



# Friends of the Old Croton Aqueduct

*Newsletter*  
No. 17, Spring 2004

## New Spillway Bridge at Croton Dam To Evoke Historic Design

To the delight of many, the bridge now under construction across the spectacular spillway of the New Croton Dam will resemble the well-loved 1905 original, whose image has graced so many postcards, photographs, and paintings. Helen Barolini of Hastings greeted the news with pleasure, saying "a return to a more traditional design is something I've long hoped would happen." Physical deterioration of the 1905 bridge from roadway salt and spillway spray led in 1975 to a replacement bridge of more modern design. Now, structural problems in the 1975 bridge have required its replacement.

Area residents and admirers of the great dam in Yorktown bemoaned the loss of the old bridge when it was taken down, says Ed Rondthaler of Croton-on-Hudson, who was born the same year the first bridge was completed. Christopher Tompkins, in his book of historic photos entitled "The Croton Dams and Aqueduct," writes:

"The year 1905 brought a new addition to the rising dam: the 200-foot arched [spillway] bridge, for which the New Croton Dam was famous . . . The span was a graceful structure against the backdrop of the jagged gorge. . . . Because of concern for its structural integrity, the old span was replaced with a modern, simple bridge that has never caught the attention of dam aficionados as well as the old bridge did."

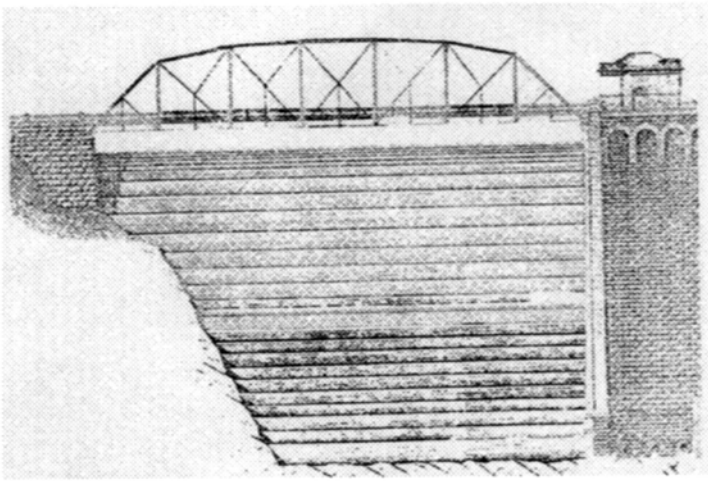
The original, 1892 contract for the dam showed only the notation "bridge" for the spillway bridge on its drawings, without a specific design. One early report

showed it as a through-truss steel bridge (see illustration). Discussions followed about what the bridge should like look and whether it should be granite (more durable, more expensive) or steel. The decision was for a steel arch bridge.

The current decision by the New York City Department of Environmental Protection, which has jurisdiction over the dam, to create a contemporary version of the original span was influenced by the dam's classical design and powerful presence, as well as the character of the surrounding landscape. DEP, working with the New York State Historic Preservation Office



*A rendering of the new spillway bridge at Croton Dam. (Courtesy of NYC Dept. Of Environmental Protection.)*



*An early plan for the spillway bridge. From Report of the Aqueduct Commissioners, 1887-1895.  
(Courtesy of NYC Dept. Of Environmental Protection.)*

and the city's Art Commission, together with the bridge engineering firm of Hardesty & Hanover, developed a design intended to integrate the dam, the bridge, and the natural surroundings.

There are differences between the 1905 bridge and the new design. Twelve columns, equally spaced to echo the detailing along most of the dam's face, will fill the spandrels - the two triangular spaces between the top deck of the bridge and the outer curves of its wide arch over the Croton River; the 1905 bridge had 18 of these vertical elements, with varied spacing between them. While the 1905 bridge was black and the 1975 span was a weathered dark brown, the new bridge will be silver-gray in color to blend with the masonry of the dam. To eliminate painting and reduce maintenance costs, the final finish will be obtained through a process called metalizing. Less visible will be such improvements as a higher load capacity, stainless steel reinforcements, and seismic constraints.



