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CONSERVATION STATUS OF CASTILLEJA LONGISPICA
ON CUSTER AND GALLATIN NATIONAL FORESTS, MONTANA

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December 1995

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I. SPECIES INFORMATION

A. CLASSIFICATION

1. SCIENTIFIC NAME: *Castilleja longispica* A. Nelson
2. SYNONYMS: *Castilleja pilosa* (S. Wats.) Rydb. var. *longispica* (A. Nels.) N. Holmgren
3. COMMON NAME: white paintbrush, parrot-head paintbrush
4. BIBLIOGRAPHIC CITATION: Nelson, A. 1899. New plants from Wyoming- X. Bulletin of the Torrey Botanical Club 26: 480-487.
5. TYPE SPECIMENS: United States, Wyoming, Teton County, Gros Ventre River, 5 August 1894, A. Nelson 900a (holotype, RM) (a mixed collection with *C. cusickii*)
6. FAMILY: Scrophulariaceae (Snapdragon Family)
7. GENUS: *Castilleja* is a genus of ca. 200 species, most of which occur in western North America. However, ca. 15 species occur in western South America, and a few occur in eastern North America and Asia (Cronquist et al. 1984). Lines between species are made ambiguous by widespread interspecific hybridization (Hitchcock et al. 1959, Cronquist et al. 1984).
8. SPECIES: *Castilleja longispica* was first collected by Aven Nelson in 1894 in Teton County, Wyoming. It is closely related to *C. pilosa* (Hitchcock et al 1959) and most recently has been treated as a variety of *C. pilosa* (Cronquist et al. 1984).

B. PRESENT LEGAL OR FORMAL STATUS

1. FEDERAL STATUS

- a. U.S. FISH AND WILDLIFE SERVICE: None
- b. U.S. FOREST SERVICE: Sensitive in Region One. This is a species for which the regional forester has determined there is a concern for population viability within a state, as evidenced by significant current or predicted downward trend in populations or habitat (Lesica and Shelly 1991).

2. STATE STATUS: *Castilleja longispica* is currently listed by the Montana Natural Heritage Program as G4-S2, apparently secure globally but imperiled because of rarity in Montana. Lesica and Shelly (1991) list *C. longispica* as sensitive in Montana.

C. DESCRIPTION

1. GENERAL NONTECHNICAL DESCRIPTION: White paintbrush is a herbaceous, hemiparasitic perennial with clustered, erect or ascending, purplish stems, 10-30 cm (4-12 in) high, from a branched rootcrown. Lower leaves are long and narrow with entire margins, while the upper ones are wider with 1-2 pairs of slender, spreading lobes. Foliage is covered with short to long and soft hairs. Flowers are borne in a spike at the top of the stems. Each flower is subtended by a broad leaf-like bract with yellowish or sometimes purplish tips and 1-3 pairs of slender lobes. The yellow, tubular corolla, 15-20 mm long, tapers to a short hood (galea) above and 3 small lobes below. The tubular calyx, 10-20 mm long, surrounds the corolla and is cleft into 4 equal, pointed lobes. Although the flowers are not completely hidden, the inflorescence takes its color from the bracts rather than the flowers. Photographs of *Castilleja longispica* are provided in Appendix A.

2. TECHNICAL DESCRIPTION: Perennial; stems clustered, often decumbent at the base and branched above, 1-3 dm tall, purplish, puberulent to villous-hirsute; lower leaves linear, entire, upper ones with 1 or 2 pairs of slender, divergent lobes, densely short-pubescent; bracts yellowish (rarely purplish), 3- to 9-parted, the lobes shorter and narrower than the mid-blade; flowers rather remote and usually not hidden by the bracts; calyx 10-20 mm long, subequally cleft into 4 linear, linear-triangular, or sometimes deltoid segments; corolla 15-20 mm long, generally exserted well beyond the calyx, its lower lip prominent, pouched, sometimes purplish, often nearly equaling or exceeding the galea in length, both galea and lower lip more or less strongly puberulent (Hitchcock et al. 1959).
3. SIMILAR SPECIES AND FIELD CHARACTERS: *Castilleja longispica* can be told from the other pale-flowered species in Montana by a combination of two characters: (1) a calyx that is equally lobed rather than being cleft more deeply on top and bottom than on the sides and (2) a lower corolla lip that is nearly as long as the upper lip (galea). In the Pryor Mountains, *C. pallescens* is found in drier sites with more well-drained soils than *C. longispica*. *Castilleja cusickii* occurs in more mesic sites than *C. longispica*. Thus dry, warm slopes or ridge tops with sparse sagebrush will have *C. pallescens*; moderate slopes with fairly dense sagebrush and *Festuca idahoensis* will support *C. longispica*; lower slopes, swales or bottoms with robust grasses, such as *Agropyron caninum*, will have *C. cusickii*.

The relatively long and narrow inflorescence of *Castilleja longispica* helps to identify it at a distance. It seems to always grow with mountain big sagebrush (*Artemisia tridentata* ssp. *vaseyana*).

D. GEOGRAPHIC DISTRIBUTION

1. RANGE: *Castilleja longispica* is endemic to central Idaho, northwest Wyoming, and southwest and south-central Montana (Cronquist et al. 1984). Hitchcock et al. (1959) give a larger range including the northern Great Basin, but this must be based on the closely related *C. pilosa*.

2. RECENTLY VERIFIED SITES

a. PRYOR MOUNTAINS: *Castilleja longispica* appears to be common on the south slopes of the Pryor Mountains. Six populations were documented in 1995 and an additional site was reported in 1984:

Crooked Creek
Commissary Ridge
Tony Island
East Bear Canyon
Bear Canyon
Big Coulee
Bluewater Creek

Detailed descriptions of these sites can be found in Appendix B.

b. BEARTOOTH MOUNTAINS: There are four recently verified populations of *Castilleja longispica* on the east front of the Beartooth Mountains:

Robertson Draw
Line Creek
Ruby Creek
Gold Creek

Detailed descriptions of these sites can be found in Appendix B.

c. YELLOWSTONE AREA: Ten populations are reported for Montana just north or west of Yellowstone National Park in Montana:

Little Trail Creek
Grayling Arm Hebgen Lake
Grayling Power Pole
Cinnamon

Sheep Creek
Little Mile Creek
Kirkwood
Elkhorn Ranch
Wapiti Creek
Raynolds Bridge

These populations are not vouchered by herbarium specimens. Detailed descriptions of these sites can be found in Appendix B. The Raynolds Bridge population has not yet been documented (S. Shelly, pers. comm.).

3. HISTORICAL SITES: There is a collection made by Aven Nelson in 1899 from Madison County (Midway). The location information is so poor that this population cannot be relocated. There was a poor collection from Ravalli County made in 1959 (Burnt Fork Lake Ridge); this specimen is probably misidentified as the site description seems eccentric.
4. UNSUCCESSFULLY SEARCHED AREAS: The occurrence of *Castilleja longispica* is somewhat sporadic. In between the documented populations, there are areas of what appeared to be appropriate habitat that were unoccupied. Grasslands on the northwest-facing slopes above Rock Creek and the West Fork of Rock Creek were surveyed briefly, but *C. longispica* not was found. *Castilleja longispica* was not found on the north slopes of the Pryor Mountains above Sage Creek.
5. AREAS YET TO BE SEARCHED: Additional populations of *C. longispica* undoubtedly occur in the Pryor Mountains, especially near the headwaters of Bear Canyon to King Canyon and some of the unexplored finger ridges such as Tony Island. Populations may also occur on the Crow Indian Reservation in the Pryor and Big Horn mountains.

Large expanses of appropriate *C. longispica* habitat occur throughout southwest Montana. Recent and historical collections suggest that *C.*

longispica probably can be found in some of these areas.

E. HABITAT

1. ASSOCIATED VEGETATION: *Castilleja longispica* is found in the *Artemisia tridentata*/*Festuca idahoensis* habitat type (Mueggler and Stewart 1980) and is generally rare or absent from the more mesic *Geranium viscosissimum* phase of this habitat type. Sagebrush (*Artemisia tridentata* ssp. *vaseyana*) canopy cover was 10-40%. Grass cover was ca. 20-60%, and dominant species included *Festuca idahoensis*, *Agropyron spicatum*, *Poa secunda*, *P. pratensis*, and *Carex filifolia*. Canopy cover of forbs was 20-50%; common species included *Astragalus miser*, *A. adsurgens*, *Arenaria congesta*, *Potentilla gracilis*, *Antennaria microphylla*, *Eriogonum umbellatum*, *Phlox hoodii*, *Balsamorhiza* spp., *Lupinus* spp., and *Cerastium arvense*. Bare ground usually covered 5-30%. Scattered *Juniperus scopulorum*, *Pinus flexilis*, and *Pseudotsuga menziesii* are encroaching into some sites.
2. TOPOGRAPHY: *Castilleja longispica* commonly occurs on nearly level flats to moderate slopes of 20-40%. Although it may be found on cool slopes, *C. longispica* most frequently occupies southeast- to southwest-facing aspects. On the east front of the Beartooth Mountains, *C. longispica* is found at 6,700-7,200 ft. In the Pryor Mountains it occurs at 6,000-7,800 ft., occupying the lower elevations on cool aspects. In the Yellowstone area *C. longispica* has been found at 6,000-7,600 ft.
3. SOIL AND GEOLOGICAL RELATIONSHIPS: In the Beartooth Mountains, *C. longispica* is found on soils that are derived from Madison Limestone or a combination of limestone and granite-derived glacial till. *Castilleja longispica* was found only on soils derived from Madison Limestone in the Pryor Mountains. In both ranges soils have a

sandy-loam texture and are deep to moderately deep.

