In This Issue…

News:
- A Persian leopard was saved by a farmer in North-Khorasan province, Iran
- Springs are drying out: a threat to the leopards in Arsanjan, Iran
- An Indian leopard rescued from well
- UPM completed the first ecological Malayan leopard project

Technical Notes:
- Leopard capturing programs

“Asian Leopard Specialists” is an academic-based group consisted of leopard researchers who specifically study on the Asian leopard sub-species. Currently, our group is officially active in Iran in the form of “Asian Leopard Specialist Society (A.L.S.S.)” that is a non-profit and academic-based society.

We invite the Asian-leopard researchers from various countries to join us by submitting an application letter to: members@leopardspecialists.com.

We also invite the Asian-leopard researchers to submit their news, new findings and an introduction to their leopard projects for publication in the Asian-leopard newsletter via: Newsletter@leopardspecialists.com.

Leopard researchers may also submit a brief introduction of themselves or their group to researcher@leopardspecialists.com to appear in the Leopard Specialists’ page in our website.

Asian Leopard Specialists, Directors and Advisors:

General Director (International):
Mohamed Zakaria Hossein (Dr. Assoc. Prof.)

General Director (Iran):
Shirin Hermidas (Mrs.)

Executive Director:
Arezoo Sanei (Ph.D. Student)

International Advisors:
Igor G. Khorozyan, Ph.D.  
(Member of IUCN/SSC Cat Specialist Group; WWF Armenia)

Andrew Stein, Ph.D.  
(Botswana Predator Conservation Trust, Field research coordinator)

Jan Janecka, Ph.D.  
(Department of Veterinary Integrative Biosciences, Texas A&M University)
NEWS

- **A Persian leopard was saved by a farmer in North-Khorasan Province, Iran**

An adult male leopard individual that was noticeably weak was found by a farmer (naming Hasan Azimi) near Rashvanlou village located in North-Khorasan province. Hasan Azimi stated in an interview with A.L.S.S. that even though he had not seen any leopard previously, once he saw the leopard he found that it has come to him asking for help.

A male leopard found in North-Khorasan province (Photo: Abdari)

Considering the fact that North Khorasan province is one of the provinces with a high rate of human-leopard conflicts in Iran, taking an action by a farmer to save a leopard has really impressed us. Asian Leopard Specialist Society and D.O.E. office in the North-Khorasan province acknowledged him because of his support to the leopards in the region.

The leopard that we called him Kopet was translocated to a D.O.E. office located in Bojnourd city. The name “Kopet” was retrieved from “Kopet Dag” that is name of a habitat located in North-East of Iran where the leopard was found there. Kopet had 2 treatments so far in University of Mashhad. A surgery was done on his lower lip that was torn. His blood parasite was also treated.

Asian Leopard Specialist Society appreciation to the farmer who saved the leopard (Photo: Fakhraei)
Department of Environment of Iran had intended to monitor the leopard individual after releasing it to the wild using telemetry techniques. Therefore, A.L.S.S. that was the candidate to conduct monitoring program, studied whether the leopard is releasable to the wild or not. Based on the preliminary survey was conducted in the region, appearance of Kopet and his health status, interviews with local settlers and reports of recent conflicts in the area, it was suggested that Kopet had a fight with a wild boar about one month before it was found by Hasan Azimi. Our interviews with local settlers indicated that there was no leopard observation or indirect sign found by local settlers for at least the last 20 years in the region. So it is very probable that Kopet has come from a protected area namely “Golul Sarani” located close to the borders of Turkmenistan in North-East of Iran. This area is almost 9 Km away in North from the place that Kopet was actually found there.

Kopet had 4 broken canines with exposed nerves which were our main concern. Therefore, we admitted that Kopet may not be able to survive in the nature and feeding on wild preys. Therefore, he was translocated to Tehran on 29. May for the root canal treatment. Kopet was weighed as 58 kg when he was found first. But after receiving medical treatments his weight increased to 65 kg.

