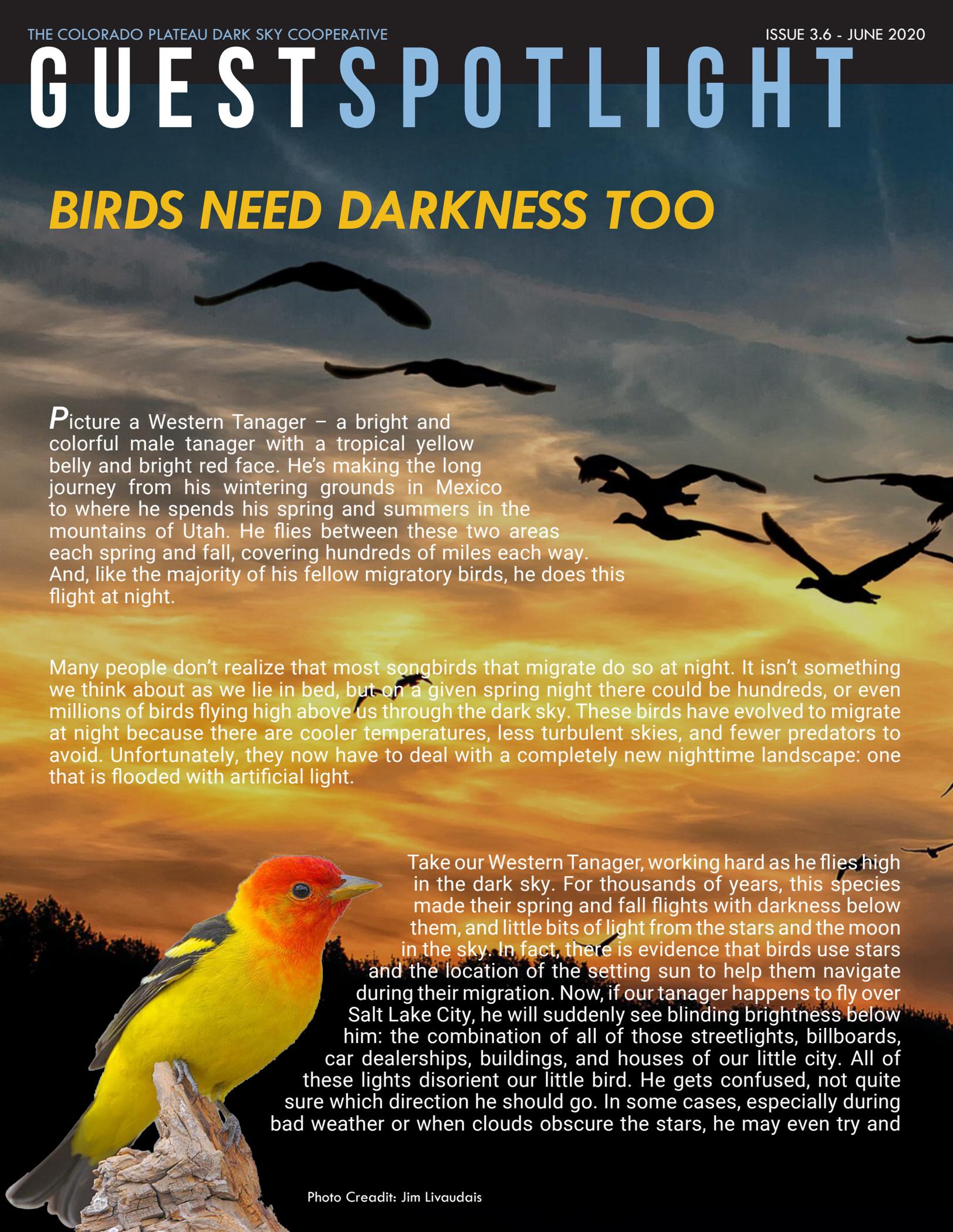


GUEST SPOTLIGHT

BIRDS NEED DARKNESS TOO

Picture a Western Tanager – a bright and colorful male tanager with a tropical yellow belly and bright red face. He’s making the long journey from his wintering grounds in Mexico to where he spends his spring and summers in the mountains of Utah. He flies between these two areas each spring and fall, covering hundreds of miles each way. And, like the majority of his fellow migratory birds, he does this flight at night.

