

## REVIEWS

EDITED BY WALTER BOCK

**Proceedings of the 16th international ornithological congress.**—H. J. Frith and J. H. Calaby (Eds.). 1976. Canberra City, A.C.T., Australian Academy of Sciences. Pp. xvii + 765. \$50.00.—This proceedings volume of the 16th ornithological congress held in Canberra 12–17 August 1974 contains the general reports, the presidential address of J. Dorst, the papers presented at the 11 symposia, and list of members. The major lack is information of the contributed papers presented in the general sessions. Abstracts of these papers were published in *Emu* (vol. 74, suppl.; see p. 3), but it would have been useful to include the titles and authors of these papers in the proceedings.

The theme of the congress was "The Two Hemispheres" and the program was designed to highlight the biological differences between the southern and the northern continents. This aim was achieved in three symposia, those on "Biology of crowned sparrows (*Zonotrichia*) in two continents" (#5), "Co-operative breeding in birds" (#10; plus a number of contributed papers on this subject), and "Seabirds: Distribution, speciation and ecological diversification at sea" (#11). Five of the symposia dealt entirely with southern hemisphere or Australian birds, and three symposia dealt with general topics (value of various taxonomic characters in classification, feather structure, evolution of island land birds). The five symposia on southern birds and many of the contributed papers gave the scientific program of the congress its distinctive and extremely interesting Australian flavor. The papers presented in these five symposia ("Origins of Australasia avifauna," "Biology of southern hemisphere species," "Breeding of birds in southern continents," "Physiological and behavioral adaptations to arid lands," and "Systematics of Australian passerine birds") provide a wealth of information on the biology of Australian birds; they alone make this volume invaluable to all ornithologists. The symposium on "Structure of feathers" provides a thorough review and much new information on the detailed morphology and chemistry of feathers. The symposium on avian adaptations to arid zones is an excellent review of the general and the detailed adaptations of birds to arid lands. The symposium on biology of *Zonotrichia* is a model for future symposia on a single genus; it would be valuable to have similar summaries of the biology of widespread genera, especially those that have a wide north-south range.

Many ornithologists had the misfortune to miss the Canberra congress; however, they are able to capture some of the flavor of that meeting and much of the scientific content by obtaining this proceedings volume. I recommend it highly to all ornithologists.—WALTER J. BOCK.

**Parrots of the world in life colours.**—Nagamichi Kuroda. 1975. Tokyo, Kodansho, Ltd. 282 pp., 65 color plates. Price 18,000 yen (about \$61.00). Text in Japanese and English.—It is perhaps unfortunate for the 87-year-old author and the publisher that this book comes on the heels of Joseph Forshaw's "Parrots of the world" (see *Auk* 91: 850–852, 1974), for it too covers every known species of parrot, illustrating each in color. The 65 color plates come first in the volume, depicting 645 individual birds—there are 3 more on the jacket of the book, but the colored frontispiece by the author's son, alluded to in the preface, is missing from my copy. The individual birds on the plates are numbered, and the text follows, covering the plates and birds in numbered sequence—this results in some peculiarities of arrangement, e.g. 2 races of Palm Cockatoo are on plate 2, covered on page 80, but 2 others are on plate 62, treated on page 247! The text has side-by-side, brief (3–4 figure accounts per page) accounts in Japanese and English. The English account covers only part of the material treated in Japanese (see below). Citations in Japanese are not translated. For each form is given the range, abbreviated considerably, with mention of type locality, and notation of characters, which varies from minimal to moderate detail. Also presented, in Japanese only, is information on rearing the birds, and, occasionally a "Remarks" section. Following the text is a list of live parrots introduced into Japan (in Japanese, but with Latin scientific names), a section called "Principal literatures. Mostly after 1967" a page and a half long (again, Japanese citations are not translated). Finally, there is a triple index to Japanese names, scientific names, and English names.

Non-Japanese users will purchase the book for its color plates. Unfortunately, these are not comparable in quality to those in Forshaw's book, this aside from the plates being smaller (about 7 × 10 in available for each plate), containing, at 10 or 11 birds per plate, many more individuals, and lacking backgrounds entirely. The renderings are not by any means bad, being of the quality expected in a good field guide, but they suffer by comparison with most of Cooper's paintings for Forshaw's book, and their color reproduction

is of much lower caliber. Many figures are washed out and too pale, others (e.g. *Pyrrhuras*) show patterns as too sharply defined, not grading into surrounding colors as they really do. Too much effort is devoted to outlining individual feathers, making some green birds look overly patterned when they are not, and overemphasizing patterns, as in the Amazonas. The listing of the figured birds at the bottom of each plate solely in Japanese greatly lessens usefulness of the plates, for one has to scramble through the text to find the numbered bird. Parrot fanciers will certainly want to have this book despite its cost and shortcomings, and others may care to pay its price to have renderings in color of *all* major subspecies of parrots. They should be aware that some of the colors, although suggestive, are not accurate.

