



Friends of the Old Croton Aqueduct

Newsletter

No. 20, Spring 2005

Valley of the Dam

Cornelia Cotton

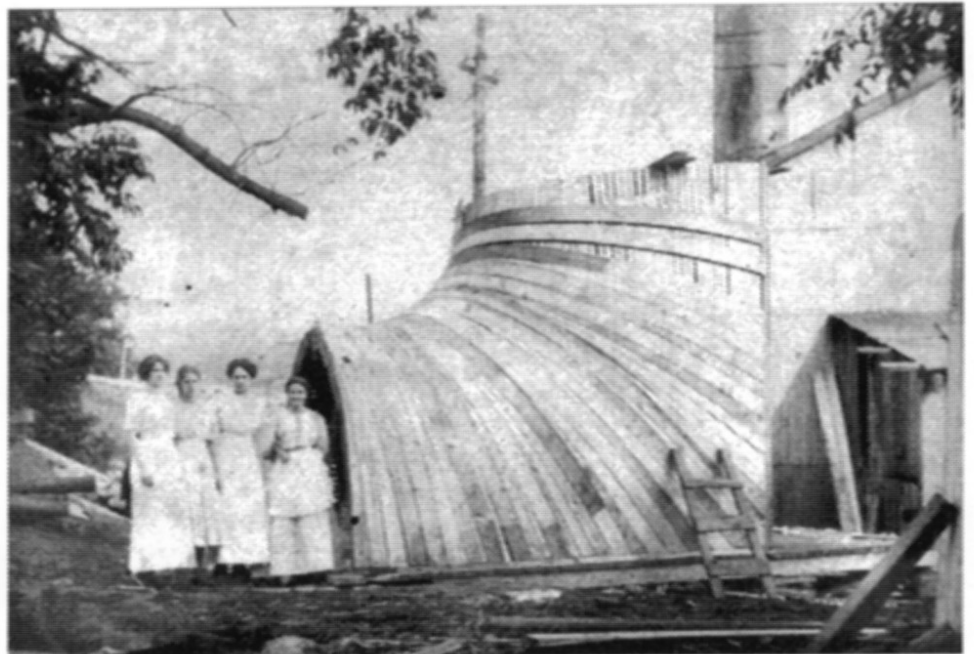
Note: The years 2005-06 mark the centennial of completion of the New Croton Dam.

Last fall's wonderful exhibit, "Valley of the Dam," at the Yorktown Museum, was a great treat for all who are enchanted by the romance of the Croton Water. Culled largely from the Tompkins Family Collection, with additional material from several historical societies and private archives, the show covered both the Old and New Croton dams with old prints, maps, photographs, paintings, artifacts, tools, and even a large-scale model of the New Croton Lake Reservoir Gate House and Coffey Dam, a gift from the New York City Department of Environmental Protection.

Unlike several other recent exhibits on this theme, which stressed the esthetic, engineering, or historic importance of these grand projects, this presentation in addition drew the visitor closer to the horribly hard labor, the strenuous effort of the people engaged in the back-breaking work of bringing clean water to the city. It showed the upsets and displacements of the people who lived in the valley, whose houses, churches, farms and farmlands, and whole communities had to make way

for the construction of the dams and flooding of their lands. It was put together from the perspective not of New York City, the beneficiary of the water, but rather of the effect of the dams on the lives of people in the Croton River valley.

Among interesting items relating to the Old Croton Dam and Aqueduct were celebratory silk ribbons from



Washwomen posing next to an aqueduct mold, c. 1900. This is one of the few photos showing women workers, who generally labored behind the scenes. (From "The Croton Dams and Aqueduct," Christopher R. Tompkins, Arcadia Publ., Charleston, SC, 2000.)

Valley of the Dam *(continued)*

1842, a rare photograph of the dam, a beautiful engraving by Robert Havell, Schramke's famous "Description of the New York City Aqueduct" (1846) with its map, and contemporary prints showing views along the Aqueduct, including the High Bridge, and most sensationally, an original Croton Fire Insurance Co. poster, proclaiming, "Cash Capital of \$200,000. at 180 Broadway, New York," an idealized chromolithograph of the Old Croton Dam.

