



Bats monitoring program in Western Russia

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Biodiversity of Russia

- 11 400 vascular plants;
- 320 mammal species;
- 780 bird species;
- 80 reptile species;
- 29 amphibian species;
- 343 fresh-water fish species;
- 9 cyclostomes species;
- 130000-150000 invertebrate species;





Bats diversity in Russia



41 species

17 species in
the IUCN Red
List Species

1 – EN

8 – VU

7 – NT

1 – DD

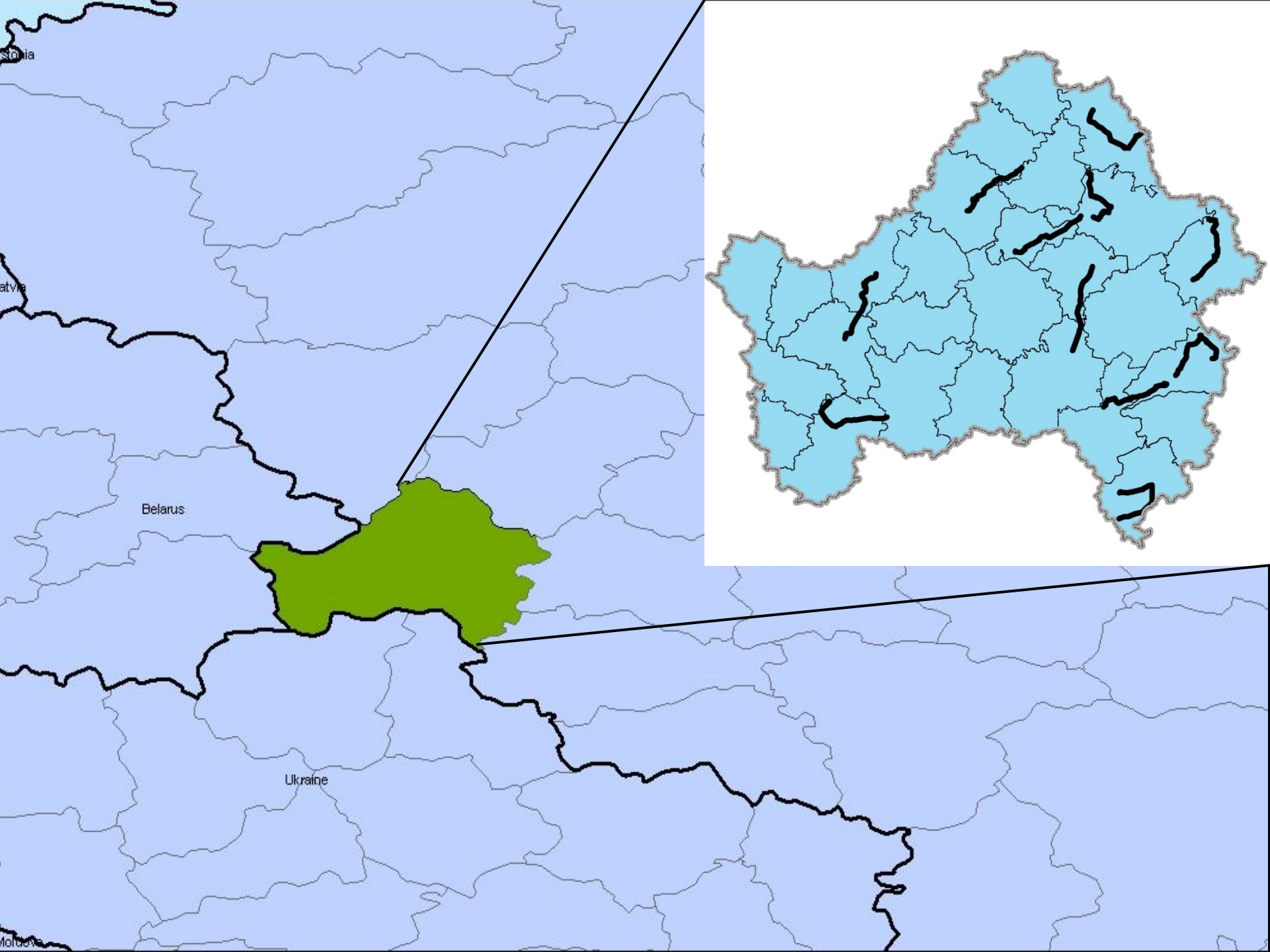
Bats as indicators?

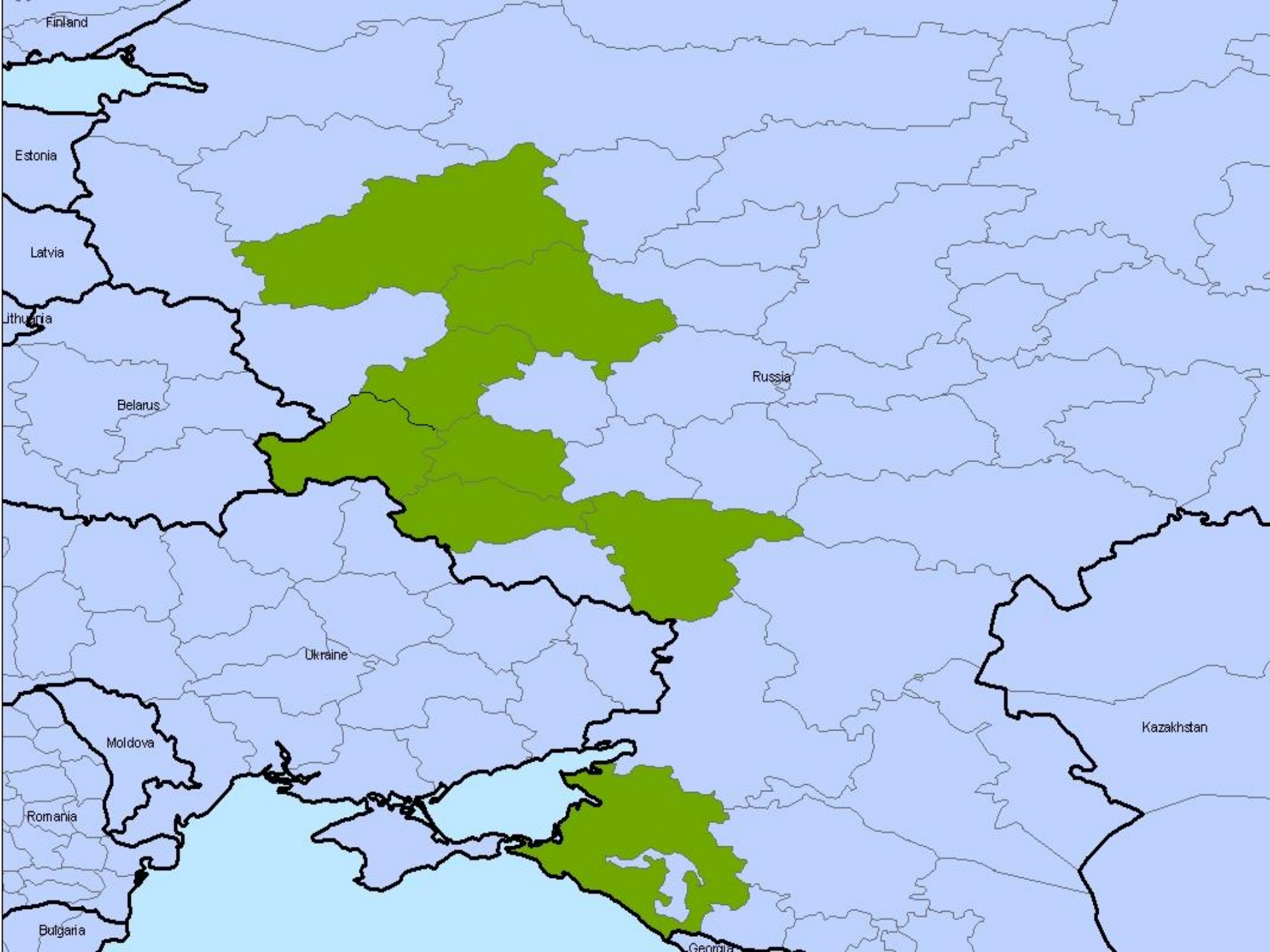
- Represent a fifth of all mammalian biodiversity
- Occupy a wide range of niches
- Provide a number of ecosystem services
- Sensitive to climate change as depend on nocturnal flying insects (themselves sensitive to changes in temperature)
- Sensitive to pollution through poisoning of their insect prey base





