



NEWS&GUIDE PHOTO / BRADLY J. BONER

Researchers with Craighead Beringia South put a radio collar on a sage grouse in April at a breeding area, or lek, near Jackson Hole Airport. The study's preliminary findings showed that female birds visit different leks, contrary to what scientists had believed.

Sage grouse span multiple breeding areas

Study could prove to be important for Wyoming population estimates.

By Cory Hatch

In the quest for the perfect male, female sage grouse in Jackson Hole move from lek to lek, a finding that could have important implications as sage grouse populations continue to decline in the rest of the state.

This past summer, Craighead Beringia South biologists used Global Positioning System collars and radio collars to track 15 breeding-aged female sage grouse as they moved among leks at the Jackson Hole Airport, on the National Elk Refuge and in Grand Teton National Park.

A lek is where male sage grouse gather to put on a competitive mating display for females. Dominant males defend key locations in the lek from potential rivals. Females then choose the male they wish to breed with, usually the dominant males.

According to Beringia biologist Bryan Bedrosian, scientists previously thought that female sage grouse stayed at one lek for the duration of the breeding season. Though the results of the study are preliminary, Bedrosian said its clear that some females in Jackson Hole used more than one breeding area.

If the birds move from breeding ground to breeding ground in other parts of Wyoming and the United States, the study could change how scientists

make population estimates. Biologists would need to count every lek in a given area simultaneously. And even then, the count likely wouldn't be completely accurate.

The scientists say local birds could be moving so much in order to breed with more than one suitor to increase genetic diversity in their chicks.

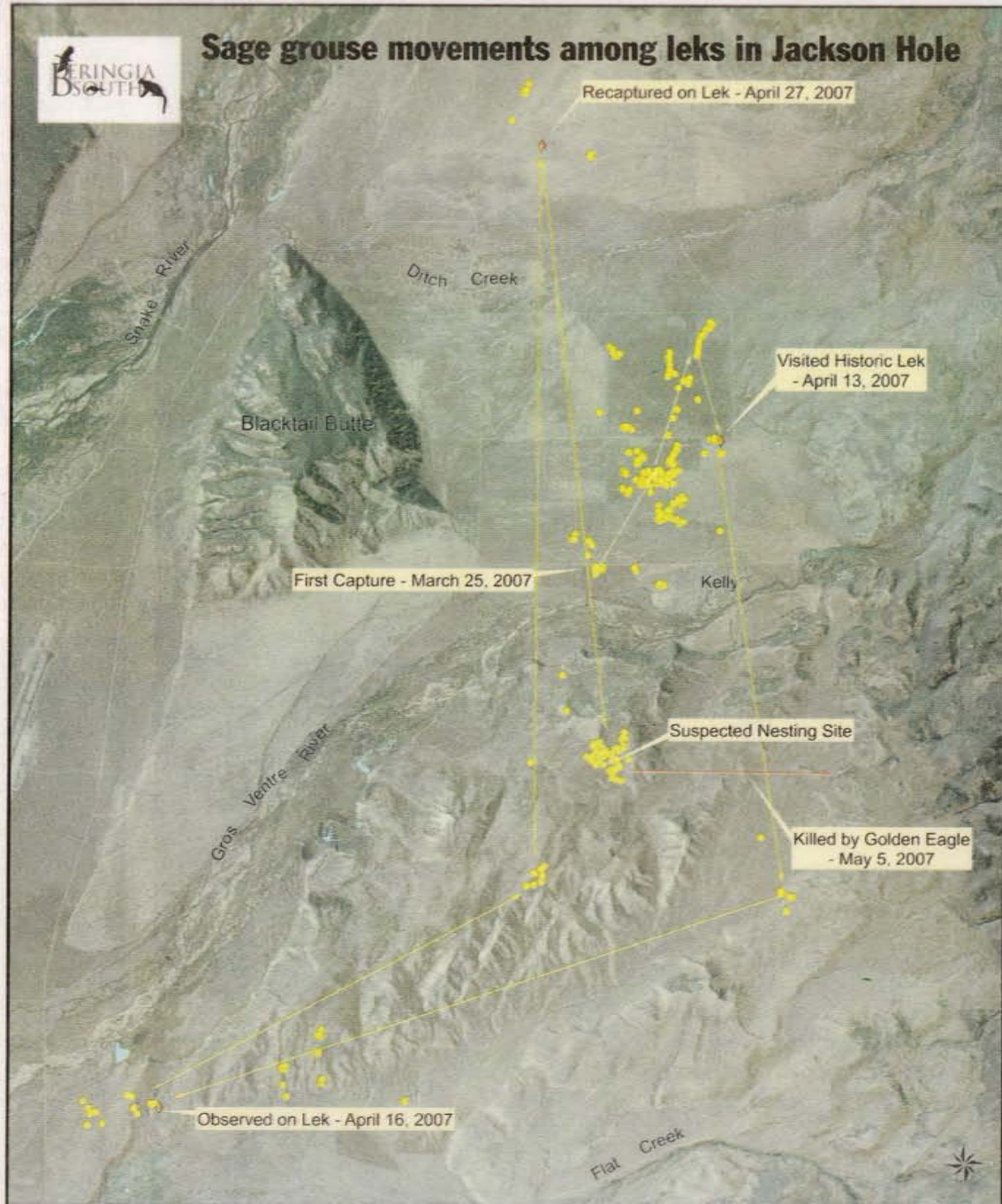
"I have to remind myself a lot that sage grouse can fly and can go where ever they want," says Bedrosian. "It [the finding] definitely has implications for our valley. The fact that we have it here definitely opens the possibility that it happens everywhere in the state."

