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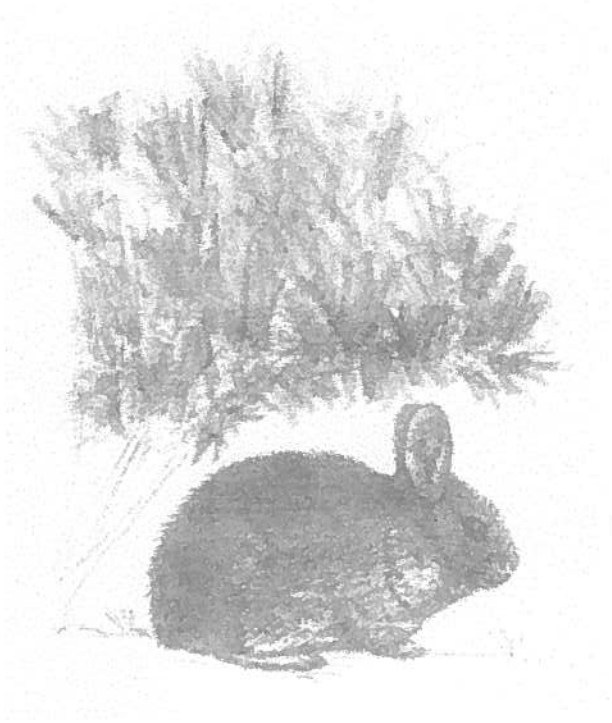
STATUS OF THE PYGMY RABBIT (*BRACHYLAGUS IDAHOENSIS*) IN IDAHO

by

Hadley B. Roberts



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STATUS OF THE PYGMY RABBIT

(*Brachylagus idahoensis*)

IN IDAHO

by

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NOVEMBER 2002

Abstract. In July and August 2002, I conducted a "windshield survey" of pygmy rabbit habitat in southern Idaho for the Bureau of Land Management (BLM). I traveled approximately 4,100 miles through eight BLM Field Office areas in search of currently or recently active pygmy rabbit burrow systems, using methods that I previously used successfully in Lemhi and Custer Counties (Roberts, 2001). I assumed for the purpose of this study that I would be able to find rabbits anywhere that there were mature stands of the three subspecies of big sagebrush (*Artemisia tridentata*). I was only able to find nine new sites that were currently active and two sites that had been recently used. Six of these sites were within 15 miles of the state lines between Idaho and Montana, Utah, Wyoming, and Nevada, providing insight on connectivity between the states.

The major reason for finding so few animals was the high degree of fragmentation over most of the pygmy rabbit's historic range. Much of the Snake River Plains has been converted to dry land or irrigated farming that has eliminated rabbits from this area. Other large blocks have been reduced by recent large wild fires. Agriculture and range fires together have fragmented what was once thought to be one continuous population into three sub-populations: (1) lands situated north of the Snake River, (2) Owyhee County, and (3) lands south of the Snake River. Habitat in the Salmon and Challis FO areas (sub-population 1) has remained relatively intact because there have been few large range fires and only small acreages of farming. On the other extreme, the Burley FO area (sub-population 3) is heavily farmed and has had numerous large range fires. Pygmy rabbits found here should be considered isolated and fragmented. Their future is in doubt. Owyhee County (sub-population 2) has been severely burned at lower elevations but higher elevations appear to be relatively intact.

I concluded that there is little that can be done to mitigate past loss of habitat due to farming, as it is a way of life in Idaho. However, there are ways to mitigate further habitat loss on private lands through conservation easements. Fire is currently the major contributing factor to the loss of pygmy rabbit habitat in Idaho. Its fate rests largely on BLM fire suppression efforts. If it is to survive, large blocks of mature big sagebrush need to be preserved.

INTRODUCTION

The Bureau of Land Management (BLM} lists the pygmy rabbit (*Brachylagus idahoensis*) as Sensitive Species. It is currently a Species of Special Concern (Category C - Undetermined Status Species) on the Idaho State Sensitive Species List (Idaho Conservation Data Center 1994), which means the species may be rare in the state, but for which there is little information on their populations, distribution and/or habitat requirements. To reflect this uncertainty, the Idaho Fish and Game Commission recently changed its status in Idaho from a hunted species to a protected species. This study is designed to increase the information on distribution of the pygmy rabbit throughout the state and clarify its status.

During the summers of 1997 and 1998, I mapped the distribution of pygmy rabbits in Lemhi and Custer Counties, Idaho (Roberts 2001) and found them occurring scattered throughout sagebrush habitat of both counties. I also found significantly higher number of rabbits within 10 miles of Leadore, Idaho. My survey method was largely "windshield biology" where I observed active rabbit burrows as I drove slowly through appropriate habitat. The method proved very successful, as I was able to locate over 100 active burrow sites within my 583,600-acre study area. Based on this success, I proposed to the BLM that I try the methodology over the remainder of the state where pygmy rabbits were thought to exist, namely the Snake River Plains and the adjoining Bear River drainage.

Distribution information on pygmy rabbits in Idaho is very sketchy. In addition to my survey, Idaho State University has conducted a series of studies on the Idaho National Engineering and Environmental Laboratory (INEEL) site (Wilde 1978, Wilde and Keller 1978, Gabler 1997, Tullis 1995, Simons 2001). Green and Flinders (1980a and 1980b) reported them on the U.S. Sheep Experiment Station at Dubois. The Idaho Conservation Data Center (2001) has 146 records of the pygmy rabbit from Idaho that have been collected since 1890.

Closely adjacent to Idaho, Rauscher (1997) reports pygmy rabbits are found in neighboring Beaverhead, Deerlodge and Madison Counties in southwestern Montana. There are reports that they are found in the five neighboring counties (Fremont, Lincoln, Sublette, Sweetwater and Uinta) in southwestern Wyoming (Campbell et al. 1982). There is no specific information as to how Idaho populations connect with the Utah, Nevada and Oregon, where they are known to exist.

Purposes of this study are to:

- extensively survey BLM administered lands currently thought to be occupied by pygmy rabbits in Idaho
- determine the outer limits of their range in Idaho, including connectivity with their range in adjoining states
- map areas where they have been extirpated by recent wild fires and agriculture
- map concentration areas

STUDY AREA

The study area includes lands drained by the Snake River in southern Idaho, commonly referred to as the Snake River Plains, as well as those drained by the Bear River in the southeastern corner of the state. It is approximately 42,000 square miles in size and is comprised of federal and state owned lands administered by the BLM, Forest Service, Fish and Wildlife Service, National Park Service, Bureau of Indian Affairs, Bureau of Reclamation, Idaho Department of Lands, Idaho Department of Fish and Game (IDFG) and INEEL, in addition to private lands. The BLM is the largest landholder in this area.

The area is generally flat overall, but several small mountain ranges are interspersed over the landscape and several deep canyons dissect it. The east, south, and west boundaries are the state lines between Idaho and Montana, Wyoming, Utah, Nevada, and Oregon. The Salmon River Mountains form the northern boundary.

