NOTES AND NEWS

The annual meeting of the Cooper Ornithological Society will be held at Berkeley, California, April 3 to 5, 1959, and will be sponsored by the University of California and its Museum of Vertebrate Zoology. Howard L. Cogswell is the chairman of the Local Committee. The first session, devoted to the annual business meeting and the presentation of scientific papers, will be held on April 3rd.

At the 75th anniversary meeting of the American Ornithologists' Union in New York City last October, the following officers were elected: Ernst Mayr, president; George H. Lowery, Jr., 1st vice-president; Dean Amadon, 2nd vice-president; Herbert G. Deignan, secretary; Charles G. Sibley, treasurer; and Eugene Eisenmann, editor of The Auk. The following were elected to the class of Fellows: Andrew J. Berger, William Pierce Brodkorb, and Harold F. Mayfield. Those elected to the class of Elective Members were Fred H. Glenny, Philip S. Humphrey, Wesley E. Lanyon, Margaret H. Mitchell, Thomas L. Quay, and Dale A. Zimmerman. William Homan Thorpe (Great Britain) was elected as an Honorary Fellow. New Corresponding Fellows are D. S. Rabor (Philippines), Franz Sauer (Germany), Ernst Sutter (Switzerland), and Gunnar Svärdson (Sweden). The Brewster Memorial Award was given to A. W. Schorger for his book "The Passenger Pigeon." The Union's next annual meeting will be held at the Saskatchewan Museum of Natural History, Regina, August 25–30, 1959.

A painting of the Turquoise-browed Motmot by Don R. Eckelberry is published as the frontispiece of this issue through the generosity of a donor who wishes to remain anonymous.

In the course of the past year, the number of countries outside of the United States to which the Condor is sent passed 50. It now stands at 58. The Society's business managers and editors thought the list might be of interest to members, and the names of the 58 countries follow:

Argentina
Australia
Austria
Belgian Congo
Belgium
British Somaliland
Brazil
Canada
Cape Province, South Africa
Ceylon
Chile
Colombia
Costa Rica
Czechoslovakia
Denmark
Dominican Republic
England
Estonia
Finland
Formosa
France
Germany
Greece
Guatemala
Hungary
Iceland
India
Israel
Italy
Japan
Jugoslavia
Kenya, B. E. A.
Luxembourg
Malaya
Mexico
Natal, South Africa
Netherlands
New Zealand
Northern Rhodesia
Norway
Nyasaland
Paraguay
Peru
Philippines
Poland
Portugal
Scotland
Spain
Surinam (Dutch Guiana)
Sweden
Switzerland
Tanganyika, B. E. A.
Thailand
Transvaal, South Africa
Turkey
Uruguay
Venezuela
U. S. S. R.

PUBLICATIONS REVIEWED

HAWKS, OWLS AND WILDLIFE. By John J. Craighead and Frank C. Craighead. Stackpole Company, Harrisburgh, Pennsylvania, and Wildlife Management Institute, Washington, D.C., 443 pp., 1956. $7.50.

This ambitious study of predation was carried out in a township (36 sq. mi.) in southern Michigan, and twelve square miles of semi-wilderness in northwestern Wyoming. The former area, judged to be typical of the region, was intensely farmed, woodlots remaining on only 11 per cent of it. The Wyoming area included wooded river bottoms, fields, sagebrush benches and forested buttes. The two areas were selected to determine whether predation operated in the same manner in civilized and wilderness localities.

For two years hawks and owls were intensively studied on the Michigan area and reliable estimates of the fall, winter, spring, and summer populations were made. During the breeding season all nests were located and frequent climbs were made to each to determine the food brought to the nestlings. Some nestlings were also tethered to obtain food data for the period after which they would normally have left the nest. During the autumn and winter extensive collections of pellets were analyzed. Studies in the Wyoming area were made only during one summer and were used primarily for comparison, but as no adequate study was made of the prey popula-

tions, the results are difficult to interpret and evaluate. The book contains a wealth of material on territory, movements, food, food requirements, clutch size, and breeding success of birds of prey in relation to the populations of the other raptor species present. In the opinion of the reviewer this constitutes the most important contribution of the book. However, many of the numerous tables which are used to present the data are located far from their text reference, and their number is excessive.

