

WILDLIFE CONSERVATION

Water Pollution—Conservation's Most Urgent Problem

Life cannot exist without water; all plants and all animals, including man himself, depend upon water. Water made our industrial system possible—water is used in the processes of manufacture, and as a means of carrying off industrial wastes. An important part of our food supply comes directly from oceans, rivers, and lakes. Water holds for us tremendous aesthetic, social, and recreational values.

We have taken poor care of our waters. Where the greatest number of people live, where the need for water is greatest, we have all but destroyed its usefulness. In 1944 the Surgeon General of the United States estimated that in this country pollution from sewage and industrial wastes together approximated the raw sewage of at least 100 million people. We take the water that we use every day from these same streams and lakes. The effects are plain to see. The Surgeon General also said: "Modern processes of water purification are less and less effective in coping with this ever-increasing burden of pollution." The direct economic loss from pollution has been estimated at from 100 to 500 million dollars a year. The figure does not include such things as the thousands of lost swimming holes, the water-birds dead of oil-soaked feathers, and the blighted resting and feeding grounds of wildfowl. It includes costs which are charged to the maintenance of public health and to losses to the fisheries industries, but to that extent only does it indicate the violent disruption of the whole aquatic biota.

And there lies the naturalists' special interest in the problem. No matter what their particular fields may be, there is one underlying principle which ties them all together: the dependence of both animals and plants upon water and soil—not upon water and soil as two separate systems, but as one. In the long view, no one animal or group of animals can be considered apart from the rest. Through food chains—food circuits—all organisms draw upon a common store of nutrients which are borrowed for a time, and eventually returned. In nature, this system of borrow-and-return is a fairly orderly one, but civilized man has not yet learned to fit himself into the basic "pattern." As Leopold has said: "Civilization shortens food chains, and routes them into lakes and rivers instead of fields and pastures." And in doing so, it has drastically unbalanced the biological pattern of our waters, all too often to the extent of destroying that pattern entirely.

Except in the case of a very few pollutants, the techniques for cleaning up our waters are already well known and in use; they need only to be applied more widely. However, most rivers cross State lines, and we have spent our time haggling over "States' rights" as opposed to Federal control. Anti-pollution laws must somehow be coordinated, but we have not agreed on how to do it.

There is hope that agreement is now in sight. The leaders of the two opposing groups have again introduced bills in the Federal Congress, four in January of this year: H. R. 123, 315, and 470, and S. 418. All four agree on the following points: The States are primarily responsible for pollution-abatement programs. The Surgeon General of the U.S. Public Health Service is made responsible for the control of water-pollution; in cooperation with other public and private agencies, he shall prepare pollution-control plans; he shall encourage interstate cooperation; he may bring suit to abate pollution within a stated time after having given notice; he shall conduct investigations and publish reports thereon; he shall review reports and applications for Federal assistance, and shall establish priorities. An Advisory Board is to be established, consisting of the Surgeon General as Chairman, and representatives of the Departments of War, the Interior, and Agriculture, with five additional members not in Federal employ; the Board will review poli-

cies and programs on pollution control and make recommendations thereon to the Surgeon General; \$100,000,000 is authorized for grants-in-aid and loans in each year and \$1,500,000 for State aid in studies and programs.

Anti-pollution bills have been introduced in Congress regularly since 1936. One of the earliest passed both Houses but was vetoed by the President in June 1938 because it did not provide for review by the Executive branch. Another, in 1940, passed both Houses but died in conference over an amendment similar to the provision which differentiates the present Mundt bill from the other three. During the war, although new sources of pollution appeared at a much greater rate than before, anti-pollution legislation was out of the question on practical grounds. That excuse no longer exists.

The most significant thing about the four current bills is that their proposers have shelved the old jurisdictional dispute. An encouraging sign is that S. 418 was introduced as a joint bill sponsored by the leaders of the two major political parties, Senators Barkley and Taft. Public opinion is unquestionably in favor of pollution control. The chance to get it seems better than it has been for many years. There is no excuse for more delay.—F.N.H.

Conservation of Renewable Natural Resources: Some Fundamental Aspects of the Problem. By Raphael Zon, William S. Cooper, Gustaf A. Pearson, Homer L. Shantz, A. E. Douglass, Charles G. Abbot, Paul B. Sears, Ellsworth Huntington, Morris L. Cooke, Samuel T. Dana, Milton S. Eisenhower, and Julian F. McGowin. University of Pennsylvania Press, Philadelphia, 1941: 6 × 9 in., vi + 200 pp., 31 figs. \$2.50.