Many people don’t realize that most songbirds that migrate do so at night. It isn’t something we think about as we lie in bed, but on a given spring night there could be hundreds, or even millions of birds flying high above us through the dark sky. These birds have evolved to migrate at night because there are cooler temperatures, less turbulent skies, and fewer predators to avoid. Unfortunately, they now have to deal with a completely new nighttime landscape: one that is flooded with artificial light.



Take our Western Tanager, working hard as he flies high in the dark sky. For thousands of years, this species made their spring and fall flights with darkness below them, and little bits of light from the stars and the moon in the sky. In fact, there is evidence that birds use stars and the location of the setting sun to help them navigate during their migration. Now, if our tanager happens to fly over Salt Lake City, he will suddenly see blinding brightness below him: the combination of all of those streetlights, billboards, car dealerships, buildings, and houses of our little city. All of these lights disorient our little bird. He gets confused, not quite sure which direction he should go. In some cases, especially during bad weather or when clouds obscure the stars, he may even try and



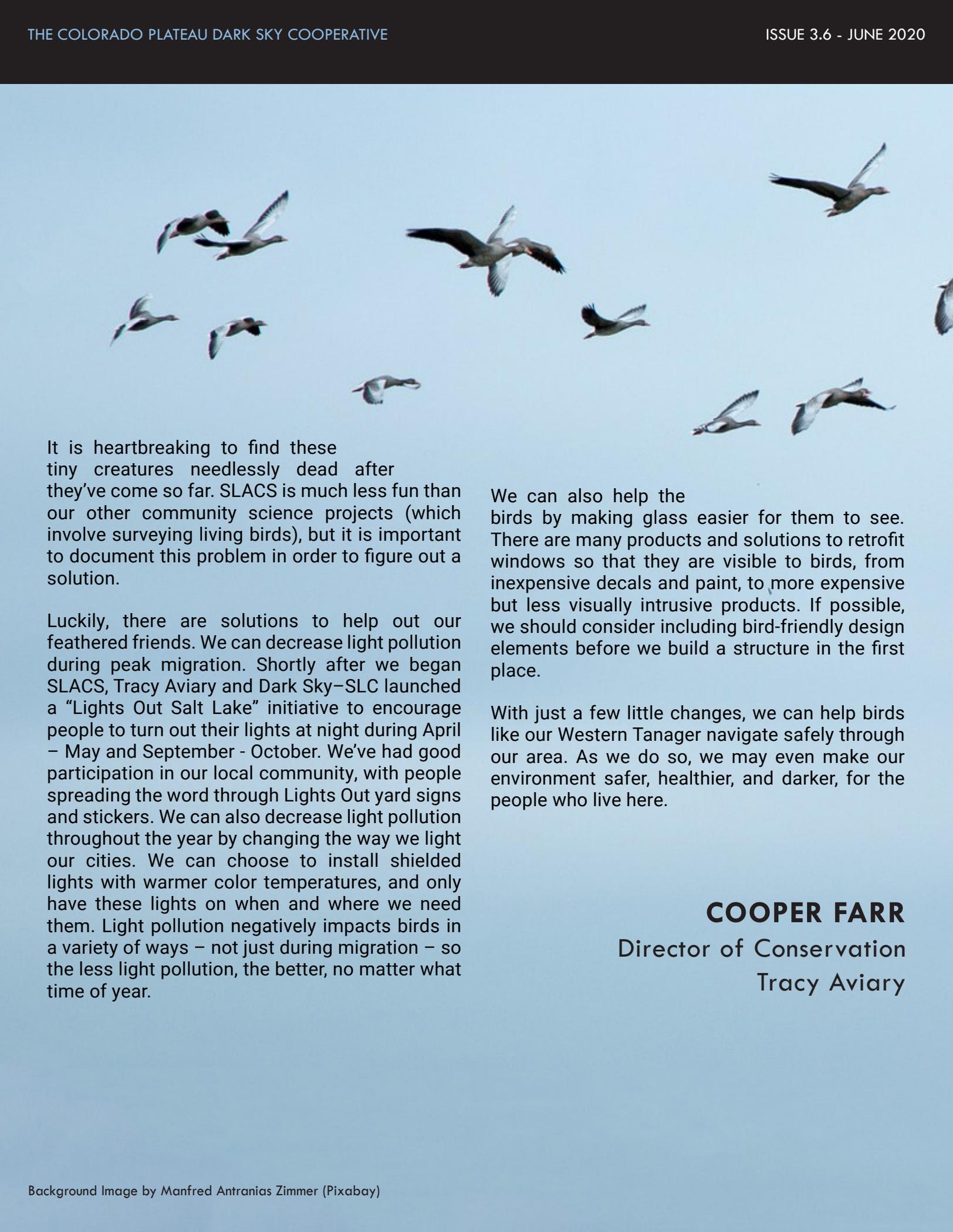
fly down toward the lights of the city. Once inside this bright urban area, the tanager may not be able to figure out how to leave, even if he does get his bearings. Birds will often avoid going from bright areas to dark ones, so he may feel trapped in the city. He most likely has to hunker down until morning.