C. Fahn

*Bridge replacement in progress, November 2003.*

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In both the 1905 and the new bridge, the spandrel columns transfer loads from the deck level down to and along the arch over the river, whereas the 1975 bridge had most loads concentrated at the center - it looked like an arch but did truly not function as one, according to the current bridge engineers. In both the 1905 and new bridge, the narrow "arches" between the tops of spandrel columns serve a decorative purpose only.

Work on the new bridge began in August 2003 and is scheduled for completion by the end of this year, according to Jeffrey Busse, Senior Project Manager with DEP's Upstate Bridge Reconstruction Program. The construction plan has entailed removing part of the existing bridge, using the part remaining as a staging platform for starting the new bridge, and then removing the rest of the present bridge. This bridge is one of 17 within the Croton watershed's chain of reservoirs, all scheduled for upgrading.

Take a look for yourself as the work on the bridge proceeds. Visitors to Westchester County's Croton Gorge Park, located off Route 129 at the base of the dam, are treated to a water spectacle as the spilloff pours over the massive terraced stonework, with spray hitting the rock walls of the gorge. The roar of the water is constant, and rainbows abound.

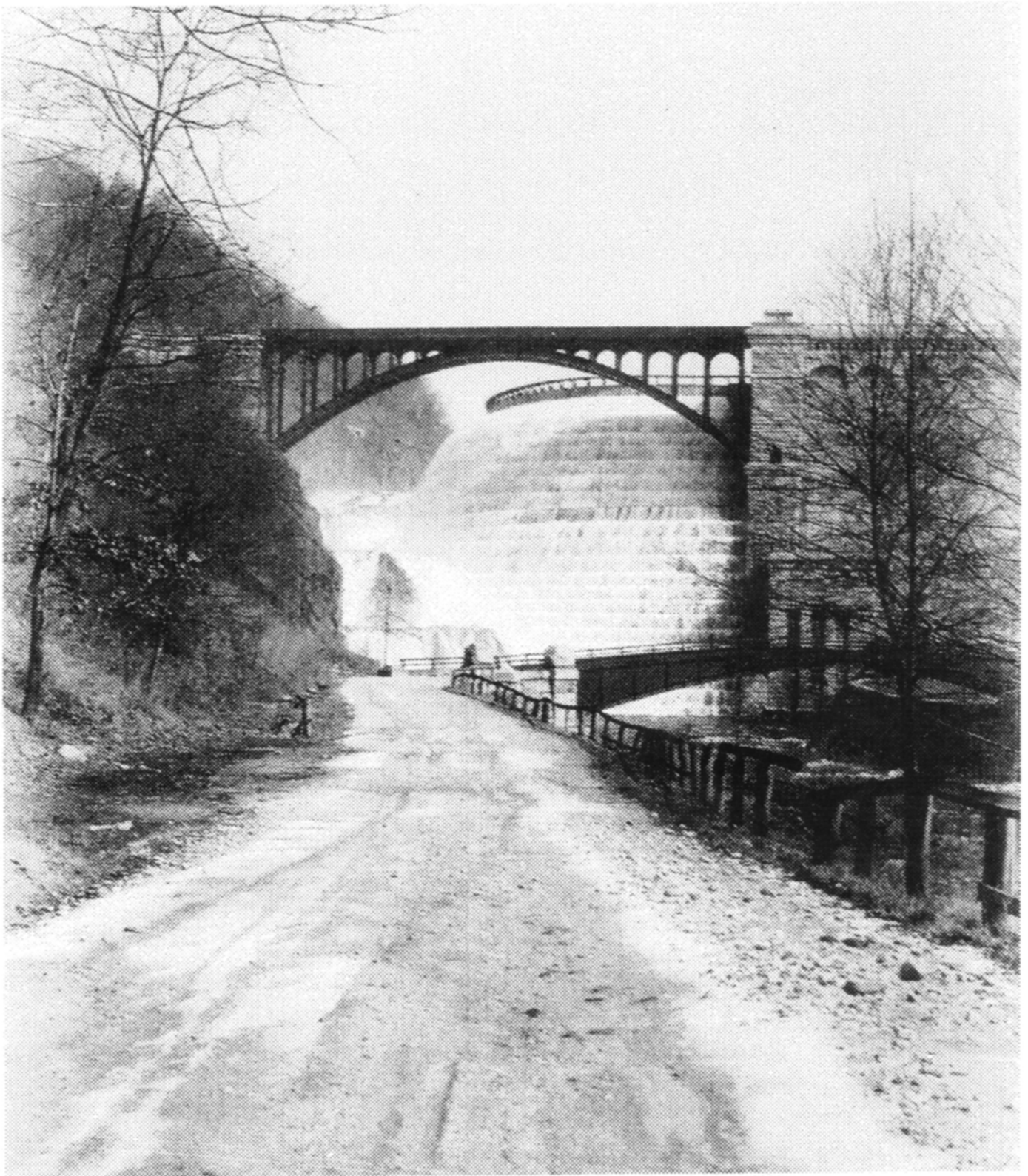
*Note:* For a beautiful on-line photo of the original bridge from the spillway side, go to [www.corbis.com](http://www.corbis.com)>Search. In the Search box, type New York City Water Supply. Click on image no. VV13408.

