



# FELID TAG TIMES

A quarterly publication of the Felid Taxon Advisory Group of the Association of Zoos & Aquariums

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### May 2009

### Felids of Temperate Asia

# ASSOCIATION OF ZOOS & AQUARIUMS

## Calendar

April 27 – 29, 2009

- Large and Small Cat Husbandry Courses, Tacoma, WA

April 29, 2009

- Clouded Leopard SSP Meeting, Tacoma, WA

April 30, 2009

- Lion SSP, Ocelot SSP, & Pallas' Cat PMP Meetings, Tacoma, WA

May 1 – 3, 2009

- Felid TAG Annual Conference, Tacoma, WA

June 17, 2009

- Tiger SSP, Snow Leopard SSP, & Amur Leopard PMP Meetings, St. Paul, MN

## News

### Remember to Bring Silent Auction Items!

Please contribute to the annual Felid TAG Conference silent auction! Funds raised keep registration fees low, contribute to travel expenses for invited speakers from felid range countries, and support *in situ* conservation efforts. We will accept auction items when you check in at the meeting.

### Regional Collection Plan

A revised Regional Collection Plan (RCP) is currently under review by the Wildlife Conservation Management Committee.

### Last Known Wild Jaguar in the U.S. is Lost

The only known wild jaguar in the United States, Macho B, was euthanized last month. On February 18, Macho B was accidentally captured by the Arizona Game and Fish Department in a snare intended for a black bear and mountain lion research study south of Tucson. He was radio-collared and released in the hopes of learning more about the species' existence in Arizona. Twelve days later, he was recaptured after his movements decreased, indicating he was sick. Phoenix Zoo veterinarians diagnosed Macho B with severe and unrecoverable kidney failure. The U.S. Fish and Wildlife Service and the Arizona Game and Fish Department decided to euthanize Macho B to end his suffering. Facing accusations of inappropriate actions that ultimately led to the jaguar's death, the Arizona Game and Fish Department is currently under federal investigation.



### Will Jaguars Return to the U.S.?

A federal judge has ordered the U.S. Fish & Wildlife Service to revisit its decisions not to designate habitat and create a recovery plan for jaguars in the United States. The Fish & Wildlife Service does not consider the U.S. habitat to be critical to the species' survival. The ruling is the outcome of a lawsuit by Defenders of Wildlife and the Center for Biological Diversity.

### Clouded Leopard and Small Felid Conservation Summit

The Clouded Leopard and Small Felid Conservation Summit was held January 28 – 30 at Kasetsart University in Bangkok, Thailand. The workshop was conceived to compile current information and address the conservation issues facing the nine species of Southeast Asian small wild cats. In addition, the meeting sought to facilitate information exchange, communication, and collaboration among the many independent parties working with these species.



Kasetsart University's Faculty of Forestry invited IUCN's Conservation Breeding Specialist Group (CBSG) and IUCN's Cat Specialist Group to facilitate this workshop. Using CBSG tools and processes designed specifically for this type of conservation issue, the workshop brought together a diverse group of 65 participants from 13 countries including field ecologists, population biologists, naturalists, conservation education

teachers and zoo professionals.

During the workshop, participants worked in small region-based groups to summarize all available information about the focal species in Southeast Asian range countries: clouded leopard, Sundaland clouded leopard, marbled cat, jungle cat, golden cat, flat-headed cat, fishing cat, bay cat, and leopard cat. These data were used to update current range maps for these species.



In addition, the major issues relating to clouded leopard and small felid conservation were identified and prioritized. Based on these results, participants developed goals to achieve the desired change in the conditions identified in the issue statements. Finally, each group developed specific actions, relevant to the situation in the various range countries, to accomplish the goals, taking into account the scientific information on the species, their habitats, and the threats identified. A full report of the meeting will be available shortly and will be posted on the Clouded Leopard Project website ([www.cloudedleopard.org](http://www.cloudedleopard.org)).

This international conservation event was sponsored by The Clouded Leopard Project, Point Defiance Zoo and Aquarium, Smithsonian's National Zoo, Cincinnati Zoo & Botanical Garden, Nashville Zoo, The Aspinnall Foundation, Thailand Zoological Park Organization, and Thailand Dept. of National Parks and Wildlife.

### Ocelot Festival

About 4,000 people attended the 10th annual Ocelot Conservation Festival in February at the Marine Military Academy in Harlingen, Texas. Sihil, a 7 year old ocelot, traveled with her trainers (Alicia Sampson pictured) all the way from Cincinnati to help educate the audience about ocelots and what can be done to protect the species. Funds were raised for research and education aimed at restoring habitat for ocelots in the Rio Grande Valley.



Did you know that the Clouded Leopard Project has a fantastic blog?! Keep up on the latest news and thoughts from the world of clouded leopards at [www.cloudedleopardblog.blogspot.com](http://www.cloudedleopardblog.blogspot.com).