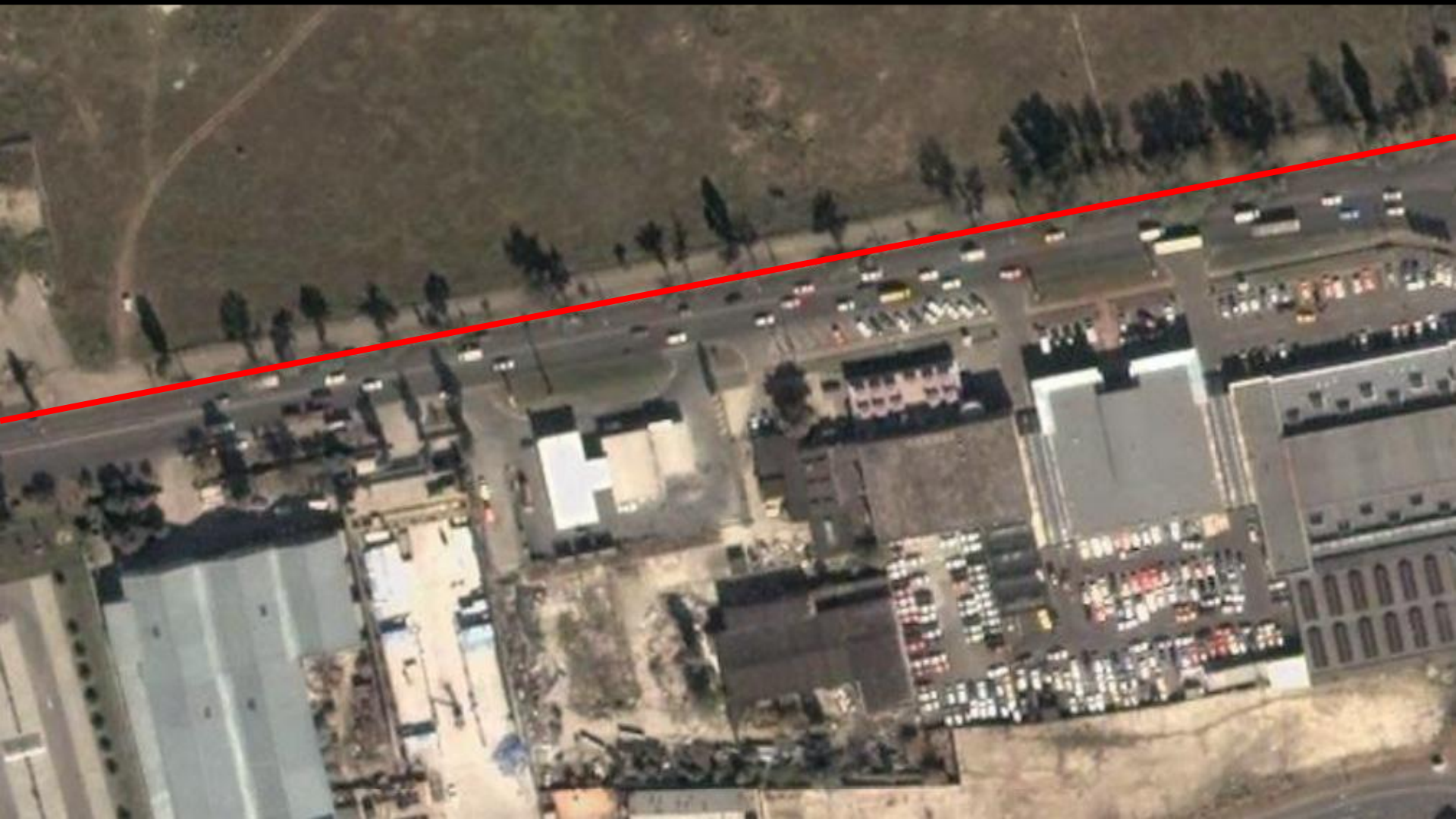






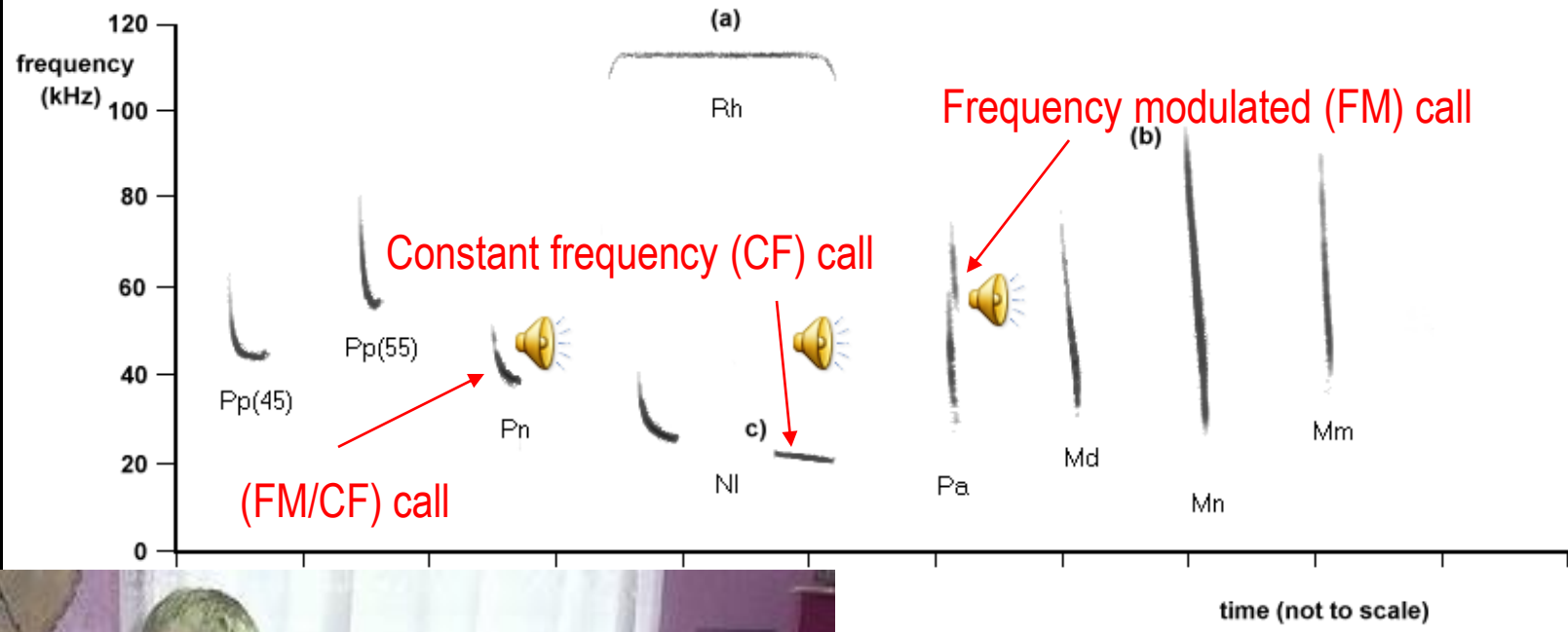


Acoustic car transect monitoring

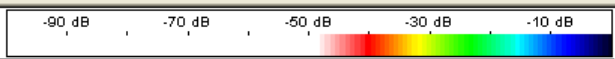




