

The Waterways & Canals of Milan

By Albert J. Schmidt

This spring I spent just over two weeks driving in northern Italy—around Milan and the Lombardy lakes. These travels took me as far northwest as Locarno and Bellinzona in Switzerland, to Trento in the northeast, and as far south and east as Pavia, Cremona, Mantova (Mantua) and Verona. I was especially intrigued by the various rivers descending from the Alps – the Ticino and Adda, which flow southward toward Milan from Lakes Maggiore and Lecco; the Oglio, which straddles the east side of Bergamo; the Mincio, which carries waters from Lake Garda along the west side of Mantua; and the Adige, which cuts through Verona. All at some point join the great river Po. That the Po emptied into the Adriatic at Venice provided a city like Milan the potential for becoming an inland seaport – if only canals existed to provide the necessary river linkages. Milan did, in fact, take up this challenge, thereby becoming a city of canals and thus a key part of the north Italian river system.

Although Milanese over the centuries built at least half a dozen canals, I focused on only functioning or near functioning ones--the Grand Canal (*Naviglio Grande*) and the Pavia Canal (*Naviglio di Pavia*). The Grand Canal, which dates to the mid-twelfth century, was originally intended for commerce, irrigation, and, of course, defense. Connecting the city to the River Ticino, it even served the Visconti lord Gian Galeazzo as a water road from Lake Maggiore for hauling marble to his magnificent new cathedral.

Additional waterways altered the Milan landscape over the centuries; early in the seventeenth the Spanish, who exercised a lengthy rule, built a canal basin (the *Darsena*), where Napoleon added a canal navigable to Pavia in the south. At this juncture of the Grand and Pavia Canals' bustling Port of Ticino (*Porta Ticinese*) emerged, marked by an Ionic arch to celebrate Bonaparte's victory over the Austrians at Marengo in 1800. The port became not only the commercial hub of Milan, but a source for the Pavia Canal to irrigate the rich farmlands of the Lombardy plain.

Milan's canal system peaked at the turn of the twentieth century and was especially busy during World War II, when Allied planes took a heavy toll on road and river traffic. Only in the last generation has this network lost its centrality to the city's commerce. I encountered a flea market adjacent to the dry bed of the Grand and rotting boats in the Pavia at old Port of Ticino. Further south, the Pavia still functions for irrigation. While most Milan canals have been filled and paved over, the Grand, the Darsena, and the Pavia hover between extinction and a renaissance; it's hard to tell which. There is talk of rehabilitating them for Milan's Expo 2015 to stimulate tourism, but this is still a work in progress.

The Rough Guide to the Italian Lakes suggests checking www.naviglilombardi.it and www.amicideinavigli.org (p. 94) for breaking news of this matter. I would add <http://www.naviglilive.it>. An incomparable canal source, profusely illustrated, is *I Navigli: De Milano Lungo i Canali La Bellezza Nel'Arte e Nel Paesaggio* (Edizioni CELIP Milano, 2002-2007). Leonardo da Vinci is another avenue to explore regarding Italy's canals. He was intensely interested in hydrodynamics and did work for the Sforza duke of Milan variously as engineer and architect. One wonders whether his reputed invention of the crucially important mitred (beveled) lock gate was tested and put to use in his Milan work. That he also worked with Niccolo Machiavelli on building a canal system connecting Florence on the Arno to the sea further substantiates his canal interest. See Roger D. Masters, *Fortune is a River: Leonardo da Vinci and Niccolo Machiavelli's Magnificent Dream to Change the Course of Florentine History* (New York: The Free Press, 1998).

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The author on a bridge over the now unwatered Grand Canal – photos by the author



The Darsena (Canal Basin) at the junction of the Grand and Pavia Canals



The Pavia Canal watered – from a postcard



Grand Canal when watered – from a postcard



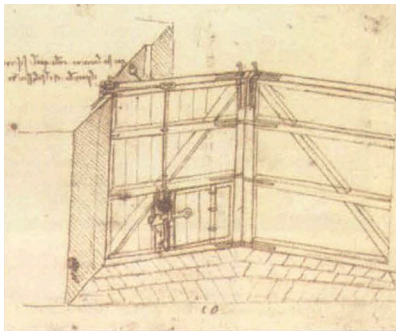
Irrigation canal and gate watered by the River Ticino, near Mantua



Pavia Canal today near the Port of Ticino, rotting boats in foreground



The Grand Canal today – unused and unwatered (2010)



Leonardo Da Vinci's sketch of a mitered (beveled) lock gate – from the National Museum of Science and Technology, Italy



Monument to Napoleon's victory at the Battle of Marengo – he built the Pavia Canal and joined it to the Grand Canal at the Port of Ticino