

Animals After Irma



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Edited by Jenn Yerkes

Irma's Island

After a major hurricane, it can take years for nature to recover. On the island of St. Martin, we had a chance to watch that recovery in the aftermath of Hurricane Irma. In the weeks and months following the hurricane, St. Martin truly was Irma's Island.

The chapters in this book were published in a local newspaper between September and December 2017. Often, they described new aspects of the recovery as they happened.

The island, its nature and its people continue to recover. No doubt, there are future chapters of this story waiting to be written.



Still Humming

Are there any Irma survivors more amazing than our hummingbirds? For starters, these tiny birds survived the strongest storm winds in Caribbean history. They managed to hang on — unprotected against the elements — while giant tamarind trees were uprooted.

When Irma's winds died down, the hummingbirds that remained were far from safe. Across the island, every flower had been torn from every plant. Although trees and plants would bounce back quickly, the clock was ticking for our hummingbirds. With a high metabolism, they need to eat frequently to survive. For them, starvation looms in a matter of hours, not days or weeks.

One of our first goals after the storm was to provide food for these birds. We had prepared feeders and sugar water to be ready as soon as it was safe to go outside. I had heard many stories from people who didn't see hummingbirds on St. Martin for years after Hurricane Luis in 1995.





This time, it would be different. As soon as the feeders were out, they were swarmed by hungry birds. Our two common hummingbirds, the Antillean Crested Hummingbird and the Green-throated Carib, were there in large numbers. Sugar Birds arrived by the dozen and soon there were more than 100. They perched on every tree around the feeder, screeching to each other.

We even had a rare visitor to the feeders, the Purple-throated Carib. Found on many nearby islands, it prefers altitudes higher than what St. Martin has to offer. It is rarely seen here.





Hummingbirds are usually protective of nectar sources. They will fight and chase other birds away. But during this crisis, they seemed to make peace at the feeders. Especially during the first two weeks, the feeders were busy and magical, with a dozen hungry hummers hovering around each feeder in the morning.

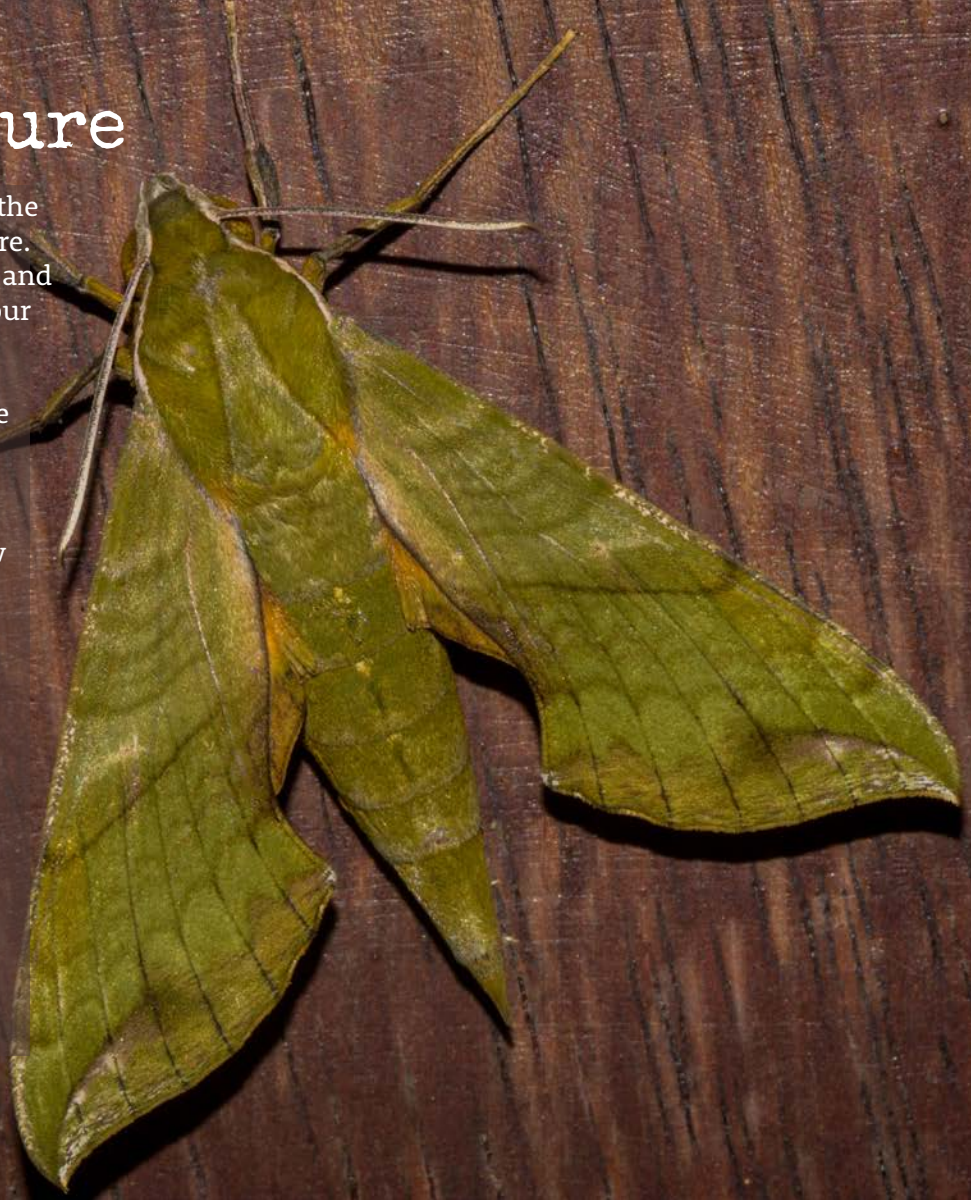
Three weeks after Irma, the feeders were still busy, but flowers started blooming again. At that point, the extra food gave these survivors a boost as they started new families. We helped our hummingbirds bridge a gap that few would have survived on their own. And unlike after Luis, now there won't be years after Irma when people didn't see a hummingbird.