### Meet Our Cats: Marina

Marina is the only surviving captive-born offspring of a pair of wild-born Russian cats imported by the Denver Zoo in the 1990s. She was the oldest first time Pallas' cat mother (at 7 years of age) and oldest Pallas' cat ever to give birth (at 10 years of age) in the International Studbook. Marina and Yuri (now at Birmingham) produced 4 litters and 16 kittens over 4 years. At 11 years of age, Marina now lives in quiet retirement at the Cincinnati Zoo.

## Conservation Program Updates

### Amur Leopard PMP

#### Upcoming Program Meeting

The Amur Leopard Program Meeting will be held in conjunction with the Tiger SSP meeting in June at the Minnesota Zoo. The meeting will be on June 17<sup>th</sup> from 9-10:00am. Please contact Diana Weinhardt

([Diana.Weinhardt@state.mn.us](mailto:Diana.Weinhardt@state.mn.us)) if you plan on attending.



#### Wildlife Conservation Society Russia Debuts Web Site

The Wildlife Conservation Society's Russia Program now has its own website at [www.wcsrussia.org](http://www.wcsrussia.org). The website includes news items, information on our projects, as well as publications and reports that can be downloaded. I want to thank Cheryl Hojnowski for taking on the bulk of the work in making this happen, along with a lot of help from Jonathan Palmer in NY and Katya Nikolaeva in Vladivostok. As we work through the "bugs and blips" that are inevitable in any new endeavor, we would appreciate hearing from you any recommendations or comments. - Dale Miquelle, Program Director, WCS Russia Program

#### Support Raised for Amur Leopard and Tiger Alliance Programs

On March 20, the Minnesota Zoo Foundation transferred \$25,000 to the Amur Leopard Conservation Support Programme based at the Zoological Society of London (ZSL) in the UK. This transfer contains donations from the Minnesota Zoo, Oregon Zoo Foundation, Audubon Commission/Audubon Nature Institute, Granby Zoo, Seneca Park Zoo, Seneca Park Zoo AAZK Chapter, and Eunice Dwan Charitable Trust, for a total of \$25,000. These funds are to be split to support two ongoing Amur leopard conservation programs in the Russian East: the Phoenix Fund's (based in Vladivostok) Leopard public education programs and Tigris/ZSL programs to support anti-poaching activities. All of the above-mentioned recipients are part of the Amur Leopard and Tiger Alliance (ALTA). Please visit ALTA's website, [www.amur-leopard.org](http://www.amur-leopard.org), to learn more about critically endangered Amur leopards and ALTA members' efforts to save them. Thanks very much to all of the institutions that contributed to this program!



Photo: Jonathan Buckmaster



### Snow Leopard SSP

#### Program Update

The current population consists of 143 specimens at 64 institutions. AZA as well as CAZA facilities (WCMC approved non-member participants) are included in the SSP. Current gene diversity for the managed population is 95% and is equivalent to the genetic diversity of a population descended from approximately 11 founders ( $f_{ge} = 11.51$ ). Most AZA managed populations have set a genetic goal of maintaining 90% gene diversity for 100 years. When gene diversity falls below 90%, it is expected that reproduction will be increasingly compromised by, among other factors, lower birth weights, smaller litter sizes, and greater neonatal mortality. Under the current population parameters, with a growth rate of 4% ( $\lambda = 1.04$ ), gene diversity can be maintained at or above 90% gene diversity for 48 years. The SSP will recommend 40 breeding pairs, 21 transfers for this period. One export to the ARAZPA population is recommended.

#### DEMOGRAPHY

Current Population Size (N) 143  
Specimens Excluded from Analyses 20  
Target Population Size 175  
Mean Generation Time (T, in years) 7.4  
Projected Population Growth Rate ( $\lambda$ ) 1.04

#### GENETICS

	<i>Current</i>	<i>Potential</i>
Number of Founders	38	
Founder Genome Equivalents	11.51	19.25
Gene Diversity Retained (%)	95.65	97.40
Population Mean Kinship	0.0435	
Mean Inbreeding (F)	0.0175	
% Known Pedigree (prior to assumptions)	100	
Ne/N	0.3221	
Years To 90% Gene Diversity	48	
Gene Diversity at 100 Years From Present (%)	85	

#### Upcoming Master Planning Session

A master plan session has been planned for June 17<sup>th</sup> at the Minnesota Zoo. All institutions are welcome to attend.

## Pallas' Cat PMP

### Program Update

We continue to struggle with infant mortality issues related to toxoplasmosis exposure and beyond. It has been a frustrating two years for the program with struggles to get aging females pregnant and 14 of the 19 infants born this year lost for one reason or another. We continue with fecal studies on the hormone cycling of our breeding females and with pregnancy testing so that we can be better prepared for upcoming deliveries. We also continue to investigate the cause of death when we do not succeed so that we can be better prepared to avoid the same problems in the future. Overall, the population is stable with births fairly well balancing out deaths, but our long-term goals are to continue to try to grow the population into the future. We have had interest from several new institutions in obtaining animals, which is wonderful and we are doing our best to accommodate those interests as animals become available. This is a fantastic species and we are excited about the interest being generated. Be patient. They are worth the wait!!

