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First Breeding of the Snowy Plover in Minnesota

Philip C. Chu

On 1 July 2006, during one of our weekly shorebird surveys at Big Stone National Wildlife Refuge in Lac Qui Parle County, Peder Svingen and I found a Snowy Plover (*Charadrius alexandrinus*) at the north end of the refuge's East Pool.

We immediately recognized the plover as either a Snowy or a Piping (*C. melodus*) on the basis of its small size and pale upperparts. Size, as estimated from bulk of body, was roughly 50–60% as large as a nearby Killdeer (*C. vociferus*). As for the upperparts, they were a light buff-gray, reminiscent of the color of dry sand.

The bird was identifiable as a Snowy Plover, rather than a Piping, because of its slim black bill, grayish legs, black breast-side patches, and black-brown ear-coverts. The blackness of the breast-side patches and ear-coverts, as well as the comparatively broad black bar across the fore-crown, suggested that the bird was a male.

On 2 July, Randy Frederickson relocated the Snowy Plover roughly 0.7 mile south of where it had been on the previous day, in the vicinity of the East Pool's Kaercher Peninsula, and on 3 July, Doug Kieser and Jim Otto found two Snowys there. Kieser photographed the two, and his photographs showed the second plover to be browner than the first, with less black in the fore-crown, light buff-gray rather than blackish ear-coverts, and black-brown rather than black breast-side patches; that the second was browner suggested that it might be a female, and if the two birds were male and female then that raised the possibility of a breeding attempt.

On 5 July, the two adults were reported again, and then on 8 July, Chris Benson, Dedrick Benz, and Bob Ekblad found

both adults accompanying two downy chicks — confirming that the two adults were male and female, and establishing Minnesota's first breeding record for the species.

Snowy Plover chicks make their first trip from the nest one to three hours after hatching (Boyd 1972), meaning that the first day on which the chicks were seen, 8 July, may have been the date on which the chicks hatched.

Reports of both parents continued through 13 July; thereafter, however, only the male was seen, always with the chicks nearby. This phenomenon, in which the female disappears long before the young fledge, is not unusual, at least for some Snowy Plover populations: along the California coast, chicks are typically deserted by their mothers within two weeks of hatching, after which they are attended solely by their fathers (Warriner *et al.* 1986). In coastal California, desertion allows mothers to try to produce a second brood with a different male (Warriner *et al.* 1986), but even in Great Plains populations, where only monogamy has been observed (Boyd 1972, Hill 1985), if one parent deserts then it tends to be the female (Boyd 1972).

At East Pool, the plover family frequented an area near the tip of the Kaercher Peninsula that had been exposed by an ongoing drawdown. The area extended about 420 yards west-northwest beyond the peninsula-tip and varied in width from roughly 60 yards at its narrowest point to 190 yards at its widest. It consisted of flats with scattered stony patches. The plovers were observed most frequently among the stones of the latter. As for vegetation, initially there was none, but by the time the plover chicks hatched



Snowy Plovers, 12 July 2006, Big Stone NWR, Lac Qui Parle County. Photo by James P. Mattsson.

there were green shoots emerging from the drying mud, and over the following weeks as the ground dried and the chicks grew, the plants grew as well. At the time, no attempt was made to identify those plants; however, plants that grew elsewhere on the drying East Pool flats — and that therefore may also have grown on the flats at the tip of the Kaercher Peninsula — included nut-grass (*Cyperus* spp.), barley (*Hordeum* spp.), and smartweed (*Polygonum* spp.).

Snowy Plover parents brood their chicks as needed, lead the chicks to feeding areas, react to possible predators, and drive off potential competitors (Page *et al.* 1995). At East Pool, potential competitors chased by the father included Least Sandpipers (*Calidris minutilla*) and Killdeers (J. Mattsson, pers. comm.). As for reacting to possible predators, if the father and chicks were approached too closely, the father would repeatedly perform a distraction display. With its head low, body horizontal, and tail held almost straight

down and spread, the male parent would run rapidly away, the net effect being to expose to the observer the white sides of its tail. If this did not produce the desired effect, the male would fly back, land, give a peeping call — “wheet! ... wheet!” — and then run away again, in the manner described previously. The distraction displays were repeated at a frequency of perhaps one per minute until the observer moved away.

The father and chicks were last seen together on the Kaercher Peninsula on 29 July. On 6 August, there were no Snowy Plovers on the peninsula, but one juvenile was found about 0.7 mile to the west, on the flats along the west margin of East Pool. A single juvenile remained in this latter area through 27 August.

The present Snowy Plover record, accepted by the Minnesota Ornithologists' Union Records Committee (Svingen 2007), is the ninth of ten for Minnesota. It and five others (Kyllingstad 1976, Berber 1981, Eckert 1986, Mattsson 1987, Hertzell 1998)

are from the state's western regions, as defined by Green and Janssen (1975); three (Wiens 1982, Hiemenz 1983, Bardon 2005) are from the state's central regions; and one (Zierman 2007) is from the eastern region.

This first Minnesota breeding record is one of just eight Snowy Plover breeding records for the northern prairies. The first four are from Saskatchewan between 1986 and 1989 (Gollop 1986, 1987; Smith 1996). In contrast, the last four are much more recent — in 2006, the Minnesota record, and in 2007, the first breeding record for South Dakota (J. S. Palmer, pers. comm.) and the first two for North Dakota (North Dakota Birding Society and the U. S. Fish and Wildlife Service 2007).

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