The major prehistoric habitat type over most of the study area is the big sagebrush series (Hironaka et al. 1983) that includes three subspecies. Wyoming big sagebrush (*Artemisia tridentata* ssp. *Wyomingensis*) is the most predominant with inclusions of basin big sagebrush (*Artemisia tridentata* ssp. *tridentata*) at the lower elevations. Mountain big sagebrush (*Artemisia tridentata* ssp. *vaseyana*) occupied the higher elevation sites. Rocky Mountain juniper (*Juniperus scopulorum*) is also conspicuous on the lower foothills. Coniferous trees make up the major component on the mountain slopes, including Douglas-fir (*Pseudotsuga menziesii*), lodgepole pine (*Pinus contorta*), sub-alpine fir (*Abies lasiocarpa*) and Engelmann spruce (*Picea engelmanii*).

Since the arrival of the white man in the early 1800's, vegetative types have been altered and the original sagebrush canopy has been drastically reduced by both dry land and irrigated farming. Sagebrush cover has been even more severely reduced over the past decade by a rash of extremely large wild fires. This large-scale reduction in sagebrush habitat has altered a large percentage of pygmy rabbit habitat in southern Idaho.

METHODS

The survey was conducted in two parts; a preliminary mail survey and a field survey. The BLM Salmon Field Office mailed a questionnaire regarding pygmy rabbit sightings to all federal and state natural resource agency field offices; BLM, Forest Service, National Park Service, Fish and Wildlife Service, National Resources Conservation Service, Bureau of Reclamation, IDFG and Idaho Department of Lands. The data was requested in order to fill in the gaps on the current Idaho Conservation Data Center (ICDC) pygmy rabbit range map, January 2001 (Figure 1). I wished to use this updated map to plan my field survey, by concentrating my survey efforts to areas where rabbit sightings were scarcest. The survey was conducted mainly on BLM land and other closely adjacent federal and state land. No attempt was made to survey private land.

The field survey was conducted mainly from a four-wheel drive truck, but did include small amounts of foot travel when appropriate. Basically I drove as slowly as possible (usually under 15 miles per hour) in habitats that appeared suitable based on a model I developed for Lemhi and Custer Counties (Roberts 2001). Most of survey was conducted on good gravel back-country

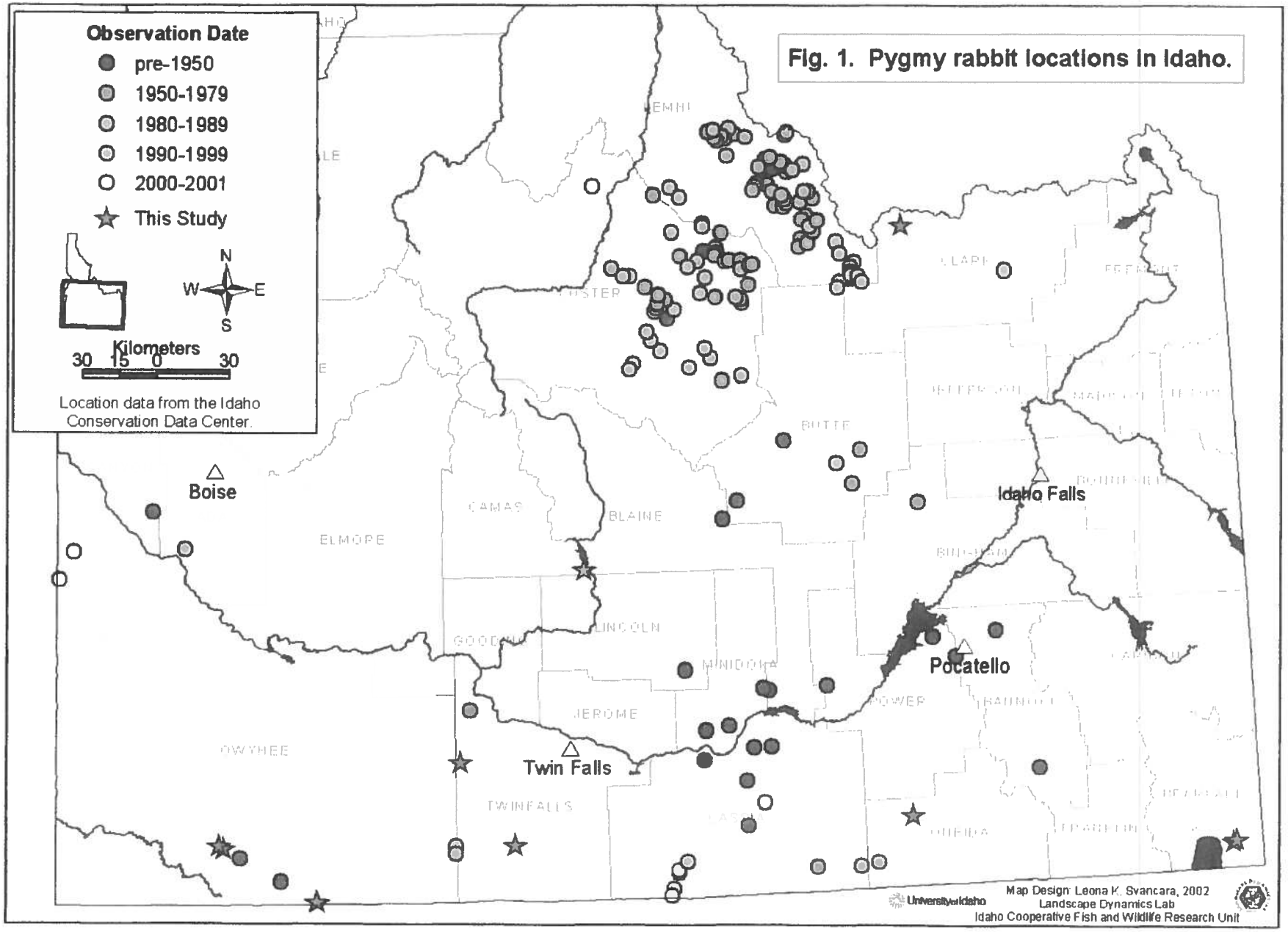


Fig. 1. Pygmy rabbit locations in Idaho.

roads where there was little or no traffic and my safety was not compromised. I increased speed and skipped over agricultural lands or recent burns.

The major strength of this type survey was that I was able to rapidly survey extensive areas. It provided positive information only where pygmy rabbits existed. It provided less certain information about where they did not exist.

While driving, I was constantly looking for sign of soil disturbance that would indicate pygmy rabbit digging activity. This usually appears as a tannish spot within the sea of contrasting grayish sagebrush that I found to be very easy to detect. I then walked to each site for further evaluation. Unfortunately there are other items that appear from a distance to be similar to pygmy rabbit burrow systems such as Townsend pocket gopher (*Thomomys townsendi*), Richardson ground squirrel (*Citellus richardsoni*) and badger (*Taxidea taxus*) digging, ant mounds and an occasional tumbleweed. I checked each site and made a careful search for any sign of pygmy rabbits such as fresh digging or tracks and especially the presence of fresh pellets. I only recorded the burrow system as active if these were present.

