

removal can only be attempted by trapping around sheep killed by lynx or by shooting them in the most-attacked pastures. A few sites are at risk in the Jura mountains, and we expect that by this procedure very few individuals will be removed in the next years while the conflicts will be definitively solved.

#### References:

- Linnell, J.C., Odden, J., Smith, M.E., Aanes, R. & Swenson, J.E. (1999): Large carnivores that kill livestock : do "problem individuals" really exist ? *Wildlife Society Bulletin*, 27, 698-705.
- Linnell, J.C.; Odden, J., Kvam, T., Moa, P., & Andersen, R. (2000): Who did it? Age and sex specific depredation rates of Eurasian lynx on domestic sheep. *Carnivore Damage Prevention Newsletter*, 2: 9-10.
- Stahl, P., Vandel, J.M., Herrenschmidt, V. & Migot, P. (2001a): Predation on livestock by an expanding reintroduced lynx population: long term trend and spatial variability. *Journal of Applied Ecology* (in press).
- Stahl, P., Vandel, J.M., Herrenschmidt, V. & Migot, P. (2001b): The effect of removing lynx in reducing attacks on sheep in the French Jura Mountains. *Biological conservation* (in press).
- Stahl, P., J.M. Vandel, S. Ruetter, L. Coat, Y. Coat & L. Ballestra (submitted): Lynx predation on sheep in the French Jura: influence of habitat factors, sheep availability and lynx behaviour.

---

### Procedure to Selectively Remove Stock Raiding Lynx in Switzerland

by  
Christof Angst, ch.angst@kora.ch

In 1997, the Swiss Agency for the Environment, Forest and Landscape (SAEFL) mandated the KORA to define criteria to selectively remove lynx specialising on livestock. The condition was that the criteria should be easily applicable for the wildlife services of the cantons authorities and yet not arbitrary.

A time series and geographic analysis of the 954 approved lynx kills from 1973–1997 revealed some clusters of lynx kills. As in the French Jura Mts. (see article above), there were some "hot spot" regions, containing the majority of damages (Angst et al. 2000). A lynx core area in Switzerland may be about 80–100 km<sup>2</sup>. Such an area can very simply be de-

scribed by a circle with a radius of 5 km. When we were overlaying all clusters of attacks with such circles, we found that a few cases contained 20 or more kills, but all the other ones less than 10. The basic idea was to remove any lynx that was merely feeding on livestock. The average kill rate for wild ungulates is one animal (roe deer or chamois) per week. As lynx often did not consume sheep entirely, we assumed that they would kill somewhat more than one sheep per week. During the average aestivation period of 15 weeks, a lynx feeding only on livestock would therefore kill about 20 animals. We concluded that we had indeed seen a few "specialists" in the past, and that the "random" attacks had never lead to more than 10 kills in the same area.

Based on the temporal and geographical analyse and the behavioural considerations we proposed the following criteria that were included into the *Swiss Lynx Concept* implemented by the SAEFL in August 2000:

- A permission to remove a lynx will be given if at least 15 animals are killed during a season of aestivation or a calendar year within a circle of 5 km radius around any killed livestock.
- If any lynx attacks occurred in the same region during the previous year, the threshold is reduced to 12 animals.
- The permission will only be given if prevention measures were applied on these pastures.
- The permission will not be given if any barrier cuts the circle in a way that it is very unlikely that the same lynx was responsible for the kills on each side of the barrier.
- Only a state game warden or a person mandated by the cantonal authority is allowed to shoot a lynx.
- A lynx can only be shot or trapped in flagranti, so at a domestic animal killed or in the pasture where the damage occurred.

From 1997-2001, eight shooting permissions have been given according to these criteria. Three lynx have officially been shot so far.

#### Reference:

- Angst Ch., P. Olsson & U. Breitenmoser 2000: Übergriffe von Luchsen auf Kleinvieh und Gehegetiere in der Schweiz. Teil I: Entwicklung und Verteilung der Schäden. KORA-Bericht Nr. 5: 58pp. German with English executive summary. Available on: [www.kora.unibe.ch](http://www.kora.unibe.ch)