

RECOMMENDATIONS AND GUIDELINES FOR UTE LADIES'-TRESSES ORCHID (Spiranthes diluvialis) RECOVERY AND FULFILLING SECTION 7 CONSULTATION RESPONSIBILITIES

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As a follow-up to a recent Ute ladies'-tresses orchid recovery team meeting, the U.S. Fish and Wildlife Service (Service) has prepared these recommendations and guidelines for Service staff and partners to further orchid recovery and aid in conducting Section 7 consultations.

BACKGROUND

Ute ladies'-tresses orchid (Spiranthes diluvialis) is endemic to moist soils near springs, lakes, or perennial streams. The elevational range of known orchid occurrences is 4,200 to 7,000 feet. Most of the occurrences are in alluvial substrates along riparian edges, gravel bars, old oxbows, and moist to wet meadows in the floodplains of perennial streams, but some locations in the eastern Great Basin are in similar situations near freshwater lakes or springs. The orchid appears to require moisture in the rooting zone, typically provided by a high ground water table, through the growing season and into late summer or early autumn. The orchid is well adapted to disturbances caused by stream movement through floodplains over time, and is tolerant of other disturbances, such as grazing, that may mimic natural disturbances in their effects on riparian habitat. Suitable potential habitat is typically found along streams that experience heavy spring runoff of sufficient magnitude to create movement and reshaping of the stream channel. Plants usually occur as small scattered groups and occupy relatively small areas within the riparian system. It is not known how, under what conditions, and in what time frame, the orchid is dispersed and new viable colonies established. The orchid is generally intolerant of deep shade and strongly alkaline or clay soils and cannot compete with aggressive rhizomatous species such as reed canarygrass (Phalaris arundinacea) and cattails (Typha spp.) or exotic species such as Canada thistle (Cirsium arvense). Attachment 1 provides a more complete description of orchid biology, life history, and ecology.

"Typical" orchid habitat, as described above, can be found throughout the Intermountain and Rocky Mountain west and the western plains. However, the orchid only occurs in significant numbers in two locations, in and near Boulder, Colorado along the east slope of the Front Range, and in the Uinta Basin along the south slope of the Uinta Mountains. Otherwise, it is found infrequently in widely scattered locations. Recent discoveries of colonies in Wyoming and Montana indicate that surveys for and inventories of orchid occurrences continue to be an important part of orchid recovery planning and implementation. The recovery team has identified and prioritized areas where survey and inventory of the orchid are important.

SECTION 7 CONSULTATION AND UTE LADIES'-TRESSES ORCHID SURVEYS

Potential habitat is fairly common, yet orchid occurrences are infrequent and unpredictable. Because the probability of actually finding an orchid colony at any one location is small, the Service wishes to avoid the regulatory burden of requiring surveys under Section 7 of the Endangered Species Act for all projects throughout the potential range of the species. However, in order to recover the orchid, it is important that surveys be conducted in appropriate locations and in response to impending impacts to colonies or potential habitat. The Service has therefore developed the following recommendations and guidelines to help ensure that surveys are conducted where and when appropriate.

General Guidelines for Surveys

Field Offices are encouraged to take the following actions regarding surveys for Ute ladies'-tresses orchid:

1. Solicit funds and organize partnership and volunteer efforts to conduct surveys in identified high priority areas, especially those in which future impacts are likely to occur. Survey efforts should be coordinated with state Natural Heritage Programs and with the orchid recovery team.
2. Acquaint all Service staff with the orchid, high priority areas for surveys, habitat preferences, and species identification. Staff should have the orchid in mind when visiting wetlands or streams for any purpose, and also when reviewing projects of any type, for example, fishery, wetland, or stream enhancement or alteration projects, FERC and 404 licenses, and surveys for other species of interest that may be in or near potential orchid habitat.
3. Develop relationships with state and other Federal partnership agencies to acquaint them with orchid habitat, appearance, and priority areas for survey. Encourage them to look for the orchid when in suitable areas and notify Service staff about projects that are planned for potential orchid habitat. Especially important partners include state wildlife agencies, state stream management or water quality agencies, Corps of Engineers, Natural Resources Conservation Service, Bureau of Reclamation, Forest Service and Bureau of Land Management.
4. Require surveys as part of Section 7 consultation under appropriate conditions in areas identified as high priority for surveys. Appropriate conditions include:
 - a. large areas of potential habitat will be impacted. Examples of projects that can result in impacts to large areas of potential habitat include stream channelization and stabilization, stream habitat improvement, projects that impact downstream hydrology and hydrograph such as dams, diversions, and hydropower, gravel mining operations, and streamside recreation trails.

b. planning time frame allows a survey to be conducted, i.e., project will not be initiated until after the next orchid flowering period. If possible, surveys should be conducted for several years. Developers in priority survey areas should be educated about the orchid and the need for surveys. They should be encouraged to plan projects sufficiently ahead that surveys will be possible so that they will not be put in a bind should the Service determine that a proposed project will have an impact on potential orchid habitat of sufficient magnitude that a survey will be required before permits can be issued.

