



IN MEMORIAM: GEORGE ADELBERT BARTHOLOMEW, 1919–2006

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In Memoriam

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IN MEMORIAM: PAUL HERBERT BALDWIN, 1913–2006

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Paul Herbert Baldwin, a member of the AOU since 1947, an Elective Member (1953) and Fellow (1976), passed away on 26 September 2006 at the age of 93 in his home in Ashland, Oregon. Paul was born on 26 February 1913, in Berkeley, California, to George H. and Corrine B. Baldwin. His childhood was spent in Berkeley, where he developed an early interest in science and the natural world. In this, he followed a family tradition of scientists that included a chemist, physician, civil engineer, and amateur naturalist. His mother collected shells and evergreen cones and taught him the elementals of observation and collection techniques. He applied these skills in many ways throughout his long life, being a meticulous and careful scientist.

Paul graduated from the University of California at Berkeley (UCB) with a B.S. in Zoology in 1936. He then moved to Hawaii and worked at the Hawaii Volcanoes National Park for several years with the Civilian Conservation Corp. Paul met his future wife, Sarah, in Hawaii, and they married in 1940, living in the Park until the late 1940s. He had a strong interest in ecology and entomology, discovered a new species of Hawaiian insect, and worked on the introduced mongoose before he began to focus on birds. Paul conducted the first intensive behavioral study of the Hawaiian honeycreepers, and this served as material for his Ph.D. dissertation, which was accepted by UCB in 1950. He published this work in 1953, in *University of California Publications in Zoology*, and the material remains one of the most important papers written on native Hawaiian birds. During his undergraduate and graduate years, he also served on staff at the Museum of Vertebrate Zoology in Berkeley and at the Bishop Museum in Honolulu.

After Paul received his Ph.D. in 1950, he and Sarah moved to Ft. Collins, Colorado, where he took a faculty position in the Department of Zoology at Colorado State University (CSU). During his 28-year tenure at Colorado State University, Paul and his graduate students continued to study complex ecosystems, particularly the interaction of woodpeckers and Engelmann Spruce beetles in Rocky Mountain forests, and the avian ecology of the Pawnee Grassland Biome in eastern Colorado. Paul taught embryology and ornithology at CSU; in the latter, he always saved the final lectures of his course for the adaptive radiation of the Hawaiian honeycreepers. Although Paul was a quiet and reserved man, his enthusiasm during those few lectures encouraged many, including me, to find out more about those amazing Hawaiian birds and their unique ecosystems. Paul also taught for a number of summers at the University of Montana Biological Station on Flathead Lake in western Montana, an experience that is still the source of many special memories for his family.

At the time of his retirement in 1978, Paul had the foresight to distribute his field notes to various scientists and libraries. I was fortunate enough to receive four field notebooks from his early work in Hawaii—small green notebooks with meticulous notes and illustrations. He had diagrams of avian pox on House Finch legs that looked so realistic, and a text so moving, that it was like being transported back to the 1930s on Mauna Loa. These unpublished notes assisted me significantly in unraveling the sequence of avian disease arrival in the Hawaiian Islands. In addition, his monograph on the Hawaiian honeycreepers has served as a foundation for much of the behavioral work conducted on these



PAUL HERBERT BALDWIN, 1913–2006

(Photograph courtesy of Colorado State University, Archives and Special Collections.)

birds. Paul never lost his interest in and knowledge of Hawaii, and one of his last professional papers, published in 1983, dealt with the diet of the newly discovered honeycreeper, the Po'ouli. The coauthor of this paper, Tonnie Casey, said that even after all the years away from Hawaii, Paul could name every insect part that they found in the crops of those first two birds of this new species. Paul's last trip to Hawaii was to attend the 1997 Cooper Ornithological Society (COS) meeting in Hilo, where he and his family revisited forests that he had not seen in more than half a century. At that meeting, he asked me whether the Akiapola'au was still in the forests; I replied that it was, and he said, "then everything is still OK." *Studies in Avian Biology* No. 22, which resulted from that meeting, was dedicated to Paul for his seminal work on the wildlife in Hawaii. He was a long-term member of the COS and served as Secretary.