In the Yellowstone area soils supporting *C. longispica* are poorly developed and gravelly with a sandy texture. These soils are derived from mixed sedimentary parent material.

4. REGIONAL CLIMATE: Red Lodge (5,575 ft), at the north end of the Beartooth front had mean July and January temperatures of 64.9° F and 21.8° F respectively, and mean annual precipitation was 25.0 in. Wettest months were April, May and June (NOAA 1982). The town of Bridger is in the valley of the Clark's Fork of the Yellowstone River at 3,680 ft, ca. halfway between the foothills of the Pryor Mountains and the Beartooth front. Mean July and January temperatures were 70.5° F and 21.5° F respectively, and mean annual precipitation was 12.67 in (NOAA 1982). The climate of the *Castilleja longispica* populations is probably warmer and drier than Red Lodge but cooler and wetter than Bridger.

West Yellowstone, 6,600 ft. at the northwest edge of Yellowstone National Park had mean July and January temperatures of 60.1 and 11.7° F respectively, and mean annual precipitation was 22.3 in. Wettest months were June, December and January (NOAA 1982).

5. DYNAMIC ABIOTIC FACTORS: Fire was undoubtedly an important dynamic force in the sagebrush-grassland communities that support *C. longispica*. Before the advent of fire suppression, dense stands of sagebrush were destroyed by fire on an average of every 35-40 years (Arno and Gruell 1983). *Castilleja longispica* is almost always found growing with big sagebrush (Hitchcock et al. 1959), perhaps indicating that *Artemisia tridentata* is the preferred host for this hemiparasitic plant. In this case fire would decrease the abundance of *C. longispica* as well as

that of sagebrush; however, there is no direct evidence indicating that this is so.

F. POPULATION BIOLOGY

1. PHENOLOGY: *Castilleja longispica* has been observed flowering in mid-June through late July in the Pryor Mountains, July and early August in the Beartooth Mountains, and late June through early July in the Yellowstone area.
2. POPULATION SIZE AND CONDITION: Among the total of 21 known populations there are an estimated 50,000-350,000 plants.
 - a. PRYOR MOUNTAINS: There are seven known populations. Additional populations probably exist in the area.
 - i. Bear Canyon population has 1,000-10,000 plants over an area of ca. 300 acres.
 - ii. East Bear Canyon population has 5,000-10,000 plants in ca. 100 acres.
 - iii. Big Coulee population has 1,000-10,000 plants in ca. 5-10 acres
 - iv. Crooked Creek population has 5,000-10,000 plants in at least three subpopulations in 200-300 acres.
 - v. Commissary Ridge population has 10,000-100,000 plants in at least three subpopulations over 300-400 acres.
 - vi. Tony Island population has 100-500 plants in ca. 1 acre.
 - vii. There are no size or population estimates for the Bluewater population.

- b. BEARTOOTH MOUNTAINS: There are four known populations on the east front of the Beartooth Mountains:
- i. Robertson Draw population has 10,000-100,000 plants over 100-150 acres.
 - ii. Gold Creek population has 500-1,000 plants over ca. 20 acres.
 - iii. Ruby Creek population has 1,000-10,000 plants in ca. 40 acres
 - iv. Line Creek population has 500-1,000 plants over ca. 30 acres.
- c. YELLOWSTONE AREA: There are ten known populations; however, additional populations probably occur in the foothills of the Absaroka, Gallatin and Madison mountain ranges. I believe that many of these population estimates may be low. For example, *C. longispica* was reported to be common over 640 acres of the Little Mile Creek area, yet the population was estimated at only 300 plants.
- i. Grayling Power Pole population has 600-2,000 plants among at least ten subpopulations over ca. 40 acres.
 - ii. Little Trail Creek population has 1,000-10,000 plants over ca. 450 acres.
 - iii. Grayling Arm Hebgen Lake population has 500-1,000 plants over ca. 40 acres.
 - iv. Cinnamon population has at least 70 plants in at least 3 subpopulations over ca. 50 acres.
 - v. Sheep Creek population has ca. 200 plants over ca. 40 acres.

- vi. Little Mile Creek population has ca. 300 plants over 640 acres.
- vii. Kirkwood population has ca. 75 plants in ca. 10 acres.
- viii. Elkhorn Ranch population ca. 35 plants over 20 acres
- ix. Wapiti Creek population has ca. 75 plants over 25 acres
- x. Raynolds Bridge population has 500-1,000 plants over ca. 10 acres

3. REPRODUCTIVE BIOLOGY

- a. TYPE OF REPRODUCTION: *Castilleja longispica* does not produce rhizomes or other means of vegetative propagation. Reproduction is entirely from seed.
- b. POLLINATION BIOLOGY: There are no known observations on the pollinators of *C. longispica*. Large-flowered species of *Castilleja* may be pollinated by hummingbirds, while small-flowered species may be pollinated by bees (Faegri and van der Pijl 1971).
- c. SEED DISPERSAL AND BIOLOGY: Seeds of *C. longispica* are borne in dry capsules at the top of the stem. Presumably the capsules break open and seeds are shaken from them by wind or passing animals (van der Pijl 1982). Some species of hemiparasitic Scrophulariaceae, such as *Melampyrum* and *Pedicularis*, are dispersed by ants (van der Pijl 1982). It is not known if *C. longispica* has this dispersal syndrome.
- d. SEEDLING BIOLOGY: Seedlings of many hemiparasites require attachment to a host in

order to grow (Sahai and Shivanna 1985, Macior 1980). It is not known if this is the case with *C. longispica*.

4. DEMOGRAPHY: The large root crown of some plants of *C. longispica* suggest that it is a long-lived perennial. Demography studies of *C. longispica* have not been done.

G. ECOLOGY

1. BIOLOGICAL INTERACTIONS

- a. PARASITISM: *Castilleja longispica* is a hemiparasite, capable of photosynthesis but obtaining a large part of the water, nutrient, and even carbohydrate requirements from its host (Malcolm 1966, Kuijit 1969). Hemiparasites in the Scrophulariaceae are generally not thought to be host specific (Kuijit 1969), and the host range of *C. longispica* is not known. However, the fact that it is always associated with moderate to dense stands of *Artemisia tridentata* perhaps suggests that this shrub is a preferred host.
- b. COMPETITION AND FACILITATION: Hemiparasites that have attached to a host probably suffer little direct effect from competition as much of their water and nutritional requirements are obtained from the host.
- c. HERBIVORY: Nearly all of the populations of *C. longispica* in the Beartooth and Pryor mountains are subject to livestock grazing. Some of these sites, such as Commissary Ridge, suffer heavy grazing pressure with 50-75% utilization of palatable grasses. Nonetheless, evidence of grazing of *C. longispica* was not apparent at any of the sites visited. Furthermore, the occurrence of ungrazed clumps of grass adjacent to large *C. longispica* plants in heavily grazed

pastures suggests that *C. longispica* is avoided by cattle.

Late in the season (August) the leaves and bracts of some *C. longispica* plants appeared ragged. These plants may have suffered insect herbivory. The effects of this herbivory on the plants is not known.

2. HYBRIDIZATION: There are few barriers to hybridization in the genus *Castilleja* other than different chromosome numbers (Cronquist et al. 1984). At many of the sites in the Pryor Mountains *C. longispica* occurs in close proximity to either or both *C. pallescens* or *C. cusickii*. *Castilleja longispica* has an equally four-lobed calyx, while the latter two species have deeper calyx divisions on top and bottom than laterally. Intermediates in this character were not observed.

H. LAND OWNERSHIP

1. U.S. FOREST SERVICE: All of the known occurrences of *Castilleja longispica* on the east front of the Beartooth Mountains and all but one in the Pryor Mountains are on public lands administered by the Beartooth District of Custer National forest. These include:

- Bear Canyon
- East Bear canyon
- Big Coulee
- Crooked Creek
- Commissary Ridge
- Tony Island
- Gold Creek
- Ruby Creek
- Line Creek
- Robertson Draw

In addition, most or all of the land supporting nine of the ten known Yellowstone area populations are on public lands administered by the Hebgen Lake District of Gallatin National Forest:

- Grayling Power Pole

Little Trail Creek
Grayling Arm Hebgen Lake
Cinnamon
Sheep Creek
Little Mile
Kirkwood
Elkhorn Ranch
Wapiti Creek

2. PRIVATE LAND: The Bluewater Creek population of *C. longispica* is on land owned by a private individual. Portions of the Grayling Arm Hebgen Lake and Grayling Power Pole sites are owned by private individuals. A portion of the Little Trail Creek population is on corporate lands. The Reynolds Bridge population is on private land, although some of this may be partly administered by the State of Montana as a rest area.

