



Corrigendum: Respiratory Function in Voluntary Participating Patagonia Sea Lions (*Otaria flavescens*) in Sternal Recumbency

Andreas Fahlman^{1,2*} and Johnny Madigan³

¹ Fundación Oceanográfica de la Comunidad Valenciana, Valencia, Spain, ² Department of Life Sciences, Texas A&M University-Corpus Christi, Corpus Christi, TX, USA, ³ Dolphin Adventure, Nuevo Vallarta, Mexico

Keywords: tidal volume, breath duration, diving physiology, respiratory flow rate, lung compliance

A corrigendum on

Corrigendum: Respiratory Function in Voluntary Participating Patagonia Sea Lions (*Otaria flavescens*) in Sternal Recumbency

by Fahlman, A., and Madigan, J. (2016). *Front. Physiol.* 7:528. doi: 10.3389/fphys.2016.00528

OPEN ACCESS

Edited and reviewed by:

Walter Araujo Zin,
Federal University of Rio de Janeiro,
Brazil

*Correspondence:

Andreas Fahlman
afahlman@whoj.edu

Specialty section:

This article was submitted to
Respiratory Physiology,
a section of the journal
Frontiers in Physiology

Received: 20 November 2016

Accepted: 19 December 2016

Published: 05 January 2017

Citation:

Fahlman A and Madigan J (2017)
Corrigendum: Respiratory Function in
Voluntary Participating Patagonia Sea
Lions (*Otaria flavescens*) in Sternal
Recumbency. *Front. Physiol.* 7:670.
doi: 10.3389/fphys.2016.00670

1. A reference to the metabolic cost in Patagonia sea lions is missing in the first paragraph of the discussion. The following sentence should be corrected: The estimated resting metabolic rates were similar to those measured in Steller sea lions and California sea lions in water (Hurley and Costa, 2001; Fahlman et al., 2008, 2013) and Steller sea lions in air (Rosen and Trites, 2000).

The correct sentence should be: The estimated resting metabolic rates were similar to those measured in Patagonia sea lions, Steller sea lions, and California sea lions in water (Hurley and Costa, 2001; Fahlman et al., 2008, 2013; Dassis et al., 2012) and Patagonia and Steller sea lions in air (Rosen and Trites, 2000; Dassis et al., 2012).

2. The following sentence in the discussion should include the previous study on Patagonia sea lions: In addition, the estimated mass-specific resting metabolic rates (sRMR: 4.1–10.5 mL O₂ min⁻¹ kg⁻¹) were similar to those measured in Steller sea lions and California sea lions in water (Steller sea lions: 7.4–9.2 mL O₂ min⁻¹ kg⁻¹; California sea lions: 5.7–10.4 mL O₂ min⁻¹ kg⁻¹, Hurley and Costa, 2001; Fahlman et al., 2008, 2013) and Steller sea lions in air (3.0–9.5 mL O₂ min⁻¹ kg⁻¹, Rosen and Trites, 2000).

The sentence including previous study should be:

In addition, the estimated mass-specific resting metabolic rates (sRMR: 4.1–10.5 mL O₂ min⁻¹ kg⁻¹) were similar to those measured in Patagonia sea lions, Steller sea lions and California sea lions in water (Patagonia sea lions: 9.0 mL O₂ min⁻¹ kg⁻¹; Steller sea lions: 7.4–9.2 mL O₂ min⁻¹ kg⁻¹; California sea lions: 5.7–10.4 mL O₂ min⁻¹ kg⁻¹; Hurley and Costa, 2001; Fahlman et al., 2008; Dassis et al., 2012; Fahlman et al., 2013) and Patagonia sea lions and Steller sea lions in air (Patagonia sea lions: 4.3–9.1; Steller sea lions: 3.0–9.5 mL O₂ min⁻¹ kg⁻¹, Rosen and Trites, 2000; Dassis et al., 2012).

3. The species studied is also commonly called South American sea lion or Southern sea lion.

4. A typo was detected in the reported mass-specific metabolic rate (s $\dot{V}O_2$) and the reported value for s $\dot{V}O_2$ should be 53 mL O₂ • min⁻¹ • kg^{-0.6} or 8.6 ± 1.9 mL O₂ • min⁻¹ • kg⁻¹.

REFERENCES

- Dassis, M., Rodríguez, D. H., Ieno, E. N., and Davis, R. W. (2012). Submerged swimming and resting metabolic rates in Southern sea lions. *J. Exp. Mar. Biol. Ecol.* 432–433, 106–112. doi: 10.1016/j.jembe.2012.07.001
- Fahlman, A., Svärd, C., Rosen, D. A. S., Jones, D. R., and Trites, A. W. (2008). Metabolic costs of foraging and the management of O₂ and CO₂ stores in Steller sea lions. *J. Exp. Biol.* 211, 3573–3580. doi: 10.1242/jeb.023655
- Fahlman, A., Svärd, C., Rosen, D. A. S., Wilson, R. S., and Trites, A. W. (2013). Activity as a proxy to estimate metabolic rate and to partition the metabolic cost of diving vs. breathing in pre- and post-fasted Steller sea lions. *Aquat. Biol.* 18, 175–184. doi: 10.3354/ab00500
- Hurley, J. A., and Costa, D. P. (2001). Standard metabolic rate at the surface and during trained submersions in adult California sea lions (*Zalophus californianus*). *J. Exp. Biol.* 204, 3273–3281.
- Rosen, D. A. S., and Trites, A. W. (2000). Pollock and the decline of Steller sea lions: testing the junk food hypothesis. *Can. J. Zool.* 78, 1243–1250. doi: 10.1139/z00-060

Conflict of Interest Statement: The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

Copyright © 2017 Fahlman and Madigan. This is an open-access article distributed under the terms of the Creative Commons Attribution License (CC BY). The use, distribution or reproduction in other forums is permitted, provided the original author(s) or licensor are credited and that the original publication in this journal is cited, in accordance with accepted academic practice. No use, distribution or reproduction is permitted which does not comply with these terms.