In Michigan an effort was made to estimate the populations of the chief prey species. Four square miles were closely observed and the relative abundance of *Microtus* in the areas of suitable habitat were noted. Populations were estimated by obtaining a trap-night index and then the areas were "trapped out" to determine the relationship between the index and the number of voles present. The estimate of the population on the four square miles was then extrapolated to cover the township. The extent to which this technique overcame the usual bias in estimation of *Microtus* populations by the use of traps remains to be investigated. No systematic trapping of *Peromyscus* was conducted. Instead, estimates were taken directly from the work of Burt in other areas in southern Michigan. Pheasant and Bobwhite numbers were determined by direct count. Cottontail population density was estimated from the number of animals jumped, tracks, and the distribution of good refuges. Fox squirrel density was estimated by a direct count in one woodlot and these figures were multiplied by the number of acres of suitable habitat. Small birds were estimated on the basis of birds seen per acre of suitable habitat in the winter, and upon estimates in the literature of breeding bird densities in similar agricultural areas for the spring and summer. The accuracy of some of these methods is questionable and, furthermore, insufficient attention was given to the magnitude of the seasonal and yearly fluctuations in the abundance of these species and the effects of this on the estimation of predation's role.

Most studies of predation have concerned themselves with the relationship between one predator and one of its important prey species. Among insects, where carnivores and herbivores are often highly specialized for the utilization of a restricted food source, this approach has been successful, and there are many well-known examples of natural control in the entomological literature. The vast majority of vertebrates, however, are much more catholic in their use of the environment, and the single-species approach has led to conclusions which are not really satisfactory to anyone. Indeed, many leaders in the field doubt that predation is important in determining population levels. Therefore, it is most welcome to find a study in which at least an attempt has been made to study the interactions of collective predator and prey populations. No one without the great enthusiasm of the Craigheads for the birds of prey would have attempted such an ambitious project nor would they have progressed as far. One can only wish that they had taken a more chewable bite, concentrating more of their efforts upon a study of the ecology of one of the chief prey species such as *Microtus*.

Unfortunately, the authors' zeal did not extend undiminished to the prey species and the impression given by the book is that the prey densities were "determined" in a small fraction of the overall time devoted to the raptors. Great pains were taken to find every hawk and owl nest and, yet, figures for the density of such important prey species as *Peromyscus* and passerine birds were largely borrowed from other publications. Since a study of this type is no stronger than its weakest estimate, it would have been much more valuable to have tried to obtain a greater accuracy in the estimates of the most important prey species rather than striving for a relatively useless 100 per cent accuracy in raptor-population censuses. The general imprecision of prey population estimates and the lack of prey-vegetation studies make it difficult to evaluate the discussion of the role of predation which concludes the book.

It is regrettable that the authors have fallen prey to the tendency to assume the conclusions they wish to make. One finds statements of conclusion preceding their supporting evidence in the book. For example, the chapter on the function of predation precedes the chapter on predation's annual toll. Nonetheless, the authors have beautifully demonstrated how the pressure of a collective raptor population is distributed over the total prey population. They suggest that, since the prey populations in spring have already survived the winter, they cannot be considered surplus. Therefore, they believe that early spring predation significantly reduces the populations below the carrying capacity of the environment. This is certainly a tantalizing suggestion and should be pursued further. However, in the absence of knowledge of the amount of food available to the prey species it cannot be considered to

have been substantiated in this study. If one does not know the value of the carrying capacity he cannot know whether a population has been depressed below that value. Therefore, the information given in this book does not impinge upon the controversy over Errington's views in quite the manner the authors suppose, but in all fairness it must be admitted that Errington was not able to measure the food supply either, and he probably would not have arrived at his well-known conclusions if he had studied a situation such as that investigated by the Craigheads. It would appear that the answer to the question whether predation does depress vertebrate populations below the carrying capacity of the environment and, if so, how much so and how often, will not be provided by studies oriented primarily toward predators, with measurements of prey populations for the sole purpose of permitting the estimation of the percentage of the populations taken, but rather by studies oriented toward the relationships between the prey populations and their environmental resources, with predation considered in relation to this. In only such a manner would it seem possible to be able to determine the role of predation in terms of the total ecology of any species.

