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## 1969 HUDSON RIVER FISHERIES SURVEY BRIEF

An initial survey of the Hudson River was conducted by Region 6, Fish Management from July 28 through August 8, 1969. The section of river covered was from Lock No. 1 to Fort Edward and the purpose of the survey was to obtain very general information concerning the fish populations of the river i.e.:

- a. species present,
- b. size range of species,
- c. their relative abundance,
- d. and distribution.

A cursory evaluation of the aquatic environment was also made.

Sampling was done by electrofishing, seining and gill netting.

Chemistry was run at seven stations corresponding to those established by the Conservation Department in 1959 as they appear in the N.Y.S. Health Department's Upper Hudson River Drainage Report No. 2.

A list of fish species collected and their common names is as follows:

- ✓1. *Alosa pseudoharengus* - Alewife
- ✓2. *Boleosoma nigrum* - Johnny darter
- ✓3. *Carassius auratus* - Goldfish
- ✓4. *Catostomus commersonnii* - White sucker
- ✓5. *Fundulus diaphanus* - Banded killfish
- ✓6. *Ictalurus natalis* - Yellow bullhead
- ✓7. *Lepomis gibbosus* - Common sunfish
- ✓8. *Lepomis macrochirus* - Bluegill
- ✓9. *Micropterus salmoides* - Largemouth bass
- ✓10. *Notropis* sp. - shiner
- ✓11. *Perca flavescens* - Yellow perch
- ✓12. *Salmo trutta* - Brown trout
- ✓13. *Semotilus atromaculatus* - Creek chub
- ✓14. 3 sp. minnows (unidentified)

The brown trout were collected in tributary streams.

The collection data indicates the absence of any significant fishery between Lock No.1 and Fort Edward. The only gamefish species collected in the river channel itself were found along the shoreline

Also check voucher specimens

| CODE | INIT.            |
|------|------------------|
| 1    | Supt             |
| 2    | Admin. Asst.     |
|      | Secty.           |
| 3    | Park Historian   |
| 4    | Historian        |
| 5    | Technician       |
| 6    | Ranger           |
| 7    | Foreman II       |
| 8    | Maint. Men I     |
| 9    | Maint. Men II    |
| 10   | Laborer          |
| 11   | Curator          |
| 12   | Technician 2G.   |
| 13   | Maint. Sup. III. |
| 14   | Seasonals        |
| CODE |                  |
| 1    | Read             |
| 2    | Comments         |
| 3    | Prepare Reply    |
| 4    | Return To        |

and these were represented by young only. Only the cove, and the beach near its entrance, at Coveville, produced larger fish of any species other than goldfish.

Perhaps the most surprising aspect of the species composition of the study section was the apparent absence of carp (Cyprinus carpio). This species is able to withstand adverse chemical and physical conditions that severely limit the growth, survival and reproduction of many other species. Carp are known to be a prominent species in the river, both below and above the study section and in the Mohawk River. It appears that conditions within the study area are not suitable for carp.

Goldfish (Carassius auratus) were the only larger fish taken in the survey with the exception of a few sunfish, bluegills, and one alewife, which were captured in the coves or along the beach at Coveville. This species (goldfish) appeared to be doing fairly well and were to be found in most of the coves and back water areas along the river with some being captured and observed in the river itself. The larger goldfish sampled were extremely fat and were of two distinctly different patterns of coloration. One type was very vivid orange and did not appear to grow as large as did the brown variety, one member of which measured 18.5" in length. Some specimens were captured that appeared to be "hybrids" of these two varieties of coloration.

A noticeable dearth of aquatic vegetation was characteristic of the river channel. It is suspected that the extreme turbidity coupled with the presence of current severely limits the growth of aquatic plants on the river bottom. It is interesting to consider that a substantial decrease in the turbidity of the water could result in an explosion of aquatic plant growth, particularly in some of the still-water areas where the river bottom must be a veritable bed of fertilizer. Even in areas where the current is fairly prominent, some species of aquatic plants would do very well if turbidity was substantially decreased.

Chemistry data including values for water temp., dissolved oxygen, and pH do not reveal any factors which would be considered limiting to the existence of a warm water sport fishery, yet, such a fishery does not exist in the study section. It goes without saying that the chemistry data obtained in this survey and in 1959 is not comprehensive in terms of testing for all possible unfavorable chemical conditions for fish or other aquatic organisms. It is very likely that large quantities of toxic substances are released into the river and/or its tributaries from time to time that have passed undetected by these two extremely cursory chemical surveys. This is not meant to imply that all of the river's ills are attributed to chemical factors. Some are

undoubtedly due to physical factors, many of which go hand in hand with the chemical. Such factors as color, temperature and turbidity undoubtedly exert considerable influence on the river as an aquatic environment.

It is therefore recommended that a comprehensive monitoring program be initiated by those agencies most able to do so which would serve to monitor the chemical and physical changes in the river over an extended period of time. This system should be devised to effectively monitor the river at critical locations such as:

1. The areas immediately below large industrial complexes,
2. below major sources of sewage effluent,
3. in or near the mouth of major tributaries which are known or suspected to be sources of various types of pollution.

In the meantime, all possible steps should be taken to reduce chemical, physical, and thermal pollution in the river and its tributaries. A 1969 report by the Saratoga County Sewer Agency outlines possibilities for an excellent central sewage disposal system for that county's major sources of municipal and industrial sewage. The system, as proposed, appears to be a big step in the right direction for a major water pollution problem, which affects the Hudson River and several of its principal tributaries.

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