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**May 30, 2006**

Henry Maddux, Field Supervisor  
U.S. Fish and Wildlife Service  
Utah Fish and Wildlife Office  
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Comments e-mailed to [hsmilkvetch@fws.gov](mailto:hsmilkvetch@fws.gov) in ASCII file format with the subject: Attn: Shivwits or Holmgren milkvetch on May 30, 2006 at 10:35pm

RE: March 29, 2006 Proposed rule to designate critical habitat for *Astragalus ampullarioides* and *Astragalus holmgreniorum*

Dear Mr. Maddux:

Our comments with respect to the above proposed rule with respect to *Astragalus ampullarioides* (hereinafter “Shivwits milkvetch”) and *Astragalus holmgreniorum* (hereinafter “Holmgren milkvetch”) follow.

### **Response to Public Comments Solicited section**

To first respond to the numbered items for which public comments were specifically sought under the heading “Public Comments Solicited” contained in the notice:

- (1) We strongly support designation of all areas that have been proposed. None of those proposed areas should be considered as anything other than essential and critical habitat for the survival of the respective species. Both of these species have precious few remaining populations. Protection of the few remaining occupied habitats is essential for the survival of both species.
- (2) The amount and distribution of these two species is better known than for most rare plant species in the state of Utah. We believe that the Service has sufficient information on the amount and distribution and that there are no other better sources of information than what the Service is already in possession of.
- (3) The significance of the site of Holmgren milkvetch found north of Atkinville wash and west of I-15 is in fact potentially significant and it should be included in the critical habitat proposal. This habitat is near the habitat of another endangered species, *Arctomecon humilis*. The two species are technically not sympatric at this point but this is the closest point at which the two are found together. Both species are pollinated by a common pollinator, *Eucera quadricincta*. This location also represents the northernmost range of the Holmgren milkvetch in the South Block area and it may be one of the remnant survivors that connected the South Block area plants to other populations. As a location that is disjunct, it could contain important genetic information and it is clearly a part of an area that is unusual and which should not be lost or written off. We fear however that this area is simply being written off in view of the fact that it is in the process of being destroyed by the FHWA, UDOT, SITLA and Sun River expansion and because of the disastrous impacts of I-15 thru the South Block area.

- (4) Concerning the designation of lands in intervening lands of I-15 for the Shivwits milkvetch, these lands should be designated as well as the designation of lands within highway right of ways. This is in effect very minor mitigation for the damage that I-15 has caused to this species and since it occurs in so few places, there is little choice but to designate these areas. Intervening lands between the Utah and Arizona population of Holmgren milkvetch should also be designated and must be connected in an ecosystem approach for the conservation of this species.
- (5) We are unaware of any benefit to excluding lands under the ownership of others. Ownership of land should not be a consideration of determining critical habitat, i.e. critical habitat is critical habitat regardless of who owns it. The critical habitat designation in these non-federally owned areas creates no economic impact because non-federal landowners will not be required to take any action nor will it limit their actions with respect to these lands absent a federal connection. By designating such lands, landowners may voluntarily comply or take actions that they otherwise would not have taken (for example, the State of Utah took action in 1983 on its lands relating to *Arctomecon humilis* because of comments made in the recovery plan) for the benefit of the species. So federal rulemaking actions have a positive conservation impact on non-federal lands with minimal economic consequences.
- (6) The critical habitat designations are essential so that other land use planning will not inadvertently contribute to the demise of these species. Designation of the Santa Clara units will help to support to ensure that these lands are not destroyed and may help to support a recommendation to expand the Red Bluffs ACEC to protect those subunits.
- (7) We are unaware of any national security nor impacts on small entities.
- (8) We believe that the critical habitat designation process could be improved thru the soliciting of suggestions for actual habitat designations prior to the publishing of a proposal. The critical habitat designation process should also be fully integrated with recovery plan preparation procedures and processing and go hand in hand with one another and should not be separated per current Service policies.

## **Other comments**

### *Inadequate buffer zones*

Critical habitat designations are required not just to avoid species from becoming extinct but to lead them to recovery. There is essentially no chance that these species can achieve recovery unless lands are designated with habitat for viable

native ecosystems including plant communities and their pollinators which must include areas that are not limited solely to occupied habitats.

On Page 15791 a discussion relating to the Holmgren milkvetch pollinators concludes that homing distances are in the 0.1 to 2.9 km range. Then the Service concludes that taking the size of the smallest pollinator it was appropriate to expand only smaller subunits by 400 meters. On Page 15791 the Service comes to the exact same conclusion with regards to the Shivwits milkvetch.

The Service has ignored the maximum foraging distances of the pollinators of both species and instead has selected the lower homing distance ranges. It further has ignored edge effects in making these proposals which are in no way limited to smaller unit sizes. Further the Service has selected the smallest size pollinator (which also happens to be the least likely effective pollinator). So the Service has made the absolute worst assumptions (and scientifically incorrect) in each case in determining appropriate buffer zones and contrary to what is known about these species.

Per Dr. Vincent Tepedino, the primary pollinators of both of these milkvetches are “. . . large, powerful, fast-flying ground nesting species of the genus *Anthophora*.” Dr. Tepedino indicates that a one mile (5,280 feet) buffer zone around occupied habitat would therefore be appropriate (personal communication, Feb. 13, 2006).