Closer to Nature

Even in this modern world, living in the Caribbean means being close to nature. We spend time outdoors in the wind and sun. The beach is our backyard and our summer never ends.

A hurricane brings us closer to nature in many ways, both big and small. The storm itself was the immense power of nature brought to life. It taught us how small we are, and how vulnerable.

The aftermath brought nature to us and us into nature. Windows that were shut for years to keep in the air conditioning were flung open. Insects and other animals crossed freely between their homes and ours. Moths, beetles and bees were everywhere, perhaps as disoriented as we were.





The storm pushed us into nature. We headed out to clear zinc and branches, to prune trees and shrubs. Once hidden, the animals around us were suddenly out in the open. Birds and iguanas perched on bare branches and headless palm trunks.

As days turned into weeks, the dull brown hills began to explode into green. Grasses were quick to sprout again from their roots. Battered skeleton trees began to sprout new leaves. Flowers began to bloom. Day by day, the colors of life returned.

Though we are still busy rebuilding homes, businesses and lives, we have an eye on nature and it gives us strength. Watching the color of the hills and the sea return to normal reminded us that life on St. Martin will go on. All of the island's native plants and animals are hurricane survivors. If they weren't, they would have been gone long ago. And if nature can find a way to grow again, so can we.



Flies Like Us

It took a few weeks after the hurricane for the flies to build from occasional guest to pest to plague, but by the one-month anniversary of Irma, they were everywhere. What caused this outbreak, and how long would it last?

In nature, sudden changes in the population of a plant or animal are often linked to unusual conditions. Usually it's a bad sign. Deer populations get too high when there are no wolves to hunt them. Seaweed grows out of control if there are too many nutrients in the water fertilizing it.





Flies begin their lives as larvae — often called maggots. Like caterpillars, they are eating machines. Young flies eat all sorts of things, depending on the species. There are poop-eaters, garbage-eaters and carrion-eaters. Common housefly larvae eat all three, so it's not surprising they became the most plentiful.

After Irma, the island was covered in fly food. When we think about the fly life cycle, the surge of flies a few weeks after the hurricane makes a lot of sense. For about two weeks, the larvae were eating and growing. Then they spent a week as pupae, transforming into adult flies.

The sudden creation of all this fly food at once was like a ticking time bomb. Looking back to the days just after Irma, each adult female fly was probably laying hundreds of eggs. Millions of flies were growing for weeks, hidden in the piles of trash. We only realized their full numbers when they emerged as flying adults.



