

Jaguar Conservation Team (JAGCT) Summary Notes
Douglas City Hall, Douglas, Arizona
January 18, 2001

Introduction

Meeting was called to order by Bill Van Pelt, Arizona Game and Fish Department (AGFD) at 0920 MST.

Opening Comments and Ground Rules

Ground rules were the same as previous meetings. Participants were asked to raise their hand to ask a question or state an opinion. Only one person was supposed to speak at a time, with no side conversations, so that each person could be heard and the meeting could move forward. Participants in the Jaguar Working Group (JAGWG; i.e., everyone present at the meeting) were allowed to comment and were encouraged to do so on any issue being discussed at the meeting.

Handouts Available

1. Meeting Agenda
2. Memo to JAGSAG from Habitat Subcommittee
3. JAGSAG's review of jaguar conservation strategy
4. Summary notes from previous meetings- July 20, 2000 JAGCT meeting and December 12, 2000 habitat subcommittee meeting
5. Draft brochure for reporting jaguar sightings
6. Outline of the jaguar unit distributed by the Education Subcommittee

Agenda Review/Additional Discussion Points

Order of agenda was changed to put the Habitat Subcommittee presentation after the update on legal protection of the jaguar.

Status of Action Items

1. Make map of Sonora available during discussions- map available but not brought to meeting.
2. Distribute information on USFWS Applicant Status Criteria- pending.
3. Brochure on reporting jaguar sightings- a draft of the brochure was available for comment. The final brochure will be printed by March 31, 2001 and distributed by June 30, 2001. If anyone else wants to submit comments, they should do so as soon as possible.

4. Draft a letter that recognizes participants in the education subcommittee- done.
5. Annual JAGCT Activity Report to USFWS- the last report is finished and covered a two-year period (July 1998 to June 2000). Tim Snow and Laurie Averill-Murray (AGFD) will be drafting the next report, to be finished by March 2001. At that point, we will be back on schedule and reports will be due by the end of January each year.
6. Draft letter to North American Commission for Environmental Cooperation requesting that the jaguar be added to their list of high-priority species and projects to fund- Bill Van Pelt attended a Shared Species Workgroup meeting of the Trilateral Commission in Denver, CO and the jaguar was identified as one of the top five research priorities.

Task Reports

Update on Arizona Jaguar Sightings

Tim Snow (AGFD) has received 12 reports of potential sightings since the last meeting. Six of these were sightings of large black cats. Sightings were as follows: one near Portal, two near Safford, two in the Tucson area, two in Oracle, one in Prescott, one in the Baboquivari Mountains, one in California Gulch, and two in New Mexico (reported to Tim by Michael Robinson, Center for Biological Diversity).

Follow-up field investigations were conducted on four potential sightings: 1) a deer hunter saw a large cat in California Gulch and photographed its tracks. The tracks were later identified as mountain lion; 2) two deer hunters saw a large cat from a distance in the Baboquivari Mountains. Jack Childs and Tim Snow followed up on the sighting, but could not find any sign; 3) a sighting in the Oracle area; and 4) a sighting in the White Mountains. In the latter case, the individual was contacted, given a map and asked to mark the location of the sighting. Unfortunately, the individual marked the wrong place on the map and the investigators were unable to get to the correct location until well after the sighting.

Update on New Mexico Sightings

Chris Ortega, Lordsburg Area Officer for the New Mexico Department of Game and Fish, was unaware of any recent jaguar sightings. Additionally, Chuck Hayes (NMDGF) did not report any recent jaguar sightings in New Mexico.

Update on Jaguar Depredation Reports

Jack Childs, depredation subcommittee chairman, has not received any reports of potential jaguar kills since the last meeting.

JAGSAG Review Response

The Jaguar Scientific Advisory Group (JAGSAG) was formed to advise the Jaguar Conservation Team (JAGCT) on their activities. The JAGCT solicited large cat researchers to participate in the group. Those that agreed to sit on the JAGSAG were: Alan Rabinowitz of the Wildlife Conservation Society; Brian Miller of the Denver Zoo; Michael Tewes of Texas A&M; Howard

Quigley of Hornocker Wildlife Institute; Raul Valdez of New Mexico State University; and Carlos Lopez-Gonzales of Instituto de Ecologia.