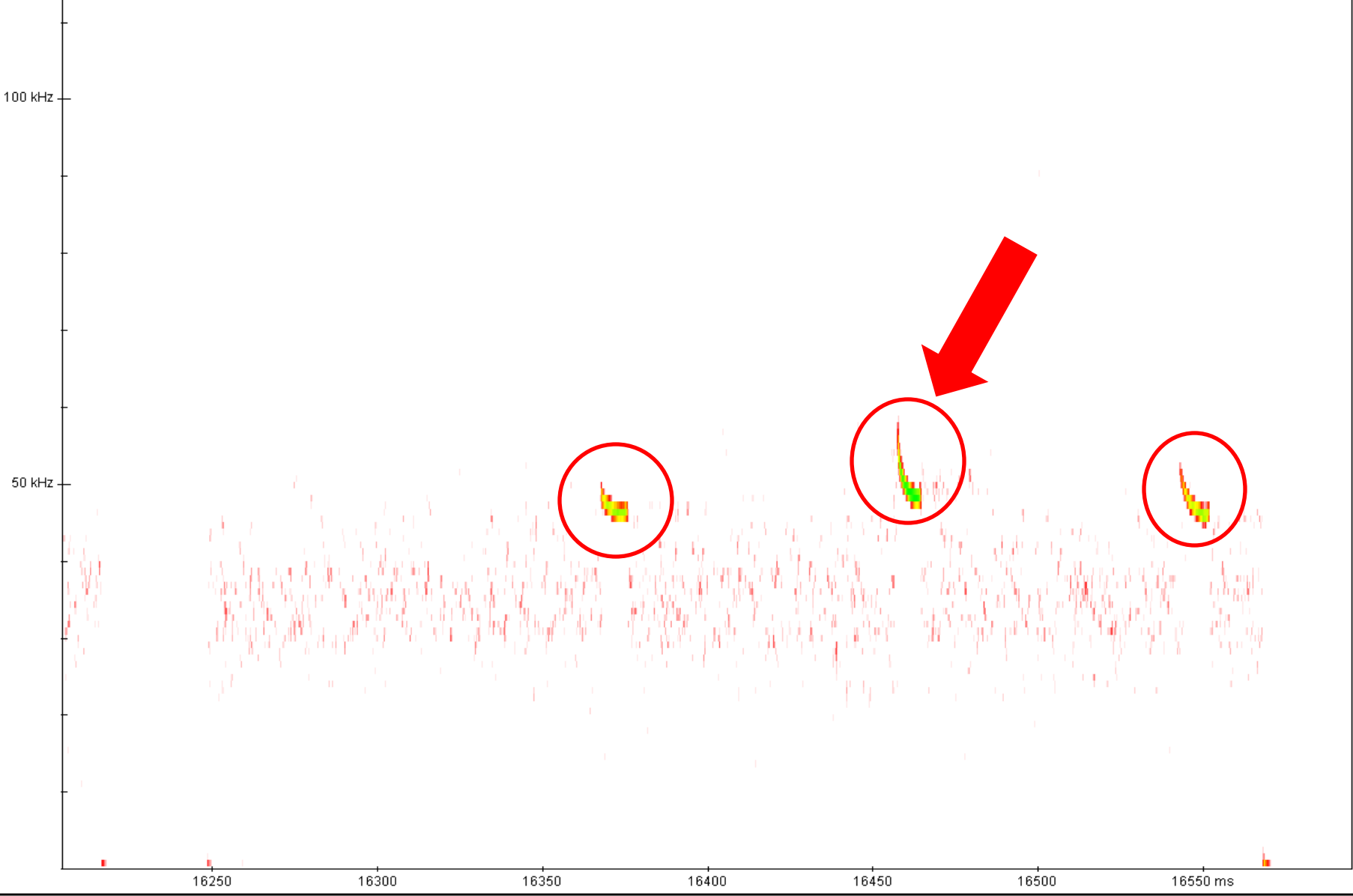




Sonogram
analyses

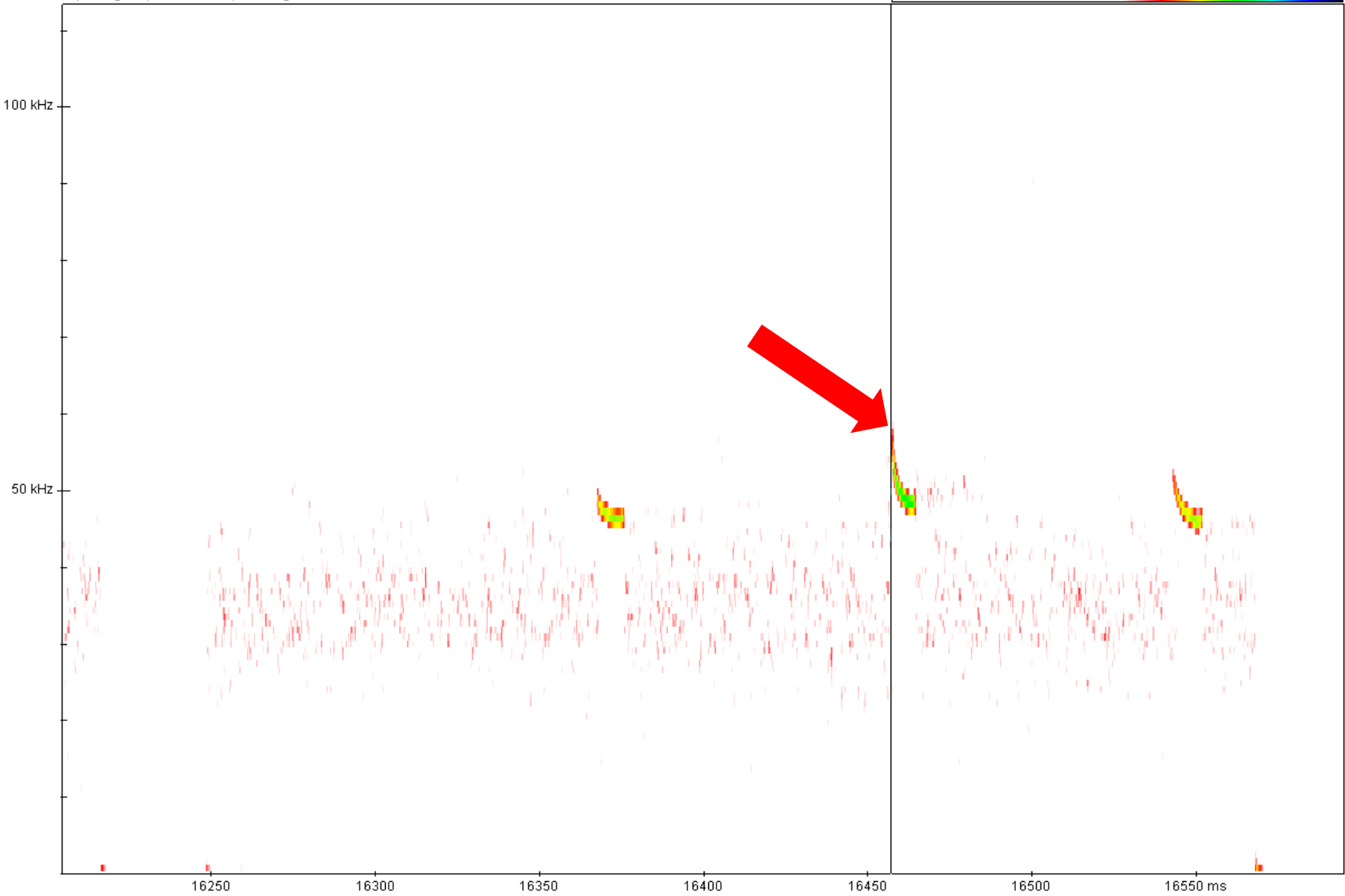
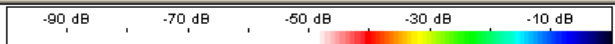


Spectrogram, FFT size 512, Hanning window. - Left.