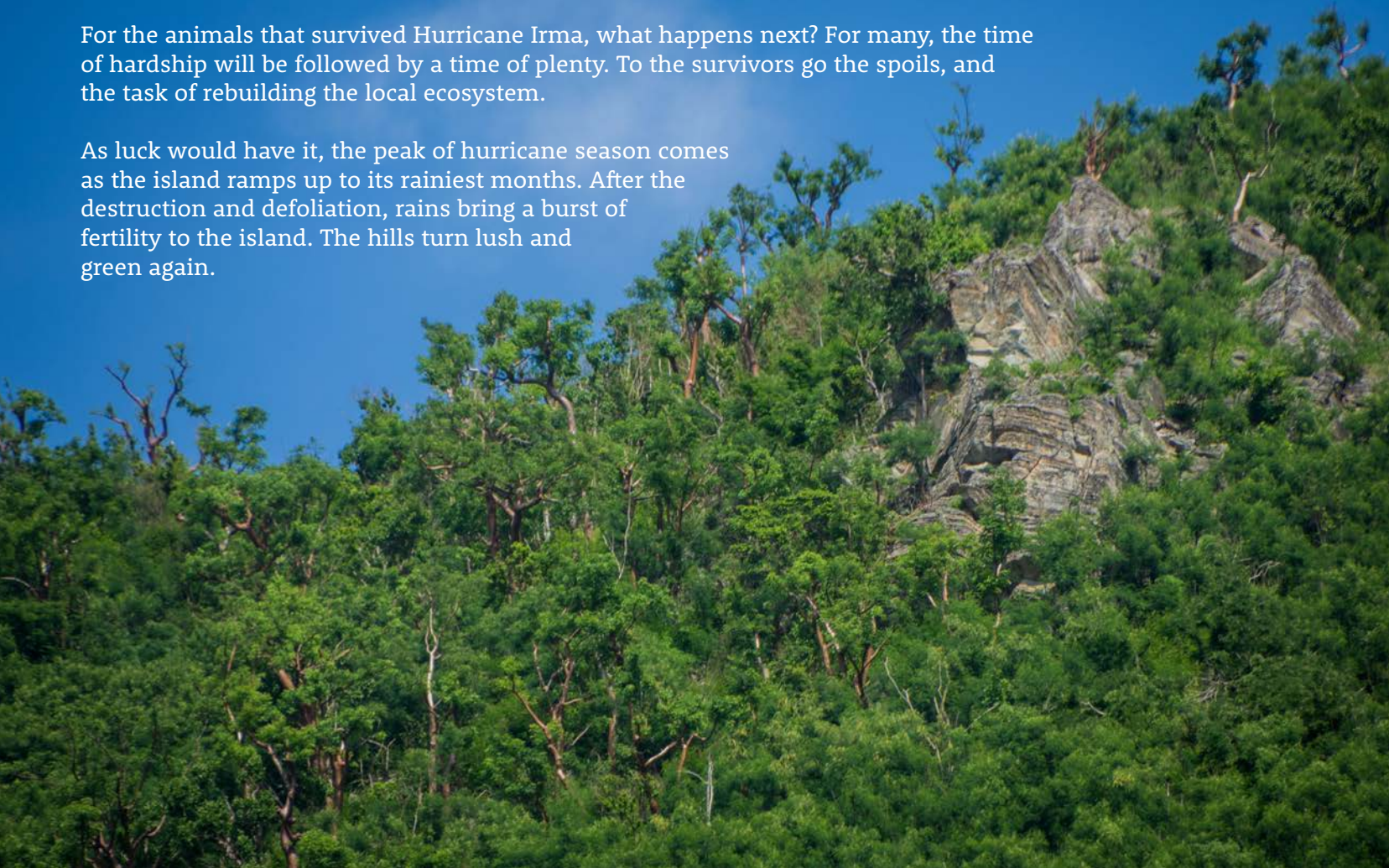
Though they may be annoying, the flies actually serve a very important purpose. After Irma, they consumed garbage, poop and dead animals at an incredible pace. By doing so, they helped return nutrients to the soil while also making our grossest garbage disappear. They may seem like a plague in the kitchen, but they are also our saviors in the trash pile.

And this population boom wouldn't last forever. As they did their part in the island's recovery, they prepared for their own decline. After exploding in numbers to eat a year's worth of garbage in weeks, their population ebbed as soon as the problem was fixed. Of all the aid workers on the island after Irma, flies did some of the dirtiest work.

The Survivors Flourish

For the animals that survived Hurricane Irma, what happens next? For many, the time of hardship will be followed by a time of plenty. To the survivors go the spoils, and the task of rebuilding the local ecosystem.

As luck would have it, the peak of hurricane season comes as the island ramps up to its rainiest months. After the destruction and defoliation, rains bring a burst of fertility to the island. The hills turn lush and green again.



This timing is important. In the Caribbean, many native animals can breed year-round due to the warm weather. However, most do this less in the spring dry season. During the wet season, animals may bear young more frequently, or raise more offspring at once. With an abundance of food available, more newborn animals survive to adulthood.

