

A reconstructed graphic novel of storm damage from the ship's logs in the British Admiralty Records, PRO, London.

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RACER'S STORM

The Benchmark Hurricane of 1837

BY JAMES L. GLASS*

Racer's storm in 1837 is remembered by meteorologists as one of the most famous and destructive hurricanes of the nineteenth century "partly due to its apt name, but more so as a result of its extreme duration and the immensity of its path of destruction." Despite its extraordinary size and duration and the devastation it caused from Cuba to the Gulf coast to Cape Hatteras, it has largely been forgotten by today's residents along the Texas coast.

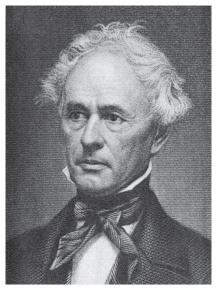
Early accounts of the storm came from Lt. Col. William Reid of the British Royal Engineers in 1838, and William C. Redfield of New York City in 1846.² Since then, additional information on the storm has been added by Samuel Wood Geiser² in 1944, Ivan Ray Tannehill in 1955,³ and David M. Ludlum in 1963.⁴ This paper presents new historical information about the storm from newspaper reports, descriptions of damage to *HMS Racer* from its logbooks; and the notebooks of a Swiss scientist residing in Matamoros about the disastrous impact of the storm in that city.

When it first hit, the storm was thought to have been two storms because it had raked the southern coast of Cuba about two weeks before it did the same thing to the northern coast. Not until William Redfield, who was studying the storm's course in the southern U. S., read the published reports of Lt. Col. Reid in London, who had analyzed the logbooks of British ships stationed in the Caribbean, did Redfield—the professional meteorologist of the pair—realize that they had been working on the same storm. They corresponded and connected the details about the path taken by this unusual storm.

After entering the Caribbean through the historical spawning grounds of the Windward Islands on September

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24, 1837, the storm affected Hispaniola (Haiti), Jamaica, Cuba, and the Yucatán peninsula. On September 29 it encountered the British sloop-of-war Racer and caused so much damage to the ship that an aroused public clamored for details of its survival and for souvenir engravings.6 It swept across the tip of Yucatán to strike the eastern



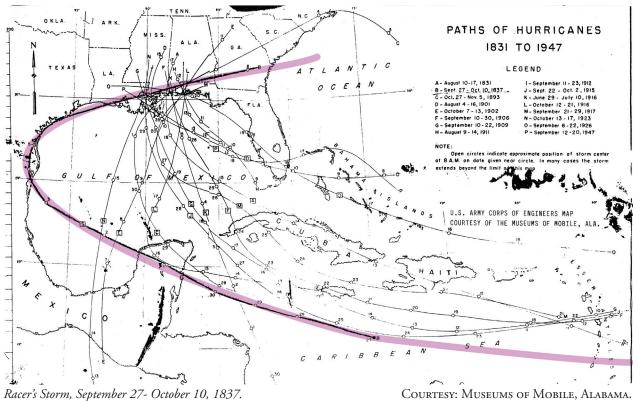
William C. Redfield (1789-1857)

coast of Mexico. The Houston *Telegraph & Texas Register* of August 22, 1837, reported that "The Mexican fleet is lying at Vera Cruz unmanned." After the storm the *Telegraph* further reported that "The crew of the *Caldwell*, which has just arrived at Velasco, state that they were informed by the officers of a revenue cutter... which had recently left the coast of Mexico, that nearly every vessel of the Mexican navy had been destroyed by the late severe gale." The fleet would have consisted of more than a dozen ships of war. Surely such a spectacular event must be taken with a heavy dose of Texas wishful thinking, for no corroboration has been found.

