

Loafing at the Landfill

Dumps offer seagulls the easy life

By KATHY A. FACKELMANN

In the past 40 years, ornithologists have reported a dramatic upswing in selected populations of herring and ring-billed gulls, particularly around the Great Lakes region.

Why are these seagulls flourishing when so many other bird species are struggling?

Garbage!

That's right, trash. Refuse.

These graceful silver-and-white birds have mastered the art of dumpster diving. All over North America and Europe, landfill goodies are fueling a gull population explosion.

But the more gulls, the greater the potential for clashes with humans, says biologist Hans Blokpoel of the Canadian Wildlife Service in Nepean, Ontario. Those conflicts can range from minor annoyances, such as bird droppings on the boardwalk, to more deadly threats.

Dumps and airports are often located near each other because people don't want to live near garbage or noise, Blokpoel notes.

Seagulls winging their way to the motley landscape of a refuse dump can — and do — get sucked into airplane engines, he adds. Because gulls are relatively slow fliers, they are more likely than any other birds to collide with planes. The dump-airport connection means that the potential for harm to both humans and gulls is very real.

"Bird strikes occur infrequently," Blokpoel says. "But there's a lot of damage done — sometimes planes crash and people die because of it."

Indeed, one of the most tragic incidents occurred at Boston's Logan Airport on Oct. 4, 1960. An Eastern Airlines jet flew through a flock of starlings on takeoff. The resulting crash killed 62 people.

At New York's Kennedy Airport, a flock of gulls got sucked into the engine of a DC10 on Nov. 12, 1975. The pilot aborted takeoff, but the engine caught fire and exploded. Amazingly, there were just two serious injuries among the 139 people aboard. (The flight had no paying passengers and was filled with airline personnel, all of whom had been trained in evacuation procedures.) The plane was completely destroyed in the resulting fire.

The Federal Aviation Administration (FAA) is so concerned about this problem that it has funded a number of studies, including one by a team of U.S. Department of Agriculture (USDA) ornithologists. Rather than observe gulls flying near landing strips, this team decided to look first at gulls making trips to a garbage dump not located near

colony of herring gulls that nests on the rocky beaches of Turning Point Island, an island created by dredging material from the bottom of Lake Erie's Sandusky Bay. The team works out of a USDA wildlife research center in Sandusky, Ohio.

The scientists decided to examine this colony because of its proximity to three refuse dumps. One dump, the Erie County Landfill, became the focus of their study.

Ornithologists know that herring gulls eat putrid landfill food. Belant, Dolbeer, and their co-workers wanted to find out whether these gulls would head for the dump during the breeding season, a time of enormous energy demands. Some scientists had speculated that low-quality dump food wouldn't meet seagull nutritional requirements during the breeding season, which runs from egg laying in mid-April until young chicks leave the nest in early July. However, Belant, Dolbeer, and their colleagues thought that adult gulls might favor the fast food available at the dumps during this busy period.



Photos by Dolbeer

Seagulls follow a bulldozer's path at the Erie County Landfill, 10 miles from their Lake Erie home.

an airport. By learning about the basic behavior of gulls, the team hopes to understand what sets these birds on a collision course with aircraft. Such information will also give city planners practical tips about the safest locations for landfills.

The group's findings, from published and unpublished studies, reveal that seagulls congregate at landfills for a variety of reasons. Some gulls rely almost exclusively on a diet of landfill leftovers. Others visit the local dump primarily to participate in social activities.

The herring gull, or *Larus argentatus*, is the bird most commonly referred to by the catchall term "seagull." Its distinctive "kek kek kek" can be heard near saltwater and freshwater shores from the Arctic to the tropics.

Jerrold L. Belant, Richard A. Dolbeer, and their USDA colleagues studied a large

The researchers captured 17 gulls in walk-in traps placed around the birds' nests. Without hurting the birds, the researchers outfitted each with a device that emits radio waves of a specific frequency. These 30-gram transmitters, which resemble tiny backpacks, enable the scientists to track the flight pattern of each bird, says Belant, who is now at the Great Lakes Indian Fish and Wildlife Commission in Cloquet, Minn.

In most field studies, ornithologists observe the target species at close range, an approach that could prove rather smelly in this case. Rather than sit around the garbage dump for days on end, however, these researchers relied on a computerized receiver that picked up each bird's characteristic radio signal. A data collection computer at the landfill and another at the nesting colony noted each time a specific gull arrived on the scene, Dolbeer says.

To figure out flight patterns to and from the landfills, biologists in airplanes used a receiver to pick up radio waves emitted by gulls in transit. The team then charted

each bird's path on a topographical map.

Alas, the USDA biologists still had to do some close-up birdwatching. One or two members of the team spent at least 2 days per week at the landfill, which received, on average, 275 metric tons of garbage daily. Using binoculars, the ornithologists counted the gulls in a given area, a method that can be used to estimate the total gull population at any given time. Next, the investigators made a series of observations of gull behavior.

To their surprise, they found that the gulls in this colony spent very little time foraging at the landfill during the breeding season. In fact, *L. argentatus* shunned the landfill in favor of a higher-quality food source.

During this time, the gulls spent more than 80 percent of their time on Lake Erie catching perch and other freshwater fish — a food source superior to the moldy, high-fat scraps at the dump.