II. ASSESSMENT AND MANAGEMENT RECOMMENDATIONS

A. THREATS TO KNOWN POPULATIONS

1. ENERGY EXPLORATION AND DEVELOPMENT: Oil and gas development has occurred to the southeast of the east front of the Beartooth Mountains, and oil and gas leasing has been proposed for the Beartooth front area of Custer National Forest. Intense oil and gas exploration and development could adversely impact populations of *Castilleja longispica* by destroying habitat; however, it is unlikely that more than a small portion of the *C. longispica* plants in the area would be destroyed in this way. Much more pernicious is the threat of widespread introduction of aggressive exotic plants (see below) that always accompanies road construction and large-scale disturbances.
2. EXOTIC PLANTS: Knapweed (*Centaurea maculosa*) is present along some roads as well as in native grasslands along the front of the Beartooth Mountains. The semi-arid climate and gravelly soils found in the area are conducive to the spread of this aggressive exotic. There was

noticeably more knapweed in 1995 than in 1987 when initial surveys for The Nature Conservancy were conducted (Lesica 1988). If this plant continues to spread it could outcompete and displace many native species (Watson and Renney 1974, Harris and Cranston 1979; Tyser and Key 1988), *Castilleja longispica* among them. Leafy spurge (*Euphorbia esula*) was observed along the road up Robertson Draw in an area that had been burned. This aggressive exotic may also pose a threat to populations of *C. longispica*.

The introduced grass, smooth brome (*Bromus inermis*), is present at both sites on the northwest side of the Yellowstone area (Grayling Power Pole, Grayling Arm Hebgen Lake). This species can be invasive and tends to exclude other species. Smooth brome may pose a threat to populations of *C. longispica* in the Yellowstone area.

3. RECREATION AND RESIDENTIAL DEVELOPMENT: Two of the *C. longispica* populations occur on private land near Hebgen Lake that is adjacent to newly created residential areas (Grayling Power Pole, Grayling Arm Hebgen Lake). Both of these sites are threatened by subdivision and housing development.

B. MANAGEMENT PRACTICES AND RESPONSES

1. LIVESTOCK GRAZING: The Robertson Draw area has been deferred from grazing since 1988 to protect elk winter range. All other populations of *Castilleja longispica* in the Pryor and Beartooth mountains are subject to cattle grazing. Observations suggest that *Castilleja longispica* is not adversely affected by cattle grazing and may even benefit (see above). Six of the Yellowstone area populations (Cinnamon, Sheep Creek, Little Mile Creek, Kirkwood, Elkhorn Ranch and Wapiti Creek) are on cattle grazing allotments. Some of the Pryor Mountain sites (Big Coulee, Tony Island) may be subject to grazing by wild horses and two

populations in the Yellowstone area (Grayling Power Pole, Grayling Arm Hebgen Lake) are subject to grazing by domestic horses. J. Jacobs (Gallatin National Forest) reports that horse grazing does not appear to be adversely affecting these latter populations of *C. longispica*.

2. RECREATION AND DEVELOPMENT: Most recreational activity in the Pryor and Beartooth Mountains occurs during hunting season when *C. longispica* is dormant. There is some off-road vehicle use in the Pryor Mountains during the growing season; however, the habitat of *C. longispica* usually has dense sagebrush and is not prone to widespread disturbance from ORVs.

The persistence of native plants is generally not compatible with housing development such as that occurring in the Hebgen Lake area.

C. RECOMMENDATIONS FOR MAINTAINING VIABLE POPULATIONS

1. MANAGEMENT RECOMMENDATIONS: There are no immediate threats to populations of *Castilleja longispica* in the Pryor or Beartooth mountains. Most populations in the Yellowstone area are also unthreatened. The species occurs in habitat that is abundant, so other populations will undoubtedly be found. Encroachment by exotics such as knapweed could pose a threat in the future; however, it is not known how a hemiparasite like *C. longispica* that is reported to have a wide host range will respond to a weed invasion. Two small populations in the Yellowstone area are threatened by residential development and exotic weed encroachment. Again, other populations undoubtedly occur and have yet to be located, both in the Yellowstone area and throughout southwest Montana. Currently there are 21 known populations with an estimated 50,000-350,000 plants. Most populations are secure and may be increasing under livestock grazing. Current management practices

appear to be compatible with persistence of known *Castilleja longispica* populations in Montana.

2. U.S. FOREST SERVICE STATUS RECOMMENDATIONS: There are many large populations of *Castilleja longispica* currently known, and it is likely that many more are yet to be found. There are no known threats to most of the populations, and current management practices seem to be compatible with long-term persistence of the species. Thus, *Castilleja longispica* should be removed from the list of sensitive species maintained by Region One of the U.S. Forest Service.

- D. SUMMARY: *Castilleja longispica* is endemic to northwest Wyoming, central Idaho and southwest and south-central Montana. There are currently 21 known populations in the Pryor Mountains, Beartooth Mountains and Yellowstone area with an estimated 50,000-350,000 plants. Populations occur in plant communities dominated by sagebrush, Idaho fescue and bluebunch wheatgrass, a common habitat throughout this part of Montana. All known large populations are on public land administered by the U.S. Forest Service and managed for cattle grazing. *Castilleja longispica* appears to be unaffected or enhanced by grazing. Two small populations in the Yellowstone area are immediately threatened by weed encroachment and residential development; however, all other populations appear to be secure. Current management practices seem to be compatible with long-term persistence of the species. *Castilleja longispica* should be removed from the list of sensitive species maintained by Region One of the U.S. Forest Service.

III. INFORMATION SOURCES

- A. HERBARIUM SPECIMENS: Collections vouchering many of the populations in the Pryor and Beartooth mountains are housed at the University of Montana herbarium (MONTU). A specimen documenting the Commissary Ridge population collected by Judy McCarthy is at Montana State

University Herbarium (MONT). There are currently no voucher specimens for the Yellowstone area populations.

- B. FIELD WORK: Field surveys were conducted by Peter Lesica in June and August of 1995 on the east front of the Beartooth Mountains from the Wyoming border to northwest of Red Lodge and in the Pryor Mountains. Field forms are deposited at the Montana Natural Heritage Program in Helena.

Field surveys in the Yellowstone area were conducted by J. Jacobs of Gallatin National Forest in 1994. Project surveys were conducted in the Yellowstone area in 1995 by Lih-An Yang and Tris Hoffman, under contract to the Hebgen Lake District of Gallatin National Forest.

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Appendix A. Photographs of *Castilleja longispica* and its habitat. Upper left: *Castilleja longispica*, Upper right: *Castilleja longispica*, Lower left: *C. longispica* habitat at Commissary Ridge, Lower right: *C. longispica* habitat at Robertson Draw, Bottom: *C. longispica* habitat at Bear Canyon.



Appendix B. Element occurrence records for known populations of *Castilleja longispica*.

December 5, 1995

MONTANA NATURAL HERITAGE PROGRAM
Element Occurrence Record

Scientific Name: CASTILLEJA PILOSA VAR LONGISPICA
Common Name: PARROT-HEAD INDIAN-PAINTBRUSH

Global rank: G4?T4 Forest Service status: SENSITIVE
State rank: S1 Federal Status:

Element occurrence code: PDSCR0D2H1.022
Element occurrence type:

Survey site name: WAPITI CREEK
EO rank:
EO rank comments:

County: GALLATIN

USGS quadrangle: LINCOLN MOUNTAIN

Township: Range: Section: TRS comments:
009S 004E 8 SW4

Precision: M
Survey date: Elevation: 6840 -
First observation: 1995-08-14 Slope/aspect: 0% / NORTH
Last observation: 1995-08-14 Size (acres): 25

Location:
CA. 4 MILES WEST ON TAYLOR CREEK ROAD FROM HWY 191, ON PASTURE
SOUTHEAST OF JUNCTION OF WAPITI CREEK ROAD AND TAYLOR CREEK ROAD,
BOUNDED TO THE NORTH BY TAYLOR CREEK ROAD.

Element occurrence data:
CA. 75 PLANTS, 100% IN FLOWER.

General site description:
DRY, OPEN MIDSLOPE ON SITES WITH SUBSTANTIAL BARE SOIL AND ROCKS.
SANDSTONE BEDROCK ASSOCIATED SPECIES: ARTEMISIA TRIDENTATA SSP.
VASEYANA, FESTUCA IDAHOENSIS, CHRYSOTHAMNUS VISCIDIFLORUS, POTENTILLA
FRUTICOSA, SELAGINELLA Densa, ANTENNARIA SPP., GEUM TRIFLORUM,
FRAGARIA VIRGINIANA, DANTHONIA INTERMEDIA.

Land owner/manager:
CONSERVATION EASEMENT: THE NATURE CONSERVANCY
GALLATIN NATIONAL FOREST, HEBGEN LAKE RANGER DISTRICT

Comments:
OBSERVED BY LIH-AN YANG.

Information source: SENSITIVE PLANT COORDINATOR, GALLATIN NATIONAL
FOREST, P.O. BOX 130, FEDERAL BUILDING, BOZEMAN,
MT 59771.

Specimens:

December 6, 1995

MONTANA NATURAL HERITAGE PROGRAM
Element Occurrence Record

Scientific Name: CASTILLEJA PILOSA VAR LONGISPICA
Common Name: PARROT-HEAD INDIAN-PAINTBRUSH

Global rank: G4?T4 Forest Service status: SENSITIVE
State rank: S1 Federal Status:

Element occurrence code: PDSCR0D2H1.012
Element occurrence type:

Survey site name: TONY ISLAND
EO rank: C
EO rank comments:

County: CARBON

USGS quadrangle: BIG ICE CAVE
EAST PRYOR MOUNTAIN

Township: Range: Section: TRS comments:
008S 027E 11 SE4

Precision: S
Survey date: 1995-08-13 Elevation: 7800 - 7840
First observation: 1995-08-13 Slope/aspect: 20% / SW
Last observation: 1995-08-13 Size (acres): 1

Location:

PRYOR MOUNTAINS. CA. 1.3 AIR MILES SOUTHEAST OF BIG ICE CAVE. FROM
MAIN ROAD TO DRYHEAD OVERLOOK, TAKE OLD ROAD TO TONY ISLAND. STAY TO
EAST.