One female, dubbed F1, was captured and collared west of Kelly, flew to the North Gap lek on the National Elk Refuge, then moved to the Moulton lek where Bedrosian again captured her by accident during an attempt to collar other sage grouse. F1 then flew back down to the Elk Refuge where Bedrosian and Craighead thought the female had settled down to start nesting. "We thought she was starting to set up shop," Bedrosian said.

Several days later, the biologists found out that F1 fell prey to a golden eagle that lived west of the Elk Refuge. But even with her untimely demise, F1 showed that at least some female sage grouse move a lot during breeding season.

Though not all of the females in the study showed movement from lek to lek, F1 wasn't the only bird to try out different breeding grounds.

The Beringia study is part
See **GROUSE** on 34A



While most scientists thought female sage grouse stayed at one lek during breeding season, a female named F1 moved between several different leks during the summer before she was killed by a golden eagle that lived west of the Elk Refuge.

CRAIGHEAD BERINGIA SOUTH MAP



NEWS&GUIDE PHOTO / BRADLY J. BONER

Biologists Vincent Slabe, left, and Bryan Bedrosian weigh one of six sage grouse captured at a lek north of the Jackson Hole Airport runway in April.

GROUSE

Continued from 33A

of a larger effort by the state to learn more about sage grouse as their habitat becomes threatened by sprawl and industry such as oil and gas development.

The local biologists received \$62,000 of the funding of the \$300,000 study from the Upper Snake River Sage Grouse Working Group, and have partnered with the National Park Service, the Wildlife Heritage Foundation of Wyoming, Wyoming Game and Fish, the National Elk Refuge and the U.S. Forest Service.

During the two- to three-year study, Bedrosian and Craighead Beringia South president Derek Craighead hope to answer questions about nesting success; the mortality of adults, chicks and eggs; movements between leks; and winter habitat.

Earlier this year, Bedrosian led a team of scientists that captured 45 grouse, including 24 females.

Of those 24, 15 were of breeding age, and 14 of those birds nested. One female died of yolk peritonitis (the yolk burst inside the female, eventually killing her), and one hen's eggs didn't get fertilized.

While the normal incubation period takes about 27 days, the hen with the unfertilized eggs stayed on her clutch for at least 95 days, setting a new national record.

"She was definitely tenacious about trying to get those eggs hatched," said Craighead.

Seven females eventually hatched chicks, and of those, three raised chicks that survived. Overall, a ratio of about two-thirds of a chick was born for each of the 15 hens.

So far, the numbers look better than previous studies on Jackson Hole sage grouse, but Bedrosian said the difference probably isn't significant

and stressed that the data is preliminary. Another summer or two of data should help form a clearer picture of sage grouse biology in Jackson Hole.

The majority of mortalities came from mammals such as coyotes and badgers, Bedrosian said. And, at least for this study, scientists couldn't document any predation by ravens, which some think play a role in the declining sage grouse numbers in the Pinedale area. Though ravens didn't kill any of the Jackson Hole birds in the study this summer, Bedrosian says they are a known source of sage grouse mortalities.

"She was definitely tenacious about trying to get those eggs hatched."

— Derek Craighead

CRAIGHEAD BERINGIA SOUTH PRESIDENT

During the study, the biologists were surprised to find that the grouse spend a lot of time before breeding season pecking at the ground in certain barren areas such as the Old Kelly Dump, a bare ridge on the Elk Refuge, and on a gravel pile at the airport.

"We found bird in areas that were abnormal feeding on minerals in the dirt," Bedrosian said.

The biologists took soil samples from the sites for analysis, and found high levels of calcium at each location.

"A grouse really needs a lot of calcium to to lay down those eggs," said Bedrosian. "An important part of what goes on here in the valley is looking for places to get those supplements they needed right before breeding season."