

What about the Green Heron, and the Yellow Crowned Night Heron  
 and maybe the King Rail? White-tailed Kite?  
 Exactly what criteria, what data - set up for assignment to Blue list?

White Ibis

Fulvous Tree Duck

Mexican Duck

Turkey Vulture

• Black Vulture

Swallow-tailed Kite

✓ Sharp-shinned Hawk

✓ Cooper's Hawk

✓ Red-shouldered Hawk

✓ Ferruginous Hawk

✓ Harris' Hawk

✓ Marsh Hawk *abundant!*

✓ Osprey *where are they?*

✓ Caracara - *endangered.*

Prairie Falcon

✓ Pigeon Hawk - *endangered?*

Sparrow Hawk (Florida). *Wow!*

Sharp-tailed Grouse

Sage Grouse

✓ Limpkin *endangered?*

Snowy Plover

Am. Oystercatcher

Least Tern

Barn Owl?

✓ Burrowing Owl

✓ Red-cockaded Woodpecker

Gila Woodpecker

✓ Red-headed Woodpecker

Bewick's Wren

✓ E. Bluebird

W. Bluebird

Mountain Bluebird

Loggerhead Shrike - *???! abundant!*

Gray Vireo

Bachman's Sparrow *endangered?*



Caracara. Photo: Allan D. Cruickshank from N. A. S.

## The Centers of Learning

### 5. THE UNIVERSITY OF MICHIGAN by Robert W. Storer

Most of our studies of birds are aimed at a better understanding of evolution - systematics in the broadest sense. Our students are working on a spectrum of problems ranging from functional anatomy to behavior, ecology, and environmental physiology.

The facilities open to graduate students at the University of Michigan Museum of Zoology include a world bird collection of approximately 20,000 study skins, representing 60% of the world's species, and over 11,000 skeletons, a major ornithological library including the Wilson Ornithological Society library, facilities for keeping live birds indoors and out, photo-period rooms, environmental chambers, and acoustical equipment. The Edwin S. George Reserve (approximately 25 miles from the campus), the Botanical Gardens, other University-owned properties near Ann Arbor, The

The following birds have been reported declining in numbers in certain parts of their range and are being considered as possible additions to The Blue List.

Great Blue Heron (Midwest). *abundant*

Swainson's Hawk (S. California).

Clapper Rail (California).

Roseate Tern (Gulf Coast). ?

Yellow-billed Cuckoo (California).

Short-eared Owl (Central Rockies).

Red-shafted Flicker (S. California,  
 Central Rockies).

Red-headed Woodpecker (Florida).

Scissor-tailed Flycatcher (S. Plains).

House Wren (S. Atlantic, Midwest, N. Rockies).

Bell's Vireo (S. California).

Yellow Warbler (Colorado).

Le Conte's Sparrow (Gulf Coast).

Fox Sparrow. (N. Rockies).

University of Michigan Biological Station (in northern Michigan near Cheboygan), and several areas in the Upper Peninsula are available for field studies.

The zoology faculty numbers approximately fifty, several of whom are actively working on ornithological problems.

William R. Dawson, Professor of Zoology and Environmental Physiologist in the Museum of Zoology, is interested in temperature regulation, water economy, and electrolyte metabolism of adult and nestling birds.

Francis C. Evans, Professor of Zoology, Director of the Laboratory of Vertebrate Biology and Associate Director of the Edwin S. George Reserve, has studied the ecology of nesting sparrows on an old field in the Reserve.

Robert B. Payne, Assistant Professor of Zoology and Curator of Birds in the Museum of Zoology, is studying the songs and behavior of parasitic birds and is interested in breeding biology and the breeding seasons of birds.

Robert W. Storer, Professor of Zoology and Curator of Birds in the Museum of Zoology, is studying the comparative behavior and anatomy of grebes.

Other faculty members whose interests are primarily in such fields as population ecology, endocrinology, and wildlife management also have graduate students working on research related to birds.

*Major research interests of some of our current graduate students*

Curtis S. Adkisson – Geographic variation in vocalizations of Pine Grosbeaks.

Steven Cohen – Function Analysis of Animal Communication Systems.

Clara Dixon – Life history of the Savannah Sparrow.

Erica H. Dunn – Bioenergetics and breeding strategies of altricial birds.

Warren R. Faust – Vocalizations of the Kirtland's Warbler.

Donald B. Heckenlively – Vocal and other displays of the Spizellas.

James C. Howell – Vocalizations of Cedar and Bohemian Waxwings.

Joel Kerlan – Endocrinological studies of the photoperiodic response in blackbirds.

Ronald Orenstein – Adaptive radiation in passerines.

Spencer Sealy – Breeding ecology and relationships of murrelets.

Joseph G. Strauch, Jr. – Adaptive significance of social behavior of anis.

James Veghte – Physiology of the Common Raven.

*Recent Doctoral Theses on Birds at the University of Michigan*

Denis F. Owen, 1961. Geographic Variation and Polymorphism in the Screech Owls in North America.

Robert C. Lasiewski, 1962. Physiological Responses to Temperature in Hummingbirds.  
Alan G. Goodridge, 1964. Effect of Hormones on Lipid Synthesis in Birds.

Stephen T. Emlen, 1966. Experimental Analysis of Celestial Orientation in a Nocturnally Migrating Bird.

Norman L. Ford, 1967. A Systematic Study of the Owls Based on Comparative Osteology.  
John P. Hubbard, 1967. A Systematic Study of the *Dendroica coronata* Complex (Aves.)

Agnar Ingolfsson, 1967. The Feeding Ecology of Five Species of Large Gulls (*Larus*) in Iceland.

Joseph R. Jehl, Jr., 1967. Relationships in the Avian Suborder Charadrii: A Taxonomic Study Based on the Color Pattern of the Downy Young.

J. David Ligon, 1967. The Biology of the Elf Owl, *Micrathene whitneyi*.

Bertram G. Murray, Jr., 1967. A Comparative Study of the Le Conte's and Sharp-tailed Sparrows with Comments on the Ecology of Sympatric Species.

Susan W. H. Sanders, 1967. The Osteology and Myology of the Pectoral Appendage of Grebes.

Jean W. Cohn, 1968. The Convergent Flight Mechanism of Swifts (Apodi) and Hummingbirds (Trochili) (Aves).

James P. Ludwig, 1968. Dynamics of Ring-billed Gull and Caspian Tern Populations of the Great Lakes.

William C. Preston, 1968. Breeding Ecology and Social Behavior of the Black Guillemot, *Cephus grylle*.

J. Alan Feduccia, 1969. Evolutionary trends in the Dendrocolaptidae and Furnariidae.

Frank B. Gill, 1969. Microevolution in the Reunion White-eye (*Zosterops borbonica*).

C. Dean Fisher, 1970. Geographic variation and evolution in the Australian Ring-necked Parrots (*Barnardius*).

David J. T. Hussell, 1970. Factors affecting clutch size in Arctic passerines.

Louis J. Laux, Jr., 1970. Non-Breeding Surplus and Population Structure of the Red-Winged Blackbird, *Agelaius phoeniceus*.