By the time construction of the New Croton Dam began in 1892, photography was able to document the work to a remarkable degree. Photos show houses and churches being moved, others to be consigned to the waters. It was touching to view the homely artifacts left behind, and later rescued, from these displacements – spoons, bottles, nails, coins, hooks, and buttons; stirrups, axes, and shovels – that bring to life the world of our 19th century Westchester residents.

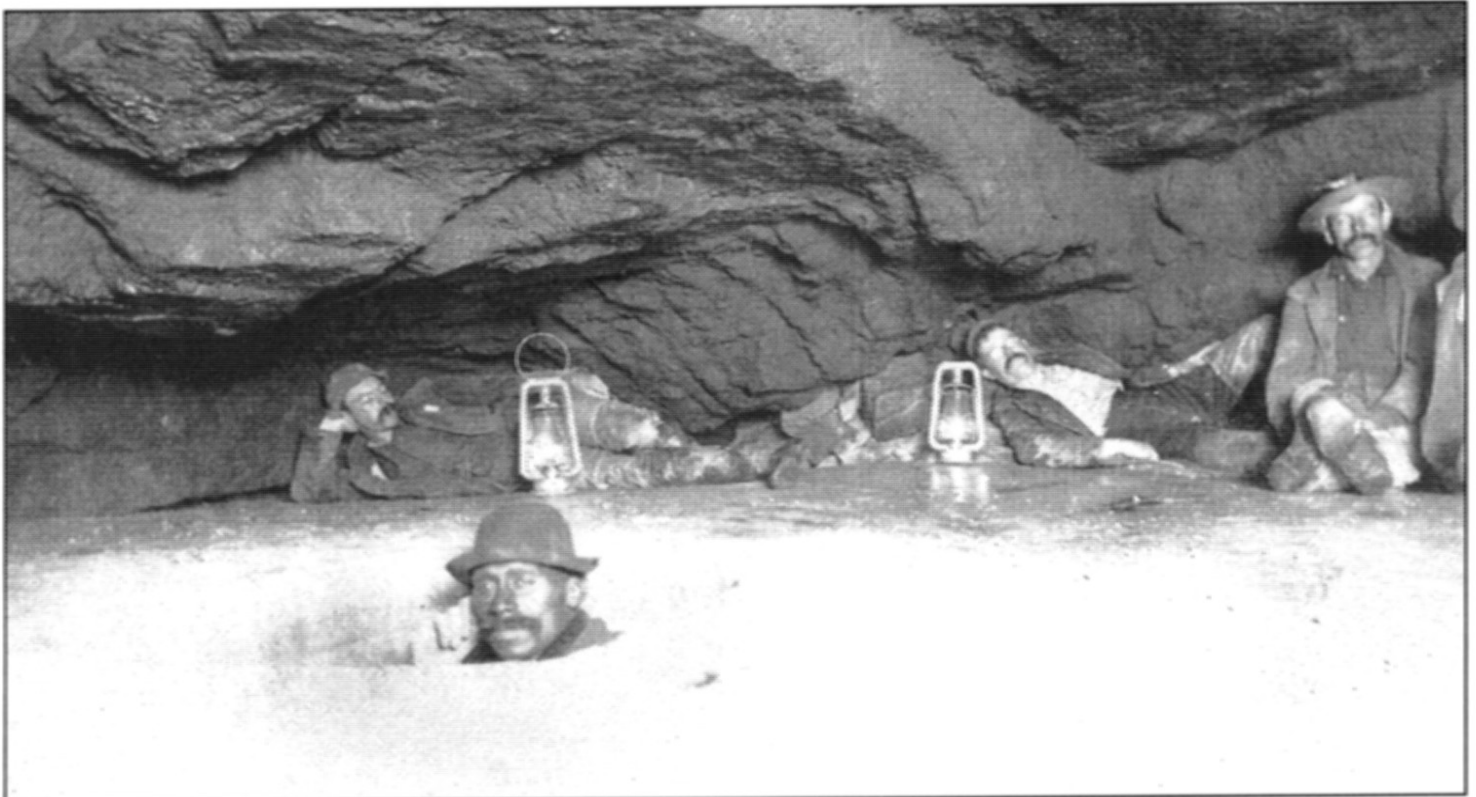
This section also included engravings and articles that appeared in popular magazines about the building of the New Croton Dam, some opposing the project, as well as illustrations from *Scientific American*. There were copies of the Official Reports of the New York Aqueduct Commission, from 1895 to 1907, postcards,

documents on the labor strike at the dam (1900), and workers' pay scales. The Tompkins family had a very close connection to the New Croton Dam, as John M. Tompkins was the Superintendent of the Croton Reservoir for 40 years. He raised his children and grandchildren in the valley. His tool chest is a treasured souvenir. Other items preserved are a light globe from the outside of the second gatehouse (1907-60) and a rain gauge.

