

A WING AND A PRAYER

Wildlife hospitals near Vancouver are seeing a huge influx of patients due to climate change, but staff and volunteers remain determined to work miracles

Words by **ROBERTA STALEY**
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Fledglings, such as this house sparrow, are particularly vulnerable to unseasonal weather



Pet cages are often used to transport injured and orphaned birds



Staff and volunteers assess a rescued bird at the WRA



Co-executive director of the WRA Linda Bakker feeds a four-week-old European starling



A merlin falcon about to undergo treatment

INSIDE AVIARY ONE, a roughhewn wooden building full of covered cages, a small speaker emits an array of bird calls, from the lyrical trilling of songbirds to the strident squawks of jays. The piped-in chirps, cheeps and clacks are a critical part of helping prepare abandoned infant birds for release into the wild. The youngsters include two Steller’s jays, covered in winsome fledgling frizz.

The siblings were rescued 20 days ago by a motorist. Unseasonably ferocious spring rainstorms had gripped British Columbia’s Pacific coastal region, and the two-day-old fledglings were blown onto the tarmac, along with their nest. They were rushed to the Wildlife Rescue Association (WRA) of British Columbia, where volunteers and staff sprang into action to keep the tiny creatures alive. A nest of blankets with a heater underneath kept them warm, while their meals were a ground-up slurry of insects and mealworms, administered via syringe every 15 minutes over a 12-hour period, mimicking the natural feeding cycle.

The chicks survived, thanks to vigilant care that included daily health and weight checks, with the handlers placing

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the tiny birds in a light cotton sack to reduce exposure to humans (and prevent habituation). One method of determining weight gain is examining the pectoral muscle, or keel, through the sack. “It shouldn’t be jutting out; it should be nice and round,” says Linda Bakker, co-executive director of the WRA.

and fluorescent blue of adulthood, they’ll be transferred to flying cages to strengthen their wings. They’ll also be taught foraging skills, with mealworms and insects hidden just below the surface of the dirt floor. Schooling them in bird communication is one thing “we can’t teach them” – hence the piped-in stereo recordings, says Bakker.

AT THREE WEEKS OF AGE, THE jays still can’t fly. They are housed together in a cage that, inside, is reminiscent of a miniature jungle gym, with branches for hopping on and food placed at different levels to encourage self-feeding. As soon as they moult into the glossy black

It was a miracle that the Steller’s jays lived – one of thousands performed every year at the WRA. The facility, created in 1979, is at the receiving end of everything that can go wrong for wild animals: broken bones and feathers; concussion from flying into windows; injuries from traffic accidents and cat attacks; electrocution from powerlines; lead poisoning from bullets and fishing

ABOUT THE AUTHOR



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WILDLIFE HOSPITAL



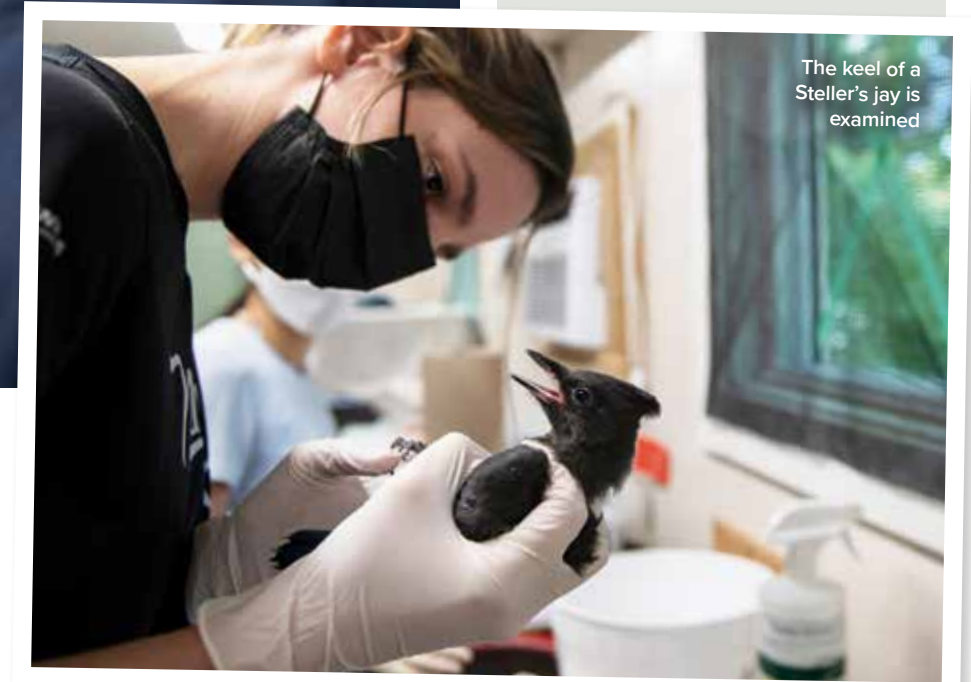
WRA volunteer Nel Aird sterilises bird paraphernalia



