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Short Communication

First Record of the Polychaete Worm *Ceratonereis* (*Composetia) burmensis* (Phyllodocida: Nereididae) from Pakistan

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Abstract. *Ceratonereis* (*Composetia*) *burmensis* Monro (1937) is reported for the first time from Pakistan. A single specimen was collected from Hab river delta (24°53'13.45" N and 66°42'18.04" E) on the Balochistan coast in September, 2017. Two species of *Ceratonereis* previously reported from Pakistan are: *Ceratonereis marmorata* (Horst, 1924) and *Ceratonereis* sp. (*Cpmposetia*) *burmensis* differs from *C. marmorata* in having a prostomium that is not marmorated. It also differs from *Ceratonereis* sp. in having neuropodial falcigers. *C.* (*Composetia*) *burmensis* has wide distribution from Iran to China.

Keywords: polychaeta, nereididae, *Ceratonereis* (*Composetia*) *burmensis*

Monro (1937) described *Ceratonereis* (*composetia*) *burmensis*, as *Ceratonereis burmensis*, for the first time from Myanmar (formerly Burma). Genus *Ceratonereis* Kinberg, 1865 is characterized by the presence of conical paragnaths only on the maxillary ring of the proboscis, while oral ring lacks paragnaths and papillae. Hartmann-Schroder (1985) revised the genus and introduced three subgenera: *Ceratonereis* for species with anteriorly cleft prostomium, *C.* (*Simplisetia*) for species with anterior margin of prostomium entire and with fused heterogomph falciger neurochaete and *C.* (*Composetia*) for remaining species including *C. (C) burmensis*. Khlebovich (1996) raised the three subgenera to full generic level, which is yet to be accepted widely. World Register of Marine Species (last accessed in December, 2017) still recognizes it as *Ceratonereis* (*Composetia*) *burmensis* (Monro, 1937).

Although Pakistan is rich in marine biodiversity (Siddiqui and Aslam, 2017) yet the Polychaete fauna of Pakistan is little studied. Family Nereididae, to which *C. (C) burmensis* belongs, is merely represented by 16 species (Siddiqui and Mustaquim, 1988; Mustaquim, 1997; Hassan, 1963; Aziz, 1938). In comparison 40 species of Nereididae have been reported from neighboring country Iran (Bonyadi-Naeini *et al*., 2017). In Pakistan genus *Ceratonereis* is represented by *C.marmorata* (Horst, 1924) and *Ceratonereis* sp. (Mustaquim, 1997). During routine collection of oysters from Hab river delta, a specimen of *C.* (*Composetia*) *burmensis* was found. This being a new record for Pakistan is described and illustrated in this paper.

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The worm was collected from Hab river delta (24°53' 13.45" N and 66°42' 18.04" E) on the Balochistan coast in September, 2017 and was fixed in 4% formaldehyde. Later on it was preserved in 70% alcohol. The everted proboscis was examined under stereo microscope. Parapodia were removed from anterior, middle, and posterior part of the body. They were temporarily mounted in glycerol-alcohol (equal parts of glycerol and 70% alcohol) and examined under compound microscope. All drawings were made with the help of camera lucida.

Results and Discussion

Finaly *Neridiae Blainville* in 1818, Sub Family Neridiae Blainviille in 1818, *Ceratonerise (Composetia burmensis* (Monro, 1937), 532 p Fig. 1a-f; Wu *et al*. (1985) Fig. 98 A-I, 99A-G; Fernando and Rajasekaran, (2002) 237 p. *Nereis (Ceratonereis) burmensis*, Fauvel (1953) p 196, Fig 97d-f; *Ceratonereis (Composefia) burmensis*, Hartmann- Schröder, (1985), p49; Chen, (2009), p165; *Composetia burmensis*, Yousefi *et al.* (2011), p62.

Description: One complete specimen was found, length was 28 mm and width 2.5 mm (excluding parapodia) for 66 chaetigers.Anterior margin of prostomium entire, not cleft. Eyes present, 2 pairs. A pair of digitiform

antennae present. Palpophore large, palpostyle small and button-like. Tentacular cirri with distinct cirrophores, longest tentacular cirri extend back to chaetiger 3. Jaws with 10-11 teeth, Oral ring of pharynx without paragnaths or papillae. Maxillary ring of pharynx with conical paragnaths only, arranged in discrete areas (Fig. 1A and B), area I, a patch of 5 small cones; area II, 13 large cones on each side; area III, a patch of 30 cones arranged in 3 irregular rows; area IV, 7 cones on each side.