Two odd photographs caught my eye, the first showing three workmen resting in the upper cave of a New Croton Aqueduct tunnel. It was necessary to excavate a space larger than the water channel to provide for sound construction. The water would be contained in a cast-iron liner, which consisted of curved sections bolted together. Because the liner could not be made watertight, the space between it and the rock walls was filled in with a concrete grout. This required 18 inches of grout over the cast-iron pipe. Access to the void was through an opening at the top of the tunnel. The photographer's assistant whose head popped up through the opening at the crown of the aqueduct was obviously caught off guard when he had documented a concrete pour.

The second photograph showed ladies and gentlemen in splendid gala finery at the official dinner

Continued on page 6

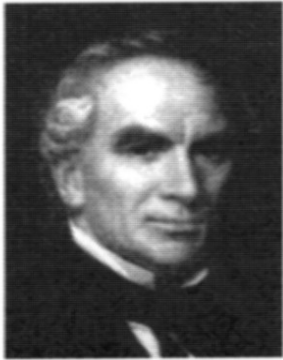


*New Croton Aqueduct workmen; photographer assistant's head in foreground. 1889. See text.
(Courtesy of Croton-on-Hudson Historical Reference Room and Yorktown Museum.)*

Croton Visionaries Recognized in Talk at Friends' Annual Meeting

The Friends' annual meeting for 2004 was held on November 18 at Rockefeller State Park Preserve and featured a talk by vice president Robert Kornfeld, Jr., who highlighted several key but little known figures in the history of the Old Croton Aqueduct.

Primary among the visionaries of the Croton Waterworks was Myndert Van Schaick—philanthropist, social philosopher, and public official. Van Schaick was a fervent advocate for constructing and later enlarging the Aqueduct. He served in many capacities from the 1830s to '60s, writing the original legislation and serving as president of the Croton Aqueduct Board during two defining periods. He has been regarded by many as "father" of the Old Croton Aqueduct.



Myndert Van Schaick.
(From *"Water for Gotham: A History,"* G. Koepfel, 2000.)

Another visionary, David Bates Douglass, the Aqueduct's first chief engineer, was a pioneer of both civil engineering and landscape architecture in the U. S. Douglass laid out the entire original system, prepared detailed surveys of the route, and planned all of the primary structures. "When we experience the Aqueduct today, to a

large extent we are experiencing a landscape designed by Douglass," said Kornfeld. His went on to trace the evolution of the original ("Old") Croton Aqueduct from the 1842 opening to the addition of its much larger sister conduit, the New Croton Aqueduct—headed by long-serving Croton engineer Benjamin S. Church—and the eventual full development of the Croton system, with a network of a dozen dams and feeder reservoirs in Westchester and Putnam counties.

A number of interesting facts emerged. According to Kornfeld, it was Francis D. Phelps, of the family memorialized by today's Phelps Memorial Hospital Center in Sleepy Hollow, who first thought of using the Croton River for New York's water supply. And St. Paul's Chapel, which famously survived the attacks of Sept. 11, 2001, also survived the great fire of 1776 thanks to a bucket brigade, often the city's only means of fighting fire before the Croton Aqueduct.

Need for preventive maintenance. Hastings member Michael Ambrosek's question about erosion and drainage problems on the Aqueduct led to a discussion of the importance of preventive maintenance

of the Aqueduct's overburden of packed earth and embankment facings, culverts, and bridges. The Friends and State Parks agree on the need for a systematic condition survey along the Aqueduct's 26-mile length in Westchester, and hope to form a committee of qualified volunteers under Bob Kornfeld's direction to participate in such an effort.