The storm went on to flood Tampico and Matamoros, near the mouth of the Rio Grande, where a high pressure front forced it to recurve to the northeast. It continued along the southern coasts of Texas, Louisiana, Alabama, and Florida, where it turned on a straight course across Georgia, through the southeastern tip of South Carolina and into the Atlantic Ocean near Charleston, South Carolina. It lasted for about sixteen days ⁷ and covered a distance of approximately 4,150 statute miles.8 It was so large that its winds and rains stretched on the same day, October 6, from Galveston to St. Joseph's, Florida.9 Its effects were felt initially from Barbados to southern Cuba, a distance of about 1,300 miles, to about a diameter of 800 miles in the Gulf, and one of about 160 miles across in Texas. 10 The total number of dead and injured and the amount of property loss cannot be estimated. The following will present a brief review of storm-related events

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Track B: Racer's Storm, September 27- October 10, 1837.

in the Caribbean and Gulf, its Texas track in more detail, and a summary of subsequent events in the United States.

The storm was the tenth of eleven storms in "The Great Hurricane Season of 1837,"11 and the islands of the Antilles chain already were in shambles from previous storms when it arrived. The so-called "Barbados Storm" had struck Barbados and Santa Lucia on July 9. A larger storm, the "Los Angeles" or "Antigua-Florida" storm, followed a month later on August 2 and compounded the desolation. It has been rated as one of the seven most destructive storms to hit Puerto Rico in the 103-year period from 1825 to 1928.¹²

To make matters worse, the islands suffered the twin disasters of a severe hurricane with earthquakes on August 2. Bridgetown, Barbados, was "totally destroyed by fire and...all ships that had been in the port perished."13 The government newspaper in Mexico City also published a report from a correspondent in Havana who described the misfortunes at St. Thomas (now Charlotte Amalie) as he received them from Spanish relatives:

Of 33 ships that were in the port, only 3 will be able to save themselves with much damage, accounting for 70 people drowned in the peak force of the hurricane, a fire manifested itself to which all the men of the village responded and continued to cut away at even after various men were burned, resulting in approximately 40 dead and 1500 injured. In the same grim night, three earth tremors were experienced in such a manner that the four elements set themselves to playing...the tremor was felt here too [Havana] to the extent that the house in which I live shook for several hours.14

The temblors spread across the Caribbean and the

Gulf from the edge of the Caribbean tectonic plate, and ruptured many of the undersea domes, or pockets, of natural gas, basalt, asphalt, sulphur, hydrogen sulfide gas (H₂S), and other natural products.¹⁵

The H₂S gas, with its distinctive "rotten egg" odor, set off events that dumbfounded average people and frightened superstitious inhabitants into fleeing to higher ground. A silvery dew appeared on the leaves of plants, providing "... the most brilliant and strangest scene... a spectacle of the Thousand-and-One-Nights."16 Silver coins turned black in workers' pockets, as did dyes and ferrous metals. Buildings painted with al fresco egg-tempera-based coatings turned a dark, roasted-red, and people perspired with no increase in temperature. Most visible were the results of the gas creeping slowly along the sea floor, stealing the oxygen, turning the bottom black while killing the flora and fauna, but leaving the water clear. On the morning of September 15, two weeks before Racer's Storm, a captain of the National Guard in Sisal, Yucatán, marveled at an "immensity of fish [that] was floating over the waters, as if stunned, and tried to submerge...[they] were pushed by the current and the waves, coming out upon the beaches to die where, after a few hours, they had formed great mounds of dead fish."17 Captain William Seymour of the brigantine Judith and Esther, near Jamaica, reported that: "For nearly an hour we could not observe each other or anything but merely the light, and most astonishingly, every one of our fingernails turned quite black, and remained so nearly five weeks afterwards... Every one of the crew were affected in the same way."18

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Racer's Storm began between St. George's, Granada, and the island of St. Vincent in late September, and was "first observed southeast of Jamaica" on September 24.19 It struck the southern coast of Jamaica as well as the towns of Merida and Sisal on the Yucatán peninsula. As it began to cross the tip of the peninsula it intercepted HMS Racer, which had stopped at Belize, British Honduras, on September 21 to ferry a group of discharged artillerymen to Port Royal, Jamaica, together with the wife of one of the soldiers and their child. On the night of September 29 the ship was twice blown flat on its beam ends and nearly everything went overboard: most sails, tackle, cannons and powder, stores of food and clothing, compass, chronometers, and both masts except for a six-foot stump of the mainmast to which was spliced a twelve-foot main trysail mast. The lives of three crewmen and the child were lost. Captain Hope hoisted a main trysail up the stump and used some of the yards and the bowsprit as jury-masts upon which to set other scraps of sail on October 1 when the winds had dropped to gale-force strength of from thirty-nine to forty-six miles-per-hour. Thus rigged, the ship limped into La Habana shipyards, arousing great public interest and awe of such a feat of seamanship.²⁰

