

2017 PULITZER PRIZE WINNER

# The Salt Lake Tribune

DEC. 31, 2018 « MONDAY » SLTR M

U. football » Holiday Bowl vs. Northwestern is a reward — and a test » B1

NFL PLAYOFFS:  
EAGLES GET NFC  
WILD CARD, RAVENS  
WIN AFC NORTH » B1

## LOOKING AHEAD



# Homeless services aim for a fresh start

**New shelters** » Utah providers pin big hopes on change in approach, facilities and measuring.

By **BENJAMIN WOOD**  
*The Salt Lake Tribune*

Matt Minkevitch, executive director of The Road Home, was optimistic in a recent interview about

the progress of the homeless shelter's annual holiday fundraiser.

Donations amassed during the two-day telethon, he said, are critical to keeping The Road Home running

smoothly through the end of June, when its fiscal year turns over.

"It's not superstition," Minkevitch said, "but I don't count until we're done."

The looming summer months have additional weight this year, because The Road Home will relocate

sometime in June or July to a new location. It will be one of three new homeless resource centers scheduled to open next year in Salt Lake County after years of planning, debate and occasional missteps by the various government agencies and

Please see **HOMELESS, A4**



RICK EGAN | *The Salt Lake Tribune*

A homeless shelter is under construction Friday at 3380 South 10 West in South Salt Lake.

# Cams offer snapshots of Utah wildlife



LEAH HOGSTEN | *The Salt Lake Tribune*

**Above** » University of Utah biologist Austin Green demonstrates a heat- and motion-activated Bushnell camera. Those cameras have captured cougars, mule deer and other animals heading down paths to Red Butte Creek for water. Green is leading research exploring how recreation affects wildlife in the central Wasatch.

**Right** » Moose and mule deer are among most common animals seen in the footage, along with red foxes, raccoons, squirrels, turkeys and mountain lions.



Scientists plan to use tens of thousands of images produced by automatic cameras to get answers about the animals' response to development and recreation — and hope the community will lend a hand.

By **BRIAN MAFFLY** | *The Salt Lake Tribune*

As many a northern Utah mountain biker or cross-country skier knows from firsthand experience, moose often hang out on favorite trails and are not always in a hurry to let a rider pass, yet most cyclists can go a lifetime without ever seeing a cougar or a bobcat while touring.

Outdoor recreation and wildlife cohabit

in a big way along the Central Wasatch Mountains and the foothills that tumble into Utah's largest urban area, yet scientists have only a vague idea of how animals respond to all the athletes, picnickers and hikers traipsing through their living room.

Now biologist Austin Green hopes to find firm answers using dozens of trap cameras. But his research has generated more information than he and his team can handle:

50,000 critter images recorded during a 105-day study period last spring and summer.

"It will be a ton of data, which is very exciting. We are more excited than daunted," said Green, a doctoral candidate with the University of Utah's Biodiversity and Conservation Ecology Lab. "It opens an opportunity to the community. Anyone that's interested can get involved and help us look

through all these photos."

The images are loaded onto a special website, where certified participants can access them. The Wasatch Wildlife Watch study is a classic "citizen science" project, enlisting dozens of volunteers to deploy monitoring equipment, then gather, organize and analyze the data. This is time-consuming, tedious work but vital for

Please see **WILDLIFE, A4**

Bushnell CAM21 57°F 13°C 06-23-2018 09:29:18  
Courtesy image

## Wildlife

Continued from A1

advancing field science.

"Leveraging Community Science to collect crucial information on ecological data gaps is a win-win for local stakeholders and land and wildlife management agencies alike," Green co-wrote in an op-ed with Allison Jones, executive director of the Wild Utah Project. Without the assistance of lay scientists from the community, research like the Wasatch wildlife study would not happen, particularly when government and institutional support for field science is declining.

"The goal is to fill a huge data gap in terms of what we don't know about medium-sized mammals, and how human activity and recreation are influencing those core habitats and the pathways between them," Jones said in an interview. "We need the data more than ever because there is so much planning and development and proposals coming down the pike in the Central Wasatch."

