

NEWS AND NOTES

1995 ANNUAL MEETING OF THE COOPER ORNITHOLOGICAL SOCIETY

The Cooper Ornithological Society held its 65th annual meeting jointly with the Mexican Section of BirdLife International at the Universidad Autónoma de Baja California Sur in La Paz, Baja California, 4-9 April 1995. The Local Committee was chaired by Juan Guzman and the Scientific Program Committee was chaired by Patricia Escalante-Pliego. Over 220 people registered with about one-third being from Mexico, Central America and South America. Presentations included 129 papers and 33 posters.

The Miller Award, the Society's award for lifetime achievement in ornithological research, was presented to Barbara De Wolfe. The full citation appears on page 1096 of *The Condor*.

Honorary memberships were bestowed on Luis F. Baptista, Richard F. Johnston and Edwin O. Willis for outstanding contributions to the Cooper Ornithological Society and to ornithology. Citations for these ornithologists appear on pages 1094-1095 of *The Condor*.

Mewaldt-King Student Research Awards were presented to Juan Esteban Martinez Gomez of Villanova University for his research, "Demography and breeding ecology of the Socorro Mockingbird"; to Todd J. Underwood of the University of Delaware for "Methods of estimating and indexing productivity: a test with a local Wood Thrush population," and to James Berkelman of Virginia Polytechnic Institute for "Habitat requirements of the Madagascar Fish Eagle."

For the first time, the society presented travel awards to help students attend the annual meeting. Travel awards were presented to Adriana Amador-González, Alejandra Valero, Alfredo Garza, Angelica Estrada Hernandez, Blair O. Wolf, Carlos A. Lara Rodriguez, Catherine Graham, Claudia Rodríguez-Yañez, David Curiel-Cante, Donato Acuña-Vázquez, Dorothy Hill, Erika Marcé, Guadalupe López-Santiago, Keith Sockman, Laura Dominguez Canseco, Liliana Montañez-Godoy, Maribel Castillo-Cruz, Miguel Angel Martinez-Morales, Ruben Galicia-Molina Tania Macouzet-Fuentes, and Vita Wright.

Four awards were presented for outstanding student papers. The A. Brazier Howell Award went to Tarmo Poldmaa of Queen's University for "Genetic and social monogamy revealed in the promiscuous Noisy Miner (*Manorina melanocephala*)."

The Frances F. Roberts Award was given to Joby Rohrer of the University of Hawaii for "Seasonal variation in hematocrit levels between sexually dichromatic and monochromatic Hawaiian forest bird species."

One Board of Directors Award was given to Dorothy P. Hill of the University of Calgary for "Male Chestnut-collared Longspurs (*Calcarius ornatus*) feed second broods less: is confidence of paternity the reason?"

A second Board of Directors Award went to Peter P. Beck of San Diego State University for "Song repertoire in the Least Bell's

Vireo (*Vireo bellii pusillus*): variability within a breeding season."

Through the annual balloting by all members of the Society, Sallie J. Hejl, Barbara E. Kus and Thomas E. Martin were elected to three-year terms on the Board of Directors.

In the Board of Directors' meetings, the following were elected to, or continue in, office: Sheila A. Mahoney, President; J. Michael Scott, President-elect; Terrell D. Rich, Secretary; Peter Stettenheim, Assistant Secretary; Donald R. Powers, Treasurer; Walter Wehtje, Assistant Treasurer. The new editor of *The Condor* is Walter D. Koenig. John T. Rotenberry continues as editor of *Studies in Avian Biology*.

The next annual meeting of the Society will be held 27-31 March at the Bahia Hotel in San Diego, California. Barbara Kus and Abbey Powell will cochair the Local Committee.

The following resolutions were unanimously approved by the Board of Directors. Members wanting resolutions delivered to particular individuals or organizations with a cover letter from the President should contact Sheila Mahoney.

ESTABLISHMENT OF A SAN CLEMENTE LOGGERHEAD SHRIKE RECOVERY TEAM

Whereas, the San Clemente Loggerhead Shrike (*Lanius ludovicianus mearnsi*) population is currently estimated to consist of fewer than 15 pairs, and

Whereas, the entire population is restricted to San Clemente Island, which is public land administered by the United States Navy, and

Whereas, captive propagation and captive breeding efforts have been underway since 1991 to enhance the wild shrike population, and

Whereas, the U.S. Navy and U.S. Fish and Wildlife Service have invested significant funds in support of programs to restore the shrike population,

Therefore be it resolved that the Cooper Ornithological Society urges the U.S. Fish and Wildlife Service to move rapidly to establish a formal Recovery Team to guide and advise this important program through its completion.