A tiny, two-week-old European starling is rehydrated with saline



Faces are obscured to ensure these American crows don't become habituated to humans



The keel of a Steller's jay is examined

CLIMATE IN FOCUS

Seabirds struggling with warmer waters

Since 1970, the North American bird population has declined by 30 per cent due to loss of habitat, lack of food and pollution, according to a 2019 study by the Cornell Lab of Ornithology. Climate change is exacerbating this trend and it is particularly evident in marine areas.

"Seabirds along the Pacific coast are canaries in the coal mine when it comes to assessing the effects of climate change," says JD Bergeron, CEO of International Bird Rescue.

In the past three decades, marine heatwaves have increased by more than 50 per cent. Fish swim deeper to avoid heated waters and some seabirds will starve if unable to reach them. Consequently, the Nazca booby, which normally lives in tropical areas like Central America, has been showing up in places like California.

tackle; malnutrition; and exhaustion from migration. But in the past few years, the 300 volunteers and two dozen staff have found themselves under increasing pressure, as human-caused climate change has boosted the number of patients.

"Temperatures plunged to -20°C and 62 hypothermic hummingbirds were brought in for emergency care"

WEATHER EXTREMES, such as blistering heat domes, biblical flooding, hurricane-force winds and bitter cold and snow, are making rehabilitation efforts increasingly Sisyphean and complex. "Normally our intake is 20 to 30 birds a day," says Bakker. "With a heat dome we'll take in 20 to 30 more." In May 2023, the temperate rainforest of Metro Vancouver, which normally sees summer averages of 20°C, experienced a heat dome, with temperatures climbing to 33°C over a three-day period. "We had 160 new intakes," says Mac Pearsall, WRA's assistant hospital manager, who helped triage the birds.

Two years earlier, the weather extremes were cataclysmic. The region saw hurricane-force winds and, in June, temperatures

soared above 40°C, rising in places to just below 50°C, killing farm animals and more than 600 people across the province. Gasping fledglings flung themselves out of nests in a desperate bid for survival. (Scientists estimate the heat dome will be a 5-10 year event due to climate change.) Then, five months later, 'atmospheric rivers' – vast streams of moisture in the atmosphere – pummelled BC, flooding a 150km² expanse of farmland and wilderness. That was followed by snow in December that broke temperature records dating back to the 1800s. Temperatures plunged to -20°C with wind-chill factor, far below the 5°C average, and 62 hummingbirds, hypothermic and hypoglycemic, were brought in for emergency care.

During another deep freeze in December, 2022, the WRA took in 88 injured thrushes that, confused by snow reflections in glass, flew into windows. Hummingbird feeders froze, and people brought half-dead birds in for care. Red-breasted sapsuckers became beacons for predators – including domestic cats and dogs – sticking out like traffic lights against snow that normally would have quickly melted.

With such climate extremes, the WRA's annual intake has risen to 6,000 patients a year, up from about 5,000 five years ago. This represents 150 species, all with unique care and needs. Waterbirds, for example, require pools, and many of the facility's 20 outbuildings have tubs of various sizes to allow convalescing patients to swim and

dive. Hummingbird fledglings require a fancier feeding system: they dine on a sugar solution administered via a syringe adorned with a plastic flower, teaching them that flowers are a food source. All told, it costs \$260 to rescue and rehabilitate each bird, with yearly operating costs now at \$2 million – 80 per cent of that coming from public donations, says Bakker.

