Title of the paper: Season rather than habitat affects lynx survival and risk of mortality in the human-dominated landscape of southern Sweden

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Summary of the data set
Landscapes are mosaics of habitat associated with different risks and resources, including human activities, which can affect individual survival in wildlife. Different relationships between habitat characteristics and human-caused and natural mortality can result in attractive sinks. We used individual-based data from 97 Eurasian lynx (*Lynx lynx*) monitored for 160 exposure years to link adult survival and the risk of mortality to home range habitat characteristics in the human-dominated landscape of southern Sweden. Human-caused mortality dominated mortality causes (24 out of 37 deaths). We did not detect any strong effects of habitat characteristics explaining the variation in mortality risk in lynx. Although the density of roe deer affects several aspects of lynx ecology, we could not detect any effects of roe deer density on lynx survival, probably because roe deer density was sufficiently high in our study area. Instead, there was a high seasonal variation in mortality lynx. Mortality was highest during the hunting season for lynx (February 16 – March 31), as well as during autumn and winter, probably because lynx poaching occurred opportunistically during the hunting season for moose and roe deer. We did not find any indication that human activity created attractive sinks for lynx, since there was no contrasting pattern between human-caused and natural mortality in terms of habitat characteristics. One explanation for the limited influence of the home range characteristics may be that lynx in our study died from multiple causes (natural causes 35%, legal hunting 27 %, poaching 22 % and vehicle collisions 16 %). Therefore, it is less likely that one or a few habitat characteristics could explain the risk of mortality at the home range scale. There is strong evidence that lynx can coexist with humans in multi-use and human-dominated landscapes, even without large protected areas, if the management regimes are favourable.

Data file: Data from Andren_et_al_Season rather than habitat affects lynx survival and risk of mortality in the human-dominated landscape of southern Sweden_Wildlife_Biology.csv

Description of the data set (variables):
id – Individual lynx number
sex – Sex, female or male

cause_of_mortality – Cause of mortality of the lynx

enter – Day of enter used in the Kaplan-Meier analyses (day 1 is June 1, day 365 is May 31)

exit – Day of exit used in the Kaplan-Meier analyses (day 1 is June 1, day 365 is May 31)

death – Fate of the lynx, all causes of mortality, 0 = survival, 1 = mortality event

death.alt – Fate of the lynx, all causes of mortality, but excluding four cases of suspected poaching, 0 = survival, 1 = mortality event

human – Fate of the lynx, human caused mortality, 0 = survival, 1 = mortality event

natural – Fate of the lynx, natural causes of mortality, 0 = survival, 1 = mortality event

four_season – The four seasons using the in the Cox proportional hazards model as numbers;
    1 = summer; June 1 – September 30
    2 = winter; October 1 – February 15
    3 = hunting season; February 16 – March 31
    4 = spring; April 1 = May 31

factor_four_season – The four seasons using the in the Cox proportional hazards model as categories, periods same as for "four_season"

enter_four – Day of enter used in the Cox proportional hazards model with four seasons;
    the summer period: day 1 = June 1, day 122 = September 30
    the winter period: day 1 = October 1, day 138 = February 15
    the hunting period: day 1 = February 16, day 44 = March 31
    the spring period: day 1 = April 1, day 61 = May 31

exit_four – Day of enter used in the Cox proportional hazards model with four seasons, periods same as in "enter_four"

hunting_season – the two seasons using the in the Cox proportional hazards model as numbers;
    0 = non-hunting season; April 1 – February 15
    1 = hunting season; February 16 – March 31

factor_hunting_season – The two seasons using the in the Cox proportional hazards model as categories, periods same as for "hunting_season"

enter_hunting – Day of enter used in the Cox proportional hazards model with two seasons;
    the non-hunting period: day 1 = June 1, day 260 = February 15, and day 261 = April 1, day 321 = May 31)
    the hunting period (day 1 = February 16, day 44 = March 31)

exit_hunting – Day of exit used in the Cox proportional hazards model with two seasons, periods same as in "enter_hunting"

prop_agricultural_land – Proportion of agricultural land with lynx home ranges

prop_forest – Proportion of forest with lynx home ranges

second_road_density – Density of secondary roads (km/km^2) within lynx home ranges

roe_deer_index – Roe deer density index (year number of roe deer shot per km^2) within lynx home range

lynx_density – Lynx density (number of family groups (i.e., female with kittens)/1000 km^2) within lynx home ranges

edge_density – Density of forest/agricultural edge (km/km^2) within lynx home ranges

ruggedness – Mean ruggedness (VRM-index) within lynx home ranges

year – Year of entry in the Cox proportional hazards model