

See discussions, stats, and author profiles for this publication at: <https://www.researchgate.net/publication/232679590>

First record of white-faced ibis, *Plegadis chihi*, nesting in Arizona

Article in *The Southwestern Naturalist* · January 2009

DOI: 10.1894/0038-4909(2003)048<0130:FROWIP>2.0.CO;2

CITATIONS

2

READS

40

4 authors, including:



Carla Hurt

Tennessee Technological University

48 PUBLICATIONS 617 CITATIONS

SEE PROFILE

Some of the authors of this publication are also working on these related projects:



Using environmental DNA for detection of the Pygmy Madtom, *Noturus stanauli* [View project](#)

FIRST RECORD OF WHITE-FACED IBIS, *PLEGADIS CHIHI*, NESTING IN ARIZONA

Author(s): Brenda J. Zaun, Kirke A. King, Carla Hurt, and H. Maaïke Schotborgh

Source: The Southwestern Naturalist, 48(1):130-131. 2003.

Published By: Southwestern Association of Naturalists

DOI: [http://dx.doi.org/10.1894/0038-4909\(2003\)048<0130:FROWIP>2.0.CO;2](http://dx.doi.org/10.1894/0038-4909(2003)048<0130:FROWIP>2.0.CO;2)

URL: <http://www.bioone.org/doi/full/10.1894/0038-4909%282003%29048%3C0130%3AFROWIP%3E2.0.CO%3B2>

BioOne (www.bioone.org) is a nonprofit, online aggregation of core research in the biological, ecological, and environmental sciences. BioOne provides a sustainable online platform for over 170 journals and books published by nonprofit societies, associations, museums, institutions, and presses.

Your use of this PDF, the BioOne Web site, and all posted and associated content indicates your acceptance of BioOne's Terms of Use, available at www.bioone.org/page/terms_of_use.

Usage of BioOne content is strictly limited to personal, educational, and non-commercial use. Commercial inquiries or rights and permissions requests should be directed to the individual publisher as copyright holder.

FIRST RECORD OF WHITE-FACED IBIS, *PLEGADIS CHIHI*, NESTING IN ARIZONA

BRENDA J. ZAUN,* KIRKE A. KING, CARLA HURT, AND H. MAAIKE SCHOTBORGH

United States Fish and Wildlife Service, Cibola National Wildlife Refuge, Cibola, AZ 85328 (BJZ)

United States Fish and Wildlife Service, Arizona Ecological Services Field Office, Phoenix, AZ 85021 (KAK)

United States Fish and Wildlife Service, Arizona Ecological Services Field Office, Phoenix, AZ 85021 (CH)

Meerkoetlaan 1, 7905 ER, Hogeveen, The Netherlands (HMS)

Present address of BJZ: Kauai NWR, Attn: Brenda Zaun, Kilauea Point, P.O. Box 1128, Kilauea, HI 96754

Present address of CH: 1716 South Sycamore, Mesa, AZ 85202

**Correspondent: Brenda.Zaun@fws.gov*

ABSTRACT—This article reports the first record of white-faced ibis (*Plegadis chihi*) nesting in Arizona and describes observations during the nesting period. On 21 June 2000, a colony of approximately 75 nests was discovered on an island of bulrush (*Scirpus*) in Cibola Lake, a backwater of the Colorado River within Cibola National Wildlife Refuge in southwestern Arizona. Based on date of first hatching, egg laying began about 15 June 2000. Ibis nests were monitored weekly. Overall, nesting success in this colony was low, with a fledging rate of slightly less than 1 young per pair.

RESUMEN—Este artículo hace el primer registro del ibis de cara blanca (*Plegadis chihi*) anidando en Arizona, e incluye observaciones hechas durante el período de anidada. El 21 de junio del 2000, se descubrió una colonia de aproximadamente 75 nidos en una isla de vegetación de ciénaga (*Scirpus*), en el Lago Cibola, un cuerpo de agua aislado del Río Colorado, ubicado en el Cibola National Wildlife Refuge, en el suroeste de Arizona. De acuerdo a la fecha de primera eclosión, la puesta de huevos comenzó alrededor del 15 de junio. Se hicieron observaciones de los nidos semanalmente. En general, el éxito de eclosión de la colonia fue bajo, con una tasa de volantones menor de un juvenil por pareja.

We report on the first record of the white-faced ibis (*Plegadis chihi*) nesting in Arizona and describe observations throughout the 2000 nesting period. A colony consisting of approximately 75 nests was discovered on a 0.4-ha "island" of bulrush (*Scirpus*) on 21 June 2000 in Cibola Lake, a 243-ha backwater of the Colorado River on the Cibola National Wildlife Refuge in southwestern Arizona. About one-fourth of the nests were marked with numbered surveyor's flagging and were monitored weekly through 27 July 2000.