The meeting was presided over by Friends president Mavis Cain, who was reelected to another term as part of a slate of candidates for officers and board presented to the members. The Friends thank Karen Schatzel and William Cassella for their efforts as Nominating Committee. The Aqueduct's new State Park Manager, Peter Iskenderian, was introduced. Thanks as well to all the members who contributed refreshments and time to a lively and informative meeting.



High Bridge a Feature of April 12 Program

The High Bridge, linchpin of the Old Croton Aqueduct and the oldest bridge in New York City, will be a featured subject of "New York City's Water Supply System," a program about historic and contemporary aspects of the city's water supply infrastructure. Robert Kornfeld, Jr., vice-president of Friends of the Old Croton Aqueduct, will discuss the bridge's history, and a representative of the Department of Transportation will report on an engineering study now assessing the bridge's condition. They are part of a panel of five speakers, moderated by Gerard Koepfel, author of *Water for Gotham: A History*. The panel will include a "sandhog" who has worked for 30 years on the Third Water Tunnel.

Admission is free to the program, which takes place **Tuesday, April 12, 6:30 to 8:30 pm**, at the CUNY Graduate Center, 365 Fifth Ave. between 34th and 35th Streets (the former B. Altman department store). The Gotham Center for New York City History and High Bridge Coalition are sponsoring the event. The Friends are an active member of the Coalition, which is campaigning for a reopening of the bridge as a unique greenway crossing of the Harlem River.

Call 212-817-8215 to register or visit www.gothamcenter.org. Reservations will be honored until 6:25 pm, after which admission is first come, first served. Join us for an interesting evening!

Springtime Insects of the Old Croton Aqueduct

Lawrence Forcella*

After the Vernal Equinox, most people look forward to the pageant of emerging flowers as a sure sign of spring. Few realize that at the same time, insects can be observed slowly beginning to emerge from their own winter slumber. A delightful way to observe both at the same time is with a walk on the Old Croton Aqueduct.

The trail meanders past fields, gardens, wetlands and great swaths of woodland, creating a "greenway" of varied insect habitats for many miles. Along many stretches, forest and field grow right up to the edge of the path. The green border of plant growth will always contain insect life – often, entire thriving ecosystems where predators stalk or ambush unwary prey. The trail's open spaces also create a flyway for aerial insects, while sun-loving insects can find a place to bask. Woodland species can be observed as they cross or travel down the path, often in search of flowers on which to feed.

Spring is a unique time for insects on the Aqueduct, as many of the emerging species can only be observed at this time of year. Many passed the winter hibernating within the ground, beneath brush and stones, or inside hollow trees and rotten logs. A few are described briefly below; for more detailed descriptions, please visit www.godofinsects.com.

While most moths and butterflies pass the winter inside chrysalids and cocoons, those that emerge in late March and early April sequestered themselves for the winter, hibernating as adults. The most common of these is the Mourning Cloak (*Nymphalis antiopa*). The topside of its wings is a rich, velvety purplish-brown; the outer edges are marked with a broad band of dirty yellow, on the inner edge of which is a black band containing a row of blue spots. Though a butterfly of the woodlands, it loves to sun itself and can be found along the sides of the trail basking in patches of sunlight,

wings outstretched.

Another, smaller hibernating butterfly that can be seen very early is the Comma (*Polygonia comma*). The topside of their wings are colored a rust-brown and marked with blotches of black, with a broad, dark margin on the hind wing. The underside is a swirl of brown tones that afford it camouflage when it is at rest with its wings closed. It gets its name from the "comma" of silver that adorns the underside of each hind wing. These two butterflies are soon joined by the Spring Azure (*Celastrina ladon*) and the Cabbage White (*Pieris rapae*) – both of which over-winter as chrysalids.



The Comma (Polygonia comma) in its summer form, rust-brown with blotches and margins of black. (Photo by B. Strnadova)

Bees soon follow butterflies out of hibernation. The most conspicuous are the Bumblebees (*Bombus* spp.). Between April and May, these large, fuzzy bees can be seen ponderously flying up and down the trail, gathering pollen and nectar from flowers. Feel free to take a closer look, for Bumblebees are among the most docile of bees. Those active in early spring are all queens preoccupied with starting a colony. In April, they can be seen crawling about in fallen leaves on the edges of the trail. Bumblebees nest in the ground and these queens are looking for a hole to move into. Later in the season, after the colony has been

established, small workers will appear to take over the pollen-collecting duties from the queen.

