

Issue on the "Persian Leopard National Status Assessment in Iran"

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70% of the Persian leopard mortalities (2007-2011) were because of poaching and poisoning!



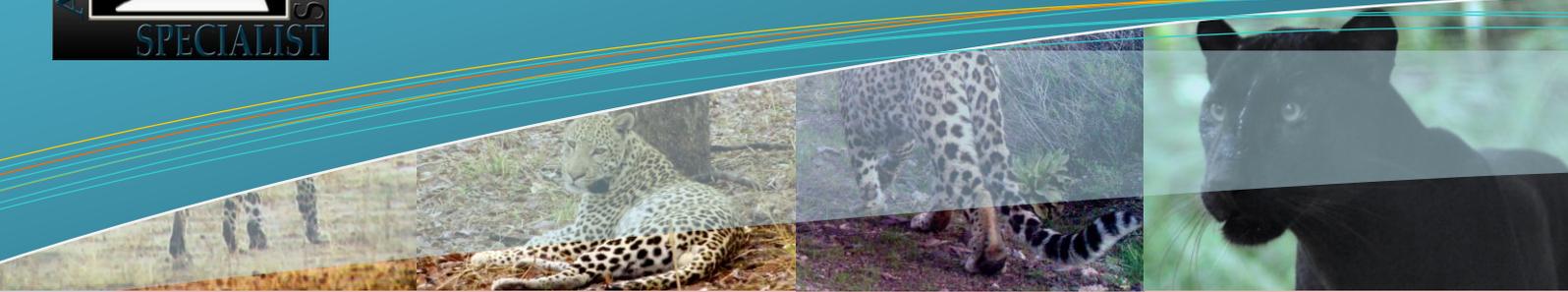
Snapshot

A leopard on the pass...

Photo credit:

Persian Leopard Project in North Khorasan Province, Iran

- Asian Leopard Specialist Society
- Department of Environment, North Khorasan Province
- People's Trust for Endangered Species



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WHERE LEOPARDS ARE FOUND IN IRAN?

AN OVERVIEW TO THE NATIONAL STATUS ASSESSMENT OF THE PERSIAN LEOPARDS

Iran is known as one of the most diverse countries in terms of existence of cat species. A total of 10 cats have been recognized in Iran so far. However, 2 of them, the Persian lion and Hyrcanian tiger are regarded as extinct species.

In 2011, Department of Environment of Iran embarked on assessing status of Felids of Iran across the country. This was done together with Cat Specialist Group, IUCN and various experts and societies in Iran. Subsequently, four NGOs of Asian Leopard Specialist Society (ALSS), Plan for the Land (P4L), (Iranian Cheetah Society) ICS and Mohit-Ban (MB) were selected to conduct studies on various cat species. Furthermore, each provincial DoE Office assigned an expert as cat representative for each relative province. Two cat workshops have been held in Iran so far, one in Karaj (University of Environment; Nov. 2011) and another in Sari, Mazandaran province (May 2012).

The first workshop was to assess status of each cat species and the second one was to design the relative conservation roadmap for conservation of felids of Iran.

Asian Leopard Specialist Society (spearheaded by A. Sanei) was appointed for assessing status of two nationally widespread species of the leopard (*Panthera pardus saxicolor*) and the jungle cat (*Felis chaus*) in the country. All 31 provincial DoE offices, Iranian central DoE (Wildlife Bureau), a number of local communities and knowledgeable persons as well as persons with ongoing leopard projects assisted us in this national survey. We developed a protocol to record leopard occurrence data from 2007 to 2011. A total of 190 questionnaires were filled and record reliabilities were identified (i.e. confirm presence, possible presence). We also established a directory to record information on leopard potential prey census being done annually by the provincial DoE offices in protected areas.



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Information on various threat factors in leopard habitats, human/livestock-leopard conflicts and leopard mortalities were also recorded.

A new concern raised...

Is the Persian leopard population in Iran splitting to two separate parts?

Leopard distribution in Iran has been always related to the presence of two mountainous ranges of Alborz and Zagros running from Northeast to the Northwest and from the Northwest to the South of Iran. There is a natural barrier in the Iranian central region consisted of two deserts of Lut and Kavir where they separates leopard distribution in North from those in South. Therefore, Northwestern Iran where it is also internationally considered for the leopard status in the Caucasus region has a very critical role in connecting leopard populations in North to those in West and South of the country.



