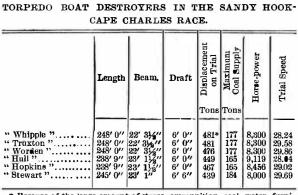
## THE OCEAN RACE OF TORPEDO-BOAT DESTROYERS.

Although the recent ocean race of six of our largest torpedo-boat destroyers, over a 240-mile course from Sandy Hook to Cape Charles, has not turned out to be as great a fiasco as similar races of this kind that have been held in bygone years in other navies, it can hardly be called a success. The first race of this character, if we remember rightly, took place some twenty years ago, when a large number of torpedo boats were sent at full speed over a course laid up the English Channel; and it served mainly to demonstrate the frailty of these craft and the impossibility of relying upon them for any long-continued speed effort over a lengthy course. Such of the boats as were not crippled in the engine room or boiler room, began to show evidence of structural weakness. The race left no doubt that the torpedo boats of that day were altogether too light for deep-sea duty; and it was partly as the result of this experience that the dimensions

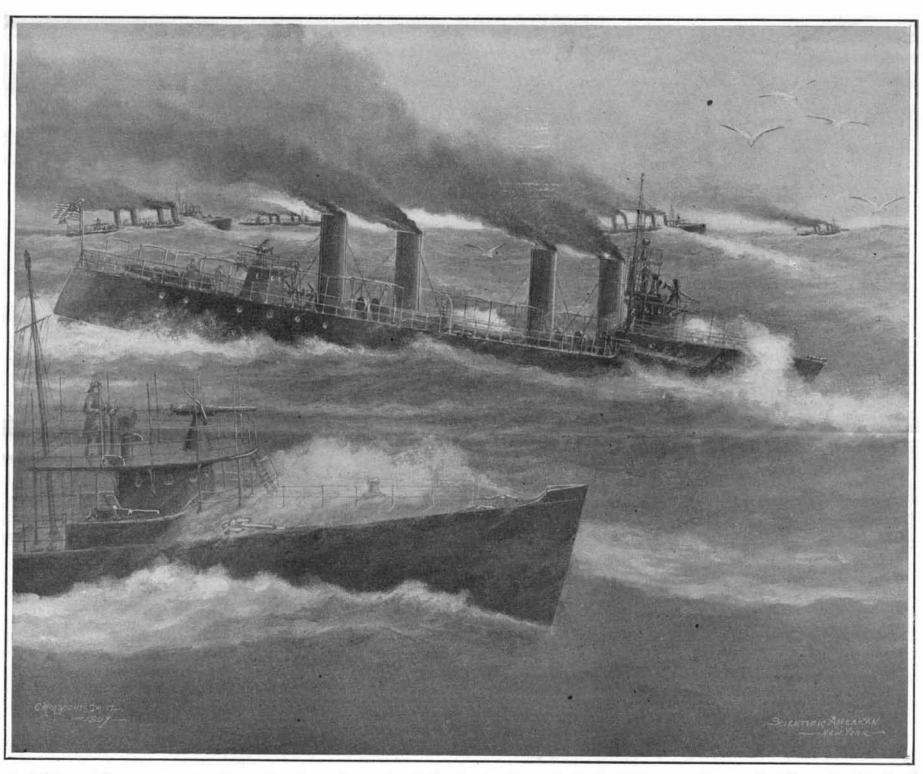


Scientific American

\* Because of the large amount of stores, ammunition, coal, water, furniture on board, these vessels at the commencement of the race displaced nearly 700 tons,

representative of the sixteen vessels which compose our destroyer fleet. She is 245 feet long; 23 feet 1

The recent race was rendered possible by the fact that a squadron of six of our destroyers was under orders to proceed from New York to the naval review at Hampton Roads. Advantage was taken of the opportunity thus presented, to send these vessels down the coast under an order calling for them to make their best speed for the 240 miles. The boats started abreast across an imaginary line drawn from the Sandy Hook lightship at eight thirty-three on the morning of June 6. Each vessel, judging from the blowing off of the safety valves, was carrying a full head of steam, and they were speedily hull down to the observers at the Sandy Hook station. Although the boats were credited with trial speeds of from 28 to nearly 30 knots an hour, it was not anticipated that they would average more than 22 or 23 knots an hour over the whole course. This should have brought them into Hampton Roads at about 6 o'clock the same evening.



The "Worden," Winner, Average 21.6 Knots. The "Hull" Made 15 Knots; the "Stewart," 11½ Knots; the "Truxton," 11 Knots. The "Hopkins" Was Disabled. THE 240-MILE OCEAN RACE OF THE TORPEDO-BOAT DESTROYERS.

and scantling of torpedo craft were increased, and the torpedo boat developed into the dignity of the torpedoboat destroyer. The increase in size since that date inch in beam, and draws 6 feet 6 inches at normal draft. Her displacement on trial was 439 tons, and her trial speed 29.69 knots an hour. The great dis-

The winner of the race was the "Worden," whose time, taken by the American fleet as she passed the Cape Charles light, was seven forty P. M., the elapsed time for the run being eleven hours and seven minutes. This works out at just 21.6 knots average for the whole distance-a rather poor showing for the crack boat of half-a-dozen supposed 28 to 30 knot craft. The "Worden" was being closely pressed by the "Hopkins," when suddenly off Hog Island, the latter broke a propeller strut, and was completely disabled. The propeller, thrashing wildly around, tore a hole in the after compartment, and the "Hopkins" had to signal for assistance. Her after bulkhead held, fortunately, as did her pumps, and with the aid of a line from the "Whipple," she was able to reach Hampton Roads at 8 o'clock on the morning of June 7. It is only fair to state that the "Hopkins" and "Whipple" had averaged a higher speed than 21.6 up to the time of the accident, the "Whipple" slowing down subsequently. The other boats made a pitiful showing, the "Hull" taking 16 hours, the "Stewart" 21 hours, and the "Truxton" 22 hours to cover the 240 knots.

has been steady, the displacement having gone up from 80 or 100 tons to from 300 to 400 tons, while the latest British destroyers are of 500 tons displacement. But even the modern destroyer, with its ample length, beam, and draft, appears to be unable to maintain her full speed for more than a few hours at a stretch. Probably the best work that has been done of late years was the deep-sea service of the Japanese destroyers during the operations at Port Arthur, when these vessels kept the sea, except for occasional visits to a naval rendezvous, through all the stormy months of the winter blockade. It is certain, however, that most of this service was performed at a moderate cruising speed, the occasional runs under full power being only of limited duration.

The division of torpedo boats engaged in this race contained representatives of the best of our destroyers. The latest and probably the most efficient of the six is the "Stewart," whose dimensions may be taken as parity between the trial speeds of these boats and the speeds which they are able to develop on a sudden order for a run under full power, is to be attributed: First, to the rapid all-round depreciation due to the light construction both of hulls and engines. Secondly, to the fact that, as in the present case, the hulls are frequently foul because of the lengthy absence from drydock; and thirdly, to the fact that in the cruising condition they are so weighted down with ammunition, general stores, coal, water, and the furniture necessary for living accommodation, that they not infrequently displace fully 50 per cent more than they did on trial. Thus, the "Hull," when on trial, stripped for speed, and with just enough water and coal for the occasion, displaced about 450 tons. On crossing the line at Sandy Hook, she displaced about 680 tons. It was for the reasons given above. that naval officers did not expect the vessels to average more than 22 or 23 knots for the whole course.