Alaska Range, it occurs to me that the gyrfalcon's laying season, which begins in April, may take place about the time the ground squirrels emerge from hibernation, a predator-prey relationship not discussed in this paper. Wilber and Musacchia [*J. Mammalogy* **31**, 307 (1950)] state that *Citellus barrowensis* comes out of hibernation "about the middle or end of April," and my friend W. O. Pruitt, Jr., informs me that he saw an active, adult ground squirrel in the Cape Thompson region of Alaska as early as 19 April 1960. The comparatively euryphagous peregrine, which can and does subsist on mammals as well as on transient birds, has no trouble obtaining food when its own laying season starts, if its nesting cliff is near water. On treeless Baffin Island peregrines frequently take lemmings when these rodents are numerous; but peregrines are highly prone to take flying prey, and robins, jays, waxwings, and the like expose themselves to capture when they fly across rivers in wooded parts of Alaska.

I call attention to the need for proof that the gyrfalcon is truly sedentary at high latitudes. Available data indicate that the species is regularly migratory, less so than the peregrine in that it rarely moves very far south of the arctic, but definitely migratory within latitudinal limits. White ptarmigan feathers found at plucking spots well north of the Arctic Circle (see page 204) are not proof of the gyrfalcon's winter residence, for cock ptarmigan wear white plumage well into summer. The Kenai area, in which gyrfalcons are said to be commoner in winter than at any other season, is well south of the Arctic Circle. There are very few (if any) valid records of gyrfalcons being seen or taken at really high latitudes in the dead of winter. Gyrfalcons are known to follow the ptarmigans south during the period when the nesting grounds of both gyrfalcons and ptarmigans are in winter darkness. To this extent, I submit, the gyrfalcon and peregrine are equally dependent upon migratory species.

The discussion of the nesting cliff as an "ecological magnet" is thought-provoking. Cade found that in Alaska "very high cliffs seem to be avoided by peregrines," nesting birds frequently being found on a low bluff only a few hundred yards from an unoccupied cliff with face 300 to 500 feet high. "Such a lack of preference for cliffs is especially conspicuous along the Colville River, but it seems to be generally true over much of Alaska." Cade is convinced that the "first-class aerie" is not so much a matter of cliff dimensions, exposure, and the like, as of occupation by a pair of "effective breeders"—that is by "a pair that usually is able to fledge one or more young each year because the mates have established all the social adjustments required for a strong pair pond. Such pairs can withstand a great deal of molestation by human beings and other predators, regardless of the physical characteristics of their aeries . . ." Breeding pairs of peregrines observed by Cade in Alaska were, almost without exception, composed of fully mature birds.

Cade concludes that the gyrfalcon is the "dominant competitor" in Alaska because of its greater size and strength and because its early nesting "gives it first chance to settle on the available cliffs," but that the peregrine is "numerically more successful" over most of its Alaska range because it readily adapts itself to changing climatic conditions, is less exacting than the gyrfalcon in choice of nesting cliffs, has no difficulty in obtaining plenty of food all summer long, and escapes the arctic winter by migration.

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New Books

Biological and Medical Sciences

The Lower Animals. Living invertebrates of the world. Ralph Buchsbaum and Lorus J. Milne. Doubleday, Garden City, N.Y., 1960. $12.50. This volume ranges from the microscopic radiolarians to the giant squids, from spiders on high mountains to sea cucumbers. The illustrations include 292 photographs (many of them in color) and 23 drawings.

The Memoirs of Ray Lyman Wilbur. 1875–1949. Edgar Eugene Robinson and Paul Carrol Edwards, Eds. Stanford Univ. Press, Stanford, Calif., 1960. 703 pp. $10.

The World of Amphibians and Reptiles. Robert Mertens. Translated by H. W. Parker. McGraw-Hill, New York, 1960. 207 pp. Illus.

General

Common Sense about Africa, Anthony Sampson, 175 pp.; **Common Sense about the Arab World,** Erskine B. Childers, 192 pp.; **Common Sense about China,** Guy Wint, 176 pp.; **Common Sense about Russia,** Robert Conquest, 175 pp. Macmillan, New York, 1960. $2.95 each. "The aim of this series is implicit in its title. . . . The authors have been asked . . . to assume no special knowledge of the subject on the part of their readers . . . to write in a manner immediately intelligible to [anyone] of average education . . . and . . . to be as objective as . . . possible."

Can We End the Cold War? A study in American foreign policy. Leo Perla. Macmillan, New York, 1960. 251 pp. $4.50.

China Crosses the Yalu. The decision to enter the Korean War. Allen S. Whiting. Macmillan, New York, 1960. 235 pp. $7.50.

The Squeeze. Cities without space. Edward Higbee. Morrow, New York, 1960. 367 pp. $5.95.

Wild Life in an African Territory. A study made for the Game and Tsetse Control Department of Northern Rhodesia. F. Fraser Darling. Oxford Univ. Press, New York, 1960. 168 pp. $4.

Reference and Bibliography

The International Dictionary of Applied Mathematics. W. F. Freiberger, Editor-in-Chief. Van Nostrand, Princeton, N.J., 1960. 1181 pp. Illus. $25. More than 8000 entries, prepared by 33 contributing editors, define terms and describe methods in the applications of mathematics to 31 fields of physical science and engineering. The volume contains a group of four foreign language indexes that alphabetically list the French, German, Russian, and Spanish equivalents of the terms defined and give their English equivalents. Typical entries are: "*ABAMPERE.* The *cgs electromagnetic unit* of current. It is that current which, when flowing in straight parallel wires 1 cm apart in free space, will produce a force of 2 dynes per cm length on each wire. One abampere is ten absolute amperes. (See *electromagnetic units.*)" "*ATOMIC ORBITAL.* See *orbital.*" "*GEODESIC COORDINATES (PARAMETERS) FOR A SURFACE.* Parameters u, v such that the curves $v =$ constant are a singly-infinite family of geodesics and the curves $u =$ constant are the *geodesic parallels* orthogonal to them." "*MACAULEY METHOD.* A method of simplifying the double integration procedure for calculating the deflections of beams of uniform cross section when the applied loading is discontinuous. Two constants of integration only are introduced. Junction conditions at points of discontinuity of loading $x = a$ are satisfied by integrating $x—a$ as a unit, and by extending all distributed loads to the right-hand end of the beam, introducing negative loads as needed." Entries vary in length from a line to more than a page, and many are illustrated.

Nuclear Reactors. Bibliographical series, No. 2. International Atomic Energy Agency, Vienna, Austria, 1960 (order from National Agency for International Publications, New York). 716 pp. $5. The 4118 items in this bibliography cover the relevant literature in English, French, Russian, German, Italian, Japanese, and certain other languages, published from 1947 to 1959. All items are classified by subject (ten categories) and are listed alphabetically, by title of the abstracted paper, within each category.