

Introductory Article

Conservation and management prospects of the Persian and Malayan leopards

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Persian leopard. Being the largest predator of wide distribution in the mountains of Iran, the Persian leopard (*Panthera pardus saxicolor* Pocock 1927; Figure 1) is acknowledged as the “King of the Mountains” by local settlers. After the extinction of the Persian lion (*Panthera leo*) and the Caspian tiger (*Panthera tigris*), the Persian leopard is the last member of genus *Panthera* which still remains in its natural habitats in Iran. About five decades ago, living in most rural communities of Iran was based on the traditional methods of cultivation and animal husbandry, while urban growth and development were witnessing a slow progress. As a result, in many of the natural habitats in Iran, flocks of wild sheep and wild goat could be observed to occur widely in the dale hills and high mountains, specifically in the long ranges of Zagros and Alborz Mountains. Likewise, signs of the leopard presence could be found frequently in these areas.

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Figure 1. Persian leopard (*Panthera pardus saxicolor* Pocock 1927). A. Close up of Persian leopard (Photo: R. Shoja, Department of Environment, General Office, North Khorasan Province, Iran). B. A camera-trapped Persian leopard in Meghri Ridge, Armenia (Photo: I. Khorozyan, A. Malkhasyan and M. Boyajyan; Source – Asian Leopard Specialists Newsletter, No. 2, August 2011, with permission).

In addition to the mountains and forests as the known habitats of the species by nomads, farmers and foresters in the last decades, leopards were also seen roaming in the plains in tandem with the seasonal movements of preys. Based on the documents written by experienced local experts and authorities on Iran's wildlife affairs as well as narrative accounts of hunters, including reports and validated itineraries of travellers, the Persian leopard has been living throughout Iran's mountains and forests for over the last 50 years. However, its current status and distribution range in Iran have been under scrutiny quite recently. Because of this, a countrywide research project has been launched to spearhead the first country-wide research of its kind aimed to elucidate the present distribution range and conservation status of the Persian leopard in Iran. The studies presented in this Special Issue (devoted to Persian and Malayan leopards) are focused on the three main and urgent concerns, namely: (1) leopard distribution range which is tackled by a paper entitled: "Distribution pattern of the Persian leopard (*Panthera pardus saxicolor*) in Iran" by A. Sanei and M. Zakaria

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(pp. 7-18); (2) availability of its potential prey species which is lucidly accounted for by a paper co-authored by A. Sanei, M. Zakaria and Sh. Hermidas, entitled: "Prey composition in the Persian leopard distribution range in Iran" (pp. 19-30) and primary threats to its survival in the country in recent years of which a paper entitled: "Survival of the Persian leopard (*Panthera pardus saxicolor*) in Iran: Primary threats and human-leopard conflicts" by A. Sanei and M. Zakaria (pp. 31-39) provide information of great significance to the conservation of this endangered mammal species. All the findings presented in these three papers are indispensable data for the first phase development of a country-wide conservation plan as well as in the conduct of further comprehensive studies on current distribution range in Iran.

Establishment of the Persian leopard directory in Iran. Being home to the main population of the Persian leopards in the Middle East, Iran plays a significant role in survival of the leopards in the Middle East. Considering the importance of assessing the Persian leopard status in Iran over the years, while our studies on the status of the leopard in Iran are ongoing, one of us (Arezoo Sanei) established the first Persian leopard directory in Iran since 2002. The directory includes: (a) leopard presence records through observations involving mortalities, hunted individuals, road kills, poisoned and sick animals in the protected areas and elsewhere in the country; (b) biometry of leopard body and skull samples obtained from various regions in Iran, as well as (c) records of the human or livestock-leopard conflicts. The early version of this database was submitted to the Azad University of Tehran in fulfilment of the requirements for the degree of Natural Resource Management Engineering in 2004. Later on and after the completion of the database, the first issue of this directory was published as a book, entitled: "Analysis of leopard (*Panthera pardus*) status in Iran (No.1)" in 2005 and the updated version in 2007 (in the Persian language) by Sepehr Publication Center. The book has become a standard reference for the researchers studying the various species as this has recorded status and data of a wide range of species, including both carnivores and preys in the protected areas of Iran.

