

- 16.06.93 – One dropping in Southeast Coronat at 1,800 m (J.P. Pompidor).
- 08.10.93 – One dropping in Southeast Madres at 1,500 m (Chazel, Da Ros).
- 12.12.93 – One chamois (*Rupicapra rupicapra*) found killed by lynx in East Coronat at 1,280 m. Prey hidden with fern and leaves under a pine tree (Da Ros, Chazel).
- 08.02.94 – One track on snow in East Madres at 1,300 m (Chazel, Da Ros).
- 04.94 – One goat probably killed by lynx. Near the remains of the prey we found one dropping of the felid at 980 m in South Coronat (Chazel, Da Ros).
- 10.07.94 – One track in mud found at about 2,200 m in a colony of marmots in East Madres (Chazel, Da Ros).
- 10.94 – Tracks on mud at 1,280 m in East Madres (Chazel, Da Ros, Borrut).
- 23.01.95 – Tracks on snow found in West Coronat at 1,700 m (Chazel, Da Ros and three persons of the Abruzzes National Park).

Lynx sightings

During this period, lynx have rarely been seen. The most important report occurred in a valley in the north of the study area. A lynx frightened by a dog was observed by J. Borrut, who is now a member of the Pyrenean lynx group. He is a professor of natural history and a very good naturalist. This observation took place in May 1993.

In 1994, Reynes, who lives in the Casteillane valley, met a lynx in a thick forest at about 1,500 m. Borrut investigated this case.

A hunter saw a lynx in the central part of the massif in September 1993, but we could not investigate this case and it remains uncertain.

Tracks and signs of lynx are not well known and few people have reported them.

First analysis

We have studied 21 reports considered as certain. We do not refer to other cases which are uncertain. These reports are the only material concerning the lynx in the massif. They cover a large geographical area extending over nearly the whole eastern part of the Pyrenees. It seems that the lynx also occurs in the Canigou massif, but investigations have not begun there.

The average number of tracks and signs collected was 3.69/year.

The average number of observations reported was 0.46/year.

Fourteen records were collected during the period December-April, which is the most important. The snowy period is, of course, the best for finding tracks or signs, and also droppings. The rut period is included between these dates, and one of its effects is to increase local densities. Information collected during summer is rare, but occurs constantly.

Preliminary conclusions

The presence of the lynx in the Madres-Coronat massif is shown through more than 35 reports since 1985, the cases described here being the latest found. The information is linked with reports made during the period 1970-1980.

The lynx, a very elusive species, is largely unknown in our mountains and the creation of the lynx group, a local branch of the Eurasian Lynx Group, is the first attempt to study it so as to conserve it.

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Taxonomic Status of the Iberian Lynx

by Juan F. Beltrán*, John E. Rice and Rodney Honeycutt**

The Iberian lynx, *Lynx pardinus*, is considered the most vulnerable cat in the world, yet its taxonomic status and relationship to other lynx species are controversial (1,2). Given that the Iberian lynx is listed as "Endangered" and its populations are highly fragmented (3), an understanding of its relationship to other taxa

of *Lynx* is important for the development of an effective conservation plan. Here, we report the first detailed molecular phylogenetic assessment of *Lynx* relationships. These data provide support for the Iberian lynx being a distinct species relative to its European and North American counterparts.

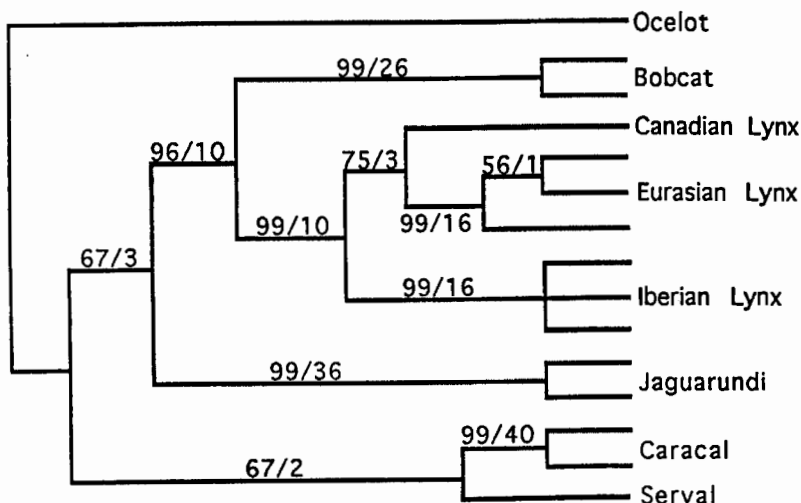


Fig. 1. Phylogeny derived using a maximum parsimony analysis (branch and bound option) of aligned sequences. The single most parsimonious tree had a length of 410, CL of 0.670 and RI of 0.791. Bootstrap values (1000 replicates) are shown along branches, with the number of extra tree lengths needed to collapse a node separate by a slash (/). All specimens are unrelated individuals, and the Iberian lynxes are from two different populations in Spain. Specific details of primers and experimental procedures are available from the authors upon request.