Visibility was quite variable depending on the degree of slope and density of sagebrush cover. Where conditions were most favorable (a slope of over 10 percent and crown density of less than 30 percent), I could detect rabbit and other animal digging activity at distances over 200 yards. This was the most common situation. However, on flat terrain and tall dense sagebrush, visibility was often less than 25 yards. I estimated the average bandwidth that I surveyed was approximately 100 yards on both sides of a road.

In addition to driving, I also stopped at strategic locations to search with binoculars. These locations were valley bottoms where I could view a hillside or from a ridge top where I could view large expanses of flat areas.

Historic data was collected from several sources. The ICDC provided records and a map of all the pygmy rabbit sightings that have been reported since 1890. Vegetative mapping was provided from GAP data that was provided by the University of Idaho. This included a map of current sagebrush areas and a map showing privately owned agricultural lands. The BLM and Forest Service provided recent fire information.

RESULTS

MAIL AND FIELD SURVEYS

Response from the 32 mail survey forms that were sent out was very light and provided little useful information. It included returns from only nine offices. Three of these proved to be useful; the others were negative reports or contained information or data that was questionable or unreliable.

The field survey was conducted between July 8 and August 15, 2002 and was accomplished in three weeklong trips from Salmon, Idaho and return. The first week (July 8 to 12) covered 1,239 miles within the BLM Idaho Falls and Pocatello Field Office (FO) areas, plus the adjacent Targhee, Caribou and Cache National Forests. The second week (July 22 to July 26) covered

1,219 miles on the BLM Shoshone, Owyhee and Jarbidge FO areas and the third week (August 11 to August 15) covered 1,257 miles on the BLM Burley and Shoshone FO areas and the adjacent Sawtooth National Forest and Curlew National Grasslands. I also made several day trips to areas on the Salmon and Challis National Forests that I had not previously surveyed. Total mileage was 4,100 miles. Subtracting transit time, actual survey miles were approximately 3,000. Figure 2 shows the entire route surveyed.

For the three-week period, I was only able to locate nine currently active pygmy rabbit burrow systems verified by the presence of fresh tracks and pellets. This is far less than what I expected, based on my experience in Lemhi and Custer Counties. All but one of the sites that I found was while driving. Eight of these are on BLM lands; four on the Owyhee FO area, two on the Pocatello FO area, and one each on the Idaho Falls and Jarbidge FO areas. The other was found on the Curlew National Grasslands. Specific locations are found in the Appendix. All locations have been forwarded to ICDC.

I also found two recently active sites, meaning they were active within the last year or two. These were identified by the presence of old pellets. One of these was found on the Owyhee FO area and the other on the Shoshone FO area. Specific locations are found in the Appendix.

While searching for active burrow systems, I noted recently burned (10 to 20 years) areas and agricultural areas where rabbit activity had been precluded and there was little chance of current activity. Following is a summary of habitat conditions that I found and areas that should be considered for further study. Also are notes on where pygmy rabbits have been sighted in the past, based on ICDC (2001) records.

Pocatello Field Office Area. This FO area has historically been one where the fewest number of pygmy rabbits have been reported. The ICDC (2001) shows only four records, all of them occurring between 1914 and 1931. Only one was from BLM lands; the others were from the Fort Hall Indian Reservation (2) and the Caribou National Forest (1). This survey produced two new records, both from Pegram Creek, on BLM lands in Bear Lake County.

Much of this area is privately owned cultivated land or National Forest. Most of the valleys are farmed from foothills to foothills. There is little hope of finding any more than small isolated populations. The most likely spot that I saw for further study was the large block of apparently suitable state-owned land between Greys Lake National Wildlife Refuge and Blackfoot Reservoir, and on the Bear Lake Plateau in the extreme southeastern corner of the state. The Fort Hall Indian Reservation also appeared to have some potentially suitable habitat.

Idaho Falls Field Office Area. Only eight records appear in ICDC (2001) from this area, only one of which was on BLM lands. The others were from the INEEL (3), Craters of the Moon National Monument (2), U.S. Sheep Experiment Station (1), and state lands (1). Three of these records were dated between 1890 and 1936; the remainder were between 1954 and 1977. I found one active burrow site in this area on BLM lands at the head of Medicine Lodge Creek.

Pygmy rabbit habitat in the southern half of this FO area has been greatly reduced by agricultural practices and wildfires and is severely fragmented; however sagebrush habitat in the north half is

