Creek, are also being considered for future improvement projects. These creeks rated high for aquatic habitat improvement. In conjunction with the riparian program, a booklet is being developed which outlines the specific objectives for riparian areas, and actions to be taken which would enable the Jarbidge Resource Area to meet those objectives. The booklet also describes the monitoring techniques and time frames that will be used to evaluate vegetative, and other improvements within the riparian zones. In addition to riparian areas associated with rivers and creeks, a number of projects have been completed to enhance wildlife values at several springs and reservoirs. Projects have included fencing, constructing nesting islands, and developing water away from riparian areas. The springs and reservoirs with projects include: Camas Slough, Heil Reservoir, Ryegrass Reservoir, 71-Draw Reservoir, Cedar Mesa Reservoir, Roseworth Pond, Prince Albert Pond, and Dove Spring. In the fiscal year of 1992 and 1993, Whiteside Pond and Antelope Spring are scheduled to be fenced.

Wild Horses

In 1989, 56 wild horses were rounded up and removed from the Saylor Creek Wild Horse Herd. They were transported to Boise for adoption in the Adopt-A-Horse Program. All of the 56 horses were adopted. Six head of horses captured in other herd areas were released with the remaining Saylor Creek horses to reduce the potential for inbreeding. In 1991, monitoring of the herd documented a total of 44 horses within the herd area. In 1990, a management plan was completed for the Saylor Creek Wild Horse Herd. No wild horses are present in the area that was transferred to the Bruneau Resource Area.

Wilderness/Wild & Scenic Rivers

Wilderness:

In September of 1987, the final Jarbidge Wilderness Environmental Impact Statement (EIS) was published. This study is based upon the recommendations of the Proposed Jarbidge RMP and Final EIS which addressed wilderness suitability of three Wilderness Study Areas (WSAs), totaling 208,833 acres of land. The proposed action states that 37,540 acres within the two WSAs are suitable for wilderness designation. These include 20,800 acres in the Bruneau River-Sheep Creek WSA (ID-111-17) and 16,740 acres in the Jarbidge River WSA (ID-17-11). The entire 29,309 acre King Hill Creek WSA (ID-19-2) was determined to be unsuitable for wilderness designation. In June of 1990, these recommendations were incorporated into the Idaho Wilderness Study Report, which was subsequently approved by the Secretary of the Interior and the President, and presented to Congress.

Pending decisions by Congress regarding wilderness designation, all WSA lands are managed under the Wilderness Interim Management Policy (IMP) so as not to impair the suitability of each area for consideration as wilderness. Monitoring and compliance checks have been conducted each year throughout the field season in all three WSAs. In 1991, Student Conservation Association (SCA) volunteers were used to conduct intensive examinations of the interiors of the Bruneau-Sheep Creek and King Hill Creek WSAs. In 1992, SCA volunteers were used to replace boundary signs around the Jarbidge River and Bruneau River-Sheep Creek WSAs.

Management of the King Hill Creek WSA was transferred to the Bruneau Resource Area in January of 1992.

Wild & Scenic Rivers:

The main stem of the Bruneau River was designated a study river in the Wild and Scenic Rivers Act of 1968. As a result, a federal-state study team with representatives from the Idaho Governor's office, Idaho Department of Fish and Game, Idaho Department of Water Resources, Idaho Department of Parks and Recreation, BLM, U.S. Forest Service, and Bureau of Outdoor Recreation, was established. The team produced a final report in 1976. The report recom-

mends that a total of 121 miles, including 71 miles of Bruneau River, 29 miles of Jarbidge River, and 21 miles of Sheep Creek, be included in the National Wild and Scenic River system. The upper 11 miles of the Bruneau were recommended for "scenic" designation; the remaining 110 miles were recommended for "wild" river status. In 1977, these proposals were incorporated into proposed legislation but no further action was taken. In 1991, Public Land Order 6890 went into effect, extending the minerals withdrawal, which had been in effect since 1968, for an additional 10 years. The stated purpose of the withdrawal is to protect the recreational, scenic, and cultural values of the Bruneau and Jarbidge Rivers. Pending Congressional action, the Bruneau and Jarbidge Rivers will be managed so as not to impair their suitability for inclusion in the Wild and Scenic River system.