The complete mitochondrial control region (D-loop) was sequenced for the Iberian lynx, Eurasian lynx (*Lynx lynx*), Canada lynx (*Lynx canadensis*), bobcat (*Lynx rufus*), and related felid species (caracal, serval, jaguarundi and ocelot). Phylogenetic analyses of the D-loop performed, using both maximum parsimony and neighbor-joining, resulted in identical topologies (Fig. 1).

These results are significant for several reasons. First, the monophyly of the genus *Lynx* is strongly supported, a finding similar to that of Werdelin, but contrasting with some morphological accounts (4). Second, relationships among the felid taxa are congruent with previous molecular data (5). Third, the Iberian lynx is divergent from both the Eurasian lynx and Canadian species. Therefore, the Iberian lynx can be considered an evolutionary unit (or valid phylogenetic species) in that from both a morphological and genetic standpoint it is unique. The Iberian lynx revealed a lower level of percent nucleotide sequence divergence (0.006%) relative to the bobcat (0.61%) and Eurasian lynx (0.69%). It will now be interesting to conduct a detailed study of the remaining isolated populations of Iberian lynx in an effort to

learn more about the overall phylogeographic pattern and levels of genetic variation in this rapidly vanishing species.

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(Reproduced from *Nature Vol. 379*)

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Mutant Leopards from India

by Divyabhanusinh*

Among the large felids, partial albinism is not an uncommon phenomenon. Though there are no records of such aberrations among Asiatic lions *Panthera leo persica* in India, instances of albinism have been reported from South Africa (McBride 1977). There were as many as 17 instances of "white" tigers in India between 1907 and 1933 (Gee 1954) and there was the famous Mohun from Rewa and his progeny of a later day which are too well known to require elucidation. There is also one instance of a "white" cheetah *Acinonyx jubatus* from central India, the only one recorded anywhere (Divyabhanusinh 1987).

As far as leopards are concerned, the phenomenon appears to be extremely rare and very few records exist. I have consolidated here all the instances I have come across which should be of interest to readers of the *Journal*.

1. In 1905 there was a report of a light coloured animal from Central India: "One leopard (*taindua*) of sandalwood (*sandli*) colour was killed at Jhinna [near Ajaigarh, Panna District, M.P.]. It was a very large leopard. Such a sandalwood coloured leopard has not been seen or heard of and its skin still exists today" (Ajaigarh 1914, p.47).
2. In c.1910 a white leopard was reportedly shot in Dumraon in Bihar, of which there are no details (Musselwhite 1933, p.104).
3. In 1937, there was a "likely" report of a police officer having shot a white leopard in Dumraon; there is no skin in existence of this specimen (Musselwhite 1933, p.104).
4. In 1940 a white female was shot by a Boris Lissenovitch 15 miles from Sarasaran (sic) near Dumraon. "When shot the eyes were sky blue - there was no trace of pink in the eye - and the tail shows just a suggestion of the original leopard. The animal is white at the sides and cream towards the centre with pale brown spots." There is a picture of a white leopard in the same report (presumably the same animal) which was six years old and was 6'6" between pegs (Musselwhite 1933, pp.97, 104). The book from which three of the above records are cited was published in 1933 and nowhere in it are a subsequent edition

and date mentioned. Yet, its text gives the date as February 1940 of the white leopards at number 4 above. This is clearly an error and the correct date could well be 1930. If so, the dates of the animals referred at 2 and 3 above would be different as well.

5. There is yet another instance of a male white leopard, about 6'9" in length, with sandalwood coloured light spots on its body, which was shot by a villager c.1965 in village Aramgang of Ajaigarh tehsil of Panna district, Madhya Pradesh. This is not very far from Jhinna mentioned in 1 above. The skin was acquired by the late Raja Bahadur Kaushalendra Sinhji and the mounted trophy is in the Ajaigarh Palace (Vansda, pers. comm. 1984).
6. M/s Van Ingen & Van Ingen of Mysore have recorded receiving a white leopard skin from Tikamgarh near Orcha in Madhya Pradesh (Van Ingen, pers. comm. to Vansda, 1967). The Maharaj of Orcha informed he has been unable to find any information regarding this specimen (pers. comm. 1991).
7. One skin of a leopard from Hazaribagh in which "the ground colour is much paler than usual, almost cream and the pattern is tan" is preserved in the British Museum, London (Pocock 1939, p.224).
8. A "white (albino) leopard" was recorded by Buchanan-Hamilton according to one source (Lydekker 1907, p.318), while another states that "Blanford cites a figure of a white one [leopard] in Buchanan-Hamilton's drawings" (Finn 1929, pp.84-85).
9. One "skin which was normal except for having the spots light brown instead of black" has been recorded but no further details are available (Finn 1929, p.85).

From this examination it may be observed that three instances are from Dumraon and one from Hazaribagh, both in Bihar, and three are from Ajaigarh and Orcha in Madhya Pradesh.

Incidentally the only recorded white cheetah, nearly 400 years ago, belonged to the Raja of Orcha, and it is likely that it came