

## Description of *Myrianida convoluta* (Cognetti) from the Bay of Peter the Great (the Sea of Japan), first finding in the Russian seas (Polychaeta: Syllidae, Autolytinae)

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Buzhinskaja, G.N. & Nekrasova, M.I. 2007. Description of *Myrianida convoluta* (Cognetti) from the Bay of Peter the Great (the Sea of Japan), first finding in the Russian seas (Polychaeta: Syllidae, Autolytinae). *Zoosystematica Rossica*, **16**(2): 147-151.

*Myrianida convoluta* (Cognetti) is described from the Bay of Peter the Great. The atokous form, stolon-bearing specimens and female with larvae were found in August 2006 on sea grasses from the depth of 1-2 m. The species is recorded from the Russian seas for the first time.

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Six species of Autolytinae were previously recorded from the Far Eastern seas (Russia). Based on a study of the type material, Nigren (2004) clarified that *Autolytus caterincae* Uschakov, 1950 and *A. beringianus* Annenkova, 1934 are junior synonyms of *Epigamia magna* (Berkeley, 1923). *A. ussuriensis* Zachs, 1933, known from a single specimen in poor condition, is considered Autolytinae incertae sedis. *A. rostripalpus* Chlebovitsh, 1962, described from epitokous males, is considered now Autolytinae Procerini incertae sedis. Thus, only 2 species are for certain revealed in the Far Eastern seas: *Proceraea prismatica* (Fabricius, 1780) and *Epigamia magna* (Berkeley, 1923).

Among the polychaetes collected from sea grasses in the Vostok Bay (the Bay of Peter the Great, the Sea of Japan) in summer 2006, we found several specimens of *Myrianida convoluta* Cognetti. The species is recorded from Russian seas for the first time. In our northern seas and in the Black Sea, *M. prolifera* (O.F. Müller, 1788) only was recorded.

The studies were made at the Biological Station "Vostok" of the Institute of Marine Biology (Far East Scientific Centre, Russian Academy of Sciences). The description, photos and figures were made from living specimens taking into consideration that identification of preserved specimens of small Autolytinae is a very difficult task. Microscopes "Mikmed 6" of the firm LOMO (St. Petersburg), "Polyvar" of the firm Reichert and camera "Canon Power Short S 40" were used. The

material is deposited at the Zoological Institute, Russian Academy of Sciences, St. Petersburg.

### ***Myrianida convoluta* (Cognetti, 1953)** (Figs 1-10)

*Autolytus convolutus* Cognetti, 1953: 323-332, figs 1-12; 1957: 71-72, Fig. 15 a-b, Tav. II, fig. 14, 17, 18; Ben-Eliahu, 1977: 85-86, fig. 12; San Martin, 2003: 483-486, figs 265 A-E, 266 A-D.

