Seismic body vibrations in a sand-dwelling species, the piebald shrew (*Diplomesodon pulchellum*)

Ilya Volodin, Alexandra Zaytseva, Olga Ichenko, Elena Volodina, Anastasia Chebotareva

1 Department of Vertebrate Zoology, Lomonosov Moscow State University, Moscow, 119991 Russia
2 Scientific Research Department, Moscow Zoo, Moscow, 123242 Russia
3 Department of Biology, Saint-Petersburg State University, Saint-Petersburg, 199034 Russia

volodin.svo@gmail.com
www.bioacoustica.org

Self-produced seismic vibrations

**YES !!!**

19 shrews
(10 males, 9 females)

**Insectivora ???**

160.5 ± 15.9 Hz
min-max 132-174 Hz, N = 11 animals

159.4 ± 6.1 Hz,
min-max 148-170 Hz, N = 11 animals

**Probable functions:**
Communication? – NO, they SMELL and VOCALISE
SEISMIC SUBSTRATE DENSITY
EXPLORING !!!

Piebald shrews are capable of digging and detect insects under sand layer (up to 30 prey diggings per night)

Body vibration related: Thermoregulation? - NO
Hunger? - NO
Fear? - NO

For somatosensory detection, piebald shrews may use ridges of fine hairs of their forefeet

Supported by RFBR grant 12-04-00260.