After crossing Yucatán and flooding Vera Cruz and Tampico, the storm made its dramatic appearance on the threshold of Texas by hovering over the mouth of the Rio Bravo, where it pounded Matamoros for three rainladen days while "the dynamics of recurvature slowed the storm's forward progress and turned it gradually into the north... [where it searched] for a steering course of westerlies which would carry the storm system off to the northeast."²¹

One of the residents of Matamoros in 1837 was Jean Louis Berlandier, a Swiss naturalist and scientist who had arrived in Mexico in 1826. He had served as a botanist with the Mexican Boundary Commission that traveled throughout Texas and Mexico from 1827 to 1829. He then settled in Matamoros, married, and became the town's physician and meteorologist, known affectionately as "Dr. Louis." After his death by drowning in 1851, his widow sold a number of his records, notes, and drawings to a U. S. Navy officer, James Henry Coffin, who eventually gave them to the Smithsonian Institution. Among the papers were Berlandier's meteorological records and personal observations of the effects of Racer's Storm on Matamoros and its port town of Brazos de St. Iago (Santiago).²² Much of the following information is taken from those papers.

The months of August and September had been extremely rainy in the towns at the tip of Texas: Matamoros, Laredo, Revilla de Mier, Camargo, and Reynosa. The crops were already buried underwater before September was over. On the 29th, while *HMS Racer* was going through its ordeal, there was a calm before the storm and it stopped raining and the sky was fine and clear, even with stars at night. But during the nights of October first and second, Louis Berlandier heard what he thought was artillery and "hid myself believing

I would hear the next day of some new revolution; they are so frequent in Mexico."²³ The roaring turned out to be the storm surge crashing on the beach at Brazos de Santiago, eighteen air miles to the east. The little village of twenty-five or thirty plank structures at Santiago was entirely destroyed except for three buildings. The "often battered Mexican customhouse on the sand spit lying across the river was swept away"²⁴ and coastal floods extended "for many miles inland."²⁵

According to Berlandier's account, "On the 2nd of October towards 10 P. M. a frightful wind from N. N. E. was felt, the sky being so dark one could not see a step before oneself. Such torrents of rain fell on the ground and the waves in fury from the lakes besieged Matamoros, rolling the billows even in the street." From September 17 to 30, Berlandier had recorded nine inches of rain, that increased by 29.25 inches from October 1 to 4, with the worst of it—11.25 *pouces* [inches]— on October 3.

Galveston was already experiencing squall lines and strong winds on the same dates, so large was the storm. There are also reports of shipping disasters at Santiago. The storm carried ships in the Rio Grande and the stores from the warehouses "to the plains where they remained without water. The Julius Caesar, a Texian vessel newly taken from the enemy I saw two years later, well established in a plain without water."27 Also blown up on shore near Santiago was the schooner Velasco, which had left New Orleans for Galveston on September 23. She had dropped a passenger at Matagorda on September 28, after which her mainmast was carried away by the storm and she was blown helplessly against the Mexican shore and given up for lost. The Velasco finally made it to Galveston with only thirty-seven passengers on board. What had started as a pleasant, five-day voyage had turned into a thirtyday nightmare with the loss of thirty-three lives,²⁸ mostly women and children, out of a total of seventy passengers.

