Say "Venice," and you've said "boats." People here board boats as easily as people elsewhere board elevators. Left our handling is second nature, and experts can be considered artists. The gondola needs no introduction, but with reason: its display of grace is impressive and timeless. As part of a two-issue series about the boats of Venice, Paolo Lanapoppi, a native Venetian, looks at how gondolas are faring today, starting on this page. Beginning on page 50, Thom Price tells of his experience as an American who went to Venice three years ago to learn the skills of gondola construction—and decided to stay.

There's more to Venice than gondolas, however. At dawn, stout workboats take load after load of fresh fish and produce to the central market; at mid-morning in certain seasons, a hunter might motor home in a light skiff with his limit of ducks; or on weekends, traditional sailing and rowing craft take to the lagoon surrounding the city for races and regattas. In WB No. 153, Anne Witty's "Beyond the Gondola" will examine numerous other watercraft of Venice, where wood remains the boatbuilding material of choice.

Eds.

The specifications would be quite tough to meet. First of all, the boat must be able to proceed through waterways that are very narrow—say, only about 20’ wide—and thick with two-way traffic of similar boats. So it's imperative that the oarsman face forward, not aft. Then, the boat must be extremely maneuverable, because the canals in this boat's tremendously crowded home city are full of elbow turns and tight bridges. For the sholest possible draft, it must definitely be flat-bottomed, because in many places the water is no more than 2’ deep. A second oarsman can be admitted, but most of the time there will be only one, and he will use a single oar—no one working alone could handle two oars in canals as narrow as many of these are. The oar, moreover, cannot be confined by an oarlock, because it must change position quickly and frequently. The oarsman must be able to move his craft ahead, backwards, and sideways with ease.

Such a boat must also carry six people comfortably, but up to eight or ten at times. With six people aboard, it must move easily, requiring no more effort than a leisurely walk. But it must be able to power-up as needed, for example when counteracting contrary currents or winds. The passengers must have comfortable armchairs in which to sit, unbothered by wind or wave. They must be able to drink, eat—and in a different age, even make love—with ease, so we need a removable cabin, to be used or not depending on the season and the owner's whims. Finally, such a boat must be handsome. Smooth and elegant, it must lend itself to all kinds of refined decorations in wood, metal, and tapestry.

It is understandable that this kind of craft could not reach its final form in a few weeks or even years. About six centuries passed before it evolved fully. Width, length, and hull shape changed slowly but intelligently. Less-efficient solutions slowly disappeared until the organism reached a final, unimprovable perfection. The exacting specifications imposed by its unique environment—Venice—were met: today, more than 400 gondolas still slide effortlessly in the city's canals.

The shape of the gondola has remained unchanged throughout most of the 20th century, but structural adaptations to its changing environment continue. New glues and new nails appeared on the market. The cost of wood grown to a proper curve increased, encouraging a search for other solutions. Chemical research produced new paints. Labor became too expensive for some refined decorations. And most important, the purpose of gondolas—their very reason to exist in Venice at all—has changed dramatically: no more a vital means of daily transportation for the city's residents, they are now used only for the pleasure of tourists, and this changing role itself has caused important modifications.

Still, gondolas are close to the city's heart. Last year, Venetians became particularly excited when a very old gondola from the collection of The Mariners' Museum in Newport News, Virginia, returned to its birthplace for a complete restoration. This gondola dated from the middle of the 19th century. Today, very few gondolas—perhaps two in the entire world—can claim such a
Venice is unique among cities in having no wheeled transport on land—no scooters, no bicycles, no horns, no parking lots. In the old days, gondolas awaited merchants and courtiers; today they await only tourists. Still, a sure sign of health is that the 405 gondolier licenses, a sum strictly limited by the city government, are almost impossible to get by any means other than heredity.
Gilberto Penzo's sectional drawings dramatically show a modern gondola's asymmetry. Penzo is an artist and historian who has written extensively about gondolas and other boats of Venice.

distinction, and none this old can be found in Venice itself. Here, when a gondola reached a certain age, the Venetians would simply demolish it and build another. Only away from their original surroundings did gondolas appear to be exotic objects that demanded to be preserved beyond their useful lifetimes. The heirs of American landscape painter Thomas Moran had donated this particular gondola to an institution on Long Island, New York, which in turn donated it to The Mariners' Museum. Documents proved that Moran had bought the gondola in Venice in 1890 and suggest that it may have been built originally for the English poet Robert Browning during his stay in Venice, probably between 1846 and 1850. If confirmed, this would make the Newport News gondola the oldest in the world.