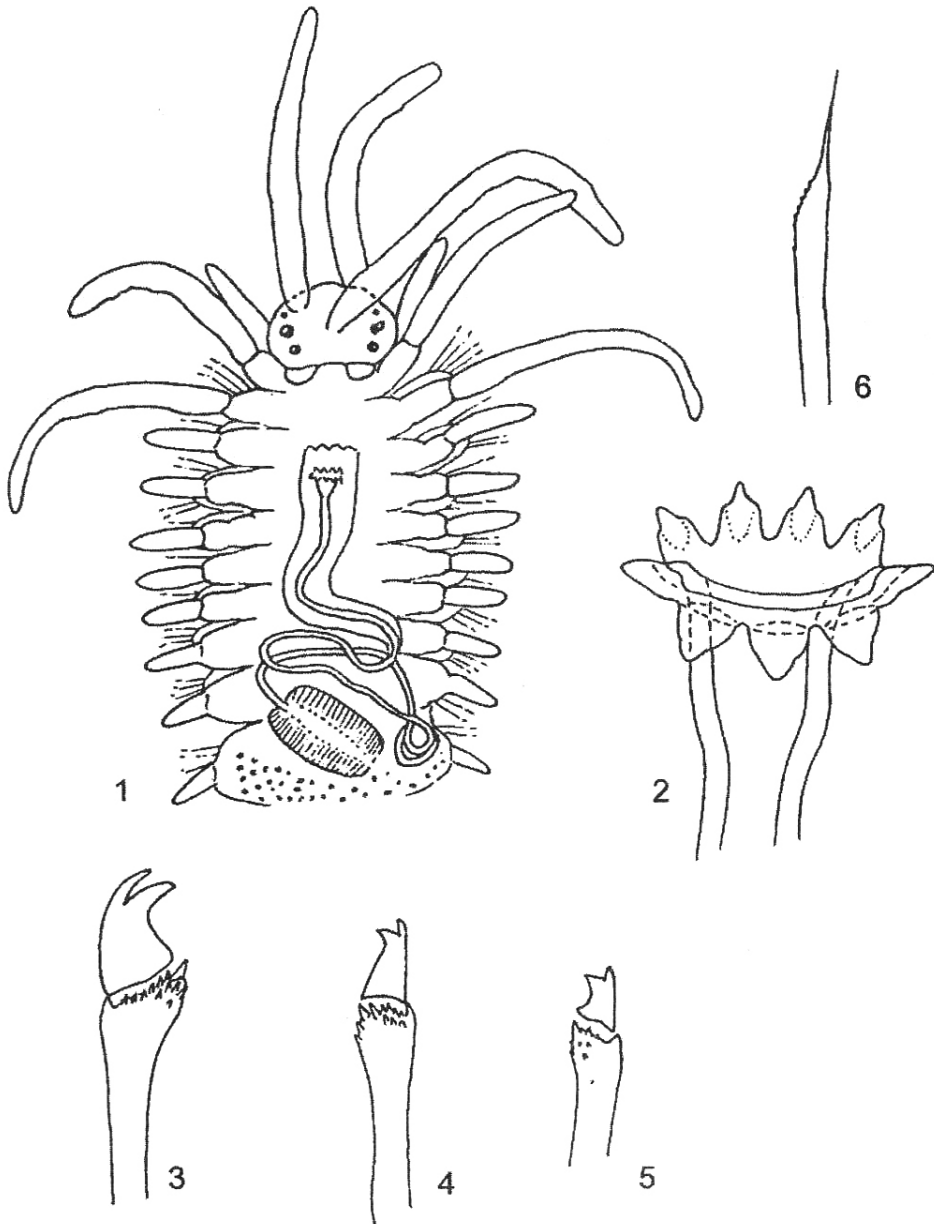
*Autolytus (Regulatus) convolutus*: Imajima, 1966: 47-49, fig. 12 a-h.

*Myrianida convoluta*: Nigren, 2004: 125-126, fig. 60, A-D.

**Material.** Russia, Sea of Japan, Bay of Peter the Great, Vostok Bay, depth 1-2 m: 1 female, 2 specs with male stolons, on *Phyllospadix*, 8.VIII.2006; 5 specs, on *Phyllospadix*, 18.VIII.2006; 1 spec. with stolon on initial stage, on *Zostera*, 22.VIII.2006.

**Description.** Length 3 mm for 44 chaetigers, width 0.3 mm. Live specimens uncoloured to faintly yellowish; cirri transparent.

Prostomium rounded-triangular, broader than long, about 1.5 times as wide as long (Fig. 7). Two pairs of red eyes in trapezoidal arrangement; with lenses; anterior pair larger than posterior. Eye spots present above anterior pair of eyes (Fig. 1). In dorsal view, palps not projecting in front of prostomium. Nuchal epaulettes short, up to middle of tentacular segment (Fig. 1). Median antenna inserted medially on prostomium, lateral antennae on anterior margin of prostomium. Median antenna reaching chaetiger 7; length of



**Figs 1-6.** *Myrianida convoluta*. 1, anterior part, dorsal view; 2, trepan; 3-5, upper, middle and lower compound chaetae; 6, bayonet chaeta.

lateral antennae  $5/6$  of median antenna. Length of dorsal tentacular cirri  $3/4$  of lateral antennae. Ventral tentacular cirri half as long as dorsal pair. Tentacular segment shorter than following.

