

WATERWORKS

NEW YORK STATE FEDERATION OF LAKE ASSOCIATIONS, Inc.

Winter 1995

Where Do Fish Go In Winter?

When lakes turn to ice
And are covered with snow,
What becomes of the fish
Who are living below?

It's not so exciting
Down under the ice,
But fish find it restful
And really quite nice.

It's dark and it's cold,
But the water's not frozen.
In fact, it's just perfect
For fish to reside in.

From *"Where Fish Go In Winter and
Answers to Other Great Mysteries"*
by Amy Goldman Koss



Don't miss Scott Kishbaugh's
"Lake Quiz" on page 3

Learn about Lake Otsego, site of
the Annual Conference in
Cooperstown on page 5

Where Fish Really Go is answered
by D. Green & Ed Mills on page 2

1995 ANNUAL CONFERENCE COOPERSTOWN - MAY 5, 6 & 7

You are all invited to come to Cooperstown! This year's conference will be held in beautiful Cooperstown on the shore of Lake Otsego. Meetings, presentations, plenary sessions and concurrent sessions will be held in Bassett Hall, a facility of the Mary Imogene Bassett Hospital, very near the center of town.

Dr. Willard Harmon, Director of the Biological Field Station on Lake Otsego, will be conducting field trips and concurrent sessions at this facility throughout the conference. Otsego 2000, Otsego County Conservation Association, and others will discuss some of the successful programs and future plans for the lake.

Other presentations will include include discussions on large lakes and small lakes (a request from last year's conference), dealing with bureaucracy at the local and state level, update on the Clean Lakes Section of the Clean Water Act, fund raising for your Lake Association, phytoplankton, biological monitoring parameters; and the committee is still working on more!

The Friday night "Open Forum" will again be the place for sharing of ideas. There will be a dinner on Saturday night at the Peppermill Restaurant for participants and their guests, preceded by a reception at Bassett Hall.

This is an ideal location for the whole family. While participants are at the conference, the rest of the family can be taking in the points of interest in Cooperstown. Besides the Baseball Hall of Fame, there is Doubleday Field, the Farmer's Museum, the Goodyear Swamp, golf at the Otsego Golf Club, numerous galleries and shops. For more information write the Chamber of Commerce, 31 Chestnut Street, Cooperstown, NY 13326. (607)547-9983

Since participants will have to make their own room reservations, you will find a partial list of accommodations in and around Cooperstown on page 4. Please do this as soon as possible as Cooperstown is very busy year around.

Remember this year's conference is a month earlier - May, not June.



Where Do Fish Really Go In Winter?

Observations From New York Waters

by David M. Green & Edward L. Mills

What happens to fish in the winter is an interesting question. Winter has different meanings to different fish depending on water temperature and climate. For example, winter to a Florida fish means different things compared to an upstate New York fish. Here, we consider winter to be a cold dormant period for fish. There is not a lot of information on fish in the winter- maybe that is because fishery biologists retreat to their desks, analyze data, and write reports in the winter! Nevertheless, some of us do get out and observe fish in the winter.

Biologists often characterize freshwater fish into three categories: coldwater, coolwater, and warmwater fish. You might think that there are no warmwater fish in New York, but that is not true! These categories actually refer to the upper temperatures preferred by these different fish groups. Coldwater fish include all of the trout and salmon species and burbot (freshwater cod); coolwater fish are represented by walleye, yellow perch, and northern pike; and largemouth bass, sunfish, and bullheads are considered warmwater fish. While the three categories refer to upper temperature preferences, they also reflect feeding activity and movement at lower temperatures. Thus, coldwater fish are more active and feed more at colder temperatures, and warmwater fish become more dormant as temperatures decline. Bass have been observed in an unconscious state, lying on their sides, appearing dead, when exposed to temperatures just above 32F, while rainbow trout are more active at this temperature. Some North Atlantic Ocean fish even have a natural antifreeze in them so they can remain active below normal freezing temperatures.

Generally fish will seek the warmest water they can find in the winter. Water has a unique property that is very important to the survival of aquatic organisms. It is most dense at 39F, so as water cools, the warmest water is eventually near the lake bottom. The 32F water is lighter and floats, then freezes. If water didn't have this unique property, lakes would freeze from the bottom up and kill most organisms. Because the warmest water is near the bottom, you will generally

find fish in deep water in winter. In streams they will occupy the deepest holes or move downstream to areas where the stream is larger and deeper. Whatever the types of fish, winter activity, food, and water temperature are linked and influence where fish are found. Just ask a winter fisherman, fish usually occupy the deeper, warmer waters of lakes and this is where fish are caught. In fact, most of their catch consists of cold or coolwater fish - fish that commonly feed during the winter.