After battering the shore for seventy-two hours, the storm recurved and moved an unknown distance offshore, greatly affecting the coastline with winds that did not reach as far inland as the rains. A letter from Dr. J. Wilson Copes at Cox's Point (now Port Lavaca) to Dr. Ashbel Smith in Houston described conditions near Matagorda Bay. When nearby Camp Chambers closed, on the west bank of Arenosa Creek, Dr. Copes was ordered to report to his superior, Surgeon General Smith, at the military hospital in Houston. As he and his small medical corps waited to catch a ship for Houston, the storm struck on October 5. He later wrote that his expectations were to embark in short order, so his team did not take "but one or two tents with us. I had none at all and was much exposed. Every storm which was most violent, upon us being situated upon a point very much exposed to the Bay & Gulph, threw down our tents and left us the only alternative, endurance."29 While Dr. Copes was "enduring," squall lines with strong winds from the southeast engulfed Galveston from October 1 to 3. On October 4 the

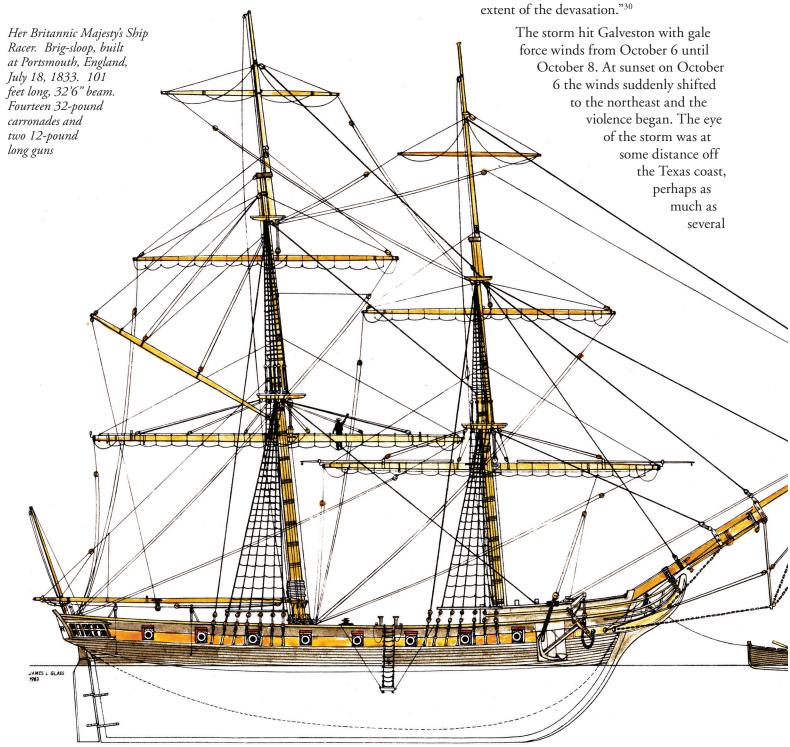
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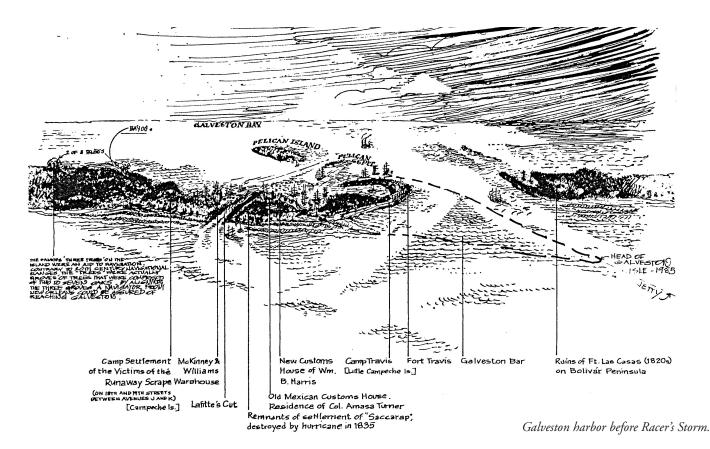
winds increased and veered to the east to begin the telltale counterclockwise cyclonic movement. On October 5 small boats began to blow on shore. Weather-wise sailors recognized the signs and the ships in the harbor were stripped of sails. Mooring and rigging lines were doubled and redoubled and anchor chains shortened. Small craft headed for shelter in Clear Lake, Anahuac, or along Buffalo Bayou to Houston.

