

Case 3080

Polydora websteri* Hartman in Loosanoff & Engle, 1943 (Annelida, Polychaeta): proposed conservation of the specific name by a ruling that it is not to be treated as a replacement for *P. caeca* Webster, 1879, and designation of a lectotype for *P. websteri

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Abstract. The purpose of this application is to conserve the specific name of *Polydora websteri* Hartman in Loosanoff & Engle, 1943 for a boring mudworm (family SPIONIDAE) from coasts of North America. The name was proposed as a replacement for *P. caeca* Webster, 1879, a junior secondary homonym of *P. coeca* (Örsted, 1843), which relates to a tube-dwelling spionid. However, *P. websteri* was based on different material from *P. caeca* Webster and the names are now known to refer to distinct species. It is proposed that *P. websteri* should not be treated as a replacement name for *P. caeca* Webster, and that a lectotype be designated in accord with accustomed usage. *Polydora websteri* is well known as a borer in the shells of oysters and other commercially important molluscs.

Keywords. Nomenclature; taxonomy; Polychaeta; SPIONIDAE; *Polydora caeca*; *Polydora websteri*; mudworms; marine; North America.

1. Örsted (1843, p. 39) described a new polychaete species, *Leucodorum coecum*, a tube-dwelling spionid from the Øresund, Denmark.

2. Claparède (1869, pp. 53–54) referred the genus *Leucodora* Johnston, 1838 (used by some authors as *Leucodora* or *Leucodorum*) to synonymy with *Polydora* Bosc, 1802, and Örsted's species thus became *Polydora coeca* (Örsted, 1843). The name is currently in use and the species is known from the eastern Atlantic and the Arctic.

3. Webster (1879, pp. 252–253, pl. 9, figs. 119–122) described and illustrated a new polychaete species, *Polydora caeca*, a shell-boring spionid from the coast of Virginia, U.S.A. Despite the description being brief and based on one specimen, Webster (1879, p. 253) noted that 'This species can readily be distinguished from any previously described from our coast by the purple markings on the tentacles'. Another characteristic feature provided by Webster (p. 252) was the caruncle extending 'from the head to the anterior margin of the 4th segment'. Until recently *Polydora* specimens with these characteristic features have not been subsequently

reported from the Atlantic coast of North America (see *Polydora* revisions by Blake, 1971, 1996).

4. Hartman (in Loosanoff & Engle, 1943, pp. 70–72) proposed the replacement name *Polydora websteri* to replace the name *P. caeca* Webster (under Article 58 of the Code *coeca* and *caeca* are deemed to be homonyms). However, Hartman redescribed and illustrated the species based upon her own material because Webster's single specimen was 'not known to exist' (1943, p. 72). Hartman also recorded (p. 70) that Webster's 'description is faulty and misleading in all essential respects' and (p. 72) 'the original description of *P. caeca* Webster is incomplete in some important details and erroneous in some others'. Hartman's material was deposited in the Allan Hancock Foundation of the University of Southern California but no types were designated. These specimens (collected by J.B. Engle from vesicles on empty oyster shells, in the mouth of Milford River, Long Island Sound, Connecticut) are now kept in the Los Angeles County Museum of Natural History (LACM-AHF POLY 1628). They have been examined and found to include 13 specimens in good condition. No individuals with bands on the palps or a caruncle extending beyond segment 2 have been found that would have suggested the presence of *P. caeca* Webster.

5. *Polydora* specimens matching Hartman's (1943) description are very common along the east, west, and gulf coasts of North America, along the west coast of South America (Hartman, 1945, 1951, 1954, 1959, 1961; Foster, 1971, pp. 26–27; Blake, 1983, p. 257), and Australia (Blake & Kudenov, 1978, pp. 258–259). *Polydora websteri* was redescribed by Blake (1971, pp. 6–8) and has become the subject of numerous investigations due to its importance as a borer in shells of commercially important molluscs (Medcof, 1946; Owen, 1957; Hopkins, 1958; Mackenzie & Shearer, 1959; Hartman, 1966; Davis, 1967, 1969; Haigler, 1969; Evans, 1969; Jeffries, 1972; Blake & Evans, 1973; Zottoli & Carriker, 1974; Kojima & Imajima, 1982; Bailey-Brock & Ringwood, 1982; Bergman, Elner & Risk, 1982; Sato-Okoshi & Okoshi, 1993).

6. Recently, *Polydora* specimens matching Webster's (1879) description of *P. caeca* were found boring into gastropod shells from Rhode Island (Williams & Radashevsky, in press). The length of caruncle was shown to be size-dependent, reaching the middle of segment 4 in the largest specimens. Although body pigmentation was variable, black bars on the palps were present in all specimens (the purple pigmentation reported by Webster, 1879 for *P. caeca* is actually black; purple pigment has not been described in any spionid species by modern zoologists although this color was reported by researchers in the 19th century). Specimens with the same characteristic features were collected by S.H. Hopkins from oyster shells off Virginia (the type locality for *P. caeca*) and deposited in the National Museum of Natural History, Smithsonian Institution, Washington, D.C. (USNM 45201). Specimens from Rhode Island and Virginia represent the only shell-boring *Polydora* species with banded palps and caruncle extending beyond segment 2 on the Atlantic coast of North America.