As plants and trees regrow, they begin to provide in abundance for hurricane survivors. Flowers and fruits and leaves feed insects, insects feed lizards, lizards feed birds. For a time, the survivors of Irma face less competition for these riches. Their offspring rise to keep the island buzzing and singing with life.

Recovery after a major disaster is built into the very nature of the ecosystem here. Species that were not adapted to this task would have disappeared long ago. Our native species are not only island specialists, but recovery specialists. Adaptations that help them bounce back from the dry season each year also help them prosper at times like this.



After a storm, there is an amazing window into the self-healing capabilities of nature. It is on display here at a scale and pace that is easy to watch and appreciate. We could see the way the barren stumps around us began to regrow. Butterflies and birds that were gone are suddenly seen again.

Of course, it takes time to make a full recovery. Giant trees have fallen that will take hundreds of years to replace. Some of our birds may take years to get back to the numbers that lived here before Irma. Perhaps a few things will never be quite the same.



A close-up photograph of a small gecko, likely a species from a tropical island, clinging to a piece of brown, fibrous material. The gecko has a light green body with a prominent blue stripe running down its side. Its head is pointed towards the right, showing a blue eye and a small red mark near its mouth. The background is dark and out of focus.

Still Hanging On

Extinction has always been a part of island life. Why are smaller islands home to fewer species? In part, because of extinction. Small islands have less habitat, so they have smaller populations of plants and animals. If something bad happens — a severe drought or terrible storm — these small populations are at risk.

On a continent, if a habitat is temporarily unlivable animals can move to a nearby place that is still okay. Once the habitat recovers, they can move back in. On an island, the sea blocks this kind of movement. If a species gets wiped out, it may be gone for good.



These natural extinctions are a key part of Caribbean ecology, but they are also rare. Without humans, extinctions and new colonizations of plants and animals balance each other out. Both happen rarely, and the mix of animals and plants on an island changes very slowly.

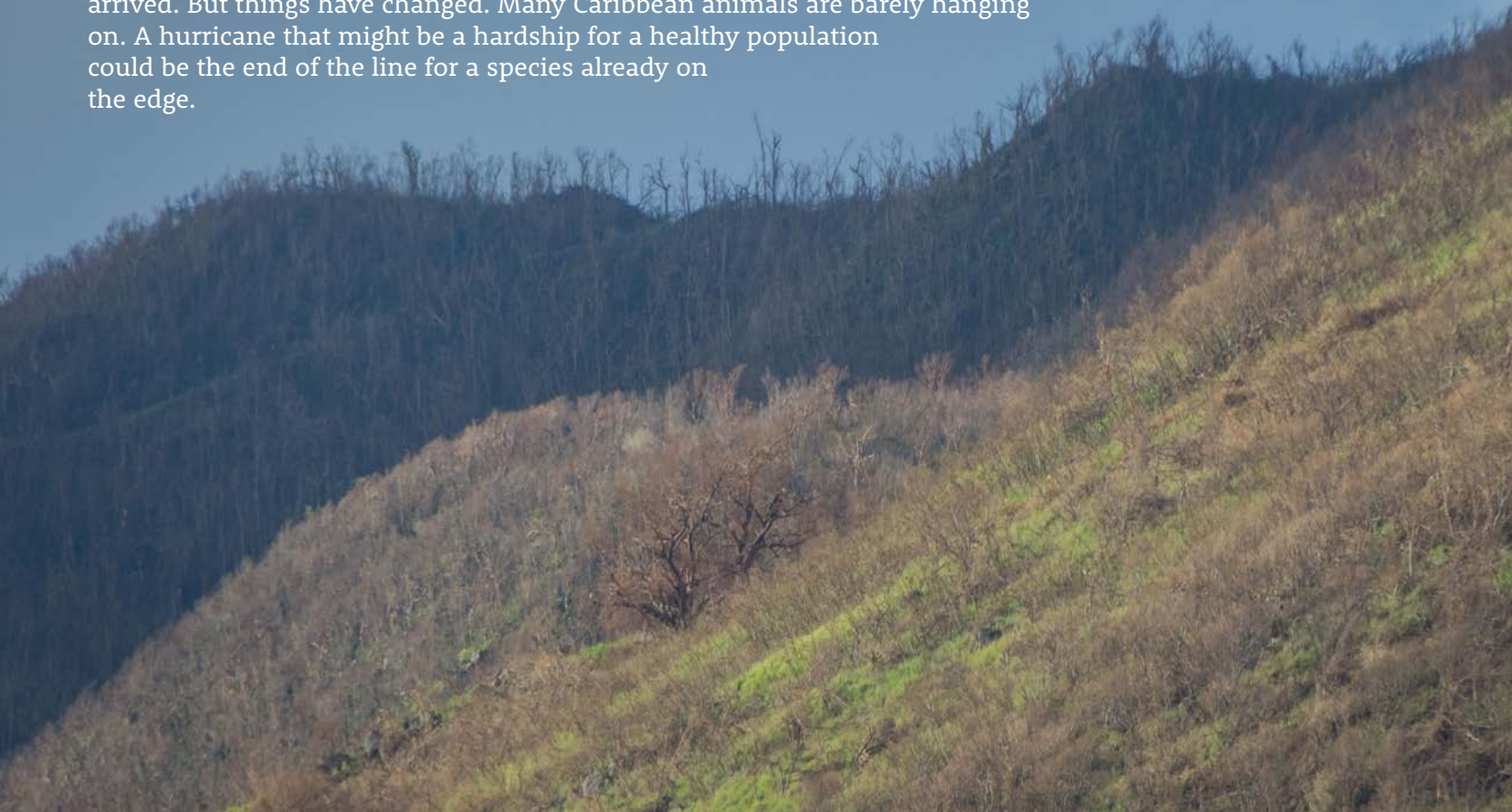
Humans brought extinction with them when they arrived in the Caribbean. The first wave came as Amerindian people colonized the region. Evidence suggests that many prehistoric animals, like the giant sloth, Jamaican monkey and some large rodents died out during this time. The extinction of large animals after prehistoric hunters arrive in a new land is a pattern seen all over the world.