This book should be read and studied carefully not only by persons interested in the general biology of the birds of prey, but also by anyone interested in predation. The critical nature of this review should not be taken to mean that the book is of little value. In spite of its shortcomings, the study is one of the best available for vertebrate populations and, even more significantly, it demonstrates the possibility of dealing effectively with the pressure of collective predator populations upon all the important prey species. It therefore points the way toward the study of predation as a part of the over-all functioning of the ecological community.—GORDON H. ORIANS.

COOPER SOCIETY MEETINGS

SOUTHERN DIVISION

MAY.—The regular monthly meeting of the Southern Division of the Cooper Ornithological Society was held May 27, 1958, at the Los Angeles County Museum, with Thomas R. Howell, president, presiding.

The following names were proposed for membership: Lt. Cmdr. William G. Lehmann (DC), U.S.N., U.S. Naval Hospital, Oakland, Calif., by John Davis; Miss Kay Binder, 3838 West 61st St., Chicago 29, Ill., John Bursewicz, 14 Chapin St., Jamestown, N.Y., Kirk E. Downing, Box 489, Arkansas City, Kans.; Lewyn Edward Geiger, P.O. Box 146, Wellborn, Fla., Winthrop W. Harrington, Jr., 1900 Massachusetts Ave., Lexington 73, Mass., John Henderson Hart, 2700 Verona Rd., Kansas City, Mo., Miss Phyllis Lorraine Hurlock, R.D. 1, Coatesville, Pa., Peter M. Isleib, Jones Hollow Rd., Marlborough, Conn., Miss Hazel Belle Philbrick, 5090 Washington, St. Louis 8, Mo., Bryan Leonard Sage, 11 Deepdene, Potters Bar, Middlesex, England, Allen W. Stokes, Dept. of Wildlife Management, Utah State University, Logan, Utah, Farris S. Swackhamer, Shell Chemical Corp., P.O. Box 335, 1120 Commerce Ave., Union, N.J., Miss Katrina Thompson, 2029 Milford, Houston 6, Tex., Dr. Clifford Tillman, 492 Cherokee Park, Natchez, Miss., Maynard J. Toll, 414 S. Irving Blvd., Los Angeles 5, Calif., Miss Virginia M. Vaden, 4325 Bowser Ave., Dallas 19, Tex., Henry M. Weber, M.D., 82259 Miles, Indio, Calif., Lovett Edward Williams, Jr., Wildlife Research Unit, A.P.I., Auburn, Ala., and Robert J. Williams, Botany Dept., University of Wisconsin, Madison, Wis., all by C.V. Duff; Roger W. Jessup, 5431 West San Fernando Rd., Glendale, Calif., by Ed N. Harrison; Dale Warren Rice, U.S. Fish & Wildlife Service, % Navy 3080, Box 1, FPO San Francisco, Calif., by Johnson A. Neff; Stephen C. Bromley, 9359 Gotham St., Downey, Calif., and James R. Northern, Los Angeles County Museum, Exposition Park, Los Angeles 7, Calif., both by Kenneth E. Stager; Oscar M. Root, Brooks School, North Andover, Mass., by Wendell Taber; Herold Connon, 288 Lester Ave., Oakland 6, Calif., Mrs. Mildred V. Davies, 1019 W. 23rd St., Upland, Calif., William Harding, 526 S. Van Ness, Santa Ana, Calif., and Neal G. Smith, 1751 E. 29th St., Brooklyn 27, N.Y., all by Jack C. von Bloeker, Jr.; Julius J. Keil, 3347 14th St., Long Island City 6, N.Y., and Jorge A. Ibarra, Museo Nac. de Historia Natural, Salon No. 2 La Aurora, Guatemala City, Guatemala, both by C.V. Duff.

Mr. John Wintersteen of the Department of Zoology, U.C.L.A., showed his excellent colored motion picture, "East African Safari."—DOROTHY E. GRONER, *Secretary*.

SEPTEMBER.—The regular monthly meeting of the Southern Division was held September 20, 1958, at the Los Angeles County Museum, with Thomas R. Howell, president, presiding.

The following names were proposed for membership: Edward M. Chappell, P.O. Box 1085,