Over the last two years, JAGCT habitat subcommittee members have developed habitat suitability criteria for the jaguar in northern Mexico, Arizona, and New Mexico per the Jaguar Conservation Agreement, Objective 5, Task 1. In September 2000, the habitat subcommittee asked JAGSAG to again review the habitat suitability criteria and answer 12 questions regarding jaguar conservation and habitat. The responses to these questions were made available at the meeting. A summary of the JAGSAG's recommendations can be found at the end of their response: "A top priority, therefore, is studying the habitat-use of territorial adult jaguars (particularly females) in the northern population of Sonora, Mexico. If the habitat that those animals use resembles the physical structure and dominant plant forms available in the U.S., then one can say that jaguar habitat (or potential habitat) exists in the U.S. Until those data are gathered, *modeling should continue using the general categories of plant forms, physical structures, terrain ruggedness, human population, etc. that are now being placed in GIS systems.*"

JAGCT Education Subcommittee Update

The education subcommittee gave a presentation on the status of the jaguar unit. They originally wanted to design programs for all grade levels, kindergarten through 12th. This was too ambitious, and they scaled back to 4th through 8th or 9th grade (i.e., middle school). Sue Krentz, Arizona Cattlegrowers Association, gave a general overview of the project. In the beginning, the subcommittee spent a lot of time gathering and compiling grade-appropriate materials. Many people supplied materials and the subcommittee still welcomes submissions. Materials range from biology of the species to politics (Endangered Species Act information) to cultural and artistic references to the jaguar. The program is interdisciplinary and designed to stimulate critical thinking and problem-solving skills as well as introduce students to looking at controversial issues from all points of view. The jaguar unit was developed following the national and state (AZ, NM) standards for a teaching program.

Karen Schedler (AGFD) presented a timeline of the tasks that need to be completed:

1. Finalize assessments, bibliography, webliography- February 16, 2001.
2. Final preparation for review- February 23, 2001.
3. Dissemination of jaguar unit for review to 15 educators- February 28, 2001. Educators will review the package for accuracy and make sure that it meets standards for a teaching program.
4. Reviews from professional educators returned- April 6, 2001.
5. Collate comments, make revisions based on comments- May 1, 2001.
6. Printing of lesson plan for pilot testing- May 11, 2001.

7. Training workshop for 10 educators- August 1, 2001.
8. Final evaluation from educators after implementing program during Fall semester- November 22, 2001.
9. Final product available- January 01, 2002. Still need to decide how the information will be disseminated. Ideas include hard copies, CDs, or via website.
10. Translation of lesson plan into Spanish and modifications to meet standards for a teaching program in Mexico- June 1, 2002.

The jaguar unit is a model lesson plan for a case study of any endangered or sensitive species.

Karen Husted passed out an outline of the day-by-day activities of the jaguar unit. She requested that everyone present review the calendar for glaring errors and get back to her after the meeting, keeping in mind that the plan will need updating as new information becomes available. Karen gave a presentation on the general goals and objectives of the lesson plan. The plan was designed to:

1. Implement the Concept of Multiple Intelligences.
2. Implement the Concept of Styles of Learning and Doing- i.e., each person has a different way of learning and doing things.
3. Implement an interdisciplinary approach to learning.
4. Implement thinking and learning skills.
5. Implement performance-based assessment- i.e., what can you show us you have learned.
6. Introduce students to many points of view and force them to evaluate and use the information in developing strategies to solve important issues.
7. Provide a component for excellent professional development for teachers.
8. Demand teachers to be facilitators of learning and thinking- i.e., teachers won't always be the dispenser of knowledge but will rather teach students how to research an issue and become knowledgeable in a particular field.