Contrary to the proposed rule, it is the medium to large-sized pollinators (*Anthophora* and *Eucera* and *Bombus*) that have maximum **foraging** distances of 2.7 to 5.5 km that are the effective pollinators.

The distance that pollinators fly are a function of both density of flowers and pollinator size (personal communication from Dr. Tepedino, Dec. 14, 2005). The habitats that these species grow in are harsh and involve a lack of flower density. Critical habitat must include sufficient areas that support other plants and pollinator habitat.

The habitats that both milkvetches occur on now essentially represent artificial, terrestrial islands. They however did not evolve in that kind of environment and they now face new challenges including microclimate differences and greater impact of invasive species (see Frankel pp. 221-2). Areas as large as possible must be identified and preserved and corridors must be wide and include not just narrow ribbons of vegetation in order to serve both as travel routes and that contain viable native habitat (Frankel p. 226).

We recognize that critical habitat designations are not proposals for rare plant preserves yet they must properly consider edge effects. The shape and buffer width both have significant effects on the central core. Areas should ideally be

circular or square in shape. Buffer zones should be expanded and shapes made less irregular to reduce edge effects (Frankel, pp. 239-242).

Further, buffer zones are hardly appropriate for only the smallest areas/units. Larger areas require the exact same consideration.

Buffer zones/edge effects have also seemingly only been evaluated by the Service with respect solely to pollinator issues. Where is the buffer zone/edge effect analysis for the impact of chemical sprays? Invasive species? Impacts from ORV trails and related use in the area and recreation in general? In connection with for example insecticide sprays Tepedino suggested a 3 mile buffer zone around rare plant populations (Tepedino p. 4).

#### *Failure to address fragmentation problems*

Page 15790 of the proposed rule acknowledges the important of “connectivity within and between populations within close geographic proximity to facilitate pollinator activity and seed dispersal mechanisms.” Yet no areas are being designated outside of occupied areas.

Our comments relating to buffer zones are pertinent to this issue as well but still do not fully address the population fragmentation problem.

With respect to the Holmgren milkvetch, the Santa Clara units should be *connected*. The habitat in this area is the most pristine habitat and in the best condition for all Holmgren milkvetch habitat (Dr. Renee van Buren, 2005 personal communication and as indicated in the proposed rule). It is likely also genetically unique. Here we as a society have one last chance to get it right for this species. If one considers what has happened to this species as a result of I-15 when one of its populations was forever split into two and the invasive species that now attack its habitats, and that now with the approval of the Southern Corridor, not only will the Atkinville interchange destroy critical habitat for the Holmgren milkvetch, it will also both establish a second road barrier and it will now separate the Utah population from its Arizona portion, and that a city of some 25,000+ people is being planned for its Central Valley habitat, the very least that can be done is to provide fully effective critical habitat for the Santa Clara units. The Purgatory Flat population is in trouble and cannot be re-connected and is isolated also by I-15 and urban sprawl. The only population left that can be properly addressed are the Santa Clara units. Yet, habitat around the smaller South Hills subunit is currently slated for disposal. An undisclosed Western Corridor may also ultimately fragment the two Santa Clara units despite not yet being disclosed to the public by federal agencies and is being refused for consideration in impact analyses. It is absolutely essential to the survival of this species that a circle be drawn around BOTH of these units that provides for ample connectivity between them and included in the critical habitat designation. These two units are as close as somewhere in the range of

1 to 1.5 miles from each other. That is even within the recommended buffer zone suggested by Dr. Tepedino. A proper critical habitat designation would involve therefore a square or circle shaped area that include both of these units and with additional habitat around the perimeter and especially in view of the threats as outlined in the proposed rule and herein.

Similarly and despite the impending Southern Corridor construction, the Utah-Arizona units should be all connected. These units are as close then less than a mile to two miles away from each other and clearly within the necessary a buffer zone so there would be no reason not to connect them. Additional critical habitat to the full possible foraging distance should be provided on the Arizona side to help offset all of the impacts that are happening on the Utah side.

With respect to the Shivwits milkvetch, the proposal needs to provide again for fragmentation which is currently not evident. The Pahcoon and Shivwits units appear to be reasonably close to one another; a circle of connecting habitat around both of them and with an expanded buffer zone should be provided. Connecting habitat for the Harrisberg subunits should also be designated.

*Prompt designation is critical for proper long term land use planning*

Finally, we understand that the Washington County Growth and Conservation Act as currently propose by Senator Robert Bennett may have serious implications on the future of the Shivwits milkvetch and the Holmgren Milkvetch. This proposed bill would authorize the disposal of up to 25,000 acres of BLM land. Some of the land currently slated for disposal would actually result in disposal of land with Holmgren milkvetch. This proposal underscores the necessity of the designation of critical habitat. Washington County is the fifth fastest growing county in the United States. The designation of critical habitat must take place soon so that this habitat designation will be part of the long term land use planning in Washington County.

Sincerely,

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References:

Frankel, Otto H. et al. 1995. The Conservation of Plant Biodiversity. Cambridge University Press. 299 pp.

Tepedino, Vincent J. The Reproductive Biology of Rangeland Plants and Their Vulnerability to Insecticides. Section 3.5 from the USDA-ARS handbook Grasshoppers: Their Biology, Identification and Management