



*Rochester Committee
for Scientific Information
Rochester, NY*

*RCSI Bulletin 1
Report on Water Pollution*

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REPORT ON WATER POLLUTION

1. What was found.

Dr. G. Berg and Dr. T.T. Bannister, acting for the committee, collected samples of Irondequoit Creek and counted the living coliform bacteria in the water.

<u>Place</u>	<u>Date</u>	<u>Count of coliform bacteria per 100 ml of creek water</u>
Site 1. Public park, south of N.Y. Central RR right of way, upstream from sewer	Sunday 9/27/64	2 thousand to 5 thousand
Site 2. East Rochester sewage processing plant outlet	Sunday 9/20/64	3 million to 5 million
Site 3. Under bridge to sewage disposal plant	Sunday 9/27/64	2 million
Site 4. Oak Hills housing development, 1,500 feet downstream from sewer outlet	Sunday 9/27/64	200 thousand to 300 thousand.

We counted the coliform bacteria because they live in intestines and are the best measure of the contamination of water with human fecal matter. This is how we interpreted the results:

1. The bacterial count at the sewer outlet was so high, that there was no difference on that score between sewage coming out of the processing plant and sewage that would not be processed at all.

2. The bacterial count at the housing development downstream was as high as one would expect from mixing raw sewage with the water of the stream. This meant that the coliform bacteria were not killed or removed by the flow of the stream, and that the stream was too loaded with sewage to be self-cleaning.

2. Background information.

We recommend the authoritative book on Preventive Medicine by Drs. Hilleboe and Larrimore for background information (Dr. Hilleboe was the Commissioner of the New York State Department of Health, and chairman of the New York State Water Pollution Control Board). According to this book the following diseases were associated with human fecal contamination:

diarrhea of the newborn	virus fever and virus diarrhea
shigellosis (dysentery)	(Coxsackie and Echo type)
staphylococcal infections	virus hepatitis
typhoid fever	virus gastroenteritis
polyomyelitis	amebiasis
virus meningitis	cysticercosis

Quoted from page 73:

"In any community, there are always persons suffering from disease. Therefore sewage always contains disease-producing organisms which, if brought into contact with healthy individuals may cause disease."

3. A note on procedures and purposes.

The samples of water were obtained and handled according to the Standard Methods for the Examination of Water and Sewage of the American Public Health Association, as recommended by the New York State Department of Health. Counting was done on EMB agar plates (Hilleboe-Larrimore, page 101), and confirmed by the anaerobic gas fermentation test (as per Standard Methods of the A.P.H.A.). Tap water controls were negative. Supplies for the test were bought by the members of the Rochester Committee for Scientific Information.

The results of our tests of water are available as a public service to all parties with a legitimate interest in environmental pollution. For instance, the preliminary counts of Irondequoit Creek were made available to the Conservation Council of Monroe County in connection with public hearings held on September 23rd, 1964.

Drs. Bannister and Berg plan to test the Genesee River next. The Rochester Committee for Scientific Information invites the help of other trained persons in this undertaking. If you had some training in bacterial plating and bacterial counting, won't you join our survey of pollution in the waters of Monroe County?

For the Committee for Scientific Information

THOMAS A. FINK, President,

GEORGE BERG, Chairman of the Scientific Committee.