Dorsal cirri of chaetiger 1 as long as median antenna (Figs 1, 5). Dorsal cirri from chaetiger 2

short, about  $1/3$  as long as body width, subequal in length to following dorsal cirri. Cirrophores present on tentacular cirri and all dorsal cirri. Cirrophores shorter than parapodial lobes and shorter than cirrostyles. All appendages cylindrical. Parapodial lobes rounded. Single acicula in all

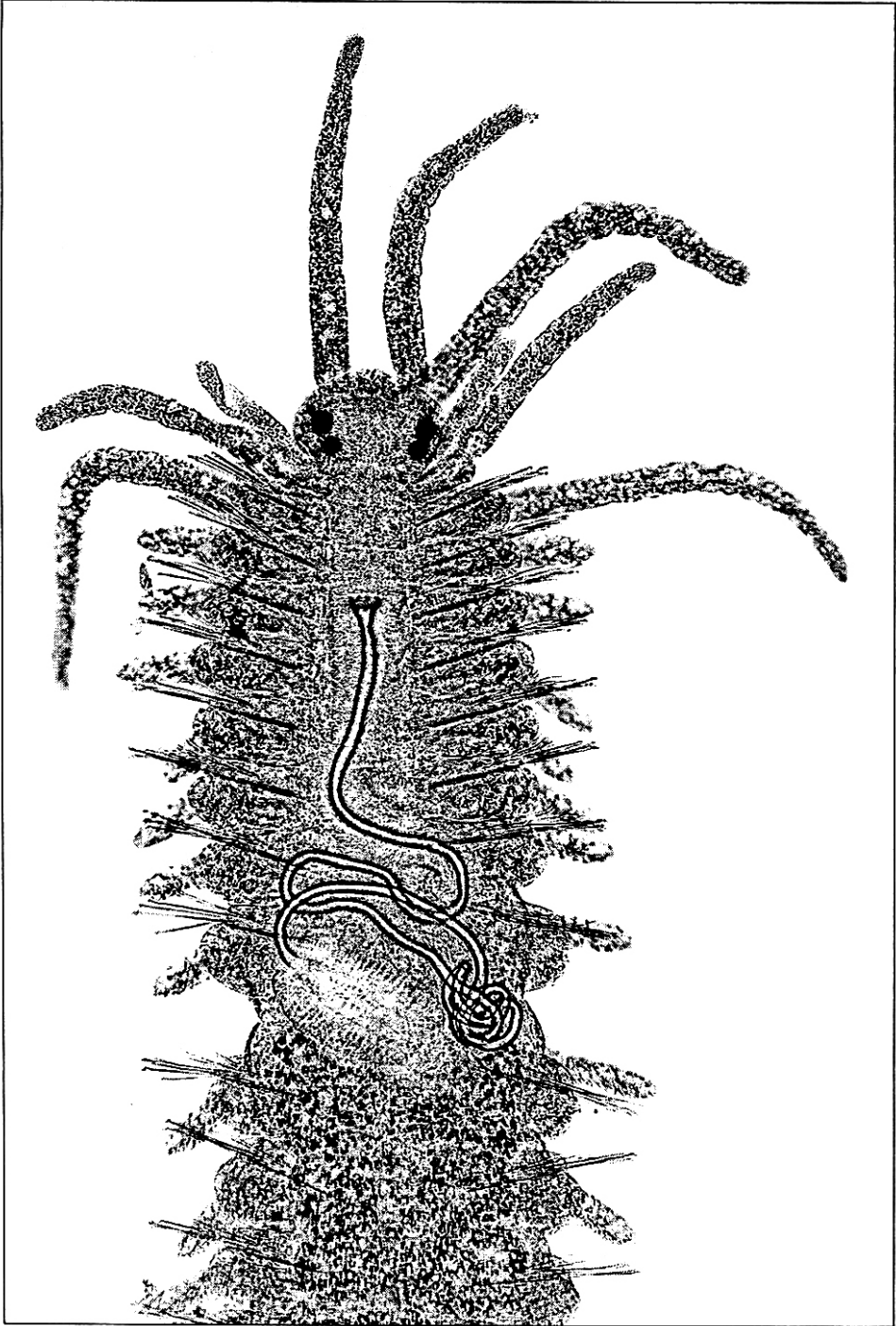
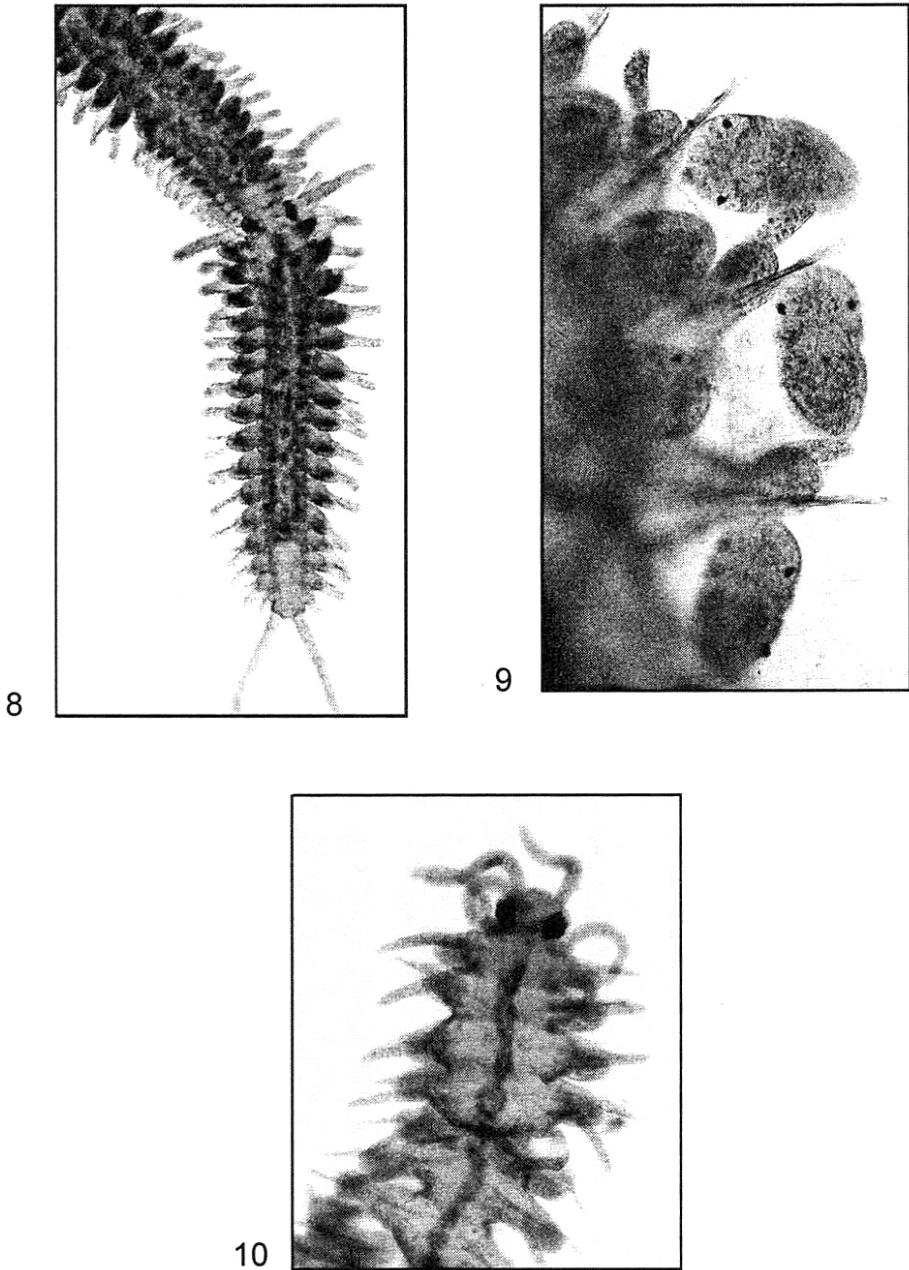


Fig. 7. *Myrianida convoluta*, anterior end (photo).



