

Syllides caribica, a new species from Aruba, the Netherlands Antilles,
with a brief discussion of its subfamilial assignment

(Polychaeta: Syllidae)

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With 2 figures

Abstract

A new species of Syllidae, *Syllides caribica* n. sp., from Aruba, the Netherlands Antilles, Caribbean Sea is described and discussed. The new species is conspicuous in possessing fleshy palps with ventral papillae-like appendages, in lacking pharyngeal teeth, in having smooth dorsal cirri on first and second chaetiger and articulated ones on following chaetigers, and in possessing a single prominent spine at the bases in each of the blades of the superior falcigerous chaetae. Its assignment to the Syllinae or Eusyllinae is discussed by resulting that the taxon *Syllides* ØRSTED 1845 might not be positioned into any of the four classical syllid subfamilies thus a revision of the subfamilies is regarded to be claimed.

Key words: *Syllides*, Syllidae, Syllinae, Eusyllinae, taxonomy, systematics, Netherlands Antilles, Caribbean Sea.

Introduction

During my work on a revision of the polychaete genus *Typosyllis* LANGERHANS 1879 sensu HARTMANN-SCHRÖDER 1965 (Syllidae), I had the chance to study a striking species that was collected on sandy beaches of Aruba island, Caribbean Sea. I found that this specimen possessed typical syllid palps with paired ventral papillae-like appendages. Biarticulate palps are completely uncommon in Syllidae, and it struck me how similar these palps were to the biarticulate ones known in pilargid species. An assignment to the Syllidae was obvious, not only on account of the possession of a proventricle, but also because the general habitus, as well as parapodia and chaetae, are completely syllid typical. At first sight I supposed a close relationship of the observed material to LANGERHANS' genus as sepa-

rated palps and the conspicuously articulated dorsal cirri intercessioned for a Syllinae species, whereas the general habitus, the smooth anteriormost appendages, and the articulated dorsal cirri that were bent into posterior direction were so similar to *Syllides* ØRSTED 1845 (Eusyllinae). However, such combination of features does not fit neither of the subfamilies Syllinae, Eusyllinae, Exogoninae, and Autolytinae.

In this paper, *Syllides caribica* n. sp., from the Caribbean Sea, is described and its position within the Syllidae discussed. The new species was collected on Aruba island sandy beaches in 1995 by CHRISTOPH MEYER, Universität Osnabrück, who kindly left me the material for description.

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Material and methods

There was only one complete animal found in the obtained sample of sand. The specimen was washed out with a solution of 8% MgCl₂ (see WESTHEIDE 1990) and fixed in a buffered mixture of sucrose, picric acid, formaldehyde, and glutaraldehyde (SPAFG; see WESTHEIDE & PURSCHKE 1988). Subsequently it was transferred to 70% ethanol. For light microscopical preparations, the fixed specimen was transferred from 70% ethanol to glycerine. Observations, measurements, photos and line drawings were made with aid of a Leitz Diaplan microscope with interference contrast optics and a camera lucida. Pencil drawings have been scanned, imported into a graphic program (Micrografx Designer 4.1a TE) and redrawn vector-orientated. The printout was done by a laserprinter (Hewlett Packard 4P) with a dissolution of 600 x 600 dpi.

The following abbreviations for collections are used: Muséum d'Histoire Naturelle, Genève [MHNG]; Senckenberg Museum, Frankfurt am Main [SMF]; Universität Osnabrück, Spezielle Zoologie, private collection of Prof. Dr. W. WESTHEIDE [SZUO]; Zoologisches Institut und Museum, Universität Hamburg [ZMH].

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Systematic account

Syllides caribica n. sp.

Figs. 1–2

Holotype (SMF 4971): Caribbean Sea, Netherlands Antilles, west coast of Aruba island, Eagle Beach, 12.3°N, 70.0°W, 50 cm depth, chalky coarse sand of coral reefs at high tide line, 20 Nov. 1995, C. MEYER leg., F. LICHER det. [only specimen].