The text has the usual number of typos and misspellings one finds in many Oriental translations into English; one can in most cases piece together the intended meaning. There are occasional text gaps, e.g. there is no English text of the Japanese sections for 46, 157b, 158b, 158d, and 158e, among others. The Japanese sections, some long, on rearing of parrots, and "Remarks" sections, are not rendered in English hence the non-Japanese buyer will purchase considerably less text than his Japanese counterparts.

For those who really must have "everything" about parrots, have space on their shelves, and the money in hand, this book might prove sufficiently useful in the sheer numbers of forms of parrots depicted, to warrant its purchase. Others will prefer to be content with Forshaw's volume, which costs about the same amount.—LESTER L. SHORT.

**Social organization and behavior of the Acorn Woodpecker in central coastal California.**—Michael H. MacRoberts and Barbara R. MacRoberts. 1976. Ornithological Monographs No. 21. viii + 115 pp. Price \$7.50.—The MacRoberts studied the highly social Acorn Woodpecker (*Melanerpes formicivorus*) over about 3 years and 9 months at the Hastings Natural History Reservation near Monterey, California. Apart from the introductory material, the report contains sections on foods and foraging behavior, territory and spacing, roosts and nests, reproduction, population dynamics (includes mortality, dispersal, recruitment of groups, age structure, group size, hawk predator interactions with woodpeckers), and ecology and evolution of woodpecker social systems. Two appendices are a valuable contribution, the one treating visual and acoustical displays in detail, the other documenting histories of 30 groups and individuals thereof. There are 12 tables, and 39 figures, the latter depicting habitats, acorn-storage sites, territorial boundaries, and audiospectrograms, among other items.

The authors were able to band and utilize data from 149 Acorn Woodpeckers at Hastings Reservation. Much of the general information they provide is in accord with our previous knowledge of this interesting bird, but they were successful in adding much new information on how sociality affects the total range of individual and group activities. Acorns of course are of primary importance to this woodpecker, and much of their activities, including social behavior and cooperative breeding endeavors seem related to utilization of acorns as food, and to the storage of the acorns as a long-term food source. Groups averaged 5 or 6 (2–15 birds) individuals, with recruitment chiefly through birth within the group, i.e. birds in most groups are closely interrelated. The size of groups seems related to availability of acorn storage sites and availability of acorns. Acorn Woodpeckers seem able to cope with wide fluctuations in the acorn crop, flying longer distances to secure acorns, so long as they have storage sites and the crop does not fail completely—if it does, territories are abandoned. The all-purpose territory is maintained year-round, and varied at Hastings from 3.5–9 ha. All members of a group except nestlings less than 2 months old defend it against conspecifics. Defense of granary storage-sites, sap trees, harvesting trees, anvils, flycatching perches, nesting sites, and roosting sites is conducted seasonally or year-around against other species (starlings, jays, magpies, crows, squirrels, other woodpeckers, nuthatches—even hummingbirds—from Acorn Woodpecker sap holes).

The foraging scheme involves utilization first of green acorns in late summer, then of acorns through the fall, winter, and spring. Acorns are stored in the fall, and used until spring. From late winter to summer sap is an important food, and is taken as in *Sphyrapicus* sapsuckers. Insects taken by flycatching are another food source exploited from late winter through to summer, and form the food fed to nestlings. Virtually all adult birds store acorns and construct sap holes; old birds use these sources, but juveniles, which adults often feed from acorn stores during fall and winter, are not allowed to use the stores in some groups.

The breeding system was not fully elucidated, it remains to be determined which birds (only a single pair) are responsible for the eggs at a cooperative nest. Polyandry is at least suggested by several observations of a female copulating with two males in succession. Each adult in the group takes part in incubation, brooding, and feeding of the young at the "group" nest. Little of "courtship" or pairing activity was seen. Pairs may be relatively stable within groups, hence displays probably are not common. Until more data are available on survival and mortality, the exact breeding role of each individual of groups cannot be evaluated. Many interesting points are elucidated about the young birds and juvenile-adult relations.