Michael Robinson, Center for Biological Diversity, and Scotty Johnson, Defenders of Wildlife, expressed interest in joining the education subcommittee. Michael wanted the meeting minutes to reflect that he has previously requested joining the education subcommittee but was never notified of meeting dates or places. Steve Pavlik said he had also expressed interest in being contacted and had not received notice of meetings. Several others present felt that meetings were adequately advertised and open to anyone who wished to participate. A general discussion ensued on whether the lesson plan should be distributed to educators even though the

Conservation Team has not had a chance to review it in its entirety. Karen Schedler reiterated that the lesson plan needs to be printed and ready for pilot testing by the summer and the previously stated deadlines cannot be altered if this timeline is to be met. It was decided that anyone who wants to comment on the lesson plan should send a request to Bill Van Pelt via the jaguar web page. Bill will forward requests to Karen. Comments need to be received well in advance of the dissemination date (02/28/01). There will be other opportunities for the Conservation Team to comment on the lesson plan, but it is important that educators review the lesson and make sure it meets educational standards.

The education subcommittee decided to meet immediately following the JAGCT meeting to discuss matters further with M. Robinson, S. Johnson, and S. Pavlik. The next education subcommittee meeting will be in the beginning of May, the exact date to be announced 30 days in advance.

A brief discussion ensued on funding for the education project. Several grant opportunities were mentioned, including the National Fish and Wildlife Foundation. It was noted that members of the education subcommittee have spent approximately \$20,000 of their own money and in-kind services to this project over the past three years.

Legal Protection of the Jaguar in Arizona and New Mexico

No new updates.

Jaguar Habitat Identification

Jim Hatten, AGFD Geographic Information Systems specialist, gave a presentation on modeling habitat components for the jaguar. Jim stressed that this was more of a "land use/land cover suitability model" rather than a "habitat suitability" model. The lack of data on jaguar habitat use makes quantitative, GIS-based modeling difficult. With this in mind, the objectives of the modeling exercise were to identify relationships between historic jaguar sightings and physical factors (e.g., elevation, distance to water, vegetation biomes, prey abundances, and human densities); identify potentially suitable jaguar habitat based on these criteria; and determine the suitability of constructing a GIS-based model with any or all of the above variables.

A map of the historical (verified) jaguar sightings showed that within the last 30 years, sightings have been largely concentrated in the area south of Tucson. Jim cautioned that just because a jaguar was sighted in a particular area does not mean that the area represents jaguar habitat. These individuals may have been wandering in search of a habitable place. Thus, the current model will only identify general areas that may contain potential jaguar habitat. The general conclusions of the modeling exercise were that jaguars have been most often observed in low human density areas; jaguars were more common in javelina, white-tailed or mule deer habitats, less common in elk habitats; jaguars were usually within 16-km of perennial or intermittent waters; and jaguars were observed twice as often in scrub grasslands as any other biome classification. Several people asked why the maps and graphs showed no jaguar occurrences in the Chihuahuan Desert biome. This could be due to differences in how the GAP project and Brown, Lowe, and Pase classified Arizona's biomes. After the meeting, Jim investigated the

issue and reviewed the point locations to make sure they were properly mapped. Chihuahuan Desert does exist in GAP, but none of the jaguar points fell on it, although they were close in a couple of locations. The occurrence of jaguars in seemingly sparse Sonoran Desert scrub was also discussed. This is not considered jaguar habitat by the JAGSAG, although desert riparian corridors may be suitable habitat and will most likely be included in the final model. Jack Childs addressed the fact that another layer, topography, should also be added to the land-use model. Jaguars are frequently found in bluffs/cliffy areas that provide habitat for denning. The final map created by combining all of the above mentioned GIS layers showed 26,245 mi² (67,670 km²) of potentially suitable land-cover/habitat for the jaguar in Arizona- 23 percent of the state. Eight historic sightings (20%) fell outside the potentially suitable envelope, but half of those were within a few miles of the boundary.

At this point, we need to start identifying potential travel corridors between breeding populations of jaguars in Mexico and Arizona/New Mexico. Additionally, Jim's land-use maps cannot be refined any further without concrete jaguar habitat-use data from Mexico. Carlos Lopez-Gonzalez will provide us with information (i.e., GPS locations) on areas in Mexico that are considered suitable jaguar habitat. This will hopefully help AGFD build a habitat suitability model. Bill Van Pelt has also contacted Raul Valdez to try to obtain similar information from his jaguar studies.