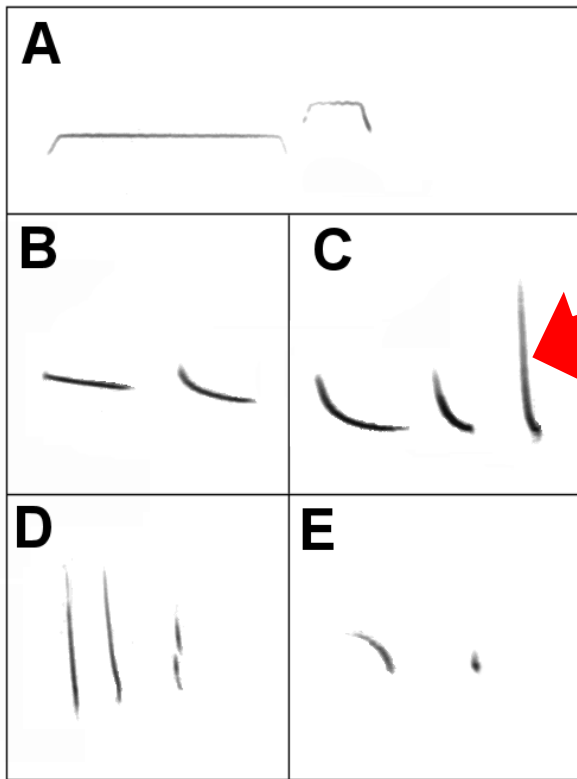
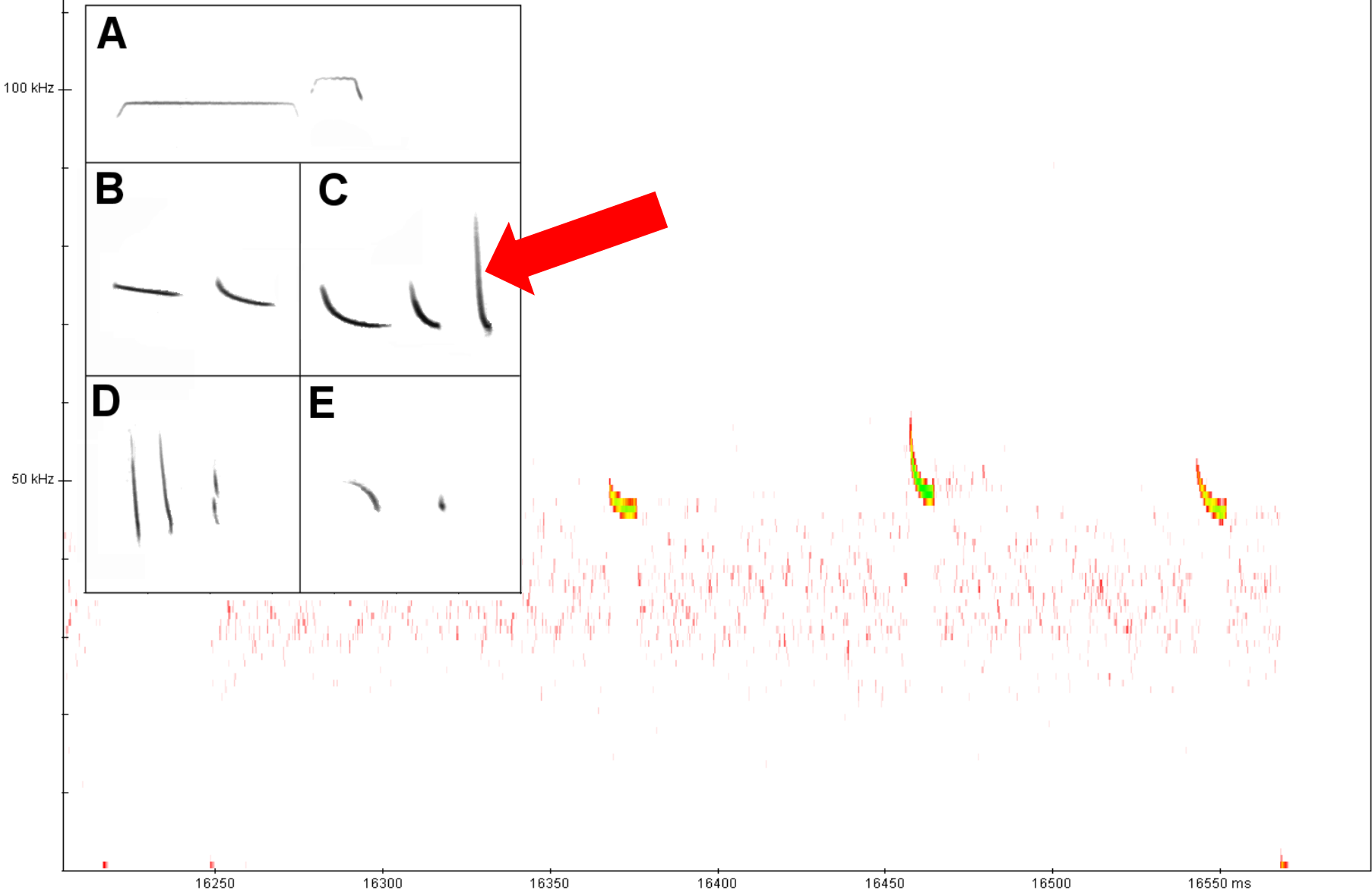
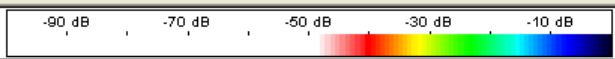


Spectrogram, FFT size 512, Hanning window. - Left.

