

**St. Charles Park District
Nature News – December 24**

Well, it happened again this week. There I was out on Randall Road, along with 2 million other people in frenzied pre-Christmas mode, facing the same dilemmas I have every time I try to “shop.” Where is Bed, Bath & Beyond in relation to Borders? Is Gander Mountain north of Fabyan Parkway, or south? And what’s the best way to get from Best Buy to Trader Joe’s?

As I sat at yet another red light, 15 cars from the intersection, absorbing the stark realization that Trader Joe’s was in the complete opposite direction, I couldn’t help but think of how much easier this venture would be, if only I were a chickadee.

Chickadees, those black-capped, winged wonders so prevalent at this time of year, are experts when it comes to spatial relations. They might not care about which store is Office Depot and which one is OfficeMax, and I doubt they could tell me where Ann Taylor is at Geneva Commons, but they sure know how to find what they need to survive, even thrive, in our harsh winter weather.



Primary amongst those needs is food—the seeds, nuts, spiders and insects that provide needed energy. To make sure there’s enough to eat, chickadees employ a strategy called scatter hoarding. That is, they cache thousands of food items across the tens of acres that is their foraging territory. Then, when supplies are scarce, all the birds have to do is retrace their steps (or shall we say flaps?) to find the bits and morsels they’ve stashed away.

Now here’s where the story gets positively amazing. Rather than relying on chance to find a sunflower seed here or a peanut chip there, chickadees actually recall where they put them. It’s the avian equivalent of finding thousands of carefully placed needles in hundreds of haystacks. And to folks like me, who struggle to remember where we put the car keys, the feat is truly astounding.

The key to the bird’s success lies in a part of its brain called the hippocampus. In chickadees, as it is with most vertebrates, the hippocampus is responsible for keeping track of spatial organization and memory. But unlike the hippocampi of most other creatures, that of the chickadee changes in size, growing by nearly 30% during the fall months to accommodate its increased need for recall and navigation. In spring, when food becomes more plentiful, the brain region returns to its previous dimensions.

Studies have shown that chickadees can cache as many as 100,000 food items over a year's time and that, during winter, they can remember the locations of thousands of individual food items for a period of weeks and even months. It's also been proven that the birds are returning to their own caches, not simply nibbling on whatever food they happen to come across. Further, research indicates that chickadees know when their food has been pilfered (losses of up to 20% per day can occur when rodents or other bird species are factored in) and will learn to avoid such "high crime" areas.

One last thing that's great about chickadees—they're everywhere. North American scientists have found them to be ideal research subjects because they are year-round residents, their numbers are plentiful and they have little fear of humans.

You too can observe their captivating behaviors without a great deal of effort. Look out a window that faces a bird feeder or, better yet, bundle up and take a walk in one of our area's great natural areas. Chances are the chickadees will be out in force, feeding, foraging and caching for the future. Look up in the trees and listen for their distinctive "chicka-dee-dee-dee" call, a sure sign that you've been spotted.

As a matter of fact, I plan to head out for a little chickadee-watching myself. I've got my hat, coat, boots and gloves. Now if I could only find the car keys...

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