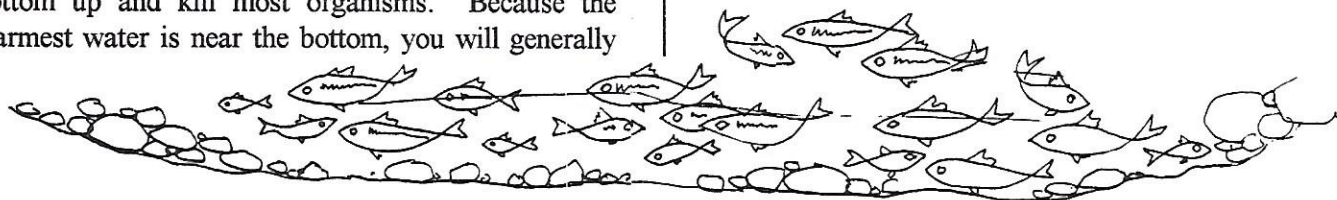
In winter 1991-92, we observed fish with a video camera under the ice in the tributaries of the Hudson River. Fifty to 90 % of the largemouth bass from the 40,000 acres of the freshwater tidal portion of the river moved into five locations in creek mouths or bays totaling only a little more than 300 acres. The bass were active, swimming slowly about, sometimes eyeing and bumping into the camera. In southeastern New York, young bass have been observed buried in the leaf litter around the edge of ponds during winter.

While feeding by warmwater fish is greatly reduced in the winter, coolwater fish feed more actively, and coldwater fish feed very actively in winter. Trout and salmon are active winter feeders. Lake trout have the coldest water temperature preference of any trout in New York and can even be found cruising near the surface of the unfrozen Finger Lakes in December.

Winter is a unique time in the life of a fish. They tend to aggregate mostly in habitats where they can find the warmest temperatures. However, aggregation can increase the risk of being located and caught by anglers. Life of a fish in winter is a restful period as feeding activity and movement are low. As spring and summer temperatures approach, life of a fish becomes more complex as needs for food and risks of predation increase. Perhaps if a fish had its choice, it would choose winter as its favorite season!

David M. Green & Edward L. Mills are with the Department of Natural Resources, Cornell Biological Field Station, Bridgeport, NY

Ed. Note: Due to space limitations, this article had to be edited. Complete copies are available from the NYS Federation of Lake Associations office.



The Ultimate Lake Quiz

by Scott Kishbaugh

With the recent popularity of the movie, "Quiz Show," and the continued fascination with trivial pursuits, now is the time to offer to all Waterworks readers the first (and perhaps, last) Lake Quiz. The answers to the following questions, plus one bonus question, should provide everything you wanted to know about New York State lakes (but didn't really want to ask). It is worth noting that (nearly) all of the lakes named in the quiz are real NYS lakes. Perhaps the only difference between this quiz and those fancier quiz shows is that even all correct responses will win you nothing, save the immense satisfaction of possessing a wealth of knowledge about NYS lakes. But, frankly, isn't that sufficient reward in and of itself?

1. What is the largest lake in New York State (by surface area)?

- A. Lake Ontario
- B. Oneida Lake
- C. Chautauqua Lake
- D. Big Pond

Answer: A and/or B. The largest lake is Lake Ontario (the portion in NYS is approximately 5.9 million acres, roughly the size of Long Island). The largest lake completely within the state is Oneida Lake at 51,070 acres.

2. What lake has the longest shoreline (lakes wholly within the state)?

- A. Cayuga Lake
- B. Lake George
- C. Oneida Lake
- D. Seneca Lake

Answer: B. Although it is the smallest of the four choices, its 131 mile shoreline is the longest among lakes completely within NYS. Among all lakes, Lake Ontario (at 356 miles) and Lake Champlain (at 191 miles) have the longest shoelines.