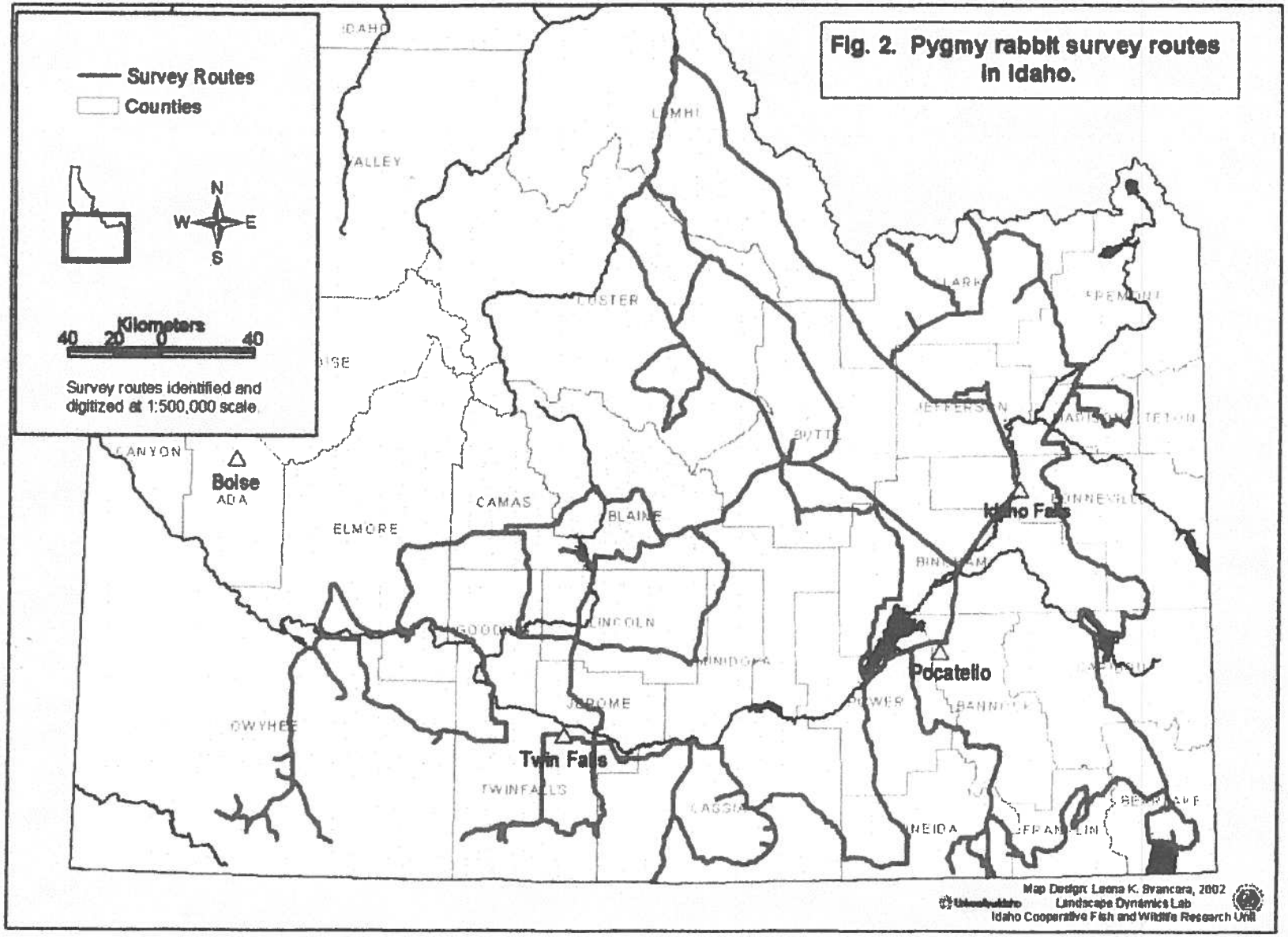


Fig. 2. Pygmy rabbit survey routes in Idaho.

still relatively undisturbed and contiguous. The best possibilities to search for additional rabbits are the areas southeast of Craters of the Moon National Monument, the Big and Little Lost Rivers, Birch Creek and Medicine Lodge Creek.

Burley Field Office Area. This FO area has provided the most pygmy rabbit records (16) (ICDC 2001) with records dating back to 1910. Only five have been from BLM lands; ten others were from private land and the last was from the Sawtooth National Forest. Eight records were from between 1910 and 1978. The others were more recent, 1999 and 2000. I only found one currently active pygmy rabbit burrow system in this FO area. It was on the Curlew National Grasslands. This FO area has also been severely fragmented by agriculture and wildfires. It is highly unlikely that any more than widely scattered rabbit activity will be found here. The most likely place to search is the area north of the Snake River.

Shoshone Field Office Area. This FO area has produced only four pygmy rabbit records (ICDC, 2001), all of them dating between 1910 and 1918. One was from BLM lands; the other three were from private land. I located one recently active burrow site near Magic Reservoir.

Outside of the agricultural lands, sagebrush habitats appear to be largely intact and suitable for pygmy rabbits. Areas with the most potential for further search are the south side of the Bennett Hills and the lower slopes of the Salmon River Mountains, north of U.S. Highway 20.

Owyhee and Jarbidge Field Office Areas. There are seven old pygmy rabbit records from these two FO areas, all on BLM lands (ICDC 2001). Three of these were between 1913 and 1952; the others were more recent, 1993 to 1997. I found three additional burrow sites in the Bruneau River drainage, Owyhee FO area, and one near Salmon Falls Reservoir, Jarbidge FO area.

There is very little agriculture within this area. However, large wildfires have decimated sizeable blocks of pygmy rabbit habitat, especially the northern halves of both FO areas in Wyoming big sagebrush habitats. Helen Ulmschneider (pers. comm. 2002) reports that the higher elevation mountain big sagebrush sites are still quite intact. The most likely place to find rabbits will be in the more remote areas adjacent to the Nevada border.

Salmon and Challis Field Office Areas. These FO areas have been intensively inventoried in 1997 and 1998. The findings are reported in Roberts (2001). Since then, there have been several recent reports of range extensions. Jerry Gregson (pers. comm. 2002) found two isolated pockets of current rabbit activity in Darling Creek and Morgan Creek. Both of these sites are over 15 miles from its previously reported range. Bruce Roberts (pers. comm. 2002) found a recently active site in the headwaters of Hawley Creek on the Salmon National Forest. I recently found three currently active sites in Copper Basin on the Challis National Forest.

At this time, it appears that the Salmon FO area has a higher density of pygmy rabbits than any other part of Idaho. From reports from adjacent states, it may have higher densities than any other place in its eight state range. The major valleys of the two FO areas (Lemhi, Pahsimeroi, Big and Little Lost Rivers, Birch Creek and Warm Springs Creek) have been relatively free of large wildfires, and sagebrush habitat is largely intact and continuous.

General Findings. Six of the nine active burrow systems that I located were within 15 miles of the Idaho state line and provide some insight as to how Idaho pygmy rabbit populations are connected to populations in the adjoining states. My first record was from within three miles of the Montana border at the head of Medicine Lodge Creek in Clark County. This corresponds favorably with Rauscher (1997), who indicates they have been found approximately 10 miles northwest in neighboring Beaverhead County. I also located two active burrow sites within eight miles of both the Wyoming and Utah borders on Pegram Creek in Bear lake County. This corresponds favorably with reported populations in Lincoln County, Wyoming (Campbell et al. 1982).

I also found an active burrow system on the Curlew National Grasslands, approximately 15 miles north of the Utah border, and found two active burrows approximately 15 miles north of the Nevada border near Riddle, Idaho. I found no recent information from either of these states indicating that there were currently nearby active burrows.

DISCUSSION

For this report, I assumed that the entire big sagebrush-dominated habitat of southern Idaho that existed prior to the advent of white man was occupied at some time by pygmy rabbits, either as home range or as a travel corridor between home ranges. These lands are illustrated in Figure 3, a map that depicts the historic (~1900) distribution of big sagebrush in Idaho (USFS Intermountain Fire Science Lab 1997). The Idaho Gap Analysis Project for pygmy rabbit habitat modifies this to include only those lands between 1,500 and 2,400 meters in elevation (Figure 4).

Using these maps, I proceeded to field check them for accuracy. Based on my prior experience in mapping suitable habitat and historic sightings from ICDC records, I further modified these two maps into a composite that I feel is an accurate delineation of prehistoric pygmy rabbit range in Idaho (Figure 5). This large block is approximately half of Idaho and provided continuous habitat over all of the Snake River Plains. This map does not agree with other authors such as Burt and Grossenheider (1952), Zereloff (1988), or Whitaker (1996), whose range maps show much smaller areas.

This scene has changed considerably over the last 200 years. A broad belt of dry land and irrigated farms now forms a travel barrier to rabbits along the river from Ashton to Mountain Home (Figure 6). Today the population existing north of the Snake River is completely disconnected from animals living south of the Snake River.

