

MOHONK PRESERVE, INC.

RESEARCH REPORT

November 1982

FISH OF THE NORTHERN SHAWANGUNKS:

ANNOTATED CHECK LIST

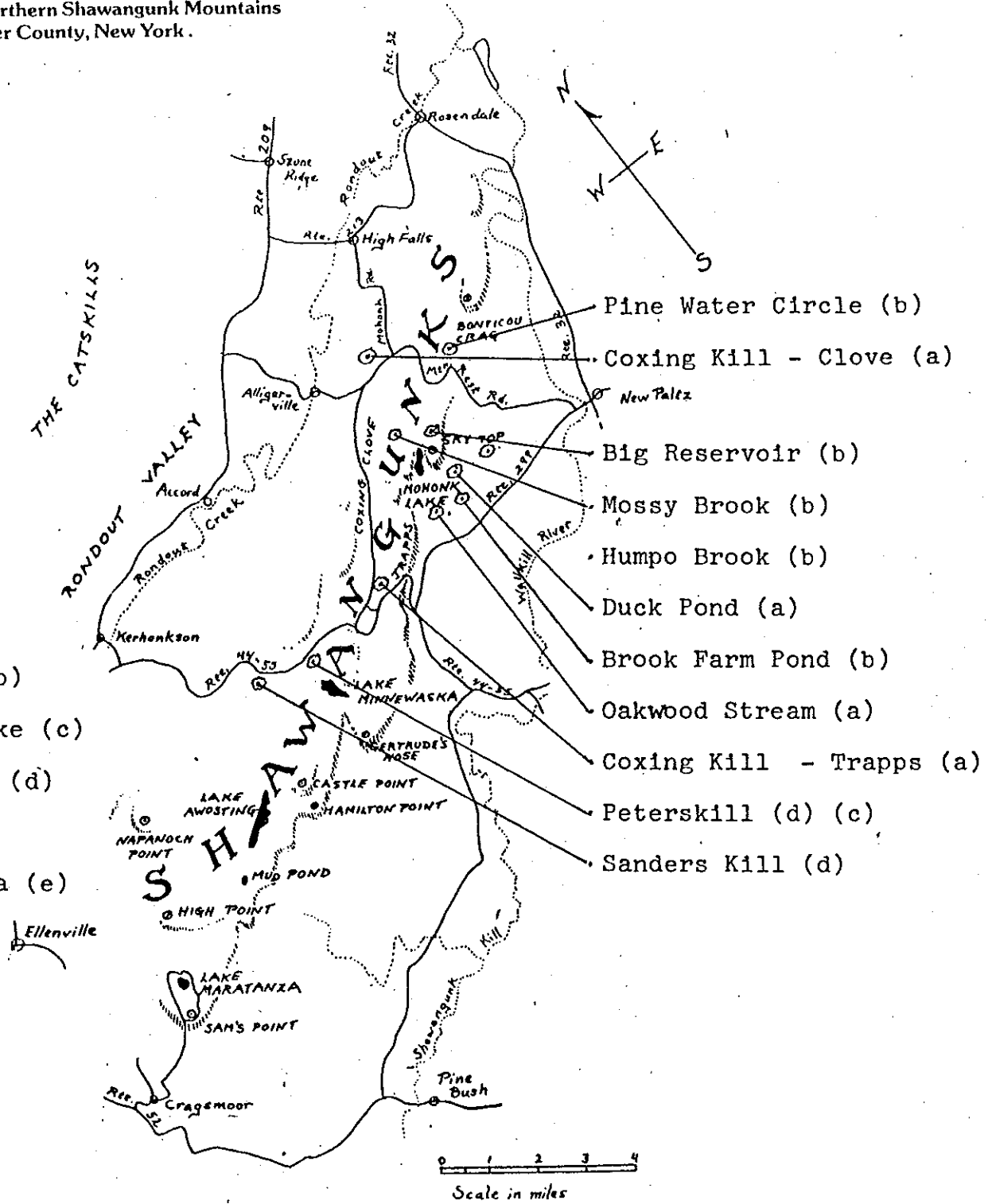
by

Paul Huth

and

Daniel Smiley

The Northern Shawangunk Mountains
of Ulster County, New York.



Property Owners

- a) Mohonk Preserve Inc.
- b) Smiley Brothers Inc.
- c) Minnewaska
- d) Palisades Interstate Park
- e) Village of Ellenville

adapted from:

Snyder and Beard 1981

Fish of the Northern Shawangunks:

Annotated Check List

Paul Huth and Daniel Smiley

Mohonk Preserve
Research Report

November 1982

Abstract: This check list includes 22 species of fish recorded from the five Northern Shawangunk sky lakes, six adjacent streams and four artificial ponds. The historical status of each species is supported as far as known by annotations of observations, catches and records of stocking and reproduction. The period covered is 1865 to the present.

INTRODUCTION

While studying the possible effect of acid rain on the hydrology of the Northern Shawangunks, we became aware of the disappearance of fish from certain of the sky lakes of the ridge. This led to work on a research report on that subject, which is now in draft form. As a preliminary to the geographical presentation, we found it desirable to assemble the data by species. This check list is the result. Because many of our information sources were anecdotal, it seemed important to include extensive annotations which are suggestive of the historical interactions between fish and anthropogenic influences in the Shawangunks.

The area of the Northern Shawangunks covered in this report is shown in Figure 1. Waters referred to are labeled, with current owners indicated. Detailed topographic information can be found in U.S.G.S. Mohonk Lake, Napanoch, and Gardiner Quadrangles.

Natural and human history and geological relationships are described by Snyder and Beard (1981). Detailed discussion of fish in the Shawangunks can be found in Smiley and Huth (1982).

The material for this report was obtained from the files of the Mohonk Preserve and local historical sources. Nomenclature follows that of Blair, et. al. (1968), and Scott and Crossman (1973).

Study of the following check list will show that there has been a decline in fish populations in certain of the Shawangunk waters. This matter is discussed more fully in a Mohonk Preserve research report nearing completion.