After his retirement from CSU in 1978, Paul and Sarah moved to Redwood Valley, California. Sarah pursued interests in plant ecology, birding, gardening and traveling. Paul learned and practiced calligraphy, rug-making, wine-making, and cultivation of fruit trees, and continued his avid interest in reading. He not

only made numerous hooked rugs that lined the walls of his house but, according to his graduate student Roger Boyd, also produced a wide variety of high-quality wines. Continuing their naturalist activities, Paul and Sarah developed their rural property into a miniature nature preserve and did extensive baseline studies of plants and birds at the Boggs Lake and Anderson Marsh wetlands areas. They lived in Redwood Valley for nearly 25 years.

In 2002, Paul moved to Ashland to live with his oldest son, Tom, where he continued to enjoy traveling and his other pastimes until the final months of his life. Paul's last days were spent in the presence of family members and community caregivers, for whom he set a fine example of how to leave this life in a graceful and spiritual manner. Paul is survived by his children, Tom Baldwin of Ashland, Oregon, Owen and Charlene Baldwin of Addis Ababa, Ethiopia, and Carol Baldwin of Missoula, Montana; nine grandchildren; and three great-grandchildren. He was preceded in death by his wife Sarah in 2002 and his brother George. He was a teacher and a student until the very end, and those who shared his journey feel grateful and blessed.

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IN MEMORIAM: GEORGE ADELBERT BARTHOLOMEW, 1919–2006

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Professor George A. Bartholomew, a Fellow and former Vice President (1971–1973) of the AOU, passed away on 2 October 2006. Known to colleagues, students, and other friends as “Bart,” he was born in Independence, Missouri, on 1 June 1919. His parents, his late brother Richard, and he moved from Kansas City, Missouri, to Berkeley, California, where he attended Berkeley High School. He completed an A.B. and an M.A. at the University of California, Berkeley, in 1940 and 1941, respectively. He then enrolled in the doctoral program in biology at Harvard University, but World War II intervened, leading to his service as a physicist in the Bureau of Naval Ordnance from 1942 to 1945. He returned to Harvard, completed his Ph.D. in 1947, and then joined the faculty of the Department of Zoology at the University of California, Los Angeles (UCLA). He retired from the UCLA faculty in 1987, but continued as a principal investigator in the Laboratory of Biomedical and Environmental Sciences until 1989.

Bart was an inspiring teacher at both the undergraduate and graduate levels and a supportive mentor of 42 Ph.D. recipients and 14 postdoctoral scholars. More than 1,170 individuals, a substantial fraction of today's physiological ecologists, can trace their graduate academic lineage to him (see bartgen.bio.uci.edu/tree, an internet resource compiled by A. F. Bennett and C. Lowe). He supplemented his instructional efforts through co-authorship of two textbooks and 30 educational films, several of the latter dealing with the Galápagos Islands as an evolutionary laboratory. I was fortunate to have him as a major professor, because of his patience, sage guidance, rigorous standards, and considerable editorial skills. His accomplishments in teaching and research led to his being included among the 20 top professors in the history of UCLA (“The Bruin Century,” *UCLA Today* 20 (9), 2000).