This large-scale habitat fragmentation has reduced what once was probably a single population to what now can be considered three separate sub-populations, the largest of which lives north of the Snake River in the Idaho Falls, Shoshone, Salmon and Challis FO areas, where big sagebrush is continuous and connectivity is still rated as good. The Owyhee and Jarbidge FO areas still contain large contiguous unbroken stands of sagebrush and connectivity is still rated as fair to good. This area should probably be considered a second major sub-population.

However, the Burley and Pocatello FO areas have been completely disconnected from the rest of the state by agriculture. Rabbits living here should now be considered as isolated, fragmented sub-populations. Most of the tributary valleys to the Snake and Bear Rivers are farmed from

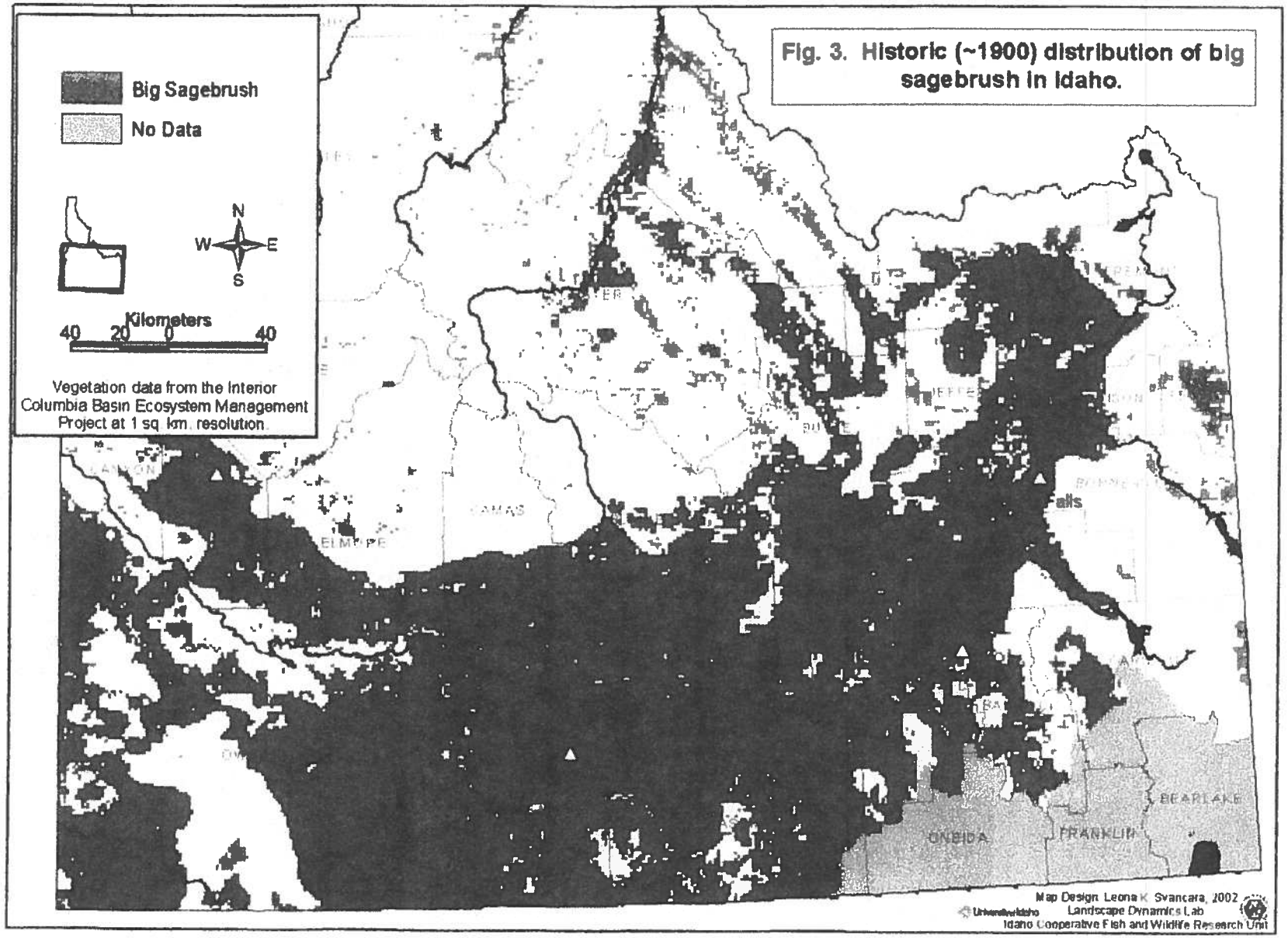


Fig. 3. Historic (~1900) distribution of big sagebrush in Idaho.

