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## **Seabirds travel long distances to find food**

**Birds I View  
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Survival in a dynamic ocean where finding food is quasi-predictable has honed the physiological and behavioral skills of seabirds to an Olympian precision. The stakes are high. If seabirds are unsuccessful in obtaining food within 5 or 6 days they will likely die.

For millennia people who ventured to sea to fish used their knowledge about seabirds to find fish schools and productive waters. With the development of fish-finding technology these signals are longer essential, though at times seiner crews are on the lookout for gannets as they seek to harry schools of mackerel.

Seabirds also exploit public information from other seabirds when searching for food. Note how a single gull can rapidly transform into raucous flock when one is casting discards from a boat. A single gannet diving on a school of capelin, mackerel or herring can quickly cascade into sheaves of piercing missiles that disrupt the school they are targeting. So hungry gannets not only have to accurate, they also have to act quickly before the table is cleared. The old adage – hungry as a gannet – derives from their penchant for rapid intense feeding.

Seabirds and fishers also find it efficient to live near traditional fishing grounds. So it is no trivial coincidence that resilient fishing communities are often adjacent to large seabird colonies. Consider for example Cape St. Mary's and St. Brides and Branch, or Funk Island and Musgrave Harbour, Fogo and Lumsden.

### **Using GPS to track seabirds**

Just a few decades ago the initial efforts to track animals involved large heavy gear which was attached to whales and other marine mammals. As technology improved, hardware and battery size were reduced making it possible to track large flightless birds like penguins then large volant albatrosses.

Today the miniaturization of tracking devices allow biologists to track tiny warblers and even insects. In the seabird realm, students in my lab are using 1-gram GPS to track the smallest seabirds that nest in eastern Canada – the Leach’s storm-petrel. Sydney Collins is obtaining tracks of these robin-sized seabirds that move hundreds of km from their nest-burrows in Witless Bay to venture off the eastern edge of the Grand Banks to feed in continental shelf waters.

### **Gannets fishing off Cape St. Mary’s**

It is quite a different matter to attach a GPS on a large feisty gannet on a cliff than on a tiny storm-petrels in a nest-burrow. And this year owing to the numerous kills of gannets by coyotes at Cape St. Mary’s, it was very difficult to locate gannets with chicks on the mainland. Fortunately, Chris Mooney, Kyle d’Entremont and I eventually lucked upon the one site that the coyotes did not visit. We were able to noose five parental gannets and tape GPSs to their tails.

The technology we use at Cape St. Mary’s allows us to obtain maps of the gannets’ fishing trips without recapturing the bird and retrieving the GPS. Instead, each time a bird with a GPS returns to its nest – its track is down-loaded into a base-station some distance away. We can then obtain the details of the fishing trips from the base-station. Some of the GPSs are solar-powered will continue recording for months.

So far the gannets have feeding on capelin throughout Placentia Bay and along the southern Avalon. Offshore capelin spawning sites in Placentia Bay are being studied and mapped by a group from the Davoren lab at the University of Manitoba, and we are comparing the gannets’ fishing spots with the capelin distribution.

We expect the gannets’ foraging behavior to change as the ocean warms and migratory mackerel, squid and saury move into the region. The GPS devices also provide information on diving behavior. We can determine where the gannets dive, how deep they dive and even the different types of dives that they make for different fishes.

Dives for capelin involve near-surface oblique plunges that are U-shaped under the water. Whereas vertical rocket-like dives for larger rapidly swimming mackerel are made from great heights and are V-shaped underwater. These dive data inform us about the fish the birds are eating and feeding to their chicks.

Let me work off Cape St. Mary’s where the fog horns wail and the gannets sail and the fish are everlasting.

### **Gannets entangled in gillnets**

Gillnets especially herring gillnets are problematic for gannets and other seabirds. On 15 July Cliff Doran photographed a 2<sup>nd</sup> year gannet that was flying off Cape Race with a piece of gillnet wound about it. Another entangled gannet likely fared better as it was picked up and untangled by a CWS crew by Gull Island in Witless Bay (Marina Montevicchi, Pierre Ryan).

### **Rare brown booby visits Cape St. Mary’s and south coast**

Sightings of a brown booby in Placentia Bay and around Cape St. Mary's on 27 July sparked some excitement that the wayward bird might be attracted to the gannet colony. (Kyle d'Entremont, José Ramirez-Garofalo). A few days later on 1 August a brown booby (same bird?) was photographed hitching a ride on the Marine Atlantic ferry on its way to Port aux Basques (Keith Vokey).

Brown boobies are related to gannets though smaller and darker as their name implies. Almost all brown boobies nest in the Pacific though 10 to 20 thousand nest in the Bahamas, Caribbean and northern South America and at times strays venture to Newfoundland and have been seen in Placentia Bay in the past.

### **Storm-petrels endangered by excessive night-lighting**

Leach's storm-petrels nesting on Baccalieu are following brightly lit long-liners into Bay de Verde where they are stranded on the wharf. Manager Barry Hatch has turned off the fish plant lights off when they not needed which helps the situation. Sherry Green and plant workers are releasing some of the birds that are otherwise killed by cats or simply swept off the wharf. Reducing unnecessary lighting on boats and on the wharf could benefit storm-petrels whose population on Baccalieu has halved during the last 30 years.

### **Other birds in the area**

On 28 July, a sandhill crane was photographed near the ocean below sod farm in St Shotts (Cliff Doran). The arctic shorebird migration is on the move. The first whimbrels were seen at Cape Freels, Greenspond and Cape St. Mary's in mid-July (Kyle d'Entremont, Janet Montevecchi). Flocks of ruddy turnstones, white-rumped sandpipers, sanderlings, semi-palmated and larger plovers are moving along the northeast southeast coasts.

Lisa and Robert Gillard of Beachy Cove Road did their best to rescue a hairy woodpecker that had been apparently mauled by a cat. But as is almost always the case once a cat bites a bird the outcome was lethal.

On the sunny resplendent last day of July – the resident song sparrow at the Auk House in Musgrave Harbour was singing as stridently as if it was the first day of spring and maybe it was.

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