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: Bird Brief :

Terns

ORDER: Charadriiformes (13 Families)

FAMILY: Laridae (390 Species)

Caspian Tern

Hydroprogne caspia

Forster's Tern

Sterna forsteri

Common Tern

Sterna hirundo

Black Tern

Chlidonias niger

The much anticipated spring bird migration is rapidly approaching. This is an exciting time of year to see many bird species linger to rest and forage before they continue flying to their chosen breeding grounds. Bird watchers long to see the colorful warblers pass through our region as well as orioles, tanagers, grosbeaks, flycatchers, vireos, and one of my favorites - terns!! The color of spring is breathtaking from feather to flora!

I have to say, there is nothing like watching a tern dive head first to catch a fish, then fly back out of the water, body shake to remove water while consuming its meal all within a breath of a second. Terns are militaristically precise, persistent and simply - elegant! They make gulls look like pudgy, slow, disheveled birds. Additionally, they fly with purpose and rarely rest. Terns are definitely show stoppers along the lakefront in spring!

I typically look for the Caspian, Forster's, and Common terns at McKinley Marina. The Caspian terns are the largest and earliest spring arrivals. Next, the smaller Forster's arrive, and shortly thereafter the Common terns. The black terns thrive in marshy habitats, so I often see them at Horicon Marsh in early May around the time of the annual Horicon Marsh Bird Festival.

Terns have distinct contrasting markings that make them easy to identify. Caspian, Forster's, and Common terns have a black cap, whitish-gray body plumage, and a bright reddish to orange bill. By far, the challenge comes when trying to identify the Forster's from the Common tern. So, here is a table of marking characteristics that may help you differentiate terns seen in our region.

	Caspian Tern <i>Largest</i>	Forster's Tern	Common Tern	Black Tern <i>Smallest</i>
Head Shape	Large and blocky	Blockier and Larger than Common	Rounded and smaller than Forster's	Small, round and all black
Bill Shape	Spearhead-like and usually flies with bill angled down	Thicker than Common	Thinner and longer than Forster's	Long and slender
Bill Color	Orange and very broad-based	Orange	Red to orangish-red	Black
Wing Tip	Large black wedge	Pale primaries	Dark wedge on primaries	Gray-black
Tail Markings	Short; shallow forked	Long forked tail	Long forked tail with black outer webs on outer tail	Short and slightly forked
Call	Explosive KE-OUW	Harsh Keeeaa	kee-yaa	Scratchy KEK

I would like to share some of my favorite facts about these terns.

First, courtship and nesting are charming! During courtship, the male tern will present a fish to the female in his bill. They will then perform a synchronized aerial ballet while calling to one another. This has been called the ***fish flight***. If a bond is established, then both will land and the male will finally

give the fish to the female and proceed to mate. Interestingly, the male will continue to feed the female during egg laying and early incubation. In fact, clutch size and weight of the offspring are greatly improved if the male provides quality food during the early nesting period. This, in part, will keep the female healthy and well fed and thus she will be a better care provider for the semiprecocial offspring. This is important because researchers have found that weight gain of the nestlings is the best predictor for survivability of terns. I'm also intrigued by their nesting design. The nest is constructed by loosely scattering gravel or sand while making a shallow depression, which is called a scrape nest. What is heartwarming is the fact that the tern will sometimes decorate the edge of the nest with mollusk shells. I love the fish flight, the fish delivery to the female, and the nest decorating - all fascinating aspects of courtship.

Second, the name tern comes from the Old Norse word, *taerne*. Do you remember the story of Captain Cook? Well, the Forster's Tern is named after Johann Reinhold Forster, a scientist who accompanied Captain Cook around the world. The Caspian Tern was named for the Caspian Sea where it was first identified.

And finally, the tern wing and tail are unique and have been studied to understand aerodynamic forces of lift and drag. In other words, are the wings the focus of providing lift and is the tail responsible for drag? Is the aspect ratio, or ratio of wingspan to wing width, important in flight? Well, the higher the aspect ratio and the higher the lift-to-drag ratio, the less energy is needed for flight. Birds with slender, long wings are the most energy efficient and can stay in flight for long periods of time. Albatross birds are a perfect example and can stay aloft for months without landing because of their extraordinary energy efficiency. For birds with wider, shorter wings, more energy is needed for flight. However, these birds, like hawks, can maneuver and takeoff rapidly. For terns, not only do they have slender, pointier wings, but they also have forked and fanned tails. Studies have shown that these attributes provide high lift-to-drag ratios. This means that terns can float on open water winds with minimal energy expenditure. So, not only are terns elegant, they are magnificent energy conserving fliers which allows them to fly long distances around the globe!

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