STIKINE RIVER DELTA, SOUTHEASTERN ALASKA

Whereas, the Stikine River Delta is an intertidal wetlands of approximately 50,000 hectares in central southeast Alaska, and

Whereas, the Stikine River Delta is one of the last undeveloped (pristine) intertidal wetlands along the Pacific coast of North America, and

Whereas, the second largest concentration (1,000-1,600) of Bald Eagles (*Haliaeetus leucocephalus*) in North America gather to feed on the Eulachon (*Thaleichthys pacificus*) during their spring spawning run, and

Whereas, the Stikine River Delta may be a critical spring stopover for the arctic nesting Wrangel Island population of Lesser Snow Goose (*Chen caerulescens caerulescens*), and

Whereas, one to three million shorebirds, of 22 species (over 90% are Western Sandpipers [*Calidris mauri*]), stop over during the spring migration, and

Whereas, although the uplands are wholly contained within the Federally designated Stikine-LeConte Wilderness, there is no protection of the intertidal wetlands (under jurisdiction of the State of Alaska), an important migration stopover for coastal migrants on the Pacific Flyway,

Therefore be it resolved that the Cooper Ornithological Society recognizes the ecological significance of the Stikine River Delta and recommends its recognition by the Western Hemisphere Shorebird Reserve Network as an "International Site," and

Be it further resolved that the Stikine River Delta should be permanently protected to maintain its ecological integrity as a Critical Wildlife Habitat Area by the State of Alaska.

ENDANGERED SPECIES ACT

Whereas, the Endangered Species Act is the Nation's safety net preventing the extinction of America's treasured species, and

Whereas, the Endangered Species Act has prevented the extinction and facilitated the population recovery of species such as the Bald Eagle, Peregrine Falcon, Brown Pelican, and Whooping Crane, and

Whereas, the Endangered Species Act includes a rational process whereby listing decisions are based solely upon biology and where other factors including economics are incorporated into processes such as designation of critical habitat, and

Whereas, the attacks on the Endangered Species Act have largely been based on misinformation and anecdote and endanger the act and the species that depend on it, and

Whereas, Congressional proposals such as a "moratorium" on listing decisions and critical habitat designations are crude legislative instruments that would likely result in increased costs as they will ultimately make recovery efforts more difficult, and

Whereas, the Cooper Ornithological Society has previously stated its strong support for the Endangered Species Act,

Therefore be it resolved that the Cooper Ornithological Society reiterates its strong support for the Endangered Species Act and urges Congress to oppose any efforts to impose moratoriums, rescissions, or other methods to weaken the Act and that weaken America's efforts to protect its biological resources.

SALVAGE LOGGING

Whereas, the ecological health of national forests in the western United States has been seriously compro-

mised by nearly a century of logging, fire suppression, grazing, and other human impacts as documented in the report *Interim Protection for Late-Successional Forests, Fisheries and Watershed*, authored by representatives of scientific professional societies, including ornithologists, wildlife biologists, fisheries biologists, ecologists, and conservation biologists, and

Whereas, this report concluded that further logging, including salvage logging, should be suspended in the region's ecologically sensitive and significant forest stands, pending development and implementation of a comprehensive recovery strategy and revision of relevant National Forest plans, and

Whereas, the potential for salvage logging to cause serious damage to both terrestrial and aquatic resources is comparable to, and in some cases greater than, that of other logging practices, and

Whereas, there is considerable scientific uncertainty regarding the claimed ecological benefits from salvage logging and related management techniques such as forest thinning which allegedly reduce the likelihood of catastrophic fire, and

Whereas, Congressional proposals attempt to legislatively exempt salvage logging on Federal forest lands from environmental review and other safeguards provided by existing laws, and

Whereas, these proposals are without sound scientific basis and compromise prudent management,

Therefore be it resolved that the Cooper Ornithological Society asks Congress to oppose any efforts to mandate salvage logging without full compliance with the Nation's environmental laws.