The MacRoberts show that all individuals are in pairs and groups, i.e. the young are taken into the groups and no "floater" population exists. The population density of Acorn Woodpeckers seems largely related to availability of oak woodlands, and available territories are occupied constantly. Shifts to new areas occur primarily in spring. Fall shifts into unfavorable habitats for year-around living result when the oak crop fails, and the birds are forced to use areas with no prepared acorn storage sites.

The discussion of evolution of social systems is marred by lack of information. The authors compare the well-known *M. lewis* and *M. erythrocephalus* with *M. formicivorus*. Needed are investigations of southern populations of Acorn Woodpeckers that do not store acorns, or do so in different ways, and of the "Tripsurus" group, especially highly social *M. cruentatus*, the likely closest relative of *formicivorus*, which breeds in tropical American lowlands where no oaks grow. *Melanerpes flavifrons* of Brazil is another species of this group that fruitfully might be studied. Investigations of non-storing closely related species and conspecific populations are apt to shed more light on the evolution of social systems in these woodpeckers, particularly the Acorn Woodpecker, than are comparisons with other, related, acorn-storing species.

This treatise is well-produced; no errors came to my attention. The paper is effectively organized and presented, and the tables and figures are helpful. I recommend this report to all interested in woodpecker behavior and in avian social systems.—LESTER L. SHORT.

**Birds of Nepal, with reference to Kashmir and Sikkim.**—Robert L. Fleming, Sr., Robert L. Fleming, Jr., and Lain Singh Bangdel. 1976. Kathmandu, Nepal, Robert L. Fleming, Sr. and Jr. 349 pp. Illustrated by Hem Poudyal and Hira Lal Dangol, with R. L. Fleming, Jr., Margaret Fleming Waldron, and Linda F. Fleming; 148 color plates, 2 color photographs, and 2 maps. \$14.00 (U.S.A. distributor: Mrs. Vern Beielser, 1028 Crestwood Street, Wenatchee, WA 98801).—The "Birds of Nepal" is a very good field identification guide, the first for any part of the Indian subcontinent, covering the nearly 800 species of birds that occur in Nepal. The format of the book is that of the Robbins, Bruun, and Singer "Birds of North America" with the abbreviated textual material on one page facing the color paintings of the birds on the opposite page. The well presented text for each species, while short, is loaded with information and contains English and scientific names, altitudinal range (in meters and feet), length (in centimeters and inches), seasonal status, abundance, habitat, field identification, habits, voice, presence in Kathmandu Valley, range (specifically listing Kashmir, Garhwal, Nepal and Sikkim as well as indicating worldwide distribution).

The plates are rustic in appearance by Western standards, but are effective and attractive, and are mostly clear and accurate. Some of the more confusing birds, such as warblers and raptors, are not well done, and a few birds would be difficult to identify from the plates, e.g. *Cettia flavolivaceus* should have a strong dark eye-stripe and more yellow underparts. Shapes of some birds are a bit off, probably because of a lack of experience with the living bird, but these Nepali artists are to be congratulated for a fine job considering the difficulties facing them in learning to portray birds in a country that has no art tradition of this type. It is likely that the somewhat muddy feel of many of the plates may be due to the process of reproduction. Several plates have typical Himalayan background scenes which are very attractive and lend a good feeling for the region without detracting from their value as an identification guide.

There are two endpaper maps. The front one contains two maps of Nepal, one showing the names of places mentioned in the text and another showing the broad zoogeographic zones of Nepal. The final map shows the birding localities in and around Kathmandu Valley. The introduction is interesting, well written, and very informative. The different zones of Nepal are described in terms of their location, peoples, elevation, dominant vegetation and prominent birds. Areas of particular interest to ornithologists and some useful hints for bird-finding in Nepal are listed. The section ends with a discussion of how to use the book. A four-page bibliography is inserted at the end of the book along with two appendices. The first appendix contains a list of the birds, with brief identification material, that occur in Kashmir, but not Nepal (and thus aren't treated in the main text), and the second has a similar list for Sikkim. Some useful innovations in English names were made, e.g. Eurasian Griffon for *Gyps fulvus*, but other new names tended to be too provincial, e.g. Nepal Sunbird, *Aethopyga nipalensis*, whose range extends to China, Thailand, and Indochina.