CHECKLIST OF FISH OF THE NORTHERN SHAWANGUNKS

1. Brown Trout (*Salmo trutta*)

Mohonk Lake (and Duck Pond)

1920-1963 several stockings of hatchery fingerlings. A few survived to fairly large size. No reproduction recorded.

Lake Maratanza

1925 (±) stocking of "trout," probably this species, survived less than a year. (Terwilliger, 1981; Rubin, 1982).

Lake Awosting

1957 adult fish planted. Survived less than 2 weeks, many dead found.
(A. Smiley, 1976-1982).

2. Rainbow Trout (*Salmo gairdneri*)

Mohonk Lake (and Duck Pond)

1920-1940 various stockings of hatchery fingerlings. Medium sized fish periodically transferred from Duck Pond to Lake. Many were caught by guests.

1929 and for several years, observed spawning in Duck Pond brook.

1940-1982 approximately 800-1,000, 8 to 12 inch hatchery rainbows were stocked almost every spring.

Lake Awosting

1957 adult fish planted. Survived less than two weeks, many dead found.
(A. Smiley, 1976-1982).

3. Brook Trout (*Salvelinus fontinalis*)

Lake Minnewaska

1878 hypothetical record (Knickerbocker, 1937). This lake is the source of Coxing Kill.

Coxing Kill--Trapps area

1926-1982 scattered records of 4 to 6 inch fish caught.

1930s several stockings with fingerlings from NYS Conservation Department.

1932 ten trout 4 to 6 inches in a pool below route 44-55.

1938 habitat damaged by September hurricane.

1982 6 inch fish still present.

Sanders Kill

1935-37 one report from a fisherman.

Lake Awosting

1957 adult fish planted. Survived less than 2 weeks, many dead found. (A. Smiley, 1976-1982).

4. Lake Trout (*Salvelinus namaycush*)

Mohonk Lake

1871 stocked with 2,000 "Salmon Trout" by A.H. Smiley from Caledonia Fish Hatchery. "Nearly all lived."

1920 stocked--several cans of 5 & 6 inch fish.

1923 4½ lb., 27¼ in. female caught.

(1982) no later records, apparently did not reproduce.

5. Lake Whitefish (*Coregonus clupeaformis*)

Mohonk Lake

1871 stocked with 2,000 "white fish" by A.H. Smiley, from Caledonia Fish Hatchery. "Most died, except 300 to 400."

6. Redfin Pickerel (*Esox americanus* var. *americanus*)

Brook Farm Pond

1935 report by fisherman.

1975 one in brook above pond. (Krieg, 1973-1982).

7. Chain Pickerel (*Esox niger*)

Mohonk Lake

1865 3 large fish caught.

1875 well supplied with "pike"

1917 4 lb. fish caught through ice.

1926-1981 considered a nuisance fish.

1978-1982 a decrease in number reported by one fisherman.

Minnewaska Lake

1879 (±) reported present

1922 none. (See under Yellow Perch).

Lake Awosting

1889 report of regular harvest. (A. Smiley, 1976-1982).

1900-1904 several reports from fishermen.

1909 (-) seen in the Peterskill, the outlet stream of Lake Awosting, "upstream of Awosting Falls." (Rubin, 1982).

1915-1921 none caught in Lake by Camp Awosting boys.

1929 in Peterskill below Minnewaska Power House. (Rubin, 1982).

Lake Maratanza

1900 (±) reported catches, by fishermen.

Mud Pond

1910-1920 possibly still present, per fishermen.

Coxing Kill--Clove area

1974 3 caught in seine at Alligerville Road bridge. (Krieg, 1973-1982).

8. Goldfish (*Carassius auratus*)

Pine Water Circle

1917 (±) large school, all sizes.

1957 a few found dead, cause not determined.

1982 many still present.

9. Golden Shiner (*Notemigonus crysoleucas*)

Big Reservoir

1915-1920 trapped for fishing through the ice in Lake.

1920s dozens transferred to Lake.

1957 150[±] found dead after Gypsy Moth spraying.

1982 plentiful, including small fish.

Mohonk Lake

1920s transferred from Big Reservoir.

1930s to 1960s schools in Lake. Some seen regularly, feeding with trout at porch.

1978 none with trout.

1979 & 1982 small school at south end.

Duck Pond

1928 fingerlings transferred from Mohonk Lake.

1974 Nov. 20 found dead, cause not determined.

10. Creek Chub (*Semotilus atromaculatus*)
Humpo Brook
 1935 Brook Farm pond (a dam in brook).
 1973-1979 in brook and pond. (Krieg, 1973-1982).
Coxing Kill---Trapps area
 (1926) a local resident claimed that "suckers" had been dumped in stream by fishermen.
11. Blacknosed Dace (*Rhinichthys atratulus*)
Duck Pond
 1920s a "dace" was common in pond and brook.
 1974 caught in outlet stream.
Mossy Brook
 1939 a "dace" was seen west of Log Cabin.
Humpo Brook
 1973-1981 caught in seine. (Krieg, 1973-1982).
Coxing Kill--Clove area
 1974 caught in seine. (Krieg, 1973-1982).
Oakwood Stream
 1975 a "dace" was seen at junction of brooks.
12. White Sucker (*Catostomus commersoni*)
Brook Farm Pond
 1935 reported by fisherman,
Mohonk Lake
 1952 2 floating on surface, alive, both killed. One with eggs, 5 3/4 lbs., 22 3/4 in.
13. Brown Bullhead (*Ictalurus nebulosus*)
Lake Minnewaska
 1880 (±) "Minnewaska" (Knickerbocker, 1937)
Lake Maratanza
 1900 (±) fisherman recollection.
Mud Pond
 1904 (±) fisherman recollection.
 1919-1920 reported possibly still present. (Rubin, 1982)
Brook Farm Pond
 1935 fisherman report.
 1955 9 April, spawning in brook above pond.
Big Reservoir
 1944 4 inch fish, netted and killed.
14. American Eel (*Anguilla rostrata*)
Mohonk Lake
 1916 Mohonk employee operated eel pot under State Permit No. 14.
 1955 a 14 in. eel in Glen Anna Brook, a tributary of Mossy Brook, Mohonk Lake's outlet.
Peterskill Stream
 1922 18 in. eels stunned by electric wire at Minnewaska Hydro Plant. (Rubin, 1982)

Coxing Kill

1938 reported in Trapps area.

