

Publication

Anthropozoonotic parasites circulating in synanthropic and pacific colonies of South American sea lions (*Otaria flavescens*): non-invasive techniques data and a review of the literature

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Since late 1970s, the southern Chilean city Valdivia constitutes home for a unique bachelor group of South American sea lions (*Otaria flavescens*), initially descendant from colonies at the Pacific coast, but now directly living in a freshwater habitat in close proximity to human population and a vast amount of wild and domestic animal species. In the framework of a parasitological monitoring program, 115 individual fecal samples were collected from synanthropic South American sea lions between March and May 2018. For comparative reasons, 79 individual fecal samples from two free-living *O. flavescens* colonies at the Pacific coast were also sampled. Coproscopical analyses revealed the presence of nine different parasite taxa in individual fecal samples, including two protozoan (*Cryptosporidium* spp. and *Giardia* spp.) and seven metazoan parasites (*Anisakidae* gen. spp., *Diphyllbothriidae* gen. spp., *Ogmo-gaster heptalineatus*, *Trematoda* indet. type 1, *Trematoda* indet. type 2, *Otostrongylus circumlitus*, and *Parafilaroides* spp.), and morphological and molecular characterizations of adult helminths confirmed identification of following species: *Anisakis simplex*/A. *pegreffi*, *Pseudoterranova cattani*, *Contracaecum ogmorhini*, and *Adenocephalus pacificus*. For the first time, the results of the current study show the presence of zoonotic relevant *Giardia*- and *Cryptosporidium*-infections in two free-ranging colonies of South American sea lions apart from human settlement. Furthermore, a detailed literature search of previous publications on the endoparasite fauna of South American sea lions was conducted, revealing reports of at least 50 protozoan and metazoan parasite taxa including findings of the current study. Thereby, at least 25 of reported taxa (50%) have been recorded to bear zoonotic potential. The present study illustrates a successful application of non-invasive screening methods and their applicability in the field of marine mammal parasitology, bringing new insights into the endogenous parasite fauna of South American sea lions in Southern Chile, including anthropozoonotic protozoan and metazoan taxa.

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