SCIENCE AT THE NATIONAL BIOLOGICAL SERVICE

Whereas, research and other scientific activities at the National Biological Service under the Department of the Interior are essential for wise decisions regarding sustainable uses of America's natural resources, and

Whereas, there is an increasing need for scientific facts to improve management decisions, and

Whereas, properly informed management is necessary to avoid costly restoration efforts and to perpetuate the flow of goods and services from the resource base that stimulate the economy sustainably, and

Whereas, there are a number of Congressional proposals that would seriously harm science in the Department of Interior by eliminating, dismembering, or severely reducing funding for the National Biological Service, and

Whereas, such budget cuts or reorganizations would seriously weaken the flow of scientific information to states, Federal resource managers, and private sector companies and individuals,

Therefore be it resolved that the Cooper Ornithological Society strongly urges the Congress of the United States to maintain and strengthen the National Biological Service of the Department of Interior.

SUPPORT FOR EXTRAMURAL RESEARCH

Whereas, the Nation's colleges and universities have a long history of providing high quality research at low cost to address society's most compelling issues, and

Whereas, the Nation's investment in higher education continues to provide not only the incalculable dividends associated with a better educated work force, but also the very tangible benefits that meet daily human and economic needs, and

Whereas, competitive peer-reviewed extramural research whether sponsored by NSF, NOAA, NIH, EPA, or any other agency ensures that the best science is supported by the tax dollar, and

Whereas, the cost of university research or facilities operations to the Federal government is borne only for the duration of a grant or contract and do not increase the size of the Federal work force, and

Whereas, university research provides the opportunity for rapid change and flexibility as priorities and needs change, and

Whereas, sponsored research at universities supports the training of the next generation of scientists and engineers, and

Whereas, proposed Congressional budget cuts in agencies such as NOAA, NIH, and NSF target extramural, university-based research disproportionately compared with intramural Federal sciences,

Therefore be it resolved that the Cooper Ornithological Society requests that Congress strongly support extramural peer-reviewed research and not target it for unequal budget cutting.

DESIGNATION OF CRITICAL HABITAT FOR THE SOUTHWESTERN WILLOW FLYCATCHER

Whereas, the Southwestern Willow Flycatcher (*Empidonax traillii extimus*) is a riparian obligate breeding species that has declined to the point that it has been listed by the U.S. Fish and Wildlife Service as an endangered species, and

Whereas, the primary threat to the flycatcher, which resulted in listing as an endangered species, is loss and modification of riparian habitat, and

Whereas, protection and recovery of the flycatcher will require protection and recovery of riparian habitats and ecosystems, not simply prevention of "take" of individual flycatchers, and

Whereas, riparian ecosystems are complex and dynamic, and may experience local habitat loss and modifications in response to a wide variety of local and regional phenomena, both natural and human-related, many of which can not be predicted or foreseen at the current time, and

Whereas, the U.S. Fish and Wildlife Service is charged with protecting and recovering the riparian habitats essential to the survival of the flycatcher, and

Whereas, in order to protect flycatcher habitat, the U.S. Fish and Wildlife Service can designate and identify

legal critical habitat and develop conservation agreements with private landowners and government land management agencies, and

Whereas, designation of critical habitat: (1) will guarantee protection of riparian habitats from influences outside the habitat, (2) provides protection against unforeseen or unanticipated threats, (3) guarantees long-term compliance, (4) provides protection that is not contingent on annual agency funding, and (5) involves public comment and economic analysis, and

Whereas, designation of critical habitat would alleviate many riparian conservation problems,

Therefore be it resolved that the Cooper Ornithological Society urges the U.S. Fish and Wildlife Service to formally designate critical habitat as part of the protection and recovery process for the Southwestern Willow Flycatcher, and to develop conservation agreements that support and augment these efforts.

RESOLUTION OF COMMENDATION

Whereas, the Cooper Ornithological Society held its first joint meeting with CIPAMEX, Sección Mexicana del Consejo, Internacional para Preservación de las Aves on the campus of the Universidad Autónoma de Baja California Sur, La Paz, México, and

Recognizing that the Committee on Local Arrangements, under the outstanding direction of Juan Guzmán and Ricardo Rodríguez Estrella, provided us with an exceptionally diverse assemblage of exhibits, special events, field trips, and evening social events, and

Recognizing that the Committee on the Scientific Program under the equally capable direction of Patricia Escalante, arranged outstanding scientific lecture sessions, workshops, and poster sessions, and

Whereas all those who have attended this meeting have been enriched by it,

Therefore be it resolved that the Cooper Ornithological Society commends the Committee on Local Arrangements and the Committee on the Scientific Program for their efforts toward this historic meeting.