Wild Utah Project is helping coordinate Green's research along with support from the Utah Natural History Museum and Salt Lake City's parks and public lands division.

The images were recorded at 210 sites in a 367-square-mile areas stretching from the Wasatch peaks to the Jordan River, with an emphasis on the canyons from City Creek to Little Cottonwood.

Green's research builds on four years of data already recorded in Red Butte Canyon, the research natural area that is closed to public access just east of the U. campus. That work netted images in a place that has been largely undisturbed for decades, while Green's study targets spots like the Bonneville Shoreline Trail that see a steady, year-round stream of people.

"We have a good baseline data set for when animals should be active, so now we are going out into more trafficked areas," Green said. "We had cameras on hiking and bike trails, campsites, any type of human



LEAH HOGSTEN | The Salt Lake Tribune

University of Utah biologist Austin Green shows one of the camera sites in Red Butte Canyon that has captured cougars and other wildlife. Green is leading a study exploring how recreation affects wildlife in the central Wasatch. With the help of hundreds of volunteers, teams have rigged trap cameras at 210 sites and recorded 40,000 to 50,000 images of animals.

recreation, from fully protected to massive use."

Other Utah biologists have already documented what's known as the Wasatch "weekend effect," when wildlife appear to have adjusted their routines in response to outdoor recreation. Salt Lake, Davis, Weber and Utah counties are bordered by public lands that teem with people on weekends.

The Uinta-Wasatch-Cache National Forest sees about 9 million visitors a year, focused mostly in Little and Big Cottonwood canyons, which are also critical water sources for Salt Lake City.

"We are looking at how recreational traffic affects wildlife abundance, distribution and behavior," Green said. "We want to identify key habitat areas that need to be protected or restored or subject to planning efforts. Whether you are climbing, hiking or biking, you are going to be affecting wildlife in various ways."

Green's study window ran from May 6 to Aug. 18, broken into three blocks. For each six-week block, volunteers set up 70 camera locations. The teams avoided rigging cameras on slopes greater than 45 degrees or facing sunrises and sunsets, usually strapping them to bushes or trees at knee height.

"This maximizes capture of anything from the size of a skunk to a moose," Green said. "You might not get the whole body, but you can still tell it's a moose."

Commonly used by hunters to scout locations to stalk game, motion-triggered trail cameras have become a vital tool for studying wildlife. But their widespread use raises privacy concerns, especially in studies that focus on lands that see heavy human activity.

But trail cameras snap shots that few human photographers can ever get and do it on a shoestring. Green is running his study on \$30,000 in grants from public and private sources. The 70 cameras he used cost about \$250 apiece, or \$400 total, including locks, security cases and batteries. The city and museum purchased many of these cameras and will retain ownership.

The critter cams record the date, time, geocoordinate and temperature when the animal was photographed.

"This does it automatically 24/7. That's why it's great for mammals," Green said. "Mammals are usually nocturnal. They are wary of humans. ... It's easy to count birds but hard to count mammals."

The cameras automatically switch to infrared at night,

but images can still get overexposed or underexposed at dawn and dusk.

So far, the most common species registering in the data is *Canis lupus familiaris*. That's right, dogs. Not surprisingly, *Homo sapiens* also appear regularly, but those images are not studied. After people and their pets, mule deer are by far the most common animal seen in the data, along with squirrels, red foxes, raccoons, moose, turkeys and mountain lions.

"We can estimate abundance at each site. From that, we can identify where animals are most active. We can identify what habitat they use most, what areas in the Wasatch are most important for every species," Green said. "We can overlay those heat maps on each other. We hope we can see areas where we have an important patch of habitat, and see if something is blocking connection between them."

Green and his colleagues view the camera study as a "legacy" project that will continue year after year. The next step is a winter survey, but trap cameras are not practical when snow is piling on the ground.

So this aspect of the study will gather data the old-fashioned way, examining tracks left in the snow.