1-8-2020

PROCEEDINGS OF THE FIFTEENTH NORTH AMERICAN CRANE WORKSHOP

JANE E. AUSTIN

RICHARD P. URBANEK

MEGAN E. BROWN

PROCEEDINGS OF THE FIFTEENTH NORTH AMERICAN CRANE WORKSHOP

8 -11 January 2020
Lubbock, Texas

FRONTISPIECE. Dr. George Archibald (center) received the L. H. Walkinshaw Crane Conservation Award at the Fifteenth North American Crane Workshop in recognition of his visionary leadership in international crane conservation efforts during the past nearly 50 years. George received his undergraduate degree from Dalhousie University in Halifax, Nova Scotia, in 1968, and completed his Ph.D. at Cornell University in 1977. Along with Ronald Sauey, in 1973 he established the International Crane Foundation (ICF) as the world center for the study and preservation of cranes. For 27 years George served as the President of ICF. He has received numerous awards and honors for his role as a charismatic and inexhaustible ambassador for crane conservation. He continues today as Senior Conservationist to direct programs for ICF worldwide. The Award was presented by NACWG President Richard Urbanek (left) and Vice-president Sammy King (right) on 10 January 2020. Thanks to photographer Ted Thousand for the print, which shows a sandhill crane nesting on George's farm. (Photo by Glenn Olsen)

Front cover: A frosty dawn at Muleshoe National Wildlife Refuge, Texas, 11 January 2020, by Daryl Henderson.

Back cover: Scenes from the Fifteenth Workshop in Lubbock, Texas, by Daryl Henderson, Glenn Olsen, and Richard Urbanek.

PROCEEDINGS OF THE
FIFTEENTH NORTH AMERICAN CRANE WORKSHOP

8-11 January 2020
Lubbock, Texas, USA

Editors
JANE E. AUSTIN
and
RICHARD P. URBANEK

Associate Editor
MEGAN E. BROWN

Published by
NORTH AMERICAN CRANE WORKING GROUP

Proceedings of the Fifteenth North American Crane Workshop

Printed in the United States of America by Omnipress, Madison, Wisconsin

Available from:
International Crane Foundation
E-11376 Shady Lane Road
Baraboo, Wisconsin 53913-0447 USA

$35.00 Postpaid

Proceedings of the North American Crane Workshops:

Lewis, J. C., editor. 1976. Proceedings of the [1975] international crane workshop. Oklahoma State University Publishing and Printing, Stillwater, Oklahoma, USA.

Lewis, J. C., editor. 1979. Proceedings of the 1978 crane workshop. Colorado State University Printing Service, Fort Collins, Colorado, USA.

Lewis, J. C., editor. 1982. Proceedings of the 1981 crane workshop. National Audubon Society, Tavernier, Florida, USA.

Lewis, J. C., editor. 1987. Proceedings of the 1985 crane workshop. Platte River Whooping Crane Maintenance Trust, Grand Island, Nebraska, USA.

Wood, D. A., editor. 1992. Proceedings of the 1988 North American crane workshop. Florida Game and Fresh Water Fish Commission Nongame Wildlife Program Technical Report 12, Tallahassee, Florida, USA.

Stahlecker, D. W., and R. P. Urbanek, editors. 1992. Proceedings of the sixth North American crane workshop. North American Crane Working Group, Grand Island, Nebraska, USA.

Urbanek, R. P., and D. W. Stahlecker, editors. 1997. Proceedings of the seventh North American crane workshop. North American Crane Working Group, Grand Island, Nebraska, USA.

Ellis, D. H., editor. 2001. Proceedings of the eighth North American crane workshop. North American Crane Working Group,Seattle, Washington, USA.

Chavez-Ramirez, F., editor. 2005. Proceedings of the ninth North American crane workshop. North American Crane Working Group, Seattle, Washington, USA.

Folk, M. J., and S. A. Nesbitt, editors. 2008. Proceedings of the tenth North American crane workshop. North American Crane Working Group, Gambier, Ohio, USA.