Another insect that appears in early spring is the Water Strider (*Gerris remigis*). You may have to leave the trail to spot these insects because their habitat is the streams which intersect (and generally flow under) the Aqueduct. Water Striders hibernate in debris along the banks of these streams and emerge quite early in spring to mate and feed. They can be found skating about on the surface film, using four long legs to propel themselves along as they search for their prey: unlucky insects that fall into the stream.

Many other insects emerge in spring—too many to list here. A few more common ones to look out for are: predatory ground beetles, many kinds of flies and midges, various moths, and several different species of ants, bees and sawflies. Happy hunting!

*Lawrence Forcella is an entomologist living in Hastings.

A Farewell to Tony Rivera

Aqueduct users may not know crew member Tony Rivera, but Tony probably knows the Aqueduct trail inch by inch from the Croton Dam to the Yonkers line better than anyone else. It was with mixed feelings that Aqueduct managers, staff, and volunteers from State Parks and board members of the Friends feted him at the Aqueduct trailer on December 29, his last day of work before retiring. Past and present State Park managers are unanimous in singing Tony's praises. We wish him well, and hate to see him go.



Tony Rivera (left) and Tony Faillia. (Photo by C. Fahn)

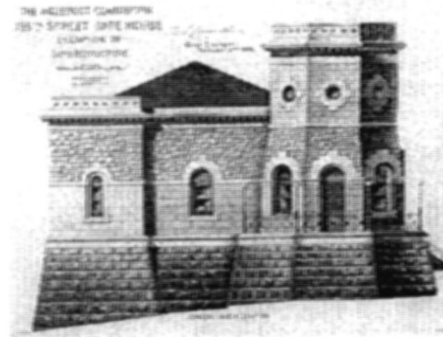
Tony started work on the Aqueduct in 1990. He told us of his love of nature and the outdoors, and how he had enjoyed visiting state parks on both sides of the Hudson when his children were growing up. After working at a variety of jobs and having his own business, yet not feeling ready to retire, he sought work with State Parks.

At the time, the Aqueduct trailer in Dobbs Ferry didn't exist—it was installed in 1994. The perennial flower border in front of the trailer and the vegetable garden nearby are Tony's handiwork. Mounds of debris and dumping on the trail were more common in the past—Tony attests to a major improvement in conditions in recent years. One regret he voiced is that he worked only a relatively short time with Tony Faillia. From 2003, when Tony F. started, the Two Tony's constituted the Aqueduct's year-round crew. They clicked instantly, "like brothers," and together enjoyed exploring the trail.

At the trailer, Tony—wearing his ever-present Mets cap—said he was looking forward to relaxing a bit, including *not* getting up at 5 a.m. We gave him a gift to remember us by, tried to express the appreciation we all felt, and wondered aloud how soon we could sign him up as a volunteer.

"The Gatehouse": Museum Exhibit Opens

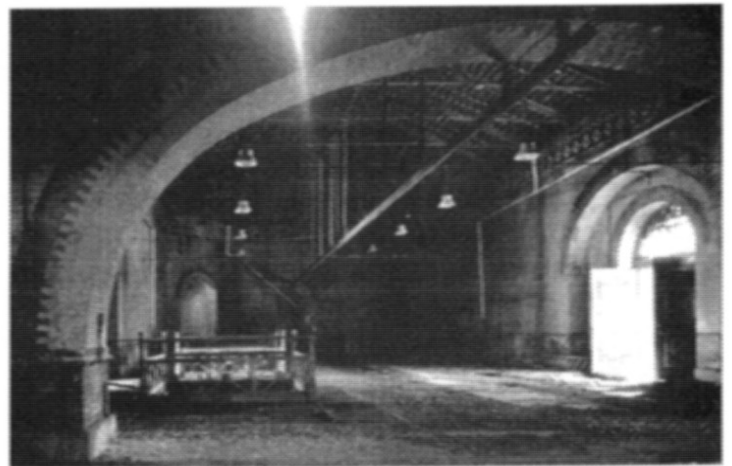
An exhibit about the project now underway by the Aaron Davis Hall Performing Arts Center to reconfigure the Croton system's 135th St. gatehouse (1890) into a theater venue is on view at the Museum of the City of New York. Aaron Davis Hall and the gatehouse are across Convent Ave. from each other, on the edge of the City College campus. The gatehouse has been closed up and unused since it was taken out of service as a water supply facility in 1984.