Photo: HR Mirzadeh

Participants in the workshop for status assessment of the felids in Iran. University of Environment, Karaj, Iran (2011)



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Our mappings for the leopard occurrence points revealed that leopard records in this critical region of Northwestern Iran is relatively low. We compared these results with the leopard distribution map provided by Sanei (2007) and Sanei and Zakaria (2011) for 90 studied sites across the country. Comparison of these distribution maps of the leopard occurrence in Iran, suggested that leopard population is splitting to two separate parts of Northern and Southern subpopulations (Sanei *et al.* in press).

Meanwhile, the main Persian leopard population in the Middle East is known to be occurred in Iran where it also supports viability of this subspecies in the neighboring countries. Following by surprising result of our study, we developed a new national survey to model distribution of the leopard potential habitats in the country (more information is available in this issue, p6).

PERSIAN LEOPARD PROJECT IN NORTH-EASTERN IRAN

We embarked on a new study in North-Eastern Iran, North Khorasan province from September 2011 to September 2012. Main objectives of this research were:

- “1- To identify leopard distribution in North Khorasan in relation to human pressures and prey resources
- 2- Identification and description of conflict hotspots
- 3- Development of scientifically based recommendations to North Khorasan office of Department of Environment (DoE) about mitigation of human-leopard conflicts and elaboration of area-specific conservation strategy, action and management plans”

The research was financially supported by People’s Trust for Endangered Species and it was conducted in cooperation with North Khorasan DoE provincial office.

The study resulted in several important findings. We developed a research design to collect well distributed data leopard occurrence data across the province and then, MAXENT modeling was implemented to identify potential distribution of the species across the region. Questionnaire surveys were done in 22 villages in predefined grid cells of 12 km x 12 km across the province. Human/livestock-wildlife conflicts and



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wildlife disease, knowledge of local communities about compensation programs and livestock insurance regulations were investigated. Systematic camera trappings were done in Salouk NP to identify the Persian leopard population in the area. We also covered the areas with several complaints from local communities about livestock-leopard conflicts with camera trapping surveys.

We have already identified several areas as the vital leopard corridors in the region. Most of the leopard potential habitats were estimated to be in southern portion of the province where most areas under auspice of the Department of Environment lay down in a line located in southern part of the province. We identified several conservation needs both in terms of habitat requirements and also awareness raising programs and mitigating human-wildlife conflicts. These identified conservation priorities made our objectives in the next phase of the Persian leopard project in North Khorasan province, Northeastern Iran.

To see the full progress report you may visit: www.leopardspecialists.com/index.php/alss-projects.



North Khorasan province contains Kopet Dag mountain range which extends to the neighbouring country of Turkmenistan and provides corridors and common habitats to connect leopard population in Iran and those inhabiting in Turkmenistan. Current study signifies the first research on the distribution modelling of the Persian leopard potential habitats in Iran. We used results of this study to develop a research for distribution modelling of the Persian leopards in whole the country.

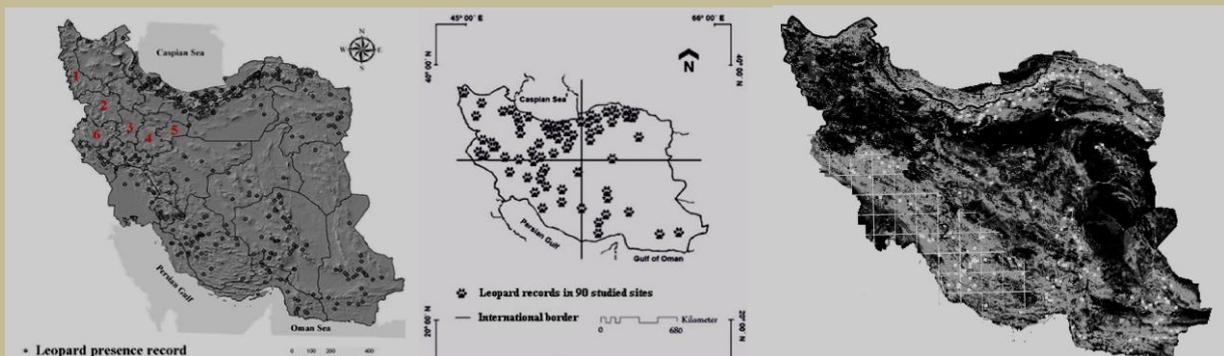


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**VERIFICATION OF A HYPOTHESIS:
NATIONAL SURVEYS FOR THE FIRST COUNTRYWIDE PERSIAN LEOPARD
POTENTIAL DISTRIBUTION MODEL IN IRAN**