Element occurrence data:
100-500 PLANTS, MATURE FRUIT.

General site description:

DRY, OPEN RESIDUAL MOUNTAIN RIDGE. LIMESTONE PARENT MATERIAL, STONY
SOIL. ASSOCIATED SPECIES: ARTEMISIA TRIDENTATA VASEYANA, FESTUCA
IDAHOENSIS, ASTRAGALUS MISER, GALIUM BOREALE.

Land owner/manager:

CUSTER NATIONAL FOREST, BEARTOOTH RANGER DISTRICT

Comments:

OBSERVED BY P. LESICA. SOME HORSE GRAZING IN AREA.

Information source: LESICA, PETER. DIVISION OF BIOLOGICAL SCIENCES,
UNIVERSITY OF MONTANA, MISSOULA, MT 59812. PHONE
406/728-8740.

Specimens: LESICA, P. (7019). 1995. MONTU.

December 5, 1995

MONTANA NATURAL HERITAGE PROGRAM
Element Occurrence Record

Scientific Name: CASTILLEJA PILOSA VAR LONGISPICA
Common Name: PARROT-HEAD INDIAN-PAINTBRUSH

Global rank: G4?T4 Forest Service status: SENSITIVE
State rank: S1 Federal Status:

Element occurrence code: PDSCR0D2H1.019
Element occurrence type:

Survey site name: SHEEP CREEK
EO rank:
EO rank comments:

County: GALLATIN

USGS quadrangle: EARTHQUAKE LAKE

Township: Range: Section: TRS comments:
012S 002E 1 SW4; 12 NW4

Precision: M
Survey date: Elevation: 6480 -
First observation: 1995-07-28 Slope/aspect: LEVEL
Last observation: 1995-07-28 Size (acres): 40

Location:

CA. 1.5 AIR MILES SOUTH OF VISITOR'S CENTER ON EARTHQUAKE LAKE. TAKE
ROUTE 87 CA. 2 MILES SOUTH FROM HWY 287. GO EAST ON FS RD 6905 CA. 2.5
MILES TO END.

Element occurrence data:

CA. 200 PLANTS, 90% IN FRUIT, 10% IN FLOWER.

General site description:

DRY, OPEN UPPEXSLOPE OF ALLUVIAL FAN. WELL-ESTABLISHED ON DRY FLATS AS
WELL AS STEEP SLOPES. ASSOCIATED SPECIES: ARTEMISIA TRIDENTATA SSP.
VASEYANA, FESTUCA IDAHOENSIS, STIPA COMATA, AGROPYRON SPICATUM,
LUPINUS ARGENTEUS, POA SECUNDA, ANTENNARIA SPP., ERIOGONUM UMBELLATUM.

Land owner/manager:

GALLATIN NATIONAL FOREST, HEBGEN LAKE RANGER DISTRICT

Comments:

OBSERVED BY LIH-AN YANG. CATTLE GRAZING MAY IMPACT POPULATION. ECODATA
PLOTS 117C95Y005 AND 117C95Y006.

Information source: SENSITIVE PLANT COORDINATOR, GALLATIN NATIONAL
FOREST, P.O. BOX 130, FEDERAL BUILDING, BOZEMAN,
MT 59771.

Specimens:

December 6, 1995

MONTANA NATURAL HERITAGE PROGRAM
Element Occurrence Record

Scientific Name: CASTILLEJA PILOSA VAR LONGISPICA
Common Name: PARROT-HEAD INDIAN-PAINTBRUSH

Global rank: G4?T4 Forest Service status: SENSITIVE
State rank: S1 Federal Status:

Element occurrence code: PDSCROD2H1.014
Element occurrence type:

Survey site name: RUBY CREEK
EO rank: B
EO rank comments:

County: CARBON

USGS quadrangle: TOLMAN FLAT

Township: Range: Section: TRS comments:
009S 020W 15 SE4

Precision: S
Survey date: 1995-08-11 Elevation: 6720 - 7200
First observation: 1995-08-11 Slope/aspect: 40% / SOUTH
Last observation: 1995-08-11 Size (acres): 40

Location:

TAKE HWY 72 10 MILES SOUTH AND TURN WEST ONTO FS RD 3008. TAKE FS RD
3008 UP TO ROBERTSON DRAW CA. 2.5 MILES BEFORE FS BOUNDARY.

Element occurrence data:

1000+ PLANTS, MATURE AND IMMATURE FRUIT. HEMIPARASITIC ON PERHAPS
SAGEBRUSH.

General site description:

DRY, OPEN RESIDUAL MOUNTAIN UPPERSLOPE. GLACIAL TILL PARENT MATERIAL,
STONY SOIL. ASSOCIATED SPECIES: ARTEMISIA TRIDENTATA VASEYANA, FESTUCA
IDAHOENSIS, AGROPYRON SPICATUM, ARTEMISIA FRIGIDA, LUPINUS ARGENTEUS,
CHRYSOPSIS VILLOSA, ASTRAGALUS ADSURGENS.

Land owner/manager:

CUSTER NATIONAL FOREST, BEARTOOTH RANGER DISTRICT

Comments:

OBSERVED BY P. LESICA. DISTURBANCE BY FIRE AND PAST LIVESTOCK GRAZING.

Information source:

LESICA, PETER. DIVISION OF BIOLOGICAL SCIENCES,
UNIVERSITY OF MONTANA, MISSOULA, MT 59812. PHONE
406/728-8740.

Specimens:

December 6, 1995

MONTANA NATURAL HERITAGE PROGRAM
Element Occurrence Record

Scientific Name: CASTILLEJA PILOSA VAR LONGISPICA
Common Name: PARROT-HEAD INDIAN-PAINTBRUSH

Global rank: G4?T4 Forest Service status: SENSITIVE
State rank: S1 Federal Status:

Element occurrence code: PDSCR0D2H1.005
Element occurrence type:

Survey site name: ROBERTSON DRAW
EO rank: A
EO rank comments: LARGE POPULATION.

County: CARBON

USGS quadrangle: MOUNT MAURICE

Township: Range: Section: TRS comments:
009S 020E 21 S2; 28 N2

Precision: S
Survey date: 1995-08-09 Elevation: 6700 - 7200
First observation: 1993-08-06 Slope/aspect: 10-18% / SOUTHEAST
Last observation: 1995-08-09 Size (acres): 100

Location:

FROM 8 MILES SOUTH OF BELFRY TAKE ROBERTSON DRAW ROAD TO CROSSING OF
ROBERTSON DRAW. HIKE UP ROAD CA. 1 MILE.

Element occurrence data:

1995: 10,000 PLANTS, IMMATURE FRUIT. PARASITIC PERHAPS ON SAGEBRUSH.
1993: 500 PLANTS, FLOWERING. HEMIPARISITIC.

General site description:

DRY, OPEN LOWERSLOPE, UNGLACIATED MOUNTAIN SLOPES. LIMESTONE PARENT
MATERIAL, LOAMY SOIL. ASSOCIATED SPECIES: PINUS FLEXILIS, ARTEMISIA
TRIDENTATA, A. FRIGIDA, AGROPYRON SPICATUM, FESTUCA IDAHOENSIS,
ASTRAGALUS ADSURGENS.

Land owner/manager:

CUSTER NATIONAL FOREST, BEARTOOTH RANGER DISTRICT

Comments:

ECODATA PLOT #93PL020. ENTIRE AREA OF SUITABLE HABITAT NOT SURVEYED IN
1993. DISTURBANCE BY FIRE NOTED IN 1995.

Information source: LESICA, PETER. DIVISION OF BIOLOGICAL SCIENCES,
UNIVERSITY OF MONTANA, MISSOULA, MT 59812. PHONE
406/728-8740.

Specimens: LESICA, P. (7010). 1995. MONTU.

December 5, 1995

MONTANA NATURAL HERITAGE PROGRAM
Element Occurrence Record

Scientific Name: CASTILLEJA PILOSA VAR LONGISPICA
Common Name: PARROT-HEAD INDIAN-PAINTBRUSH

Global rank: G4?T4 Forest Service status: SENSITIVE
State rank: S1 Federal Status:

Element occurrence code: PDSCR0D2H1.001
Element occurrence type:

Survey site name: MIDWAY STATION
EO rank:
EO rank comments:

County: MADISON

USGS quadrangle: UNMAPPABLE

Township: Range: Section: TRS comments:

Precision: U
Survey date: 1899-06-19 Elevation: -
First observation: 1899 Slope/aspect:
Last observation: 1899-06-19 Size (acres): 0

Location:
MIDWAY STATION, M.Y. LINE. (HISTORICAL RECORD).

Element occurrence data:
UNKNOWN.

General site description:
AMONG SAGEBRUSH ON THE PLAIN.

Land owner/manager:

Comments:
M. OWENBY, 1935. MIDWAY STATION NOT ON MAPS.