I was able to field test this guide for 3 weeks in Nepal and found it quite useful in the field. It enables identification of all but some of the more difficult species, such as some raptors and warblers that require a more detailed text and finer illustrations (and in the case of raptors, more plumages shown). The pointers on field identification are generally very good and contain some previously unpublished field marks (e.g. striped neck appearance of *Dinopium shorii*), but some species with which the authors have had more limited experience are poorly treated, e.g. *Falco jugger*, which is called "smaller and more chunky" than the

Peregrine, whereas it averages in the large end of the Peregrine range and is a more slender looking bird because of its more slender wings and longer tail (similar to *Falco biarmicus*). The striking dark and light underwing pattern was missed both in text and plate. Immature plumages of many species are treated, but usually too briefly (and without illustration) to be of much help. The notes on habits give excellent ideas of what to expect of each bird when it is seen, and the habitat listings are very helpful. The song descriptions, mostly drawn from the Fleming's field experience, are very good, and many are better described than ever before. One of the most useful parts of the text is the reference to each species' occurrence in Kathmandu Valley, as nearly all visitors enter Nepal at Kathmandu and spend most of their time there. A sentence tells how common the bird is, when it is present, and where in the valley it is likely to be found. Over 400 species are known from the valley (altitude about 4,300 feet) and surrounding hills (up to 9,000 feet); 180 species have been seen in one day on the Kathmandu Christmas count. A good deal of new information on distribution and abundance is contained in the species accounts.

All in all, the "Birds of Nepal" is a fitting tribute to the years of pioneering effort the Flemings have put into learning more about their first love, the birds of Nepal. The few shortcomings illustrate the extreme difficulties of writing a field guide without ready access to an extensive museum collection. Its large amount of useful, and often previously unpublished information makes it an excellent addition to the ornithological literature as well as a very useful field guide.—BEN KING.

**The web of adaptation, bird studies in the American tropics.**—David W. Snow. 1976. New York, Quadrangle/The New York Times Book Co. xiii + 176 pp. \$8.95.—This book is intended to introduce the layman to evolution and the web of adaptation as illustrated by the ecological and behavioral attributes of neotropical fruit-eating birds, but it lacks cohesion and falls somewhat short in this respect. Despite a general treatment of the issues, there is no unifying explanation showing how the information presented relates to these subjects. The fact that 7 of the 11 chapters represent independent, published research papers (by Dr. Snow or his wife Barbara) rewritten for the lay audience, may be in large part responsible. Even so, the reader is still provided with accurate, informative, and fascinating accounts of the species in question. Having read all of the original papers, I should note that only the technical jargon has been deleted; the scientific information, though less detailed, is in no way compromised, and Dr. Snow freely acknowledges that many of the subjects covered will require additional study and more thorough observation. Rather, the subjects are approached from a different viewpoint. In particular, one is treated to a glimpse into the personal life of a field naturalist through incidents whose description surely would fall victim to the editor's blue pencil in a scientific journal. They transform the research report into a story in which the author as well as his subjects come alive. These vignettes also will help dispel the myth among layman and laboratory scientist alike that field work is no more than a camping vacation in the woods.

My only serious criticism relates to the inclusion in the book of previously unpublished data of scientific interest. Because of the popular nature of the approach, many important details are not included. In addition, much of the scientific community may remain unaware of this information because of its location. Aside from this, this delightful collection of essays will provide both the professional and the layman with several hours of entertaining and informative reading. The book is remarkably free of typographical errors, though the pages in my copy were not evenly trimmed and are of several different heights.—MERCEDES S. FOSTER.

**Evolution illustrated by waterfowl.**—David Lack. 1974. New York and London. Harper and Row, Publishers. 96 pp., illus. \$10.00.—This is a unique little book about waterfowl that serves as a clever introduction to some general ideas about evolutionary biology and simultaneously summarizes waterfowl ecology and breeding biology in a functional manner. It is one of Lack's last works and reflects his more recent association with the superb collection of waterfowl at The Wildfowl Trust in England. It also may be a product of his recent excitement over island waterfowl. The book is aimed at students of secondary schools or beginning college level, but anyone interested in evolutionary biology or waterfowl will find it interesting.

Lack sets the stage by crediting Darwin with establishing the "fact" and the "means" of evolution and states the focus of this book as the "reason" for the abundance of distinctive species, and "how" these forms originated. Lack has chosen waterfowl to illustrate the process because the group of about 150 species is large enough that the various stages are evident, but small enough that they are well known. Most also are visible as live birds at The Wildfowl Trust.