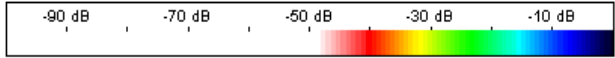




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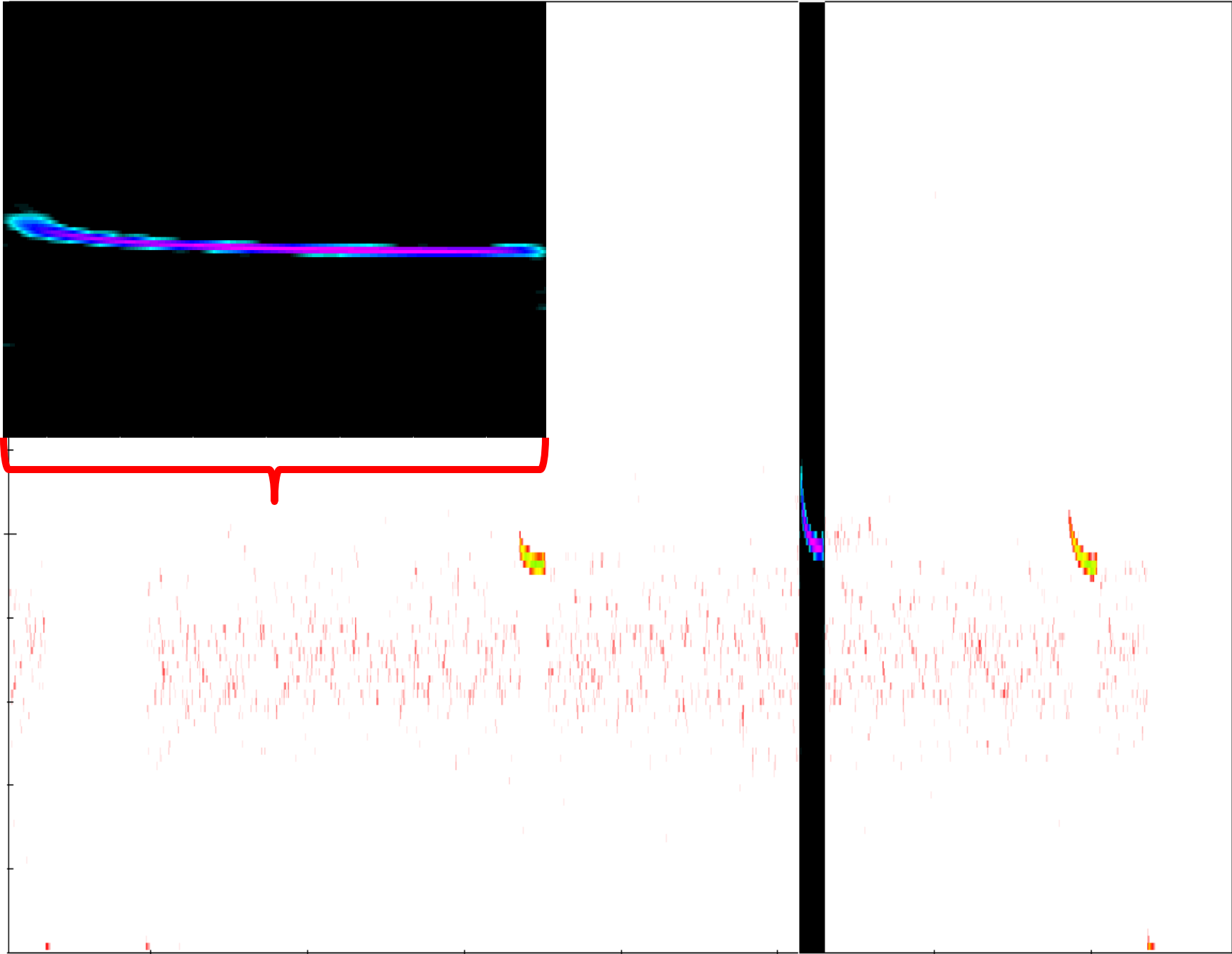