As well as it had been preserved over the years, the gondola still appeared shabby. Some rebuilding had been done by American craftsmen—good at their trade but not aware of Venetian techniques. Some of the decorations had lost their original shining appeal. John Hightower, the museum's director, agreed that restoration was needed. In recent years, the museum has chosen to send boats back to their places of origin for restoration, to draw on local knowledge and traditions. The excellent results with a jettor returned to its native Netherlands for such refurbishing demonstrated the policy to be effective. With that project as a model, Hightower journeyed to Venice to find the heirs of the oldest Venice traditions.

He was lucky. Of the five boatyards still working on gondolas in Venice, only one is run by a family whose roots in the business date back to the 19th century. The patriarch, Nedis Tramontin, is now 75 but strong and lively as an oak. His grandfather opened his yard in 1884, after working for 20 years as an apprentice at the historic Casal boatyard—most probably the yard that had built the gondola in The Mariners' Museum collection. The Tramontins still work with many of the tools, measurements, and criteria left by the yard's founder, whose muschoio face overlooks operations from a sepia-colored photograph hanging in the workshop.

Old Nedis knew what should be done. He was moved almost to tears when he recognized some construction features that even his shop had abandoned. The frames were built in just two pieces ("embraced," as the old term describes this method) rather than being made in three separate pieces of straight-grained wood as today. But who can still find dozens of pieces of elm compass timber? Up to the end of the 19th century, boatbuilders would visit elm groves on the mainland to select properly curved branches from live trees. Nedis's attention also fixed on the main beam, which had been replaced in America, but not in a way the Venetian boatbuilders considered proper. He noted that rather than being bent into place using water and fire, it had been carved to fit at the boat's sides. "This beam is a blasphemy," Tramontin exclaimed, startling museum representative Maynard Bray by simply taking a saw in hand and cutting it away.

That part of the job was in good hands. Nedis Tramontin's reputation as a gondola builder gives him a waiting list of about 12 years for the two gondolas he builds per year, and gondoliers fervently pray for his good health and that of his son, Roberto, who is gradually taking over this two-man operation. But as in any restoration project like the one involving the boat from the United States, a variety of approaches are possible and not all are unanimously supported among preservation professionals. Whether to restore or conserve is an issue that's always lurking with historic watercraft (see WB No. 144). More specifically in the case of The Mariners' Museum gondola, whether or not to use epoxy glue seemed the most controversial issue—one quickly settled by old Nedis, who favored it and simply proceeded to use it.
There were myriad other issues that needed discussion, and a number of items required the services of specialized skills outside the Tramontin shop. So in a few days a formidable group of old and young artisans was assembled, most belonging to firms that had been in business for at least a hundred years: a gilder for the countless gold-leaf decorations; an upholsterer for chairs, trims, and textiles; a couple of blacksmiths for irons and brasses; a stained-glass specialist for the lamps; a paint factory that agreed to produce a few gallons of black paint the way it had been done in the 1890s. Tramontin's yard served as the headquarters. The group met regularly, discussing, planning, analyzing photographs, and making decisions under the guidance of gondola historian and author Gilberto Penzo, whose books have included essentially all there is to know about historic Venetian boats and whose services had been engaged by The Mariners' Museum.
The historically important gondola was carefully measured and documented with complete sets of lines and construction plans. This information will contribute to the knowledge of the gondola's long evolution. It's a story that has not been easy for scholars to reconstruct, because the builders left no plans—even today, builders frequently work with only a few patterns, relying instead on an experienced eye and plenty of closely guarded secrets.

Because Venice is so interlinked with the water, however, boats show up in paintings and drawings of old prominently and frequently. One of the most beautiful paintings is a 1494 work by Carpaccio, showing a gathering of luxury craft on the Grand Canal—the ancestors of modern gondolas. Most were handled by one oarsman, just as they are today. But the hulls show only a hint of the characteristic rocker, which in modern gondolas has reached the point where the bow and stern rise well clear of the water. The cabins of the boats represented in this painting were little more than metal frames with canvas covers. The decorative iron at the bow—the *ferro*—was very simple and hadn't yet acquired the six “teeth” it has today. The oar posts—called *forcola* in the singular and *forcole* in the plural—were also much simpler, almost flat and most probably not allowing the eight different positions used by modern gondoliers (see sidebar, page 53). The rowing technique, however, had already been acquired, and one of the oarsmen seemed to be demonstrating the “step on the brake” position, with the oar forward of the forcola, exactly the same technique that modern gondoliers use.