**Figs 8-10.** *Myrianida convoluta* (photos). **8**, part of a chain of the male stolon; **9**, larvae on dorsal cirri of female; **10**, female, anterior end.

chaetigers. Chaetal fascicle with 6-7 compounds in chaetigers. Compound with bidentate blades; serration of blades not visible in light microscope (Figs 3-5). Distal tooth of compounds smaller than proximal. Shafts of compounds with small spines. Single thin bayonet chaeta subdistally denticulated starting with chaetiger 14 in each parapodium (Fig. 6).

Pharynx very long, with multiple situation anterior and lateral to proventricle (Figs 1, 7). Trepan with 9 equal large teeth arranged in 1 ring in chaetiger 3 (Fig. 2). Basal ring poorly developed; infradental spines not visible. Proventricle ellipsoid, in segment 8-9, with 20-21 rows of muscle cells. Pygidium with 2 cirri; median papilla absent.

Female with larvae on ventral side and on dorsal cirri (Figs 9, 10). Length 2 mm, 36 segments, colour faintly greenish. Prostomium rounded triangular, anterior margin prominent. Eyes 2 pairs, large, with lenses, dark red, situated on dorsal and ventral side of prostomium. Palps absent. Nuchal epaulettes to end of tentacular segment. Median antenna inserted medially on prostomium; lateral antennae inserted on anterior margin. Tentacular segment shorter than following segments. Tentacular cirri 1 pair, dorsal, as long as antennae. Length of following cirri equal to body width. Short cirrophores present on all cirri. All appendages cylindrical. Single acicula in each neuropodium. Notopodia and swimming chaetae absent. Pygidium with 2 cirri. Anterior region with 4 chaetigers. Larvae from chaetiger 5 to 30.

**Reproduction.** Schizogamous reproduction behind chaetiger 16 (1 specimen with stolon in initial stage) and chaetiger 22 (2 specimens with male stolons). Male stolons consisting of 12-16 chaetigers (Fig. 8).

**Comments.** The species was described from the Bay of Naples. The type material of the species is not preserved. Our specimens differ from the figures and photos of the type specimens (Cognetti, 1953) in the position of the median antenna in the centre of the prostomium, instead of on its anterior margin. In the description of specimens from the Mediterranean Sea (San Martin, 2003), the median antenna is stated to be located between the posterior pair of eyes. Nothing is known about nuchal epaulettes of the types; they are usually reported

as reaching the end of chaetiger 1 or chaetiger 2. Nuchal epaulettes of our specimens are restricted to tentacular segment. However, main characters of our specimens agree with the diagnoses of this species, namely: much convoluted pharynx, equal cirri, except for first dorsal cirri, small equal cirrophores and trepan with 9 equal teeth on a thin basal ring. The note about presence of infradental spines in this species (Nigren, 2004) is most probably a mistake, as these spines are absent in the photo of trepan presented by the author.

**Distribution and ecology.** The species is widely distributed in subtropical regions: Mediterranean, Red Sea, the Atlantic Ocean near Spain and Cape Verde Islands, Gulf of California. It was reported also off Cuba (tropical waters) and in the Tsugaru Strait (North Japan, low boreal waters). The species occurs in the intertidal zone to the depth of 20 m on sea grasses, on algae with epifauna (sponges, hydroids), inside of sponges, on starfishes, in cryptofauna of lime concretions, on vermetid reefs, on sand with *Amphioxus*.

#### Acknowledgements

We thank the administration of the Institute of Marine Biology for the opportunity to stay at the Biological Station "Vostok" and staff of this institute for their kindness, benevolence and co-operation. We are grateful to A.A. Golikov and Dr. A.M. Naseka (Zoological Institute RAS) for preparing the photos for publication. The work was supported by a grant of the Federal Programme "Biodiversity".

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Received 21 November 2007