More recently (2011), the Asian Leopard Specialist Society (ALSS) jointly with the Department of Environment of Iran is conducting the latest Persian leopard national surveys spearheaded by A. Sanei for the purpose of assessing the Persian leopard status. The same study is being conducted on the rarely known jungle cat (*Felis chaus*) in Iran to assess its current status and develop future conservation measures.

Malayan leopard. Very little is known about the Indochinese leopard (*Panthera pardus delacouri* Pocock 1930; Figure 2) in Malay Peninsula, its ecology and status under the rapid development taking place in its habitats in recent times. There are several serious challenges to a study of the Malayan leopard in the tropical rain forests of Malaysia. These challenges are mostly associated with the following: (i) the inherent dense vegetation of tropical rain forests; (ii) the melanistic pattern of the Malayan leopard and (iii) the lack of information on the abundance/distribution status and ecology of the subspecies. The fourth and fifth papers in this Special Issue, entitled: "Occupancy status of the Malayan leopard prey species in a fragmented

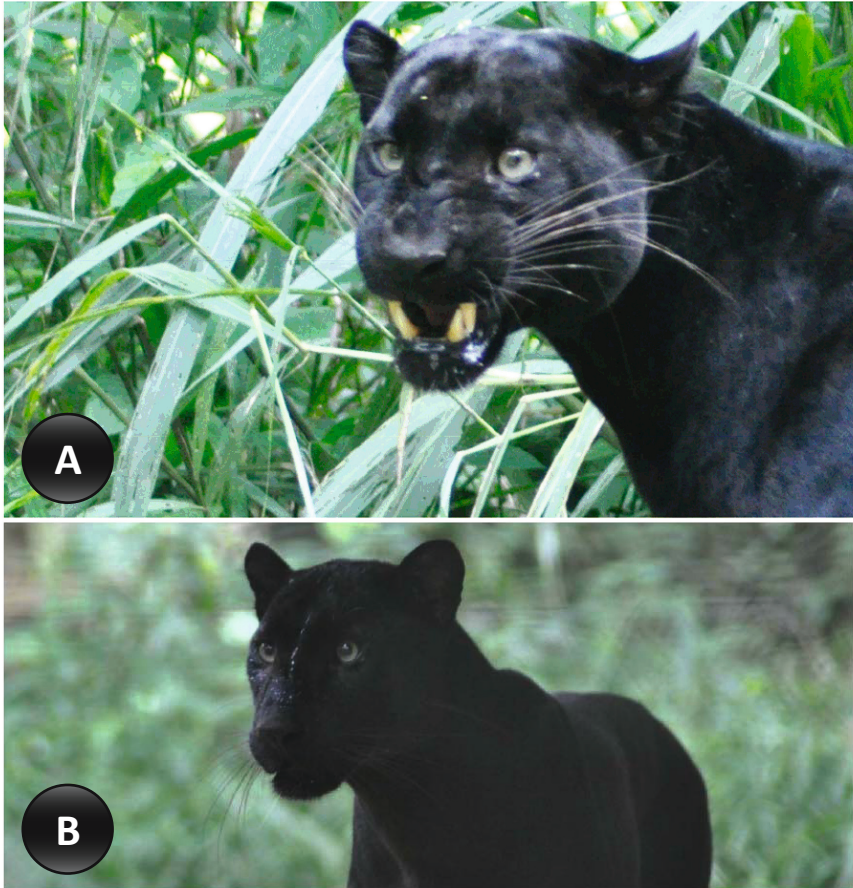


Figure 2. Malayan leopard (*Panthera pardus delacourii*). A. Close up of Malayan leopard; B. Anterior part of body (Photos: Arezoo Sanei).

forest in Selangor, Malaysia” (pp. 41-55) and “Impacts of human disturbances on habitat use of the Malayan leopard in a fragmented secondary forest, Malaysia” (pp. 57-72), respectively - both authored by A. Sanei and M. Zakaria expound on the availability of prey species to the Malayan leopard and the vulnerability of its habitats vis-à-vis the onslaught of relentless destruction caused by infrastructure development and anthropogenic activities, such as swidden agriculture, logging, quarrying, wildlife poaching, etc.

The Malayan Leopard Research Project conducted by the Faculty of Forestry of Universiti Putra Malaysia from 2007-2009 stands as the first research of its kind aimed at the elucidation of the conservation status of this large territorial predator in a typical highly fragmented tropical rainforest in Malaysia following the incidence of rapid and massive deforestation therein.

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