Lack neatly organizes and illustrates concepts in some 22 short chapters. A brief description of the family Anatidae is followed by a general discussion of the principles of classification. He describes some practical

difficulties in classification in groups such as waterfowl where the fossil record is poor and the group is viewed as if looking down on the phylogenetic tree—seeing only the “tips of the branches.” He outlines the concept of binomial nomenclature, priority, vernacular names, and the changing taxonomic philosophy on the use of generic names for ducks. Proceeding to higher categories, he discusses tribes, subfamilies, and then ties in the screamers (Anhimidae) at the ordinal level.

After this taxonomic array, the next series of chapters focuses on the evolutionary process by a discussion of subspecies and the transition to species. He emphasizes how widely differing forms may bear subspecific names, for example the races of the Mallard (*Anas platyrhynchos*) of the southern United States, Hawaii, and Laysan and the unique Canada Goose (*Branta canadensis*) complex.

His chapter on ducks of remote islands is inserted next because of the intermediate taxonomic status of many forms. In some ways this is a more lucid statement of his ideas than was his original paper (1970, *Wildfowl*, 21: 5–10). His thesis remains that most islands have resources for only one species and that this must be an adaptable form—commonly a member of the genus *Anas*. He discusses the tendency of island males to lose the distinctive male plumage in the absence of interspecific competition for females.

A subsequent chapter discusses species that have distinctive color phases, with some commentary about mutations and selection, but his comments do not adequately describe present knowledge of the genetics of the Lesser Snow Goose (*Chen caerulescens*). The discussion then leads into the concepts of speciation, allopatry, and sympatry, and reproductive isolation. He also compares ducks and geese in relation to specific recognition characters.

His discussion of competition starts with the interaction of a newly formed species sympatric with its parental form, and moves into the concept of competitive exclusion. He describes isolation by food competition wherein species use separate areas, use different habitats in the same areas, or use different foods. His waterfowl examples are those of Olney (1963, *Proc. Int. Congr. Zool.* 1: 256) and Frith (1959, *C.S.I.R.O. Wildl. Res.* 4: 97–181) but here, as elsewhere, no references are cited.

In a discussion of selection toward differentiation resulting from ecological competition, he discusses adaptative radiation that has resulted from a form that must have been a “successful new model.” Examples of convergence cited are Common Shoveller (*Anas clypeata*) and Pink-eared Ducks (*Malacorhynchus membranaceus*), and eiders (*Somateria* spp.) versus steamer ducks (*Tachyeres* spp.).

The two penultimate chapters describe facets of the reproductive biology of ducks: time of breeding, nest-site selection, clutch size versus egg size, growth strategy in ducklings, post-breeding flightlessness, migration, and the nomadic movements of Australian waterfowl. Lack's concluding chapter is a single, direct statement of the principles and mechanics of evolution.

Robert Gillmor's black-and-white drawings are simple and effective. A few are stiff looking or out of proportion, but most are excellent and add considerably to the effectiveness of the text. Better figure titles would have been helpful.

Appendix 1 gives a convenient list of waterfowl taxonomy that follows Johnsgard (1965, *A handbook of waterfowl behavior*) but without recent innovations by Johnsgard and others. Appendix 2 is a useful glossary emphasizing ecological and evolutionary terms valuable to students or laymen. It is unfortunate that no literature is cited; numbers could have been used with little pain for the reader.

The book is worth reading. It will be especially useful for outdoor-oriented biology students who need to put theory and familiar subjects together.—MILTON W. WELLER.

**Parent birds and their young.**—Alexander F. Skutch. 1976. Austin, University of Texas Press. xviii + 503 pp. \$27.50.—For more than four decades, Alexander F. Skutch has been a tireless and prolific student of the breeding habits of birds. His studies on the life histories of Central American species have been published in numerous books and in papers appearing in all the major ornithological journals. I think it is fair to say that were it not for Skutch's work and its influence on younger ornithologists, we would know next to nothing about the reproductive behavior of tropical New World birds. The enormity of Skutch's contribution, most of it scattered in accounts of individual species, is such that no single work provides an adequate summary and synthesis. At last, Skutch himself has brought his lifetime work, together with an extensive survey of the world literature, into a single volume.

