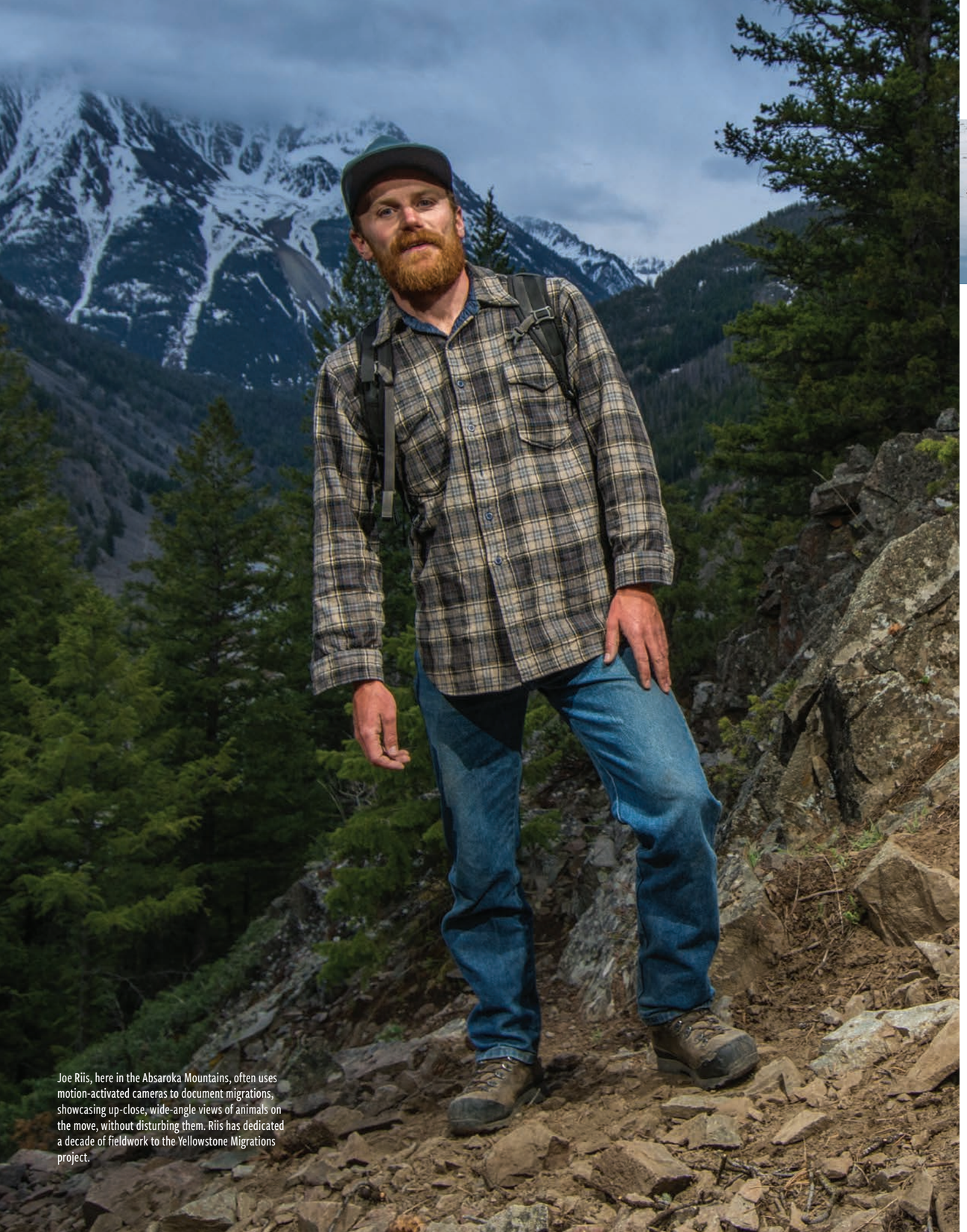


Joe Riis, here in the Absaroka Mountains, often uses motion-activated cameras to document migrations, showcasing up-close, wide-angle views of animals on the move, without disturbing them. Riis has dedicated a decade of fieldwork to the Yellowstone Migrations project.




Photographer Joe Riis' body of work includes recording the migrations of pronghorn, elk and mule deer. His photographs showcase the challenges these species face, such as barbed-wire fences and deep snowpacks, when migrating hundreds of miles twice a year.