Hartup, B. K., editor. 2010. Proceedings of the eleventh North American crane workshop. North American Crane Working Group, Laurel, Maryland, USA.

Aborn, D. A., editor. 2014. Proceedings of the twelfth North American crane workshop. North American Crane Working Group, Laurel, Maryland, USA.

Aborn, D. A., editor. 2016. Proceedings of the thirteenth North American crane workshop. North American Crane Working Group, Baraboo, Wisconsin, USA.

Austin, J. E., and R. P. Urbanek, editors. 2018. Proceedings of the fourteenth North American crane workshop. North American Crane Working Group, Baraboo, Wisconsin, USA.

Austin, J. E., and R. P. Urbanek, editors. 2022. Proceedings of the fifteenth North American crane workshop. North American Crane Working Group, Baraboo, Wisconsin, USA.

Suggested citation format for articles in workshops 1-5:
Author(s). Year. Title of paper. Proceedings of the North American Crane Workshop 00:000-000.

Suggested citation format for articles in workshops 6-15:
Author(s). Year. Title of paper. Proceedings of the North American Crane Workshop 00:000-000.

ISBN 978-0-9659324-6-2

PREFACE

The North American Crane Working Group held the 15th North American Crane Workshop in Lubbock, Texas, on 8-11 January 2020. Lubbock, the "Hub City" of the Southern High Plains and location of Texas Tech University, was host of the workshop. The workshop opened on 8 January with an evening social at the National Ranching Heritage Center and concluded on 11 January with a field trip to Muleshoe National Wildlife Refuge. There were 73 registrants. The scientific program consisted of 34 oral and 14 poster presentations, a High Plains Plenary, and three special Symposia. The diverse array of topics covered represented the latest findings on North American cranes. Hosts Blake Grisham and Kathy Brautigam, workshop coordinators, did an outstanding job of local planning and arrangements.

At the workshop we also formally recognize and celebrate the achievements of individuals who have dedicated themselves to saving cranes and crane habitat. Our group's highest honor, the L. H. Walkinshaw Crane Conservation Award, was presented to Dr. George Archibald by NACWG President Richard Urbanek and Vice President Sammy King. George, co-founder, past President, and currently Senior Conservationist of the International Crane Foundation, remains active today in his worldwide pursuit of crane conservation efforts.

Some of the highlights of Workshop 15 included an opening banquet at the National Ranching Heritage Center with presentations on art, play, and creativity and their roles in crane conservation by Gregory Hill and Rose Elizondo, as well as a presentation on sandhill cranes in Siberia by George Archibald. We had plenary presentations on the Texas High Plains and symposia on the future of habitat conservation, human dimensions and outreach, and the effects of telemetry and marking cranes. We enjoyed a field trip to Muleshoe National Wildlife Refuge to observe sandhill cranes at a major roost on the Texas High Plains. Our silent auction raised over $850 for student travel awards. We also discussed potential locations for our next workshop and made tentative plans for the 16th North American Crane Workshop to be held in Baraboo Wisconsin, the home of the International Crane Foundation, during fall of 2023.

The general business meeting was held on the final day of workshop, and 11 board members were elected by voice vote to serve a 3-year term. A meeting of the new Board was held immediately after the general membership meeting to elect officers for 2020-2023: President Hillary Thompson (International Crane Foundation [ICF], Vice-president Sammy King (U.S. Geological Survey, Louisiana Cooperative Fish and Wildlife Research Unit), Treasurer Barry Hartup (ICF), and Secretary Megan Brown (University of Maryland). At Large board members include David Aborn (University of Tennessee), Antonio Cantu (Louisiana State University), Tom Leiden (Leiden Conservation Foundation), Tommy Michot (University of Louisiana), Glenn Olsen (U.S. Geological Survey, Eastern Ecological Science Center), Richard Urbanek, and Jeannie van Vianen (ICF).

