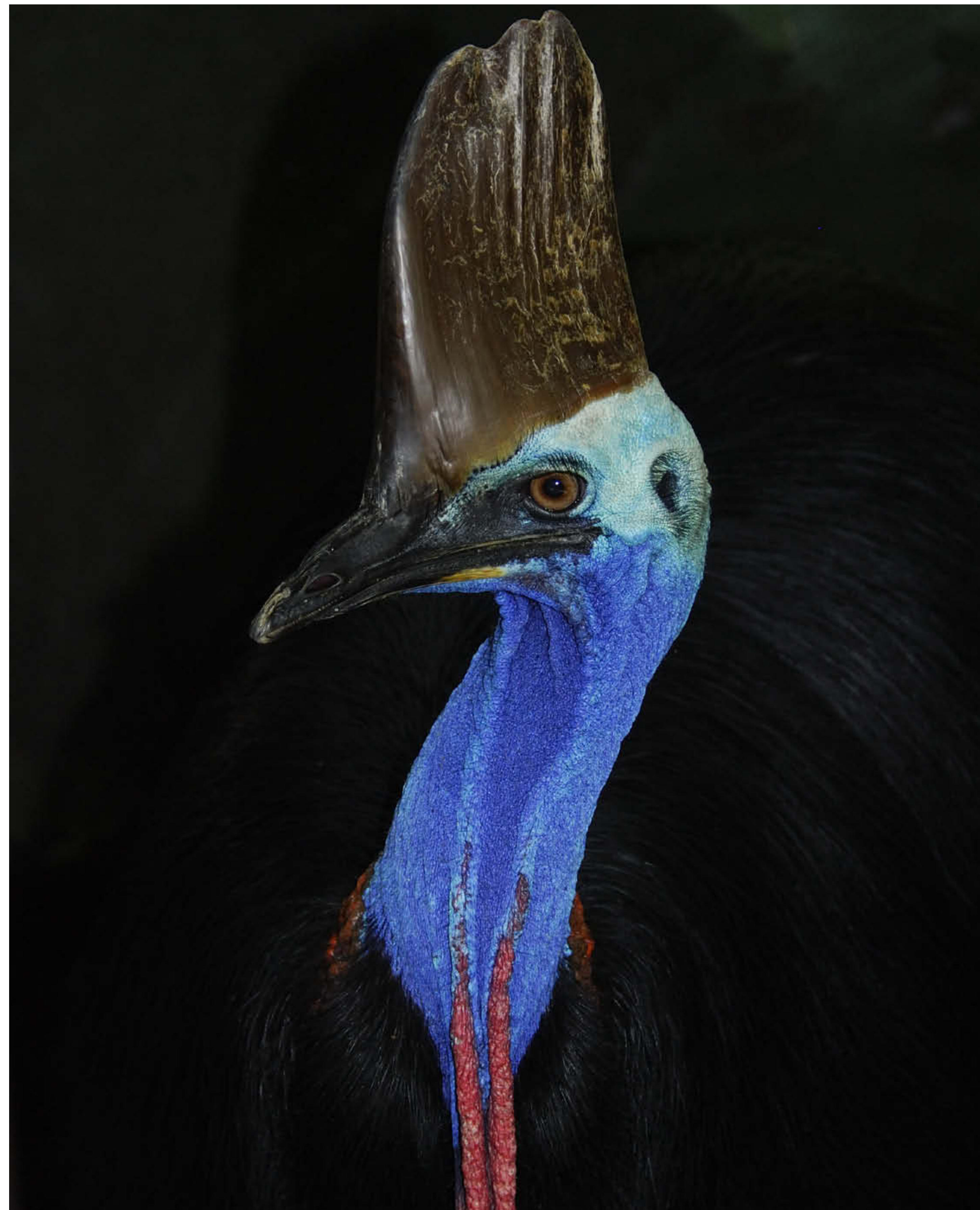
Saving "Big Bird"

A cyclone forced endangered cassowaries out of the rainforest and into the danger zone