Video related to this topic is available at: <http://www.4shared.com/video/6QVeUqgd/Persian_Leopard_was_saved_by_a.html>
Drought and dry condition was one of the main concerns regarding survival of a variety of species including the leopards and their preys in various parts of the country. Dry condition was much serious in southern provinces of Iran such as Fars, Kerman and Yazd provinces.

While we were conducting a survey in Kuh-Siah mountainous region located in Arsanjan township in Fars province, we found that several springs were recently dried out. Near to these mountains, a plateau with several cultivation farms is located. A local researcher namely Darioush Gholami shiri is currently studying on the negative effects of false cultivation programs by local settlements on underwater routs that may also cause springs on the altitudes to dry out.

These studies possibly will lead us to a management plan as a collaborative work with local farmers to address their cultivation programs and to prevent further negative impacts on the similar places in the vicinity.

Springs are drying out: a threat to the leopards in Arsanjan, Iran

Vast areas in Iran have received only small amount of rain per year in the recent years.
We also found that porcupines were much common in the recent years in this area and therefore, many Pistachio trees have been disturbed. Leopard is known as the main predator for the porcupines. Therefore, this could be a warning indicating lack of predators in the habitat in the recent years. However, we aim to conduct more studies to address status of this large predator in the region.

Many local illegal hunters live in this area. They use to hunt wild goats and many other wildlife species in non-protected habitats in the region and even other regions nearby. Long term awareness programs may noticeably decrease illegal hunting by local settlers in this area. Collaborative research and conservation projects with help of local hunters and settlements and to receive financial benefits from wildlife projects in the region may considerably encourage local settlements to co-operate in conservation programs in this area.
• An Indian leopard rescued from well

Leopards are well known to be good climbers and smart hunters. However, there are various reports of leopards fell down and trapped in the wells in India while chasing a prey or running away from humans nearby. Recently, the times of India published news saying that a leopard fell down in a well in Robertsganj division of forest department. The leopard was sitting on top of a dam. When the villagers found that a leopard is sitting there, gathered in the place. While the leopard was trying to run away fell down into the well.

Forest officers dangled a rope inside the well so that the leopard caught hold of it. Then the leopard was pulled up and jumped out and run to the forest.

Similarly, another leopard that was trapped in a well in Dewas district of Madhya Pradesh, was successfully took out using a cage.

Two months earlier, a male leopard that was trapped in a well in Guddur village near Mathur in Krishnagiri district was not that lucky as it was died after it was rescued. It seemed that this leopard was starved for almost 3 days in the well. A blood clot was also found in its left lung.

• UPM completed the first ecological Malayan leopard project

University Putra Malaysia has recently completed the first Malayan leopard project in Malaysia. The project was funded by University Research Grant and it was Master’s thesis of Arezoo Sanei under supervision of Assoc. Prof. Dr. Mohamed Zakaria.

Conducting this research there were several serious challenges that were mainly associated with (i) the dense vegetation cover of the tropical forests, (ii) melanistic pattern of the Malayan leopard and (iii) lack of ecological knowledge about the sub-species inhabiting the Malaysian tropical rain forests.
Population study of leopard indicated that there were four individuals of leopard existed in the Ayer Hitam Forest Reserve suggesting the density estimate as high as 28.35 leopards/100 km² which is one of the highest leopard densities ever reported. This is comparable with records of leopard densities in Rhodes Matopos National Park (Zimbabwe), Londolozi Game Reserve (South Africa) and Sanjay Gandhi National Park (India) (Edgaonkar & Chellam, 1998; Marker & Dickman, 2005; Stander *et al*., 1997).

We plotted occupied area by each individual. The polygons suggest high degree of overlap between occupied area by different individuals, however, probability that more than one individual occur at a time in the area of about 352 ha. is significantly lower than when only one individual presents in that area. Area of overlaps between polygons for all leopard individuals in the study area covers 15% of the total site area. Largest overlap has occurred between polygons of individuals 2 and 4 covering 40% of the total site area.

