

NOTES AND NEWS

A meeting for presentation of scientific papers, sponsored by the Cooper Ornithological Society, will be held in conjunction with the forthcoming meetings of the Pacific Division of the American Association for the Advancement of Science at Santa Barbara, California, June 15 to 20. The Society's meeting will occur on Saturday morning, June 20, beginning at 9 a.m. on the campus of Santa Barbara College.

Organization of a program for this meeting is now in progress. Information concerning the program may be obtained from Dr. John Davis, Moore Laboratory of Zoology, Occidental College, Los Angeles 41, California. Persons wishing to participate should write to him.

Other sections of these general meetings of the AAAS will also be of interest to ornithologists and naturalists. Some field trips will be held. A preliminary announcement listing all participating organizations and the proposed programs may be obtained by writing to Dr. R. C. Miller, California Academy of Sciences, Golden Gate Park, San Francisco, California.

The forthcoming meetings of the American Ornithologists' Union to be held at Los Angeles, California, are scheduled to take place from Wednesday, October 21, through Sunday, October 25. Wednesday, the 21st, will be taken by business meetings. Thursday, Friday and Saturday will be devoted to papers and symposia. The annual banquet will occur on Saturday evening. A field trip is planned for Sunday.

PUBLICATIONS REVIEWED

THE STUDY OF INSTINCT. By N. Tinbergen. Oxford University Press, xii + 228 pp., 130 figs. 1951. \$7.00.

At this writing, Tinbergen's book on instinctive behavior has not yet received the attention due it in American ornithological journals. It seems as though semipopular and more or less anthropomorphic writings on birds, not particularly challenging to our abilities to assimilate new ideas and facts, get more space on review pages than fundamental contributions. Critical reviews of more or less popular works, certainly important in themselves, will reach their proper audience not in leading scientific journals but in less specialized journals and magazines with greater appeal and interest to the general public.

It is a pleasure to describe and discuss Tinbergen's book. Well written, with elegant development of ideas and arguments, courageous in challenging faulty views and procedures, calm and confident in style, yet stimulating, the book should be read by anyone interested in the behavior of birds. Tinbergen is the present-day spokesman of a school of animal behaviorists developed by Lorenz and arising primarily from the early work, from 1900 to 1920, of C. O. Whitman at the University of Chicago and of the German ornithologists, Oskar and Magdalena Heinroth. The objective is to study innate behavior rather than learned or conditioned behavior. Certainly the latter is unavoidable in the study of innate behavior, and the distinction of the Lorenz-Tinbergen school arises out of point-of-view and method rather than subject matter. The two men are primarily environmentalists and evolutionists; they are naturalists in the best modern sense. They want to know how an animal responds to stimuli arising in its normal habitat and what it can and does learn *there*. At once, then, they differ from the majority of psychologists who want to know what an animal (usually the rat, or mouse, or some other tractable mammal) is *capable* of learning (usually in a pen or cage) and what pathologies can be detected or induced in it.

The book is organized around six questions to be asked about any particular act or behaviorism. (1) What external factors stimulate it? (2) What internal factors can stimulate, modify, or control it? (3) What part does the behavior play in a total pattern integrated by the nervous and muscular systems? (4) When does it appear and what is its place in the development and maturing of behavior in the individual? (5) What is its functional or adaptive significance? And (6) what is its place in the evolution of behavior? A chapter is devoted to each of these basic questions except for a division into two chapters of the material on external factors, the more complicated aspects of which are taken up after discussion of internal factors and "spontaneous" behavior. An introductory chapter orients the reader well with regard to objectives, the relation of the book to other types of research on behavior, and the relation of the study of behavior, or ethology, to other biological disciplines.

The main conclusions of the book deal with