

- Non-breeding behaviors as they relate to the affinities of the thrush genus *Hylocichla*. KEVIN WINKER, Univ. Minnesota, Bell Mus. Nat. Hist., Minneapolis, and JOHN H. RAPPOLE, Texas A&I Univ., Caesar Kleberg Wildl. Res. Inst., Kingsville.
- Distribution and relative abundance of migrants in southeastern Peru. JOHN W. FITZPATRICK, Bird Div., Field Mus. Nat. Hist., Chicago, IL, and SCOTT K. ROBINSON, Illinois Nat. Hist. Surv., Urbana.
- Closing remarks. JOHN H. RAPPOLE

## IB. SYMPOSIUM

### EVOLUTIONARY SIGNIFICANCE OF GEOGRAPHIC VARIATION

Robert M. Zink and George F. Barrowclough, Convenors

- Opening remarks. ROBERT M. ZINK
- The relevance of geographic variation to avian speciation: the secrets of allopatry. NED K. JOHNSON, Mus. Vert. Zool. & Dep. Zool., Univ. California, Berkeley.
- Geographic variation in birds: selection, environmental induction or epigenetics? ALLAN J. BAKER, Dep. Ornithol., Royal Ontario Mus., Toronto, ON, Canada.
- Geographic variation in birds: issues and directions. ROBERT M. ZINK, Mus. Zool., Louisiana State Univ., Baton Rouge.
- Population structure and intraspecific phylogenies. JOHN C. AVISE, Dep. Genet., Univ. Georgia, Athens.
- Geographic variation in the Spotted Owl, *Strix occidentalis*. GEORGE F. BARROWCLOUGH, Dep. Ornithol., Am. Mus. Nat. Hist., New York, NY.
- Closing remarks. FRANCES C. JAMES

## TUESDAY AFTERNOON, 19 AUGUST

### IIA. MATING & PARENTAL INVESTMENT

Martin L. Stephens, Chr.

- \*Sexual selection in the Pinyon Jay (*Gymnorhinus cyanocephalus*). KRISTINE JOHNSON, Dep. Biol., Univ. New Mexico, Albuquerque.
- \*Sex differences in defense of eggs and nestlings by Northern Mockingbirds (*Mimus polyglottos*). RANDALL BREITWISCH, Dep. Biol., Univ. Miami, Coral Gables, FL.
- Seasonal changes in bill length in White-crowned Sparrows. MARTIN L. MORTON, Dep. Biol., Occidental Col., Los Angeles, CA.
- Distribution of offspring defense among families by polyandrous female Northern Jacanas (*Jacana spinosa*). MARTIN L. STEPHENS, Humane Soc. of U.S., Washington, DC.
- Vocal responses of Tree Swallows (*Iridoprocne bicolor*) to models of nest predators. BRADLEY M. GOTTFRIED, Dep. Biol., Armstrong State Col., Savannah, GA.
- Secondary sex ratios of nestling Golden Eagles (*Aquila chrysaetos*). MICHAEL W. COLLOPY and THOMAS C. EDWARDS, JR., Dep. Wildl. & Range Sci., Univ. Florida, Gainesville, and MICHAEL N. KOCHERT and KAREN STEENHOF, Boise District, Bur. Land Manage., Boise, ID.
- The adaptive significance of creching behavior in the White-winged Scoter. F. P. KEHOE, Dep. Zool., Univ. Guelph, Guelph, ON, Canada.
- Nesting phenology and competition among Red-headed and Red-bellied woodpeckers and European Starlings for nest sites in east-central Mississippi. DANNY J. INGOLD, Dep. Biol. Sci., Mississippi State Univ., Mississippi State.
- The role of male aggression and female location in determining spatial organization and mating success of male Sharp-tailed Grouse (*Tympanuchus phasianellus*) in southeastern Montana. HANS LANDEL, Dep. Biol. Sci., Purdue Univ., W. Lafayette, IN.
- Nest site selection in Acorn Woodpeckers. MARK T. STANBACK, PHILIP N. HOOGE, and WALTER D. KOENIG, Hastings Nat. Resource Reservation, Carmel Valley, CA.
- Extra-pair copulations in the Indigo Bunting: who gets them and how? DAVID F. WESTNEAT, Dep. Biol., Univ. North Carolina, Chapel Hill.

\* Student eligible for a Student Presentation Award.

Multiple paternity in a wild population of Mallards (*Anas platyrhynchos*). SUSAN EVARTS, Bell Mus. Nat. Hist., Minneapolis, MN, and CHRIS WILLIAMS, Dep. Genet., Univ. Georgia, Athens.

