



Seminar in Stockholm or Uppsala 27 November 2018

Early warning

Bats are impacted by roads and railways through barrier effects, collisions, noise and light disturbance, and direct loss of habitats. The general knowledge is however limited about these nocturnal mammals. Bats occur in basically all habitats and landscape types, but for most species we know little about demography and population density or the significance of the above impacts.

In the same time, **bats have an extraordinary position in conservation** with all species listed in the EU Habitats directive (in Sweden implemented by the Species Conservation Ordinance, *Artskyddsförordningen*). Any development – urban, industrial, infrastructure – is prohibited if it can jeopardize the conservation status of bats.

Accordingly, bats **are often a particular limitation** to infrastructure development. Because of the limited knowledge of bat population ecology, it may be difficult to prove that a **new road or railway** does not have a significant effect on bat conservation status. Also it is difficult for the developer to propose appropriate mitigation or compensation measures. There is an obvious risk for erroneous decisions, either allowing new developments that compromises bat conservation or inducing conservation action that lacks foundation.

Moreover, conservation guidelines from the Swedish Transport Administration state that important conflicts with bat conservation along **existing roads and railways** should be known, and measures taken to minimize this conflict.

Legislation and guidelines hence point out the urgent need for better knowledge of bat ecology and of the impacts from road and railways. Recent research may help filling that need.

The goals of this seminar are to:

- present current knowledge about impacts from roads and railways on Swedish bats,
- present useful decision tools to minimize and mitigate these impacts,
- discuss when and where conservation action is needed and when not.

Focus is on the Swedish situation, but because the impacts and legislation is largely similar in all EU countries, we expect an international interest and we therefore give the seminar in English (with an opportunity to ask and discuss in Swedish).

From the program (which is still in the making)

Invited speakers

- *Anna Berthinussen (Conservation First, UK)*
- *Johnny de Jong (Swedish Biodiversity Centre, SLU Sweden)*
- *Morten Elmeros (National Environmental Research Institute, Denmark)*
- *Manisha Bardhwaj (SLU Sweden and University of Melbourne, Australia)*

The program will be open for further speakers and poster presentations.

Part of the day will be dedicated to a discussion around questions such as:

- *How has recent research helped assessing the impacts of roads and railways on bats?*
- *How effective are bat mitigation measures such as over- and underpasses?*
- *How can noise and light disturbance be mitigated?*
- *Can bat research provide any functional tool to guide decisions on new infrastructure and on retro-fitting of existing infrastructure?*
- *Can any proxy (“stand-in”) be used until better population data is gained?*
- *What risks do we face with the lack of knowledge?*
- *What are the most urgent knowledge gaps that remain?*

Save the date. More info will be available in early autumn. The seminar will be free of charge but entail a cost for lunch and coffee.

Welcome!

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