PIONEER IN WILDLIFE PHOTOGRAPHY BRINGS

MIGRATION TO THE MAINSTREAM

Story by Kelsey Dayton

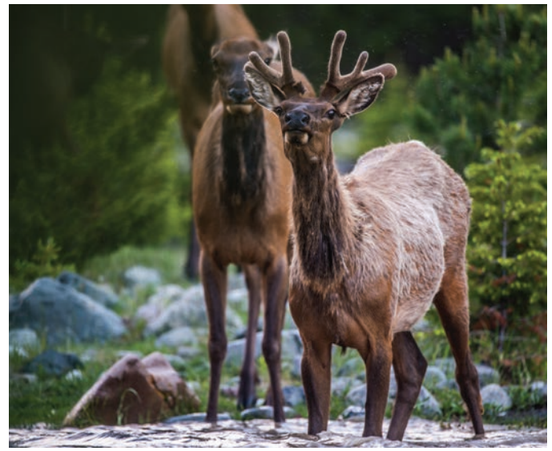
Photographs by Joe Riis

Time in the Greater Yellowstone Ecosystem could be measured in migrations. The movement of elk, deer and pronghorn mark the transition from fall to winter and winter to spring. Their arduous journeys across raging rivers and 10,000-foot mountains define an ecosystem.

Some of Joe Riis' favorite images from these places — a pronghorn with a leg stuck in a fence, or an elk with calves panting up a mountainside, or a group of pronghorn crossing the Green River with one animal in the foreground — show the essence of these migrations. It is slow and deliberate. It's about survival, finding food and raising young. And it's incredibly hard and awe-inspiring.

That, said the Cody-based photographer, is what he hopes people see when they look at his images.

A National Geographic Photography Fellow and also a photography fellow at the Wyoming Migration Initiative, Riis has spent the last decade creating



Elk ford the Shoshone River during the regular migration to their summer and winter ranges.

Pronghorn are notoriously skittish and Riis didn't want images of the animals running away from him. He wanted to capture what migration looked like without the animals reacting to human presence, so he spent a year pinpointing the animals and their movements.

groundbreaking photographs of big game migrations in the Greater Yellowstone Ecosystem, documenting not only previously unseen movements of animals in the wild, but inventing and perfecting a camera system to do it.

His work and pioneering efforts have helped people who may never set foot in the outdoors understand how a grueling push over a mountain pass causes veins to pulse from a bull elk's neck, or the danger of guiding young fawns across swollen rivers, or the perils a seemingly innocuous fence might pose to a sprinting pronghorn.

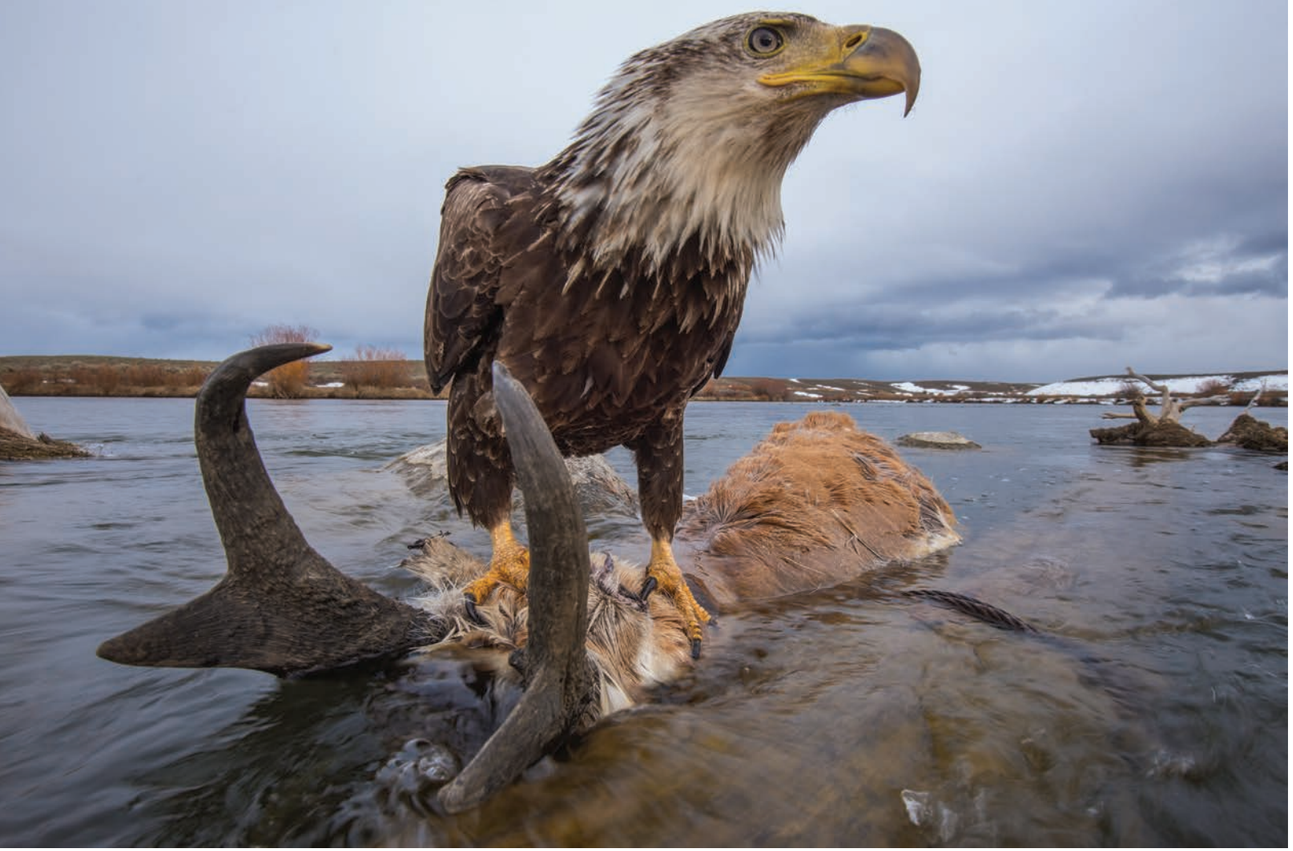
More people understand it because they can now see it in his photographs and videos.

