

**Gary Ivey**  
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**International Crane Foundation**  
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## **QUALIFICATIONS**

I have worked for International Crane Foundation since June 2007. I have over 30 years of experience working with wetlands, waterfowl and waterbird management and planning with particular emphasis on sandhill cranes in the Pacific Flyway. I served as a biologist at several National Wildlife Refuges (NWRs) for 18 years. I worked at Malheur NWR in eastern Oregon for 15 years and supervised one of the most comprehensive biological monitoring programs in the NWR System. I played a lead role in refuge management and planning through writing of habitat management, water management, and wetland project plans. My Master's Thesis explored nesting ecology of greater sandhill cranes and my PhD explored wintering ecology of sandhill cranes in the Sacramento-San Joaquin Delta. I served on the Greater Sandhill Crane Recovery Planning Team from 1998-2001 and I also served as a subconsultant and expert on the greater sandhill crane and assisted with development of their conservation, avoidance and mitigation measures for the Bay Delta Conservation Plan.

## **WORK HISTORY**

*2007-present, Research Associate, International Crane Foundation; Wildlife and Wetlands Consultant*

I have my own consulting business and I also work part-time on sandhill crane issues in partnership with the International Crane Foundation. My work includes working with agencies, conservation organizations, and other groups on crane management, conservation and research projects in the Pacific Flyway. I also served as lead researcher on a study of wintering ecology of sandhill cranes in California's Sacramento-San Joaquin Delta which is my PhD project through Oregon State University.

- Conducted a study of sandhill crane winter distribution throughout the Central Valley
- Conducted a research project on wintering ecology of greater and lesser sandhill cranes in the Sacramento-San Joaquin Delta Region.
- Conducted a satellite telemetry study of lesser sandhill crane migration and landscape use between summering areas in Alaska and wintering areas in the Central Valley of California.
- Conducted a study of Canadian sandhill cranes summering along the Lower Columbia River in Oregon and Washington.
- Partnered with Audubon California to produce a crane management guidelines titled: *Guidelines for managing breeding greater sandhill cranes on private lands in California.*
- Consulted with the Central Valley and Intermountain West Joint Ventures on conservation, management and monitoring of greater sandhill cranes for Joint Venture planning purposes.
- Consulted with several western National Wildlife Refuges on conservation and management of sandhill cranes for their Comprehensive Conservation Plans.
- Participated in Pacific Flyway meetings regarding sandhill crane conservation and management at the Flyway scale.
- Assisted the U.S. Fish and Wildlife Service develop: *Priority Information Needs for Sandhill Cranes: a funding strategy.*
- Assisted with capture of greater sandhill cranes in the Imperial Valley, California to study their movements and distribution.

*1999-2007, Wildlife and Wetlands Consultant, Self Employed*

- Conducted an analysis of factors influencing nest success of sandhill cranes at Malheur NWR (Ivey and Dugger 2008).

- Authored the *Intermountain West Waterbird Conservation Plan* for the *Waterbirds for the Americas* Initiative (Ivey and Herziger 2006). The plan includes recommendations for sandhill crane conservation, monitoring and research.
- Conducted a study of sandhill crane wintering ecology for TNC on Staten Island in 2002-2003 (Ivey and Herziger 2003).
- Conducted a satellite telemetry study of sandhill cranes which stage in SW Washington, in 2001-2002 (Ivey et al. 2006).
- Wrote wildlife a management plan for a rice ranch in the Sacramento Valley of California which include provision of a sandhill crane roost site and foraging habitats in 2003 (Ivey and Snowden 2002).
- Coordinated and conducted state-wide surveys of sandhill cranes breeding in Oregon and California in 1999 and 2000 (Ivey and Herziger 2000, 2001).
- Co-authored a recovery plan for sandhill cranes in Washington in 2002 (Littlefield and Ivey 2002).
- Co-authored a habitat assessment and management strategy for sandhill cranes for TNC's Cosumnes River Preserve in California (Littlefield and Ivey 2000).
- Served on recovery team and assisted California Dept. of Fish and Game with development of a draft recovery plan for sandhill cranes in California in 1998-2001.

*1983-1998, Wildlife Biologist, Malheur National Wildlife Refuge, Princeton, OR*

My primary duty was to direct a very extensive biological program which included wildlife and vegetative surveys, and responsibility for supervision, development, implementation, coordination, evaluation, adherence to applicable policies, and planning. I wrote wildlife and habitat inventory, habitat management, and wetland management plans for the refuge to meet objectives for key species such as sandhill cranes and waterfowl. I conducted and coordinated off-refuge migratory bird surveys with the Oregon Department of Fish & Wildlife and other agency biologists for the Harney Basin and eastern Oregon. I also analyzed data and wrote publications.

*1982-1983, Wildlife Biologist, Kern National Wildlife Refuge, Delano, CA*

My primary duty was to direct the refuge biological program. I also assisted with development of the Master Plan and habitat management and monitoring plans for wetland units on Kern and Pixley NWRs. I also conducted winter surveys of sandhill cranes which wintered on Pixley NWR.

