Lesson 4 Amazing Animals Around Us

A World on the Wing

Jo: Hello, listeners. Did you know there are times at night when a massive migration happens right over your heads? The scale of migration involving billions of birds traveling up to thousands of kilometers leaves you in awe. On today's Jo's Tea Time , we invite naturalist and author Scott Weidensaul to share his knowledge. He's spent decades studying migratory birds, writing about them, and engaging in conservation efforts. Welcome to the show, Mr. Weidensaul.

Weidensaul: Thanks for having me, Jo.

Jo: Your new book says every spring and fall, hundreds of millions to billions of migratory birds pass over our roofs, but we seem to have no idea that it's happening. Why is that?

Weidensaul: Well, most birds migrate after dark, including almost all of the birds that are normally active during the day. That's why it's hard for us to realize the migration is happening. They migrate at night because the night sky is cooler, and the air calmer. Besides, there are fewer predators at night. If you could strip away the night sky and make everything visible, this migration would probably be the largest, greatest natural spectacle on the planet.

Jo: Among those global travelers in your book, I found the bartailed godwits to be particularly impressive.

Weidensaul: Sure. Some of them can even make a 10,000 km nonstop journey across the Pacific Ocean, from western Alaska to New Zealand in 11 days.

Jo: How do they travel such a long distance over a nearly featureless ocean?

Weidensaul: To find their routes, the bar-tailed godwits probably rely on the sun and stars among other things. Some experts believe that they may be able to sense the earth's magnetic field lines, too. You may also wonder how, if ever, they sleep while flying over a vast ocean. It turns out that migratory birds use an approach called "half-brain sleep." This is how it works. Only the left half of the brain sleeps for a couple of seconds, then only the right half for the next couple of seconds, and then this process repeats over and over again. Isn't it amazing? Actually, some sea mammals like dolphins can do that, too, because they have to keep breathing consciously.

Jo: That's a neat trick. Who wouldn't like to have such an ability?

Weidensaul: Birds in migratory condition can do things that they can't do at other times of the year. Another neat trick you might envy is that they can gain a tremendous amount of muscle tissue without exercise. For example, before some bar-tailed godwits leave Alaska in September and make a 10,000 km flight across the Pacific, they undergo a process of binge feeding. They just eat and eat until they double their weight. By the time they take off, their heart and flight muscles may have increased by 50%. After they have eaten as much as they possibly can and can't put any more weight on, their digestive organs shrink dramatically because these won't be put to use during the non-stop flight to New Zealand.

Jo: Then what happens after they arrive there?

Weidensaul: They regrow their digestive organs and spend the summer feeding again, and they undergo the same journey back to Alaska. They do this again and again for 25 to 30 years, flying up to 30,000 km every year. By the time bar-tailed godwits die, they have flown close to twice the distance from Earth to the moon.

Jo: That's truly impressive. By the way, I hear you've visited Korea several times before. Why do you come here so often?

Weidensaul: As a bird watcher and conservationist, I find the Yellow Sea mudflats between Korea and China very special. They are some of the largest tidal mudflats on the earth and provide a critical stopover point for the countless migratory birds on the East Asian-Australasian Flyway. While these enormous stretches of tidal mud look featureless to the human eye, they have plenty of marine life forms.

Jo: So the mudflats are drawing all kinds of birds in from as far away as New Zealand, Australia, and Asia?

Weidensaul: Yes. Many of these birds fly several thousand kilometers to get to the Yellow Sea. Here, they have to double their weight in less than two weeks and make another flight of several thousand kilometers up north. That's why the Yellow Sea is so critically important. It's one of the few places in the world where migratory birds can get the resources they need on their difficult journey.

Jo: Oh, I had no idea that the Yellow Sea has such importance. What do you think we can do to preserve this precious gathering place for migratory birds?

Weidensaul: Well, you can start by raising awareness of its importance among people around you. Or, if you want to be more actively involved, you can participate in cleaning up beaches or monitoring wildlife habitats. On a bigger scale, because migratory birds travel through many countries, international cooperation is a must for their protection. Actually, I'm working with an international organization consisting of the countries along the East Asian-Australasian Flyway. As a result of our international collaboration, we managed to successfully bring back the endangered blackfaced spoonbills.

Jo: Fascinating! Mr. Weidensaul, today you let us see migratory birds and the Yellow Sea in a whole new way. Thank you!

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Hamsters in Urban Areas

Today, I'm looking for a tiny animal that's hiding in one of Europe's most beautiful capital cities, Vienna. Now it's home to nearly 2 million people, but 50% of the city is green space. What I'm looking for is probably one of Europe's most critically endangered mammals.

Now, I've come really early to a graveyard to try to see some hamsters because this is one of the best times of day to see them. At this time of the day, there's nobody around so they don't have to avoid people while looking for food. These little ones have been in the area for decades, but now live among the dead because development has robbed them of the green fields they used to inhabit.

Look! I just found one over there. See how it is trying to stuff its cheeks full? Hamsters can pack a quarter of their body weight inside their cheeks, which helps them get through the winter. Surprisingly, they not only feed on nuts and flowers, but have also adapted to eating candle wax, which is a good source of fat and is easy to find in graveyards.

Even though the hamsters here have adapted to the noises of the city, they still keep a watchful eye, as predators are never too far away. They may need to quickly escape back down into their holes, which are complex structures stretching under the ground. Despite urban areas generally having a negative effect on wildlife, cities can actually provide islands of protection for it.