The papers in these Proceedings represent 5 presentations from the workshop and 10 manuscripts submitted later. Abstracts of oral and poster presentations for which a paper is not published here are included at the end of the volume. We are grateful to the following reviewers for their contributions to the quality of this volume:

Jonathan Aaltonen, Adrienne Atkins, Jeb Barzen, Kim Boardman, Andre Breault, Sarah Converse, Douglas Currie, Tim Dellinger, Angela Dedrickson, Katie Edwards, David Ellis, Terry Finger, Blake Grisham, Daryl Henderson, Scott Hereford, Jerome Howard, Diana Koester, Michael Mace, Christopher Malachowski, Carl Mitchell, Glenn Olsen, Gunter Nowald, Kerryn Morrison, Bev Paulan, Aaron Pearse, Amy Powell, Brandon Reishus, Scott Swengel, Eva Szyszkoski, Dana Varner, Zsolt Vegvari, John Vradenberg, and Sara Zimorski.

Daryl Henderson was instrumental in final editing and proofing.

This volume retains use of the genus *Grus* for 4 crane species (sarus, brolga, white-naped, and sandhill). Until analysis of nuclear DNA supports reclassification, the NACWG will continue to endorse the conclusions of Krajewski et al. (2010, Auk 127:440-452) and Krajewski (2018, Chapter 2 in Whooping Cranes: Biology and Conservation, Academic Press). Krajewski (personal communication, 2016) considers recent reclassification to the genus Antigone to be premature.

Jane Austin and Richard Urbanek, Editors
January 2022

CARROLL D. (CD) LITTLEFIELD
1940-2019

Carroll Littlefield, best known as CD, was born on 21 June 1940 in Plainview, Texas, after which his family moved to Happy, Texas. He began undergraduate work at Eastern New Mexico University and received his B.S. degree from Texas Tech University, his M.S. degree from Colorado State in 1968, and did further graduate work at the University of Arizona. Through summer and temporary employment he experienced diverse regions, from Hutton Lake National Wildlife Refuge (NWR) outside Laramie, Wyoming, to the North Platte River, and Churchill and Dolphin, Manitoba. Later jobs would take him to the Aleutian Islands in Alaska and the Cosumnes River in California.

Much of CD's career was spent at Malheur NWR in eastern Oregon. CD was a tireless advocate to save the breeding population of sandhill cranes there, which were falling prey to various species of nest predators, and he generally argued for the refuge to live up to its name. CD generated controversy on both sides of the spectrum for the policies he recommended to save the sandhill cranes and other wildlife. The Malheur controversies may have caused CD to become somewhat world-weary and he retired from paid work in 2002 to return to Muleshoe, Texas. There he lived and continued avian studies at the Bioresearch Ranch in the Peloncillo Mountains, conducting 15 10-and-12 year transect studies that involved walking 24,000 km (15,000 miles) on the Ranch during that time frame. He finalized his transect studies in 2016 but remained an avid birder. A dedicated naturalist and writer, CD published more than 50 papers or reports on cranes and over 30 articles on other birds or natural history observations, including his book, Birds of Malheur National Wildlife Refuge, a long-time favorite with birders there.

CD Littlefield passed away unexpectedly of a heart attack at his home in the Peloncillo Mountains in Rodeo, New Mexico, on 28 May 2019. His memory looms large over his former haunts, especially at Malheur NWR in Oregon and in the New Mexico Bootheel, where he was much beloved.

Ed Newbold and Delia Scholes, Seattle, Washington (Photo of sandhill cranes at Malheur by David Marshall, U.S. Fish and Wildlife Service)

PAUL A. JOHNSGARD
1931-2021

Paul Johnsgard was born in Fargo, North Dakota, on 28 June 1931. He completed majors in zoology and botany for his B.S. degree from North Dakota Agricultural College (now North Dakota State University) in 1953. He obtained his M.S. degree on wetland ecology in central Washington from Washington State College (now Washington State University) in 1955 and his Ph.D. degree at Cornell University, on waterfowl evolution and pioneering the application of egg-white protein data to avian taxonomy, in 1959. After postdoctoral fellowships in England on waterfowl behavioral evolution, Paul accepted a faculty position at the University of Nebraska-Lincoln in 1961. During a career of 40 years there, he directed 12 students to Ph.D. degrees and 12 to M.S. degrees, and taught zoology, ecology, ornithology, and animal behavior to more than 7,000 students. He was named Professor Emeritus after retiring in 2001.