Bart's influence on functional studies of wild birds, mammals, reptiles, and insects has been profound. It results from 63 years of published research and a consistent approach that combined laboratory and field studies of ecologically relevant aspects of the physiology and behavior of animals that are exposed to unusually demanding aspects of the physical environment or that represent an extreme of specialization for the particular group. Bart's scholarly accomplishments were reviewed (W. R. Dawson, *Integrative and Comparative Biology* 45:219–230, 2005) as part of *Integrative Biology: A Symposium Honoring George A. Bartholomew*, which was held in conjunction with the 2004 annual meeting of the Society for Integrative and Comparative Biology (SICB). His scientific concern lay at the interface of physiology, behavior, and ecology. It achieved fundamental biological coherence at the organismic level because it encompassed problems directly relevant to the ecology or reproduction of the species under study. In principle, the research problems he addressed were defined by the performance of animals under natural conditions. He concentrated his investigations in three environmental settings—deserts, oceanic islands, and tropical forests and savannahs—and his work took him to North and Central America, Australia, Europe, Africa, Antarctica, and a number of islands including the Pribilofs, Midway, and New Guinea, as well as the Galápagos. His research led to groups of publications (among a bibliography of ~155 titles) in several principal areas: (1) photoperiodic control of reproduction in birds, mammals, and reptiles; (2) reproductive cycles in mammals; (3) cardiac, respiratory, and metabolic studies of large reptiles; (4) water economy, electrolyte excretion, and respiratory physiology of birds and mammals; (5) energetics of locomotion in mammals, birds, reptiles, and insects; (6) hibernation and estivation in birds and mammals; (7) reproductive and social



GEORGE ADELBERT BARTHOLOMEW, 1919–2006

(At the Smithsonian Tropical Research Institute on Barro Colorado Island, Panama, 1978.
Photograph by Clifford A. Hui.)

behavior in a variety of terrestrial and marine birds and marine mammals; (8) distribution and population dynamics of seals and sea lions; and (9) heat production, energetics, and locomotor behavior of insects. In most of these areas, the publications included both original research articles and one or more substantial and widely cited reviews. The variety of taxa and the contrasting properties of the environmental settings represented in Bart's work led to his adopting a broadly comparative view that allowed him to delineate both convergences and differences in the ways in which dissimilar organisms meet similar problems. This, in turn, afforded him insights concerning the functional, ecological, and evolutionary aspects of adaptations.

Bart was widely recognized for his professional accomplishments. His honors include Fulbright and Guggenheim fellowships (1953–1954 and 1961–1962, respectively) for research in Australia, a UCLA Distinguished Teaching Award (1966), the Brewster Medal of the AOU (1966), and the Fellow's Medal of the California Academy of Sciences (1978). Further, he was the initial recipient of the Grinnell Medal of

the Museum of Vertebrate Zoology (1983) and the Loye and Alden Miller Research Award of the Cooper Ornithological Society (1993). He was awarded honorary memberships in the Cooper Ornithological Society (1988) and the SICB (1990). Additionally, SICB established the George A. Bartholomew Award in his honor (1992); this award recognizes gifted young investigators in comparative physiology, comparative biochemistry, and related fields. Bart was elected a fellow of the American Academy of Arts and Sciences (1981) and a member of the National Academy of Sciences (1985). He was also awarded an honorary D.Sc. by the University of Chicago (1987). Beyond his scholarly accomplishments, Bart contributed important services to the U.S. Marine Mammal Commission, Smithsonian Institution, California Academy of Sciences, National Science Foundation, and, as Chair and respected faculty member, to his department at UCLA. He also served as Chief Scientist on cruises of the RV *Alpha Helix* to New Guinea (1969) and the Galápagos Islands (1978).

Bart married Elizabeth (Betty) M. Burnham in 1942, and they had two children, Bruce and

Karen (Searcy), who survive. In 1989, after 42 years in southern California, Betty and he moved to Novato, California, where, after more than 50 years of marriage, she passed away in 1993. Bart subsequently moved to a retirement facility in Greenbrae, California. In 1994, he married Ruth L. Myers, who shared his enthusiasm for travel and painting. They continued to reside in Greenbrae for the 12 years of their marriage. Ruth preceded Bart in death by two months.