NOMINEES FOR 1996 BOARD OF DIRECTORS

In 1996, the members of the Cooper Ornithological Society shall elect to the Board of Directors three people to replace retiring members Thomas C. Edwards, Jr., Richard F. Johnston and Kimberly G. Smith.

The Nominating for Directors Committee, chaired by Elizabeth Anne Schreiber, nominates Bonnie S. Bowen, Charles T. Collins, David S. Dobkin and Alfred M. Dufty for three-year terms to the Board. A ballot will be distributed to all members 45 days prior to the 1996 annual meeting.

Bonnie S. Bowen is an affiliate faculty member in Animal Ecology at Iowa State University in Ames, Iowa. She has been a member of the COS since 1982 and has served the Society as a member of the Membership Committee. She attends annual meetings and publishes papers in, and reviews for, *The Condor*. She received her Ph.D. in 1978 from the University of California, Berkeley. Her research interests include be-

havior, ecology, and genetics of communal breeders, breeding ecology of grassland birds and conservation genetics.

Charles T. Collins is Professor of Biological Sciences at California State University in Long Beach. He received his Ph.D. from the University of Florida in 1966 and has been a member of the COS since 1961. He served on the Board of the COS from 1979–1981, as Treasurer from 1981–1987 and was elected as an Honorary Member in 1994. Dr. Collins has published over 100 scientific papers, including five in *The Condor*. He regularly attends and presents papers at the annual meeting of the Society and frequently reviews manuscripts for *The Condor*. His research interests include the breeding biology and feeding ecology of swifts, and the demography of terns, skimmers, and the endemic Santa Cruz Island Scrub Jay.

David S. Dobkin is the founder and Executive Director of the High Desert Ecological Research Institute in Bend, Oregon, an independent, nonprofit center for ecological research and policy analysis focusing on natural resource issues of the Intermountain West and Pacific Northwest. He received his Ph.D. in Zoology from the University of California, Berkeley, in 1983 and has been a member of the COS since 1974. Dr. Dobkin regularly attends meetings, chairs program sessions, and reviews manuscripts for *The Condor*. He has published numerous scientific papers dealing with the ecology and behavior of birds and other organisms and is author or co-author of five books on avian ecology and conservation, including *The Birder's Handbook*, *A Field Guide to the Natural History of North American Birds*, and *Conservation and Management of Neotropical Migrant Landbirds in the Northern Rockies and Great Plains*. His primary research interests include avian community and population ecology, and the restoration of avian communities in degraded habitats.

Alfred M. Dufty, Jr., is Associate Professor of Biology at Boise State University in Boise, Idaho. He received his Ph.D. from the State University of New York at Binghamton in 1981 and has been a member of the Society since 1980. Dr. Dufty has chaired the Paper Awards Committee and has served on the By-

laws Committee. He attends COS meetings regularly, and has published papers in, and reviewed manuscripts for, *The Condor*. His research interests include the ecology of brood parasitism, behavioral endocrinology, and avian vocal communication.

MEWALDT-KING STUDENT RESEARCH AWARDS

The fourth annual Mewaldt-King Student Research Awards will be presented at the 1996 meeting of the Cooper Ornithological Society. The two \$1000 awards are designated, in the memory of L. Richard Mewaldt and James R. King, to support research that relates to the conservation of birds. Research may be in any area of ornithology, but studies that involve demographics, breeding biology, or dispersal biology may be particularly relevant, especially if the species is endangered, threatened, or otherwise "sensitive." Studies of species from threatened ecosystems (e.g., old growth forest, wetlands) are also of particular interest.

1996 Proposal Deadline. Proposals must be received by the Mewaldt-King Award Fund committee on or before January 16, 1996. Only graduate students accepted to or enrolled in a Master's or Doctoral program are eligible for the award. FAXes are not acceptable.

Format. Proposals should include the following: (1) Abstract; (2) Introduction, including (a) relevant background, (b) specific hypotheses to be tested or questions asked, (c) relevance of proposed research to conservation biology; (3) Proposed methods, analyses, and timetable; (4) General categories of expenditures, and (5) Literature cited. The proposal abstract and text, excluding literature cited, should not be longer than six single-spaced pages.

Additional Enclosures. Proposals must also include the C.V. of the applicant and a letter of support from the student's major faculty advisor. Three copies of the proposal and support materials are required by the Mewaldt-King Award Fund Committee.