3. What is the most common name for a lake in NYS?

- A. Clear
- B. Round
- C. Mud
- D. Supercalifragilisticexpialidocious

Answer: C. While many lakes are commonly called "that *&^%\$# lake" (when weeds entangle your boss' kids during your "win points with the boss" swim party), the most commonly accepted name for lakes in NYS is Mud Lake (not spelled Mudd). There are at least 74 lakes or ponds in excess of 6 acres with this name, versus 22 Clear Lakes/Ponds and 31 Round Lakes/Ponds.

4. How many lakes are there?

- A. 15,000
- B. 7,500
- C. 4,750
- D. 996

Answer: B. There are about 7,500 lakes in all, nearly 3,000 of these are found within the Adirondack Park. While this is not as many as in Minnesota, the state of 10,000 lakes (actually 15,300) or Alaska (approximately 3,000,000 lakes over 5 acres), it still makes New York one of the water-richest states in the country.

Please turn to page 6

From the President

Dear Members,

The Federation's Board of Directors has made some very positive decisions in order to, we hope, serve you better.

Many of you have been displeased with the spartan college dorm accommodations at the Annual Conference, so this year you will be able to choose where you would like to stay. Also, the earlier date in May means you won't have to leave the lake on a beautiful weekend in June. If these new arrangements please you, let us know by attending the conference.

As noted in this issue, our new office is in Findley Lake. We feel that the arrangement with Martha Keppel is a very good management decision for the Federation and will strengthen all of the membership services. We also realize that Findley Lake is a very long distance call for some of you, so we have installed an 800 number for your convenience.

The Statewide Lake Management Needs/Assessment Committee has evolved into the Statewide Lake Man-

agement Forum. You will hear more about this at the conference. Meanwhile, the Forum is presenting its message to water quality and related groups across the state throughout the spring and summer.

The Board of Directors has voted to divide the State into regions for the purpose of electing representatives to the Board from each of the regions. The regional directors will meet on an annual basis with the members in their region thereby giving members a better link to the Board and giving the Board a better understanding of the membership needs.

Your Board of Directors is a very conscientious group and is always working to serve you better. But we need to hear from you.

Hope to see many of you in Cooperstown! And don't forget to pay your dues.

Sincerely,



COOPERSTOWN

Cooperstown is a very popular place any time of the year. We urge you to make your reservations NOW. The following is a partial list of accommodations in and near Cooperstown.

MAIN STREET AREA

Baseball Town Motel 547-2161
 Cooper Inn 800-348-6222 \$120
 AAA Mobil Guide - historic -breakfast
 Inn at Cooperstown 547-5756 \$85
 Special FOLA rate-AAA M.-hist. Bkf
 The Tunnicliff Inn 547-4063 \$60-75

B & B'S WITHIN THE VILLAGE

Burrows 547-37
 Carriage House 547-8937
 Chestnut Street House 547-5624
 Eagle's Rest 547-2804
 Edward's 547-8514
 Ellsworth House 547-8369
 Green Apple Inn 547-1080
 Lindsay House 547-5618
 Main Street 800-867-9755

ON THE LAKE ROAD

Bayside Motor Inn 547-2371 \$47-99
 AAA Mobil - 7 mi. North of town
 Lake View Motel 547-2790 \$60-75
 AAA Mobil - 6 mi. N. Cont. breakfast
 Lake 'N Pines Motel 547-2790
 AAA Mobil - 7 mi. N. - open after 4/1
 Terrace Motor Inn 547-9979
 AAA Mobil - 3 mi. N. - open after 4/1

OTHER MOTELS

Coopersotwn Motel 547-2301
 In the village
 Lake Front Motel 547-9511
 In the village
 Deer Run Motel 547-8600
 9 miles N. of town
 Best Western 716-343-2311 \$75
 3 mi S. of town - indoor pool - Brkf
 children under 15 free - opening 4/1

Cooperstown area code: 607
 All prices are per room double occupancy

Short History of Otsego Lake

by Dr. Willard Harmon

In 1612, two Dutch explorers wandered from the junction of the Mohawk and Hudson Rivers westward up the Mokawk, crossed overland via Otsego Lake and south down the Susquehanna. The link that the lake provides in joining the Mohawk and Susquehanna watersheds has had important effects on Otsego Lake and its utilization throughout recorded history.