Winters have become especially capricious here, due to more extreme El Niño and La Niña climate patterns in the Pacific Ocean. Apart from the cold snaps, the season has generally warmed, causing species such as mallards to nest earlier than normal, hatching broods in mid-March rather than the end of April. "They are being born at a time when there's not an optimum food source," says Bakker, eyeing a huddle of two-day-old mallard ducklings under a heat lamp. The babies had been found alone close to a busy road; their mother was likely hit by a car while leading them to a nearby lake.

Other animals, such as bats, also suffer from heat exhaustion and dehydration. The WRA specialises in caring for these small mammals, erecting an isolation building

exclusively for bats, which, as vectors for disease, must receive special handling by workers wearing PPE.

ABOUT 45 MINUTES SOUTH OF WRA is OWL (Orphaned Wildlife) Rehabilitation Society, a two-hectare facility specialising in raptor rehabilitation. OWL, which opened in 1984, initially took care of about 100 birds a year. This number rose to about 800 birds a year until 2021 – the year of the climate-change trifecta of heat, flood and freeze – when 1,075 raptors were brought in. "During the heat dome, we got 25 merlin falcons in one day,"

says Rob Hope, raptor care manager. "We were working 10 hours a day for three days straight."

Merlin falcons, small raptors with hypnotic obsidian eyes, mottled chests and dark backs, nest later than other raptors such as eagles. When the heat dome struck, the merlin fledglings, unable to fly, flung themselves out of their nests "like kamikazes," says Hope. They were found struggling on the ground, some badly injured from falls of 20m, starving and severely dehydrated. To save them, the fledglings were given food – fresh chunks of mouse – soaked in lactated Ringer's solution, which is sterile fluid with electrolytes used

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CLIMATE IN FOCUS

Eagles seeking alternative foods

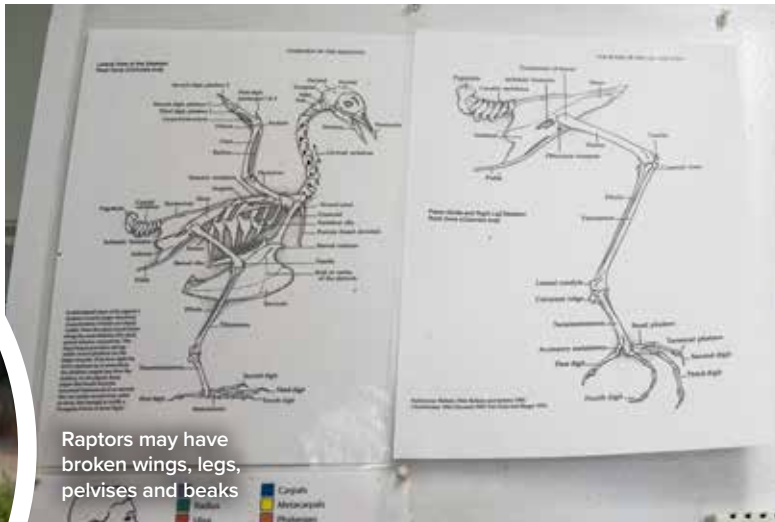
The Pacific Coast's 20,000 bald eagles have a problem. They eat the carcasses of salmon that have died after spawning, but this natural food source has dwindled, partly due to warmer waters and flooding caused by climate change.

Karen Steensma from Trinity Western University says that salmon recovery efforts have not kept pace with the needs of the eagles. As a result, the birds have moved inland to scavenge composting cow placentas and calf carcasses on dairy farms. (On average, dairy cows have a five per cent calf mortality rate.)

It is vital that farmers nurture wild, tree-filled borders around their fields and along waterways to reinvigorate habitat for salmon and create perches for eagles. Such 'corridors' also provide cool, safe places for the two species during the increasing extreme weather events.



An x-ray machine at OWL helps staff decide on treatment



Raptors may have broken wings, legs, pelvises and beaks



The Donnie Creek wildfire was the largest ever in BC

Wildfires are the death knell for birds

In June 2023, when many birds were raising broods, wildfires swept the boreal forests of Canada. Nearly 6,000km² of land was incinerated.