Etymology: The species is named for its occurrence in the Caribbean Sea.

Additional material examined: *Syllides bansei* PERKINS 1981. Atlantic Ocean: Florida, Hutchinson Island Sta. IV, 27°20.7'N, 80°12.8'W, about 11 m, coarse calcareous sand [ZMH P-16403, 1 ind. (paratype)]. – *Syllides japonica edentata* WESTHEIDE 1974. Pacific Ocean: Galapagos, Sta. Cruz, eulittoral, 31 July 1972, W. WESTHEIDE leg. et det. [SZUO, 1 ind. (paratype)]. – *Syllides longocirrata* (ØRSTED 1845). Mediterranean Sea: Villefranche [MHNG 21123 INVE, 1 ind.]. – *Streptosyllis hainanensis* DING & WESTHEIDE 1994. South China Sea: Hainan island, near Meixia, 19°54'N, 109°33'E, sublittoral sand patch in a dead coral reef, 11 Oct. 1991 [ZMH P-22024, 1 ind. (holotype)].

Description: Only specimen complete with 29 chaetigers, 2.2 mm long (not including palps and anal cirri), 120 µm wide without parapodia, 220 µm wide with parapodia without chaetae and without dorsal cirri. Body subcylindrical, approximately uniform in width, segments distinctly demarcated dorsolaterally, surface epithelium smooth (Fig. 1A). Integument without pigment. Colour whitish to yellowish in living material and after fixation, pharynx brown.

Prostomium suboval, wider than long, posterior margin straightened (Fig. 2A). Palps fleshy, in dorsal view not appearing fused with each other; each subtriangular, slightly shorter than length of prostomium, with tiny papillae-like appendage being about two times longer than wide (Figs. 1B, 2B). Three antennae; the lateral ones positioned at the anterior prostomial margin, the median one at the middle of prostomium. Right lateral antenna slender and smooth, reaching up to the posterior margin of the first chaetiger, left lateral one and median antenna much shorter, oval, less than two times longer than wide, supposedly

being regenerated. Four irregular chubby eyes situated in posterior half of the prostomium forming a slight curve opened frontally, left and right pair each partly fused together, outer eyes about one and a half to two times larger than inner ones. Frontal pigmented spots not present. Lateral sides of prostomium covered with long cilia.

Peristomium separated from prostomium by shallow groove dorsally. Two pairs of oval to beanlike peristomial cirri in anterior half; dorsal ones resembling median antennae in form and size, about one and a half time longer than ventral cirri. Distinct long paired nuchal organ dorsally from the anterior peristomial margin extending laterally to the posterior peristomial margin (Fig. 2A).

Parapodia uniramous; notopodia reduced, each only with dorsal cirrus. Dorsal cirri on the first and second chaetiger smooth to wrinkled; first pair reaching up to the posterior margin of the fourth chaetiger, second pair of nearly same length. Dorsal cirri of the third and following chaetigers articulated; third to fifth dorsal cirri each with seven articles, in median and posterior segments with five (seven in 14th chaetiger), last four segments with only one article (others broken?), each about two times longer than wide.

Neuropodia well developed; neuropodial lobes subcylindrical, about half as wide as the body width, each with a praechaetal parapodial lobe, a ventral cirrus, one internal acicula, up to eight subacicular falcigerous chaetae and one simple dorsal chaeta. Falcigerous chaetae with blades of different lengths in each parapodium, almost constantly over the whole length of the specimen (Figs. 1E–H); dorsalmost longest blades up to 50 µm long with ratio of 3.5 in comparison to the ventralmost shortest blades, each blade bidentate with a minutely serrated edge. Long falcigers with a thorn at base of the blade and teeth lacking subdistally. Shafts of superior falcigers with two notches, inferior ones with one notch. Simple dorsal chaeta distally rounded, conspicuously serrated on the distal two-thirds of length, present in first (!) chaetiger up to the