*1981-1982, Biological Technician, Sacramento National Wildlife Refuge, Willows, CA*

I was hired to assume the biological duties for the five refuges in the complex while the refuge wildlife biologist position was vacant. I planned and directed the refuge biological program, including designing and writing the original habitat monitoring plan for the refuge complex, which provided methodology for documentation of habitat management actions and evaluation of both habitat and wildlife responses to management actions.

*1980-1981, Biological Technician, Bureau of Reclamation, Sacramento, CA*

My primary job was to coordinate and review the drafting of land classification, land use, land ownership, and drainage maps prepared by the cartographic section. I was responsible for accuracy and relevance of data included on the maps. I reviewed and made recommendations on proposed wildlife mitigation plans, Fish & Wildlife Coordination Act reports, Section 7 Consultations and other reports involving wildlife topics.

*1979, Biological Technician, Klamath Basin National Wildlife Refuges, Tulelake, CA*

My primary responsibility was as a hunter bag checker. This included recording information on the number and species of birds taken by waterfowl and pheasant hunters, reporting wildlife violations to law enforcement personnel, and providing the public with information.

*1979, Biological Technician, Malheur National Wildlife Refuge, Princeton, OR*

My major responsibility was to collect data on waterfowl and marsh bird nesting by conducting a study comparing the effects of various refuge land use practices on ground nesting birds. Practices that I evaluated included: late summer haying with winter cattle grazing, late summer haying without grazing, and no haying or grazing.

*1978, Biological Technician, Klamath Basin National Wildlife Refuges, Tulelake, CA*

My major responsibility was as a hunter observer in a lead vs. steel shot study. I was trained to visually estimate ranges at which geese were shot and also to use a rangefinder. I accompanied hunter parties in the field and recorded data on the ranges at which they shot and the effects of their attempts. I necropsied geese which were bagged with one shot using a fluoroscope, X-rays, and various dissecting tools to determine the effectiveness of the various lead and steel shot loads in bagging geese.

*1977-1978, Seasonal Aide, Los Baños Wildlife Area, Los Baños, CA*

I operated a waterfowl hunter check station, sold permits, checked hunter bags, and reported wildlife violations to enforcement personnel. I learned much about wetland management (particularly moist soil management) and was responsible for irrigating natural crops and managing water on the area to provide habitat for wintering waterfowl.

## **EDUCATION**

B.A., Biology, Humboldt State University, California, 1977

B.S., Wildlife Management, Humboldt State University, California, 1978

M.S. Wildlife Science, Oregon State University, 2007

PhD. Wildlife Science, Oregon State University, 2015

## **AWARDS**

Performance Award (1980), US Bureau of Reclamation

Performance Award (1981), US Bureau of Reclamation

Special Achievement Award (1984), US Fish and Wildlife Service

Special Achievement Award (1986), US Fish and Wildlife Service

Special Achievement Award (1987), US Fish and Wildlife Service

Special Achievement Award (1987), US Fish and Wildlife Service

Quality Performance Award (1989), US Fish and Wildlife Service

Superior Performance Award (1990), US Fish and Wildlife Service

Superior Performance Award (1991), US Fish and Wildlife Service

Outstanding Performance Award (1992), US Fish and Wildlife Service

Outstanding Performance Award (1993), US Fish and Wildlife Service

Superior Performance Award (1994), US Fish and Wildlife Service

Superior Performance Award (1995), US Fish and Wildlife Service

STAR Award (1996), US Fish and Wildlife Service

## **CONSERVATION SERVICE**

President, The Trumpeter Swan Society 2011-2014

President, Malheur Wildlife Associates 2011-present

Member, Sandhill Crane Research Committee of the Association of Fish and Wildlife Agencies' Migratory Shore and Upland Game Bird Support Task Force, 2009

Member, Oregon's Important Bird Areas Technical Advisory Committee, 2003-present

Member, Oregon Steering Committee, Oregon Joint Venture, 2003-2006

Vice-president, The Trumpeter Swan Society, 2001- 2011

Member, Intermountain West Joint Venture Technical Committee, 2000-2010

Chair, Intermountain West Waterbird Conservation Plan Group, 2000 -2006  
 Member, Oregon-Washington Partners in Flight Conservation Planning Committee, 1999-2004  
 Board member, Oregon Chapter of The Wildlife Society, 1997-2000  
 Board member The Trumpeter Swan Society, 1994-Present  
 Member, Recovery Team for listed greater sandhill cranes in California, 1998-2001  
 Member, Pacific Flyway Subcommittees for sandhill cranes and trumpeter swans, 1990-present  
 Life Member, Oregon Chapter of The Wildlife Society  
 Life Member, Trumpeter Swan Society

### **CRANE-RELATED PUBLICATIONS**

Ivey, G.L., C.P. Herziger, D.A. Hardt, and G.H. Golet. 2016. Historic and Recent Winter Sandhill Crane Distribution in California. *Proceedings of the North American Crane Workshop* 13:54-66.

Ivey, G.L., B.E. Dugger, C.P. Herziger, M.L. Casazza, and J.P. Fleskes. 2015. Wintering ecology of sympatric subspecies of Sandhill Cranes: correlations between body size, site fidelity, and movement patterns. *Condor* 117: 518-529.

