Jaguar Conservation Program

*by Cheryl-Lesley Chetkiewicz**

The jaguar, a potent symbol representing all that is wild, is a top predator ranging across a variety of landscapes throughout Latin America. It retains its religious, spiritual, and cultural significance for many of the indigenous people in the Americas.

Jaguar ecology however remains poorly understood. Starting in the late 1970s and early 1980s, Wildlife Conservation Society (WCS) scientists Drs George Schaller and Alan Rabinowitz, undertook ecological studies in Brazil and Belize, respectively. Since then, only a few comprehensive studies have been carried out and the status of the jaguar throughout its range remained poorly understood. By the end of the 1990s, there were ongoing research efforts in Argentina, Brazil, Costa Rica, Mexico and Venezuela. However no-one was addressing the conservation of jaguars as a species across its entire range.

Conserving such a wide-ranging species as the jaguar, requires an approach that focuses on assessing, prioritizing, and conserving not only the individual populations, but also the suite of adaptations and ecological interactions associated with them. Building on the results from the WCS/World Wildlife Fund priority-setting framework for tigers in Asia, WCS developed a geographic priority-setting exercise for jaguars.

In March 1999, WCS, in collaboration with Dr Rodrigo Medellin at the Universidad Nacional Autónoma de México and with support from Jaguar Cars, organized and facilitated a workshop appropriately titled, "Jaguars in the New Millennium". This brought together over 30 jaguar researchers from the United States to Argentina to Mexico.

Led by Dr Eric Sanderson, WCS Landscape Ecologist, the workshop focused on determining the state of knowledge about existing jaguar populations and their status throughout Latin America. In addition, experts identified areas of remaining habitat where little or nothing was known about jaguars and those areas best suited for long-term conservation of jaguar populations. Current threats to jaguar survival, specific actions needed to reverse these threats, and research priorities were also addressed at the workshop. An analysis of the results and over 30 contributed research papers will be published in a Spanish-language volume due out next year.

Based on the priorities that emerged from the workshop, Dr Alan Rabinowitz, Director of the WCS Global Carnivore Program, and Dr Andrew Taber, Director of the WCS Latin America Program, developed a proposal for a comprehensive conservation program for jaguars. The Program consists of five components including: population status and distribution surveys, long-term research studies, jaguar-livestock conflict research and rancher outreach, population monitoring, and education and policy initiatives. As a result, Jaguar Cars awarded WCS one million dollars for the next five years to get this program underway.

To provide National expertise, input, and direction to the administration and management of the Program, WCS has created a Jaguar Advisory Group (JAG). The JAG includes: Dr Alan Rabinowitz, Dr Andrew Taber, Dr Howard Quigley, Dr Peter Crawshaw, Dr Rafael Hoogesteijn, and Dr Marcelo Aranda. The first JAG meeting is scheduled for October 1999 and plans are underway to develop a website and brochure to provide further information on the Program and funding opportunities for jaguar research.

* Program Officer, WCS Jaguar Conservation Program
Wildlife Conservation Society
185th Street and Southern Boulevard
Bronx, NY 10460-1099 USA
Email: <cchetkiewicz@wcs.org>

Leopard Records in Armenia in the 1990s

*by Igor Khorozyan**

The global concern on the status and survival of the Persian leopard (*Panthera pardus saxicolor*) in Armenia has slightly been increasing, and determination of the cat's range becomes critically important. This article accumulates very scanty and scattered data on the leopard records/sightings/presence signs in the country in the 1990s and provides a rough estimate of the cat range.

The sites where people reported about the leopard presence are depicted on Fig. 1.

Point 1 shows the main part of Khosrov Reserve. In early 1990s no leopards were recorded in this protected area, most likely in response to the killing of an adult pregnant female by a trespasser herdsman in April 1986 which caused disappearance of a whole local sub-population (Khorozyan 1999). In 1993-94, however, three to four pairs resided in the reserve's Kakavaberd (Quail Fortress) district (Walker 1994). Currently, eight individuals (two families, each consisting of male, female and two cubs) are living here (Anon. 1998a).

Point 2. In 1993, a leopard pugmark was seen and outlined on the paper by Vasil Ananyan, a young local bird specialist, on Garni river bank close to the northern border of Khosrov Reserve.

Point 3 beside Ekhegnadzor town is indicated by the Ministry of Environment (Anon. 1998b) as a leopard habitat. In 1992, an abandoned leopard den was found here in a crevice by tourists (zoologist Armen Amiryan, Yerevan, Armenia, pers. comm).

Point 4. A young animal was recorded in 1995 on a cliffy overhang by a colonel who was driving his jeep over the road Ekhegnadzor-Goris (ornithologist Karen Agababian, Yerevan, Armenia, pers. comm.).

Point 5. Several leopards were seen in spring-fall 1998 in the vicinities of Hustoop Mt. (Anon. 1998a). In November 1997, an adult livestock-raiding leopard was killed near Kapan town by a professional hunter following the claims of local people (Armen Amiryan, pers.comm.). The picture of its skin is possessed by the

