

How to whistle through your nose

The mechanism of delphinid sound production

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Toothed whales are highly social animals that depend on acoustic signals for echolocating prey items and for communicating with conspecifics in their underwater habitat. They have evolved a specialized sound production system in connection with the nasal passages where pressurized air is driving sound production. During echolocation, this pressurized air accelerates a pair of connective tissue structures (the phonic lips) to generate a transient, high-amplitude biosonar click. How the same system is also able to generate a long, intricately modulated whistle remains unclear.

In this seminar, I will review our knowledge of sound production in delphinids, with special focus on the production of whistles. Using this information I will discuss how the sound production system of delphinids is highly suited for conveying information between diving mammals.



Tuesday June 14th at 11.15 at Zoophysiology