"I didn't plan on spending 10 years on migrations in the Greater Yellowstone Ecosystem," he said. "My goal was not to become a full-time professional wildlife photographer, my goal, at the beginning was to have some experience in the wild and tell some important stories."

Riis grew up in South Dakota, in the Central Flyway. His earliest memories are of watching thousands of birds descend on the area as they migrated south to the Gulf of Mexico. He wondered where they came from and where they went.

Riis was introduced to the outdoors by fishing and hunting with a father who was a state fish

Pronghorn cross a swollen creek in the Gros Ventre Mountains as part of the migration to Grand Teton National Park. This herd of 400 pronghorn form the longest land mammal migration in the U.S.



Migrating is not easy. A bald eagle takes advantage of those spoils with this pronghorn that got lodged in the Green River. This shot was taken with a remote trigger set up about 1 mile away.

biologist and spent time teaching him the ethics of a life outdoors. He was 15 when he discovered a box of camera gear his parents used before he was born. They taught him the basics and he experimented shooting outside, learning to control the aperture and when to change the shutter speed.

His process today is the same as the one he created to document the pronghorn. He still hikes the terrain the animals travel, braving the elements for days on end as he carefully tracks the animals and sets up cameras. His goal is also the same: to tell a complex story in a way people can understand.

The budding photographer enrolled at the University of Wyoming, earning a degree in wildlife biology in 2008. On weekends he drove around the state taking scenic pictures. When his friend, Emilene Ostlind, dreamt up a project to follow the 100-mile migration of pronghorn from the Red Desert to the Pinedale and Jackson Hole areas and write about it, she asked Riis if he would photograph it. He was intrigued. He couldn't find images of the pronghorn migration online and didn't even know what it would look like.

Pronghorn are notoriously skittish and Riis didn't want images of the animals running away from him. He wanted to capture what migration looked like without the animals reacting to human presence, so he spent a year pinpointing the animals and their movements. Then he planned and set four motion-triggered cameras along the migration route, leaving them for two to 10 days at a time before moving them to another location. Unlike typical trail cameras, these were closer to the ground and carefully angled to capture what he hoped would be the best composition. He used wide-angle lenses to record both animals and landscape. He knew he wanted to show everything, from the backcountry movements no one sees, to the animals crossing roads and negotiating fences.

"Because I'm trying to show migration, it's not really about a single picture," he said. "This is a journey."

It was an expedition of trial-and-error. Sometimes an animal bumped the camera, turning the lens the wrong direction. Rain would pool on the lens, distorting images. Or the animals wouldn't come close enough for Riis to get the shot.

It took two years, but Riis created the images that showed, for the first time, what a pronghorn migration really looks like.

"He didn't just photograph it, he essentially revolutionized the way camera traps are used to photograph wildlife," said Hall Sawyer, a research biologist with Western Ecosystems Technology, Inc., and an adjunct professor at the University of Wyoming.

Riis thought the project was a one-time effort. But in 2012, Sawyer called after discovering a mule deer migration that spanned 150 miles from winter ranges in the Red Desert to high-elevation mountains around the Hoback Basin. During the four-month journey, the herd of 5,000 mule deer cross a complex landscape of private and public land, deserts, rivers, roads and fences.

Sawyer didn't want to write another paper about it for scientists; he wanted to share the story with the public, and that meant people needed to see it to understand.