That foraging pattern changed when the fledgling chicks started to leave the nest in late June or early July, notes Belant. At that time, herring gulls started to make more frequent visits to the landfill, where they would feast on chicken bones, french fries, ribs, and other fast-food morsels. The easy, though not-so-nutritious, pickings may prove more attractive to gulls when they're not trying to raise their young, he adds. Belant and his coworkers describe their findings in *Condor* (vol. 95, no. 4), a quarterly journal of avian biology.

Another surprising finding: The gulls didn't spend all their time at the dump gobbling scraps. The researchers discovered that for long periods during the day the birds simply hung out. "Gulls are very social," Dolbeer says. "They hardly do anything in their lives alone." Because landfills consist of large tracts of open land, he notes, birds can socialize or nap without worrying too much about a sneak attack from a predator.

Sea gulls are arguably the most versatile members of the avian world when it comes to gathering food. They plunge-dive to catch fish. They swoop down to the ground to snatch earthworms. They will even hover to pluck ripe cherries out of trees.

And if those natural food sources fail, the adaptable seagull can always count on the food scraps that clog landfills, litter parking lots, or fall out of garbage barges.

From an evolutionary point of view, birds that are generalists do much better than birds that specialize, points out Joanna Burger, an ornithologist at Rutgers University in Piscataway, N.J. For example, the piping plover forages primarily along a narrow strip of sandy beach (SN: 12/7/91, p.382). This shorebird's picky eating habits have brought it to the edge of extinction.

By contrast, *L. argentatus* has no trouble switching from one food source to the next. "Gulls are kind of like people," Burger says. "They're omnivores and they're opportunistic. They'll eat whatever is most available and easiest [to obtain]."

That adaptability and the ready food served up at the dump have given many seagulls a survival edge. In the past, young gulls that couldn't compete with their elders for fish would have died, Dolbeer says. Now, those less-fit chicks simply head for the nearest dump, where they can munch on moldy morsels.

Biologists point to that versatility to explain the phenomenon of the birds' soaring numbers. "Gull populations have been increasing rather dramatically in North America over the past 40 years," Dolbeer says.

While many birds prefer their traditional habitats, some seagulls find city life to their liking. Instead of creating grass-filled nests on a remote, rocky beach, these urban settlers look for a nice flat rooftop.

Officials at the Riser Foods Warehouse in Bedford Heights, Ohio, an industrial area near Cleveland, knew they had a problem when they started getting complaints about a series of gull-related incidents, including attacks on people in the parking lot. Since gulls are federally protected birds, Riser officials called in the USDA gull team.

The ornithologists discovered that more than 1,100 herring and ring-billed gulls (*L. delawarensis*) had made their home on the gravel-topped roof of the warehouse. They also took note of another significant fact: Although this warehouse is located 14 miles from Lake Erie, it is within striking distance of the Cuyahoga Regional Sanitary Landfill, which daily receives some 2,200 tons of garbage.

The team trapped 8 herring and 13 ring-billed gulls, outfitting each with a radio transmitter that could be used to track the birds' movements.

For this rooftop colony, the team discovered, the garbage dump represented a more important dining option than the waters of Lake Erie. Unlike their cousins nesting on Turning Point Island, the Bedford Heights gulls didn't have easy access to the lake, so they foraged extensively at the dump. They even foraged during the spring mating period, the team notes in an unpublished report.

What did they eat? Dolbeer and his colleagues sorted through the food pellets that

The hot-pink dye represents one method of tracking a seagull from its island home to the local landfill.

gulls normally cough up when they get back to the nest. They found that the gulls had been eating small numbers of fish, a few insects, and earthworms. But the bulk of the colony's diet came down to this: fast food.

The team found lots of bleached bones on top of the warehouse, the result of a diet of fried chicken and barbecued ribs. In fact, the gulls carried an astonishing 160 pounds of chicken and rib bones each week from the dump to the Riser rooftop.

Like their island cousins, these urban gulls also went to the landfill simply to laze around, the researchers discovered.

To get an accurate picture of gull behavior, scientists and airport safety planners must look at both traditional habitats and urban nesting sites. Without such a broad view, potential conflicts between gulls and planes may be missed. Recent surveys of gull populations in the Cleveland area, for instance, didn't include the large Riser colony, Dolbeer points out.

On the whole, encounters between birds and airplanes are relatively rare. Ornithologists estimate that there are two to five collisions with birds for every 10,000 airplane takeoffs or landings.

"Statistics on this are very difficult to get," Dolbeer notes, adding that New York's Kennedy Airport logged nearly 3,000 bird strikes from 1979 to 1993, including 51 cases in which the pilot had to abort a takeoff or make an emergency landing because of engine damage caused by a bird.

"You could fly Kennedy Airport every day of your life and the odds are that wouldn't happen," Dolbeer says, adding that Kennedy is one of the few airports to keep detailed records of bird strikes.

Still, bird-airplane smashups happen often enough that airport managers have taken steps to reduce those odds. "Most large international airports have bird control teams," Blokpoel says. Studies indicate that certain measures — such as eliminating water on runways — can keep birds away.

The results of the USDA studies suggest that not all seagulls rely on landfills in quite the same way. Ornithologists say that additional studies will clarify the complex relationship between gulls and garbage dumps. Once that happens, airports may start taking more sophisticated measures to keep birds away from the runways. □

