California Records of the Oarfish, *Regalecus russelii* (Cuvier, 1816) (Actinopterygii: Regalecidae)

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Recent oarfish strandings in California have generated enormous interest. Oarfishes are iconic and have been feared as ‘sea monsters or serpents’ in the past and ‘harbingers of earthquakes’ more recently. The amount of media coverage and subsequent misconceptions has motivated us to document the California stranding records as best we can based on the most reliable information.

Most accounts over the last century have regarded *Regalecus* as monotypic, as *R. glesne* (Heemstra 1986; Olney 2002; Horn et al. 2006; Nelson 2006; Page et al. 2013; Kells et al. 2016). Historically, and more recently, a second species, *R. russelii* or with a modified species spelling as *russellii* [as *russelii* (Cuvier 1816 (ex Shaw)) by Eschmeyer et al. 2017], has been recognized (Jordan 1902, 1907; Jordan and Starks 1907; Fujii 1984; Hayashi 2002; Roberts 2012, 2016; Angulo and López-Sánchez 2017). Both species have circumglobal, but not entirely overlapping, distributions. However, only *R. russelii* has been found, so far, in the northeastern Pacific, including Mexico, Costa Rica, and central and southern California.

Morphologically, *Regalecus russelii* is characterized by 3-6 rays in the first dorsal crest and a single ray in the second dorsal crest, not connected with a membrane to the other. *Regalecus glesne* has 6-8 rays in the first crest and 5-11 rays in the second crest (Roberts 2012). The total number of dorsal rays, vertebrae and gill rakers are also diagnostic. Mitochondrial DNA sequences indicate distinct separation between these species (Roberts 2012).

We have attempted to access all sources of information related to oarfish strandings off California, including newspaper articles, natural history museum records, published accounts, and the files and correspondence of Boyd Walker, John Fitch, Vladimir Walters, and other ichthyologists interested in early oarfish strandings. We have examined all California specimens at The Natural History Museum of Los Angeles County (LACM), Santa Barbara Museum of Natural History (SBMNH), Scripps Institution of Oceanography (SIO), and University of California Los Angeles (UCLA, now transferred to SIO). We have also searched VertNet (http://www.vertnet.org) and iDigBio (https://www.idigbio.org/) records.

Length measurements are total lengths. In eight cases we feel the original measurements were by metric tape (numbers 3, 5, 7, 9, 10, 12, 13 and 18), one by John Fitch, two by LACM staff, one by scientists at the USC Wrigley Marine Science Center at Santa Catalina Island, one at the Catalina Island Marine Institute, one by researchers at California State University Fullerton, and two San Diego County specimens by researchers at Scripps Institution of Oceanography and the Southwest Fisheries Science Center, La Jolla.

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