This study was supported in part by US Public Health Service grants D43TW007120 and K24AI068903 (to J.M.V.).

Christopher A. Duplessis, Marvin J. Sklar, Ryan C. Maves, Anne Spichler, Braden Hale, Mark Johnson, Mary Bavaro, and Joseph M. Vinetz

Author affiliations: Naval Medical Center, San Diego, California, USA (C.A. Duplessis, M.J. Sklar, R.C. Maves, M. Johnson, M. Bavaro); University of California, La Jolla, California, USA (A. Spichler, J.M. Vinetz); and Naval Health Research Center, San Diego (B. Hale)

DOI: http://dx.doi.org/10.3201/eid1712.110700

References


Address for correspondence: Christopher A. Duplessis, Naval Medical Center San Diego, 34800 Bob Wilson Dr, Suite 5, San Diego, CA 92134-1005, USA; email: chris.duplessis@waldenu.edu

Salmonella enterica in Pinnipeds, Chile

To the Editor: Several wildlife-associated zoonotic agents have played a major role in the emergence of diseases in humans (1). However, diseases can also emerge in wildlife as a result of human activities, such as contamination of the marine environment and its fauna by the disposal of nontreated human sewage. Salmonella enterica is among the agents identified as causing infection in various marine birds and mammals, including pinnipeds, from different geographic regions (2–4).

The objective of our study was to determine whether S. enterica infection occurs in pinnipeds from the Chilean coast. During August–December 2010, we obtained samples from 13 South American sea lions (Otaria flavescens) that the sanitary authority found malnourished and stranded at the northern Chilean beaches of Antofagasta (23°40′S, 70°24′W) and Los Vilos (31°54′S, 71°30′W) (Table). The pinnipeds showed no clinical signs or symptoms of disease; however, rectal swab samples were obtained during their stay for rehabilitation at the Buin Marino facilities (Santiago, Chile). After the animals recovered, they were released to their original habitat.

The swab samples were placed in Cary-Blair transport medium (COPAN, Murrieta, CA, USA) for shipment to the laboratory (Laboratory of Infectious Diseases, University of Chile, Santiago). To isolate bacteria, we placed the swab samples into 5 mL of buffered peptone water (Difco APT broth; Becton Dickinson, Franklin Lakes, NJ, USA), incubated them for 24 h at 42°C with agitation, and then aliquots of the suspension were transferred into the following media: modified semisolid Rappaport-Vassiliadis basal medium (Oxoid, São Paulo, Brazil) with novobiocin (20 μg/mL), selenite cystine broth base (Oxoid), and xylose lysine deoxycholate agar (Difco XLD; Becton Dickinson). After the aliquots were incubated at 37°C for 24–48 h, we identified suspected colonies by using biochemical tests and invA gene detection by PCR (3). Results showed that 2 of the 13 animals were infected with S. enterica strains, which were serotyped as S. enterica serotype Newport and S. enterica serotype Havana (Table), according to the Kauffmann-White scheme (6). Testing showed that the strains were susceptible to the following antimicrobial drugs: ampicillin, chloramphenicol, tetracycline, amoxicillin/clavulanic acid, trimethoprim/sulfamethoxazole, cefotaxime, nalidixic acid, nitrofurantoin, ciprofloxacin, ceftazidime, and cefoxitin (7).

Our results confirm S. enterica infection in pinnipeds from Chile and,
more broadly, the South American coast and contrast with previous unsuccessful attempts to detect Salmonella spp. in pinnipeds from Valdivia, 2,200 km to the south (8). This finding suggests geographic variability in the epidemiology of infection; however, this possibility must be confirmed in additional studies with more samples and additional regions.

*S. enterica* is an endemic bacterium in Chile that causes infection in humans and domestic animals. The Chilean sanitary authority includes *S. enterica* infection among the list of notifiable diseases, but surveillance is not conducted for *S. enterica* in wildlife. However, consideration should be given to changing this situation, given a report suggesting *S. enterica* as a priority for active surveillance (9). In addition, *S. enterica* serotypes Newport and Havana have been detected in Chile’s human population (10), strengthening the necessity for official support for initiatives addressing the need to elucidate the epidemiology of *Salmonella* in aquatic animals.

This work was supported by a grant from the International Society for Infectious Diseases.

