
Agricultural wetlands in the Willamette Valley offer important shorebird habitat

Agricultural wetlands, particularly those found in clusters, benefit shorebirds during most winters in the Willamette River Valley of western Oregon.

The area is an important wintering area for waterfowl and shorebirds, many of which have declining populations.

A study by the U.S. Geological Survey (USGS) of wintering shorebirds in the Willamette Valley found that while channelization, dam construction, and drained prairie lands have all contributed to losing many of the valley's wetlands, agricultural wetlands are still widespread and receive high shorebird use.

Persistent shorebird habitat is abundant and evenly distributed on low-lying grass seed and vegetable farmlands in years with average rainfall. Arable lowlands with native hydric soils may need to be enhanced to provide wet areas for shorebirds during dry winters.

"For 3 years, we used a combination of radio telemetry, soil invertebrate sampling, and ground surveys to map flooded and saturated land, quantify food sources available to birds, and track habitat use by wintering populations of dunlin and killdeer," says Dr. Oriane Taft.

Taft's graduate research was supervised by Dr. Susan Haig, Professor of Wildlife Biology, Department of Fisheries and Wildlife at Oregon State University.

"We tried to correlate the degree to which dunlin and killdeer use of an area was related to the area of wet habitat; percent of open, exposed soil; and abundance of invertebrates," Taft says. "One important finding was that groups of wetlands that tend to pond together are especially valuable to shorebirds."

Other study findings include:

- Invertebrate foods preferred by shorebirds are abundant in agricultural wetlands.
- Shorebirds rely on multiple wetlands during their winter residence.
- Shorebirds are attracted to areas where agricultural wetlands are clustered.
- Wet, exposed farmland with high invertebrate abundance is most attractive.

The research indicates that since shorebirds are attracted to clusters of wetlands, Willamette Valley sites that are located nearby such sites may be most valuable for enhancement.

Shorebirds prefer mostly bare ground for foraging in the winter, but unprotected soil can often lead to soil erosion and runoff. That erosion can be controlled with conservation tillage and leaving residual straw from seed harvest in the field, researchers suggest. That also increases shorebird food abundance.

Farmers interested in enhancing land for shorebirds should consider enlisting in U.S. Department of Agriculture (USDA) conservation programs that enhance wildlife habitat, suggests Dr. Bill Hohman, a biologist with the USDA Natural Resources Conservation Service (NRCS) in Fort Worth, Texas. Hohman facilitated the shorebird study for the NRCS and concurred with research recommendations.

Funding for the project was provided by the NRCS Agricultural Wildlife Conservation Center (AWCC) in partnership with the USGS and other State and Federal agencies. The AWCC, located in Madison, Mississippi, is a fish and wildlife technology development center.



Photo by Gary Kramer
Wintering waterbirds such as this killdeer benefit from native hydric soils

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