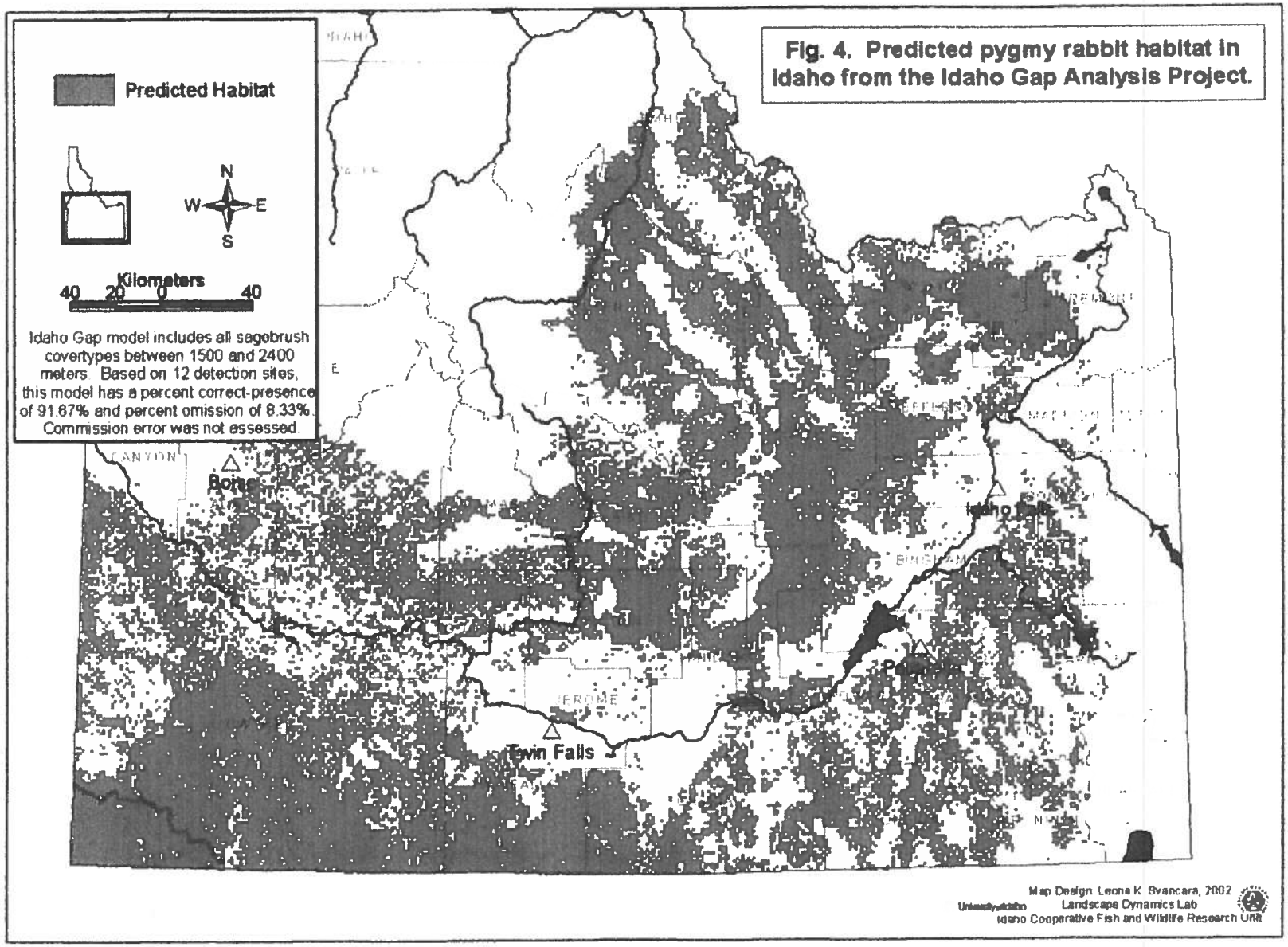
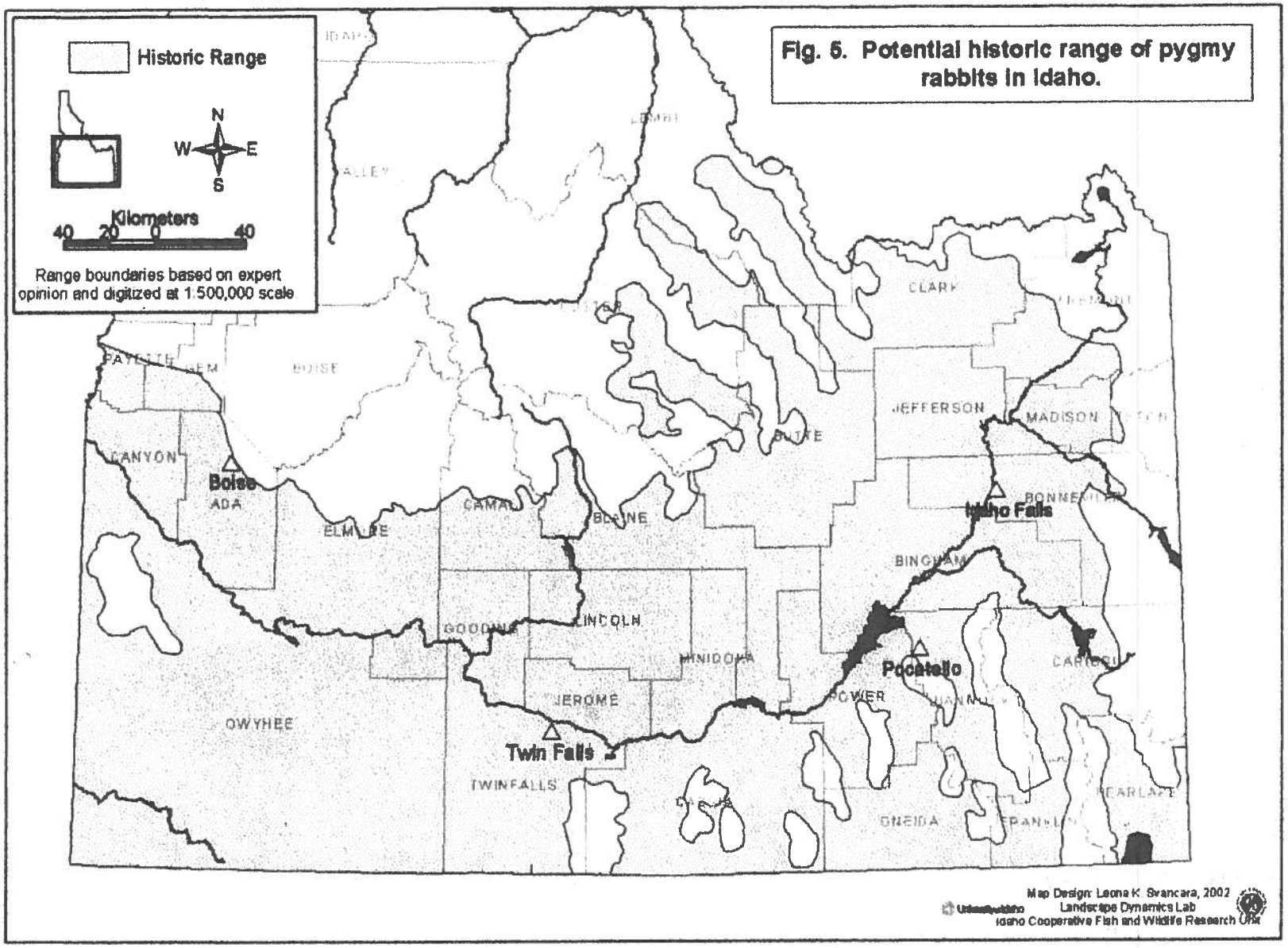


Fig. 4. Predicted pygmy rabbit habitat in Idaho from the Idaho Gap Analysis Project.


Historic Range
N
W
E
S
Kilometers
40 20 0 40
Range boundaries based on expert opinion and digitized at 1:500,000 scale
Fig. 5. Potential historic range of pygmy rabbits in Idaho.
BOISE
CANYON
Boise
ADA
ELMORE
CAMAS
BLAINE
CLARK
JEFFERSON
MADISON
BONNEVILLE
Idaho Falls
BINGHAM
GOODING
LINCOLN
MINIDOKA
Pocatello
POWER
CARIBOU
JEROME
OWYHEE
Twin Falls
TWINFALLS
ONEIDA
FRANKLIN
BEAR LAKE
Map Design: Leona K. Svancara, 2002
Landscape Dynamics Lab
Idaho Cooperative Fish and Wildlife Research Unit

