Dogs (*Canis familiaris*) and dholes (*Cuon alpinus*) squeak close to ultrasound

Volodina Elena¹, Volodin Ilya¹,²

¹ Moscow Zoo, Russia
² Lomonosov Moscow State University, Russia

volodinsvoc@mail.ru

http://www.bioacoustica.org

**What we discovered:**

- Dogs and dholes produce monophonic low-frequency and high-frequency calls and the biphonic calls. Interaction of the low (f₀) and the high (g₀) fundamental frequencies creates the combinatory frequency bands = n*f₀±m*g₀.
- All dog-like canids, African wild dogs *Lycaon pictus* and all *Canis* species, have both f₀ and g₀ and biphonation. All fox-like canids have only monophonic calls with f₀ and no g₀.
- The third super-high fundamental frequency h₀ at the range close to ultrasound. The h₀ occurred either singly or in combinations with f₀ and/or g₀, interacting with them with appearance of the combinatory frequency bands.

**Support:** Russian Science Foundation, grant 14-14-00237