Learning and Instinct in Animals. *W. H. Thorpe*   Harvard University Press, Cambridge, Mass. 1955.   viii+493 pp. 9 pl. $10.00.

The material in this book is divided into three sections.   Section I deals with directive and purposive behavior in relation to the theory of instinct.   Section II is concerned with the types of learning and with their relationships, and Section III is a comparative study of learning abilities and behavior in the various animal groups.   Section III, which covers 251 pages in itself, contains a most valuable review of the behavior characteristics of the major animal groups.   Here the author has brought together, from the interminable mass of experiments on behavior, a core of documented examples which give some reasonable concept of the variation and scope of behavior in animals.   Sections I and II deal with the theoretical aspects of instincts, drives, releasing mechanisms, habituation, conditioning and learning theory.   Various points of view are given and evaluated.   The discussion is well illustrated by means of references to the specific experiments by many outstanding workers in the fields of zoology and psychology.

No one book could cope with the entire field or bring agreement among the various theorists nor does Dr. Thorpe claim to do this.   He has done an excellent job of organizing and bringing into focus some of the major behavior problems.   Judicious use of this book along with other major references in comparative behavior can go a long way in clarifying the issues.

L. S. PUTNAM

Weather Analysis and Forecasting.   Volume II.   Weather and Weather Systems.   *S. Petterssen.* McGraw-Hill Book Company, Inc., New York.   Second Edition, 1956.   xii+266 pages. $6.00.

The post World War II advances in both the theory and technique of weather forecasting are reflected in the second edition of this well known text for meteorologists.   Petterssen believes that machine-made forecasts will eventually replace conventional methods.   Thus, most of Volume I, Motion and Motion Systems (Chapters 1–19), consists of an introduction to the analytical tools needed for the interpretation and prediction of air movements.

Volume II continues with a description of other atmospheric factors which are important in weather analysis.   Among the topics discussed are air mass production and transformation, temperature and humidity relationships in the atmosphere, clouds, precipitation, mist, fog, convective clouds and associated weather.   Much of the material has been rewritten and many references to recent work are included, as for example in the section on thunderstorms where extensive reference to the work by Byers and Braham is made.   The 9 chapters in Volume II also include one by J. C. Thompson on quantitative precipitation forecasting and a concluding one by T. F. Malone on the application of synoptic climatology to weather prediction.

This new edition is an excellent introduction to weather and weather forecasting and is highly recommended to those desiring a more than superficial approach to the subject.

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