In 1785, William Cooper arrived at the south end of Otsego Lake and founded the settlement that was to become Cooperstown. The lake's resources soon became recognized. A few years after settlement, a late spring saw 200 families in the village bordering on starvation. In the words of Cooper (1810):

"A singular event seemed sent by good Providence to our relief; it was reported to me that unusual shoals of fish were seen moving in the clear waters of the Susquehanna. I went and was surprised to find that they were herrings. In less than two day each family had an ample supply."

Commercial fishing became an enterprise in the late 1700's. Seining for Otsego Bass was first recorded in 1789 and continued until 1915, when it was permanently banned. In 1896, the holder of 42 seine licenses recorded catches of 23,284 pounds of these fish. Gill netting was introduced in the 1850's. Between 1855 and 1867, single hauls containing in excess of 5,000 Otsego Bass were recorded.

In 1869, there were 40 dwellings around the shores of the lake, excluding the Village of Cooperstown. In 1937, there were at least 147, and 273 by 1969. Three hundred twenty buildings were counted along the shoreline by the end of 1993.

During the early 1900's, inboard runabouts became popular for the well-to-do. In the 1940's, outboard motors replaced paddles and oars for most people, and Mercury introduced their 25 hp "Thunderbolt," which heralded the development of large outboard motors and the boats that use them.

In 1955, the dam at Cooperstown was renovated, raising the lake level by about 18 inches. In the 1970's, the accepted normal lake level of 1,194.5 feet about sea level was established to settle various jurisdictional problems with state agencies. Work began on the establishment of regulations, under public health law 1100, so that the village could have some control over its drinking water supply. In 1985, the Watershed Supervisory Committee began operation.

The Otsego County Conservation Association,, a non-profit group with currently over 700 members, was established in 1968. That same year, research programs on the lake began at the Biological Field Station. Work in the 1970's, supported in part by the OCCA, revealed waste disposal problems at the new Glimmerglass State Park. Immediate action to construct a new sanitary waste facility by the Parks Commission and the DEC rectified the situation. Problematic algae blooms ceased to occur for several years thereafter and oxygen levels in deep waters were again suitable for cold water fish.

Dr. Harmon is Director of the Biological Field Station on Otsego Lake and will be leading tours of the Field Station and lake sampling during the conference.

Note: The more recent historical events and environmental efforts concerning Otsego Lake can only be learned by those attending the 1995 Federations' Annual Conference.

PLEASE NOTE NEW ADDRESS & PHONE

**NEW YORK FEDERATION OF LAKE
ASSOCIATIONS, INC.**
2968 Shadyside Road, Findly Lake, NY 14636
1-800-796-FOLA (796-3652) phone & fax

Martha Keppel, Program Services

Lake Quiz Continued from page 3

5. What is the clearest lake in NYS?

- A. Clear Lake
- B. Really Clear Lake
- C. So Clear I Could See My Toes If I Were 50 Feet Tall Lake
- D. Silver Lake

Answer: D. The clearest lake on record is Silver Lake in Herkimer County, with a maximum water clarity of 16 meters (about 52 feet). This compares favorably to a transparency of just under 3 meters (9 feet) for the "average" NYS lake, but somewhat less favorably to Crater Lake in Oregon or Lake Tahoe, both with a clarity of about 40 meters (about 130 feet!). Answer C will also be accepted.

6. What lake is found at the highest elevation?

- A. Upper Wallface Lake
- B. Heavens Pond
- C. Delta Reservoir
- D. Sea of Tranquility

Answer: A. Upper Wallface Lake is found near the top of the Hudson River drainage basin, at an elevation of 948 meters (about 3110 feet). The "true" headwaters of the Hudson, Lake Tear-of-the-Clouds, is found at an even higher elevation (about 4300 feet), but it is not large enough to be included in the NYS Gazetteer of Lakes. Other possible choices that didn't quite make the cut were Rainbow Lake, Lake Ozonia, and Star Lake.

7. What is the total area of lakes in the State?

- A. 55 square miles
- B. 550 square miles
- C. 5,500 square miles
- D. 55,000 square miles

Answer: C. The surface area of the 7,500 lakes comprise at least 5,500 square miles, or more than 10% of the overall area in the State. A large percentage of that comes from the NYS portions of Lake Ontario and Lake Erie.

8. Approximately how many gallons of surface water (lakes, rivers, etc.) per resident are found in NYS?

- A. 250,000
- B. 500,000
- C. 1,000,000
- D. 1,250,000

Answer: D. As noted in #5, New York is a very water rich state.

