Shorebird Survey Results and Management Activities at Bowdoin National Wildlife Refuge, Montana[TWS]

Dwain M. "Fritz" Prellwitz
USDI Fish and Wildlife Service, Bowdoin National Wildlife Refuge
HC 65 Box 5700, Malta, MT 59538
fritz_prellwitz@fws.gov

Shorebirds have always been an important component of the wildlife resource at Bowdoin National Wildlife Refuge (NWR) in northern Montana, but recent events have heightened interest. Listing of the piping plover (*Charadrius melodus*) as a threatened species in 1985 prompted intensive surveys for breeding pairs, nests and broods starting in 1986. Discovery of breeding pairs on the nearby USDI Bureau of Reclamation's (BR) Nelson Reservoir broadened the survey area. A second major event was the decision in 1996 to establish an International Shorebird Survey (ISS) route on the refuge and begin gathering population data for use in applying for designation as a Western Hemisphere Shorebird Reserve Network (WHSRN) regional site. Weekly surveys of the ISS route from early spring until freeze-up in fall were expanded to include nesting studies, and banding of incubating adults, and nestlings of willets (*Catoptrophorus semipalmatus*), marbled godwits (*Limosa fedoa*), long-billed curlews (*Numenius americanus*) and upland sandpipers (*Bartramia longicauda*). Apparent nest success was consistently high at 74 percent (range 63.2-78.9%, $n = 77$) during 1999-2002. One hundred and one shorebirds were banded with recapture of five adult birds in subsequent years. Four of eight adult willets banded in 1999 were recaptured, including two birds on the same nest bowls from which originally captured. Bowdoin NWR received its WHSRN designation in 2002 after documenting peak numbers of 38 shorebird species in the range of 45 to 58 thousand birds. Piping plover nests on Nelson Reservoir have been threatened by inundation from rising irrigation water since 1989. Techniques were developed to elevate or move nests to avoid inundation. Completed projects for improving nesting habitat on Nelson Reservoir in cooperation with BR included elevating two islands and grading or disking vegetation on two gravel beaches. A 200-ac diked subimpoundment on the Dry Lake Unit at Bowdoin was completed in 2002 with the intent of consistently providing an ideal water level for nesting plovers.