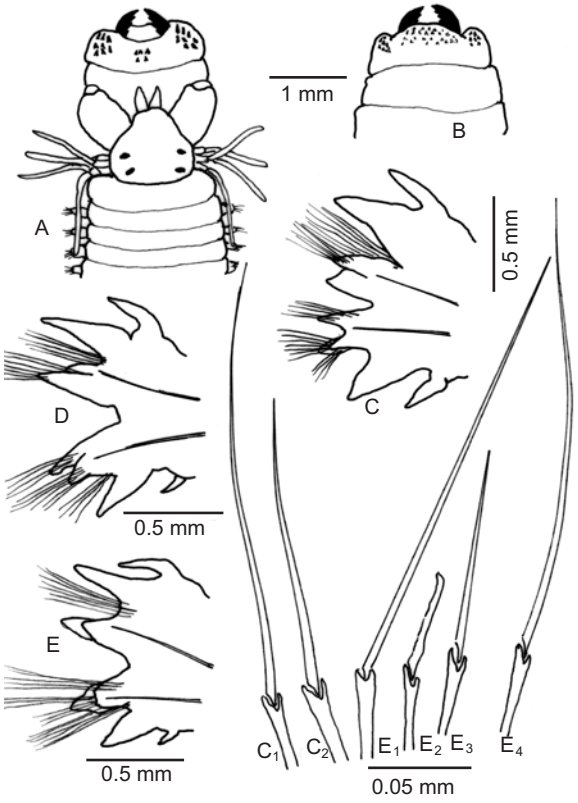

Fig. 1. *Ceratonereis* (*Composetia*) *burmensis*: A=Anterior part of the worm in dorsal view; B=Ventral view of everted proboscis; C= Anterior parapodium from 8th chaetiger; C_1 and C_2=notopodial homogomph spinigers with long and short blades respectively; D=Middle parapodium from 30th chaetiger, E-Posterior parapodium from 53rd chaetiger; E_1=Notopodial homogomph spiniger; E_2= Neuropodial sesquigomph falcigers; E_3= Neuropodial sesquigomph spiniger with short blade; E_4= neuropodial sesquigomph spiniger with long blade.

Parapodia biramous, except first the dorsal and ventral cirri without cirrophores. Dorsal cirrus smaller than the adjoining notopodial lobe, ventral cirrus smaller than the dorsal cirrus and adjoining neuropodial lobe. Notopodia of anterior parapodia with three ligules, one large and two small, neuropodia with four ligules, ventral ligule largest (Fig. 1C). In middle parapodia median ligule of notopodia small (Fig. 1D). In posterior parapodia noto- and neuropodia have three ligules (Fig. 1E). Notochaete in anterior parapodia homogomph spinigers with long and short blades (Fig. C_1, C_2). Notochaete in posterior parapodia homogomph spinigers with long blades only (Fig. E_1). Neurochaete in posterior parapodia sesquigomph falciger (Fig. E_2) and sesquigomph spinigers with short and long blades (Fig. E_3, E_4). Enlarged hook or fused falciger absent.

Distribution: Iran (Yousefi *et al*., 2011), Pakistan (present paper), India (Chandra and Chkraborty, 2008; Fernando and Rajasekaran, 2002; Fauvel, 1953); from Myanmar (Monro, 1937) from Singapore (Chan, 2009) from China (Wu *et al*., 1985).

The present specimen corresponds with the description of earlier workers (Chan, 2009; Wu *et al*., 1985) particularly in the arrangement of paragnaths, parapodial morphology and shape of chaetae. Number of paragnaths in the Area I is variable (Chan, 2009). Monro (1937) documented a more or less rectangular patch of small paragnaths on the area from type locality. In the present specimen there are 5 small conical paragnaths. Wu *et al*. (1985) reported 0 – 5 for Chinese specimens, while Chan (2009) mentioned 7 - 10 small cones on area I from Singapore. Fauvel, (1953) and Fernando and Rajasekaran, (2002) mentioned a patch of small paragnaths on area I for Indian specimens.

Prostomium and anterior part of the body in the present specimen is not heavily pigmented, as observed by Chan, (2009). However, he mentioned that the unpigmented specimens are rare. It is unfortunate that a single specimen was found and intra-specific variation could not be observed.

The present paper has raised the number of known nereidid species of Pakistan from 16 to 17. Further polychaete surveys are needed to complement the current data. We expect that many species of polychaete from our coastal waters remain to be discovered. It is a reasonable expectation if compared with the nereidid fauna of adjacent areas.

Conflict of Interest. The authors declare no conflict of interest

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