The effects of the storm at Galveston are known from matter-of-fact reports in newspapers and magazines, the reminiscences of the Texas military commander at Fort Travis, and the dramatic narrative of a woman who was a passenger on a brig that was driven ashore. Its overall impact was clear from a contemporary newspaper account:

"The history of the country contains no records of any hurricane which has equalled this either in violence of the storm or the



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miles, for wind damage seemed limited inland despite widespread rain and flooding. Col. Amasa Turner, commander of the Texas army at Galveston, wrote that there were "from twenty to twenty-five vessels of foreign tonnage [i.e. the U. S.] at anchorage in Galveston

harbor, all of which either parted their chains or dragged ashore, but one, a schooner from Mobile. She had the good fortune to ride out the gale."31 One other, the Helen, also rode out the storm by dragging her anchor across the anchor chains of other ships. The brigs *Perserverance*, *Jane*, and *Elbe* were driven ashore and heavily damaged. Several others were blown on shore, but suffered minimum damage and could be set afloat again. These included the schooners Select, Star, Lady of the Lake, Fourth of July, and the Mexican prize schooner, Correo. Of the twenty ships only three were a total loss: the Tom Toby, Select, and the warship Brutus. Two others, *Jane* and *Henry* crashed into each other before being blown on shore, where they collided with a warehouse full of merchandise belonging to Thomas F. McKinney and Samuel M. Williams.³²

The storm entirely changed the configuration of the beaches and the sandbars at the entrance to the port.³³ To escape the storm, Col. Turner and his family, Alexander Edgar, a lady with

two little girls, and soldiers from Fort Travis on the east end of the island sought shelter in Turner's residence and outbuilding. This was the old Mexican customs house that had been built by William P. Harris and Robert Wilson in 1832. The fifteen family members were on the second floor, and eighty or ninety soldiers crammed into the lower floor of the house about 9:00 p.m. on October 6. Turner felt that this "ballast" saved the house from going down.

Other soldiers huddled in a rough outbuilding and when it was blown away they threw themselves into a pile-up of bodies so that they would not follow suit. Fearing for the women and children in the deteriorating building, Turner and Capt. L. M. Hitchcock, a pilot on the bar, took action when a violent force of water struck the side of the house with such force that it fell off its blocks at about 10:00 p.m. Covering the thwarts in Hitchcock's small boat with mattresses, they put the ladies and children on them, protected them with quilts and blankets, and gave them "a full supply of the creature comforts." They then ran "her hard aground about one hundred and fifty yards from the house, took the anchor further landward, and planted it as securely as possible, and detailed to men to bale the boat and keep the precious cargo as dry as possible."

The most dramatic account comes from Emily Burritt on board the brig *Elbe*, which was trying to make port in Galveston after a twenty-eight-day voyage from New Britain, Connecticut. Among the passengers was the Burritt party of over a dozen employees of a steam mill company that had been contracted for by the Allen brothers to open the Texas Steam Mill Company on the north side of Buffalo

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Bayou at Houston. They were led by Elijah Hinsdale Burritt (1794 - 1838), an astronomer of national stature, who died of yellow fever, in Houston, within three months.³⁵ The *Elbe* foundered on a sand bar and began to pound itself to pieces in the "equinoxial" storm. The first mate deserted the ship and went to Houston, leaving it in charge of the passengers. The crew was about to follow the mate, leaving the passengers to perish, but the sight of them sitting "with our hands folded in silent despair" in the main cabin prompted them to change their minds. The waves lifted the ship off the bar and the sailors cut the masts and cut the rigging so that the hull was blown ashore into a "bed of sand… Twelve others beside us were driven up high and dry, one nearly three fourths of a mile on dry ground."³⁶

A postscript published in 1838 by an anonymous tourist identified only as "R" described the scene upon land as equally as terrible as upon the sea. After the storm "all was desolation...Human suffering in the meantime was immense. Men, women and children were seen floating upon boards, logs and small boats, for days and nights, in every part of the island."³⁷

North of the island, the storm surge affected Galveston Bay locations in varying diminishing degrees as it approached Houston, but it "sent floodwaters inland fifteen to twenty miles over the coastal prairies."38 Col. James Morgan, on Morgan's Point, wrote that "Powhattan [San Leon] has not a home in it yet—I believe—And...in the great gale...was under five or six feet of water."39 He added that "Houston was out of most of the gale."40 Mary Jane Harris Briscoe sailed to Galveston with Capt. Benjamin F. Hanna right after the rains stopped and wrote that Houston had "had no storm, nor any news of a storm in Galveston, so were very much surprised to see the condition of things when we reached the island." Capt. Hanna, through his binoculars, noted that there "were no boats visible in the harbor and no houses to be seen anywhere."41 At Galveston the water was reported "six to seven feet higher than the ordinary spring tide,"42 and Houston was pounded by heavy rains for from thirty-two to thirty-six hours as the water level in the bayou was pushed three or four feet higher than normal ⁴³ by the storm surge.