For vet Mira Ziolo, the fires are the death knell for birds such as siskins, warblers, owls, grouse, woodpeckers, ptarmigans and the endangered whooping crane. An entire generation can be wiped out, and "even if they can fly away, they're flying into other species' territory and, in their weakened state, won't survive the competition," she says.

Fires also affect future generations, as the forests they rely upon take decades to regrow, while inhaling smoke can reduce their oxygen-carrying capacity, leading to exhaustion and infection.

in hospitals for humans. "We kept the air-conditioning in the ICU running 24 hours a day," Hope says. Still, "many didn't make it". Fourteen bald eagle youngsters were also brought in, suffering from dehydration and hunger. They fared better than the merlin falcons, as the fledglings were older.

OTHER VICTIMS OF THE HEAT dome were fledgling barn owls, which build nests in boxes and on beams in dairy and poultry barns. These structures heated up like ovens. Once the mercury reaches 41°C, birds can no longer regulate their body temperature. The deadly heat affected not only wildlife but the agricultural sector, with 650,000 animals – mostly poultry – perishing.

Injured and sick fledgling owls that are brought into the raptor facility have a shot at life thanks in large part to Casper, a female great horned owl. Casper, 28, has fostered 1,300 infants since arriving at OWL as a young bird, too badly injured to be returned to the wild. Her nurturing instincts extend to her elderly buddy Blinky, a blind and deaf

41-year-old male great horned owl rescued decades ago, whom she lovingly feeds dead mice when not raising fledglings.

A variety of native raptors that have been too severely injured to be returned to the wild – missing parts of their wings, beaks or talons, or blinded by accident or disease – are kept in huge outdoor cages with grass, logs, pools and tree limbs and ramps that allow disabled birds to hop to different elevations. When any of the birds need medical care, they are taken to the main building, which has a small office space overseen by Sarah the barn owl, who sits like Buddha on a perch. The building also houses isolation rooms and maternity wards, which are kept sterilized by a raft of volunteers. There is a kitchen with a fridge containing a big bowl of dead mice for mealtimes, and dead quail for the bigger raptors. Lastly, there's the ICU and small surgical room where broken bones are splinted and flight feathers replaced, or where steroids and antibiotics are administered.

Today, a five-week-old great horned owl is undergoing treatment after being found on the ground with a broken flight feather.



OWL volunteer Colin Iverson holds an injured bald eagle still while it receives veterinary care

"Fourteen bald eagle youngsters were brought in, suffering from dehydration and hunger"



A beautiful rescued merlin falcon scales the walls of its enclosure at OWL

WILDFIRE-ALAMY

Secured on its back on the surgical table, the youngster clacks its beak indignantly, glaring with bright yellow orbs at its handlers. Hope works as swiftly as he can. "Stress will kill these birds quicker than anything," he says, treating the injury using medical-grade skin glue. OWL will keep the youngster until he is ready to fly again, eventually returning him to the same area he was found. After treatment, Hope feeds him chunks of fresh mouse with a tweezer while volunteer Glenda Latto holds the bird firmly. "Now we're cooking," Hope says cheerfully, as the owl, seemingly chortling with pleasure, gulps down the meal.

Hope says OWL is increasingly treating the climate change-linked disease aspergillosis, which strikes mainly bald eagles, which lay their eggs in February. Warmer, wetter winters increase fungal growth in nests. Eaglets inhale the spores,

causing death. Aspergillosis also affects adult birds, with the afflicted panting open-mouthed and fatiguing easily. The treatment available is long-term hospitalisation with antifungal therapy.

THE VOLUNTEERS AND STAFF at WRA and OWL pull off miracles every day, healing the sick and broken, but their power ends there. They cannot do what truly needs doing: stop climate change. Inevitably, it will worsen, adding to the number of sick, traumatised and injured birds that come through their doors. While Bakker takes joy in small triumphs, such as the Steller's jays being released into the wild, healthy, glossy and feisty, she knows there are many challenges down the road. "The balance has tipped; there's no way back." 🐦