Paul was a prolific writer and published more than 100 books and 100 peer-reviewed scientific papers in addition to about 150 nature articles. Nearly all his published works were illustrated with his own drawings and photos. In his nearly 60 years at Nebraska, Johnsgard earned the University of Nebraska's highest honors including the Distinguished Teaching Award, Outstanding Research and Creative Activity Award, and an honorary Doctor of Science degree. Major national recognitions included a Guggenheim Foundation Fellowship, the National Wildlife Federation's National Conservation Achievement Award, the National Audubon Society's Charles H. Callahan Award, and the American Ornithologists' Society's Ralph Schreiber Conservation Award, all in recognition of his ornithological research, writing, and conservation work.

Among all birds, the cranes were his favorite. His Cranes of the World (1983) remains a basic monograph of the family. In his most recent published book on sandhill cranes, Paul acknowledged, "Above all, I must declare gratitude to the cranes, who have made my life rich, exciting, and wonderful … [They] have exposed me to an additional dimension of reality and perception that I could not have imagined possible for a human to experience." He was active and working on his 105th book right up until his death on 28 May 2021.

Adapted from his self-prepared obituary and Nebraska Today, University of Nebraska–Lincoln

RODERICK (ROD) C. DREWIEN
1939-2021

Born in California, Rod grew up with a keen interest in the wildlife around him. He honed that interest in college studies, earning degrees in wildlife biology and management from Humboldt State University (B.S.), South Dakota State University (M.S.), and ultimately his Ph.D. in 1973 at the University of Idaho. His doctoral dissertation on the ecology of Rocky Mountain (RMP) sandhill cranes remains the seminal study of that population and ultimately led Rod to continued work leading the first reintroduction experiment for whooping cranes, initiated at Grays Lake in the Rocky Mountain Flyway. Although this project did not succeed in establishing a new population of whooping cranes, the results have informed recovery efforts for this and other crane species throughout the world. The development of egg collecting techniques, capture and banding, captive rearing, the use of ultralight aircraft and other methods for reintroduction have all benefited from Rod's expertise. His long-term studies of RMP population size and recruitment have been critical to the management of these birds. Rod also led the effort to disperse trumpeter swans from Harriman State Park, Idaho, in the early 1990s, which resulted in their expansion to Bear Lake, Grays Lake, and Star Valley and the rebuilding of their southward migrations. During his 54-year career, Rod worked as an independent contractor with many agencies and conservation groups from the Arctic tundra to southern Mexico. He published more than 50 papers on migratory birds as well as countless reports to contracting agencies. He also served as a mentor to many students and researchers around the world. In 2020, Rod received a lifetime achievement award on behalf of the Northern Rockies Conservation Cooperative and the Meg and Bert Raynes Wildlife Fund in recognition of his commitment and dedication to the conservation of wildlife in the Greater Yellowstone Ecosystem.

Rod and his wife and partner in conservation Ruth Shea lived in Blackfoot, Idaho, often wintering in Portal, Arizona. He passed away at his Idaho home on 28 July 2021 after a long illness. The Rod Drewien Crane Conservation Fund has been established to support the Greater Yellowstone Sandhill Crane Initiative, a program facilitated by the Teton Regional Land Trust in partnership with other state and federal agencies and non-profit organizations.

Wendy Brown, Albuquerque, New Mexico (Photo from Teton Regional Land Trust)

CONTENTS

ISBN 978-0-9659324-6-2