## IIB. FORAGING & SPACING

Susan Hannon, Chr.

- A test of mean/variance tradeoff predictions with foraging Bananaquits. JOSEPH M. WUNDERLE, Dep. Biol., Univ. Puerto Rico, Cayey, Puerto Rico.
- Field evaluation of correlates of optimal foraging. GODFREY R. BOURNE, Detroit Zoological Park, Royal Oak, MI.
- \*Time minimization in territorial Willow Flycatchers. D. R. C. PRESCOTT, Dep. Zool., Univ. Guelph, Guelph, ON, Canada.
- \*Foraging behavior and sexual dimorphism in Emerald Toucanets (*Aulacorhynchus prasinus*) in Costa Rica. CECILIA M. RILEY, Dep. Zool., Univ. Arkansas, Fayetteville.
- Optimal foraging: patch depletion by Ruddy Ducks (*Oxyura jamaicensis*). MICHAEL W. TOME, Sch. Nat. Resources, Univ. Michigan, Ann Arbor.
- Foraging patterns among kingbirds (*Tyrannus*): influences of weather and habitat. MICHAEL T. MURPHY, Dep. Life Sci., Indiana State Univ., Terre Haute.
- Acquisition of territories by floaters in cooperatively breeding Purple Gallinules. LAURIE A. HUNTER, Zool. Dep., Univ. Montana, Missoula, MT.
- Aggression and habitat segregation among diving ducks wintering in South Carolina. JAMES F. BERGAN and LOREN M. SMITH, Dep. Range & Wildl. Manage., Texas Tech Univ., Lubbock, and JOHN J. MAYER, Savannah River Ecol. Lab., Aiken, SC.
- Movements and site-fidelity of American Coots (*Fulica americana*) on their wintering grounds. I. LEHR BRISBIN, JR., Savannah River Ecol. Lab., Aiken, SC.
- Effects of group size on vigilance in Ostriches (*Struthio camelus*): antipredator strategy or mate competition. JOANNA BURGER, Dep. Biol. Sci., Rutgers Univ., Piscataway, NJ, and MICHAEL GOCHFELD, Environ. & Community Medicine, UMDNY-Rutgers Med. Sch., Piscataway, NJ.
- Evidence for resource-based communal roosting by starlings and Common Grackles. ALAN D. MACCARONE, Dep. Zool., Rutgers Univ., Newark, NJ.
- Consumption of algae by land birds. DOUGLAS A. JAMES and JOSEPH C. NEAL, Dep. Zool., Univ. Arkansas, Fayetteville.

## IIC. COMMUNITY ECOLOGY

J. V. Remsen, Jr., Chr.

- Effects of sand shinnery oak control on meadowlark densities. CRAIG D. OLAWSKY and LOREN M. SMITH, Range & Wildl. Dep., Texas Tech Univ., Lubbock.
- Prey availability and the impact of birds on scale insects during winter. MICHAEL L. MORRISON, Dep. Forestry & Resource Mgmt., Univ. California, Berkeley, and DONALD L. DAHLSTEN, SUSAN M. TAIT, and DAVID L. ROWNEY, Div. Biol. Control, Univ. California, Berkeley.
- Bird communities of oak-gum-cypress forests. JAMES G. DICKSON, U.S. Forest Serv., Southern Forest Exp. Stat., Nacogdoches, TX.
- Foliage height diversity and bird species richness revisited. PAUL B. HAMEL, Tennessee Dep. Conserv., Nashville.
- Bird communities along an elevational transect (50–850 m) in San Blas, Panama. JOHN G. BLAKE, Nat. Resources Res. Inst., Univ. Minnesota, Duluth.
- The effects of various burning and grazing treatments on upland habitat use by Whooping Cranes and Sandhill Cranes on the Aransas National Wildlife Refuge. HOWARD E. HUNT and R. DOUGLAS SLACK, Dep. Wildl. & Fish. Sci., Texas A&M Univ., College Station.
- \*The effect of phenotype-limited competition for space on dispersal distance in age-structured avian populations. D. ARCHIBALD McCALLUM, Dep. Biol., Univ. New Mexico, Albuquerque.
- \*Songbird responses to forest disturbances in large tracts of northern hardwoods. DOMINICK A. DELLASALA, Sch. Nat. Resources, Univ. Michigan, Ann Arbor.
- \*The scale of habitat selection by birds in the New Jersey pine barrens: effects of fine-grained landscape heterogeneity within a forest ecosystem. EMILE D. DEVITO, Dep. Zool., Univ. Wisconsin, Madison.