Breeding colonies of white-faced ibis are known from Alberta, the north-central United States, Oregon, California, New Mexico, Texas, Louisiana, portions of Mexico, and South America (Ryder and Manry, 1994). The nearest known nesting colony to Cibola is about 115 km west, in marshes near the Sonny Bono Salton Sea National Wildlife Refuge located in

southeastern California (S. Johnson and K. Molina, pers. comm.).

Based on date of first hatching, egg laying occurred from about 15 June to 29 June 2000. The first nestlings were seen on 7 July, and by 20 July, all viable eggs had hatched. Our observations of nestlings temporarily leaving the nest when disturbed by investigators concurred with those of Henny and Herron (1989), who reported that when young are 7 to 10 days old, they are quite mobile and move from their nests when approached. We observed nestlings 7 to 14 days old readily scurry from their nests into the bulrush when we approached the island. At that time, our intensive weekly monitoring of marked ibis nests was discontinued. All visible neighboring nests were those of conspecifics.

Nest platforms were constructed entirely of bulrush stems, which were interwoven in

standing bulrush from about 61 to 123 cm above the water. The nests were relatively flat, with a shallow open cup in the center, and contained 1 to 3 bluish-green eggs. Ibises were observed shading eggs and young from the intense sunlight as described by Tyler (1933), Kotter (1970), and Kaneko (1972). Nestlings took regurgitant from the bill of the adult. An evening observation on 28 July 2000 from a nearby elevated vantage point documented approximately 1,500 white-faced ibises using the "island" as a night roost, along with approximately 20 great egrets (*Ardea alba*) and 75 cattle egrets (*Bubulcus ibis*). On a second evening survey on 9 September 2000, we observed only about 250 white-faced ibises using the area as a night roost. Darkness precluded absolute certainty as to whether they used the "island" or nearby areas of cattail (*Typha*) and bulrush as a night roost.

Overall, there was low nesting success in this colony, with a fledging rate of slightly less than 1 young per pair. We documented 4 nests that had been abandoned, each containing 1 egg. We also observed several nests that had 1 less egg or nestling than during our visit during the previous week, possibly indicating predation. We collected 1 pipped egg caught in the bulrush below a nest and 1 dead nestling with a hole in the cranium. We also observed a live nestling in a nest with an older dead chick (estimated age 7 days). No signs of predation were evident, and it appeared to have been well fed. Avian predators might account for the disappearance of some eggs and nestlings. Great-tailed grackles (*Quiscalus mexicanus*) are known predators of eggs and nestlings of white-faced ibis (Belknap 1957) and are common on Cibola Lake. There was a cattail "island" with about 15 nesting pairs of grackles located approximately 300 m from the ibis colony.

Kaneko (1972) reported that eggshells are not seen on or near nests beyond day 1 of

hatching. We did not observe shells from hatched eggs in any of the nests, but we recovered 2 pieces of 1 eggshell in the bulrush below a nest occupied by a hatchling. One egg from 19 accessible nests that contained 2 or more eggs was collected. Data regarding pesticide residue and shell thickness will be presented in a separate paper.

We thank J. Goldsberry and P. Keywood (United States Fish and Wildlife Service, Division of Migratory Bird Management) for analyzing aerial photos of the nesting colony and confirming number of nests. We also thank M. M. Hawkes for assistance with monitoring and evening roost counts. We appreciate the constructive reviews and comments from J. M. Roberts on an earlier draft. We are grateful to S. Robertson and M. Giggelman for the Spanish translation of the summary.

LITERATURE CITED

- BELKNAP, H. W. 1957. Observations on the white-faced ibis (*Plegadis chihi*) in Louisiana. Unpublished M.S. thesis, Louisiana State University, Baton Rouge.
- HENNY, C. J., AND G. B. HERRON. 1989. DDE, selenium, mercury, and white-faced ibis reproduction at Carson Lake, Nevada. *Journal of Wildlife Management* 53:1032-1045.
- KANEKO, K. D. 1972. Nesting of the white-faced ibis (*Plegadis chihi*) on Utah Lake. Unpublished M.S. thesis, Brigham Young University, Provo, Utah.
- KOTTER, B. L. 1970. An ecological natural history of the white-faced ibis (*Plegadis chihi*) in northern Utah. Unpublished M.S. thesis, University of Utah, Salt Lake City.
- RYDER, R. A., AND D. E. MANRY. 1994. White-faced Ibis (*Plegadis chihi*). In: Poole, A., and F. Gill, editors. *The birds of North America*, Number 130. Academy of Natural Sciences, Philadelphia, and American Ornithologists Union, Washington, D.C. Pp. 1-24.
- TYLER, J. G. 1933. Items from an oologist's notebook. *Condor* 35:186-188.

Submitted 8 May 2001. Accepted 4 March 2002.
Associate Editor was Cheri A. Jones.