As the title of Skutch's book, *Parent Birds and their Offspring*, suggests, it is about the diverse ways in which birds rear their young, beginning with preliminaries such as courtship, territorial defense, and nest building, and proceeding right through to the termination of parental care. One might wonder whether, with David Lack's recent (1968) synthesis, *Ecological Adaptations for Breeding in Birds* (Methuen, London), another treatment of the subject could offer anything new. Surely it can, in this case, because Skutch and

Lack have approached their subject from opposite directions, each providing a different perspective. David Lack, perhaps above all others, was responsible for raising the study of birds in their natural environments to the level of an experimental science, while Skutch has followed the rich tradition of 19th century naturalists. Lack, a keen observer in his own right, oriented his research around hypotheses concerning the regulation of bird populations. Skutch's role has been more that of a chronicler of the lives of birds. Unlike Lack, he has recorded many aspects of reproduction for which, at present, no theory exists. While Skutch discusses such traditional topics as the number of eggs birds lay in a clutch, patterns of incubation behavior, duration of parental care, and helpers at the nest, he also treats us to detailed summaries of the structure, building, and maintenance of nests, the hour of day at which eggs hatch, the male parent's discovery that the eggs in his nest have hatched, sanitation of the nest, the "education" of young birds, and the use of nests for sleeping. Indeed, Skutch has left little of his subjects uninvaded.

*Parent Birds and their Offspring* holds few surprises for us. Skutch has treated many of his topics in earlier papers and some of the chapters are little more than updated versions of these. The reader can be lulled by Skutch's familiar, easy style, provided he is comfortable with Skutch's exuberance for anthropomorphic expression. For example, Skutch tells us that "Singing may be in part an expression of loneliness, stress, or an unfulfilled need, as it often is in ourselves; when the male bird's need is filled and his loneliness overcome, he sings less," and, "Although I could not fathom the bird's feelings, to me it looked like a gesture of heartbroken despair." But it is not difficult to distinguish facts from interpretations in Skutch's writing because the latter appear to be an expression of style rather than scientific philosophy. At times, Skutch even catches himself. For example, in the course of defending a theory that ascribes to birds "a capacity to choose and an aesthetic sense," he suggests that "We need not suppose that the female bird who visits a courtship assembly deliberately assesses the qualifications of each claimant for her attention... We must conceive of her choice as more spontaneous..."

Skutch places much of his discussion in the context of natural selection and evolution. Still, he clings to the utopian vision of animal behavior that characterized his earlier work, in which territoriality is a mechanism that adjusts the size of a population to the resources provided by the environment, and reproductive rate is adjusted by selection to balance adult mortality and thereby avoid the detrimental consequences of overpopulation. Although these views are untenable if one subscribes to the idea of individual selection, Skutch does not elaborate an alternative theoretical foundation for them.

Having read many of Skutch's earlier writings, these shortcomings are predictable, but there were other disappointments as well, some trivial yet bothersome, some substantial. The quality of many of the photographs was poor, particularly compared to those published in contemporary books and periodicals. Many of the photographs do not adequately portray the points they were chosen to illustrate. The narrative frequently becomes a rambling list of facts and observations. Literature citations are sometimes lacking in the text where they would have been helpful. There are no chapter summaries, which would have been useful for quick reference. The book does, however, have an excellent index.

I was convinced, after reading several chapters, that Skutch had not brought his subjects up to date. The chapters on helpers at the nest contain no discussion of kin-selection theory; Skutch does not mention recent papers on reproductive effort and the evolution of reproductive tactics; he plays down or ignores altogether much of the current thinking on territoriality and mating systems. But the lengthy bibliography of nearly 900 references proved otherwise. The number of papers cited per decade, beginning with 1900, progress from 2 to 10, 19, 47, 145 (40's), 263 (50's), 299 (60's), and 300 (70's, extrapolated from 3 years). *Parent Birds and their Young* seems out of date, not because recent literature has been ignored, but because of the type of paper cited. Skutch has remained an observer and his book summarizes observations, not ideas. His naturalist tradition also has not recorded the recent trend toward experimental studies of breeding behavior nor the interpretation of much of this behavior in terms of physiology, energetics, and demography.