Jumping 150 years ahead, another gathering of gondolas was painted by Joseph Heintz the Younger in 1648—in this time in a canal in Murano, an island lying close by Venice. A lot of progress had been made by this time: the bow and stern rose higher above the water, and the stems both forward and aft even showed the distinctive curve so typical of gondolas today. Curiously, the *ferro* at the bow and stern both were shaped alike, and the first “teeth” were timidly appearing. The cabins were more sophisticated, and the *forcola* began to develop its shapely curves.

Today, the most striking feature of the gondola is the large portion of the hull that is not immersed, especially when no passengers are aboard. This change took place in the first decades of the 20th century and is still controversial. What caused it?

According to some accounts, the arrival of marine engines created a new kind of wake in the lagoon and in the canals. Instead of the orderly, somehow manageable waves originated by winds, they experienced an irrational bunch of conflicting peaks coming from all directions as powerboats sped past, mercilessly near. So the trend toward hull rocker increased, lifting bow and stern ever higher over the water. It may be true, but Gilberto Penzo and Gianfranco Munerotto, both passionate historians, agree on another explanation: maneuverability. With only the center portion of the hull immersed, it is much easier to turn the boat with just a touch of the oar—a very valuable feature in

**Left**—In contrast to lavish ornamentation elsewhere, the stemhead aft—at the gondolier's end of the boat—is given a relatively simple shape.

**Right**—A *forcola* shows that the highly developed rowing techniques used today were already perfected 150 years ago.
the Venetian canals. There is a price to pay, however, in speed. Advancement through the water becomes a bit harder with a shorter waterline length and the absence of a sharp forward entry to force the water aside. But speed and distance covered are no concern to gondoliers today, since their boats are only used for short tourist rides within Venice. They never cross the open lagoon, as they often did before motorized water taxis took over that role. They move leisurely in the protected canals and are never hired in bad weather, so maneuverability took precedence over other considerations. Once again, the organism evolved according to the needs imposed by the environment.

The most curious feature of modern gondolas, though, is the progressive loss of hull symmetry, so pronounced today that it can easily be detected by the naked eye. In the 19th century the gondola was still perfectly symmetrical, both in section and in plan views, but early in the 20th century the starboard side began to diminish. In early models of this type, the gondola’s width was about 1/4 narrower to starboard than to port, measured at the main beam. As the century progressed, this effect became very strong, the center of the amidships station being 8° to the port of the centerline from stem head to stern head. (Given the gondola’s complex shape, even locating the centerline is a matter of judgment—see figure, page 44.) To understand this asymmetry, one has to think that the chief problem for a gondolier is how to oppose the boat’s tendency to turn to port each time he takes a stroke of the oar, whose blade is positioned to starboard. The rowing technique and the position and shape of the forcola have, of course, been refined so as to help overcome this problem. On his return stroke, the gondolier effects a particular movement, called a stelir, aimed at preventing the otherwise inevitable yaw to port. He does this with such ease that even boat lovers watching a gondola slide along a canal marvel that not even a hint of a course deviation is detectable. Here the asymmetry plays an important role, as Munerotto explains in his book on the gondola’s evolution. With its diminished starboard side, the boat tends to veer to the right when underway—just enough to counteract the starboard side oar thrust’s tendency to push the boat of course to port. The discovery of this balance was made early in the 1900s, and the asymmetrical hull shape was carried to its optimum proportions in the course of the following decades, thanks principally to the innovative spirit—and courage—of Domenico Tramontin, Nedo’s grandfather.

Another contribution to this transformation is no doubt the limited function gondolas have today, compared with old times. Some Venetians still remember that as recently as the early 1950s it was common for a family to hire a gondola strictly for transportation. Back then, a second oarsman, rowing from the forward position with his oar to port, was frequently employed, especially for long trips like a family’s seasonal move to the Lido for a summer at the beach. Nowadays, of course, bow oarsmen are used only in exceptional cases such as marriages and—more and more rarely—stately funerals. Gondolas are almost always handled by just one person, and the need to adapt the boat to this use has caused asymmetry to become more pronounced and universal.

Although still ornately carved in some cockpit areas, today’s gondolas rely much more heavily on traditional shapes and fine finishes—always black—to convey a sense of elegance.

