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## The fouling serpulids (Polychaeta: Serpulidae) from United States coastal waters: an overview

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### Abstract

Serpulids are an important component of fouling communities. This paper provides an overview of the serpulid species found in North America, as part of a broader study of fouling invertebrates focused on NIS (non-indigenous species) in United States coastal ecosystems. Almost 4400 serpulid specimens were examined from selected fouling plates. Fouling plates were deployed in 26 bays and coastal lagoons along the continental coasts of the United States and Hawaiian islands, primarily in bays and lagoons with salinities averaging 20‰ or greater. Twenty-five serpulid species were identified, including four new records for the United States (*Ficopomatus uschakovi*, *Hydroides* cf. *brachyacantha*, *H. longispinosa* and *Protula longiseta*), three known NIS, two presumed NIS, three cryptogenic serpulids, and several range extensions. *Crucigera websteri* extends its northward range from Santa Barbara Island to Humboldt Bay, California; *Ficopomatus enigmaticus*, first recorded in North America from San Francisco, California in 1920, Rockport, Texas in 1952 and Barnegat Bay, New Jersey in 1980, is now recorded at additional localities on the east coast (Chesapeake Bay, Virginia, Charleston, South Carolina and Indian River, Florida) and the northern Gulf of Mexico (Galveston Bay, Texas); *F. miamiensis* extends its westward range from Louisiana to Texas; *F. uschakovi*, an Indo-Pacific and Western African species, was recorded formally for the first time from the northern Gulf of Mexico (Galveston Bay and Corpus Christi, Texas) and the east coast of Florida (Jacksonville). *Hydroides* cf. *brachyacantha* extends its northward range from Curaçao to Pensacola Bay, Florida; *H. dirampha* from Veracruz, Mexico to Corpus Christi, Texas; *H. floridana* extends its westward range from Louisiana to Texas; *H. gracilis* extends its northward range from Pacific Grove to San Francisco, California; *Salmacina huxleyi* from Cape Hatteras, North Carolina to Rhode Island; and *Spirobranchus minutus* from Veracruz, Mexico to Pensacola Bay, Florida. The following additional species range extensions are provisional in that they represent only one record or were not found in the most recent surveys (e.g., *Hydroides elegans* - east coast); *H. longispinosa* from Marshall Islands to Oahu, Hawaii; *Protula balboensis* from Florida to Texas; *P. longiseta* from the Mexican Caribbean to the Indian River, Florida; *H. elegans* from San Francisco to Humboldt Bay, northern California and on the east coast from the Indian River, Florida, to Cape Cod, Massachusetts. Among surveyed bays, Biscayne Bay, Florida and Corpus Christi, Texas (northern Gulf of Mexico) had the greatest number of species (14 and 8, respectively); in contrast, almost all sites in Alaska, Washington, Oregon (northwest Pacific), Rhode Island, Virginia and South Carolina (Atlantic) had only one or two species each. *Hydroides dianthus* was, by far, the most abundant serpulid species on fouling plates in the northern Gulf of Mexico and the east coast, while *Pseudochitinopoma occidentalis* was the most abundant serpulid detected on the west coast. For each species recorded herein, we include the synonyms and some key references, a material studied section, a diagnosis, and updated distributional information. A checklist and identification key to the known shallow-water serpulids sensu stricto of the United States are included.

### Keywords

Ficopomatus; fouling; Hydroides; non-indigenous species; tube worms

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Eastern Pacific, with 31 and 34 species respectively; however, most records come from the Gulf of California or the western coast of Baja California Peninsula. Only a few records are from localities in the large expanse of the central and southern Mexican Pacific. Thus, sabellids and serpulids were collected from several shallow water habitats along the coast of Mexican Pacific, such as coastal lagoons, coral reefs, rocky shores and from man-made structures as marinas, piers and ships of several h The fouling serpulids (Polychaeta: Serpulidae) from United States coastal waters: an overview.

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