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## SNOWY PLOVER NESTING AT LAKE MCCONAUGHY IN 2004 AND 2005

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### INTRODUCTION

The Snowy Plover (*Charadrius alexandrinus*) is a small shore bird that upon casual observation resembles the Piping Plover (*Charadrius melodus*). The most obvious differences are in the dark beak and legs of the Snowy Plover in contrast to the orange bill with the black tip and orange legs of the Piping Plover. The two also have strikingly different calls (pers. obs.). In Nebraska the Piping Plover can be found along the Missouri, Platte, Niobrara, Loup and Elkhorn Rivers and the sandpits associated with those rivers (Haig and Plissner 1993). Piping Plovers are also common along the shore of Lake McConaughy (Peyton 2004). The Snowy Plover, in contrast, has been recorded from only a few locations in Nebraska, and the only reported areas for successful breeding within the state are Harlan County Reservoir (Silcock 2004) and Lake McConaughy, where breeding has been documented since 2000 (Silcock 2000, 2001b, and 2003).

In Nebraska the Snowy Plover was listed as Casual until the designation was changed to Regular in 2003 (NOU Records Committee 2004). This change is reflective of the increase in sightings reported in *The Nebraska Bird Review* and the documentation of nesting within the state.

The first report of nesting Snowy Plovers in Nebraska was in 1998 from the Missouri River near Santee, Nebraska (Silcock 2001a). This nest was apparently lost. The second and third reports for the state, and the first reports of successful nesting, were of adults with young at Lake McConaughy in 2000 and 2001 (Silcock 2001b).

Adult birds were sighted at Lake McConaughy in 2002, but it wasn't until June 2003 that a Snowy Plover nest with eggs was located at Lake McConaughy (Silcock 2003a). Later that summer three additional broods were located, two of which eventually fledged chicks (Silcock 2003b). Thus, between 2000 and 2003, there was one nest with eggs and four broods of Snowy Plovers documented at Lake McConaughy.

Starting in 2004, the Central Nebraska Public Power and Irrigation District (Central) added the monitoring of nesting Snowy Plovers at Lake McConaughy to its annual

Piping Plover monitoring plan. Presented here are the nesting data for Snowy Plovers at Lake McConaughy in 2004 and 2005.

#### METHODS

To locate Snowy Plover nests, Central personnel conducted 15 weekly surveys of the entire shoreline of Lake McConaughy from late April through mid-August in both 2004 and 2005. Surveys were conducted between 8:00 AM and 5:00 PM local time.

Once a nest was found, its location was recorded using a handheld GPS unit. To minimize human-related nest loss, a protective fence was constructed around each nest area. The fences consisted of four posts arranged approximately 5-7 meters apart in a diamond shape with two strands of bright orange string surrounding an area of approximately 25-35 m<sup>2</sup>. Because of the close resemblance of Snowy Plovers to Piping Plovers and because Piping Plovers were also nesting in the area, one of the same signs used to warn people to keep out of the nesting areas for Piping Plovers was placed on one post of each Snowy Plover fence and reflectors were placed on the other posts.

The nests were then monitored a minimum of twice weekly until nest activity ceased, either by hatching or nest failure. Broods, which tended to stay within the same general area, were located twice weekly and the fate of the chicks was documented (e.g., chicks lost or fledged). We defined fledging as either the observation of a flying chick or one 25 – 30 days old. Nest success was defined as the percentage of nests that successfully hatched at least one chick. Fledge success was defined as the percentage of chicks that reached fledging, and the ratio of fledged chicks to the maximum number of paired adults was also calculated.

#### RESULTS AND DISCUSSION

The earliest sightings of a Snowy Plover at Lake McConaughy by Central personnel were 28 May and 24 May for 2004 and 2005, respectively. The first nest located in 2004 was on 6 June and in 2005 on 24 May. The first fledged chick was observed on 15 July in 2004 and on 20 July in 2005.

Two nests with three eggs each were located by Central personnel in 2004. Stephen J. Dinsmore also reported finding two nests, one on 12 May and the other on 19 June in the same general area (pers. comm.). Both nests located by Central were successful (i.e., hatched at least one chick). The fate of the nests located by Dinsmore are unknown.

Seven additional broods were located in 2004 and 21 chicks were identified, of which 19 were known to have fledged for a 90% success rate and a 2.1 fledged chicks/adult pair ratio.

In 2005 seven nests were located with a total of 19 eggs. Three of the nests were destroyed resulting in a 57% nest success. In addition, three broods not associated with the four successful nests were documented. Fourteen chicks were seen with a minimum of 13 fledging for a fledging success of 93% and a 1.3 fledged chicks/adult pair ratio.

Nine Snowy Plover nests and a total of 19 broods were monitored at Lake McConaughy during 2004 and 2005. Six of the nine nests successfully hatched at least one chick for a combined nest success of 67%. Thirty-five chicks were monitored, of which 32 fledged for a fledging success of 91% and a fledge ratio of 1.7 fledged chicks/adult pair.

Incubation for Snowy Plovers is approximately 26 days and fledging occurs 25-30 days later (Florida Fish and Wildlife Conservation Commission, 2003). Thus fledging can be expected 50-55 days following the start of incubation. The first fledged chick in 2004 was observed on 15 July and in 2005 on 20 July, which suggests that Snowy Plovers begin nesting in mid-May at Lake McConaughy.

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