*(Thank you to Jeffrey Busse, Senior Project Manager, NYC DEP; Hardesty & Hanover, LLP, Bridge Engineering; and Kim Estes-Fradis, DEP Director of Education, for their assistance with this article. - Ed.)*

## Dam Centennial Plans

The years 2005-6 will mark the 100th anniversary of the New Croton Dam. Construction of the dam, sometimes cited as the largest masonry dam ever built, began in October 1892; the last stone was laid in January 1906. The enlarged reservoir created by the dam extended 20 miles behind it. The original Croton Dam of the 1842 (Old) Croton Aqueduct was submerged three miles upstream of the new dam (see back page).

As part of the centennial celebration, the Friends of History, based in Croton-on-Hudson, and the Croton Free Library are planning a series of events expected to include lectures, exhibits, and guided walks. If you have ideas for events, or wish to learn more, call Carl Oechsner, president of the Friends of History, at 914-271-3135.



### **The original spillway bridge at the New Croton Dam**

*The photo was kindly provided to the Friends of the Aqueduct by Peter Mintun of Washington Heights in Manhattan; the Friends learned of its existence from the very helpful staff of Morris-Jumel Mansion. It was one of the photos Mr. Mintun developed from a box of negatives he obtained from a neighbor of the Adam Priester family, whose home he had purchased. The*

*Priester family had lived in the house continuously since it was built in 1897. The box was about to be thrown away in 1979 after the last members of the Priester family died, when it was rescued by the neighbor, who kept it for the next 23 years. Russell Ulen, one of those who died in 1979, was a dam engineer and may have taken the picture.*



## Croton Taverns, Then and Now

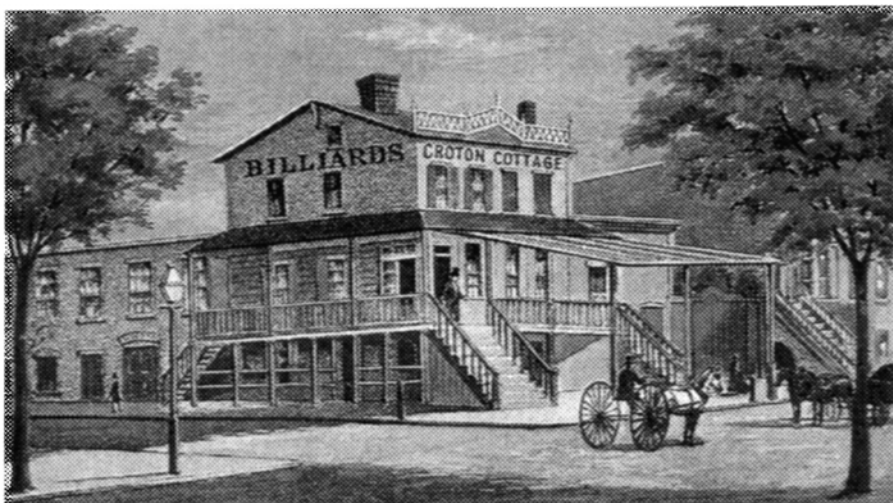
The charming edifice pictured here was Croton Cottage, at Fifth Ave. and 40th St. in Manhattan. The illustration is from the 1924 book, "Fifth Avenue Old and New 1824-1924" by Henry Collins Brown, written for the Fifth Avenue Association. The book states:

"In the years following the opening of the Aqueduct it was made the end of the afternoon drive from St. John's Park, Second Avenue and other fashionable sections, and Croton Cottage provided ice cream and other refreshments. It also had a curious 'maze' in its garden which greatly interested the country visitor. It was destroyed by fire during the draft riots. . . ."