Ivey, G. L. 2015. Comparative Wintering Ecology of Two Subspecies of Sandhill Crane: Informing Conservation Planning in the Sacramento-San Joaquin River Delta Region of California. Ph.D. dissertation, Oregon State University, Corvallis, Oregon, USA.

Ivey, G. L., C. P. Herziger, and D. A. Hardt. 2014. Conservation priorities and best management practices for wintering Sandhill Cranes in the Central Valley of California. Prepared for The Nature Conservancy of California. International Crane Foundation. Baraboo, WI, USA.

Ivey, G.L., B.E. Dugger, C.P. Herziger, M.L. Casazza, and J.P. Fleskes. 2014. Distribution, abundance, and migration timing of greater and lesser sandhill cranes wintering in the Sacramento-San Joaquin River Delta region of California. *Proceedings of the North American Crane Workshop* 20: 1-11.

Ivey, G.L., B.E. Dugger, C.P. Herziger, M.L. Casazza, and J.P. Fleskes. 2014. Characteristics of sandhill crane roosts in the Sacramento-San Joaquin Delta of California. *Proceedings of the North American Crane Workshop* 20: 12-19.

Ivey, G. L. 2014a. Greater sandhill crane. Pages 96-97 in Shuford, W.D., editor. Coastal California (BCR 32) Waterbird Conservation Plan: Encompassing the Coastal Slope and Coast Ranges of Central and Southern California and the Central Valley. U.S. Fish and Wildlife Service, Pacific Southwest Region, Sacramento, California, USA.

Ivey, G. L. 2014b. Lesser sandhill crane. Pages 96-97 in Shuford, W.D., editor. Coastal California (BCR 32) Waterbird Conservation Plan: Encompassing the Coastal Slope and Coast Ranges of Central and Southern California and the Central Valley. U.S. Fish and Wildlife Service, Pacific Southwest Region, Sacramento, California, USA.

Ivey, G.L., and B.E. Dugger. 2008. Factors Influencing Nest Success of Greater Sandhill Cranes at Malheur National Wildlife Refuge, Oregon. *Waterbirds* 31:52-61.

Ivey, G.L., C.P. Herziger, and T.J. Hoffmann. 2005. Annual movements of Pacific Coast Sandhill Cranes. *Proc. North American Crane Workshop* 9:25-35.

- Ivey, G.L., and C.P. Herziger. 2006. Intermountain West Waterbird Conservation Plan, Version 1.2. A plan associated with the Waterbird Conservation for the Americas Initiative. Published by U.S. Fish and Wildlife Service Pacific Region, Portland, Oregon.
- Ivey G.L. and C. P. Herziger. 2003. Sandhill Crane Monitoring at Staten Island, San Joaquin County, California, 2002-03. The Nature Conservancy, Galt, California.
- Ivey G.L., C.P. Herziger, and M. Gause. 2003. Farming for Wildlife: An Overview of Agricultural Operations at Staten Island, San Joaquin County, California. The Nature Conservancy, Galt, California.
- Stern, M.A., C.D. Littlefield, and G.L. Ivey. 2003. Sandhill Crane. Pp. 198-200 in *Birds of Oregon: A General Reference*. D.B. Marshall, M.G. Hunter, and A.L. Contreras, Eds. Oregon State Univ. Press, Corvallis, OR.
- Littlefield, C.D., and G.L. Ivey. 2002. Washington State Recovery Plan for the Sandhill Crane. Washington Department of Fish and Wildlife. Olympia, Washington. 71pp.
- Ivey, G. L., and C. P. Herziger. 2001. Using Ivermectin to increase survival of sandhill crane colts at Malheur National Wildlife Refuge, Oregon. *Proceedings North American Crane Workshop* 8: 166-169.
- Ivey, G. L., and C. P. Herziger. 2001. Distribution of greater sandhill crane pairs in California, 2000. California Dept. Fish and Game, Sacramento, CA.
- Ivey, G. L., and C. P. Herziger. 2000. Distribution of greater sandhill crane pairs in Oregon, 1999/00. Oregon Department of Fish and Wildlife Nongame Technical Report #03-01-00. Salem, OR.
- Littlefield, C. D., and G. L. Ivey. 2000. Conservation Assessment for Greater Sandhill Cranes wintering on the Cosumnes River Floodplain and Delta regions of California. Unpublished report. The Nature Conservancy, Galt, California.
- Ivey, G. L. 2000. Joint Venture Implementation Plans for Habitat Conservation Areas in Eastern Oregon. Oregon Wetlands Joint Venture, Portland. <http://wetlands.dfw.state.or.us/about.htm>
- Ivey, G. L., and E. J. Scheuering. 1997. Mortality of Radio-Equipped Sandhill Crane Colts at Malheur National Wildlife Refuge, Oregon. *Proceedings North American Crane Workshop* 7:14-17.
- Littlefield, C. D., and G. L. Ivey. 1995. An unusual record of Sandhill Crane philopatry. *Wilson Bulletin* 107:766.