The timeline for the jaguar land-use analysis report was discussed. The first draft will be distributed to the JAGCT habitat subcommittee on March 1, 2001 and the final report will be distributed to the conservation team on June 15, 2001. Note that all the dates in the JAGCT habitat subcommittee 12/12/00 meeting minutes should say 2001 and not 2000.

End of the Year Report

Bill Van Pelt mentioned that the annual report on JAGCT activities should be drafted and sent to Albuquerque by the beginning of March.

Mexico Update

Three jaguars have been killed in Mexico since the last meeting. The National Fish and Wildlife Foundation is about to release a grant to one researcher who is studying jaguars in Mexico.

Other Business

Scotty Johnson asked whether INS had been contacted and invited to attend the meeting. Bill Van Pelt indicated that INS was interested in participating in our meetings and a representative was supposed to attend this meeting. Apparently, a representative from INS did come, but left fairly quickly. Scotty asked whether INS would be able to provide the conservation team with a long-term (e.g., 10-year) plan of projected activities along the border. This would be very helpful for determining long-term, cumulative impacts of developments on jaguar migratory routes. Bill Van Pelt will investigate the availability of such plans.

Jack Childs was recently awarded a grant by the Wildlife Conservation Society to do more track surveys and install additional cameras and hair snares along the border. There needs to be greater coordination among the existing camera studies so that Jack's grant money can be put to the best use. Additionally, Jack is looking for someone who would like to volunteer to compile a list of all recently completed, ongoing, and proposed carnivore studies taking place on both sides of the Mexican border. This would not be limited to jaguar studies because evidence of jaguar presence would be noted in any carnivore study. The JAGCT could keep a record of these studies and make it available to anyone needing such information.

Two documentaries on the jaguar conservation effort are due to air in February, one on the Outdoor Life Network and one on ABC (Game Warden Wildlife Journal).

Ken Joens wanted the JAGCT to consider climatic change as a factor affecting jaguar movement patterns and occurrence north of the border.

The next JAGCT meeting will be in Animas, New Mexico on July 26, 2001 at 1000 mountain daylight time. Note that this meeting was originally scheduled for July 19th.

Meeting was adjourned at 1245.

Attendance Roster

Steve Spangle	US Fish and Wildlife Service
Paul Barrett	US Fish and Wildlife Service
Les Thompson	Cochise County
Steve Fairaizl	USDA-WS
Steve Pavlik	Sky Island Alliance
Michael Robinson	Center for Biological Diversity
Judy Keeler	Bootheel Heritage Assoc.
Sue Krentz	Az. Cattlegrowers Assoc.
Bill Wendt	CTSBS
Alex Black	
Bill Grossi	BLM-AZ
Karen Kay Husted	
John Cryar	
Jack Barnitz	BLM-NM
Nina King	US Fish and Wildlife Service
Levi Klump	
Don Cullum	NM Cattlegrowers Assoc.
Ken Joens	
Wendy Glenn	Malpai Borderlands Group
Ben Brown	Malpai Borderlands Group
Ron Thompson	Arizona Game & Fish Dept.
Nick Smith	New Mexico Dept. of Game & Fish
Gabriel Paz	Arizona Game & Fish Dept.
Chris Ortega	New Mexico Dept. of Game & Fish
Paul Pirtle	Dept. Comm.
Wally Alexander	Arizona State Land Dept.
Chuck Hayes	New Mexico Dept. of Game & Fish
Gary Helbing	USDA- Coronado National Forest
Ron Bemis	USDA/NRCS
Kim Bartlein	Ft. Huachuca Wildlife Office
Jack Childs	Jaguar Depredation Subcommittee
Scotty Johnson	Defenders of Wildlife
Jim Gacey	BLM-Safford Office
Ted McRae	BLM-Safford Office
Tim Snow	Arizona Game & Fish Dept.
Bill Van Pelt	Arizona Game & Fish Dept.
Karen Schedler	Arizona Game & Fish Dept.
Jim Hatten	Arizona Game & Fish Dept.
Laurie Averill-Murray	Arizona Game & Fish Dept.