7. The United States National Museum (USNM) is the only museum to which Webster sent material (Linda Ward, personal communication). Webster (1879) described 27 new taxa, and types for 14 of these are at the USNM. There is no information concerning the whereabouts of the remaining 13 species, including *P. caeca*. The only other museums that would be likely candidates to have received Webster's material are the Peabody Museum of Natural History, Yale University,

New Haven; the Museum of Comparative Zoology, Harvard University, Cambridge, Massachusetts; and the American Museum of Natural History, New York. Requests for Webster's *P. caeca* material were made at all of these museums and each indicated *P. caeca* was not deposited.

8. Hartman (1943) thought that she was dealing with the species *Polydora caeca* Webster, 1879. She knew the name *P. caeca* was a junior secondary homonym and she therefore published *P. websteri* as a replacement name. However, it is now known that *P. websteri* is different taxonomically from *P. caeca* Webster. Despite this, under Article 72 of the Code the type material of *P. websteri* is Webster's (lost) single specimen; *websteri* is the valid name for Webster's species and a new name would be required for Hartman's species. This switch of the name *websteri* from one species to the other, and adoption of a new name for *websteri* as currently understood, would cause considerable confusion because the name *websteri* has long been associated with Hartman's species and has been cited in numerous publications concerning commercially important shell-boring spionids (para. 5 above).

9. We urge that the specific name *Polydora websteri* be conserved for the species that Hartman (1943) described. We propose that Article 72 of the Code be set aside in this case and that the Commission be asked to rule that the specific name of *P. websteri* Hartman, 1943 is no longer to be treated as a replacement name (and therefore a junior objective synonym) of *P. caeca* Webster, 1879. Approval of this proposal will allow the designation of a lectotype for *P. websteri* from among Hartman's original material in the Los Angeles County Museum of Natural History (para. 4 above), thereby maintaining the name in its accustomed usage. Information on Hartman's specimens was supplied (in litt., December 1997) by Leslie H. Harris, Collection Manager of the LACM-Allan Hancock Foundation Polychaete Collection: 'The data for Hartman's (1943) material, LACM-AHF 1628 (N1929), comes from three sources: (1) data on the labels inside the vial; (2) Hartman in Loosanoff & Engle, 1943, pp. 70-72; and (3) the entry in Hartman's personal catalogue, which reads 'N1929 *Polydora websteri*, n[ew] name, Milford, Conn. Dug from vesicles on empty oyster shells, in mouth of Milford River, by J.B. Engle, Jan. 4 1943, sent by Thurlow Nelson'. One of us (V.I.R.) has examined Hartman's (1943) original specimens, described and illustrated one of them (Radashevsky, in press), and we propose that this specimen (catalog no. LACM-AHF POLY 1628) be designated as the lectotype of *P. websteri*.

10. Blake (1996, p. 181) resurrected and redefined the genus *Dipolydora* Verrill, 1879. He retained *websteri* Hartman in *Polydora* Bosc, 1802 and referred *coeca* Örsted to *Dipolydora*. Article 59 of the Code states that *P. caeca* Webster is permanently invalid since it is a junior secondary homonym replaced before 1961. We have therefore proposed (Williams & Radashevsky, in press) a new nominal species for specimens matching Webster's description. A specimen collected from a shell fragment of *Mya arenaria* Linnaeus, 1758 off Rhode Island is the holotype.

11. The International Commission of Zoological Nomenclature is accordingly asked:

- (1) to use its plenary powers to rule that the specific name *websteri* Hartman in Loosanoff & Engle, 1943, as published in the binomen *Polydora websteri*, is to be treated as the specific name of a then new nominal species and not as a replacement name for *Polydora caeca* Webster, 1879;

- (2) to designate specimen LACM-AHF POLY 1628 in the Allan Hancock Foundation Polychaete Collection, Los Angeles County Museum of Natural History, as the lectotype of *Polydora websteri* Hartman in Loosanoff & Engle, 1943;
- (3) to place on the Official List of Specific Names in Zoology the name *websteri* Hartman in Loosanoff & Engle, 1943, as published in the binomen *Polydora websteri* and as defined by the lectotype designated in (2) above.

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Comments on this case are invited for publication (subject to editing) in the *Bulletin*; they should be sent to the Executive Secretary, I.C.Z.N., c/o The Natural History Museum, Cromwell Road, London SW7 5BD, U.K. (e-mail: iczn@nhm.ac.uk).