

BOOK NEWS

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Underwater Guideposts

Homing of Salmon

by ARTHUR D. HASLER



The unerring instinct which can lead animals safely over thousand-mile migrations, the sure knowledge which drives salmon many weeks' journey up the rivers of their birth to the spawning grounds, have long fascinated laymen and scientists alike. In laboratories around the world researchers are piecing together a solution to the ancient puzzle, and the story of their quest is often as engrossing as are their revelations about patterns of animal behavior. *Underwater Guideposts* recounts the experiments and conclusions reached at a leading ichthyological research center, the Laboratory of Limnology at the University of Wisconsin, under the direction of Professor Arthur D. Hasler.

What are the cues to which salmon respond in their return home after a sojourn in the sea? What guideposts do they follow, what landmarks do they recognize? For over fifteen years Professor Hasler and his students have put these questions to fish and have "listened," through experiments, to their answers. The conclusions they have reached about sun-compass orientation in the open sea are as fascinating and in some respects as amazing as the original enigma. Equally absorbing is Professor Hasler's hypothesis about the stream phase of salmon migration, which begins when the fish has made its way

back to the mouth of the natal river after spending its entire adult life in the open sea. Professor Hasler believes that salmon navigate upstream by means of smell, following the "bouquet" of the natal stream and making the correct choice each time a new tributary enters the river.

Hardly less interesting than the ultimate answers are the questions which Professor Hasler and his colleagues posed and the experiments they devised in the course of their research. In *Underwater Guideposts* these experiments are described, illustrated, and related to the work being done in allied fields by scientists around the world. Some of Professor Hasler's own most useful findings were based on experiments with white bass in the lakes of Wisconsin, but he offers also a valuable synthesis of other scientific investigations concerning the migration of fishes. This book will interest the general reader as well as scientists working to unravel the mysteries of animal behavior.

Arthur D. Hasler received the Ph.D. from the University of Wisconsin, where he has been Professor of Zoology since 1948. Throughout his career he has directed the University's program in limnology, now housed in a new building on Lake Mendota.

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