Convent Ave. elevation of the 135th St. Gatehouse. (From Report to the Aqueduct Commissioners, 1887, City of New York, B. S. Church, Chief Engineer, C. C. Manning, delineator; courtesy of J. Bartelstone)

The Old and New Croton aqueducts came together in this ornate stone building, whose waterworks extended up to 60 feet below grade. Its massive proportions and beautiful detailing are testimony to the respect and stature accorded great civic engineering works of the period. One feature of the exhibit are reproductions of some of the 19th century engineering drawings of the building—works of art in themselves.

The exhibit will be on view until June 7, 2005. The Museum is at 1220 Fifth Ave. at 103rd St. For information call 212-534-1672 or visit www.mcny.org.



Gatehouse interior. (Photo by C. Robinson, courtesy of Aaron Davis Hall.)

Introductory Walks on the Aqueduct and Visits Inside the Ossining Weir Chamber *led by Friends of the Old Croton Aqueduct*

Walks

Explore parts of the Aqueduct trail that may be new to you, including historic sites, natural areas, and stream crossings. Each walk about 2 hrs., 4-5 mi. round trip. Free. Leader: Hal Kaplan. Contact no.: 914-376-3156 (call beginning the previous Friday evening).

Sunday, April 17. Walk on the north end of the trail from the New Croton Dam to Crotonville and back. Meet at noon in parking lot of Croton Gorge County Park (off Rte. 129), 1/3 mi. NE of Croton.

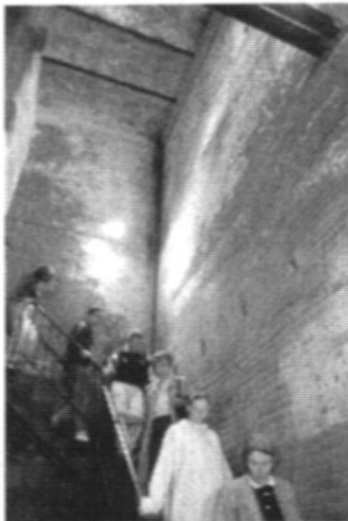
Sunday, May 15. Walk from Sleepy Hollow to Rockefeller State Park Preserve and back. Meet at noon where the Aqueduct crosses Rte. 448 (Bedford Rd.) about 0.2 mi. east of Broadway, Sleepy Hollow.

Sunday, June 26. Walk from Mercy College to Lyndhurst and back. Meet at noon where the Aqueduct crosses Hudson Rd., about 0.1 mile west of Broadway, Ardsley-on-Hudson.

Sunday, July 17. Walk from Hastings to Yonkers (Greystone) and back, with possible side trip into Untermyer Park. Meet at noon at Washington Ave. and Aqueduct Lane, Hastings.



Frederick Charles



Frederick Charles

Weir Chamber Tours

See a video and exhibit about the history of the Aqueduct, and cross the Aqueduct bridge over Sing Sing Kill to see the inside of the water tunnel. Free. Meet at 1 pm in Heritage Area Visitor Center, Ossining. Directions: turn onto Broadway from Highland Ave. (Rte. 9), approximately opposite Rte. 133. Walkable from Ossining train station. Contact no.: 914-478-3961.

Dates: Saturdays, as follows - April 9, May 14, July 9.

For **Saturday, June 11th**, Ossining Village Fair Day: Tours into the Aqueduct tunnel at intervals between about 10:30 am and 2:30 pm. Meet at stone weir chamber at far end of the Aqueduct bridge, near Heritage Area Visitor Center. Directions as above. Contact no.: 914-693-4117.

Valley of the Dam (continued from page 2)

celebrating completion of the Catskill Aqueduct in 1917, at the Waldorf Astoria in Manhattan, far removed from the sweat, mud, rocks, aching bones, and dangers faced by the men who did the real work.