1981 a number caught vicinity of Alligerville road (Clove area). (Anderson, 1982)

15. Stickleback (sp.)

Mohonk Lake

(1950) in fauna list, Story of Mohonk, hypothetical.

16. Smallmouth Bass (*Micropterus dolomieu*)

Mohonk Lake

1871 stocked 23 large fish from Rochester, on advice of Seth Green by Alfred H. Smiley.

1875 additional stocking.

1910 additional stocking.

1936 "fairly common." (NYS Cons. Dept., 1936)

1981 continues to breed naturally. 15 reported caught during summer in boatman's tally.

Mud Pond

hypothetical

1904 (±) "bass" reported caught.

17. Pumpkinseed (*Lepomis gibbosus*)

18. Redbreast Sunfish (*Lepomis auritus*)

Note: The two species were not distinguished in most of the recorded observations.

Mohonk Lake

1875 "pretty well supplied." Guide to Lake Mohonk.

1921-1924 many of each caught.

1936 both species "fairly common." (NYS Cons. Dept., 1937)

1951 40 (±) nests along shore.

1965 110 (+) nests at Bathing Beach. May have included some Rock Bass.

1971 2 gibbosus and 9 auritus seined. (Union College, 1971)

1981 in July, less than 10 nests seen--bathing beach to Open Camp.

1982 5 June--26 of the two species along above shore. Few nests.

Mud Pond

1910 (±) report from fisherman.

1919-1920 report from fisherman "after World War I" (Rubin, 1982)

Big Reservoir

1931 many noted.

19. Bluegill (*Lepomis macrochirus*)

Note: Probably lumped with above species of *Lepomis* in earlier records.

Mohonk Lake

1973 a few trapped S. Spencer.

1982 5 June 22 counted along shore of Lake--nests large.

20. Rock Bass (*Ambloplites rupestris*)

Mohonk Lake

1871 600 stocked from Rochester hatchery by A.H. Smiley.

1921-24 many were caught.

1936 fairly common. (NYS Cons. Dept., 1937)

1970 nests noted.

1980-'82 many caught.

1982 nests noted.

21. Yellow Perch (*Perca flavescens*)

Mohonk Lake

1875 "pretty well supplied with fish, such as...yellow perch." (Guide Book, 1875)

1917 12 to 15 inch, caught at Perch Rock.

1921-24 some caught, fewer than Sunfish (sp.) or Rock Bass.

1936 "fairly common" (NYS Cons. Dept., 1937)

1971 9 seined, same number as Redbreasted Sunfish. (Union College, 1971)

1973 60 caught in one evening.

1982 caught regularly.

Lake Awosting

1878 1 lb. fish caught through ice in January, species hypothetical. (Knickerbocker, 1937)

1889 fisherman report of catch.

1900 (±) fisherman report of catch.

1915-1921 none caught in Lake by Camp Awosting boys.

Minnewaska Lake

1879 (+) reported sighting. (Knickerbocker, 1937)

1900 (±) fisherman report.

1922 300 killed by dynamite. In a picture all appear to be large.

Lake Maratanza

1900 (±) fisherman report of catch.

22. Tessellated (Johnny) Darter (*Etheostoma nigrum olmstedii*)

Coxing Kill--Clove area

1974 three seined at Alligerville Road. (Krieg, 1973-1982)

ANNOTATIONS

1. Brown Trout *Salmo trutta*

1920--hatchery fingerlings placed in Duck Pond for sizing. The Duck Pond was drained periodically and all fish were netted and only medium sized trout were transferred to Mohonk Lake.

1931--in the latter part of August, guests fishing in Mohonk Lake are reported to have caught 19 Rainbow Trout in 11 days. In addition they took one Brown Trout measuring 19 in. and weighing 2½ lbs.

1932--C.L. Marburg won "Field and Stream" honor certificate--8th prize, for a

6 lb. fish caught in Mohonk Lake.

1957--species stocked in Lake Awosting, along with Brook and Rainbow Trout, for fishing by guests at Lake Minnewaska Houses. Many dead fish found, a few survived up to two weeks (A.B. Smiley, 1976-1982).

1963--Duck Pond stocked with fingerlings.

1966--two fish (20 and 22 in.) reported taken in Duck Pond.

1960s (late)--photo of 23 in. fish taken by Joe Donohue in Duck Pond.

Hypothetical: 1925 (+)--"Trout," possibly this species, stocked in Lake Maratanza. Survived less than one year (Terwilliger, 1981; Rubin, 1982).

2. Rainbow Trout *Salmo gairdneri*

1920--800 fingerlings stocked in Mohonk Lake.

1925--1000+ stocked in Duck Pond, 500 stocked in Mohonk Lake, and 500 stocked in Big Reservoir (shallow artificial water supply near Lake Mohonk)

1927--in April, one caught (Duck Pond?).

1929--observed spawning in Duck Pond Brook (upwards of 100). In July some caught to 15 in.

1930--one found dead in Mohonk Lake floating on surface in July. It had a 7 in. Smallmouth Black Bass in its mouth, evidently having choked on it. Fish weighed 5½ lbs. and measured 23.5 in.

1931--a 19 in. Rainbow Trout caught in Mohonk Lake in August was one of 19 of this species. Concurrently, a single Brown Trout was caught.

1932--in April, Duck Pond Brook high and roily from heavy snow (14 in.) near end of March. One or two small trout seen quite well up. Many of best pools spoiled either through washing or filling. At end of month only about seven fish were seen, mostly 8 or 10 in. long.

1936--listed as "common" in Mohonk Lake (NYCD), 1937. See Appendix 2.

1937--ecology of Duck Pond changing. Report by Smiley & Smiley, 1937.