Spectrogram, FFT size 512, Hanning window. - Left.



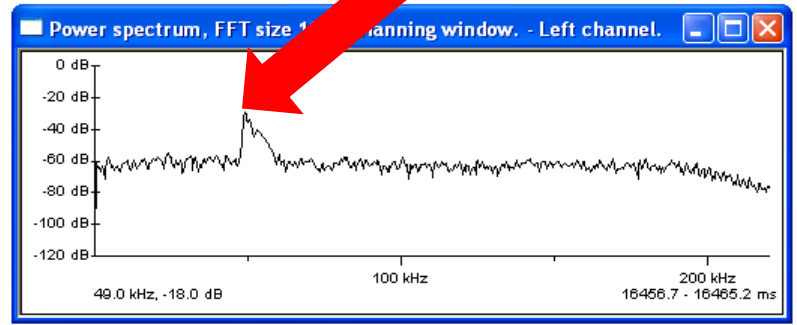
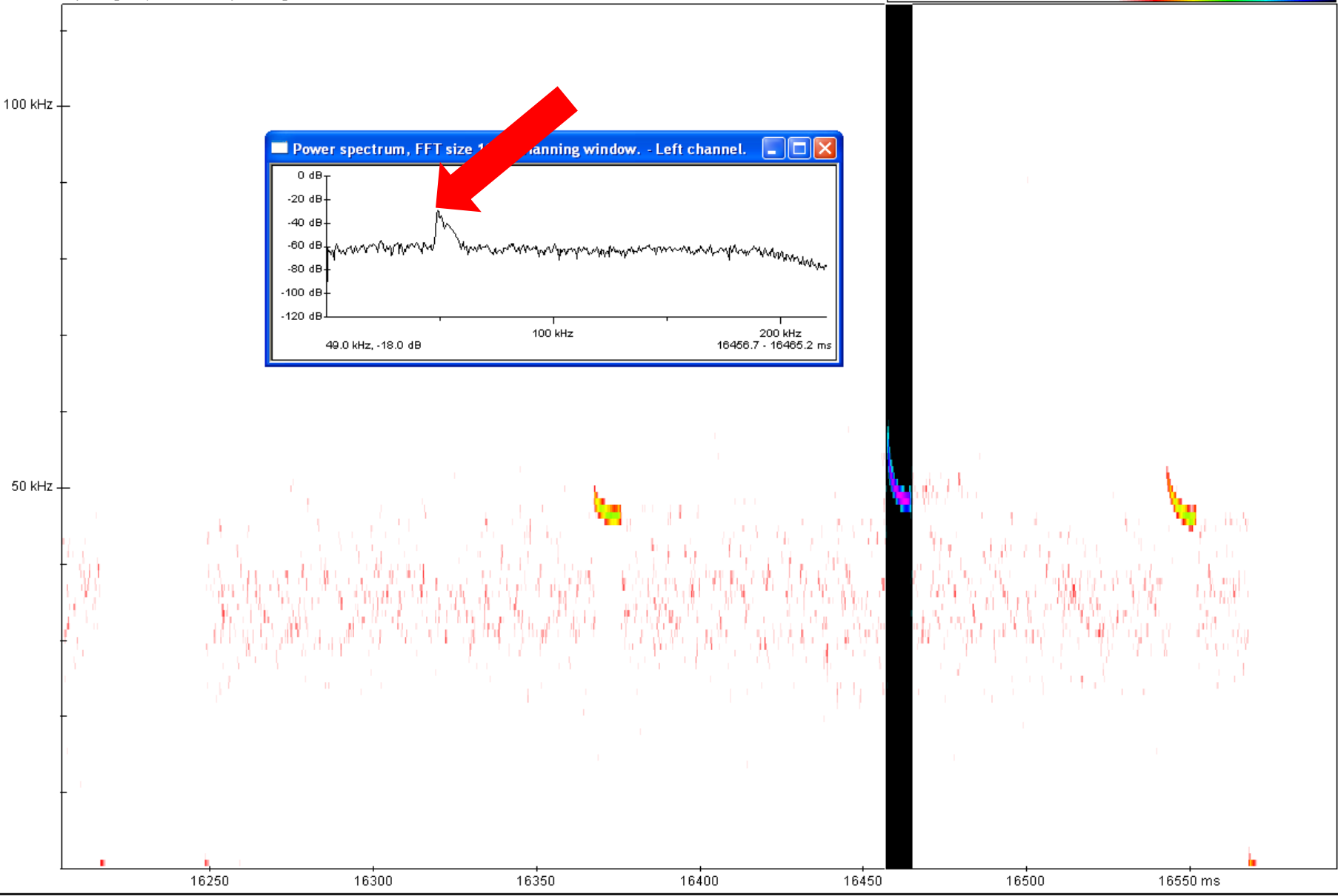
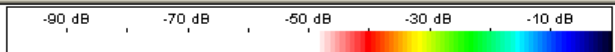
100 kHz