The eye of the storm moved out of Texas, crossing into Louisiana just below St. Martinville. Its winds and water spread through the lowlands of southern Louisiana, with its vast bulk taking from thirty-two to thirty-eight hours to pass over a single point, denuding the land of its crops of cotton and sugar cane. Most of the corn had already been harvested. One report dramatically described a scene of devastation: "... the crops of cotton, sugar and corn on both sides of the Mississippi, from the mouth of Red River down, are completely prostrated—so much so, that a common sized dog can be distinguished running over the fields."⁴⁴

The New Orleans *Bee* of October 16 repeated eyewitness accounts from refugees that the "whole Attakapas and Opelousas region, as well as along Bayou Lafourche has

experienced the ravages of the tempest," and damage to the crops was "overwhelming." The same issue reported that Baton Rouge had significant damage to houses and buildings and that the town "suffered considerably... the beautiful trees planted along the streets were destroyed."

When the first rain bands struck New Orleans on October 7, the editor of the *Picayune* did not realize the severity of what was coming. On that day he published a patronizing poem entitled "What Lady likes a rainy day?" that chided women for not wanting to get their hats wet. As reports began to come in, he inserted them into the same issue as "The Weather—A Gale," and "Effects of the Storm." Finally, aroused at the last minute when the issue was going to press, he wrote a piece headlined "*Great Destruction of Property!*" which reported the devastation of property, ships that had been driven into the woods, steamers that were total wrecks, waves that were "mountain high" in Lake Ponchartrain, and three or four feet of water over the railroad tracks.

On October 11, the *Picayune* reported that "Flooding has covered the valves of the gas company, leaving the city in the dark. The hotels and buildings at Port Pontchartrain were swept away, the lower town by the river was completely inundated, and fifteen corpses in the New Cemetery were left without a possibility of performing the rites of interment, while those who could not afford lead coffins 'had their dear ones' corpses devoured by crawfish,' whenever the city flooded." By October 21 the news had reached the Northeast via the New Orleans *Commercial Bulletin*, which summed up the damage and even ventured a belief that the storm may have relieved their fever epidemic⁴⁵, not realizing that the winds blew the mosquitoes out of their breeding grounds, taking the disease with them.

As Racer's Storm moved out of Louisiana, it left behind shipping damage of great significance to the city's economy, plus hundreds of destroyed or damaged structures. Seven ships had been wrecked, along with fishing sloops, oyster boats, and personal boats. At the port on the Mississippi, the storm badly damaged six ships. The loss of lives will never be known.

The experience of the southern United States was on a par with that of New Orleans as the hurricane's path veered more inland on its way north. The Federal Road and the Natchez Trace were impassable quagmires, bringing ground transportation to a halt. The storm inundated Pass Christian and Bay St. Louis, diluting the saline content of the bay and ruining most of Pass Christian's famous oysters. Moving into Alabama it flooded the ruins of Fort Maurepas, at present-day Ocean Springs, and the Old Spanish Fort near the mouth of the Pascagoula River, while it washed away all of the wharves at every port and harbor along the coast. 46

Mobile was better prepared than New Orleans. It was on higher ground at the head of a huge, protected bay which was ringed with safe anchorages. Racer's winds started blowing a "severe gale" from the east, accompanied by torrents of