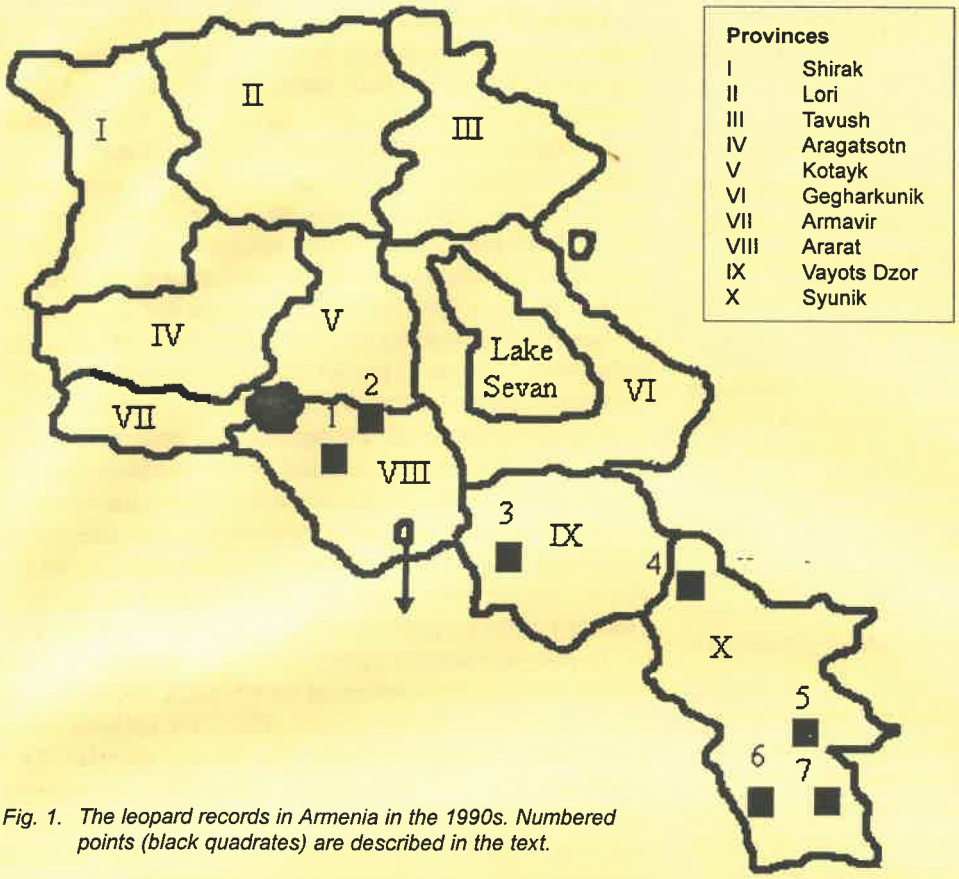

Fig. 1. The leopard records in Armenia in the 1990s. Numbered points (black quadrates) are described in the text.

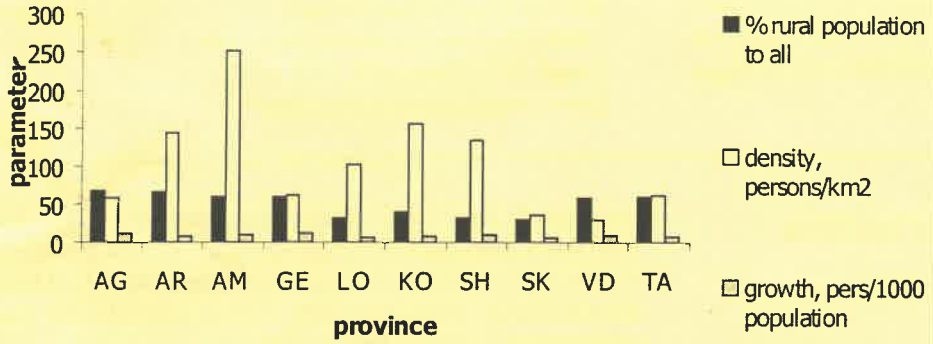

Fig. 2. Human demography of Armenian provinces (Yerevan urban agglomeration excluded). Abbreviations of province names: AG – Aragatsotn, AR – Ararat, AM – Armavir, GE – Gegharkunik, LO – Lori, KO – Kotayk, SH – Shirak, SK – Syunik, VD – Vayots Dzor, TA – Tavush.

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author and distributed also to Peter Jackson and Alan Shoemaker, Chairman and Deputy Chairman of IUCN/SSC Cat Specialist Group.

Point 6. A few individuals were encountered in spring-fall 1998 in the saddles of Kaputjuh Mt. (Anon. 1998a).

Point 7. In 1995, a leopard was killed near the Tsav village while eating a brown bear trapped with the snare. This unusual event was reported by Claudio Groff (Department of Forestry, Trento, Italy) who travelled all over Armenia with his friend working for local UN in May 1995.

As Fig. 1 shows, all leopard records are geographically confined to Armenia's three provinces of Ararat, Vayots Dzor and Syunik. Two to three decades before the leopard was officially protected, the cat population was increasing and spreading northwards based on a rise in the skin harvest rate (54 skins in 1967-1971 vs. 12 in 1958-1966) and a higher proportion of animals killed in the north (46% in 1967-1971 vs. 42% in 1958-1966) (Gasparyan and Agadjanyan 1974). Currently, the situation is completely different and no records come from northern Armenia. There is no possibility for the leopards to disperse or migrate from southern parts of Armenia to the northern ones due to very high human density in the country's central portion, especially along the Yerevan-Sevan highway and within the Lake Sevan basin. Interviews with the people in northern regions, particularly the Dilijan town and Dilijan Reserve, reveal no signs of leopard presence.

The human factor is vital in leopard distribution, and one can be convinced that most cat records come from Syunik and Vayots Dzor provinces where human density and percentage of rural population to the whole are the lowest (Fig. 2). Despite high human density within its territory, Ararat province possesses a significant portion of Armenian leopard population due to the functioning of Khosrov Reserve. The majority of villages around this protected area were once inhabited by Azerbaijani and now they are abandoned, as local people fled in the early 1990s during the Armenian-Azerbaijani military conflict over Nagorno-Karabakh. So, human disturbance of leopards can be minimal there now.

* Chairman, Armenian Leopard Conservation Society, P.O. Box 5 Yerevan 375010, Armenia
Email: <eco@hragir.aua.am>