European colonization brought a second wave of extinction. The victims included smaller mammals, birds and reptiles. The introduction of foreign species — like rats and mongoose — led to many extinctions. The widespread clearing of land to grow sugarcane and other crops was also a key cause.



Today, the threat of extinction continues, with a new twist. On Dominica, the passing of Hurricane Maria set off a desperate search for the Sisserou, a parrot that lives only on that island. Before the hurricane, the population was estimated at just a few hundred birds. Scientists made an expedition to Barbuda to check on another rare bird, the Barbuda Warbler, after that island was devastated by Hurricane Irma.

Animals native to the Caribbean have survived hurricanes for millions of years before people arrived. But things have changed. Many Caribbean animals are barely hanging on. A hurricane that might be a hardship for a healthy population could be the end of the line for a species already on the edge.



On St. Martin after Irma, it was a relief to see the two lizards that live nowhere else in the world. The Bearded Anole is common and seems to be doing just fine. The Spotted Woodslave is more mysterious. It hides during the day, often under the peeling bark of a large tamarind tree. It survived, but many large tamarind trees were knocked down by Irma. This species should be watched more carefully, and the habitat it requires should be protected.

Will climate change bring a third wave of extinction to the Caribbean? Stronger and more frequent hurricanes will put many species at risk. Our best defense is to preserve habitat and boost populations of rare species between storms. The time to start that is now.



Welcome Back!

Every fall, birds come to St. Martin — thousands of individual birds from dozens of different species. These migratory birds come from North America. As it gets colder up there and food begins to get scarce, they head to the Caribbean. Many of them will stay until April or May.