1940-1982--one thousand Rainbow Trout, of 10-12 inch size, stocked in Mohonk Lake nearly every year. For several years estimated take was 40%.

1957--species stocked in Lake Awosting, with Brook and Brown Trout, for guests at Lake Minnewaska Houses. Many dead fish found, a few survived up to two weeks (A.B. Smiley, 1976-1982).

1981--236 (+) listed in Mohonk Lake catches.

1982--growth rate of trout considered very slow as compared to other waters (Anderson, 1982).

Note: Golden Trout--exotic color cross (*Salmo gairdneri* x *aquabonita*)

1980--first stocked in Mohonk Lake. Fishing at Lake Mohonk resulted in 52 caught.

1981--restocked in Mohonk Lake. Seven listed in Lake Mohonk catches.

1982--restocked in Mohonk Lake.

3. Brook Trout *Salvelinus fontinalis*

1878--"Seven trout weighing 21 pounds," probably this species, reported in Lake Minnewaska by Nan. L. Knickerbocker in "Minnewaska 'Frozen Waters'" (1937), as having been found by a workman who was walking near the outlet.

1926--in June, the junior author caught a number of this species in Coxing Kill while fishing with Fred Shoaff.

1932--in August, some 800 (\pm) fingerling Brook Trout, supplied by the Conservation Department (Summitville) were stocked in Coxing Kill.

1932--ten trout were counted in a pool in Coxing Kill below the Rt. 44-55 crossing..."all over 4 in. and several over 6 in." Two 6 in. and "numerous one smaller than fingerlings" seen in Coxing Kill near the present picnic area.

1935-7--reported in pools in Sanders Kill by Raymond Veres, a local fisherman Rubin, 1982).

1938 (and earlier)--prior to the September, 1938 hurricane, this species was reported in Coxing Kill (below its junction with Fountain Brook), and Fountain Brook (to about Rt. 44-55).

1938 (and later)--Raymond Veres felt this species depleted in Coxing Kill due to the September, 1938 hurricane (Rubin, 1982).

1957--species stocked in Lake Awosting, with Rainbow and Brown Trout, for guests at Lake Minnewaska Houses. A few survived up to two weeks (A.B. Smiley, 1967-1982).

1966--a 17 in. fish caught in Duck Pond and returned to water.

(1970 \pm)--Brook Trout caught in Coxing Kill near the route 44-55 crossing.

1974--in October, two Brook Trout (8 in. and 6 in.) seen in Coxing Kill near the route 44-55 crossing.

1980--Brook Trout found and reported by Paul Rubin "in Sanders Kill East Tributary, Coxing Kill below Rt. 44-55, (and) Fountain Brook..."

1982--eight caught in Coxing Kill near Mohonk Preserve's Meerbaum Lot.

1982--See Acid Rain report for changing pH as a limiting factor (Smiley & Huth, 1982).

4. Lake Trout *Salvelinus namaycush*

1871 (March)--Mohonk Lake stocked by Alfred H. Smiley with 2000 "Salmon" Trout from Caledonia Fish Hatchery..."nearly all of the trout lived."

1923--C.I. Smith reported that the 1920 stocking of Lake Mohonk by Daniel Smiley (Sr.) with several cans of 5 and 6 in. Lake Trout was successful. A test catch in August resulted in the hooking and catching of 9 Lake Trout, one of which, a 27 $\frac{1}{4}$ in. female, 8 $\frac{1}{4}$ in. broad, weighing 4 $\frac{1}{2}$ lbs., was ripe with spawn and was returned to the Lake.

(1982)--no reliable reports since 1923.

5. Lake Whitefish *Coregonus clupeaformis*

1871 (March)--letter from Alfred H. to Albert K. Smiley reports stocking of 2000 "white fish" from Seth Green at Caledonia Fish Hatchery in Mohonk Lake. "Most of the whitefish died except 300 or 400..."

6. Redfin Pickerel *Esox americanus* var. *americanus*

1935--reported in Brook Farm Pond (a Lake Mohonk farm pond) by Charles Bragg. This pond (now mostly filled in with silt) is connected to the Walkkill River via the Humpo Brook.

1975--one caught in Brook Farm Brook in a bag seine (Krieg, 1973-1982).

7. Chain Pickerel *Esox niger*

1865--an entry in Stokes Register (later Lake Mohonk), 8 July "caught two Pickerel weighing 24 lbs." And on 15 July "caught four Pickerel weighing 32 lbs." A subsequent note on 7 August by another Stokes guest casts doubt on the size of the above fish.

1875-- in "Guide Book to Lake Mohonk," Mohonk Lake "is pretty well supplied with fish, such as pike..."

1879 (±)--report of this species in Lake Minnewaska about time Cliff House was built (A.B. Smiley, 1976-1982).

1889 (and earlier)--reported that John McElhone made part of his living by catching fish (Pickerel and Perch) in Lake Awosting for sale in Ellenville. His dwelling at the east end of the Lake was known as the "Pickerel House" (A.B. Smiley, 1976-1982).

1900 (±)--recollection that Pickerel were caught in Lake Maratanza about this time (Terwilliger, 1981). This species found in Lake Awosting at this time from several reliable sources. Bill Markle (son of former caretaker at lake) told of men from valley dynamiting lake for fish.

1904 (±)--report of this species caught in Lake Awosting.

1909 (-)--two sources reported Pickerel "upstream of Awosting falls" in the Peterskill (Rubin, 1982).

1910 (±)--recollection by Bill Stedner of Pickerel taken by his father from Mud Pond.

1915-1921--in 1981, D. Slingerland noted that no fish caught when he was a camper at Camp Awosting.

1917--photographs of a 4 lb. fish caught through ice in Mohonk Lake held by junior author.

1919-20--Pickerel reported as possibly still present in Mud Pond.

1922--no Pickerel appeared in picture of Yellow Perch killed by dynamiting Minnewaska Lake.

1926-1981--caught fairly regularly in Mohonk Lake.

