



## Blood oxygen depletion in California sea lions

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Virtually all marine mammals dive as a natural part of their foraging behavior. Understanding the rate and magnitude of  $O_2$  store depletion during diving is therefore important if we are to interpret and understand the physiological limits of dive performance and foraging ecology. We investigated blood  $O_2$  depletion in the California sea lion, using a backpack partial pressure of  $O_2$  recorder during maternal foraging trips. The sea lions exhibited greater tolerance to hypoxemia than predicted and venous  $P_{O_2}$  consistently increased during ascent from deep dives. It is hypothesized that blood  $O_2$  uptake from the re-expanded lung during the “ascent tachycardia” will increase arterial and venous  $P_{O_2}$ , contributing to the prevention of shallow water black out during the final ascent from deep dives.



Monday Sept 12<sup>th</sup> at 11.15 at Zoophysiology