Recommendations and Guidelines for Section 7 Consultation

The Service has placed potential habitat within the known distribution of Ute ladies'-tresses orchid into 3 categories for purposes of Section 7 consultation as follows:

Category 1: Surveys Required

Ute ladies'-tresses orchid is currently documented as occurring within the watershed or is documented as having occurred within the watershed within the past 50 years. Surveys for the orchid should be required as part of Section 7 consultation for projects that will have an impact on potential habitat. Agencies, developers, and others who may propose projects in areas with potential habitat should be alerted that such surveys will be required and urged to schedule project planning so as to allow time for orchid surveys during the flowering period in late summer.

Category 2: Surveys Recommended

Ute ladies'-tresses orchid may have occurred within the watershed or in nearby similar watersheds, however historical records are incomplete and the orchid is not now known to occur in the area. The watersheds are adjacent to or essentially similar in character to those where the orchid is currently known to occur. Surveys are recommended, particularly in circumstances when large areas of potential habitat will be impacted and/or when planning schedules permit surveys prior to project commencement. Project proponents should be alerted and encouraged to schedule project planning to as to allow time for orchid surveys.

Category 3: Surveys Encouraged

Ute ladies'-tresses orchid is not known to occur in or near these watersheds. However, given the known distribution of the orchid and character of the watersheds, it is possible that the orchid could be discovered. Surveys are not required or recommended as part of Section 7 consultation. However, Service field offices and partners are strongly encouraged to organize and support survey efforts in these watersheds.

Attachment 2 is a list of Category 1, 2, and 3 areas in Idaho, Colorado, Montana, Nevada, Utah and Wyoming. The areas are referenced as watershed units or subunits from USGS Hydrologic Unit maps of each state. Within these watershed units, wetlands, springs and seeps, and riparian areas within the 100 year floodplain of perennial streams below 6,500 feet elevation should be considered potential habitat. Recommended survey areas in each category will be revised as new information becomes available.

Survey Procedures

Ute ladies'-tresses orchid can only be reliably found and identified when it is flowering, which typically occurs sometime during the period from mid-July through mid-September. Surveys are conducted by walking or otherwise closely scrutinizing areas of potential habitat looking for flowering stalks. Surveys conducted at other times of the year are not reliable and are therefore not acceptable to the Service for purposes of clearance under Section 7.

Surveys should be conducted by knowledgeable botanists trained in conducting rare plant surveys. The Service does not maintain a list of "qualified" surveyors. However, the Service can refer those wishing to become familiar with the orchid to experts within their area who can help provide training.

Potential Habitat

Within the recommended search areas, surveys should focus only on good potential habitat as described in the Background section and in Attachment 1.

Disqualified Habitat

Considerable experience in conducting surveys in Colorado and Utah has led to identification of a number of habitat and landscape features that indicate that a site does not qualify as suitable potential habitat for Ute ladies'-tresses orchid. Most of these features can be identified at any time of year, often by as simple an activity as driving by in a vehicle. Surveyors are urged to visit sites where projects are proposed and surveys may be recommended to determine whether, and how much, of the site actually qualifies as good potential habitat. Typically, the amount of good potential habitat in a project area is limited. Therefore, if it is a hardship for a project to be postponed until the following summer in order for a survey to be completed, it is often possible to make minor design changes to avoid potential habitat. Caution must be taken to avoid alterations in hydrology, however.

