

Jaguar Conservation Team (JAGCT)- Habitat Subcommittee Summary Notes

Willcox, Arizona

June 29, 1998

The meeting opened at 10:15am. Members in attendance were Ben Brown, Don Cullum, Bill Moore, Lee Benson, and Mike Pruss. Sarah Rinkevich was unable to attend due to her flight being cancelled in Albuquerque at the last minute. Two members of the public joined the meeting after lunch, had input in regards to jaguars and other species as predators, and left the meeting. Although they did not introduce themselves, they indicated that they were related to the Klump family of Cochise County.

The agenda was handed out and reviewed to address any additions, deletions, or changes. The section 7 discussions were deferred until later to discuss with USFWS representatives. Ground rules were discussed, including breaks, lunch, finish time, and consensus for decisions.

The basis for Habitat Committee Assignments was reviewed and identified as the Jaguar Conservation Agreement, pgs 16-18, #5A-G. The format of those sections was followed for the rest of the meeting, and the remaining summary notes follow that format.

5. "Identify, maintain, and promote existing and other suitable jaguar habitats."

A.1. The reviews of Scientific Literature were discussed. This process is an ongoing process, however, the vast majority of available relevant literature has been collected and/or reviewed.

A.2. Based on 5.A.1. above, we attempted to identify habitat use patterns. The lack of good historic location and habitat information on jaguars was discussed, with specific emphasis on the lack of information on jaguars in Mexico and the United States. Concerns about any definitive decisions on habitat use patterns based on the available information were expressed. Regardless, the assignment as the Habitat Committee to provide the Conservation Team with the best information available with which to make decisions was acknowledged, and we reviewed maps of southeast Arizona and southwest New Mexico to prioritize areas that, based on historic and recent locations, are most likely to represent jaguar habitat use patterns. This included discussion of the use of riparian areas, washes, mountain ranges and complexes of mountain ranges, as corridors for movements and/or dispersal. And discussion of highways, large grassland and playa areas and areas of high human impact as potential barriers to movement and/or dispersal.

A.3. As a result of the above mapping and discussions, we identified the following considerations for range-wide habitat suitability criteria - applicable to habitats of northern Mexico and adjacent AZ/NM:

- a. The recentness of jaguar occupancy - because of the relatively low number of records of jaguars in the U.S., and their relatively widely dispersed range, we considered areas that had the majority of historic sightings, primarily in southeastern AZ and southwestern NM, and areas near recent credible sightings.
- b. Habitat composition - based on the limited information we have on habitat, we focused on areas of elevation above ca. 3,500', with the exception of riparian and wash habitat, and in the mesquite grassland and up habitats. We did not include Sonoran desert scrub in our consideration of jaguar habitat.
- c. Prey density - we reviewed prey density and distribution maps for southeast Arizona, and discussed prey density data for New Mexico. We considered the prey identified in the literature, and identified new potential prey species. Prey densities in most areas considered adequate in vegetative characteristics for jaguar were considered adequate for prey density.
- d. Human exploitation - we removed areas that had high crop agriculture and human development influence from consideration for adequate jaguar habitat. Areas specifically noted were in the Sulphur Springs Valley due to row crop agriculture and widespread human development in the Willcox/Elfrida/Double Adobe area, greater Douglas, and greater Nogales areas.
- e. Geo-physiographic area - We identified suitable habitat as several mountain ranges and their immediate surrounding areas and linkages to other mountain ranges. Areas specifically noted as not jaguar habitat include the Willcox Playa, and possibly higher elevations in the mountain islands. Riparian areas and major washes were identified as important potential movement corridors, however, it was noted that portions of the San Pedro River may be too developed and/or degraded near Interstate 10 to serve as a useful corridor.

Draft Jaguar Habitat Criteria

To be considered jaguar habitat, an area must meet all of the following criteria, not just one of them. [Please review critically, and try to think of a situation that meets the criteria that does not seem like potential jaguar habitat.]

- a. **Area must be within 50 miles of a documented jaguar occurrence. This would include an entire mountain range, if a portion of that range is within 50 miles of the occurrence.**

- b. In Arizona, based on Brown and Lowe (1980) habitat associations, the area must be in the Semi-desert Grassland, Plains Grassland, Great Basin Grassland, Interior Chaparral, Madrean Evergreen Woodland, Great Basin Conifer Woodland, or Petran Montane Conifer Forest, or in a riparian area or major wash in the Arizona Upland Sonoran Desertscrub. Areas in the Lower Colorado River Sonoran Desertscrub and Petran Subalpine Conifer Forest are not considered jaguar habitat. *****We still need habitat types to select for in New Mexico and Mexico.*******
- c. Area must have adequate prey densities to maintain a jaguar, at least seasonally. This is most likely not a limiting factor, as prey densities in areas that are otherwise jaguar habitat usually contain more than ample prey resources for jaguars.**
- d. Areas with continuous row crop agriculture over an area greater than 1 square mile and any agricultural crop areas immediately adjacent to those areas are not considered adequate habitat.**