George A. Bartholomew's accomplishments in teaching, graduate advising, research, and service provide a rich legacy for biology. His philosophical insights concerning the creative process and the nature of integrative biology represent an important part of this legacy. Many of these insights are summarized in his valediction included in the 2004 symposium honoring him (*Integrative and Comparative Biology* 45:330–332, 2005). Those of us who were privileged to know him will always remember his unassuming manner, self-deprecating humor, generosity, supportive attitude toward young people, and

adherence to high standards of scholarship. He greatly valued his professorial position, for he noted, "If one is fortunate enough to be associated with a university, even as one ages, teaching allows one to contribute to, and vicariously share in the creativity of youth" (*op. cit.*: 331). Modestly, he felt that his most lasting contribution to science would be his students and the generations of their students following them. This is certainly a very important legacy (see the Bartholomew academic genealogy referred to above), but I feel that it is rivaled by the influence that Bart's approach to his science will continue to have on avian biology and the other fields with which he was concerned. His satisfaction with his career choice is nicely summarized in a personal comment. "The wisest decision I ever made with regard to science, I made as a child. In the summer of 1932, shortly after my thirteenth birthday, I decided to become a zoologist, because I thought it would be fascinating to visit distant parts of the world and study exotic animals. I was right. It has been." (*op. cit.*: 332).

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IN MEMORIAM: MARIO ALBERTO RAMOS OLMOS, 1949–2006

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Mario Alberto Ramos Olmos died suddenly and unexpectedly at his home in Washington, D.C., in the early morning of 11 September 2006, of heart failure. His passing was a staggering loss to the ornithological and conservation community to which he had devoted his immense skill, energy, and intelligence for more than three decades. Despite his extraordinary accomplishments, there is a sense that he had much left to give, especially for his beloved Mexico.

Mario was born on 24 February 1949 in Colonia Puebla of Mexico City. During his teen years, his family ran a pharmacy, working hard to become and remain members of Mexico's fragile middle class. As the third of nine children, and the oldest male to reach adulthood, he was expected to devote considerable effort to caring for his younger brothers and sisters, and to help with the pharmacy. Nevertheless, his parents also expected him to demonstrate sufficient diligence at his studies to qualify for a profession. He showed early promise in the sciences, and entered the Universidad Nacional Autónoma de México (UNAM) in 1968, graduating with a degree in biology in 1974. The ornithologist Allan Phillips, then a faculty member in the Instituto de Biología at UNAM, was Mario's major advisor for his baccalaureate thesis, a study of the birds of the "Pedregal," vast lava flows south of Mexico City (1974, UNAM).

In October 1972, Dwain Warner, then at the University of Minnesota's Bell Museum of Natural History, received a grant from the Welder Wildlife Foundation of Sinton, Texas, to support work on the nonbreeding ecology of migratory birds. The grant included the stipulation that the funds be used to support at least one Mexican student. Warner contacted Phillips and asked him for the best student in ornithology in Mexico. Without hesitation, Phillips recommended Mario Ramos.

My wife, Bonnie, and I first met Mario in July of 1973 at the University of Minnesota's Itasca

summer field-biology session. By August of that year, Mario was already working at UNAM's Estación de Biología in the Tuxtla Mountains of southern Veracruz, and living at the nearby *cabañas* of Playa Escondida. Over most of the next 22 months (until May 1975) Mario, Dick Oehlenschläger, and I gathered data pertinent to our theses. During that two-year period, we accumulated 96,000 net-hours in tropical rain-forest and second growth and captured about 30,000 individuals of more than 150 species. This work forms, by far, the most significant contribution to the long-running investigation of the birds of the Tuxtlas, a study that began with the work of P. L. Sclater in 1857 and has included contributions from more than 60 other investigators. A total of 405 species of birds has been recorded for the Tuxtlas, 350 of which are documented by specimens. In addition, more than 90 peer-reviewed papers on Tuxtla birds have been produced, on their ecology, natural history, population dynamics, taxonomy, conservation, and the role of migrants in the movement of viruses. Mario participated as senior investigator, collaborator, or supervisor in a significant amount of this work during his 16 years (1973–1988) as a field biologist before shifting his career into international conservation.