Mailing address. Send proposals to Dr. John Faaborg, Chair, Mewaldt-King Award Fund Committee, Division of Biological Sciences, 110 Tucker Hall, University of Missouri, Columbia, MO 65211.

HONORARY MEMBERSHIPS AWARDED

At the 1995 annual meeting of the Cooper Ornithological Society, the Board of Directors of the Society conferred honorary memberships on Luis Felipe Baptista, Richard F. Johnston, and Edwin O'Neill Willis. Honorary membership status is awarded in recognition of outstanding service to the Society and ornithology.



LUIS FELIPE BAPTISTA

Luis Felipe Baptista was born in Hong Kong and is a citizen of the United States. He has B.S. and M.S. degrees from the University of San Francisco and received a Ph.D. from the University of California at Berkeley in 1971. He was on the faculty of Occidental College in Los Angeles as associate professor and curator of the Moore Laboratory of Zoology, 1973–1980. He is now the chair and curator of ornithology and mammalogy, California Academy of Sciences, San Francisco. He is a Fellow of the American Ornithologists' Union, and has been a Fellow at the Max Planck Institute of Physiology and Behavior in Germany in the laboratory of Hans Löhrl (Abteilung Aschoff), and NATO Fellow in the laboratory of Klaus Immelmann.

He has given considerable service to ornithology, having served on the Board of Directors of the Cooper Ornithological Society, and as an American Representative of the International Ornithological Council. He helped organize international symposia on bird song at the International Ornithological Congresses in Moscow in 1982, in Canada in 1986, in New Zealand in 1991, and a round table discussion on avian vocalizations at the International Congress in Vienna in 1994.

In addition to research on taxonomy and systematic relationships of birds, using morphological, behavioral and biochemical characteristics, he is especially known for his long-term research on song development and regional song dialects of birds in the U.S.A. and the neotropics. Over a 20-year period he has examined both variability and stability of local song dialects in the White-crowned Sparrow (*Zonotrichia leucophrys*). Especially important for the study of song development, was the discovery that using another male as a

song tutor extends and amplifies the sensitive period of song learning compared with use of a taped-song as tutor. With M. L. Morton he found that dispersing young White-crowned Sparrows will entrain on songs of their new neighbors, eventually discarding other song types. He and his associates also demonstrated song-learning in non-passerines, i.e., in hummingbirds.

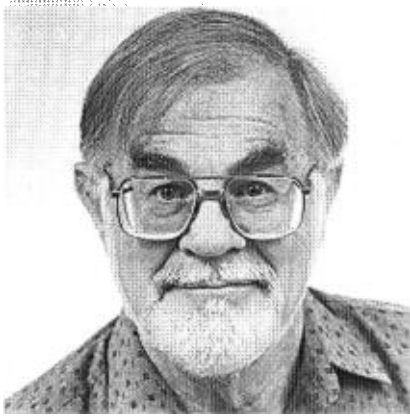
Baptista has authored and co-authored over 100 publications in ornithology, including syntheses as well as reports of original and provocative research. Luis is a friendly and out-going person with a special talent for cooperative work. He is well known as joint author (with J. C. Welty) of a leading textbook of ornithology, and has recently written (with Sandra Gaunt) an important historical review of avian sound communication. Baptista has engaged in conservation programs with Mexican biologists.

For all these various reasons, the Cooper Ornithological Society is pleased to confer Honorary Membership on Luis Felipe Baptista.

Richard F. Johnston has made major contributions to the literature of ornithology as well as ecology and evolutionary biology. His career has spanned 45 years, most of which were spent at the University of Kansas Museum of Natural History. He, and the graduate students he has directed, including 22 doctoral students, have in turn gone on to have had significant influence in ecology and evolutionary biology of birds and other organisms.

Born in Oakland, California, Dick Johnston stayed in the San Francisco Bay area for his education, receiving the B.A., M.A., and Ph.D. in zoology in 1950, 1953, and 1955, respectively, from the University of California at Berkeley. He was an instructor in biology at New Mexico State University from 1956 to 1958, and was hired by the University of Kansas in 1958, being both on the zoology faculty and curator in ornithology for the Museum of Natural History. He served as chairman of the Department of Ecology and Systematics and is now professor emeritus. Dr. Johnston also served as the director of the Systematic Biology Program, National Science Foundation, from 1968 to 1969.