Following by the hypothesis raised during our earlier status assessment of the Persian leopard in the country (this issue, p2), we used finding of the ALSS Persian leopard project in North Khorasan province to design a new study to identify the leopard potential habitats in other regions of the country. In these surveys we divided the country to 5 regions on the basis of habitat similarities, climatic factors and occurrence of eco-regions in the country.

Subsequently, we held 4 regional workshops in four provinces (various regions). We invited previously assigned representative felid expert of each provincial DoE office of the neighboring provinces to the relative regional workshop. Representative felid experts were in charge of felid studies since our earlier status assessment of the Persian leopards in the country. Collected data from 2007-2011 was again reviewed together with felid expert of each province and the model for each region was developed in the workshop using the data collected for all relative provinces in the selected region. Afterwards, resulting models were evaluated for their accuracy by felid experts. We used 17 environmental variables for the MAXENT distribution modeling and cell sizes were selected as 5 km x 5 km for the raster maps.

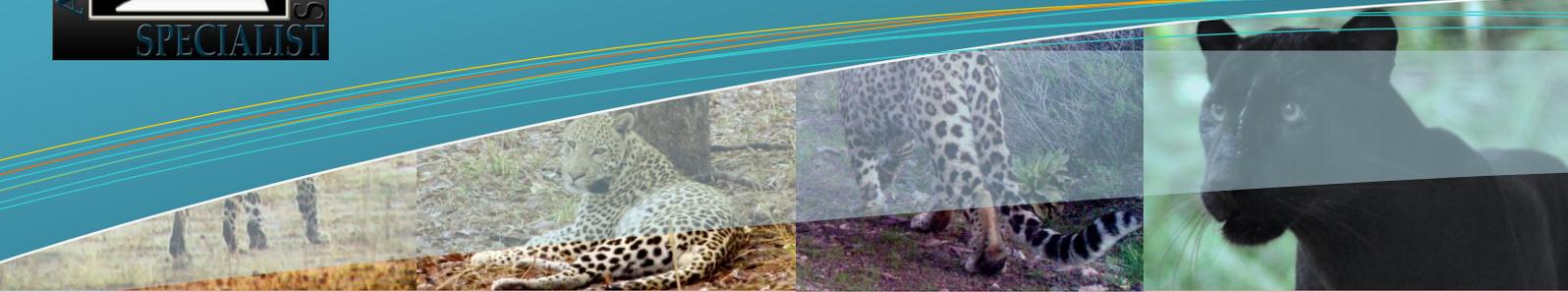


A: Sanei et al. (in press)

B: Sanei (2007)

C: Sanei et al. (in prep)

Persian leopard distribution maps from 2002 – 2006 (B, 90 study sites) to 2007-2011 (A) and current potential distribution (C). A: Sanei A., Mussavi M., Baran Zehi A., Masoud MR, Mohamadi H., Jafaari B. (in press). Status assessment of the Persian leopard in Iran. Cat News (special issue). B: Sanei, A. (2007). Analysis of Persian leopard status in Iran. Tehran: Sepehr publication centre. C: Darker grey and black areas show habitats identified as less suitable or unsuitable for leopards.



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Considering our distribution studies (maps provided in page 6; this issue) from 2002 – 2006 (map B, 90 study sites), 2007-2011 (map A) and current potential distribution map (map C) our hypothesis indicating that leopard population in Iran is splitting to two separate sub populations of North and South is already approved. Even though it seems that these procedures have been started since last decades but it might have been speeded up during the recent rapid developments. It is worth reminding that fragmentation of sub-populations speeds up extinction of the species.

