

On Patrol

Falconry program at The Dalles Dam increases survival rate of migrating salmon

Story by Victoria Hampton

Thorn perches above the fish ladder, preparing to play a game as old as time: predator versus prey.

Gulls gathering in the water below know the stakes are high as they cautiously move closer to the turbulent waters where vulnerable young salmon are gathered.

In the blink of an eye, Thorn spreads his wings and dives down toward the gawking gulls, scaring them away.

The ambush hunting style of the Harris's hawk is ideal for protecting young salmon as they travel downriver through The Dalles Dam.

Professional falconers Justin Robertson and Alina Blankenship of Sky Guardians LLC spent two months protecting salmon during the seasonal migration.

"The birds

are just doing what they do naturally," Justin says. "It's a predator/prey relationship."

The team was hired by the U.S. Army Corps of Engineers Portland District, which operates dams along the Columbia River. The U.S. Army Corps of Engineers acts as stewards, making salmon passage safer through The Dalles Dam in Oregon.

During the juvenile salmon run from April to July, hundreds of gulls and other bird species gather under the dam for an easy meal.

Recent studies found the main culprits are growing populations of inland, California and ring-billed gulls that nest at Miller Island—a short fly upstream from the dam—get year-round meals at nearby landfills.

"We've always had gulls, but we never understood their impact," says Robert Cordie, chief of fisheries for The Dalles Dam. "They will eat just about anything, so how much damage are they really doing? Our observational studies then weren't that bad."

For the past 30 years, the U.S. Army

Corps of Engineers has used deterrents to keep nuisance birds away from salmon, including pyrotechnics and avian wire.

"Anytime you dam a river, you create a bottleneck where fish are more vulnerable," Robert says. "We had a bunch of research and extensive studies done on how efficiently we're passing fish through the dam. That doesn't mean once they're below the dam they aren't our responsibility."

The search for new strategies started when studies uncovered the damage being done by gulls.

In 2015, a team scanned multiple nesting sites along the Columbia River, including Miller Island, for PIT tags—fish tracking devices the size of a grain of rice. They recovered an alarming number of salmon tags, Robert says.

In 2021, another study conducted at Miller Island counted PIT tags specific to the annual consumption rate of salmon. While chinook fared the journey with only 3% loss, the study found more than 13% of steelhead were lost to avian predation, according to Real Time Research Inc. and Oregon State University.



Thorn, a Harris's hawk, returns to Alina Blankenship after patrolling the banks of the Columbia River.
PHOTOS BY MIKE TEEGARDEN

"We feel like we're losing the battle, and it seems like there's more predation than ever," Robert says.

As the problem grew, the fisheries staff decided to take an ecological approach: use birds of prey to scare away the nuisance birds. The idea came from fisheries technician James Day's observation of wild birds at the dam.

"I watched as a Cooper's hawk moved a flock of 100 pigeons off the project—how a single wild bird like that can completely change the behavior of prey birds," James says. "That made me believe that if wild birds can do it, and these falconers say they can do it, we should give it a try."

After James contacted multiple falconers, Justin and Alina agreed to the trial program. The two-person team spent 30 days on-site, providing maximum protection to young salmon during peak migration from mid-May to mid-July.

The loud, rushing water, avian wire and alternating winds presented a new challenge for Justin and Alina's birds. The duo took their time introducing them to the environment.

"A confident bird is a good working bird," Alina says. "We don't push them. We develop their confidence gradually."

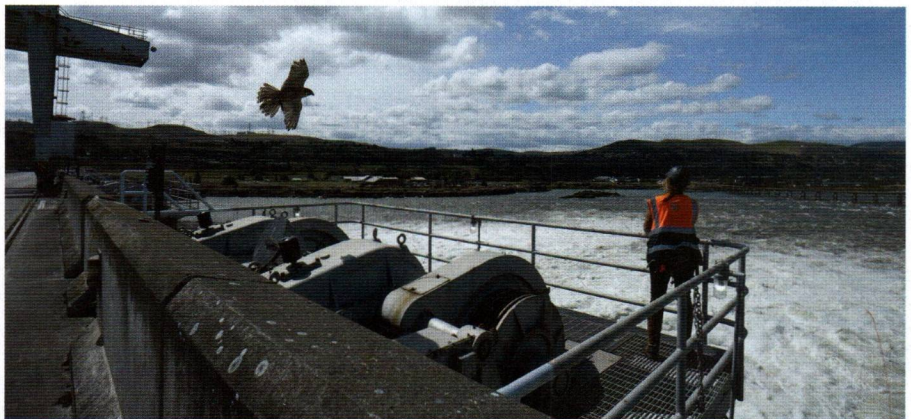
Justin and Alina each brought six to seven captive-bred birds of prey to the site. The goal is to have the falcons and hawks use their natural hunting skills to haze the nuisance birds in various situations.

"There's a difference between species and personalities, their flight styles and their skills," Alina says. "You pull out the right player for the game. That's why we maintain such good teams."

Justin and Alina act as the food supply, calling the birds in to reward them with tidbits of fresh quail meat and sending them out again.

The falconers worked closely with James to identify problem areas where birds gather to feed. The team split up to cover sections—ranging from 600 to 800 acres—including areas that cannot be reached using pyrotechnics or avian wire, James says.

"With such a large area, having the two of us is crucial," Justin explains. "We're not just pushing gulls around, but we're having a presence of predators everywhere."



TOP: Bramble and Agave, an Aplomado falcon, vie for space in the front seat of Alina's car.
ABOVE: Alina and Goose, a hybrid falcon, work the breakwater area of The Dalles Dam.
BELOW: Rogue, a 3-month-old Harris's hawk.

To track the progress, James collects data on the daily bird populations at the dam. In late May, James counted a daily average of 150 to 200 gulls aggressively feeding on young salmon. By the end of June, the average dropped as low as 13 a day.

"I'd seen it work naturally with a single wild bird that changed the behavior of a prey population," James says. "I knew it could work. I am really happy."

Data is being analyzed to determine the success of the falconry program. High water flow rates also made it difficult for birds to spot salmon in the water.

James notes that moving one bird population out can make room for other species, including cormorants and pelicans that have not been

subjects of detailed predation studies.

"I give a lot of credit to those falconers who hadn't worked birds over water," James says. "They've had no accidents and no incidences or harm to any birds. They really overcame that hurdle to do something that's never been attempted before." ■