My heart races as we walk down the narrow dirt driveway, flanked on both sides by tropical rainforest. Suddenly I spot her. The huge, six-foot-tall bird stands nearly eye-to-eye with me, her fleshy sapphire neck set off by two dangling crimson wattles. I've flown halfway around the globe to see one of Australia's largest land animals, the iconic and endangered southern cassowary. She has a pointy beak and a six-inch-high casque on her head; her large body is covered in black, hair-like, modified feathers. Her tiny, vestigial wings are hidden by the mass of black fluff. But it's the four-inch, dagger-like claw on each of her three-toed feet that gives these prehistoric-looking creatures their reputation as the world's most dangerous birds. They may not deserve this reputation, since only one person has been known to have been killed by a cassowary, in 1926.

By Wendee Holtcamp



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“That’s Bella,” says Paul Verity, who opened The Sanctuary Retreat at Mission Beach on Australia’s northeastern coast in 1996. The low-impact eco-resort includes 50 acres of rainforest Verity permanently set aside to help save the cassowaries. These fruit-eating birds play a critical role in the rainforest, dispersing seeds of more than 150 species of trees and shrubs as they roam up to one-square-mile territories, depositing great globs of seeds.

“She’s a young bird who recently took over this territory,” Verity says. Barbara, an elderly female that developed an arthritic hip, had long dominated in this area along with Stu, 20 years her junior. But Barbara hasn’t been seen in weeks, and as Verity puts it, she has probably gone to the “great fruit tree in the sky.”

Even the death of an old bird is felt in a species with only 1,500 left in the wild. Listed as endangered by the Australian government in 1999 due to massive habitat loss and fragmentation, cassowaries live in three isolated populations along the tropical northeastern coast, as well as in New Guinea.

On March 20, 2006, cassowaries in the Mission Beach area suffered a traumatic setback: Category 4 Cyclone Larry hit Australia, pummeling the World Heritage Wet Tropics rainforests with winds up to 150 miles per hour, snapping giant trees, and denuding swaths of forest and cropland. The storm sent the cassowaries scrambling for fruits. In Larry’s aftermath, 18 percent of the known cassowary population disappeared from the Mission Beach area, which has the greatest concentration of these birds in the country. Untold others perished in the forest.

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Verity and Rich DeRuiter, a 50-something Australian artist who moved to Mission Beach more than 20 years ago, regale me with a colorful history of post-Cyclone Larry events and their passionate efforts to help save the “big birds,” as locals affectionately call them. “After Larry, there were all these birds running around with nowhere to go, invading urban areas, desperate for something to eat,” explains DeRuiter.

After the cyclone, many trees dropped their leaves and did not fruit for months. “[Cassowaries] were going over back fences into people’s houses, raiding tucker off the table.” Some residents started feeding the desperate birds. But as the cassowaries emerged from the forest to raid gardens, banana plantations, or to get a free handout, they put themselves in more danger. Cars are the number one cassowary killer, followed by domestic dogs.

DeRuiter, Verity, and other residents became frustrated with what they believed was a slow response by the Queensland Parks & Wildlife Service (QPWS). They formed Garner’s Beach Habitat Action Group (G-HAG) to pressure the state agency to do more. During a community meeting, QPWS revealed that they planned not to feed the birds anywhere close to the urban fringe to encourage them to head miles back into the forested hills. Locals protested because this fringe was traditional habitat for beach birds with an ample supply of much-needed fresh water. G-HAG believed the plan amounted to a death sentence for the birds.

“There was a massive community backlash,” says DeRuiter. One problem, he says, was that fallen trees crisscrossed the forest floor, and cassowaries could not walk far inland unless someone established trails for them. Meanwhile, the birds were already in the towns, harassing people for food.

G-HAG created trails for the cassowaries and encouraged people not to feed them in town. Amid the controversy—some rangers were pummeled with tomatoes—QPWS eventually set up and maintained nearly 60 feeding stations in the forest. The rangers and volunteers stocked most of the feeding stations three times a week for several months. But the cassowaries continued to disappear.