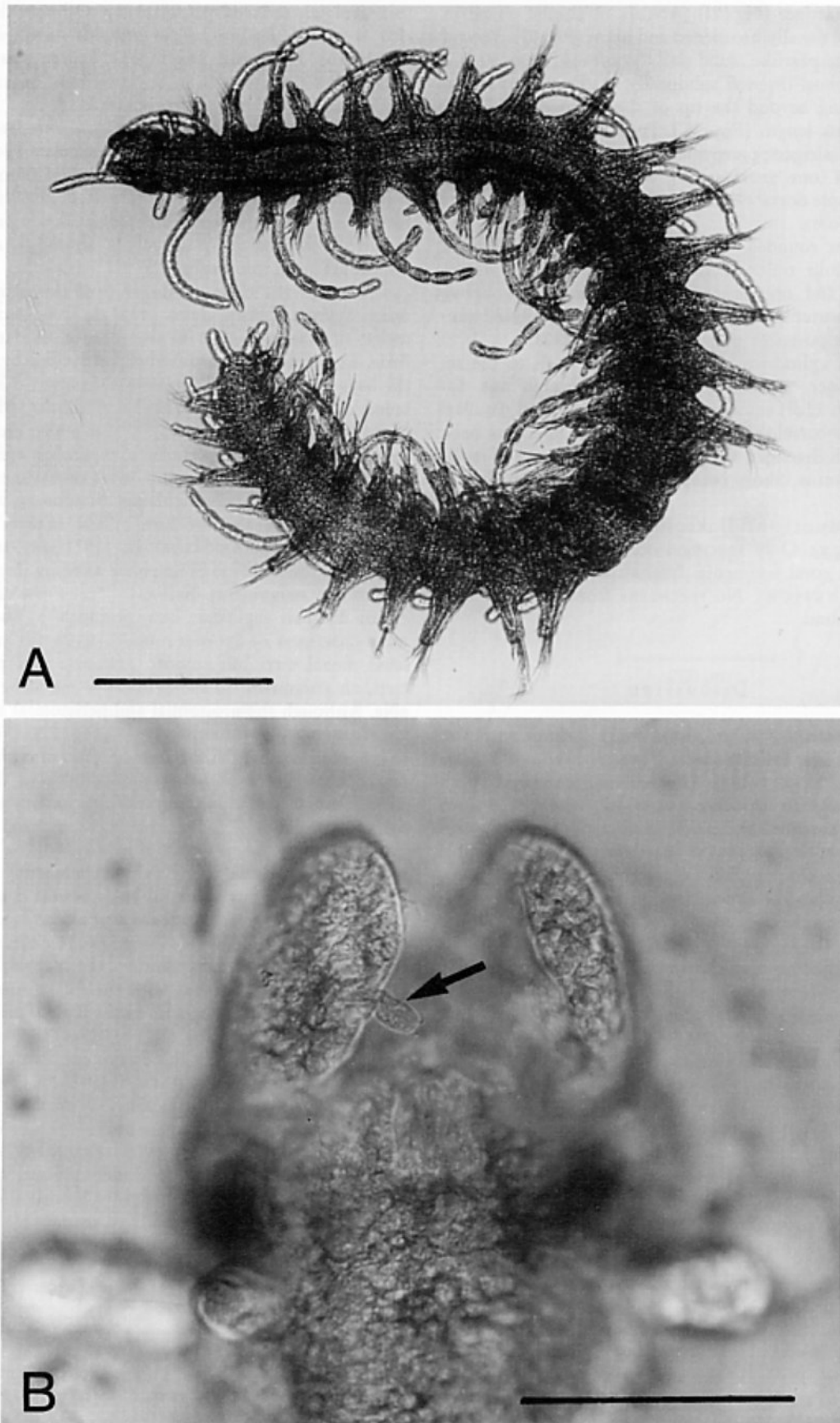


Fig. 1. *Syllides caribica* n. sp. (holotype). - A) Complete specimen, dorsal view; B) prostomium, ventral view (arrow showing papillae-like appendages). - Scales: A = 500 μ m; B = 100 μ m.