Last year the Croton Reservoir Tavern was opened in midtown at 108 West 40th St., between Broadway and Sixth Ave., by a restaurateur who is a New York history buff. The restaurant is about a block from where the Old Croton Aqueduct's distributing reservoir stood from 1842 to 1899. The reservoir is pictured on a large wall mural just inside the restaurant entrance and on its business cards. Quoting from the Brown's book:

"The Old Croton Aqueduct [reservoir]—the most famous Metropolitan structure of its time—extended from 40th to 42d Street, on the land now occupied by the imposing building of the New York Public Library.

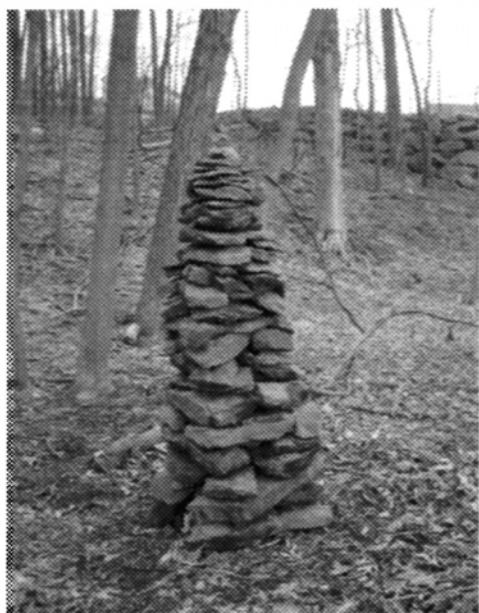
"The year 1842 marked what was perhaps the greatest forward stride in the city's history—the general



*Croton Cottage, 1850 (From "Fifth Avenue Old and New")*

introduction of running water . . . that stupendous improvement . . . When the reservoir was first completed it had a spacious promenade all around the top of the walls upon which gay and animated groups constantly gathered. Old letters speak of the delightful scene at night, with the moonlight dancing on the water. In the daytime, charming views of Long island, the distant hills of Westchester, and the lordly heights of the Palisades provided a fascinating panorama. . . ."

Barbara McManus of the Hastings Historical Society notes that Henry Collins Brown lived in Hastings and was one of the founders of the Museum of the City of New York.



A. Senior

### The Aqueduct in the Gallery: Cairns on the Trail

A series of Aqueduct-inspired art works figure prominently in "Outside/In: Interpreting and Transforming Our Experience of Landscape," an art show at the Exchange Gallery in White Plains. Manhattan-based artist and Friends member Andrew Senior, curator of the show of landscape-related works by five Westchester artists, will construct an installation of stone and digital prints inspired by his personal journeys along the length of the Aqueduct. In conjunction with the gallery show, Mr. Senior is constructing a series of temporary cairns beside the Aqueduct footpath, to serve not as waymarkers, their traditional function, but as art elements referencing several different aspects of the natural and human-influenced landscape.

Find out more — the show will be on display from April 16 to May 28, 2004, Wednesday-Saturday, noon to 5 pm, at The Arts Exchange, 31 Mamaroneck Avenue, White Plains; tel. 914-428-4220; [www.westarts.com](http://www.westarts.com).