FURTHER ATTEMPTS TO PREVENT/SLOW DOWN THE FRAGMENTATION PROCEDURES OF THE PERSIAN LEOPARD POPULATION IN IRAN

We have identified several habitats in the Iranian Caucasus region (i.e. Northwest of Iran) as few remaining leopard habitats in this region. We are in the progress of identification of possible leopard corridors among these areas. Not to lose time, we identified potential threat factors in each potential habitat in this region and we discussed the issue with relative local authorities. As an example, one of the main habitats that acts as a corridor among leopard subpopulations in North and Western parts of Iran is called "Tarom" located in Qazvin and Zanzan provinces. Our immediate recommendation for this area was to urgently increase protection status of this place to prevent any possible mining or construction activities. We already informed relative authorities on the findings of this national project for further conservation implications and our further investigate on possible threats in each identified habitat in the Iranian Caucasus region is still in progress.



Persian leopard distribution modeling in a national scale was a part of a one year project entitled:

"Assessment of the Persian leopard conservation priorities: habitat suitability and local communities' awareness raising programs".

This project is funded by GEF Small Grants Program at UNDP and supported by Iranian Central DoE, North Khorasan, Boushehr, Golestan and West Azarbaijan provincial DoE Offices.

Wildlife experts and felid representatives assigned by various DoE provincial offices in the first Persian leopard regional workshop, North Khorasan province, Iran



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Quick Notes On:

**ASSESSMENT OF THE PERSIAN LEOPARD CONSERVATION PRIORITIES:
HABITAT SUITABILITY AND LOCAL COMMUNITIES' AWARENESS RAISING PROGRAMS**

General objective of this project is to identify Persian leopard conservation priorities in relation to the leopard potential habitats in Iran and awareness raising programs and empowerment of local communities.

A total of four Persian leopard regional workshops were held during November and December 2012 in four provinces of North Khorasan, Boushehr, Golestan and West Azarbaijan. Two days of each workshop was dedicated to identification and prioritization of awareness raising programs which are required to be conducted in each province to address human/livestock-leopard conflicts. DoE felid representatives of each provincial office in various regions, DoE education experts and some key persons in local communities were invited for the workshops. Subsequently, they were trained for the techniques and methodologies of awareness raising programs. In addition, priorities in terms of awareness raising programs required in each region to mitigate human-leopard conflicts were also identified. In this project we embarked on establishment of a leopard research network consisted of local experts and trained local knowledgeable persons for continuous monitoring of the leopard status in various regions of Iran. Requirements of each provincial DoE office in terms of facilities, experts, and accessibilities to the equipments for the leopard handling programs and urgent needs such as cases of leopard injuries or the conflicts with local communities was assessed and results were discussed with relative authorities.



Our team members in the Persian leopard regional workshops in Iran

Persian Leopard Regional Workshops Team
(November & December 2012)

Arezoo Sanei

*(Distribution Modeling, Research Design:
Lecturer, Project Head)*

*Saeid Nouri Neshat & Pervin Pakzad Manesh
(Awareness Raising Programs & Empowerment
of Local Communities: Lecturer, Facilitator)*

Javad Ghafari

(GIS & Map Preparation: Lecturer)

Farid Fasihi (Arranger)

Azam Jafari (Documentary)



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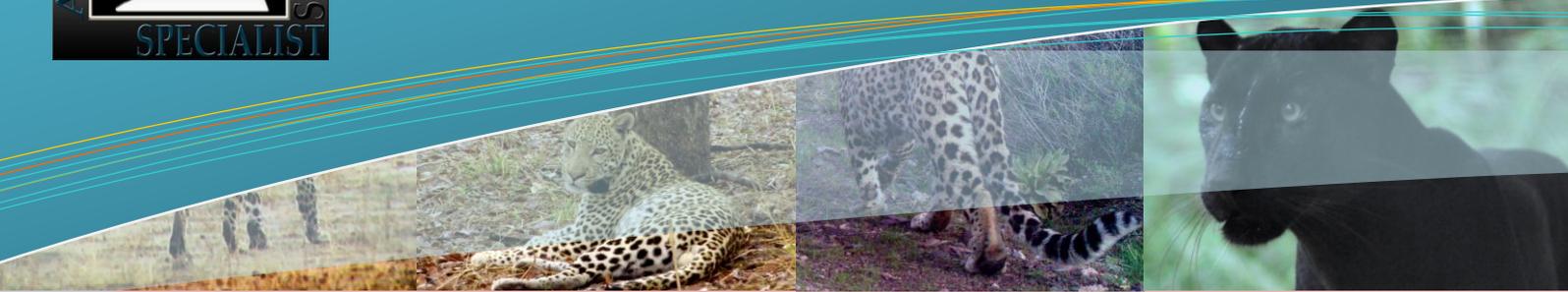
THE FIRST PERSIAN LEOPARD ONLINE RECORDING SYSTEM IS NOW AVAILABLE...

