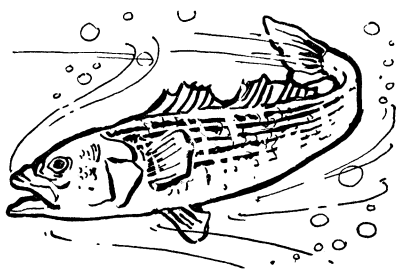


ECOLOGY
**NATURE
 RAMBLINGS**
 by Frank Thone



Water and Man

► MAN is usually given formal classification as a land animal, yet when we analyze him and his environment we find he is at least as much a water creature as a fish. His body consists largely of watery fluids and colloids, his watery foods are usually cooked in additional water, his dirt and wastes are removed principally by water, he does much of his traveling and freight hauling on water—in short, he just about swims and splashes his whole way through life.

The situation is vividly presented in a new book, *Conservation for Tomorrow's America*, by O. E. Fink, curriculum supervisor in conservation education for the state of Ohio.

Mr. Fink pictures man as the apex of a water pyramid with eight widening successive steps, representing the yearly water requirements of an adult person living in an average American city environment.

The tip of the pyramid, man's body, contains 70% of water. The first pyramid step is represented by 1,000 pounds of water in the food he eats, the second

by 3,000 pounds used by the body in keeping the proper salt dilution, the third by 100,000 pounds used in personal hygiene. Food production requires tremendous quantities of water. The fourth step on Mr. Fink's aqueous pyramid is a figure of 400,000 pounds of water used in the production of plant foods, the fifth is the water used in preparing dairy products—500,000 pounds. Meat and meat products require even vaster quantities of water in the sixth step: a good 10,000,000 pounds a year per carnivorous human.

The seventh step is the more modest quantity of 200,000 pounds of water used for municipal purposes, including not only such obvious outpourings as street-flushing and fire-fighting, but all water-requiring manufactures. These are often very thirsty things indeed: nearly 100 tons of water get used up for every long ton of steel produced; and a little over that ton (2,300 pounds) of new steel was used by the average family in a typical pre-war year.

The final step in the water pyramid cannot be measured, for it includes the use of water for travel, transportation, recreation and similar very general uses that require water but do not actually consume it.

Seen thus, the importance of water to modern life is brought to an acute focus, and the necessity for conserving it and preventing pollution from rendering it unavailable impresses itself with particular weight upon the average citizen's consciousness.

Science News Letter, April 3, 1943

PSYCHOLOGY

Books Can Aid Health As Well as Amuse

► MOST OF US, young and old, read books solely for entertainment. Properly selected and read, they can also be an aid to health, it appears from two medical reports. This does not refer to books about health, physiology, hygiene, and the like, but to books which would ordinarily be classed as the kind to be read for enjoyment, not learning.

The first report was by Dr. Ralph H. Pina, editor of a medical journal, the *Detroit Medical News*. Under the heading "Riches from Rationing" he suggests to his fellow doctors that they try books as a substitute for the Sunday afternoon or evening ride to the country or a friend's house which must be given up because of gas rationing. If that's good medicine for the doctors, it should be good medicine for the rest of us. And from the

authors Dr. Pina suggests as Sunday afternoon or evening companions, Whitman, Thoreau, Hawthorne, Lowell, Holmes, among others, he clearly has in mind treatment for rationing blues and war despondency as well as entertainment.

The second report was by Dr. Thomas Verner Moore, of Catholic University, who believes bibliotherapy, or, book treatment, can be used to help problem children. Dr. Moore reported success with bibliotherapy in the case of one 11-year-old, Charles, who could not put up with correction from a foster-aunt, was lazy at school, and refused to share his toys with a younger brother. The home situation was bad, in that Charles' father was dead and he, his mother and younger brother had to share an apartment with the foster-aunt and her family so that the mother could work.

The home situation could not easily be changed, and Dr. Moore tried to teach Charles to adjust better to it, especially since the boy will not be able to go through life successfully without learning to deal with many other more or less unreasonable persons in authority. After a few periods of play treatment during which Charles accepted the doctor as a friend, Dr. Moore started lending him books to read. Charles chose his own at first, and then the doctor began giving him books, biographies, for example, from which he could learn certain principles such as persistence in the face of great difficulties, willingness to learn from correction without getting angry, readiness to share possessions.

Science News Letter, April 3, 1943

● RADIO

Saturday, April 10, 1:30 p.m., EWT

"Adventures in Science" with Watson Davis, director of Science Service, over Columbia Broadcasting System.

Dr. Edwin Morris Betts, of the University of Virginia, will speak on "Thomas Jefferson as a Gardener."

Monday, April 5, 9:15 a.m., EWT; 2:30 p.m., CWT; 9:30 a.m., MWT; and 1:30 p.m., PWT

Science at Work, School of the Air of the Americas over the Columbia Broadcasting System, presented in cooperation with the National Education Association, Science Service and Science Clubs of America.

"Freedom from Want" will be the subject of the program.

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