The late Mary Josephine D'Alvia of Croton-on-Hudson—lawyer, political activist, historian, poet, and painter—was represented by several of her large, inimitable, semi-naïve canvases depicting the creation of the new Dam and the lives and struggles of the Italian

stonemasons, imported by the hundreds, who built the largest hand-hewn masonry structure in the Western world. Mrs. D'Alvia's mother was born at the foot of the dam, where the masons lived.

The Yorktown Museum, a jewel among such local community institutions, is blessed with volunteers of uncommon skill in installation design. To this show, lovingly researched and exhibited, sleds, ice skates, and snowshoes of the period were added, evoking wintry scenes of children and adults, who once, long ago, lived as our neighbors in the valley of the dam.



Calendar Notes

April 9-July 17: See p. 6 for listing of walks and weir chamber tours led by Friends of the Old Croton Aqueduct.

Sat., April 23, 9:30 am to 3 pm. Old Croton Aqueduct from Mercy College to Tarrytown, 5-6 miles. Dine at Tarrytown Diner and then return. Westchester Trails Assoc. Meet at Mercy College. For directions, call Howard Benedis, 914-478-3975.

Sat., April 30. Carl Oechsner will discuss the history of the Old and New Croton aqueducts. Walk on the trailway and drive to Ossining weir chamber for a view into the original aqueduct. Town of Cortlandt Recreation Dept. Meet at Croton Gorge Park on Rte. 129. For fees and information, call 914-734-1050.

Sun., May 8, 8:30 am. Mother's Day walk from Croton train station to Teatown Lake via Croton Aqueduct and dam. 8 miles. Shorewalkers. Leader: Dorothy Lourdou, 212-685-6443.

Sat., May 14. Same program as April 30, above.

March 2 to June 7, 2005: "The Gatehouse," exhibit at Museum of the City of New York. See p. 5.



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Your tax-deductible contribution helps to protect and preserve the trail.

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Please make check payable to Friends of the Old Croton Aqueduct. Send it with this coupon to the Friends at Overseer's House, 15 Walnut St., Dobbs Ferry, NY 10522-2109.

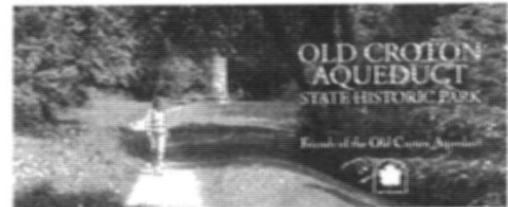
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Please let us know if you would like to volunteer.

We are most grateful to Celtic Corner Restaurant and Rochambeau Wines of Dobbs Ferry and Ricoh Business Machines of Purchase for their generous support of Friends' events and programs. Please give them your patronage.



Maps in New York City Shops

One or both of the Friends' color map/guides - of the Aqueduct in New York City and the Aqueduct in Westchester County (Old Croton Aqueduct State Historic Park) - can be purchased at the following shops in the Bronx and Manhattan:

Van Cortlandt House Museum,
Van Cortlandt Park, Bronx,
718-543-3344

Museum of the City of New York, Fifth Ave. at 103rd St., 212-534-1672

Urban Center Books, 457 Madison Ave. betw. 50th and 51st St., 212-935-3595

Posman Books, Grand Central Terminal, 212-983-1111



Mud Alert

Be kind to the trail! As the spring muds arrive, bikers and others using wheels on the Aqueduct should allow the trail to dry out first, to avoid creating ruts.

For inquiries about Old Croton Aqueduct State Historic Park or to report trail conditions, call Park Manager Peter Iskenderian at 914-693-5259.

"Old Croton
Aqueduct: Dobbs
Ferry Vicinity,"
by R. L.
Dickinson, from
New York Walk
Book, 7th ed.
(Revised), NY-NJ
Trail Conference,
2005.



Newsletter: Charlotte Fahn, *Editor*. News items, reminiscences, and comments welcome: 914-478-3961 or czfahn@yahoo.com or by mail c/o the Friends.

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Friends of the Old Croton Aqueduct is a private, non-profit, volunteer organization formed to protect and preserve the Old Croton Aqueduct. The Friends work to raise public awareness of the Aqueduct and trail, and to secure the resources that will enable this historic greenway to remain unspoiled in perpetuity. Address: Overseer's House, 15 Walnut St. Dobbs Ferry, NY 10522-2109; telephone 914-693-4117, www.aqueduct.org

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