Today, a large majority of Venetians have never stepped aboard a gondola. Public transportation takes care of most of the local needs in the Venetian canals in waterborne buses called vaporetti—whose name comes from steamboats that were first used for the purpose. Passengers with luggage to carry can take comfortable water taxis through the waterways to the airport or to the mainland. For personal use, today’s Venetians own small, flat-bottomed boats powered by outboard
motors, most of them between 4 and 25 hp but some reaching as much as 150 hp. These boats are useful for such tasks as carrying furniture as well as for summer rides, for example to restaurants elsewhere in the lagoon. They are easy to maintain and don't require any rowing expertise. Little by little, they are replacing all traditional boats moored along the canals.

So it's exclusively thanks to the tourist trade that some gondolas still exist and thrive in Venice. The great majority of the estimated 450 gondolas are owned by gondoliers, some of whom own more than one boat. A few gondolas, heavier in construction and without ornamentation, are used in traghetto service, ferrying pedestrians back and forth across the Grand Canal. A few others are owned by private parties for leisure use, and a few more are used by the city's rowing clubs. Without doubt, however, the demands of the tourist trade are preserving gondola construction and a whole lot of related trades and techniques. Since the average operating life of a gondola is about 25 years, it takes some 20 new gondolas a year to keep the fleet in shape. Aside from the Squero Tramontin, there are four more boatyards producing new gondolas—Cantiere Crea, Squero San Trovaso, Cantiere Bonaldo, and Cantiere di Rossi—although not all of them always use techniques of which old Nedos Tramontin would totally approve. Artisans, among them the specialists who were able to concur in the restoration of the gondola from The Marinier's Museum, supply the fleet's constant demand for new oars, forcole, and a vast quantity of decorations in metal, glass, and leather. It is certain that without tourism these traditions would be lost.

Traditionally an underprivileged class like coachmen and servants, gondoliers today enjoy high revenues and correspondingly high status among Venetian workers. Together with the drivers of water taxis, they constitute a much-envied elite. There is no Venetian who hasn't at least once tried to figure out how much gondoliers really earn. No official figures are available except for income tax returns, which are hardly reliable since the law does not require any written record of daily rides. A realistic guess could place their earnings between $50,000 and $80,000 a year, most of it tax-free. The city keeps the number of gondolier licenses strictly limited to 405, which means that there is no way to become a gondolier except by buying a license from a retiring owner. Not just anybody can do it, though—there is a series of other requirements, aimed at guaranteeing a certain level of quality and often incidentally making sure that licenses remain in the hands of relatives and friends. The process is regulated and supervised by an ad hoc institution, the Ente per la conservazione della gondola e la tutela del gondoliere, the Institute for Conservation of Gondolas and Protection of Gondoliers, or Ente for short. The Ente is run directly by the mayor of Venice, who appoints its director.

The Ente has set up the prerequisites for a would-be gondolier. The first step is for a young candidate to learn the proper rowing techniques. There are no schools for this—one has to find a friendly gondolier, usually one's father or a close relative, who is willing to serve as a mentor. Once every few years the Ente opens up a session of rowing exams, which all prospective gondoliers must pass. Experts from an Ente committee step aboard the gondola and judge the candidate's ability, just as is done with a driver's license on the mainland.

Another requisite is training in cultural matters, which includes lessons on the history of Venice, foreign languages, legislation, and the environment. If the candidate passes both courses, he is allowed to start on his career. "He is the right word to use, because so far no woman has passed the exams, even though many women row and compete in events and races sponsored by the city's rowing clubs. The fledgling gondolier first serves as a substitute." He then makes an agreement with a retiring gondolier, who lets him use his boat part time, with the division of earnings privately negotiated. This phase usually lasts a couple of years, the minimum requirement being 150 days of effective work. At this point, the would-be gondolier has met all the requirements and can start looking around for a license to buy from a retiring gondolier. The price, of course, is one of the best-kept secrets in town.

There is always some sadness in contemplating the remnants of bygone glory. Like the showing domes of St. Mark's Basilica or the Gothic arches of Palazzo Ducale, everything seems to have vanished in the city. But there were some who seemed to have remained. This is the way that life changed in Venice, and although there are no happy endings, the performances of the tourist world are generally enhanced by the beauty of the city, which is, to be sure, the most important thing.