**Table.** Characteristics of South American sea lions (*Otaria flavescens*) tested for infection with *Salmonella* spp., Chilean coast, August–December 2010

<table>
<thead>
<tr>
<th>Identification no.</th>
<th>Sex</th>
<th>Age†</th>
<th>Source, city in Chile</th>
<th><em>S. enterica</em> serotype isolated</th>
</tr>
</thead>
<tbody>
<tr>
<td>p070810</td>
<td>F</td>
<td>Juvenile</td>
<td>Antofagasta</td>
<td>ND</td>
</tr>
<tr>
<td>p240810</td>
<td>F</td>
<td>Juvenile</td>
<td>Los Viros</td>
<td>ND</td>
</tr>
<tr>
<td>p260810</td>
<td>F</td>
<td>Juvenile</td>
<td>Los Viros</td>
<td>ND</td>
</tr>
<tr>
<td>p090910–1</td>
<td>M</td>
<td>Pup</td>
<td>Antofagasta</td>
<td>Havana</td>
</tr>
<tr>
<td>p090910–2</td>
<td>F</td>
<td>Pup</td>
<td>Antofagasta</td>
<td>ND</td>
</tr>
<tr>
<td>p140910</td>
<td>M</td>
<td>Pup</td>
<td>Antofagasta</td>
<td>Newport</td>
</tr>
<tr>
<td>p011210–1</td>
<td>F</td>
<td>Pup</td>
<td>Antofagasta</td>
<td>ND</td>
</tr>
<tr>
<td>p011210–2</td>
<td>F</td>
<td>Pup</td>
<td>Antofagasta</td>
<td>ND</td>
</tr>
<tr>
<td>p011210–3</td>
<td>F</td>
<td>Pup</td>
<td>Antofagasta</td>
<td>ND</td>
</tr>
<tr>
<td>p011210–4</td>
<td>F</td>
<td>Pup</td>
<td>Antofagasta</td>
<td>ND</td>
</tr>
<tr>
<td>p011210–5</td>
<td>F</td>
<td>Pup</td>
<td>Antofagasta</td>
<td>ND</td>
</tr>
<tr>
<td>p011210–6</td>
<td>F</td>
<td>Pup</td>
<td>Antofagasta</td>
<td>ND</td>
</tr>
<tr>
<td>p011210–7</td>
<td>F</td>
<td>Pup</td>
<td>Antofagasta</td>
<td>ND</td>
</tr>
</tbody>
</table>

†Juvenile, animal 1–5 years of age; pup, animal <1 year of age.

ND, no detection.

**References**


6. Grimont PAD, Weill FX. Antigenic for-

**Natalie Sturm, Pedro Abalos, Alda Fernandez, Guillermo Rodriguez, Pilar Oviedo, Viviana Arroyo, and Patricio Retamal**

**Author affiliations:** Universidad de Chile, Santiago, Chile (N. Sturm, P. Abalos, P. Oviedo, V. Arroyo, P. Retamal); Instituto de Salud Pública, Santiago (A. Fernandez); and Buin Marino, Santiago (G. Rodriguez)

DOI: http://dx.doi.org/10.3201/eid1712.111103

**Address for correspondence:** Patricio Retamal, Universidad de Chile, Medicina Preventiva Animal, Av Sta Rosa 11735 La Pintana, Santiago 8820808, Chile; email: pretamal@uchile.cl

**Letters**

Letters commenting on recent articles as well as letters reporting cases, outbreaks, or original research are welcome. Letters commenting on articles should contain no more than 300 words and 5 references; they are more likely to be published if submitted within 4 weeks of the original article’s publication. Letters reporting cases, outbreaks, or original research should contain no more than 800 words and 10 references. They may have 1 Figure or Table and should not be divided into sections. All letters should contain material not previously published and include a word count.

**Letters**

Letters commenting on recent articles as well as letters reporting cases, outbreaks, or original research are welcome. Letters commenting on articles should contain no more than 300 words and 5 references; they are more likely to be published if submitted within 4 weeks of the original article’s publication. Letters reporting cases, outbreaks, or original research should contain no more than 800 words and 10 references. They may have 1 Figure or Table and should not be divided into sections. All letters should contain material not previously published and include a word count.

**Letters**

Letters commenting on recent articles as well as letters reporting cases, outbreaks, or original research are welcome. Letters commenting on articles should contain no more than 300 words and 5 references; they are more likely to be published if submitted within 4 weeks of the original article’s publication. Letters reporting cases, outbreaks, or original research should contain no more than 800 words and 10 references. They may have 1 Figure or Table and should not be divided into sections. All letters should contain material not previously published and include a word count.