Information source: BOTANIST, MONTANA NATURAL HERITAGE PROGRAM, 1515
EAST SIXTH AVENUE, HELENA, MT 59620-1800.

Specimens: NELSON AND NELSON (5452). 1899. SPECIMEN #19670. RM.

December 5, 1995

MONTANA NATURAL HERITAGE PROGRAM
Element Occurrence Record

Specimens:

Scientific Name: CASTILLEJA PILOSA VAR LONGISPICA
Common Name: PARROT-HEAD INDIAN-PAINTBRUSH

Global rank: G4?T4 Forest Service status: SENSITIVE
State rank: S1 Federal Status:

Element occurrence code: PDSCR0D2H1.008
Element occurrence type:

Survey site name: LITTLE TRAIL CREEK BISON IMPOUNDMENT
EO rank:
EO rank comments:

County: PARK

USGS quadrangle: GARDINER

Township: Range: Section: TRS comments:
009S 008E 9 SE4; 10 SW4; 15 NW4

Precision: M

Survey date: Elevation: 6000 -

First observation: 1994-07-08 Slope/aspect: 1% / NW

Last observation: 1994-07-08 Size (acres): 450

Location:

4 MILES NORTHWEST OF GARDINER, 0.5 MILE UP JARDINE ROAD, TO QUARRY ROAD, THEN 2.5 MILES THROUGH QUARRY. POPULATION IS ALONG FS RD TO LITTLE TRAIL CREEK TRAIL ACCESS BEGINNING BEYOND QUARRY DISTURBANCE AND ENDING AT LITTLE TRAIL CREEK.

Element occurrence data:

LARGE POPULATION OF >1000 INDIVIDUALS.

General site description:

IN DRIER AREAS OF SAGEBRUSH/IDAHO FESCUE/BLUEBUNCH WHEATGRASS RANGELAND. UNDEVELOPED SANDY, GRAVELLY MIXED SEDIMENTARY SOIL; CA. 50% BARE GROUND, LICHEN COMMON. ASSOCIATED SPECIES: ARTEMISIA TRIDENTATA, CHRYSOTHAMNUS VISCIDIFLORUS, ARTEMISIA FRIGIDA, FESTUCA IDAHOENSIS, AGROPYRON SPICATUM, DANTHONIA INTERMEDIA, POA SECUNDA, ARENARIA CONGESTA, GEUM TRIFLORUM, POTENTILLA GRACILIS, ERIOGONUM UMBELLATUM, ANTENNARIA MICROPHYLLA, OPUNTIA POLYACANTHA, PINUS FLEXILIS, JUNIPERUS SCOPULORUM, LEPTODACTYLON PUNGENS, TETRADYNIMA CANESCENS.

Land owner/manager:

GALLATIN NATIONAL FOREST, GARDINER RANGER DISTRICT
PRIVATELY OWNED LAND (INDIVIDUAL OR CORPORATE)

Comments:

AREA SURVEYED BY J. JACOBS.

Information source: SENSITIVE PLANT COORDINATOR, GALLATIN NATIONAL FOREST, P.O. BOX 130, FEDERAL BUILDING, BOZEMAN, MT 59771.

Specimens:

December 5, 1995

MONTANA NATURAL HERITAGE PROGRAM
Element Occurrence Record

Scientific Name: CASTILLEJA PILOSA VAR LONGISPICA
Common Name: PARROT-HEAD INDIAN-PAINTBRUSH

Global rank: G4?T4 Forest Service status: SENSITIVE
State rank: S1 Federal Status:

Element occurrence code: PDSCR0D2H1.018
Element occurrence type:

Survey site name: LITTLE MILE CREEK
EO rank:
EO rank comments:

County: MADISON

USGS quadrangle: EARTHQUAKE LAKE
TARGHEE PEAK

Township: Range: Section: TRS comments:
012S 002E 36 25; 35
013S 002E 1

Precision: M
Survey date: Elevation: 7000 -
First observation: 1995-07-07 Slope/aspect: 1% / WEST
Last observation: 1995-07-07 Size (acres): 640

Location:
CA. 6 AIR MILES SOUTH OF EARTHQUAKE MEMORIAL AT EARTHQUAKE LAKE ALONG
MILE CREEK DRAINAGE.

Element occurrence data:
CA. 300 PLANTS, 100% FLOWERING.

General site description:
DRY, OPEN LOWER ALLUVIAL FAN SLOPES. ASSOCIATED SPECIES: ARTEMISIA
TRIDENTATA SSP. VASEYANA, FESTUCA IDAHOENSIS, POA PRATENSIS, STIPA
COMATA, LUPINUS ARGENTEUS, CAREX FILIFOLIA, POTENTILLA GRACILLIS.

Land owner/manager:
GALLATIN NATIONAL FOREST, HEBGEN LAKE RANGER DISTRICT
PRIVATELY OWNED LAND (INDIVIDUAL OR CORPORATE)

Comments:
OBSERVED BY LIH-AN YANG AND TRIS HOFFMAN. ECODATA PLOT 117C95Y009.

Information source: SENSITIVE PLANT COORDINATOR, GALLATIN NATIONAL
FOREST, P.O. BOX 130, FEDERAL BUILDING, BOZEMAN,
MT 59771.

Specimens:

December 6, 1995

MONTANA NATURAL HERITAGE PROGRAM
Element Occurrence Record

Scientific Name: CASTILLEJA PILOSA VAR LONGISPICA
Common Name: PARROT-HEAD INDIAN-PAINTBRUSH

Global rank: G4?T4 Forest Service status: SENSITIVE
State rank: S1 Federal Status:

Element occurrence code: PDSCROD2H1.016
Element occurrence type:

Survey site name: LINE CREEK
EO rank: C
EO rank comments:

County: CARBON

USGS quadrangle: MOUNT MAURICE

Township: Range: Section: TRS comments:
009S 020E 29 NE4

Precision: S
Survey date: 1995-08-10 Elevation: 6800 - 7080
First observation: 1995-08-10 Slope/aspect: 20% / SOUTH
Last observation: 1995-08-10 Size (acres): 30

Location:

CA. 0.1 MILE WEST OF LINE CREEK SERVICE STATION. FROM CA. 10 MILES
SOUTH OF BELFRY, CROSS RIVER AND TAKE ROAD UP ROBERTSON DRAW.

Element occurrence data:

500+ PLANTS, IMMATURE FRUIT. HEMIPARASITIC PERHAPS ON SAGEBRUSH.

General site description:

DRY, OPEN RESIDUAL MOUNTAIN MIDSLOPE. GLACIAL TILL PARENT MATERIAL,
STONY SOIL. ASSOCIATED SPECIES: ARTEMISIA TRIDENTATA VASEYANA, FESTUCA
IDAHOENSIS, AGROPYRON SPICATUM, ASTRAGALUS MISER, A. ADSURGENS, PHLOX
HOODII.

Land owner/manager:

CUSTER NATIONAL FOREST, BEARTOOTH RANGER DISTRICT

Comments:

OBSERVED BY P. LESICA. DISTURBANCE BY CATTLE TRAILS AND ROADS.

Information source: LESICA, PETER. DIVISION OF BIOLOGICAL SCIENCES,
UNIVERSITY OF MONTANA, MISSOULA, MT 59812. PHONE
406/728-8740.

Specimens:

December 5, 1995

MONTANA NATURAL HERITAGE PROGRAM
Element Occurrence Record

Scientific Name: CASTILLEJA PILOSA VAR LONGISPICA
Common Name: PARROT-HEAD INDIAN-PAINTBRUSH

Global rank: G4?T4 Forest Service status: SENSITIVE
State rank: S1 Federal Status:

Element occurrence code: PDSCR0D2H1.017
Element occurrence type:

Survey site name: KIRKWOOD
EO rank:
EO rank comments:

County: GALLATIN

USGS quadrangle: HEBGEN DAM

Township: Range: Section: TRS comments:
011S 003E 25

Precision: M
Survey date: Elevation: 6800 -
First observation: 1995-07-08 Slope/aspect: 8% / SOUTH
Last observation: 1995-07-08 Size (acres): 10

Location:

ALONG NEW KIRKWOOD TRAIL, CA. 2 AIR MILES SOUTHEAST OF HEBGEN DAM ON
HEBGEN RIDGE.

Element occurrence data:

CA. 75 PLANTS, 90% FLOWERING, 10% FRUITING.

General site description:

DRY, OPEN LOWERSLOPE WITH ARTEMISIA TRIDENTATA SSP. VASEYANA,
AGROPYRON SPICATUM, PSEUDOTSUGA MENZIESII, POA PRATENSIS, LUPINUS
ARGENTEUS, HELIANTHELLA UNIFLORA, SYMPHORICARPOS ALBUS.

Land owner/manager:

GALLATIN NATIONAL FOREST, HEBGEN LAKE RANGER DISTRICT
PRIVATELY OWNED LAND (INDIVIDUAL OR CORPORATE)

Comments:

OBSERVED BY LIH-AN YANG. QUARTER SECTION GIVEN AS "NW" ON SURVEY FORM,
BUT MAPPED IN NE QUARTER OF SECTION 25 TO FIT SITE DESCRIPTION. NW
QUARTER MAY BE RIGHT, HOWEVER, SINCE TRAIL HAS BEEN RELOCATED TO AVOID
PRIVATE LAND. MINIMAL DISTURBANCE BY TRAIL. ECODATA PLOT 117C95T004.