This book appears to be a collection of twelve papers which were read at the University of Pennsylvania Bicentennial Conference. The table of contents divides them into three groups: natural vegetation as a guide to farm and forest practice; climatic cycles in relation to conservation; and the administrative task of conservation, public and private. There is no introduction to explain either the basic plan or its objectives.

The nature of the first section is indicated by its individual titles: "Natural Vegetation as a Key to Conservation Practices" (Raphael Zon), "Man's Use and Abuse of Native Vegetation: The Lessons of the Past and the Prospects for the Future" (William S. Cooper), "What Forest Trees Tell about Climate and Soil" (Gustaf A. Pearson), and "The Original Grassland and Desert Shrub Vegetation . . . as a Guide to Present Day Agricultural Practice" (Homer L. Shantz). This is useful and interesting information of a kind that has too often been ignored in the past.

The section on climatic cycles is the longest but, except for Paul B. Sears' excellent account of "Conservation and Changing Environment" (10 pp.), has been related only slightly, if at all, to the main subject of the book. Two of these papers—"Dendrochronology and Studies in 'Cyclics'" (A. E. Douglass) and "Periodicities in Solar Variation Reflected in Weather" (Charles G. Abbot)—explain some of the research methods and findings of these two authorities. "Climatic Pulsations and an Ozone Hypothesis of Libraries and History" (Ellsworth Huntington; 49 pp.) re-states some of the author's well known theories concerning climatic cycles and their influence upon human history, and adds the "Ozone Hypothesis"—a suggestion that minute changes in the amount of atmospheric ozone, associated with fluctuations of weather and climate, affect human well-being and mental activity. This is fascinating to read, but seems singularly out of place.

The final section has for its keynote "On Total Conservation" (Morris L. Cooke), stressing the need for planning. "Natural Resources and the States" (Samuel T. Dana) and "The Forest Problem Can Be Solved by Increased Production and Use"

(Julian F. McGowin) deal mainly with forestry, the first from the standpoint of state, the second of private, responsibility. "Federal Responsibilities in Total Conservation" (Milton S. Eisenhower), like the whole first section, draws its examples mainly from soil conservation, agriculture, and forestry. Even in this section, as throughout the book, other renewable resources—such as waters, fish and wildlife, and recreational values—get scant attention.

Altogether, like so many other symposia, this one is a group of essays, some good, some excellent, no one of which can cover the whole subject; they fail to do so collectively through the lack, apparently, of planned integration.—F.N.H.

WILDLIFE CONSERVATION COMMITTEE
Frederick N. Hamerstrom, Jr., *Chairman*

WILSON ORNITHOLOGICAL CLUB APPOINTMENTS FOR 1947

The President has appointed the following to serve during 1947:

Committees—

Membership Committee. Walter E. Scott, *Chairman*. Names of members will appear in a later issue of the *Bulletin*.

Affiliated Societies Committee. Gordon M. Meade, *Chairman*. Theodora Nelson, Member-at-large; Russell DeGarmo (Brooks Bird Club); Eugene P. Odum (Georgia Ornithological Society); O. A. Stevens (Inland Bird Banding Association); Harvey B. Lovell (Kentucky Ornithological Society); Edson H. Fichter (Nebraska Ornithologists' Union); George R. Mayfield (Tennessee Ornithological Society); N. R. Barger (Wisconsin Society for Ornithology); J. J. Murray (Virginia Society of Ornithology).

Wildlife Conservation Committee. Frederick N. Hamerstrom, Jr., *Chairman*. Rudolf Bennett, George H. Breiding, Charles A. Dambach, Paul L. Errington, Ludlow Griscom, H. Albert Hochbaum, Harrison F. Lewis, Robert A. McCabe, Richard H. Pough, Herbert L. Stoddard, Gustav A. Swanson, Milton B. Trautman.

Illustrations Committee. Walter J. Breckenridge, *Chairman*. Richard P. Grossenheider, Hal H. Harrison, Karl Maslowski, Roger Tory Peterson, T. M. Shortt.

Endowment Fund Committee. Harold F. Wing, *Chairman*. Mrs. Herbert E. Carnes, William W. Griffin, Fred W. Haecker, Fred T. Hall.

Library Committee. Harold R. Mayfield, *Chairman*. Edward F. Dana, Arthur E. Staebler, Rowland S. Wilson.

Trustees—

James Henry Bruns, three-year term
Allyn R. Moser, two-year term
William G. Fargo, one-year term.

Representative of the Wilson Club on the American Ornithologists' Union Council—Maurice G. Brooks.