Wild boar, macaque species and lesser mouse deer have been identified as the most available leopard potential preys in AHFR and there was no evidence of any other potential prey species in the habitat.
However, considering that leopard has a diverse diet, opportunistic predation on other species is also possible. Tropical rain forests are usually known to support low prey biomass for the large carnivores such as leopards. Despite of this fact that Ayer Hitam Forest Reserve is a logged over tropical rain forest, there is no evidence of lack of prey sufficiency. All identified prey species within leopard’s preferred diet (i.e. Macaque species, Wild boar and Mouse deer) are widely distributed all over the study area with occupancy rates of 1 and thus, each individual of leopard has a high chance of encountering its preferred prey species.

Several anthropogenic factors have been detected in the study area which may affect the movement pattern of leopard individuals. These include construction activities, settlement area, plantation and deforestation activities. Among these factors construction activities which have been conducted inside the forest had the most direct and indirect impacts (i.e. via its preferred prey species) on leopard movement pattern. Therefore, following by conducting construction activities inside the forest resident leopards mostly avoided the relative site with construction activities. Considering 1 - small size of the forest, 2 - availability of high population of leopards in the study area and 3 - territorial behaviour of leopard individuals, changes in previously maintained spatial organization and movement pattern of each individual could result in conflicts and fatality of them (LeRoux and Skinner, 1989).

The project progress report is available at the A.L.S.S. website at <www.leopardspecialists.com>.
Eurasian wild pig (*Sus scrofa*) and its indirect signs which are widely found in the study area. A: A camera trapped individual; B: Wild boar hair may be found holdup on barbed wires or puddles after raining, where they wallow to remove parasites and keep cool (C); D: Dried mud on the trunk when a wild boar rubs itself to the tree after wallowing.

Macaque species and their indirect signs found in the study area. A-1, A-2, A-3: Pig tailed macaque (*Macaca nemestrina*); C: Long tailed macaque (*Macaca fascicularis*); B-1: Left foot; B-2: Left Hand; B-3: Right foot.
Leopard capturing programs

Translocation of large felids is known as one of the most accepted methods in the cases where human-large cats’ conflicts occur. However, this involves several stressors while capturing, translocation to an unfamiliar location, interacting with humans for some time and experiencing possible injuries. Athreya et al., (2010) studied changes in conflict levels and fatality rates where the translocation activities were conducted in Maharashtra State of India. This study suggests that leopards did not stay at the places they were translocated to and translocations persuade attacks on human. This could be particularly because of loss of fear to the humans because of getting familiar with human during the captivity.

Here we summarized a report prepared by Lourens Swanepoel from University of Pretoria regarding the suitable leopard capturing methods (8th progress report, July 2010) to reduce tensions associated with unsuitable capturing methodologies for each case.

Generally there are 3 capturing methods including (i) darting, capturing using (ii) cage traps and (iii) foot snares.

(i) Darting generally could be used where animal can be observed from the vehicle. In this case we usually set bait and when the leopard comes close to the bait it could be darted from the vehicle. However, there are many risks associated with this method. Capturing team should notice that the leopard may fall down from the tree and injures itself. It may also run off or even attack to the capturing team. In case when tranquilliser is only partially injected, the leopard might be attacked by other animals in the area. The most important risk associated with this method is when the animal is partially anesthetized.

(ii) Cage trapping is an old method but widely used to capture the leopards. This requires only simple darting equipments such as injection and blow pipe.
Leopard tooth damage, difficulties associated with translocation of the cage and requirement of lots of human power to set up the cage, requirement of many trapping days to capture a leopard is some of the disadvantages associated with this methodology of trapping.

(iii) Capturing using foot snares. In this method bait is used to attract the leopard to the site. Sticks will be used to guide the animal where to put the steps. A foot snare consists of a snare loop that rests on a thrower. A sponge is used under a trigger that fires the thrower. The equipments are cheap and easy to transport and very efficient in capturing the leopards. In case if a non-target species was captured need to be darted. Capturing a leopard using foot snare is a very technical method and a well trained person should set up the trap.