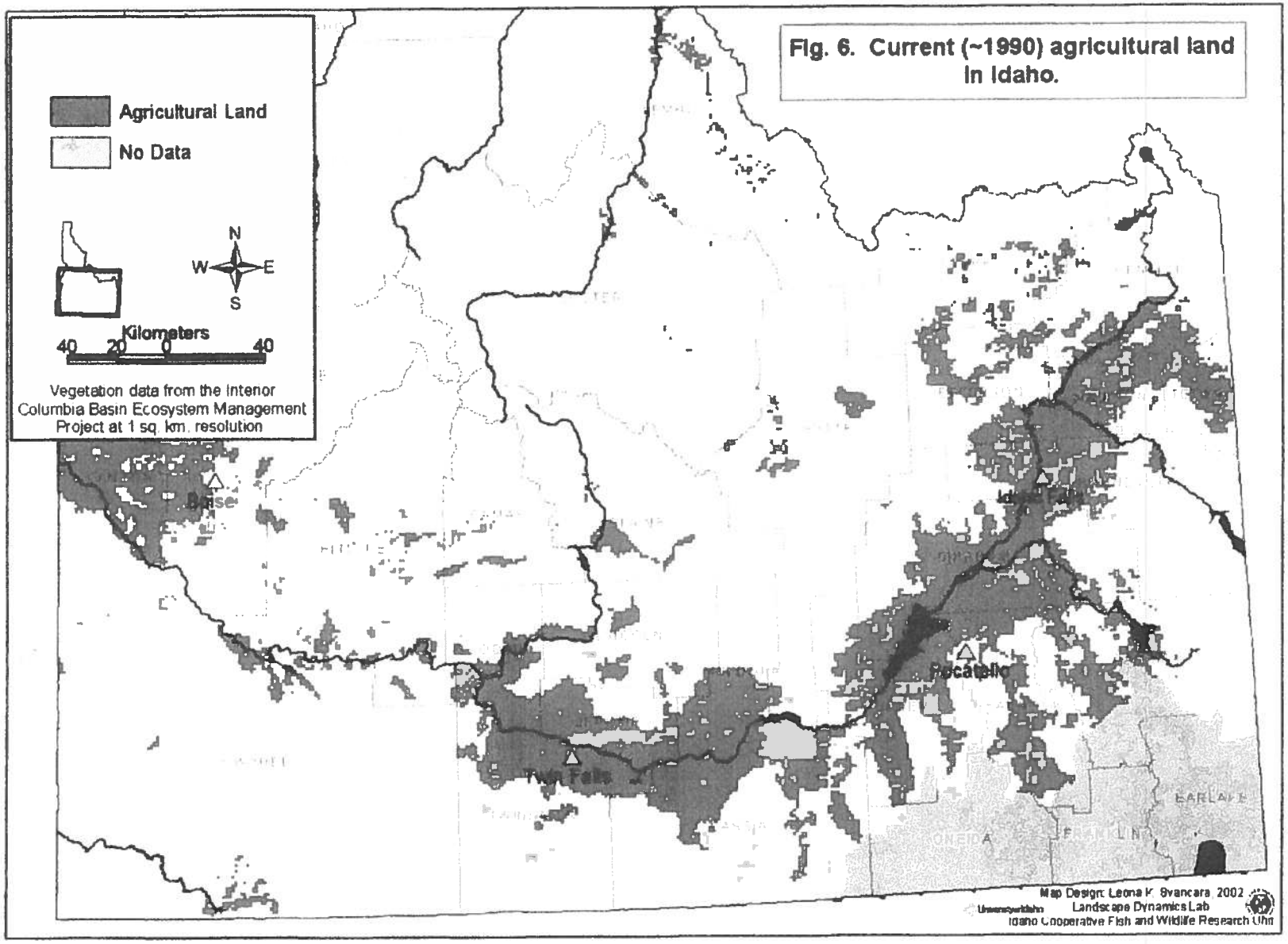


Fig. 6. Current (~1990) agricultural land in Idaho.

foothills to foothills, leaving only relatively small pockets of varying sized habitat. Since the size of a parcel of habitat needed to support a minimum viable population of rabbits is unknown, it is unclear as to how long pygmy rabbits will continue to exist here.

Wildfire is another important factor to consider when evaluating habitat fragmentation. Over the last two decades, extremely large fires have swept across the Snake River Plains, converting mature big sagebrush habitat into weedy non-habitat (Figure 7). This greatly reduced pygmy rabbit habitat over millions of acres. These sagebrush habitats can be regenerated within 30 to 50 years, but how long it will take for rabbits to re-occupy the sites is unknown. On some of the larger burns, this may take centuries unless man steps in and restocks the areas.

Most of the FO areas have suffered large-scale habitat losses due to wildfire in the last decade. From my field observations, the Idaho Falls, Shoshone and Owyhee FO areas appear to have been the hardest hit. The Jarbidge, Burley and Pocatello FO areas suffered slightly less. Fortunately there have been few large fires in pygmy rabbit habitat on the Salmon and Challis FO areas and habitat is relatively secure.

CONCLUSIONS

Pygmy rabbit numbers in Idaho are slowly but surely declining based solely on the fact that a large amount of their habitat is being lost annually. Farming has reduced suitable pygmy rabbit habitat by at least 20 percent since man came on the scene. Since farming is a way of life in Idaho, there is little that can be done to mitigate past loss of habitat. However, farming should be discouraged, and mitigated for, on private lands where rabbits presently exist. This should be done cooperatively through the various land trusts by offering financial incentives.

Fire is the other major factor contributing to a large loss of habitat, with a number of fires exceeding 100,000 acres having burned during the last decade. If the pygmy rabbit is to survive, this rate must be reduced considerably. Its fate rests largely on BLM fire suppression efforts. Fire suppression planners should place highest priority on protecting the remaining large stands of mature sagebrush. If and when large fires do occur, plans should be in place to re-vegetate the burns immediately with sagebrush and other native grasses and forbs.