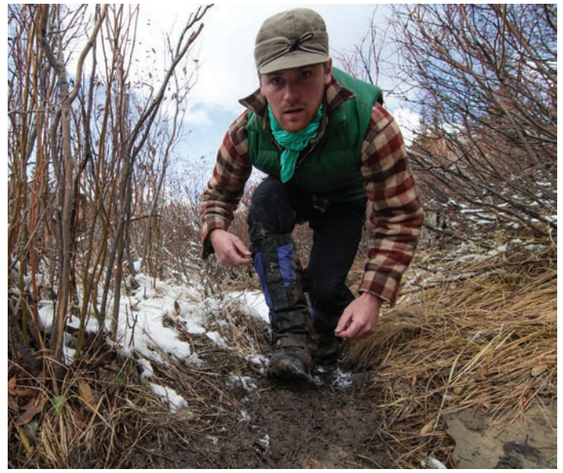
Riis' work "brings migration into the mainstream and into people's living rooms," Sawyer said.

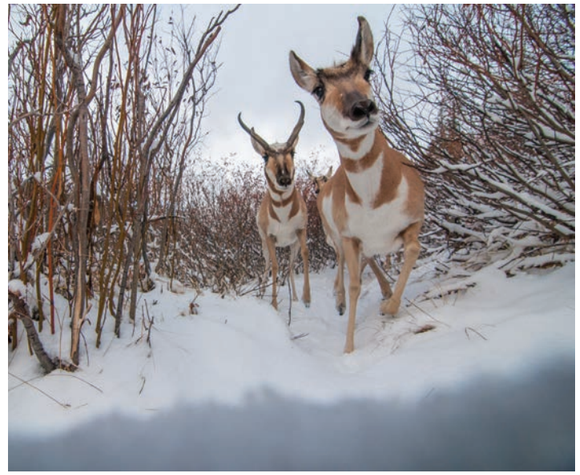
After following the mule deer journey, Riis went on to get involved in 2013 on a study with researcher Arthur Middleton, the Wyoming Game and Fish Department, and several Cody-based outfitters, to track the migration of part of the Cody elk herd as they crest 11,000-foot peaks on their journey into Yellowstone National Park and the Teton Wilderness. Riis' photos and video helped Game and Fish biologists better understand the herd's movements, management and the role humans play along their migration route.

His process today is the same as the one he created to document the pronghorn. He still hikes the terrain the animals travel, braving the elements for days on end as he carefully tracks the animals and sets up cameras. His goal is also the same: to tell a complex story in a way people can understand.

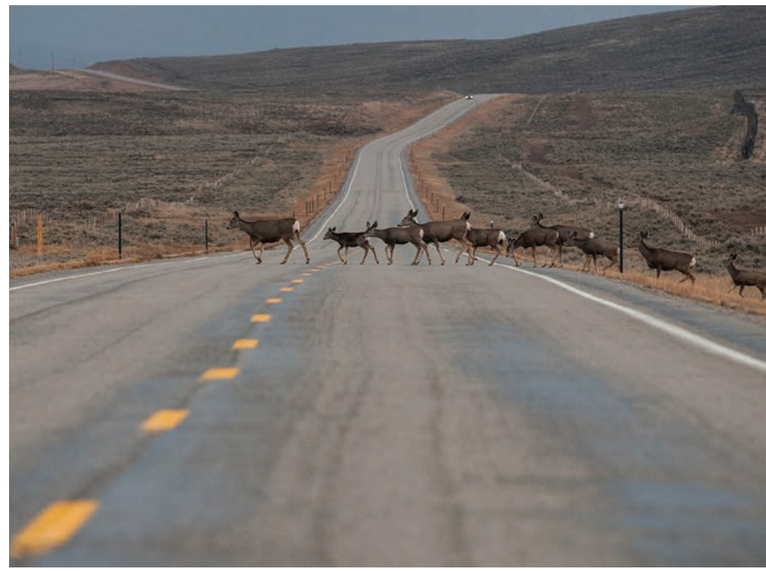
"People connect with photographs and video," he said. "It's the one international language that transcends."

— Kelsey Dayton is a freelance writer and editor of Outdoors Unlimited, *the magazine of the Outdoor Writers Association of America.*





Joe Riis gets a self-portrait in the Gros Ventre Mountains while checking a motion-activated camera that the pronghorn would eventually trigger. He often uses these types of cameras to document the Yellowstone migrations. The remote cameras allow him to showcase views of animals on the move without disturbing them.



A herd of mule deer cross Wyoming Highway 352 near the Cora post office. Although the roads were dry then, the deer continued their fall migration through a snowstorm the next day.