Areas with human residential development in excess of 1 house per 10 acres are not considered jaguar habitat. Areas developed for industrial purposes or a combination of industrial and residential development that create a footprint equal to or greater than 1 house per 10 acres are not suitable jaguar habitat.
- e. Areas must be above 3,500' in elevation, or be a riparian area or major wash complex connecting two areas above that elevation. Mountain ranges and associated canyons and washes are probably the best geographic features. Dry lake beds (i.e. playas) are not jaguar habitat.**

B. We discussed whether this section was still necessary now that the jaguar is listed, since Section 7 consultations now take place with USFWS. The USFWS representative was unable to attend the meeting, which prevented us from discussing details of the Section 7 process that were of interest to the committee. The Habitat Committee recommends forwarding federal agency EA's and BA's to the Scientific Advisory Team for review prior to submitting them to the USFWS. Continued updates to the Conservation Team on jaguar related Section 7 issues from the USFWS and other federal agencies is also recommended.

Lunch Break

C. Habitat Inventories

- 1. We reviewed the available big game population density data for southeastern AZ. We identified a need for more information on Mexican prey populations. Some prey density

information is available from the Gray Ranch in New Mexico, but we need to get further information from New Mexico on their jaguar prey populations in other areas. I have contacted New Mexico's big game project leader for big game population data for southwestern NM. Good data is not available, however, some good guesses can be made, and that may be as good as we can get for some species. For the most part, if the habitat is there, the prey will probably be adequate for jaguars.

We identified additional potential prey items for jaguars, including bighorn sheep in the Peloncillo Mountains and feral pigs in the Animas Mountains.

2. As mentioned above, we evaluated maps of southeastern AZ and southwestern NM to identify potential inter-connecting travel corridors, including riparian areas, large washes, and mountain ranges. We outlined areas in AZ and NM that we thought, based on the information we have available to us, are and/or would be potential jaguar habitat.
- D. We discussed the need to develop state-specific maps delineating land ownership patterns overlaid with suitable jaguar habitat. We identified sources for the information that we needed to create the maps. I agreed to look into available digital data on human population areas, prey density, AZ land status, and habitat type data. Lee agreed to look into the availability of GAP data for habitat classification, etc. Ben agreed to assist in creating the maps using resources available to him, and Lee agreed to confer with Albuquerque NPS to see what the availability of their GIS resources would be. I agreed to forward data to Ben to begin processing for the maps. We need data for Mexico, and need information on any Mexico sources of data. Ben agreed to look into NM land status data. Mike investigated NM wildlife population status data. Lee mentioned that the USGS web page has data available, including a hydro map at the 1:250,000 scale. Lee agreed to look into the availability of this data.
- E. We discussed potential funding sources, including:
AGFD Heritage Grants (AZ only)
Turner Foundation (high profile International projects with community support)
THAW Foundation (thru UNM)
Safari Club International
Craighead Foundation (probably not a funding source)
- F. We discussed availability of funds for agreements for suitable jaguar habitat, where they will address conservation objectives for the jaguar (5.A-G for habitat only).
1. The list discussed included:
 - a. NRCS WHIPS monies for projects on non-federal lands. Bill Moore agreed to look into this funding source.
 - b. AGFD Stewardship Agreements for AZ projects. NM does not have anything comparable they we were aware of.

- c. USFWS Partners For Wildlife for projects on private land with matching funds from other sources. Up to \$10,000 per project.
- d. Conservation Easements - various types possible.

G. We reviewed current and potential threats to jaguar population expansion, but did not identify any in addition to those already recognized.

Constructive comments were provided on methods of contacting and working with private landowners on riparian restoration projects and letting landowners know what they can do to help maintain potential habitat and potential movement corridors.

A recurring theme during the meeting was the lack of information that is needed to make better habitat decisions. Closely linked to that was the need to find funding to gather the type of data that would improve the information that we use to make decisions. We agreed that we needed to confer with Raul Valdez to see which data needs he thought he might be able to fill and how much money he would need to gather that data. Don contacted Raul to gather some of this type of information. Raul will provide information for our next meeting.

Lee Benson agreed to check on potential funding opportunities through the Border Initiative, a cooperative project involving the USGS, EPA, and NPS.

Bill Moore investigated if more specific site locality data was available for NM sightings. Greg Schmitt indicated to Bill that what he had provided to the group was as much detail as he had.

We reviewed assignments, and I agreed to type the draft summary notes for others to review.

The meeting was adjourned at 4:45pm.

Additional Notes:

1. Anyone planning to attend the Habitat Subcommittee meeting at the Gray Ranch, please contact Mike Pruss at (520) 628-5376, ext.143 by September 10, 1998 so that appropriate plans can be made with the Gray Ranch.
2. Anyone having comments on the Draft Habitat Criteria, please provide them directly to Mike Pruss by mail or FAX by September 18, 1998, so that they may be incorporated into the agenda for the subcommittee meeting on September 22, 1998. Mike's address is: 555 N. Greasewood Rd., Tucson, AZ 85745. His FAX number is (520) 628-5080.