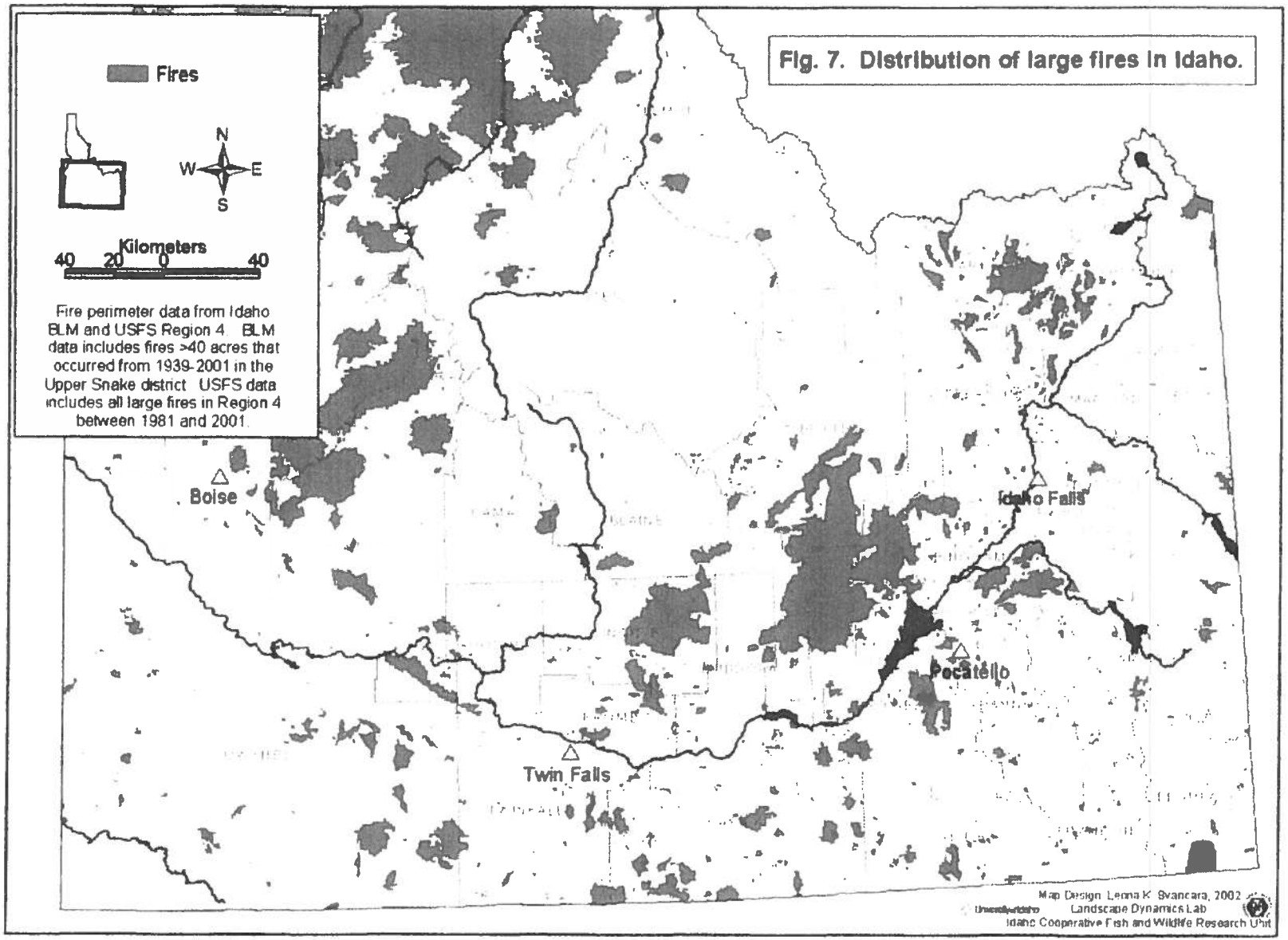


Fig. 7. Distribution of large fires in Idaho.
Fires
N
W
E
S
Kilometers
40 20 0 40
Fire perimeter data from Idaho BLM and USFS Region 4. BLM data includes fires >40 acres that occurred from 1939-2001 in the Upper Snake district. USFS data includes all large fires in Region 4 between 1981 and 2001.
Boise
Idaho Falls
Pocatello
Twin Falls
Map Design: Leona K. Svancara, 2002
Landscape Dynamics Lab
Idaho Cooperative Fish and Wildlife Research Unit

RECOMMENDATIONS

It appears that the pygmy rabbit could be a candidate for listing as a threatened species in the near future based on the very rapid loss of suitable habitat. To prevent this listing, I strongly recommend that the BLM, the major land holder of pygmy rabbit habitat in the State of Idaho, take the lead by initiating the following actions:

1. Inventory major blocks of undisturbed mature big sagebrush on BLM administered lands for the presence of pygmy rabbits. Special emphasis should be placed on Wyoming big sagebrush and basin big sagebrush sites.

2. Encourage Indians on the Fort Hall and Duck Valley Indian Reservations to cooperate in inventorying pygmy rabbits on their lands.

3. Encourage the Forest Service and Idaho Department of Lands to cooperate in these efforts.

4. Inventory all large (over 10,000 acres) recent burns and provide for re-vegetating them with big sagebrush and other native species.

5. Prioritize mature big sagebrush stands as highest priority for fire suppression activities on BLM administered lands.

6. Prohibit prescribed burning or other land altering activities on mature Wyoming big sagebrush or basin big sagebrush sites. Prescribed burning should be limited to mountain big sagebrush sites, only if there are no pygmy rabbits present.

7. Develop plans to restock suitable habitat from which pygmy rabbits have been extirpated.

8. Train all field personnel in the identification of pygmy rabbit habitat and their sign. Provide a written description of their habitat. Range conservationists would be the most helpful in gathering this information. Report findings to the appropriate wildlife biologist for verification.

9. Report all currently active pygmy rabbit burrow systems and actual sightings to the Conservation Data Center of IDFG.

10. Consider trades or purchases of private tracts of land that currently have pygmy rabbits.

11. Encourage private landowners to work with The Nature Conservancy and other land trusts in obtaining conservation easements on their lands if pygmy rabbits are present.

12. Support research on the pygmy rabbit from all accredited universities and other interested parties.

13. Determine the minimum acreage of suitable sagebrush habitat required to support minimum viable populations of pygmy rabbits.

14. Utilize the pygmy rabbit as the BLM range fire prevention symbol.

15. Form a working group of all scientists working on pygmy rabbits in the eight states where they are found to synthesize all of the available information about the species.

16. Consider proposing the species be listed as Threatened under the Endangered Species Act if this working group decides there is enough available data to support this conclusion.

ACKNOWLEDGEMENTS

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APPENDIX

Locations of currently active and recently active pygmy rabbit burrow sites found during this survey. Currently active burrows had fresh pellets and tracks in their immediate vicinity. Recently active burrows had only old pellets in their immediate vicinity.

	Drainage	**Latitude**	**Longitude**	**County**	**BLM FO Area**
PR-1 **	Divide Creek	44°26'16.6"N	112°41'08"W	Clark	Idaho Falls
PR-2 **	Pegram Creek	42°05'47.02995"N	111°11'32.09088"W	Bear Lake	Pocatello
PR-3 **	Pegram Creek	42°06'06.07701"N	111°10'37.79036"W	Bear Lake	Pocatello
PR-4 **	Juniper Draw	42°31'22.32535"N	115°09'44.63350"W	Owyhee	Owyhee
PR-5 **	Blue Creek	42°12'43.86360"N	116°11'43.79799"W	Owyhee	Owyhee
PR-6 **	Blue Creek	42°13'15.05470"N	116°13'12.39650"W	Owyhee	Owyhee
PR-8 **	Sheep Creek ***	42°08'23.38345"N	115°44'07.59775"W	Owyhee	Owyhee
PR-9 **	Twin Springs	42°15'47.52397"N	112°45'54.75587"W	Oneida	Burley
PR-10**	Salmon Falls Dam	42°12'35.81323"N	114°44'57.86037"W	Twin Falls	Jarbidge
PR-7 *	Sheep Creek	42°09'40.79566"N	115°44'26.69711"W	Owyhee	Owyhee
PR-11 *	Magic Reservoir	43°13'05.99380"N	114°22'09.95383"W	Blaine	Shoshone

* = Recently active pygmy rabbit burrow sites
** = Currently active pygmy rabbit burrow sites
*** = Two active burrow sites were found at this location, about 200 yards apart.

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