50 kHz



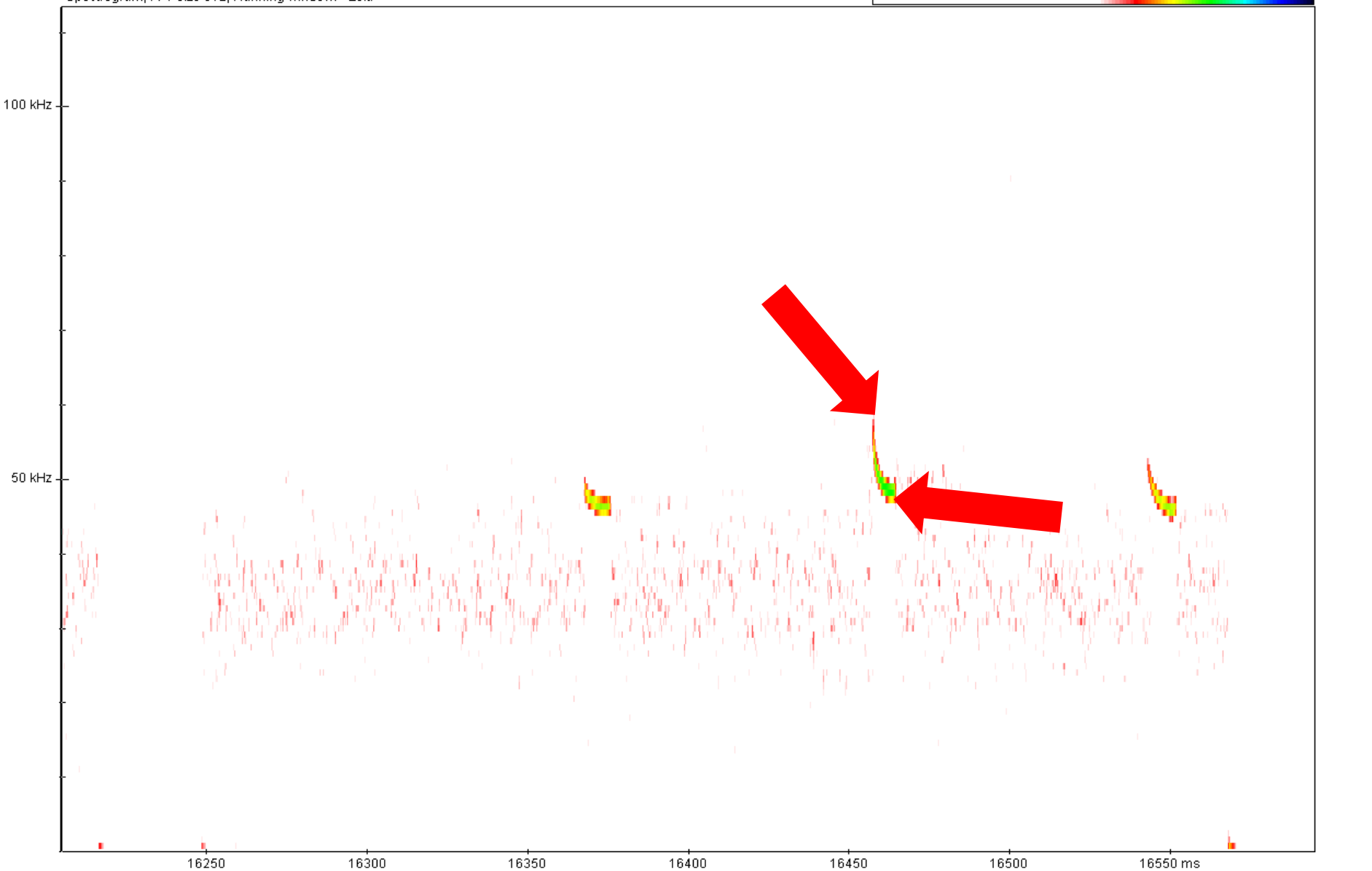
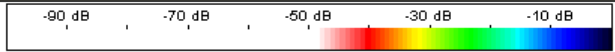


Spectrogram, FFT size 512, Hanning window. - Left.





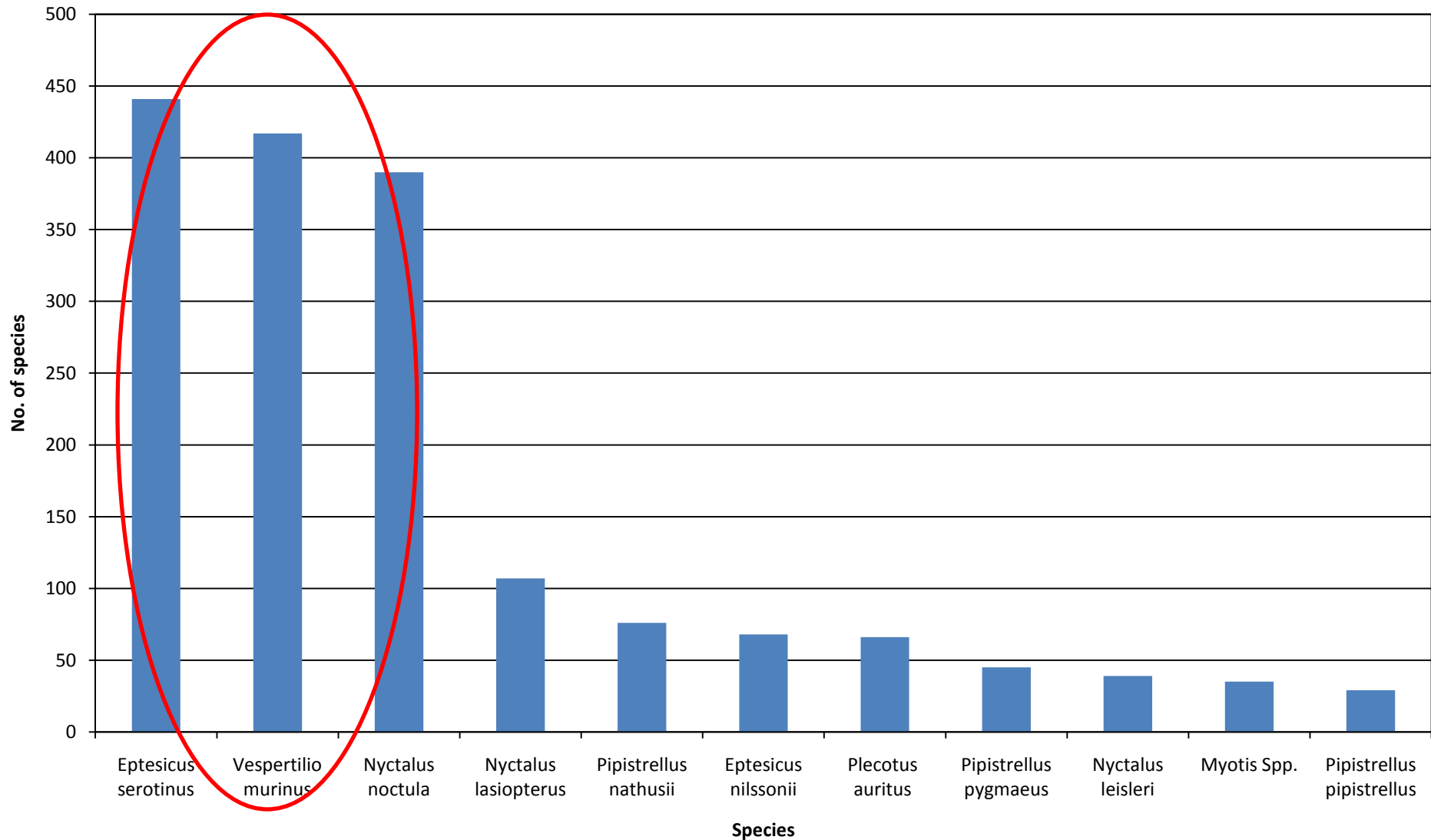
Spectrogram, FFT size 512, Hanning window. - Left.