So it is that the Venetian gondoliers gathered in the old boat museum to declare that the ancient craft and the gondolier's life is too much in danger. The Ente must do something to save it. They need a larger budget. They need more gondoliers, a unit of conservation, and a unit of recruitment and job adjustment. The gondoliers are not so much talking of a form of renaissance, "a revival" as they call it, but that which is necessary to save the craft and its environment, the works of art and the works of men. So much is being done by technical research, and yet the works of men are being lost. The key is to maintain the traditional gondoliers who have something that cannot be learned in modern ways.

The Venetians are very smart about this. A good gondolier is a good man. There is no other way.

FURTHER READING

In The Mariner's Mirror, "The Evolution of the Venetian Gondola," G.B. Rubin de Cervin, XLII/3, 1956. The author was for many years the director of Venice's maritime museum.


Gondole: Sei secoli di evoluzione nella storia e nell'arte, Gianfranco Manerotto, Il Cardo, Venice, 1994; in Italian. Out of print. Some copies are available at the Istituto per la Conservazione della Gondola. It follows the historic evolution of the gondola with accurate drawings and construction plans.

Barche Venetiane: Catalogo illustrato dei piani di costruzione, Gilberto Penzo, Il Leggio, Venice, 1996; in Italian with English translation. It includes the construction plans of most Venetian boats past and present.

Forcole, remi e voga alla venezia,————, Il Leggio, Venice, 1997; with English translation. The Venetian rowing technique, and how to build the 30-some kinds of oars and related tools.

La gondola,———, Istituzione per la conservazione della Gondola, Venice, 1999; in Italian. A complete encyclopedia on gondolas, including history, construction, decorations. With 400 drawings.


Il Bussogno: Storia e Tradizioni della Tipica Barca da Pesca dell'Adriatico, Marzari, Mario, Gruppo Ugo Mursia Editore, Milan, 1982, in Italian. (Biblioteca del Mare, 246). An in-depth look at the typical Adriatic fishing boat, liberally illustrated, with many sketched details.


Ducale, gondolas carry the unmistakable aura of times forever past. To a Venetian, they speak of a city once immersed in silence and beauty, about sophisticated craftsmen who were able to add yet another marvel to this miraculous setting. When they slide along today's canals, duly filled with camera-waving tourists, often in groups led by an accordion and a dubious tenor singing Neapolitan songs that have no heritage in Venice, only to insensitive eyes can they seem perfectly charming or inspiring. But again, without the tourist trade they would disappear altogether. So their presence is tinged with an indefinite aura of melancholy, the memory of a splendid civilization and the regret for its inevitable end. For those of us who love the unspeakable beauty of wooden boats, the enjoyment is accompanied by the need to repress a deep sigh.

Still, gondolas have defied the odds to survive in modern times. In April of this year the Mayor of Venice, a politician and philosopher famous throughout Italy, spoke at a gathering on the occasion of the release of a new CD-ROM about gondolas. The computer programmers had just declared that they had found it impossible to tell the machine how to produce an accurate gondola drawing—too many weird curves, too many asymmetrical parts. So they had to adapt the techniques of the old builders: as a unit of measure they used the seso, a half-frame that was adjusted to the various positions in the hull in an ancient form of boatbuilding called "whole-molding." The mayor raved about this. "You cannot build a gondola on a conveyor belt," he said. "The entire city of Venice was built that way. It's all asymmetrical—shapes were invented as the works went along. Then for two centuries we were surpassed by technology: a lot of drawing of plans and no room for inventiveness. But nowadays this is finished. Conveyor belts are obsolete in the advanced societies. Now the future is in imagination and beauty. So," he concluded, "we should not look at gondolas as things of the past. They are there to remind us of the way we have to be if we want to have success in the future. They are the key to a really modern way of life, the only one which will allow us to survive.

The audience, all Venetians, applauded enthusiastically. A good politician, Mayor Cacciari. But could it be that there was some truth in his vision?

Tourism has carried the gondola type—and Venice's economy—forward. It was just as impossible to imagine Venice without gondolas at the 20th century's end as it was at its beginning.

Paolo Lanapoppi, a Venice native and resident, has just acquired a 50-year-old mahogany boat of the type known as "topetta." He reports that the boat rows beautifully and is rigged with a lug sail. When not too busy sailing, sculling, or painting, Lanapoppi works as a writer. His latest book is the biography of Lorenzo Da Ponte, the Venetian poet who wrote the libretto for three Mozart operas.

To read about modern-day gondola construction, see the following page.