



**Pushing the limit:
Diving Physiology of
Marine Mammals**

Dr Gitte McDonald

*Moss Landing, San Jose State
University, USA*

It is essential to understand how marine mammals manage O₂ to interpret and understand their foraging ecology, the limits of dive performance, and their ability to adapt to environmental change and disturbance. During forced submersion, severe bradycardia isolate muscle and peripheral organs from blood flow to conserve oxygen 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 much more variable and complex than initially proposed. I will present studies on the dive response and oxygen management strategies in California sea lions, elephant seals, and harbor porpoises using bio-loggers that measured blood oxygen, heart rate, and dive behavior during natural dives. I will discuss how these animals manage oxygen during dives of different depths, durations, and activity levels, and how acoustic stressors may impact their ability to do so.



Tuesday September 7th at 12.00
Seminar room at section for Zoophysiology