### Pallas' Cat Research Project in Mongolia Celebrates 10<sup>th</sup> Year Anniversary

In 1999, a research project with wild Pallas' cats in Mongolia was initiated by an Ohio State University first-year veterinary student, Meredith Brown, in collaboration with Mongolian field biologist Bariushaa Munkhtsog. Ten years later, Meredith not only has obtained her veterinary degree but also her PhD and is now off to complete a post-doctoral fellowship in Ireland. But the field project, after ten years of incredible scientific discoveries about Pallas' cats, goes on - with the continued assistance and oversight of Munkhtsog at the Mongolian Academy of Sciences and the support of the Pallas' Cat SSP and several AZA institutions. With the participation of scientists from the National University of Mongolia, Bristol University, Michigan State University, Wildlife Conservation Society, the Cincinnati Zoo & Botanical Garden, and other research programs, our knowledge of Pallas' cat ecology has expanded exponentially over the past ten years, and many of these insights from the wild population are helping us to improve our management of this challenging cat species in captivity. Current studies include assessing the reproductive seasonality of wild male Pallas' cats, investigating further the potential exposure of wild Pallas' cats, birds, and domestic hoofstock to *Toxoplasma*, and exploring the use of frozen semen from wild males for producing new founders in the captive population. The next research expedition is scheduled to venture out onto the Mongolian steppes in June 2009 on a mission to relocate several radio-collared males for semen collection as well as obtain blood samples from 100-200 domestic sheep and goats for *Toxoplasma* testing. Any institutions interested in getting involved in an exciting ongoing field research project should consider getting personally or financially involved.



Check out a video highlight of the Pallas' cat research and reproduction program at [www.youtube.com/user/CincinnatiZooTube](http://www.youtube.com/user/CincinnatiZooTube).



### Possible Embryo Transfer Technique for Introducing New Genes

Dr. Bill Swanson and his crew at the Cincinnati Zoo conducted three additional embryo transfers in February and March 2009 into Pallas' cat females at Cincinnati, Erie, and Hogle Zoos. The embryos transferred at the Erie and Hogle Zoos were produced using frozen Mongolian Pallas' cat sperm with oocytes collected onsite from their other females whereas the embryos transferred at Cincinnati had been frozen ten years earlier and were created using oocytes collected from one of the SSP's original Russian founders that never reproduced naturally. Unfortunately, none of the embryo recipients became pregnant this year, but progress continues to be made and the scientists are optimistic about the potential success of future procedures. If this technique proves successful, it may become another technique in our arsenal for breeding genetically valuable toxoplasmosis positive females. Our strongest tool in this fight is keeping our animals free of toxo. Institutions have been fairly successful at this in recent years but the incidence of infection has been creeping up again recently. Handraising kittens from toxo positive females is labor intensive and not always guaranteed to avoid toxo infection of the kittens so this new potential for avoiding the problem altogether with embryo transfer is very exciting. If successful, it will not only be the first successful embryo transfer in this species but it could introduce new wild genes without the animals actually being physically present in the captive population.

"The SSP/PMP owes Dr. Bill Swanson and the Cincinnati Zoo, all of the collaborators in Mongolia and elsewhere and the Erie and Hogle Zoo staff a big round of applause for making this a possibility." – Martha Caron, Pallas Cat Species Survival Plan Coordinator & International Studbook Keeper

**Meet a Member: Bonnie Breitbeil**

Meet Bonnie Breitbeil, Assistant Curator at the Central Florida Zoo. As the Felid TAG Secretary and a Steering Committee member, Bonnie is highly active in the Felid TAG. She coordinates the Serval PMP and studbook and is a member of the AZA Management Group for clouded leopards. Bonnie has also been involved in developing the Husbandry Courses. In her spare time, Bonnie likes to pretend that she is an aquarium fish and touch other fish in inappropriate places.



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Photo: Simon Walker

- Caracal PMP
- Fishing cat SSP
- Serval PMP
- Amur leopard PMP
- Canada lynx PMP
- Lion SSP
- Cheetah SSP
- Snow leopard SSP
- Sand cat SSP
- Ocelot SSP
- Pallas' cat PMP
- Puma PMP
- Clouded leopard SSP
- Tiger SSP
- Jaguar SSP
- Black-footed cat SSP

**Submissions**

Felid TAG Times is edited by Shasta Bray, Felid TAG Education Co-Liaison. Please send comments, suggestions, and submissions to [Shasta.bray@cincinnati-zoo.org](mailto:Shasta.bray@cincinnati-zoo.org). Submission deadline for the August 2009 newsletter, highlighting Felids of the Americas, is June 1.