

... was the most important vessel built on the lakes.”⁵ Theodore Karamanski, in a study focused on sail, noted that “it was not until 1868 that the number of sailing vessels peaked on the Great Lakes, at 1,855.” He later adds that, if one considered tonnage, the size of the sailing fleet actually peaked in 1873, as larger vessels replaced smaller, older ones.⁶ Bruce Bowlus, summarizing the evidence from 1861 declared: “Without question, sails rather than smokestacks dominated the horizons.”⁷

The evidence upon which these claims are based is worthy of closer inspection. Take for example the number of sailing vessels noted by Karamanski for 1868. He cites James C. Mills in *Our Inland Seas* who supplied the number without attribution or qualification.⁸ The number was first published by the Bureau of Statistics of the US Department of the Treasury, which had aggregated numbers reported by the individual American customs districts relative to the vessels documented in those offices. The number 1,855 from the 1868 report is the sum of the sail vessels on the “Northern Lakes,” which district included the 166 sailing vessels enrolled on Lake Champlain. Subtract those and we are left with 1,689 vessels on the Great Lakes from that year. Quoting either number, however, without qualification, flies in the face of the reality that the Great Lakes are international. If we add all the sail vessels registered in ports in Ontario in 1867 (305 schooners, barques, brigantines and sloops), the answer for the whole number of sailing vessels on the Great Lakes in 1868 might be closer to 1,994.⁹ Was 1868 the peak year for commercial sail on the Great Lakes? Seven years later the American fleet had rebounded to a number of only 44 fewer hulls, but of greater tonnage. Indeed, from 1873 to the end of the century, the sail tonnage on the Great Lakes as Americans defined “sail” and “tonnage” was never less than it had been in 1868.¹⁰

If one narrows the scope of the transition to the question of the technologies deployed in the movement of bulk freight then there is no debate about the impact of iron and steel bulk freighters driven by coal-fired, triple expansion engines, which appeared in the last two decades of the century. Where 300-foot hulls strained the limits of wooden shipbuilding technology, by 1900 the newest ore carriers were just short of 500 feet, with

⁵ John Odin Jensen, “Great Lakes,” in John B. Hattendorf, ed. *Oxford Encyclopaedia of Maritime History* (Oxford, 2007), II, 109.

⁶ Karamanski, 22, 36.

⁷ W. Bruce Bowlus, *Iron Ore Transport on the Great Lakes: The Development of a Delivery System to Feed American Industry*, (Jefferson, NC, 2010), 85. Note that our arithmetic relating to this specific piece of evidence differs. From two different sources quoting the Board of Lake Underwriters register for 1861, Bowlus calculates the value of the sailing fleet as 62.8 percent of the total value of the fleet. My calculations in table 2 yield 53.8 percent.

⁸ James Cooke Mills, *Our Inland Seas: Their Shipping & Commerce for Three Centuries* (Chicago, 1910, rep. Cleveland, 1976), 183.

⁹ Note that there is no corresponding number for the 1868 season. “Recapitulation, Province of Ontario” in “Return of Vessels owned and Registered in the Dominion of Canada, on 1st July 1867,” Canada, *Sessional Papers*, no. 73 (1868). While many Great Lakes steamboats were registered in Montreal, Quebec, only sailing vessels transferred from American registry used that those registers.

¹⁰ The numbers supporting this paragraph are all cited in the figures and tables that follow. Note that Karamanski was well aware that the tonnage had plateaued at a number higher than 1868.