## A High Bridge 155th Birthday Party

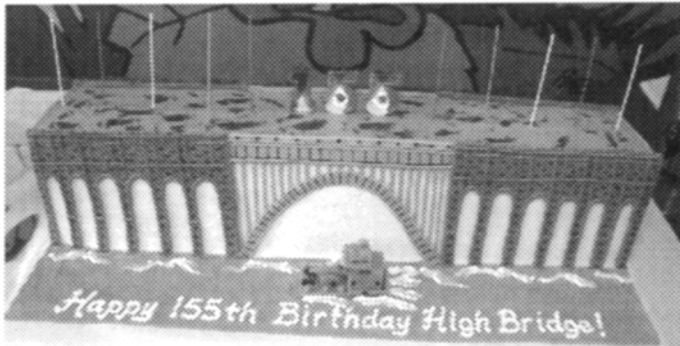
If enthusiasm alone could reopen the High Bridge, it would be a "done deal." Close to 300 people in high spirits, including 200 school children, gathered on January 14 at the Highbridge Recreation Center in Manhattan's Highbridge Park for a (slightly belated) 155th birthday celebration of the landmark 1848 span. Now the city's oldest bridge, it was the centerpiece of the Old Croton Aqueduct, carrying Croton water across the Harlem River to New York City.

The centerpiece of the party was a superior chocolate cake frosted to look like the bridge. To complete the scene, at one end of the edible bridge was the New York Botanical Garden's model of beautiful High Bridge Tower, made of plant materials. Party hats and "Happy Birthday" preceded the cake-cutting.

Four city commissioners were present—Brian Andersson of the Department of Records, Adrian Benepe of Parks, Christopher Ward of Environmental

Protection, and Iris Weinshall of Transportation—as well as Bronx Historian, Professor Lloyd Ultan, and numerous local officials. They talked of the bridge's history and the days when it was a popular and easy crossing—no vehicles!—between the Bronx and Manhattan, and looked to a future when it could again be enjoyed. Capping the program, storyteller Margaret McCandless sang verses of the Croton Ode.

A lasting part of the day's events was the unveiling, next to High Bridge Tower, of a generously illustrated interpretive sign about the bridge and the Aqueduct, with text in English and Spanish; an identical sign was also installed in Highbridge Park in the Bronx, at the opposite end of the bridge. The sign was designed for the High Bridge Coalition by Ann LaFond of the Parks in Print program of Partnership for Parks. Kudos are due to the Parks Department's Special Events team, who put together a memorable party.



NYC DEP

*The High Bridge cake. Beneath the "bridge," on the Harlem River, is one of DEP's boats that picks up debris from the city's waterways.*



B. Goodman

*The new interpretive sign on High Bridge Tower terrace, overlooking the bridge.*

## "High Bridge in a Box": A New Teaching Tool

In an ambitious effort to bring the history of the High Bridge and Old Croton Aqueduct into New York City schools, the High Bridge Coalition is sponsoring "High Bridge in a Box," a series of integrated lessons for 4th to 6th grades accompanied by a box of materials to support a mini-unit on the topic. East River C.R.E.W. (for "Community Recreation and Education on the Water") has done the creative development of the teaching unit, which will be available in English and Spanish. A workshop was held on March 22 for teachers who volunteered to try out the lesson plans and box materials, currently in a pilot phase.

The vision behind the project is to bring to life the history, science, engineering, and social studies aspects of the Aqueduct as a New York water supply landmark, and the bridge that was its centerpiece. The High Bridge Coalition is committed to preserving and

reopening the bridge to public use as the Manhattan-Bronx link in the Old Croton Aqueduct greenway.

The box itself includes a pen pal project; a model students can build of how a water tower works; maps on which students can trace the path of the Aqueduct and compare their environment to the watershed; water quality testing supplies; "Drip" program materials on water conservation; a laminated timeline poster for students to fill in; and a paper model of the bridge. High Bridge in a Box is funded by the Catskill Watershed Corporation in partnership with the New York City Department of Environmental Education, and is authorized for New Teacher Staff Development credit by the NYC Department of Education. Tori Gilbert, the teacher leading the project and president of East River C.R.E.W., can be contacted at 212-427-3956 or [vgilbert@nyc.rr.com](mailto:vgilbert@nyc.rr.com) for further information.

## Gwen Thomas Moves On to the Trails of Arizona

One of the nicest things about the Aqueduct trail is the people who walk it. New to Dobbs Ferry, Gwen Thomas walked the trail, walked into the trailer, and met Brian Goodman, who was then site manager. From that day in the late nineties, Gwen became actively involved with the Friends of the Old Croton Aqueduct, and in 2000 became co-president with Mavis Cain.

Gwen was a natural for the Friends. With a Masters degree in Forest Sciences from Yale and experience in South America, she brought a compelling interest in the outdoors to our group. Two golden Labs and a baby meant that she walked the trail daily in Dobbs Ferry and Hastings and was always aware of what needed to be done to keep the trail beautiful.