Wildlife/Fish

Threatened & Endangered Species:

Historically, peregrine falcons nested near C. J. Strike Reservoir. However, the nest area has not been active for many years. A pair of peregrine falcons were observed along Salmon Falls Creek near the Nevada border in 1992. No nest was located, however, the area will be surveyed for the next three years to determine if the pair established a nest. Bald eagles currently winter along the Snake River, and are not known to nest within the Jarbidge Resource Area. Winter habitat for bald eagles will be checked over the next five years to identify critical roosting and foraging areas along the Snake River. In January 1993, the Fish & Wildlife Service listed the Bruneau Hot Springsnail as endangered in the Bruneau River. The Snake River Physa Snail, Idaho Springsnail, and Utah Valvata Snail were listed as endangered, whereas the Bliss Rapids Snail was listed as threatened in the Snake River by the Fish & Wildlife Service in December 1992.

The Bruneau Hot Springsnail is found only in thermal seeps and springs. The Snake River snails are found only in the main stem of the Snake River and are declining due to poor water quality. The listed species are found in a few scattered locations from Indian Cover Bridge up to the confluence of Salmon Falls Creek in the Jarbidge Resource Area.

Candidate and Sensitive Species:

A variety of candidate, or sensitive species are known or suspected of being present within the Jarbidge Resource Area. These include fish, mammals, birds, snakes and some invertebrates. Interior red band trout have been documented in five rivers or creeks. In 1992, the Jarbidge River was inventoried to determine if bull trout, also known as dolly varden, were still present. None were documented during the survey, however, a few were documented upstream in Nevada. Mark Vinson also observed one near the junction of the Jarbidge River Forks. The Shoshone sculpin and white sturgeon are only known to occur in the Snake River. The known distributions for these species has not changed.

The Idaho Dunes Tiger Beetle is listed as a C2 species. (C2 = Species for which information indicates that proposed listing as threatened or endangered is appropriate, but conclusive data, biological vulnerability, or threats are not currently available.) Current information indicates that the population within Bruneau Dunes State Park is in danger of extinction. Potential threats to this species include collectors, off-road vehicle use, and livestock grazing. During the spring of 1992, in conjunction with Bruneau Sand Dunes State Park, the area was evaluated to see which is the best method to maintain the population in this area. A fence will be constructed in 1993 to minimize ORV and livestock impacts.

Ferruginous hawks, Swainson's hawks, loggerhead shrikes, western burrowing owls, and long-billed curlew are known to nest within the Jarbidge Resource Area. Data on long-billed curlew indicate that the population is stable. Population data on ferruginous hawks, Swainson's hawks, and western burrowing owls are lacking

and based on incidental reports. White-faced ibis, trumpeter swans, and black terns have been observed along the Snake River. Currently, there is no detailed information for these species. Mountain quail have been reported from several locations with in the Resource Area. Recently, Columbian sharp-tailed grouse were reported to be in northern Nevada within a few miles of the Resource Area. In recent years, neither species have been confirmed to be within the Jarbidge Resource Area.

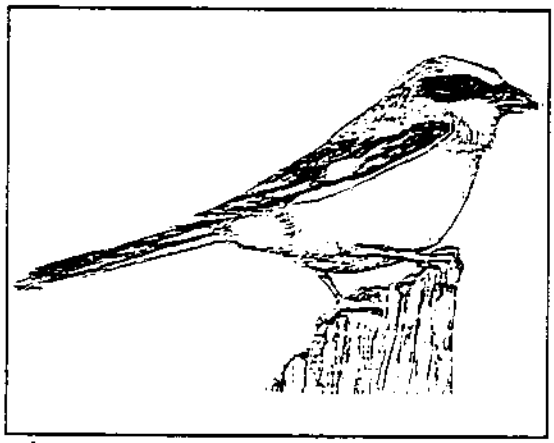

Figure 3. Loggerhead Shrike

In the future, nesting habitat for ferruginous hawks, Swainson's hawks, and western burrowing owls will be more closely monitored to estimate populations of these species. Potential habitat for Columbian sharp-tailed grouse and mountain quail will be checked to document the presence of these species. If either species is not present, the habitat will be evaluated to determine suitability for possible reintroductions of these species to their historic ranges. Inventory of the Snake River will include identifying potential nesting habitat for black terns and white-faced ibis. However, since these species occur in low numbers, establishing population trends may not be possible.