1929--Pickerel reported by Raymond Otis in Peterskill below Lake Minnewaska Power House (Rubin, 1982).

1936--listed as "rare" in Mohonk Lake (NYCD, 1937). See Appendix 2.

1950 (±)-1962--a member of the Smiley family waged "war" on Pickerel believing they were detrimental to trout.

1966--a 14 in. Pickerel caught in Mohonk Lake containing a 7 in. Spotted Salamander.

1971--one Chain Pickerel seined in Mohonk Lake in May (Union College, 1971).

1974--three caught in Coxing Kill at beaver dam bridge in bag seine (Krieg, 1973-1982).

1982--a feeling noted that there has been some decrease in species in Mohonk Lake during last five years. Few small ones seen (Anderson, 1982).

8. Goldfish *Carassius auratus*

1917 (±)--the junior author as a boy accompanied Eli Evens, Lake Mohonk Stable manager, to Pine Water Circle (a natural pond northeast of the Mohonk Golf Course) on an annual trip to seine Goldfish to put in a fountain pool beside the Mohonk Mountain House.

1957--a few Goldfish found dead in Pine Water Circle, cause unknown.

1982--many up to 8 in., Pine Water Circle.

9. Golden Shiner *Notemigonus crysoleucas*

1915-20--used as bait for winter Pickerel fishing in Mohonk Lake by A.K. Smiley family. Trapped in Big Reservoir, one of Mohonk's water supply reservoirs, which were built 1890s. No record of stocking.

1920s--dozens transferred from Big Reservoir (shallow, artificial) to Mohonk Lake.

1927--D. Smiley caught an 8 in. fish (2 in. deep and 1 in. thick) in Big Reservoir. The bait was a bread ball on a bent pin.

1928--fingerlings transferred from Mohonk Lake to Duck Pond.

1929--school in Mohonk Lake. Many good sized ones seen in Duck Pond, opposite watering trough.

1930s-1960s--schools of this species observed in Mohonk Lake.

1931--only a few visible in the Big Reservoir. Very large school seen in Mohonk Lake, covering an area probably 20 ft. in diameter. All medium sized, 3-4 in.

1934--six 4-6 in. and twentyfour 2-3 in. fish transferred from Mohonk's reservoirs to Pine Water Circle.

1936--listed as "rare" in Mohonk Lake (NYCD, 1937). See Appendix 2.

1957--150± found dead in Big Reservoir after Gypsy Moth aerial spraying with DDT.

1960s--regularly seen feeding with trout at Mohonk Mountain House Porch over Lake.

1974 (Nov.)--20 (±) found dead in Duck Pond, cause unknown.

1974--200 (±) fish, 1½ to 3½ in., caught in bag seine in lagoon area of Duck Pond (Krieg, 1973-1982).

1978--none seen feeding with trout at Mohonk Parlor Porch.

1979--30 (±) seen at south end of Mohonk Lake.

1982--considered plentiful in Big Reservoir (Anderson, 1982).

1982--a fish survey by the junior author from the shore of Mohonk Lake in July recorded 25 (±), 6 to 8 in. fish.

10. Creek Chub *Semotilus atromaculatus*

1935--reported in Brook Farm Pond by Charles Bragg. This pond (now mostly filled in with silt) is connected to the Wallkill River via the Humpo Brook.

1938--prior to the September, 1938 hurricane this species was known in Coxing Kill and Sanders Kill.

(1970s)--this species reported in Humpo Brook, area of Pine Farm, ½ mile downstream from Brook Farm Pond (Dr. H. Meng).

1973-1979--caught in bag seine in Humpo Brook (Krieg, 1973-1982).

1975--35 fish, 3 to 10 in., caught in Brook Farm Brook (above pond) in bag seine (Krieg, 1973-1982).

Note: (1926)--a fisherman, Irve Van Leuven, told D. Smiley that fingerling fish, probably of this species, had been dumped in the Coxing Kill.

11. Blacknosed Dace *Rhinichthys atratulus*

(1970s)--this species reported in Humpo Brook, area of Pine Farm (dr. H. Meng).

1973-1981--caught in bag seine in Humpo Brook (Krieg, 1973-1982).

1974--148 caught in bag seine in Duck Pond outlet brook. (Krieg, 1973-1982).

1974--caught in bag seine in Coxing Kill at beaver dam bridge on Alligerville

Road (Krieg, 1972-1982).

1975--10 caught in bag seine in Brook Farm brook (above pond) (Krieg, 1973-1982).

Note: Dace (sp.). In the 1920s we knew a small dace-like minnow at the Duck Pond as "redfin." These were definitely not Golden Shiners, which we knew from our Mohonk Lake ice fishing experience (D. Smiley): 10 July 1939--" In brook at cabin, they appeared to be dace with black stripe all the way down the side" (D. Smiley); 1975--several 4 in. (\pm) long seen at junction of brooks below Oakwood Drive, south of Mohonk Lake.

