

Comments. Discussions

The answer to Ascensão Ravara (2011) about taxonomic status of *Bipalponephthys* (Polychaeta: Nephtyidae)

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In 2010 we published a review of northern European and Arctic *Micronephthys* (Dnestrovskaya, Jirkov, 2010). In this paper we suggested that recently described *Bipalponephthys* Ravara et al., 2010a is a junior synonym of *Micronephthys* and stated that Dr. Ascensão Ravara agreed with our opinion. Recently Dr. Ravara argued that neither these genera were synonyms nor she agreed with our opinion. “In my brief conversation with Dr. Jirkov I never agreed that *Bipalponephthys* should be considered a junior synonym of *Micronephthys*” (Ravara, 2011).

The senior author (I.A. Jirkov) ought to confirm that Dr. Ravara never agreed with him that *Bipalponephthys* was a junior synonym of *Micronephthys*. The source of this misunderstanding stems from the fact that neither during the discussion following her talk, nor during our conversation during coffee break she showed her disagreement. And I (IAJ) am really sorry for misunderstanding.

Dr. Ravara gave some reasons why *Bipalponephthys* should not be considered as junior synonym of *Micronephthys*. She stated “*Bipalponephthys* and *Micronephthys* in our analysis (Ravara et al., 2010a) come out as non-nested taxa”.

Ravara et al (2010a) has removed *Bipalponephthys* gen. nov. from *Micronephthys* as a result of their phylogenetic analysis. Three species previously included in *Micronephthys*: *Nephtys cornuta* Berkeley et Berkeley, 1945 *Micronephthys oculifera* Mackie, 2000, and *Nephtys stammeri* Augener, 1932 were included in that analysis. Both data on external morphology and DNA sequences were used. The results showed that *Micronephthys oculifera* and *Nephtys stammeri* form a monophyletic clade that is distinctly different from basal *Nephtys cornuta*. Therefore, they decided

to split *Micronephthys* erecting a new genus *Bipalponephthys*.

Ravara et al. (2011) wrote “the morphological diagnoses of *Bipalponephthys* and *Micronephthys* are not similar”. However, neither a diagnosis nor its differential diagnosis are explicitly given in the description of the new genus by Ravara et al. (2010a), instead, this information sporadically distributed throughout the text and tables. It is a sad and confusing example how new taxa should not be proposed. According to Ravara (2011), “*Bipalponephthys* has the morphological synapomorphy posteriorly smooth (rather than barred) chaetae in posterior chaetigers”. This character, mentioned in Ravara et al. (2010a) however, cannot be accepted as synapomorphy, because it is present in at least eight species of *Nephtys* (see Ohwada, 1985). Ravara et al. (2010a) also stated that bifid palps are “unique for this new genus and constitute morphological apomorphies”. According to the matrix of morphological characters used for phylogenetic analysis by Ravara et al (2010a) species included in *Bipalponephthys* and *Micronephthys* differ only by characters 21 (ventral notopodial branchiae) and 35 (lyrate chaetae). On the basis of morphological similarity only Ravara et al. (2010a) included *Aglaophamus neotena* Noyes, 1980 and *Nephtys danida* Nateewathana et Hylleberg, 1986 in *Bipalponephthys*.

According to ICZN 61.1.1 “No matter how the boundaries of a taxonomic taxon may vary in the opinion of zoologists the valid name of such a taxon is determined from the name-bearing type(s) considered to belong within those boundaries”. However, Ravara et al. (2011a) did not investigate taxonomic position of *Nephtys minuta* Theel, 1879 the type species of *Micronephthys*. In fact, they even did not mention this species in their paper. Descriptions of *Nephtys*

minuta published before Ravara et al. (2010a) (for example Theel, 1879; Friedrich, 1939; Jirkov, Paraketsova, 1996; Dnestrovskaya, Jirkov, 2001) allowed estimating its taxonomic position.

Nephtys minuta, and *Nephtys cornuta* have bifid palps, ventral notopodial branchiae and has no lyrate chaetae smooth chaetae posteriorly, which replace barred one. *Micronephtys oculifera* and *Nephtys stammeri* have no bifid palps, ventral notopodial branchiae, but have lyrate chaetae. Obviously, *Nephtys minuta* and *Nephtys cornuta* on the basis on morphological similarity should be included in the same genus, while *Micronephtys oculifera* and *Nephtys stammeri* should be included into another genus. However, Ravara et al. (2010a) make *Nephtys cornuta* the type species of the new genus *Bipalponephtys*, while leaving *Micronephtys oculifera* and *Nephtys stammeri* within *Micronephtys*. In doing so they restricted the diagnosis of *Micronephtys* in such a way that type species of this genus is included in *Bipalponephtys*. Obviously such nomenclature changes ought to be rejected and *Bipalponephtys* thus should become junior synonym of *Micronephtys*.

It is interesting to mention that in their later paper Ravara et al. (2010b) wrote in the diagnosis of *Micronephtys* “Branchiae usually absent or... present” and “lyriform chaetae may be present”, and in the description of *Micronephtys minuta*: «palps... with a small papilla ventrally at the base», i.e. bifid. If these data were included into the matrix of Ravara et al. (2010a), the results of the study might have changed cardinally.

Also we do not agree with Ravara’s statement that without investigation of type material one cannot make any conclusion about its characters. Why one should publish a description if investigation of the type material is always necessary? And more importantly, Ravara and her co-authors did not investigate the type material of *Micronephtys minuta* either, they even did not even mention *Nephtys minuta* when they erected *Bipalponephtys*. Moreover, Ra-

vara et al (2010b), after investigation of type material of *Nephtys minuta* agreed that our specimens (Dnestrovskaya, Jirkov, 2010) belong to *Nephtys minuta*. They choose *Nephtys cornuta* as the type species for *Bipalponephtys* even though they did not examine any material of this species at all. So they feel free to interpret characters of the species they have not seen, while saying it should not be done by anybody else.

To sum it up, Dr. Ravara in her comments did not give any reason why our opinion about synonymy of *Micronephtys* and *Bipalponephtys* should be rejected.

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