Information source: SENSITIVE PLANT COORDINATOR, GALLATIN NATIONAL
FOREST, P.O. BOX 130, FEDERAL BUILDING, BOZEMAN,
MT 59771.

Specimens:

December 5, 1995

MONTANA NATURAL HERITAGE PROGRAM
Element Occurrence Record

Scientific Name: CASTILLEJA PILOSA VAR LONGISPICA
Common Name: PARROT-HEAD INDIAN-PAINTERUSH

Global rank: G4?T4 Forest Service status: SENSITIVE
State rank: S1 Federal Status:

Element occurrence code: PDSCROD2H1.007
Element occurrence type:

Survey site name: GRAYLING POWER POLE
EO rank:
EO rank comments:

County: GALLATIN

USGS quadrangle: MOUNT HEBGEN

Township: Range: Section: TRS comments:
012S 005E 17 NE4; 9 SW4SW4; 16 NW4NW4

Precision: M

Survey date: Elevation: 6560 - 6600

First observation: 1994-06-28 Slope/aspect: 0% / SOUTH

Last observation: 1995-07-27 Size (acres): 35

Location:

ALONG GRAYLING CREEK NEAR GUEST RANCH, 0.5 MILE NORTH OF HWY 287, 1
MILE EAST OF HWY 191, 7.5 MILES NORTH OF WEST YELLOWSTONE.

Element occurrence data:

1995: 2 ADDITIONAL SUBPOPULATIONS LOCATED, THE WESTERNMOST WITH CA. 75
PLANTS, 90% FLOWERING, 10% FRUITING, AND THE CENTRAL ONE WITH CA. 300
PLANTS, 95% FLOWERING, 5% FRUITING. 1994: 6 SUBPOPULATIONS; 3 SOUTH OF
GRAYLING CREEK. SMALL WITH 2-17 INDIVIDUALS AND 8-67 STEMS; 3 NORTH OF
GRAYLING CREEK LARGER (>100 STEMS).

General site description:

ARTEMISIA TRIDENTATA/FESTUCA IDAHOENSIS HABITAT TYPE. UNDEVELOPED
SANDY, GRAVELLY MIXED SEDIMENTARY SOIL ON DRIER SITES AND LOWER,
MOISTER SITES. CA. 40% BARE GROUND, LICHEN COMMON. ASSOCIATED SPECIES:
ARENARIA CONGESTA, BALSAMORHIZA SAGITTATA, GEUM TRIFLORUM, POTENTILLA
GRACILIS, ERIOGONUM UMBELLATUM, LUPINUS ARGENTENS, POA SECUNDA, CAREX
FILIFOLIA, ANTENNARIA MICROPHYLA, COLLOMIA SP.

Land owner/manager:

GALLATIN NATIONAL FOREST, HEBGEN LAKE RANGER DISTRICT
PRIVATELY OWNED LAND (INDIVIDUAL OR CORPORATE)

Comments:

ADDITIONAL WESTERN SUBPOPULATIONS OBSERVED BY LIH-AN YANG IN 1995.
OBSERVED BY J. JACOBS IN 1994 NEAR HOUSING DEVELOPMENT. 1
SUBPOPULATION IS IMMEDIATELY ADJACENT TO DEVELOPMENT ACCESS ROAD AND
IMMINENTLY THREATENED BY IT; ANOTHER ON PRIVATE PASTURE. FENCE
CONSTRUCTION ADJACENT TO POPULATION AREA. MOTOR VEHICLE DISTURBANCE IS
APPARENT IN ARTEMISIA. LOWER, MOISTER SITES INVADED BY BROMUS INERMIS,
WHICH MAY BE EXCLUDING SPECIES.

Information source: SENSITIVE PLANT COORDINATOR, GALLATIN NATIONAL
FOREST, P.O. BOX 130, FEDERAL BUILDING, BOZEMAN,
MT 59771.

December 5, 1995

MONTANA NATURAL HERITAGE PROGRAM
Element Occurrence Record

Scientific Name: CASTILLEJA PILOSA VAR LONGISPICA
Common Name: PARROT-HEAD INDIAN-PAINTBRUSH

Global rank: G4?T4 Forest Service status: SENSITIVE
State rank: S1 Federal Status:

Element occurrence code: PDSCR0D2H1.006
Element occurrence type:

Survey site name: GRAYLING ARM OF HEBGEN LAKE
EO rank:
EO rank comments:

County: GALLATIN

USGS quadrangle: MOUNT HEBGEN

Township: Range: Section: TRS comments:
012S 005E 18 SE4SE4

Precision: M
Survey date: Elevation: 6540 -
First observation: 1994-06-29 Slope/aspect: 0% / SOUTH
Last observation: 1994-06-29 Size (acres): 40

Location:

ALONG GRAYLING ARM OF HEBGEN LAKE NEAR DUCK CREEK. FISHER ROAD ACCESS
OFF OF HWY 287, 9.5 MILES NORTH AND WEST OF WEST YELLOWSTONE.

Element occurrence data:
>500 INDIVIDUALS.

General site description:

DRIER AREAS OF SAGEBRUSH/IDAHO FESCUE/BLUEBUNCH WHEATGRASS PASTURE.
UNDEVELOPED SANDY, GRAVELLY, MIXED SEDIMENTARY SOIL; CA. 40% BARE
GROUND. LICHEN COMMON. ASSOCIATED SPECIES: ARTEMISIA TRIDENTATA,
CHRYSOTHAMNUS VISCIDIFLORUS, FESTUCA IDAHOENSIS, AGROPYRON SPICATUM,
DANTHONIA INTERMEDIA, POA INTERIOR, ARENARIA CONGESTA, GEUM TRIFOLIUM,
POTENTILLA GRACILIS, ERIOGONUM UMBELLATUM, ANTENNARIA MICROPHYLLA,
HAPLOPAPPUS MACRONEMA.

Land owner/manager:

GALLATIN NATIONAL FOREST, HEBGEN LAKE RANGER DISTRICT
PRIVATELY OWNED LAND (INDIVIDUAL OR CORPORATE)

Comments:

OBSERVED BY J. JACOBS. DISTURBANCE INCLUDES MOTOR VEHICLE ACCESS TO
GRAYLING ARM AND HORSE GRAZING IN SPRING AND LATE SUMMER, NOT
APPEARING TO AFFECT POPULATION. SURROUNDING PRIVATE LAND IS DEVELOPED
FOR HOMES AND AFFECTS POTENTIAL POPULATIONS ON THOSE SITES.
INTRODUCTION OF NON-NATIVE GRASS (BROMUS INERMIS) FROM PRIVATE LAND
COULD THREATEN THIS POPULATION IF INVASION OCCURS.

Information source: SENSITIVE PLANT COORDINATOR, GALLATIN NATIONAL
FOREST, P.O. BOX 130, FEDERAL BUILDING, BOZEMAN,
MT 59771.

Specimens:

December 6, 1995

MONTANA NATURAL HERITAGE PROGRAM
Element Occurrence Record

Scientific Name: CASTILLEJA PILOSA VAR LONGISPICA
Common Name: PARROT-HEAD INDIAN-PAINTBRUSH

Global rank: G4?T4 Forest Service status: SENSITIVE
State rank: S1 Federal Status:

Element occurrence code: PDSCR0D2H1.015
Element occurrence type:

Survey site name: GOLD CREEK
EO rank: C
EO rank comments:

County: CARBON

USGS quadrangle: TOLMAN FLAT

Township: Range: Section: TRS comments:
009S 020E 10 NE4

Precision: S
Survey date: 1995-08-11 Elevation: 6600 - 7000
First observation: 1995-08-11 Slope/aspect: 20° / SE
Last observation: 1995-08-11 Size (acres): 10

Location:

TAKE HWY 72 CA. 4.5 MILES SOUTH FROM BELFRY AND TURN WEST ONTO
MEETEESSE TRAIL ROAD. DRIVE ON MEETEESSE TRAIL ROAD CA. 5 MILES, THEN
TAKE ROAD UP GOLD CREEK.

Element occurrence data:

500-1000 PLANTS, IMMATURE FRUIT.

General site description:

DRY, OPEN RESIDUAL MOUNTAIN MIDSLOPE. GLACIAL TILL PARENT MATERIAL,
STONY SOIL. ASSOCIATED SPECIES: PINUS FLEXILIS, ARTEMISIA TRIDENTATA
VASEYANA, FESTUCA IDAHOENSIS, AGROPYRON SPICATUM, LUPINUS SERICEUS,
ERIGERON CAESPITOSUS, COMMANDRA UMBELLATA, BALSAMORHIZA INCANA,
CHRYSOPSIS VILLOSA.

Land owner/manager:

CUSTER NATIONAL FOREST, BEARTOOTH RANGER DISTRICT

Comments:

OBSERVED BY P. LESICA. DISTURBANCE BY EXOTICS AND HIGH FORB COVER.

Information source:

LESICA, PETER. DIVISION OF BIOLOGICAL SCIENCES,
UNIVERSITY OF MONTANA, MISSOULA, MT 59812. PHONE
406/728-8740.