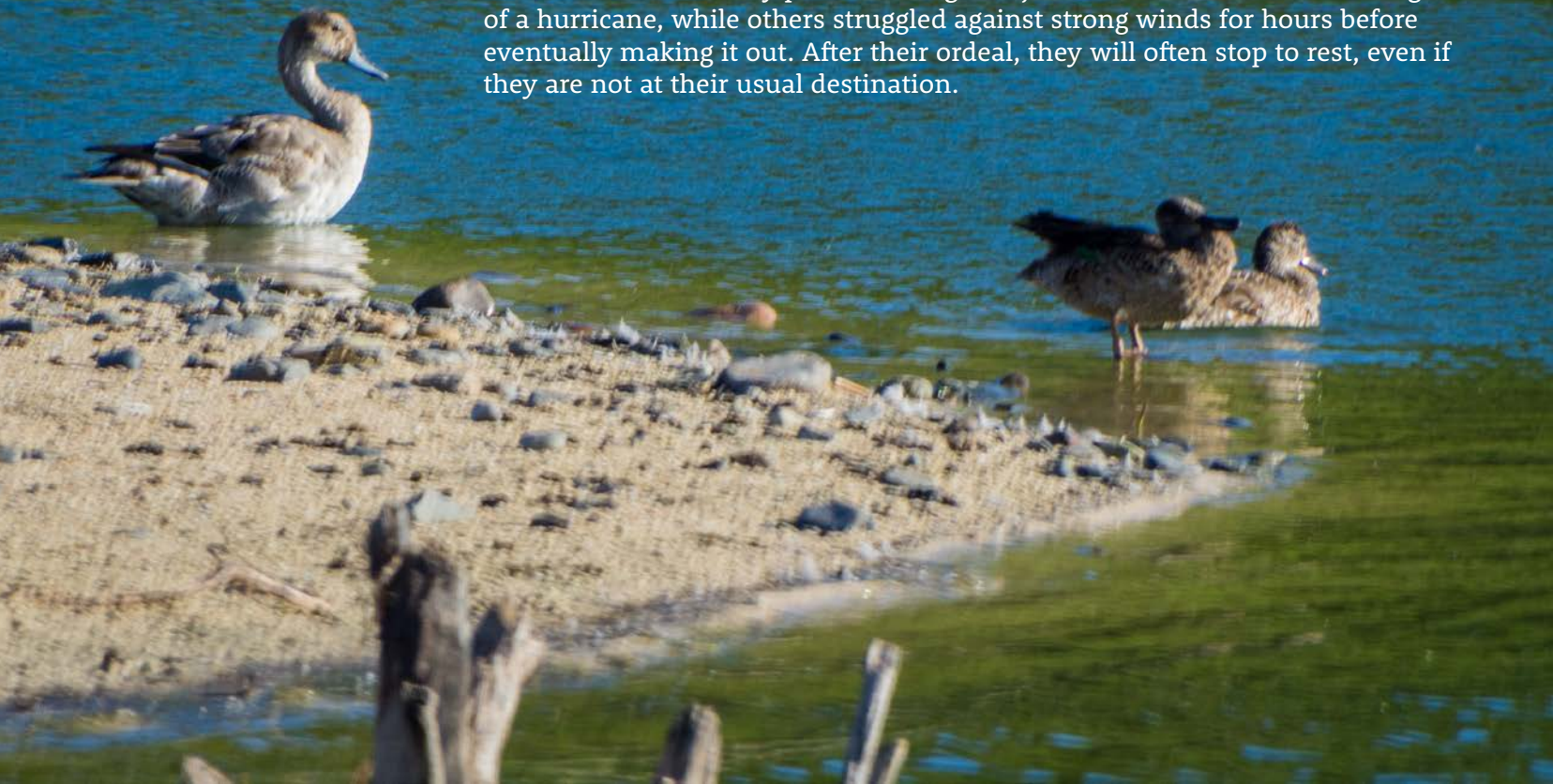
Hurricane Irma hit St. Martin with a fury, right during the migration season. Some birds had already arrived here when the storm hit. Others were caught in the storm while they were flying. Many birds made their migratory flights after, arriving on an island with heavy damage. What happened to all these birds?