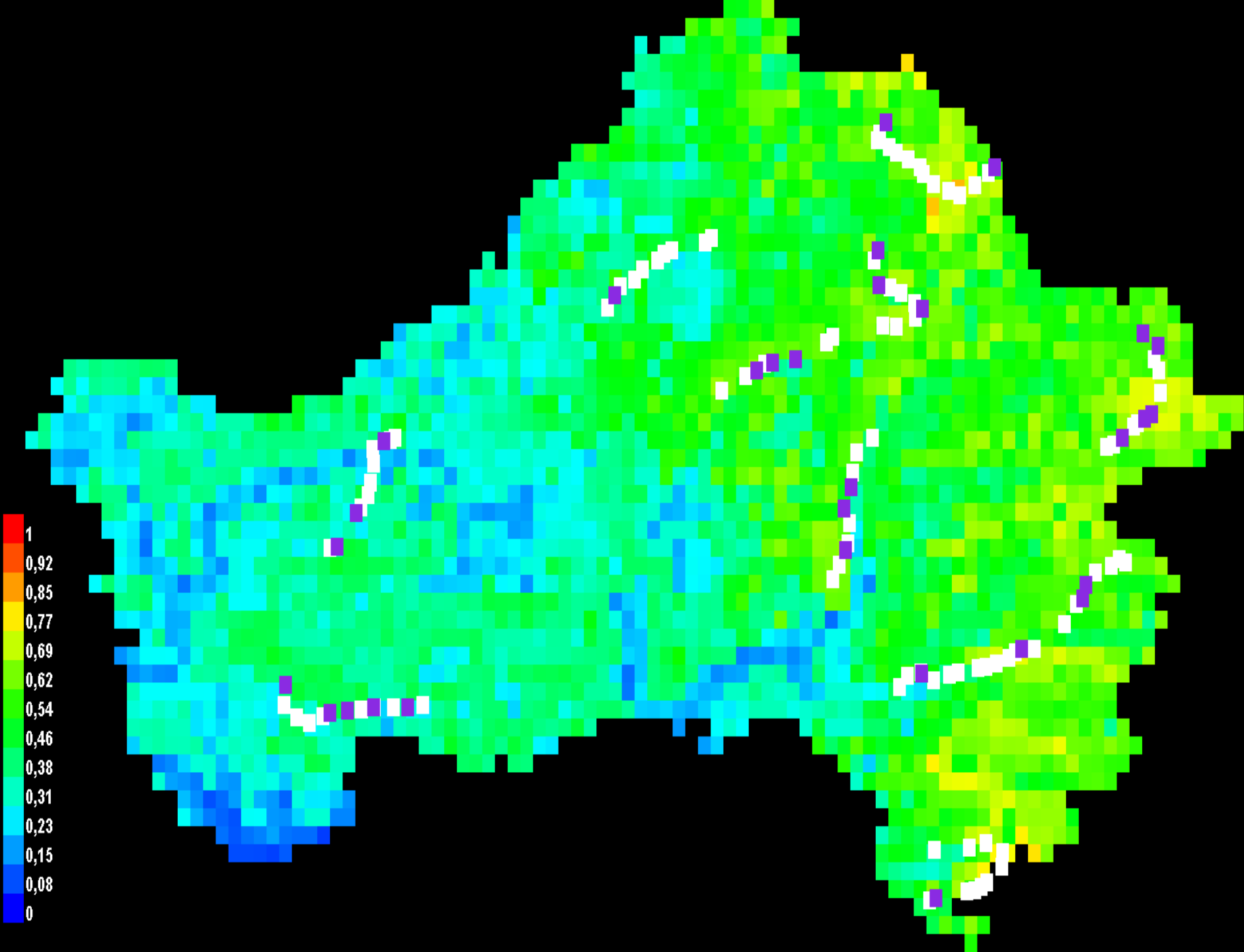


Results:

1. Greater noctule (*Nyctalus lasiopterus* Schreber, 1780);
2. Noctule (*Nyctalus noctula* Schreber, 1774);
3. Leisler's noctule (*Nyctalus leisleri* Kuhl, 1817)
4. Common pipistrelle (*Pipistrellus pipistrellus* Schreber, 1774);
5. Soprano pipistrelle (*Pipistrellus pygmaeus* Leach, 1825);
6. Nathusius' pipistrelle (*Pipistrellus nathusii* Keyserling et Blasius, 1839)
7. Parti-coloured bat (*Vespertilio murinus* L., 1758);
8. Northern bat (*Eptesicus nilssonii* Keyserling and Blasius, 1839);
9. Serotine (*Eptesicus serotinus* Schreber, 1774);
10. Common long-eared bat (*Plecotus auritus* Linnaeus, 1758).

Proportion of bat species/species groups encountered overall





Analysis of variable contributions

Variable	Percent contribution
Min Temperature of Coldest Month	65.6
Altitude	17.1
Land cover	10.7
Annual Mean Temperature	6.5

Future plans:

- To involve all regions of Russian Federation in iBatsRussia Program;
- To create network – Bats Conservation Russia;
- To identify habitats that are important to bats and model the impact of global change on these areas and wildlife populations;
- To install link with other bats conservation and research groups in other countries;
- To develop bats conservation strategy and policy for Russia.

Thank you very
much for your
attention!



Questions???