Specimens:

December 5, 1995

MONTANA NATURAL HERITAGE PROGRAM
Element Occurrence Record

Scientific Name: CASTILLEJA PILOSA VAR LONGISPICA
Common Name: PARROT-HEAD INDIAN-PAINTBRUSH

Global rank: G4?T4 Forest Service status: SENSITIVE
State rank: S1 Federal Status:

Element occurrence code: PDSCROD2H1.021
Element occurrence type:

Survey site name: ELKHORN RANCH
EO rank:
EO rank comments:

County: GALLATIN

USGS quadrangle: SUNSHINE POINT

Township: Range: Section: TRS comments:
009S 004E 11 NW4

Precision: M
Survey date: Elevation: 6600 -
First observation: 1995-08-14 Slope/aspect: LEVEL
Last observation: 1995-08-14 Size (acres): 20

Location:
CA. 1 AIR MILE WEST OF SUNSHINE POINT. HORSE PASTURE SOUTHWEST OF
JUNCTION OF TAYLOR CREEK ROAD AND HWY 191.

Element occurrence data:
CA. 35 PLANTS, 90% FLOWERING, 10% FRUITING.

General site description:
DRY, OPEN MEADOW. ASSOCIATED SPECIES: ARTEMISIA TRIDENTATA SSP.
VASEYANA, FESTUCA IDAHOENSIS, STIPA RICHARDSONII, PHLOX HOODII,
ANTENNARIA SPP., LUPINUS ARGENTEUS, DANTHONIA INTERMEDIA, ERIOGONUM
UMBELLATUM.

Land owner/manager:
GALLATIN NATIONAL FOREST, HEBGEN LAKE RANGER DISTRICT

Comments:
OBSERVED BY LIH-AN YANG. DISTURBANCE BY HORSES.

Information source: SENSITIVE PLANT COORDINATOR, GALLATIN NATIONAL
FOREST, P.O. BOX 130, FEDERAL BUILDING, BOZEMAN,
MT 59771.

Specimens:

December 6, 1995

MONTANA NATURAL HERITAGE PROGRAM
Element Occurrence Record

Scientific Name: CASTILLEJA PILOSA VAR LONGISPICA
Common Name: PARROT-HEAD INDIAN-PAINTBRUSH

Global rank: G4?T4 Forest Service status: SENSITIVE
State rank: S1 Federal Status:

Element occurrence code: PDSCR0D2H1.013
Element occurrence type:

Survey site name: EAST BEAR CANYON
EO rank: A
EO rank comments:

County: CARBON

USGS quadrangle: INDIAN SPRING

Township: Range: Section: TRS comments:
008S 026E 23 NE4

Precision: S
Survey date: 1995-06-16 Elevation: 7000 - 7520
First observation: 1995-06-16 Slope/aspect: 20% / SOUTH
Last observation: 1995-06-16 Size (acres): 80

Location:
PRYOR MOUNTAINS. CA. 1.8 AIR MILE EAST OF GRAHAM CABIN IN BEAR CANYON.
FROM BIG PRYOR MOUNTAIN ROAD WALK DOWN RIDGE IMMEDIATELY WEST OF MAIN
BEAR CANYON.

Element occurrence data:
5,000-10,000 PLANTS, FLOWERING, HEMIPARASITIC.

General site description:
DRY, OPEN RESIDUAL MOUNTAIN RIDGE. LIMESTONE PARENT MATERIAL, SANDY
LOAM SOIL. ASSOCIATED SPECIES: PINUS FLEXILIS, PSEUDOSTUGA MENZIESII,
ARTEMISIA TRIDENTATA VASEYANA, FESTUCA IDAHOENSIS, SYMPHORICARPOS
OREOPHILUS, AGROPYRON SPICATUM, POA SECUNDA, ASTRAGALUS MISER, PHLOX
HOODII.

Land owner/manager:
CUSTER NATIONAL FOREST, BEARTOOTH RANGER DISTRICT

Comments:
OBSERVED BY P. LESICA. DISTURBANCE BY LIVESTOCK TRAILS.

Information source: LESICA, PETER. DIVISION OF BIOLOGICAL SCIENCES,
UNIVERSITY OF MONTANA, MISSOULA, MT 59812. PHONE
406/728-8740.

Specimens:

December 6, 1995

MONTANA NATURAL HERITAGE PROGRAM
Element Occurrence Record

Scientific Name: CASTILLEJA PILOSA VAR LONGISPICA
Common Name: PARROT-HEAD INDIAN-PAINTBRUSH

Global rank: G4?T4 Forest Service status: SENSITIVE
State rank: S1 Federal Status:

Element occurrence code: PDSCR0D2H1.004
Element occurrence type:

Survey site name: CROOKED CREEK
EO rank: A
EO rank comments:

County: CARBON

USGS quadrangle: RED PRYOR MOUNTAIN

Township: Range: Section: TRS comments:
008S 027E 28 27 W2; 33 NE4; 34 NW4

Precision: S
Survey date: 1995-08-14 Elevation: 5800 - 6520
First observation: 1983-06-22 Slope/aspect: 30% / EAST
Last observation: 1995-08-14 Size (acres): 200

Location:

CA. 15 MILES NORTH OF COWLEY, WYOMING; ON DEMIJOHN FLAT. BOTH SIDES OF
ROAD ALONG CROOKED CREEK BETWEEN BRIDGE HOLLOW AND DEMIJOHN HOLLOW.

Element occurrence data:

1995: 5000+ PLANTS IN AT LEAST 3 SUBPOPULATIONS, MATURE FRUIT.
HEMIPARASITIC PERHAPS ON SAGEBRUSH. 1983: COMMON.

General site description:

DRY, OPEN RESIDUAL MOUNTAIN MIDSLOPE. LIMESTONE PARENT MATERIAL, SANDY
LOAM SOIL. WITH ARTEMISIA TRIDENTATA, FESTUCA IDAHOENSIS, ARTEMISIA
DASYSTACHYUM, STIPA OCCIDENTALIS, GALIUM BOREALE, LUPINUS SERICEUS,
BALSAMORHIZA SAGITTATA, JUNIPERUS SCOPULARUM, SYMPHYCARPUS OREOPHILUS,
AGROPYRON SPICATUM.

Land owner/manager:

CUSTER NATIONAL FOREST, BEARTOOTH RANGER DISTRICT

Comments:

Information source: LESICA, PETER. DIVISION OF BIOLOGICAL SCIENCES,
UNIVERSITY OF MONTANA, MISSOULA, MT 59812. PHONE
406/728-8740.

Specimens: LESICA, P. MONTANA, MISSOULA, MT 59812.

December 6, 1995

MONTANA NATURAL HERITAGE PROGRAM
Element Occurrence Record

Scientific Name: CASTILLEJA PILOSA VAR LONGISPICA
Common Name: PARROT-HEAD INDIAN-PAINTBRUSH

Global rank: G4?T4 Forest Service status: SENSITIVE
State rank: S1 Federal Status:

Element occurrence code: PDSCR0D2H1.011
Element occurrence type:

Survey site name: COMMISSARY RIDGE
EO rank: B
EO rank comments: NOT GRAZED BY CATTLE, ALTHOUGH MOST OTHER PLANTS
GRAZED.

County: CARBON

USGS quadrangle: BIG ICE CAVE
RED PRYOR MOUNTAIN

Township: Range: Section: TRS comments:
008S 027E 22 W2; 9; 15 W2; 16 E2

Precision: S
Survey date: 1995-08-14 Elevation: 6200 - 7160
First observation: 1995-08-14 Slope/aspect: 0-30% / SW
Last observation: 1995-08-14 Size (acres): 200

Location:
PRYOR MOUNTAINS. FROM BIG ICE CAVE CAMPGROUND, TAKE FS RD 3093 TO FS
RD 849, THEN TAKE FS RD 849 TO FS RD 3092 (COMMISSARY RIDGE ROAD).
POPULATION LIES ALONG COMMISSARY RIDGE ROAD AND EXTENDS CA. 2.5 MILES.

Element occurrence data:
10,000+ PLANTS, MATURE FRUIT.

General site description:
DRY, OPEN RESIDUAL MOUNTAIN UPPERSLOPE AND CREST. LIMESTONE PARENT
MATERIAL, SANDY SOIL. ASSOCIATED SPECIES: ARTEMISIA TRIDENTATA
VASEYANA, FESTUCA IDAHOENSIS, STIPA OCCIDENTALIS, AGROPYRON
DASYSTACHYUM, AGROPYRON SPICATUM, GALIUM BOREALE, BALSAMORHIZA
SAGITTATA, ACHILLEA MILLEFOLIUM.

Land owner/manager:
CUSTER NATIONAL FOREST, BEARTOOTH RANGER DISTRICT

Comments:
OBSERVED BY P. LESICA. HEAVY GRAZING IN AREA.

Information source: LESICA, PETER. DIVISION OF BIOLOGICAL SCIENCES,
UNIVERSITY OF MONTANA, MISSOULA, MT 59812. PHONE
406/728-8740.

Specimens:

December 5, 1995

MONTANA NATURAL HERITAGE PROGRAM
Element Occurrence Record

Scientific Name: CASTILLEJA PILOSA VAR LONGISPICA
Common Name: PARROT-HEAD INDIAN-PAINTERUSH

Global rank: G4?T4 Forest Service status: SENSITIVE
State rank: S1 Federal Status:

Element occurrence code: PDSCR0D2H1.020
Element occurrence type:

Survey site name: CINNAMON CREEK
EO rank:
EO rank comments:

County: GALLATIN

USGS quadrangle: SUNSHINE POINT

Township: Range: Section: TRS comments:
008S 004E 27 NW4

Precision: M
Survey date: Elevation: 6440 -
First observation: 1995-08-11 Slope/aspect: 5-20% EAST
Last observation: 1995-08-11 Size (acres): 50

Location:

CA. 1.2 AIR MILES ESE OF BURNT TOP, ON WEST SIDE OF GALLATIN RIVER
BOUNDED BY CINNAMON CREEK TO NORTH AND HWY 191 TO THE EAST.