The following features serve to disqualify potential orchid habitat:

1. Appropriate hydrology not present, typically indicated by:
 - area is composed of mostly upland vegetation

-- area dries up by mid-July, with water table lower than 12 inches below the soil surface

2. Heavy clay soils present
3. Soils strongly alkaline
4. Site heavily disturbed, such as, for example:
 - stream banks channelized and stabilized by heavy rip-rap
 - highway rights-of-way built on filled or compacted soil or rock material
 - construction sites where construction has either stripped the topsoil or where construction has been completed within the last 5 years but the area has not been revegetated

(note that Ute ladies'-tresses orchid has been found in some heavily disturbed sites where hydrology is appropriate, such as revegetated gravel pits, heavily grazed riparian edges and pastures, and along well-traveled trails developed on old berms)
5. Stream banks steep, transition from stream margin to upland areas abrupt
6. Site characterized by standing water with cattails, bullrushes, and other aquatic vegetation (note that margins of such areas may be suitable habitat)
7. Riparian areas or stream banks vegetated with dense rhizomatous species such as reed canarygrass (Phalaris arundinacea), tamarisk or salt cedar (Tamarix ramosissima), teasel (Dipsacus sylvestris), common reed (Phragmites australis), or saltgrass (Distichlis spicata spicata)
8. Riparian areas overgrazed or otherwise managed such that the vegetation community is composed of upland native or weedy species or is unvegetated. Note that the orchid can tolerate rather extreme overgrazing as long as it has not resulted in a drop in the water table as indicated by conversion of the riparian vegetation community to mostly upland species.
9. Potential habitat is no longer in a natural condition, for example, has been converted to agricultural uses and is now plowed and cropped, or has been converted to lawns or golf courses
10. Wetland is a brackish playa or pothole not fed by springs or not in the floodplain of or connected hydrologically with a riparian system or other source of fresh water

PERMITS AND VOUCHER SPECIMENS

Ute ladies'-tresses orchid (Spiranthes diluvialis) can be mistaken with a closely related species, Spiranthes romanzoffiana, which generally grows at higher elevations. It is important that potential new discoveries be appropriately identified and verified. However, since Ute ladies'-tresses orchid often occurs in very small numbers, destructive sampling may be undesirable. Proper verification of new locations of Ute ladies'-tresses orchid should include (1) identification of the species by experts, (2) depositing a voucher specimen in an authorized institution, and (3) completion of a data form, such as an Element Occurrence Record form provided by the state Natural Heritage Program, and submission of the form to the state Natural Heritage Program and the Service.

Field Offices should have at least one staff person with a permit for collecting Spiranthes diluvialis and should be sure that other authorized surveyors, such as the state Natural Heritage Programs, have the necessary permit also. It is not necessary for everyone conducting surveys to have a permit, however. Service staff should make sure that all potential surveyors understand the permit requirements and persons without a permit do not take specimens. Service staff should also encourage all surveyors and partners to notify the Service immediately if it is suspected that a new location of Ute ladies'-tresses orchid has been discovered. There have been problems in the recent past with surveyors waiting several months before notifying the Service or the state Natural Heritage Program. Immediate notification will allow the Service an opportunity to arrange for a person with the proper permit to take a voucher specimen and contact experts to help with identification when the orchid is still fresh and flowering. The Service may need to provide assurances to surveyors that information will be treated as confidential until surveyors have had an opportunity to notify their clients of a discovery. For your information, attachment 3 lists specifications placed on permits issued in 1995.

TRAINING

The Service and the Ute ladies'-tresses orchid recovery team will be working to develop training materials and conduct training workshops for Service staff, partners, and other interested persons. To facilitate that effort, Service staff and partners are encouraged to take photographs or make video tapes of potential habitat and orchid colonies in their areas and also to share their experience and expertise in conducting surveys. Training will include education about:

Habitat

- preferred or good potential habitat characteristics
- features that disqualify habitat
- habitat management

Identification

- characteristics that distinguish Spiranthes diluvialis from other orchids that may be encountered

Survey Methods

- when to survey
- what to look for
- how to look
- data documentation and recording
 - what should be noted
 - how it should be recorded
 - to whom it should be submitted

Regulations

- Section 7 consultation and conservation recommendations
- permits and collecting

Recovery

- recovery approach and goals
- status of recovery planning and implementation
- potential partners and their role

CONCLUSION

This guidance was prepared to encourage actions that will further orchid recovery and avoid placing an extreme regulatory burden on those planning projects within potential habitat areas. The Service hopes that good communication, coordination, and education among staff, partners, and the public can promote orchid recovery without conflict and acrimony.

Service staff, partners, and interested persons are encouraged to contact Dr. Lucy Jordan, recovery team leader, at the above address or 801-975-3330 ext. 143 for additional information or to provide suggestions that will make this guidance more accurate and helpful. In addition, Field Offices are encouraged to contact the recovery team leader for discussions regarding conservation recommendations when a biological assessment prepared under formal Section 7 consultation concludes that a project "may affect" Ute ladies'-tresses orchid.