One wonders, then, can this book provide an adequate summary for the ornithologist and can it be helpful to the active researcher? As a summary, *Parent Birds and their Young* is irregular, as thorough on some topics as it is deficient on others. Skutch tries to bring together the literature on all birds, but tropical passerines clearly are his strong suit and others, particularly seabirds and raptors, are badly neglected. This book is not a rich source of ideas, either, and Skutch rarely illuminates the subtle points of theory. I would nonetheless recommend *Parent Birds and their Young* to all students of birds for the simple reason that it exemplifies, in many ways, the rich, but neglected tradition of observation and empiricism in natural science. We seem so intent upon testing hypotheses about nature that our understanding of her reaches only so far as our ability to conceptualize her motors and gears, a deficiency that might lead to a scientific discipline to stagnation without the input of fresh observations. I subscribe to the hypothesis that reproductive rate is determined largely by the resources available to breeding adults but, in his final chapter, "Regulation of the Rate

of Reproduction," Skutch points to a dozen observations that cannot be explained adequately by the hypothesis as it is now formulated. How poorly we understand nature! And how little we shall learn unless we accept nature as her own best teacher. Without doubt, Alexander Skutch has been one of her most astute pupils.—ROBERT E. RICKLEFS.

#### NOTES AND NEWS

**The Colonial Waterbird Group**, organized during the Wading Bird Conference at Charleston, South Carolina last October 1976, will hold its first annual meeting on 21–23 October 1977, at Northern Illinois University, in DeKalb. The conference will include paper sessions, subgroup meetings (surveys, conservation, etc.) and an important business session. Any person wishing to present a paper on an aspect of research or management of pelicans, cormorants, herons, ibises, gulls, terns, alcids, or other colonial waterbirds should submit a single page abstract no later than **15 August 1977** to the *National Audubon Research Department, 115 Indian Mound Trail, Tavernier, FL 33070*. Additional information on the conference will appear in the midsummer CWG newsletter, or may be obtained by writing the above address.

The Board of Directors of Hawk Mountain Sanctuary takes pleasure in announcing an annual award of \$250 for support of raptor research. **The Hawk Mountain Research Award** will be granted annually to a student engaged in research on raptors (Falconiformes). To apply, students should submit a description of their research program, a curriculum vitae, and two letters of recommendation by October 31, 1977 to: MR. ALEX NAGY, *Hawk Mountain Sanctuary Association, Route 2, Kempton, Pennsylvania 19529*.

A final decision will be made by the Board of Directors in February 1978. Only students enrolled in a degree-granting institution are eligible. Both undergraduate and graduate students are invited to apply. Projects will be judged competitively on the basis of their potential contribution to improved understanding of raptor biology and their ultimate relevance to conservation of North American hawk populations.

**The Josselyn Van Tyne Memorial Fund** should contain several hundred dollars for research grants in 1978. Applications will be welcomed for the study of any aspect of avian biology, especially from persons without other sources of funds. Applicants should send four copies of the following: (1) a 3–5 page description of research goals and procedures, (2) an itemized budget, with a justification of major items and the total amount requested, and (3) a brief résumé of academic/ornithological experience. In addition, all applicants should request two or three letters of recommendation from recognized ornithologists, to be sent directly by the writers. All application materials, including letters, must be received before 1 March 1978. Send all materials to DR. M. F. WILLSON, CHAIRMAN, *A.O.U. Committee on Research Awards, Vivarium Building, University of Illinois, Champaign, Illinois 61820*.

**The International Commission on Zoological Nomenclature** has recently published the following opinions: No. 1068—The family group name LEPTOSOMATIDAE in Aves is suppressed because of homonymy in Nematoda and is replaced by LEPTOSOMIDAE Blyth, 1838. (Bull. Zool. Nom. vol. 33 (3 & 4) p. 159.) No. 1069—For the family group name THRAUPIDAE author and date on the Official List are corrected to Cabanis, 1847. (Bull. Zool. Nom. vol. 33 (3 & 4) p. 162.) No. 1070—The specific name *Archaeopteryx lithographica* von Meyer, 1861, is to be given precedence over *crassipes* von Meyer, 1857, as published in the binomen *Pterodactylus crassipes*, by any zoologists who believe the specific names apply to the same taxon. (Bull. Zool. Nom. vol. 33 (3 & 4) p. 165.)

The required six months' notice is given of the possible use of plenary powers by the International Commission on Zoological Nomenclature in connection with the following name listed by case number: (see Bull. Zool. Nom. Vol. 33 (3 & 4) 31 March 1977). No. Z.N.(S.) 2117—*Cotyle* Boie, 1826 (Aves, HIRUNDINIDAE): request for suppression.