Seminars in Zoophysiology at Aarhus University

Pushing the Limit:
Diving Physiology & Energetics in Marine Mammals

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The diving physiology and capabilities of breath-hold divers are crucial to their role in the ecosystem and their ability to exploit prey resources. During forced submersion, severe bradycardia results in isolation of muscle and peripheral organs from blood flow, thereby conserving blood O_2 for the heart and brain. However, with the development of bio-loggers, studies on trained and freely diving animals indicate that this 'dive response' is variable and often moderate. I will present my research investigating the dive response and O_2 management strategies in wild California sea lions using bio-loggers that measured blood O_2, heart rate, and dive behaviour during maternal foraging trips. I will discuss how sea lions are able to optimize the amount of O_2 they take on a dive, and how the management of the oxygen differs depending on dive duration. I will finish by introducing my current research on the diving physiology and energetics of the harbour porpoise.

Tuesday Nov 12th at 13:15 at Zoophysiology