12. White Sucker *Catostomus commersoni*
1935--reported in Brook Farm Pond by Charles Bragg. This pond (now mostly filled with silt) is connected to the Wallkill River via the Humpo Brook.
1952--two netted alive in Mohonk Lake floating on surface. One had eggs when cleaned. Largest measured 22 3/4 in. and weighed 5 3/4 lbs.
13. Brown Bullhead *Ictalurus nebulosus*
1880(\pm)--Bullheads reported in Lake Minnewaska (Knickerbocker, 1937).
1900(\pm)--recollection that Bullheads were caught in Lake Maratanza about this time. Another source mentions "catfish" around same time.
1904(\pm)--report of Bullheads caught in Mud Pond.
1935--reported in Brook Farm Pond by Charles Bragg. This pond (now mostly filled with silt) is connected to the Wallkill River via Humpo Brook.
1944--a Bullhead the size of a large pollywog found in the Big Reservoir and killed.
1955 (9 Apr.)--15 \pm up to 10 in. (\pm) long in Brook Farm Brook, above Pond, after dark. For two accounts of fishing for Bullheads, see Appendix 3.
Note: 1919-20--"Grayish Bullheads" were reported as possibly still present in Mud Pond (Rubin, 1982).
14. American Eel *Anguilla rostrata*
1916--a Lake Mohonk employee, Jim Lundrigen, had a New York State permit (No. 14) for Eel pots. A.K. Smiley told the junior author that they used to be caught in Mohonk Lake.
1922--18 in. Eels "brought up" in Peterskill "with electric line in water" when Lake Minnewaska Power House built (Rubin, 1982).
1938--prior to the September, 1938 hurricane, this species was reported in the Coxing Kill and Sanders Kill.
1955--Russel Stanhope (a teacher of biology at the Mohonk School) reported seeing a 14 in. Eel in Glen Anna Brook (a tributary of the Mohonk Lake outlet stream) in May.
1981--a number caught at night in the Coxing Kill--Clove area--up to three feet long. None known in Mohonk Lake (Anderson, 1982).
15. Stickleback (sp.)
(1950)--in fauna list of Story of Mohonk, Third Edition. Hypothetical.
16. Smallmouth Bass *Micropterus dolomieu*
1871 (February)--Mohonk Lake stocked with 23 "large Black Bass" from Rochester by Alfred Smiley on advice of Seth Green.
1875--in "Guide Book to Mohonk Lake," Mohonk Lake "is pretty well supplied with

fish, such as...black bass (with which it has been stocked)..."

1904(±)--hypothetical report of bass (sp.?) caught in Mud Pond (J. Stedner).

1910--additional stocking in Mohonk Lake. (None stocked since 1920.)

1929--a 10 in. fish seen spawning, Mohonk Lake.

1930--one caught in Mohonk Lake on live Golden Shiner, 16 in. long and weighing 1 3/4 lbs. Age estimated from scales as 8 years.

1936--listed as "fairly common" in Mohonk Lake (NYCD, 1937). See Appendix 2.

1979--one caught in Mohonk Lake weighing 3 3/4 lbs.

1981--15 reported in boatman's list of Lake Mohonk catches. Breeds regularly.

1982--a fish survey by the junior author from the shore of Mohonk Lake counted six, 3 in.(±) fish of this species.

17. Pumpkinseed *Lepomis gibbosus*

18. Redbreast Sunfish *Lepomis auritus*

These two species are listed together because most observations were of "sunfish" which might have included either species.

1875--in "Guide to Lake Mohonk," Mohonk Lake "is pretty well supplied with fish, such as...sunfish..."

1910(±)--Bill Stedner reported hearing of sunfish in Mud Pond, although he never fished it.

1919-1920--Raymond Otis reported sunfish (sp.) in Mud Pond right after WWI (Rubin, 1982).

(1921-1924)--fish of both species caught by the junior author and his brother in Mohonk Lake. Caught on worms and artificial flies.

1931--many noted in Big Reservoir when level was low. There was occasional movements of sunfish (especially Pumpkinseeds) from the Reservoir to Mohonk Lake via the hydraulic elevator discharge.

1936--both species "fairly common" in Mohonk Lake (NYCD, 1937). See Appendix 2.

1951 (19 June)--40(±) nests counted around Mohonk Lake shore.

1965 (June)--110(+) sunfish nests in area of Bathing Beach, Mohonk Lake, photographed in June. Lake down 52½ in.

1971 (May)--two Pumpkinseed and nine Redbreasted Sunfish seined in Mohonk Lake (Union College, 1971).

1973--a few small sunfish caught in fish trapping experiment in Mohonk Lake by a SUNY, New Paltz class (Dr. Spencer).

1981--in July two sunfish nests below Undercliff Path, and several at south end of Mohonk Lake. None observed at Bathing Beach and stream.

1982--feeling that Pumpkinseeds more plentiful during last five years in Mohonk Lake (Anderson, 1982).

1982--a fish survey by the junior author on 5 June from the shore of Mohonk Lake counted 26 sunfish of the two species.

Note: "Several sources independently confirm Mud Pond as having had the only sunfish in the Shawangunks, with the exception of Mohonk Lake...Fish (sunfish, bullheads, or pickerel) were reported present at least until 1919 or 1920." (Rubin, 1982)

19. Bluegill *Lepomis macrochirus*
 Note: Probably lumped with above two species of *Lepomis* in earlier records.
 1973--a few caught in fish trapping experiment in Mohonk Lake by a SUNY, New Paltz class (Dr. Spencer).
 1982--a feeling that there has been a decrease of "Bluegills" during last five years (Anderson, 1982).
 1982--a fish survey by the junior author on 5 June from the shore of Mohonk Lake counted 22 fish of this species. Nests observed were quite large, 2 ft. or more in diameter.
20. Rock Bass *Ambloplites rupestris*
 1871 (February)--Mohonk Lake stocked with 600 Rock Bass from Rochester by Alfred H. Smiley.
 (1921-1924)--the junior author and his brother caught many of this species in Mohonk Lake. Recollection is of more Rock Bass than Yellow Perch, but fewer than sunfish.
 1936--listed as "fairly common" in Mohonk Lake (NYCD, 1937). See Appendix 2.
 1970--three nests observed in shallow water, 4 to 6 feet from shore at the south end of Mohonk Lake.
 1971 (May)--one Rock Bass seined in Mohonk Lake (Union College, 1971).
 1980--Lake Mohonk Boatman reports a number caught.
 1982--report of many caught in Mohonk Lake (Anderson, 1982).
 1982--a fish survey by the junior author on 5 June from the shore of Mohonk Lake counted 5 fish.
 Note: The junior author recollects a probable record of this species in the Big Reservoir.
21. Yellow Perch *Perca flavescens*
 1875--in "Guide Book to Lake Mohonk," Mohonk Lake "is pretty well supplied with fish, such as...yellow perch..."
 1878--a one pound fish, probably this species, caught through ice in early winter in Lake Awosting, after fishing all day with 10 holes (Knickerbocker, 1937).
 1879(+)--report of species in Lake Minnewaska about time Cliff House was built (Knickerbocker, 1937).
 1889 (and earlier)--reported that John McElhone made part of his living by catching fish (pickerel and perch) in Lake Awosting for sale in Ellenville (Smiley, A.B., 1979-1982).
 1900(±)--recollection that Yellow Perch were caught in Lake Maratanza about this time. This species found in Lake Awosting and Minnewaska Lake around the same time from Oscar Lyons and other fisherman (Smiley, A.B., 1976-1982).
 1915-1921--in 1981, D. Slingerland noted that no fish caught when he was a camper at Camp Awosting.
 1917--at "Perch Rock" on east shore of Mohonk Lake this species occasionally caught. Some large, 12-15 inches, weighing 3/4 to 1 lb.
 (1921-4)--the junior author and his brother caught this species along with Rock Bass and Sunfish in Mohonk Lake. Recollection is of less Yellow Perch than Rock Bass, and fewer than sunfish.