Element occurrence data:

CA. 70 PLANTS, 100% IN FLOWER.

General site description:

DRY, OPEN UPPERSLOPE. ASSOCIATED SPECIES: ARTEMISIA TRIDENTATA SSP.
VASEYANA, FESTUCA IDAHOENSIS, POA PRATENSIS, AGROPYRON SPICATUM,
LUPINUS ARGENTEUS, BERBERIS REPENS, PHLEUM PRATENSE, GERANIUM
VISCOSISSIMUS.

Land owner/manager:

GALLATIN NATIONAL FOREST, HEBGEN LAKE RANGER DISTRICT

Comments:

OBSERVED BY LIH-AN YANG. ELEVATION GIVEN AS "6560" ON SURVEY FORM, BUT
MAPPED AT 6640 FEET TO FIT SITE DESCRIPTION. ECODATA PLOT 117C95Y012.

Information source: SENSITIVE PLANT COORDINATOR, GALLATIN NATIONAL
FOREST, P.O. BOX 130, FEDERAL BUILDING, BOZEMAN,
MT 59771.

Specimens:

December 5, 1995

MONTANA NATURAL HERITAGE PROGRAM
Element Occurrence Record

Scientific Name: CASTILLEJA PILOSA VAR LONGISPICA
Common Name: PARROT-HEAD INDIAN-PAINTBRUSH

Global rank: G4?T4 Forest Service status: SENSITIVE
State rank: S1 Federal Status:

Element occurrence code: PDSCROD2H1.002
Element occurrence type:

Survey site name: BURNT FORK LAKE RIDGE
EO rank:
EO rank comments:

County: RAVALLI

USGS quadrangle: BURNT FORK LAKE

Township: Range: Section: TRS comments:
006N 018W 03

Precision: M
Survey date: 1959-08-11 Elevation: 8000 -
First observation: 1959 Slope/aspect:
Last observation: 1959-08-11 Size (acres): 0

Location:
BURNT FORK LAKE RIDGE.

Element occurrence data:
UNKNOWN.

General site description:
20% SOUTH SLOPE. WITH ASTER, PHLOX, RYE GRASS, SEDGE, GOAT GRASS.
SANDY CLAY.

Land owner/manager:
BITTERROOT NATIONAL FOREST, STEVENSVILLE RANGER DISTRICT

Comments:
F.J. HERMANN. POOR SPECIMEN.

Information source: BOTANIST, MONTANA NATURAL HERITAGE PROGRAM, 1515
EAST SIXTH AVENUE, HELENA, MT 59620-1800.

Specimens: MACDONALD, C. H. (1720). 1959. RMC.

December 5, 1995

MONTANA NATURAL HERITAGE PROGRAM
Element Occurrence Record

Scientific Name: CASTILLEJA PILOSA VAR LONGISPICA
Common Name: PARROT-HEAD INDIAN-PAINTBRUSH

Global rank: G4?T4 Forest Service status: SENSITIVE
State rank: S1 Federal Status:

Element occurrence code: PDSCR0D2H1.003
Element occurrence type:

Survey site name: BLUEWATER CREEK
EO rank:
EO rank comments:

County: CARBON

USGS quadrangle: BLUEWATER

Township: Range: Section: TRS comments:
006S 024E 15

Precision: M
Survey date: Elevation: 4400 -
First observation: 1984 Slope/aspect:
Last observation: 1984-06-14 Size (acres): 0

Location:
NORTH SIDE OF BLUEWATER CREEK.

Element occurrence data:
COMMON.

General site description:
IN SHALLOW SOIL ON TOP OF THE BREAKS, WITH ARTEMISIA TRIDENTATA AND
AGROPYRON SPICATUM.

Land owner/manager:
PRIVATELY OWNED LAND (INDIVIDUAL OR CORPORATE)

Comments:
NONE.

Information source: LESICA, PETER. DIVISION OF BIOLOGICAL SCIENCES,
UNIVERSITY OF MONTANA, MISSOULA, MT 59812. PHONE
406/728-8740.

Specimens: LESICA, P. (3012). 1984. SPECIMEN #05999. MONTU.

December 6, 1995

MONTANA NATURAL HERITAGE PROGRAM
Element Occurrence Record

Scientific Name: CASTILLEJA PILOSA VAR LONGISPICA
Common Name: PARROT-HEAD INDIAN-PAINTBRUSH

Global rank: G4?T4 Forest Service status: SENSITIVE
State rank: S1 Federal Status:

Element occurrence code: PDSCR0D2H1.009
Element occurrence type:

Survey site name: BIG COULEE
EO rank: A
EO rank comments:

County: CARBON

USGS quadrangle: MYSTERY CAVE

Township: Range: Section: TRS comments:
008S 028E 31 SE4SW4

Precision: S
Survey date: 1995-07-15 Elevation: 6280 - 6320
First observation: 1995-07-15 Slope/aspect: 20% / SE
Last observation: 1995-07-15 Size (acres): 5

Location:

FRYOR MOUNTAINS. CA. 1 AIR MILE NORTH OF ROYCE CAVE, EAST OF BURNT
TIMBER RIDGE ROAD JUST NORTH OF FOREST SERVICE BOUNDARY.

Element occurrence data:

1000+ PLANTS, FLOWERING. HEMIPARASITIC PERHAPS ON SAGEBRUSH.

General site description:

DRY, OPEN RESIDUAL MOUNTAIN UPPERSLOPE. LIMESTONE PARENT MATERIAL,
SANDY LOAM SOIL. ASSOCIATED SPECIES: JUNIPERUS SCOPULORUM, ARTEMISIA
TRIDENTATA VASEYANA, AGROPYRON SPICATUM, KOELERIA CRISTATA, POA
SECUNDA, PHLOX HOODII, CERASTIUM ARVENSE, SENECIO CANUS, SEDUM
LANCEOLATUM.

Land owner/manager:

CUSTER NATIONAL FOREST, BEARTOOTH RANGER DISTRICT

Comments:

OBSERVED BY P. LESICA. PROBABLY OTHER SUBPOPULATIONS IN AREA.

Information source: LESICA, PETER. DIVISION OF BIOLOGICAL SCIENCES,
UNIVERSITY OF MONTANA, MISSOULA, MT 59812. PHONE
406/728-8740.

Specimens: LESICA, P. (6743). 1995. MONTU.

December 6, 1995

MONTANA NATURAL HERITAGE PROGRAM
Element Occurrence Record

Scientific Name: CASTILLEJA PILOSA VAR LONGISPICA
Common Name: PARROT-HEAD INDIAN-PAINTBRUSH

Global rank: G4?T4 Forest Service status: SENSITIVE
State rank: S1 Federal Status:

Element occurrence code: PDSCR0D2H1.010
Element occurrence type:

Survey site name: BEAR CANYON
EO rank: B
EO rank comments:

County: CARBON

USGS quadrangle: BEAR CANYON

Township: Range: Section: TRS comments:
008S 026E 27 21 SE4; 22 SW4SW4; 28 NE4NE4

Precision: S
Survey date: 1995-06-15 Elevation: 6480 - 6900
First observation: 1995-06-15 Slope/aspect: 25% / NORTH
Last observation: 1995-06-15 Size (acres): 300

Location:

PRYOR MOUNTAINS, CA. 1 AIR MILE SOUTH OF GRAHAM CABIN, ALONG BEAR
CANYON 4X4 TRAIL.

Element occurrence data:
1,000-10,000 PLANTS IN EARLY FLOWER. HEMIPARASITIC.

General site description:

DRY, OPEN RESIDUAL MOUNTAIN UPPERSLOPE. LIMESTONE PARENT MATERIAL,
SANDY LOAM SOIL. ASSOCIATED SPECIES: ARTEMISIA TRIDENTATA VASEYANA,
FESTUCA IDAHOENSIS, AGROPYRON SPICATUM, POA SECUNDA, KOELERIA
CRISTATA, ANTENNARIA MICROPHYLLA, PHLOX HOODII, SEDUM LANCEOLATUM,
ASTRAGALUS MISER.

Land owner/manager:

CUSTER NATIONAL FOREST, BEARTOOTH RANGER DISTRICT

Comments:

OBSERVED BY P. LESICA. DISTURBANCE BY LIVESTOCK TRAILS.

Information source: LESICA, PETER. DIVISION OF BIOLOGICAL SCIENCES,
UNIVERSITY OF MONTANA, MISSOULA, MT 59812. PHONE
406/728-8740.

Specimens: LESICA, P. (6745). 1995. MONTU.

Pryor Mts.
June 1994



Castilleja longispica?

Pryor Mts.
June 95



Castilleja longispica

Castilleja longispica
habitat



Bridge Hollow
Aug 1995

Castilleja longispica



Robertson Draw
Aug 1995

Castilleja longispica



Commissary Ridge
Aug 1995

Castilleja longispica (?)
habitat



Pryor Mts.
June 1985

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