WWW.PERSIAN-LEOPARD.COM

To collect supplementary data for monitoring of the Persian leopard status in the country over the years, Asian Leopard Specialist Society supported by the Department of Environment (wildlife bureau) and GEF Small Grants Program at UNDP embarked on establishment of an online recording system for recording all kind of data related to the Persian leopards. Even though joining this portal is upon invitation to assure the reliability of the source of recorded data, applications are open for those individuals interested to join this database system. Subsequently, their eligibility will be investigated.



In the Persian leopard online database system, data on: Persian leopard occurrence records, mortalities, mortality causes, biometry, craniometry, livestock depredation, complaints of local communities, opportunistic records including photo, video, track signs; habitat types and coexisted species could be stored. These data will be used for our later national status assessment of the Persian leopards across the country.



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ASSESSING PERSIAN LEOPARD MORTALITIES IN IRAN

70% OF THE PERSIAN LEOPARD MORTALITIES ARE BECAUSE OF POACHING AND POISONING

In the article entitled "Assessment of the Persian leopard mortality rate in Iran"* 71 Persian leopard mortalities from 2007-2011 across the country is reported while 70% of them were because of hunting and poisoning. In addition, 13 cases of road accidents were recorded which were mostly taken place in Golestan province. Leopard mortalities caused by human factors had a high rate of 9 individuals in Lorestan province. This article also reports that habitat destructions and lack of prey sufficiency resulted in increasing rate of human-leopard conflicts in the recent years. Yet authors reserved the chances that there are more mortalities and intentional hunting occasions than what they have recorded in this study. This study was conducted by Asian Leopard Specialist Society together with Department of Environment, wildlife bureau for the status assessment of the felids of Iran.

* Sanei A., Mousavi M., Mousivand M. and Zakaria M, Assessment of the Persian leopard mortality rate in Iran, Proceedings of UMT 11th International Annual Symposium on Sustainability Science and Management, Universiti Malaysia Terengganu, Malaysia, (2012).



Photo Credit: B. Jafari



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We acknowledge following persons for assisting us and their contribution to the Persian Leopard Regional Workshops across the country:

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Abdollah Moradzadeh (Boushehr Provincial DoE Office)

Mohajer Abarsaji, Mahmoud Shakiba, Mojtaba Hosseini (Golestan DoE Provincial Office)

Hamid RanaGhad, Mojgan Seyed Khalil Allahi, Omid Yusefi (West Azarbaijan DoE Provincial Office)

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سپاس از کلیه افرادی که ما را در اجرای کارگاه های آموزشی - مهارتی منطقه ای پلنگ ایرانی (آذر و دیماه ۱۳۹۱) حمایت کردند:

حمید رضا عسگریان (دفتر حفاظت از مناطق و امور شکار و صید، سازمان حفاظت محیط زیست)
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 محمود شکیبیا، مجتبی حسینی (اداره کل محیط زیست گلستان)
 مرگان سید خلیل اللهی، امید یوسفی (اداره کل محیط زیست آذربایجان غربی)

همچنین موسسه تخصصی مطالعات پلنگ آسیایی از مدیر کل محترم دفتر حیات وحش سازمان حفاظت محیط زیست، مدیر کل محترم دفتر حفاظت از مناطق و امور شکار و صید، هماهنگ کننده محترم برنامه کمکهای کوچک تسهیلات محیط زیست جهانی سازمان ملل متحد و مدیران کل و معاونین محترم ادارات کل محیط زیست استانهای خراسان شمالی، بوشهر، گلستان و آذربایجان غربی که در برگزاری این سری از کارگاه ها مشارکت و همراهی نموده اند، نهایت تشکر را دارد.