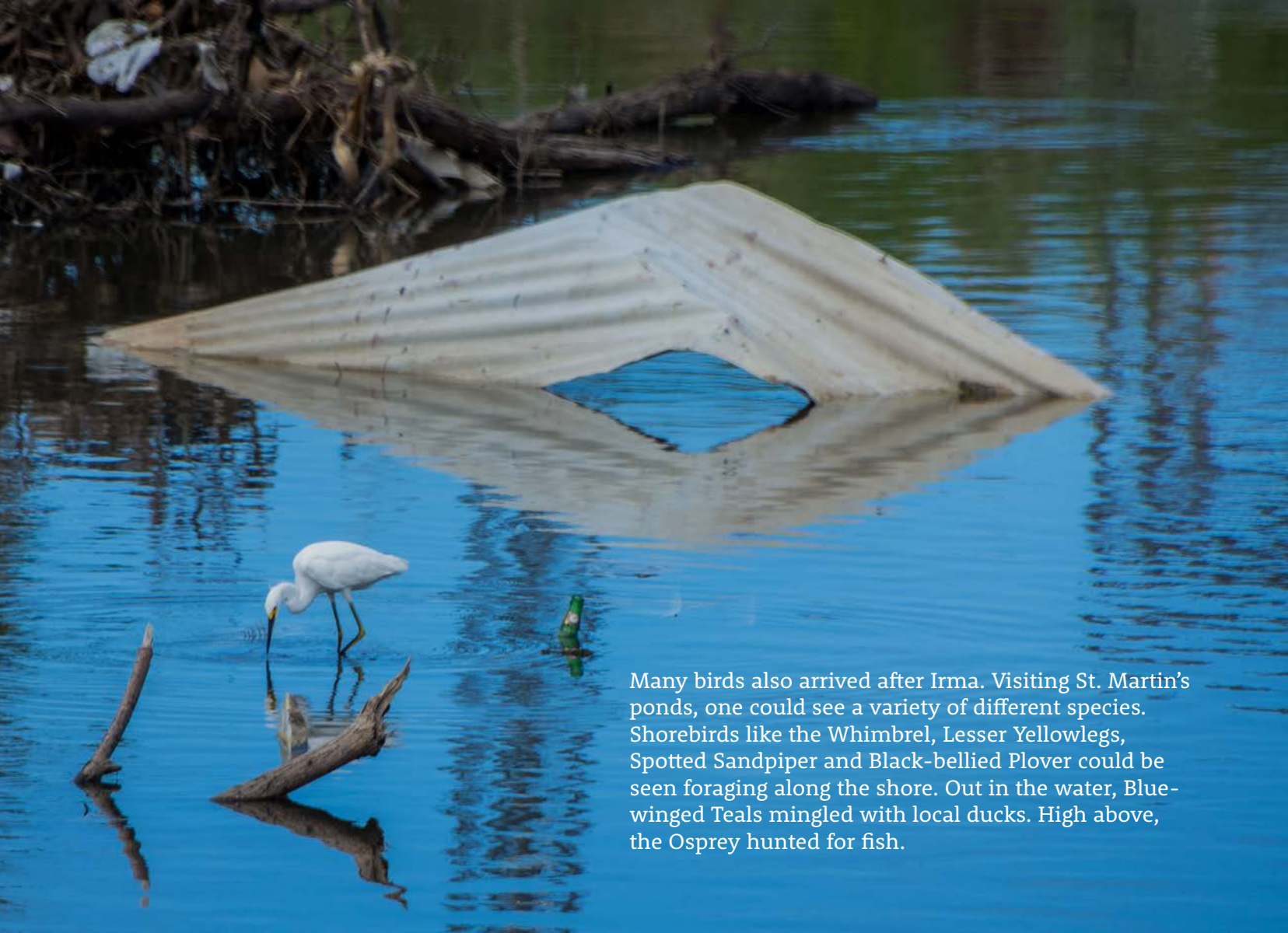
Migratory birds that were already here may have left before the storm. Although they can't read the weather report, birds can sense changes in air pressure. Feeling the storm coming, they may have traveled to another island out of Irma's path. For these long-distance voyagers, hopping over to a nearby island is easy.



Although birds tend to avoid storms, some do get caught in hurricanes. They can be trapped inside the calm eye of the hurricane with high winds forming a wall around them. In some cases, there are so many birds they can be seen in the radar images of the storm. When this happens, birds that survive may end up well off course.

Thanks to tiny satellite trackers small enough for a bird to wear, we have actually seen what happens when birds get stuck in a hurricane. Several Whimbrels — medium-sized wading birds that eat small crabs — have been monitored as they passed through major storms. Some skirted the edge of a hurricane, while others struggled against strong winds for hours before eventually making it out. After their ordeal, they will often stop to rest, even if they are not at their usual destination.





Many birds also arrived after Irma. Visiting St. Martin's ponds, one could see a variety of different species. Shorebirds like the Whimbrel, Lesser Yellowlegs, Spotted Sandpiper and Black-bellied Plover could be seen foraging along the shore. Out in the water, Blue-winged Teals mingled with local ducks. High above, the Osprey hunted for fish.

Although most of our usual migratory friends arrived, they were fewer in number after Irma. Some may have found less food if they arrived right after the passing of Irma. Others may have been disturbed by human activity. Large piles of debris were made near many of the ponds, with the constant activity of heavy machinery.

For those birds that did come, rapidly recovering ponds and mangroves offered quite the buffet of fish, crab and other foods. We welcomed them back to our island to share in its recovery.



Out of the Woodwork

Nature lovers — and perhaps even casual observers — may have noticed some unusual animals on St. Martin after Hurricane Irma. There are a few different reasons why animals we don't usually see here were on the island, or more visible than usual.

Hurricanes can bring animals with them, especially birds. Birds can be trapped in the eye of a hurricane for hours or days, forced to move with the storm. There have been many cases where hurricanes have deposited birds far from their home or migratory destination.

Some unusual sightings after Irma could have been birds brought from islands the storm passed on its way here. However, this would be difficult to know for sure because those islands, like Barbuda, mostly have the same birds that live here.



