

Some notes on the systematics of the Balkan lynx

Velizar Simeonovski, Juri Gagarin 6, Trun, Bulgaria, Tel+359 7731 2802

Diana Zlatanova, Balkan Lynx Study Project, Sofia Zoo, Srebarna 1, POB 67, 1407 SOFIA, Bulgaria, Tel. ++359-2-682 043, Fax ++359-2-683 202, eMail zlite@mbox.infotel.bg

The Eurasian lynx (*Lynx lynx* L.), like other big mammals of this region of the world, has a huge area of distribution, which includes, however, relatively uniform natural characteristics. In this area nine subspecies of this mammal have been described. For their differentiation classic characteristics are used, such as body and skull size, coloration of the fur and possible geographic isolation. These criteria are also used for the description of the Balkan lynx (*Lynx lynx balcanicus*, Buresch 1941).

Although Buresch, 1941, gave the name, (together with a short characteristic), a more detailed description of this form is given by Mirić, 1978. In his study Mirić also gives a new name to the Balkan lynx, considering the name given by Buresch for *numen nudum*. Still, Buresch was the first to describe this form, so the name *Lynx lynx martinoi* (Mirić 1978) is generally used as synonym according to the International Census System rules.

The distinct characteristics of the Balkan lynx (according to Mirić 1978, 1981) are: the relatively smaller size and the high percentage of unspotted individuals in the population.

If we look at the species in a more general way, we see that these characteristics are subject to a v-shaped changeability, as the size changes from southwest to northeast, and the coloration changes from south to north. This fact questions the evaluation criteria used, and generally shows the presence of one macro-population with variation at the periphery. The inclusion of an ecological criterion could clear the topic to some extent but would not totally solve the problem. Thus, the prevalence of spotted individuals could be linked to the specific biotope. In this case, lynx from the Carpathian region, the Caucasus and the Balkans are distinctively separable from lynx from other areas, by a high percentage of spotted individuals. Concerning size, these lynx form an „internal wedge“, which is relatively independent from the rest of the species.

The lynx from the Carpathian Mountains are in fact bigger in size than those in the north (Scandinavia and Bjalowieza) and northeastern regions (Ural).

This difference is not due to a difference in the prey spectrum (in the three cases mentioned the main prey is the roe deer). Thus, we could positively suggest that the lynx of the southern regions (Carpathian, Caucasus and Balkans) have unique genetic settings, separating them on a subspecific level from the other geographic populations of the species.

The Balkan lynx is exceptional in this group. In the past, the Carpathian and Balkan populations were connected and this link was disconnected fairly early. The smaller size of the Balkan lynx shows that it delineates the south periphery of the v-shaped changeability of the size in the bigger Balkan-Carpathian macro population. However, between the two groups lies a very serious barrier – the Danube River. The Danube River has a seasonal changeability – for the lynx it could be passable during some months in winter. Despite that, the lynx south of the Danube had developed unique characteristics, which could not be found in other populations of the Eurasian lynx. Some of the Balkan lynx in Bulgaria had inhabited plains with dry vegetation. (Dobrudzja region – Atanasov 1968) and same type mountains – Strandzja. This shows that the Balkan lynx had occupied more diverse biotopes than the other populations.

Based on the facts mentioned above we could conclude: Although the subspecies status of the Balkan lynx is still questionable, its population possesses unique ecological characteristics. This fact imposes an urgent need for detailed research and conservation measures.

Recommendations:

- a) As the basic part of the contemporary population is concentrated in Kosovo, West Macedonia and East Albania, the political disturbances and the war in this area call for urgent conservation measures, including – as a last step – the capture and establishment of a captive backup of this population.
- b) Field study of the current situation of the population
- c) Where needed, establishment of protected areas covering an area able to support a viable lynx population. In the case of existing protected areas, stronger control (including international control) with tough measures.
- d) Education and involvement of the local people in the „lynx regions“ towards more understanding and support of the recovery measures.
- e) Establishment of an International Balkan Lynx Recovery Project for the recovery and furthermore the reintroduction of the lynx into the countries where it is extinct. The Project should aim at trans-boundary cooperation and, if needed, control over a semi-captive population along the boundaries of the countries in areas of natural distribution. These semi-captive populations could serve as a back-up

for the main wild population.

- f) Genetic study on the Balkan lynx aiming at the determination of its real systematic status.
- g) To convert the lynx into a flagship species for international cooperation between the Balkan countries in regard to conservation of threatened Balkan fauna, environmental research and education.

References

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