1922--About 300 Yellow Perch killed by dynamite blast in Minnewaska Lake as a result of trying to raise a body from a drowning in about 50 feet of water (Smiley, A.B., 1976-1982).

1931--In April, low water in the Big Reservoir allowed for observation of "quite a few Perch about 6 inches long."

1934--a 16 inch fish transferred from Mohonk's Small Reservoir to Mohonk Lake.

1936--listed as "fairly common" in Mohonk Lake (NYCD, 1937). See Appendix 2.

1971 (May)--nine Yellow Perch seined in Mohonk Lake (Union College, 1971). (The same number of Redbreasted Sunfish were also taken.)

1973(±)--in July, a guest at Lake Mohonk caught about 60 Yellow Perch in one evening in Mohonk Lake. No other species caught.

1980--one seen at south end of Mohonk Lake. Lake Mohonk Boatman does not recall any being caught.

1982--a report that this species is caught regularly in Mohonk Lake, about 10-15 in. range (Anderson, 1982).

Note: In a letter from I.H. Dunlop, Commissioner, Dept. of Commerce, Bureau of Fisheries, Washington, to Hon. Charles B. Ward, Liberty, dated 15 July 1920, regarding fish stocking in Mohonk Lake, mention is made of possible previous stocking of Yellow Perch with no date indicated.

22. Tessellated (Johnny) Darter *Etheostoma nigrum olmstedii*
1974--three caught in Coxing Kill, Clove area, at beaver dam bridge on Alliger-ville Road in bag seine (Krieg, 1973-1982).

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- Stacey Wright--the Mohonk Preserve

NEW YORK STATE CONSERVATION DEPARTMENT
LAKE AND POND SURVEY

1936

Name of lake or pond P774 (Mohonk Lake) Isolated

Tributary to 3-9-14-139-Hudson River

River system Lower Hudson County Ulster Quadrangle Rosen- dale Town Rochester

Authority W.C. Senning, W.C. Ramsey, Jr. Date June 26, 1936

Previous stocking.....

Parasites (condition of fishes).....

General remarks: Coll. Senning #9 P774 (Mohonk Lake)-3-9-14-H139. Cat.No. 830-837 In

Name of species	Abundance	Seine	Gill net	Number and description
<u>Salmo gairdnerii irideus</u> One of the two taken in the nets was liberated. Scales were saved from the other two. M.L. 30.7cms. S.L. 25.7cms Wgt. T.L. 27.1cms. S.L. 24.0cms Wgt.		1	2	1 ad = 276mm. scales rows = 121 (Greene) ♀ immature ♂ mature 1 juv. = 153mm.
<u>Micropterus dolomieu</u> Several nests were observed with the young still hovering close.				
* <u>Esox niger</u> One dead one seen				
s <u>Perca flavescens</u>			2	1 ad = 260mm. testes atrophied 1 ad = 235 mm. 5 winter's old
* <u>Ambloplites rupestris</u>				
* <u>Lepomis auritus</u>				
* <u>Eupomotis gibbosus</u>				
* <u>Notemigonus c. crysolencas</u>				
} Seen but not collected.				
Cat. no. 830-837, inc.				

Appendix No. 2

A Biological Survey of the Lower Hudson Watershed

State of New York Conservation Department

1936

SERIES 5. CHEMICAL ANALYSES — LAKES AND PONDS OF THE LOWER HUDSON AREA — (Continued)
Data collected by F. B. Schirmer and Carroll Griffin