Pygmy rabbits and Idaho ground squirrels are known to inhabit the Jarbidge Resource Area. California bighorn sheep, listed as a state sensitive species, are covered in more detail in the big game section.

Information on the population and presence of other sensitive, or candidate species is very limited. Species lacking adequate information include: Spotted bats, Pacific big-eared bats, kit fox, Preble's shrew, longnose snake, ringneck snake, night snake and western ground snake. Threatened, Endangered and Candidate, and Sensitive plant species are addressed in the botany section.

Fish:

Many years ago, a variety of non-native fish were introduced into the rivers and creeks in the Jarbidge Resource Area. Walleye, Coho salmon, and brook trout are present in Salmon Falls Reservoir. Brook trout are now widespread in suitable habitat as well. The Idaho Department of Fish and Game (IDF&G) still stock rainbow trout in a number of locations within the Resource Area. A variety of non-game fish occupy suitable habitat. The status of the fisheries within the Resource Area are gradually improving, as projects on riparian areas are completed. As the shrubby vegetation increases along the banks of these creeks and rivers, water temperature is expected to decline because of shading, or enhancing the habitat for cold water fish. Redband trout, bull trout, Shoshone sculpin, as well as white sturgeon were discussed in the Candidate, and Sensitive species section.

Big Game:

Based on IDF&G information, the antelope population appears to be on the increase. The number of antelope has exceeded the RMP target of 1,340 yearlong and 3,130 wintering antelope. Four mild winters in succession have contributed to the increase in antelope numbers.

Elk in the Bennett Mountain area are conservatively estimated to be approximately 200 animals yearlong, with over 250 wintering elk by the IDF&G. In 1985, the elk population was estimated to be 125 yearlong resident elk which have met the RMP target. Wintering elk are approaching the RMP target of 300 animals. This area was transferred to the Bruneau Resource Area. Recently, the

Nevada Department of Wildlife (NDOW), introduced elk into the Jarbidge Mountain area. To date, none of the radio collared elk have spent any time in the Resource Area but, in 1990, a nonradioed elk was poached in the Resource Area. A few elk were observed along the southern boundary of the Resource Area in 1992. With the growth of the Nevada population, elk numbers are expected to increase in the southern part of the Resource Area.

Mule deer populations are believed to be stable or slightly increasing. No accurate mule deer count information was available. However, the IDF&G believes that there are approximately 3,000 deer yearlong in the Resource Area. This estimate is close to the RMP target of 3,380 deer yearlong. The mild winters have resulted in higher than expected winter survival. The bulk of the designated mule deer winter range was within the Bennett Mountain Planning Unit.

Bighorn sheep inhabit the Bruneau and Jarbidge Canyon complexes (MUAs 10, 15, and 16). Recent aerial surveys, conducted by the IDF&G, resulted in a population estimate of 120 animals. During preparation of the RMP and EIS, the population was estimated to be 25. The 20-year population goal for all MUAs is 364 bighorn sheep. To meet this goal, the IDF&G is considering a bighorn sheep transplant into the area identified as potential bighorn sheep habitat, near the confluence of the East Fork of the Bruneau River and the Bruneau River itself. The IDF&G may offer more ram permits in the future.

Gamebirds:

Since 1984, sage grouse numbers based on hunter success information, appear to have declined. Part of the decline is due to a large number of wildfires that burned nesting complexes, as well as winter habitat. Additionally, in some areas, sage grouse appear to follow a ten-year cycle and may be in the downward part of it. Monitoring of known and historic sage grouse leks will be conducted in conjunction with the IDF&G, to obtain better information on population trends, nesting and brood rearing habitat.

In the 1960's and 1970's, pheasant, California quail, and gray partridge populations are slightly up over the last six years but are down from population highs. IDF&G believes that populations for these gamebirds are currently stable. Private land acreage enrolled in the Conservation Reserve Program (CRP), has increased and is probably partly responsible for higher pheasant and gray partridge populations. The past four mild winters have also contributed to greater survival of these species.

Since the heavy snow winter of 1983-1984, chukar partridge populations have varied but are increasing. Population increases are generally attributed to the past mild winters.