“In the two years after the cyclone, the number of cassowary sightings at Mission Beach decreased 80 percent, indicating there were probably many more birds killed by the cyclone than thought,” says James Cook University research scientist Les Moore, who has studied the species for 20 years. “A significant number of the birds that survived the cyclone succumbed to disease, which suddenly became much more prevalent. Some scientists believe this is due to stress resulting from a lack of forest fruits to support this increasingly small population of big birds.”

Susan eventually saunters into the forest, and Verity and DeRuiter tell me about the cassowary’s natural history. The breeding system is polyandrous, meaning the female mates with multiple males between May and November. The male incubates the eggs and cares for the chicks. Chicks hatch with brown and white stripes, and the father protects them for 7 to 16 months, after which he grows aggressive toward them. “Cassowaries are extremely territorial, and they won’t tolerate another cassowary of the same sex. We have seen Stu chase a juvenile—probably one of his own offspring—that stood nearly five feet tall under a car with only two feet of ground clearance. If I hadn’t seen it with my own eyes, I wouldn’t have believed it possible,” says Moore.

DeRuiter, who owns 20 acres of prime cassowary habitat, has witnessed the cassowary’s unique mating ritual. “Normally the birds beat each other up, but when it’s mating time, all of a sudden the two sexes come together, all lovey dovey. She’ll take the male for a walk and stop, as if to say ‘This is this tree with the special fruit.’ Then she’ll stand back, and the male will eat the fruit.”

Cassowaries are excellent swimmers, and breeding pairs may lounge in water. DeRuiter’s son found a creek on their property, which they dubbed the love spa. “In the morning, during the breeding season, both the male and the female will be sitting together in the water.”

After chatting with Verity and DeRuiter, I hike a steep path down to the car park, where I meet Adrian Walker. A tall, thin naturalist, he reminds me of Father Time with his bushy, white beard. He has an amethyst python in the car, which he rescued from someone’s home for release into the wild—a task he does regularly.

We head to Lacey Creek in Tam O’Shanter National Park, where Walker recently spotted a papa cassowary with chicks. More than two years after Cyclone Larry, the forest has recovered nicely, verdant and lush.

Walker points out cassowary poo, a cow patty-size pile

Its looks notwithstanding, the solitary and flightless southern cassowary (page 27) is an odd bird. The two sexes come together only to mate, and then the male incubates the eggs and raises the chicks all on his own (below).

DAVE WATTS/NATUREPL.COM; ROB GRIFFITH/ASSOCIATED PRESS (OPPOSITE)

The goal of the Cassowary Corridor is to reforest areas so the birds can wander through contiguous habitat all the way up the coast. The Australian Rainforest Foundation has already recovered 600 acres in the world-famous Daintree rainforest, north of Cairns.

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full of about 40 seeds the size of avocado pits. The birds disperse tree seeds far and wide, depositing them in piles of moist fertilizer. Traveling through the cassowary's gut increases a seed's germination rate. And seed dispersal allows trees and shrubs to grow in a site away from the parents, lessening the chance of inbreeding and diversifying the gene pool.

Walker and his partner Sally Moroney collect cassowary dung for a nursery in Mission Beach run by the organization C4 (Community for Coastal and Cassowary Conservation). After spending the morning exploring Tam O'Shanter without any luck at spotting papa bird and his brood, we head to the nursery. Rows of pots containing plants of various sizes line several tables just outside the education center.

"The automatic sprinkler may surprise you," Moroney says with a laugh because the watering system has caught her off-guard before. White tags labeled with the seeds' origins stick out from the pots: "cass crap." On another table, rainforest seeds of all colors and sizes are piled—red, green, blue, brown—waiting to be sorted and planted. "We've got a few thousand trees, all grown from seed." Moroney explains the process, beginning with the collection of seeds or cassowary dung, cleaning and sorting, planting, and waiting until the seeds grow large enough to become more sun-tolerant. Since rainforests have heavy canopy, most rainforest plants germinate and grow best in shade. The nursery sells the plants and trees to people in town, as well as for bigger restoration projects.