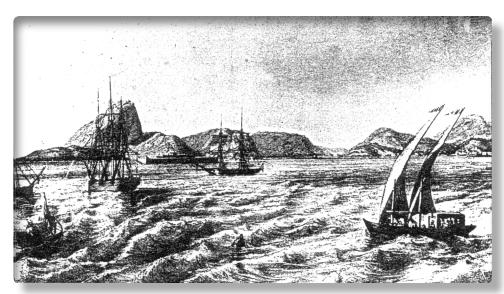
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rain, about 5 p.m. on October 6 and continued with "great violence" all night. Winds damaged a number of buildings in the city and blew down many trees, but ship damage was minimal, as all ships were "safely moored and well attended to."47 Water was "knee-deep in the stores in the vicinity of the steamboat landing. Persons were passing around the market in small boats."48 Pensacola was also struck on October 6 with winds from the east and south. Under a high pressure ridge, winds continued rushing toward the storm's low pressure trough and veered to the west and northwest during the day and evening of the 7th. 49 The storm caught the U. S. Squadron there, but no mention was made of damage

to the naval vessels. "Among the sufferers from the gale is the Schr. Roebuck, Capt. Hicks. The wind has now gone round to the west and there is a promise of fair weather." 50

St. Joseph's Bay and Apalachicola in the Florida panhandle were not as protected as Mobile and suffered severely on October 7 and 8 while still recovering from the sixth storm of the 1837 season. The winds drove "all the vessels on shore except one," and the St. Joseph's Company lost much of their trade goods and their "warehouses and wharf were much injured and in part destroyed."51 Things were much worse at Apalachicola. The Pensacola Gazette headlined "Tremendous & Awful Gale at Apalachicola! Two hundred thousand dollars worth of property destroyed—buildings down, and twenty of roofs blown off. The tide rose from ten to fifteen feet." The article continued with sensationalized details of the loss of wharves and ships—"all the steamboats and small craft...were in ten thousand pieces." It noted that "Water Street, from above Columbus wharves down near to Florida Promenade is completely filled up with logs, timber and stuff, at least four feet high." The editor of the Gazette sought to lift spirits with good humor when he wrote: "The sloop Select was back on Commerce Street, nestled up to a grog shop, while the schooner Orleans is taking a walk on Florida Promenade."52

Another high pressure dome had moved in over the Ohio Valley and the Northeast, causing high winds throughout the upper South and providing a steering current for Racer's Storm.⁵³ It continued on a flat, eastward trajectory rather than curving to the north. It was "violent from N. E., veering N., on the 7th and 8th. The gale was on the coast of North Carolina from the 8th to the 10th, blowing from N. E. and extending N. of the Chesapeake."⁵⁴ Few realized that newspaper descriptions of "mountain high" seas and "fearful gusts" of wind were the trademarks of the greatest storm of their time, which caused the almost universal



HBMS Racer off Rio de Janeiro (center), etching for public sale by Warre (1838).

ruin of cotton and sugar cane crops from Texas to North Carolina. After dealing a glancing blow to Charleston, the storm continued to its final destination in the Atlantic just south of Cape Hatteras where it sank and damaged several schooners and steamships⁵⁵ and affected the Bahama Islands.

Part of the fame of Racer's Storm rests upon the tragedy of its destruction at Ocracoke on Cape Hatteras of the steamship S.S. Home, which it smashed to pieces and threw upon the reefs. Of the total of one hundred and thirty-five passengers and crew, only forty survived. One seventyfive-year-old woman saved herself by riding the waves to shore while on a settee taken from the main salon. The ninety-eight who perished included a great number of women and children. Many of those who died were the sisters, daughters, wives, and children of important men in the U. S. Congress. The others were persons of wealth and influence who had been on a shopping spree to New York City and were returning to Charleston when the storm struck.⁵⁶ This created a national scandal and started the search for the guilty. It resulted in great pressure for maritime and insurance reform (which the ship did not have) and safety issues. The culprit was determined to be Capt. Carleton White, who may or may not have been in his cabin drinking while his ship drifted too close to shore. Capt. White blamed everything on faulty construction of the *Home* and deficient boilers.⁵⁷ The media and the public almost universally condemned White, the owners and the construction contractor. Congress was eventually pressured into passing "the law that requires every vessel to carry a life preserver for every passenger,"58 a fitting legacy of one of the major disasters of the nineteenth century. *

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