Migratory birds can be thrown off course by hurricanes. Needing rest after flying near or through a storm, they may stop in unfamiliar destinations. A small flock of American Golden Plovers was seen for the first time on Statia just after Irma. This species prefers wetlands, which Statia lacks, so they moved on quickly.

Birds can also change their behavior after a hurricane in ways that make them easier to see. Scaly-naped and White-crowned Pigeons were seen in urban areas on several islands after Irma, including St. Martin. While these species are native, they prefer forested hilltops. The destruction of their habitat may have brought them down in search of food.



Domesticated animals set loose by a hurricane aren't exactly wildlife, but they could become wild. Free-roaming pigs made headlines several times before they were recaptured. We were visited by a Cockatiel and a Lovebird during the weeks after Irma. Like many native birds, they had come to us for food. Friends saw a rabbit hopping around Simpson Bay.

Native species tend to find their way after a storm. They will continue their migration or head back to their homes in the hills as the forests recover. Hopefully lost pets and livestock find their way home as well. If they don't, some — feral pigs, for example — can have the potential to become dangerous to both humans and nature.



The Case of the Missing Wasp

If you've ever wandered the hills of St. Martin, you're sure to be familiar with the Jack Spaniard. It is a red, yellow and black wasp that builds nests of paper and defends them fiercely. Too often, the first sign of a nearby nest is a piercing, electric sting. A couple days of itching and swelling follow. Any dry spot is a likely nest location: a big branch, a wide leaf, an awning or a rocky overhang.

But where did they go after Irma? In the days immediately following the hurricane, Jack Spaniards came to our hummingbird feeders, but then they stopped. They were conspicuously absent in the months afterwards. Bees and butterflies were everywhere. The island had plenty of flies and mosquitoes. But the Jack Spaniard seemed to be gone.





Hurricanes seem like the perfect tool to get rid of these wasps. The winds were strong enough to rip their paper nests down to be soaked and destroyed. Adult wasps feed on nectar — which is why they were at our hummingbird feeders — and most of them may have starved in the aftermath of the storm. These wasps feed their young on caterpillars, another resource that would have been absent immediately after Irma.



This triple threat may help explain why Jack Spaniards vary so much from island to island. Pre-Irma they were extremely common here. On St. Kitts, I only saw them a couple times during weeks of field research. If recovery after a major storm takes years, perhaps differences between islands can be connected to hurricanes.

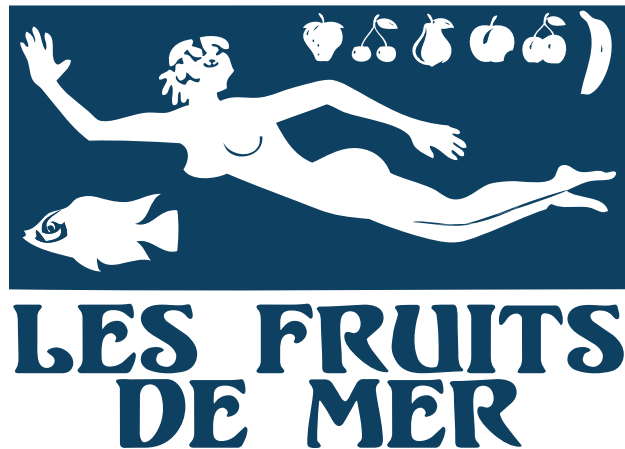
I imagine many would say “Good riddance!” to the Jack Spaniard. Personally, I don’t mind being able to walk down a trail without being stung. But they do play a role in the local ecosystem — a few, in fact. They pollinate flowers when they are feeding on nectar, and they kill a lot of caterpillars to feed their larvae. They’re also a popular food for the Gray Kingbird.

It turns out, the Jack Spaniards were only mostly gone. Some nests survived in very protected areas, like caves or abandoned buildings. Eight months after the hurricane, they started becoming more noticeable and after a year or so they were back in full force. It is an amazing recovery for a wasp that was pushed to the edge by Irma.



Mark Yokoyama has photographed and written about nature on St. Martin since 2009.

This book was made by Les Fruits de Mer. Les Fruits de Mer is a non-profit association based in St. Martin. Our core mission is to collect and share knowledge about local nature and heritage. We carry out this mission through books and other publications, our free museum, short films and oral histories, events and other projects. Discover more and download free resources at lesfruitsdemer.com.



Amuseum Naturalis is a free museum of the nature and heritage of St. Martin and the Caribbean, created by Les Fruits de Mer. It is located at the historic Old House in French Quarter on the hill above Coconut Grove. For the latest information, visit amuseumnaturalis.com.









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