

Pelagic Birds... A Life on the Ocean

by Martin Hagne

About a week ago, I had the opportunity to go on an offshore boat for 48 hours, and travel about 120 nautical miles out into the gulf, off the continental shelf and into some really deep waters. Most folks may do so to go deep sea fishing, or they may work on an oilrig... we went to bird!

There is a group of birds that spend their entire lives living on the ocean's vast expanses. They eat out of the ocean, sleep on the ocean, and spend their days soaring above the waves. The only time they move to land is for their nesting season, and some species only nest every two years. That means they literally live on the ocean for two years straight.

Some of these birds, such as albatrosses, even sleep while flying. Their huge wingspan (up to 11 feet in some species) keeps them soaring just above the waves, using the wind rising off the waves. There are many amazing facts about this group of birds, which is often referred to as Pelagic bird species.

This group of birds includes birds such as the aforementioned albatrosses. There are also storm-petrels, shearwaters, petrels, prions, fulmars, jaegers, alcids, and sheathbills. Those names alone spell intrigue! Not all of these live in our Gulf of Mexico, but many do. Others are distributed across the world's oceans. These birds all feed off the ocean, with a diet of mostly, well, it's the ocean, so... fish.

They have an incredible acute sense of smell, and can smell food from over a mile away. The oceans where these bird species live are salty, often very salty. So is their food, and the water they must drink. If you and I ate that much salt we would not do very well, and our doctors would most likely have a few words with us! So how can these birds deal with such daily doses of salt? Somehow they must purge and rid themselves of the excess salt.

In most mammals, the kidneys can do this for them. Bird kidneys are much less efficient than mammalian kidneys, so these birds must find another way to rid themselves of the salt. They have their own desalinization systems.

Many pelagic birds have a tubular structure on top of their upper bill (upper mandible). Excess salt basically runs out of this tube down the bill and drops back into the ocean. The tube is connected to a gland that is similarly structured to a kidney and lies in shallow depressions in or above the eye sockets. The excess salt is excreted from the blood by these glands, and is then extruded into the tubes. This is often done with the help of the birds shaking their heads or "sneezing", allowing the salt to leave the bird in a liquid form. Quite the extraordinary system!

These avian salt glands have made it possible for pelagic birds to survive in an otherwise hostile environment, and is one of the most effective ion transport systems ever known. This group of birds is often referred to as tubenoses.

On our trip, which left the dock in Freeport, Texas, just down the road from the Gulf Coast Bird Observatory, we observed 11 different pelagic bird species in out two days and two nights at sea. It's a fascinating world, and so different than what land birds experience in their daily lives!