CONSERVATION DEPARTMENT

SURVEY OF THE LOWER HUDSON WATERSHED

203

Lake or pond No.	Name of lake or pond and location of sample	Map No.	Time	Date 1936	TEMP. IN ° FAHR.		Depth of sample in foot	Free CO ₂ p.p.m.	Methyl orange alkalinity p.p.m. CaCO ₃	DISSOLVED OXYGEN		pH	Free H ₂ S p.p.m.	Fish collected (*reported only)	Remarks and stocking recommendations. (See report p. 104, also App. III, p. 281)	
					Air	Sample				p.p.m.	Per cent saturation					
454a	Rifton Falls Reservoir 100 ft. above dam	4A	11:50 A.M.	Aug. 5	78	77	S	Alk.	{B-93.2 C-4.8	7.6	100.0	8.2	Minnows, 6 species; Cn.S., abundant; chub sucker, oel*, johnny darter, Rb.S., common; common sucker, carp*, G.Sh., yellow perch, Lm.B.*, Y.P., Pp., Sm.B., Bg.S., rock bass, Co.B., fairly common; log perch, rare	Sm.B., Bg.S., Co.B., (Bh.C., N.S.A.)	
	100 yds. above covered bridge		13:45 P.M.		81	77	B-3	Alk.	{B-94.0 C-4.0	7.4	88.3	8.1	....		
	135 yds. above Boulevard Bridge		1:20		80	70	S	Alk.	{B-80.0 C-10.0	8.0	104.0	8.3	....		
688	Glennaro Lake Mo. S.W. bay	6A	10:50 A.M.	Aug. 17	83	77	B-4	1.5	32.0	5.5	65.5	7.7	G.Sh., Cn.S., Co.B., abundant; Pkl., Lm.B., Y.P., tadpole oel, chub sucker, Bh.C., common	Posted, (Pkl., Lm.B., Co.B., Y.P., Bh.C., N.S.A.)	
	Mo. S.E. bay		11:10		83	77	B-4	3.0	33.8	6.4	78.1	7.6	....		
	Center		11:30		79	77	S	Alk.	{B-19.8 C-2.8	7.0	92.5	8.5	....		
688	75 yds. above dam	6A	11:30	Aug. 17	77	77	B-6	2.0	32.8	6.5	77.3	7.6			
					85	60	S	Alk.	{B-17.4 C-5.5	8.6	108.3	8.6	....		
					77	77	B-0	4.2	22.0	4.7	58.0	7.2	....		
698	Wickham Lake Center of bay at outlet	6A	10:15 A.M.	Aug. 18	69	77	S	Alk.	{B-19.0 C-23.0	8.3	98.0	9.4	Cn.S., abundant; killifish, Lm.B., Y.P., Co.B., common; Pkl., carp, oel*, Pp., Bh.C., fairly common; banded pikereel, common sucker*, rare	Posted, Bh.C., (Lm.B., Y.P., Co.B., N.S.A.)	
	Center of lake		11:00		71	77	S	Alk.	{B-17.0 C-24.0	8.1	94.0	9.3	....		
					70	70	10	Alk.	{B-15.0 C-20.0	8.3	99.0	9.5	....		
					71	70	15	4.7	46.0	0.2	3.2	7.3	....		
					59	70	B-23	15.0	86.0	0.0	0.0	7.1	....		
100 ft. off mo. trib. 4	11:45	73	70	B-10	Alk.	{B-34.0 C-8.0	6.1	90.1	8.0	....					
780	Fifth Binnowater Lake S.W. corner	4A	1:00 P.M.	Ju. 10	78	67	B-21	0.5	126.0	6.4	57.8	7.0	Lm.B., Cn.S., oel*, common; Sm.B., Pkl., Bh.C., Rb.S., fairly common; Pp., Y.P., rare	White water, vegetation fair; bottom gravel, rock and muck; Sm.B., large size, Y.P., large size, (Lm., Bh.C., N.S.A.)	
	W. corner		1:10		73	63	S	Alk.	121.0	9.4	108.3	8.0	....		
	Center		1:25		70	58	B-40	13.0	144.0	0.0	10.3	7.4	....		
774	Mohawk Lake N. end	4A	2:35 P.M.	Ju. 20	80	53	23	5.6	5.4	12.0	110.4	7.0	R.T., common; Sm.B., Y.P., Rb.S., Cn.S., rock bass, fairly common; Pkl., G.Sh., rare.	White water; vegetation scant; bottom gravel and rock; transparency 15 ft.; posted, 1,000 R.T., 7 inches or larger, L.H., (Sm.B., Y.P., N.S.A.)	
	W. corner		3:30		49	B-16	7.0	7.0	7.0	0.0	69.4	6.2	....		
					69	0	0	0	0	0	12.4	135.3	6.6		
					60	0	0	0	0	0	5.4	131.1	6.6		
					58	20	0.6	5.0	12.5	120.5	7.0	....			
					50	30	0.3	5.0	11.2	98.0	6.2	....			
					48	40	4.0	5.0	7.8	97.3	6.2	....			
					48	50	5.0	6.4	6.5	80.9	6.2	....			
					48	B-60	6.4	3.0	3.3	28.5	6.2	....			
					50	B-28	3.0	6.8	11.7	103.3	6.0	....			
812	Hunk Lake N. corner	4A	11:50 A.M.	Jul. 14	91	81	B-7	8.0	0.2	0.1	0.0	6.0	Bh.C., minnows, 4 species, abundant; Cn.S., johnny darter, trout-perch, common sucker, common; B.T., rare	Light brown water; vegetation scant; bottom gravel, sand and muck; transparency 3 ft.; (Bh.C., N.S.A.)	
	S. end		12:45 P.M.		84	8	S	3.4	33.8	8.2	105.3	6.1	....		
					98	B-18	15.0	24.4	6.8	74.1	6.4	....			
830	Spring Lake N. end	3B	2:10 P.M.	Sept. 10	80	71	B-10	3.4	124.0	9.2	103.7	8.2	Killifish, fairly abundant; Lm.B., Cn.S., common; Y.P., Pp., fairly common	White water; vegetation fairly scant; bottom gravel, sand and muck; transparency 11 ft.; Y.P., (Lm.B., N.S.A.)	
	N. corner		2:40		74	S	3.0	74.4	7.8	90.4	8.2	....			
					62	M-30	20.0	100.0	0.5	4.6	7.0	....			
					49	B-00	20.0	35.0	0.0	0.0	7.0	0.7	....		

Determinations by R.A. Greene

Appendix No. 3

On Fishing for Bullheads
personal accounts

Erik Anderson - April 1982

He told me that local fishermen believe that this species can best be caught by fishing with worms on the bottom at night during the time of full moon.

In eel wiers in the Delaware, they catch more bullheads during full moon nights than all the rest of the 29 day period.

Dan Smiley - July 1983

About 1941, I was invited by Charlie Brag, a Mohonk employee, to go fishing for bullheads. My remembrance is that it was in the spring. We went after supper to the Gateway ponds. I have a clear mental picture of fishing from the bank of the pond SE of the road which is nearest the Gateway.

We had bamboo poles about 10 ft. long, with a line about 10 ft. long tied to the end of the pole. There was a wooden dobber about 3 ft. from the hook which was baited with a worm, according to my recollection.

We fished after dark. Charlie's procedure was to stand close to shore with our feet about 15 inches apart. Between our feet was a lighted kerosene lantern. With the light source in that position, one could see the dobber without direct beams reaching one's eyes. When there was a bite, there was no playing the fish. One simply swung it on to the shore. On cool spring evenings the lantern contributed a bit of welcome warmth. Bullheads were delicious, the preferred season being the early spring while the water was still cool.

Dan Smiley