During his graduate research in the Tuxtlas, in 1975, Mario met and married Maria Isabel Castillo, herself a biologist and UNAM graduate. Their three children, Aurora, Mariano, and Ameyali, survive. Mario's Ph.D. dissertation (1983, University of Minnesota) focused on a question, framed by Finn Salomonsen and David Lack, regarding the degree to which birds from a particular part of a species' Holarctic breeding range winter in a specific portion of the tropical wintering range. At that time, the only way to address the question was through band returns or, for those species in which they occurred, regional variations in plumage coloration. Using specimens of 11 species showing



MARIO A. RAMOS, 1949–2006

(On the rim of Santa Martha crater, 8 March 1985. Photograph by John H. Rappole.)

identifiable subspecific variation collected in the Tuxtlas, along with hundreds of other specimens from major museums, Mario obtained remarkable insight into the timing, routes, and winter settlement patterns of populations from known breeding regions. This work was quickly recognized by the scientific community as seminal. In 1979, before completing his dissertation, he was offered a position at a new Mexican government research organization, Instituto Nacional de Investigaciones sobre Recursos Bióticos (INIREB). Based in Xalapa, INIREB was created by the plant ecologist Arturo Gomez Pompa and modeled after research institutions like the Max Planck Institute in Germany and the Smithsonian Institution in the United States. Scientists at INIREB had remarkable freedom to pursue basic research questions with academic and government support, a freedom that Mario exercised to considerable effect. He initiated projects in the Tuxtlas as well as several other regions of the country. His greatest contribution during this period was in training a number of students, several of whom became leaders in ornithology and conservation. Mario was offered the directorship of INIREB in 1988, but

declined and chose to become senior program officer for Latin America and the Caribbean for the World Wildlife Fund (WWF). He left WWF in 1991 to join the Environmental Department of the World Bank, where he was responsible for assessing environmental effects of bank aid projects. In 1994, he moved to the Bank's Global Environment Facility (GEF) as senior environmental specialist, a position he held until his untimely death in September 2006. During this latter period, he used his considerable international influence to initiate several major conservation programs in Mexico, including establishment of a portion of the Tuxtla Mountains as a Biosphere Reserve with a permanent, broad-based management team.

The quality of Mario's research was recognized in international scientific and conservation circles. He was elected president of the Mexican section of the International Council for Bird Preservation, and he founded the Mexican conservation organization, Pronatura, in 1980. In 1982, he joined the Committee of the International Ornithological Congress, and he founded the Neotropical Ornithological Society two years later. He was an Elective

Member (1985) and Fellow (1992) of the AOU. He was an invited plenary speaker at the 19th International Ornithological Congress, Ottawa, Canada (1986), and became Senior Conservation Fellow for WWF in 1988. Mario maintained his professional interest in ornithology until his death, serving as President of the Neotropical Ornithological Society from 1984 to 1998.

Mario had an uncanny facility for sifting through vast amounts of information, identifying the key issue, and charting a practical course of action. However, the clearest evidence of his extraordinary gifts was most readily observed in a public forum—any meeting where important issues were at stake. He could argue cogently and forcefully in Spanish, English, and Portuguese, and rarely failed to make his point and achieve his goals. These abilities, along with his deep commitment to conservation, enhanced Mario's stature and nurtured his influence through his 15 years at the World

Bank and GEF. Nevertheless, on the basis of his publications, students trained, organizations fathered, and wildlife preserves created, he will be best remembered, I believe, as being among Mexico's greatest ornithologists and conservationists. This exalted status in the pantheon of Mexico's finest seems somewhat odd to those of us who knew him as a comrade, sharing soggy *tacos gringos* (tortillas and peanut butter) in the cold, neverending rain of a Santa Martha cloud-forest. Although his strength, energy, focus, and patience at times appeared superhuman in this particular environment, we did not think or worry much about his international standing. We knew him then mainly as we remember him today, as a dear friend, loyal, dependable, and thoroughly enjoyable to be with regardless of the circumstances; and now as one who has left us—way too soon.

I thank J. Vega Rivera, K. Winker, and I. Castillo de Ramos, who provided critical information for this memorial.