C. Fahn

*Gwen Thomas (right) and Mavis Cain*

In Hastings, she noted that the old quarry was overburdened with the

village's garden waste, causing seepage into the Aqueduct that borders it. With baby Stephanie on Gwen's back, she and Mavis delivered to every neighbor's house a flyer they had prepared. The ensuing meetings led to cessation of dumping and the start of a cleanup plan—a triumph for Gwen. Another successful project, spearheaded by Gwen with the Dobbs Ferry PTA, was a cleanup that brought out 40 adults and kids who cleared mountains of trash from the woods bordering the Aqueduct, restoring a beautiful green view to the west for trail walkers.

Gwen wrote an article for our newsletter about a couple in Briarcliff who had donated an easement on their land abutting the Aqueduct, thereby preserving this buffer in perpetuity. And her sprightly brochure, *Doggie Do's and Don'ts*, remains a valuable guide to dog walker etiquette on the trail.

Now Gwen and her family have moved to Arizona, where husband Tom has taken a new job at Thunderbird University in Phoenix. Gwen has become involved with a group that monitors the trails in Thunderbird Park. It's nice to know she continues contributing to the outdoor life of a community.

Good luck, Gwen! We miss you. —Mavis Cain

## Turning 40 - on the Aqueduct

Benjamin Dean

I hadn't thrown a party in years when I decided to do so for my 40th birthday. A walk in the woods with family and friends seemed far better for mixing than the usual drinks in a loud, crowded bar (though we got around to that eventually).

What decided me on the Old Croton Aqueduct trail were a few things: the ease of the walk and breadth of the path (both good for conversation), the accessibility of the train (if anyone wanted to turn back early), the charming towns along the route, the closeness to the Hudson—a river I live two blocks from, in Greenwich Village—and the thought that we might see it better through the bare trees of winter, and the encouraging response I got when I called the Friends of the Aqueduct and spoke to Mavis Cain. (And one other thing: the excellent map, which I'd bought in Grand Central Terminal.)

Mavis helped me plan our route - we left the train at Greystone Station and came back from Irvington, having walked as far as Villa Lewaro after an Irvington lunch - and gave me the confidence that this really was a good idea. And what a success it was! We were lucky with the January weather, had a chance to talk in changing clusters of a few here, a few there, to be active but not athletic, see new sights and breathe better air, take a beautiful train ride, and learn a bit of history—all without cars. Mavis and Charlotte Fahn met us at the trailer across from the Overseer's House and their welcome—complete with trail biscuits—topped off a day that had just the right balance of relaxation and adventure.



C. Fahn

*Ben Dean (standing, far left) and friends on January 17, 2004, at the Aqueduct trailer in Dobbs Ferry.*





## Calendar Items

**Saturday, May 1, 9:00 am** (rain date, Sunday, May 2nd): A hike on the Old Croton Aqueduct, led by Carl Oechsner for the Friends of History. Meet in parking lot of Croton Gorge County Park, off Route 129. Call 914-271-3135 to sign up.

**Saturday, May 1, 10 am.** Guided walk, 7-8 miles from Greystone (Yonkers) to Lyndhurst. Register with Westchester Community College, 914-785-6830 (option 5 on voicemail message).

**Saturday, May 1, 10 am-3 pm.** Help New York Restoration Project revitalize the Old Croton Aqueduct trail in Manhattan's Highbridge Park. Part of a series of workdays on this part of the trail. For information: Adam Chazan at 212-333-2552 or achazan@nyrp.org.

**Saturday, May 22, 8 am.** BirdWalk on the Aqueduct, about 2 miles roundtrip, led by Michael Bochnik for the Hudson River Audubon Society. Meet at Lenoir Nature Center (feature 50 on the Friends' Aqueduct map), 19 Dudley St., Yonkers. For information: 914-237-9331.

**Saturday, June 5.** National Trails Day. For details of events at Highbridge Park, Manhattan, call 212-927-9568 or see [nycgovparks.org/ThingsToDo/UpcomingEvents/NorthManhattanParksEvents](http://nycgovparks.org/ThingsToDo/UpcomingEvents/NorthManhattanParksEvents), shortly before the date.