Perhaps his best known research has been on the evolutionary significance of geographic variation in birds. He was among the first to recognize that introduced species provide a powerful natural experiment for the study of adaptation and rapid evolution. His studies of the House Sparrow in North America and the Rock Dove throughout its range have been especially stimulating. He has about 140 articles and reviews in the periodical literature, and his book with



RICHARD F. JOHNSTON

Marián Janiga entitled *Feral Pigeons* (Oxford University Press) is due out in 1995.

Among Dr. Johnston's contributions has been his editorial work, and in this regard his influence has been especially far reaching. He was editor of *Systematic Zoology* (now *Systematic Biology*) from 1967 to 1970, was general editor of *Annual Review of Ecology and Systematics* from 1968 to 1992, and was the founding editor of *Current Ornithology*, a post he held from 1981 to 1987.

Dick Johnston also has been active in ornithological affairs. In the Cooper Ornithological Society he was an assistant editor of *The Condor* and on the board of directors. In the American Ornithologists' Union he has served as annual meeting chairman, program chairman, on the Brewster-Coues Awards Committee, on the Editorial Advisory Board, and as chairman of the National Program for Ornithology Publications Committee. He is also a past president of the Society of Systematic Biology.

In recognition of a long and productive career, and a life-time of contribution to the field of ornithology, it is a pleasure to recognize Richard F. Johnston as an Honorary Member of the Cooper Ornithological Society.

Edwin O'Neill Willis (picture not available) received a bachelor's degree from Virginia Polytechnic Institute and a master's degree from Louisiana State. In 1965, he received a Ph.D. in zoology from the University of California at Berkeley where he was one of Alden H. Miller's last doctoral students. He is now on the faculty of the zoology department of the Universidade Estadual Paulista, São Paulo, Brazil. He joined the Cooper Ornithological Society in 1959, and he is a Fellow (1974) of the American Ornithologists' Union.

Probably no family of birds is more typical of low-

land tropical American forests than the antbirds, and Willis has spent a lifetime in the study of the behavior and ecology of antbirds of which he is the leading authority. His early studies of color-banded antbirds on Barro Colorado Island, Panama resulted in three definitive monographs on the Bicolored (*Gymnopithys bicolor*), Spotted (*Hyllophylax naevioides*), and Ocellated (*Phoenostictus mcleannani*) Antbirds, all of which unlike most other antbirds, attend swarms of army ants for the insects and other arthropods the ants flush out of hiding. His studies of social organization within and between species of antbirds that attend army ant swarms helped clarify the relationship between territorial organization and dominance hierarchies in nature. He has also studied many other tropical birds in several countries of Central and South America. The revised list of the birds of BCI (Smithson. Contrib. Zool. 1979: 1-31) by Willis and Eugene Eisenmann has long been a basic reference for following avifaunal changes with time on a tropical island of known age.

For about the last 20 years he has resided in Brazil, where in 1991 he and Yoshika Oniki who often collaborates in his research listed 1,644 species of birds with their scientific and Portuguese vernacular names, one of the largest avifaunal lists of any country. His early and frequent use of color-banded individual birds enabled Edwin Willis to go beyond the excellent and renowned pioneer studies of Alexander Skutch on the behavior of tropical birds in several respects. He was the first to show with color-banded birds that because their nests are frequently robbed by predators, 10 or more nestings may be attempted by a single pair of antbirds in one year and only one or two nestings may succeed. This phenomenon which may be general among birds with open nests in lowland tropical forest helps provide an explanation for the small clutch size typical of such birds. The long-term studies by Willis of color-banded antbirds also revealed the occurrence of considerable longevity and gave the first evidence for senescence among some tropical land birds.

He has studied many other species of Neotropical birds besides antbirds, and has shown that whereas the resident suboscines often dominate the forest areas, migrant oscines more often occupy forest margins and more open habitats. He also made some of the first measurements of the minimal size of area needed to maintain tropical forest avifaunas. In this connection, he was an invited speaker in 1978 at the International Ornithological Congress, Berlin. The quality of the research by Willis has been uniformly first-rate, although often done under difficult field conditions, and he has consistently related his results to broad biological principles. He has often published in the best journals in both North and South America, making his reports available to a wide audience.

For his great contributions over many years to the understanding and conservation of the birds of tropical America, the Cooper Ornithological Society is proud to confer Honorary Membership on Edwin O'Neill Willis.