Though C4 and G-HAG have had a big impact locally, another organization has taken a broad perspective when it comes to saving the southern cassowary. For the species to thrive, its heavily fragmented rainforest habitat must be reconnected, and that is a primary goal of the Australian Rainforest Foundation (ARF)'s Operation Big Bird. ARF is a quasi-governmental organization with the goal to "protect, extend, and re-

Cassowaries eat the fruits of forest trees and deposit the seeds in dung piles (left, top) scattered throughout their habitat. A nursery run by the organization C4 grows trees from seeds collected in the dung for forest restoration projects (bottom).

cover" habitat for the cassowary and other endangered species. One of ARF's major efforts involves buying land, placing it in conservation covenants that permanently protect it, and then selling the land to companies that want to enhance their green footprint. "We're an organization full of successful businessmen who are very concerned about the environment," explains McFadden.

Over the past few years, ARF has worked with scientists at James Cook University and CSIRO (Commonwealth Scientific and Industrial Research Organization) to reconnect a "cassowary corridor" from Cairns 150 miles south to the town of Cardwell. Mission Beach lies toward the southern end of this corridor. Although Australia's Wet Tropics rainforest has survived 135 million years—it's the oldest of its kind in the world—efforts to conserve it can't come too soon. By 1983, 57 percent of the rainforest had been lost, and by 1997, the loss increased to 81 percent. The rate of loss has slowed, but the remaining rainforest is heavily fragmented. Although cassowaries occasionally cross open land, the fragmentation exposes them to serious danger.

"The cassowary's habitat is just shrinking and shrinking," says McFadden. "So the idea is for all of us to work together to buy back or regenerate private lands. It's been quite successful."

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Cassowaries aren't well known, even in their own country. "I could probably walk into a school in Perth and suggest they help me save the cassowary, and they'd look at each other and say, 'the what?'" says McFadden.

On the other hand, people from around the world come to northeastern Queensland for a chance to view the birds and Australia's other unique wildlife. But if the status quo continues, Moore, who has been documenting the birds' decline in Mission Beach, believes few cassowaries will remain there in 20 years. "As a small population they will be vulnerable to another cyclone, which is certain to occur.

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"The cultural, iconic, and economic value of the cassowary to tourism in north Queensland is similar to that of the koala in the rest of Australia. The loss of the cassowary from the coastal lowlands will undoubtedly have a negative impact on the reputation of the Wet Tropics World Heritage Area," says Moore. There's an urgent need for research into the birds' ecology, behavior, and habitat needs, and on the impacts of forest fragmentation. "It is difficult to understand how an Australian endangered species, with a population size of possibly fewer than 1,500 adults, has received almost no funding for baseline studies."

At day's end, we sit on The Sanctuary's wooden veranda, overlooking a rainforest-clad hill that tumbles down to the Coral Sea. It's a verdant, viney, mossy jungle, resplendent with ancient cycads, towering tree ferns, and circular fan palms. Australia's largest land animals wander through these ancient forests. If efforts continue to make the big birds more deeply appreciated, the charismatic cassowary could become this rainforest's flagship icon the way jaguars have for Amazonian rainforests.

Yet cassowaries suffer from a serious image problem. "We used to find that tourists were freaky about walking in the forest," says DeRuiter. "Part of the fear came from a public awareness campaign that advocated 'Beware, Cassowary.' I used to say 'Be Aware' is a better way to go."

Signs and public messages have since been changed to "Be Cass-o-Wary."

By far, cassowaries have more to fear from people than vice versa. During 2006–'08, cars killed 17 birds when they left their forests and crossed roads. Several lodges in Mission Beach, as well as local residents, stubbornly continue to feed them. "Feeding cassowaries is both illegal and stupid," says Verity. In an increasingly fragmented landscape, involving individuals like Verity to save land and follow science-based recommendations will prove crucial to cassowary conservation.

Houston-based writer Wendee Holtcamp covers wildlife and conservation issues for a number of magazines.