**Wednesday, June 9, 6-9 pm.** Uptown Arts Stroll opening reception at Highbridge Park, W. 173rd St. and Amsterdam Ave., Manhattan, on the High Bridge Water Tower terrace. For info: [mcollinsnyc@yahoo.com](mailto:mcollinsnyc@yahoo.com) or [www.artistsunite-ny.org](http://www.artistsunite-ny.org), or call 212-568-8500.

**Monday, June 21, 7:30 pm.** Ed Rondthaler presents a talk and slide show on the Croton River. At the Croton Free Library, sponsored by the Friends of History. For information: 914-271-6612. See [www.aqueduct.org](http://www.aqueduct.org) for updates and new listings.

### MEMBERSHIP COUPON

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

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| <input type="checkbox"/> Renewal          | <input type="checkbox"/> New Member        |
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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.*

## Aqueduct News / In Brief

"Signs of Life," an exhibit at the Hastings Historical Society of posters and other ephemera from the Hastings community, includes several hard-hitting broadsides opposing the **proposed installation of a high-pressure gas pipeline** in the Aqueduct right-of-way in 1993. Call 914-478-2249 for hours. . . . A guide to an easy, **three-mile loop hike in Van Cortlandt Park** on the Putnam and Old Croton Aqueduct trails appeared in the Jan. 27, 2004, issue of the Bergen Record, written by Daniel Chazin of the New York-New Jersey Trail Conference. Send a stamped, self-addressed envelope to the Friends if you'd like a copy. . . . The novel "Pompeii" by Robert Harris (2003) vividly depicts the centrality of **aqueducts in the life of Roman cities**, focusing on the 60-mile Aqua Augusta—the Empire's longest—which supplied water to the coastal cities of the Bay of Naples. The hero of the story is the young aquarius, or engineer, in charge of the huge aqueduct. Our own Croton Aqueduct, 41 miles long, was modeled on Roman aqueducts.

## Mud Alert

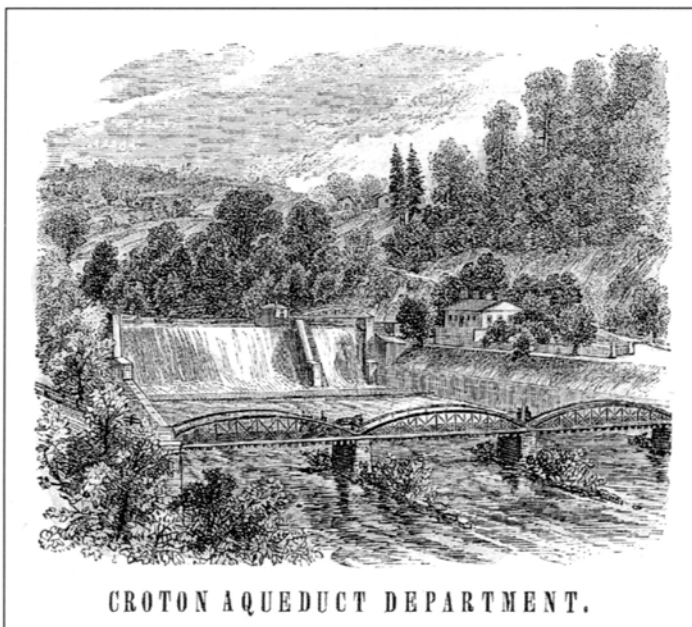
Be kind to the trail! As the spring muds arrive, bikers and others using wheels on the Aqueduct should allow the trail to dry out first, to avoid creating ruts.



## Map Orders

To order the Friends' full-color, award-winning map/guide by mail, send a check for \$5.25 (includes shipping and handling) to Friends of the Old Croton Aqueduct, Overseer's House, 15 Walnut Street, Dobbs Ferry, NY 10522. For the name of the retailer nearest you, call 914-693-4117.

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



*The original Croton Dam, 1842, now submerged  
in the Croton Reservoir. From a report of the  
Croton Aqueduct Department, c. 1866.*

**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  
Overseer's House  
15 Walnut Street  
Dobbs Ferry, NY 10522

**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](http://www.aqueduct.org)

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