Unfortunately, once the sun rises, our little tanager finds himself in a very dangerous environment. Bird eyes can't perceive glass the same way that human eyes do. They see transparent windows as something they can fly through. Or, if a window reflects trees, other vegetation, or even sky, they may think they can fly right into the image. Sometimes, a bird that is drawn into a bright city will make it safely out again, and continue on their journey. We'll say our little tanager was able to fly out of the city and up to the mountains into safety. But, all too often, birds that are drawn into our cities end up colliding with windows before they make it out again. It is estimated that between 365 and 988 million birds die from crashing into windows in the United States every single year. Window collisions happen for a variety of reasons – not just when light pollution draws birds off course – and it is a huge problem

for birds in this country, and around the world.

This negative relationship between light pollution and migratory birds has been documented by many studies around North America, but before 2017 no one had investigated whether this was an issue in Salt Lake City. At the time, Tracy Aviary was looking to expand our community science program with a project that focused on urban ecology and conservation. We had already been partnering with the Salt Lake Chapter of the International Dark Sky Association (now encompassed in the statewide Utah chapter) on some outreach and education efforts. Gathering data on the relationship between migration and light pollution in the city was a natural expansion of our work, and in spring of 2017 we launched the Salt Lake Avian Collision Survey (or SLACS for short). For this project, volunteers walk downtown survey routes during spring and fall. They search the areas around buildings in 20 city blocks of downtown Salt Lake City looking for birds that have collided with buildings. Once a bird is found, the species and location is documented, and the bird is collected and donated to the Natural History Museum of Utah for further research and display in their collection.

Since we began this project in 2017, we have documented 144 bird-building collisions. This number represents a small fraction of the birds that likely collide with windows in the area, considering we're only surveying 20 blocks, and we're doing so intermittently throughout the migration season. We've found 38 different bird species so far. Western tanagers are among the victims, unfortunately, but we find many types of birds on our surveys - from the beautiful blue Lazuli Bunting to the tiny Calliope Hummingbird, to the drab (but no less important) Brewer's Sparrow.

A photograph of several birds in flight against a clear, light blue sky. The birds are scattered across the frame, with some in the foreground and others further away. They appear to be in various stages of flight, with wings spread and some showing dark feathers on their wings and tails. The overall scene is peaceful and natural.

It is heartbreaking to find these tiny creatures needlessly dead after they've come so far. SLACS is much less fun than our other community science projects (which involve surveying living birds), but it is important to document this problem in order to figure out a solution.

Luckily, there are solutions to help out our feathered friends. We can decrease light pollution during peak migration. Shortly after we began SLACS, Tracy Aviary and Dark Sky-SLC launched a "Lights Out Salt Lake" initiative to encourage people to turn out their lights at night during April - May and September - October. We've had good participation in our local community, with people spreading the word through Lights Out yard signs and stickers. We can also decrease light pollution throughout the year by changing the way we light our cities. We can choose to install shielded lights with warmer color temperatures, and only have these lights on when and where we need them. Light pollution negatively impacts birds in a variety of ways - not just during migration - so the less light pollution, the better, no matter what time of year.

We can also help the birds by making glass easier for them to see. There are many products and solutions to retrofit windows so that they are visible to birds, from inexpensive decals and paint, to more expensive but less visually intrusive products. If possible, we should consider including bird-friendly design elements before we build a structure in the first place.

With just a few little changes, we can help birds like our Western Tanager navigate safely through our area. As we do so, we may even make our environment safer, healthier, and darker, for the people who live here.

COOPER FARR

Director of Conservation
Tracy Aviary



Cities are full of brightly lit, glass-covered buildings that are dangerous for birds.
Photo Credit: Cooper Farr



Dead Western Tanager found by a SLACS volunteer after it collided with a building.
Photo Credit: Ginger Hauschild