Isolated Tracts:

The Jarbidge Resource Area has 122 tracts for management in the Isolated Tracts/Sikes Act program. The isolated tracts are generally clumped into three general geographic areas - Bell Rapids, Blue Gulch, and Grindstone Butte. Sikes Act agreements allow portions of public land to be farmed, whereas the farmer agrees to create irrigated wildlife habitat on public land, as well as leave stubble at a certain height, not harvest until after gamebirds hatch, and some standing crops for winter cover and food. Since 1986, three agreements have been terminated by mutual consent or non-compliance. Presently, there are five active Sikes Act cooperative agreements. Fourteen guzzlers, three shelter belts, and three ponds have been constructed on the tracts to benefit wildlife. At least 300 acres have been interseeded to shrubs. Approximately 39 miles of fence have been constructed to reduce agricultural and livestock trespass problems.

One of the Jarbidge RMP goals was to develop and implement a habitat management plan (HMP) for the Snake River (MUA 4). Starting in the fiscal year of 1992, the Bureau of Land Management will inventory lands along the Snake River in MUA 4 and MUA 8 (Hagerman Fossil Beds) and MUA 5

(Snake River Birds of Prey). Upon conclusion of the inventory, all tracts will be evaluated and prioritized. Priority rankings will be based on the presence of threatened or endangered species (plant and animal), unique habitats, potential to reach management objectives, and overall values. Specific objectives and management actions to meet those objectives will be written for the tracts.

Botany

In 1985, the Jarbidge RMP and final EIS stated that there were seven plants on the Threatened, Endangered, and Sensitive Plant lists for the Resource Area. Currently, 27 sensitive plant species or subspecies are known to inhabit the Jarbidge Resource Area. Table 7 lists the plant species and the number of known locations that are currently in the Jarbidge Resource Area. Future inventories may increase the number of sensitive species known to be present, as well as the number of known sites where sensitive species are found. Resource specialists in the Jarbidge Resource Area plan to develop a herbarium for all plants in the area. Two species, *Stylocline filaginae* and *Primula wilcoxiana*, were only known from locations in the Bennett Mountain Planning Unit.

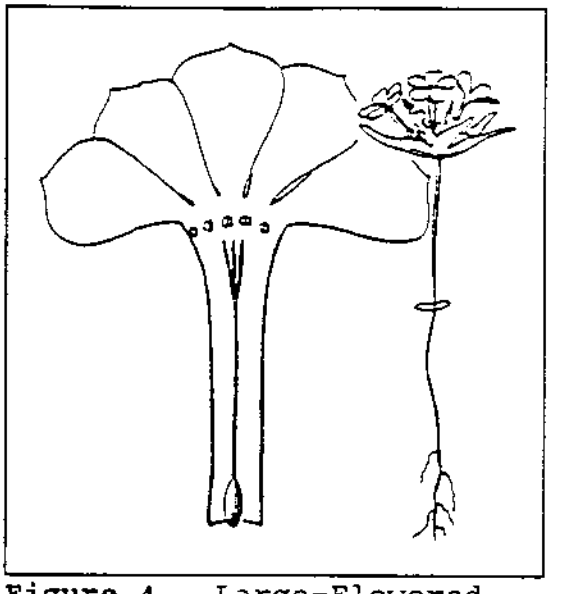

Figure 4. Large-Flowered Gymnosteris

Table 7. Sensitive plant species and number of known locations in the Jarbidge Resource Area.

Scientific Name	Number of Locations
Astragalus atratus var. inseptus	3
Astragalus atratus var. owyheensis	8
Astragalus camptopus	9
Astragalus kentrophyta var. jessiae	4
Astragalus mulfordiae	1
Astragalus purshii var. ophiogenes	5
Cymopteris acaulis var. greeleyorum	1
Eatonella nivea	4
Epipactis gigantea	1
Erigeron latus	2
Eriogonum ochrocephalum	1
Eriogonum salicornoides	5
Eriogonum shockley var. shockley	11
Gilia polycladon	1
Glyptopleura marginata	4
Gymnosteris nudicaulis	8
Gymnosteris parvula	1
Lepidium montanum var. papilliferum	2
Lepidium davisii	9
Leptodacytlon glabrum	4
Malacothrix glabratta	4
Malacothrix torreyi	1
Mentzelia torreyi var. torreyi	17
Pediocactus simpsonii var. robustior	2
Penstemon janishiae	1
Peteria thompsonae	4
Stipa webberi	1