Bonus: For whom was the Secchi disk named?

- A. Guiseppe Secchi, inventor of the original "what's black and white and read all over" riddle.
- B. Beck Secchi, daughter of Guiseppe
- C. Pietro Angelo Secchi, paper waterwatcher
- D. Captain James T. Secchi, future Star Trecchi

Answer C. The origin of the Secchi disk is usually traced back to Pietro Angelo Secchi, a papal scientific advisor and head of the Roman Observatory working for a papal oceanographic mission on April 30, 1865 in the Mediterranean.

Editor's Note: Why isn't there a "Secchi Disk Day" on April 30?

1995 NYSFOLA MEMBERSHIP FEES

Lake, Watershed and Other Associations:

- | | |
|--|----------|
| <input type="checkbox"/> less than 99 members | \$100.00 |
| <input type="checkbox"/> more than 100 members | 200.00 |
| <input type="checkbox"/> Individual | 20.00 |
| <input type="checkbox"/> Individual who is a member of a NYSFOLA organization in good standing | 10.00 |
| Name of NYSFOLA organization _____ | |
| <input type="checkbox"/> Corporate | 200.00 |
| <input type="checkbox"/> Student | 10.00 |
| Name of School _____ | |
| <input type="checkbox"/> Individual sponsored by current member (see page 8) | 10.00 |
| Name of sponsored member _____ | |
| Address _____ | |
| Name of Sponsoring Member _____ | |

NAME _____

ASSOCIATION OR COMPANY _____

ADDRESS _____

TELEPHONE _____ COUNTY _____

FEE ENCLOSED \$ _____

Make checks payable to the New York Federation of Lake Associations, Inc.

Send to: Don Keppel, Treasurer

2698 Shadyside Drive, Findley Lake, NY 14736

1995 ANNUAL CONFERENCE REGISTRATION

COME TO COOPERSTOWN - MAY 5, 6 & 7

Conference Registration Fee _____ \$75.00

Fee Includes: Admittance to all conference proceedings, field trips, Friday night wine & cheese forum, all refreshment breaks, Saturday lunch and Saturday night reception and dinner.

Dinner choice: ☐ Prime Rib ☐ Chicken Cordon Bleu ☐ Poached Salmon☐ Additional Dinner Ticket (includes tax & gratuities) _____ \$25.00

Total Enclosed \$ _____

Make checks payable to the New York Federation of Lake Associations, Inc.

Send to: Martha Keppel, Conference Registration

2698 Shadyside Drive, Findley Lake, NY 14736

***Note: One check for Dues and Conference Registration will be gladly accepted**

NEW YORK STATE
FEDERATION of LAKE
ASSOCIATIONS, Inc.

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Waterworks is published four times a year. Letters to the Editor, news items, informational pieces, art work and photographs from our members are welcome at any time.

Please note new mailing
address:

PO Box 539
Cazenovia, NY 13035

Phone/fax (315) 655-4670

Bits & Pieces

Call for Posters Anyone interested in setting up a poster demonstration at the Conference in Cooperstown, please call or write to John Miller, Exhibitor Chairman, 8 Crescent Street, Illion, NY 13357, telephone (315) 895-7502.

Newsletter Contest Have your lake association recognized for efforts to inform, educate, and involve your members. Newsletters will be judged on readability, content, and interest. All newsletters submitted will be displayed at the Conference. Send your latest issue to the Federation office by April 15.

Sponsored Memberships These memberships are to introduce a person (not a lake association, please) who has never been a member of NYSFOLA. It is good for one year only. The recipient will be billed for regular dues the following year. It is a great way for someone you know to become familiar with the Federation, and increase the number of members. (See dues notice on pg. 7)

Special Meeting Since the By-Laws of the Federation call for an annual meeting in June of each year, the meeting of the membership in Cooperstown will be a special meeting. At that meeting, you will be asked to vote to amend the by-laws. Some of the changes reflect the new Regional Directors' position, definition of a quorum, annual meetings, and executive board membership.

NEW OFFICE FOR NYSFOLA

ADDRESS: 2698 Shadyside Dr., Findley Lake, NY 14736

TELEPHONE/FAX: 1-800-796-FOLA (796-3652)

OFFICE HOURS: Mon, Tues & Wed - 9:30-4:00

Martha Keppel, Program Services Administrator

*New York State Federation of Lake Associations, Inc.
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