TAXONOMIC NOTES OF POLYCHAETA IN ROCKY INTERTIDAL SHORES OF GUNUNG KIDUL, YOGYAKARTA

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ABSTRAK

Hadiyanto (2013) Catatan taksonomi polychaeta di pantai intertidal berbatu Gunung Kidul, Yogyakarta. *Zoo Indonesia,* 22(2), 17-27. *Tiga puluh spesies polychaeta telah dilaporkan dari pantai intertidal berbatu "Gunung Kidul", Yogyakarta. Semua spesimen disimpan di Pusat Penelitian Oseanografi (P2O-LIPI), Jakarta. Kebanyakan polychaeta tersebut tersebar luas di perairan Indo-West Pacific. Sembilan belas dari seluruh spesies yang teridentifikasi terindikasi sebagai temuan pertama di perairan Indonesia, tetapi temuan tersebut perlu diverifikasi.*

Kata kunci: *catatan taksonomi, polychaeta, pantai intertidal berbatu, Gunung Kidul*

ABSTRACT

Hadiyanto (2013) Taxonomic notes of polychaeta in rocky intertidal shores of Gunung Kidul, Yogyakarta. *Zoo Indonesia,* 22(2), 17-27. *Thirty polychaete species in sixteen families were reported from rocky intertidal shores of "Gunung Kidul", Yogyakarta. All specimens were deposited in Research Center for Oceanography (RCO-LIPI), Jakarta. Most of them widely distributed in Indo-West Pacific waters. Nineteen identified species were indicated as new record to Indonesian waters, but these records in particular need to be verified.*

Keywords: *taxonomic notes, polychaeta, rocky intertidal shore, Gunung Kidul*

INTRODUCTION

The first exploration on Indonesian polychaetes was conducted by Siboga Expedition (1899-1900) which took place in Eastern Indonesian waters and reported by many authors, such as Horst (1912; 1917; 1924), Mesnil & Fauvel (1939), and Caullery (1944). The next is Snellius II expedition (1984) which also took place in Eastern Indonesian waters and reported by Aguado *et al*. (2008). After these expeditions, Indonesia polychaetes were explorated partially in East Java and Madura by Pillai (1965) and Natuna Islands by Al-Hakim & Glasby (2004). Exploration of Indonesian marine biodiversity was regularly conducted under Ekpedisi Widyanusantara (EWIN) by Research Center for Oceanography, Indonesian Institute of Sciences from 2007 up to present, but no taxonomic report on poylchaeta yet.

The material of the studies above was collected mainly from offshore (Horst 1912; 1917; 1924; Mesnil & Fauvel 1939; Caullery 1944; Al-Hakim & Glasby 2004; Aguado *et al*. 2008) and milkfish farms (Pillai 1965). The polychaeta from rocky intertidal shore of Indonesian waters is particularly unknown, although few species from Siboga Expedition were collected from intertidal zone of small islands. Rocky shores provide a great variety of habitats suitable for polychaetes (Giangrande *et al*. 2003). These polychaetes were mainly controlled by physical environmental variables, showed a poorer fauna, dominated by ubiquitous species and a few well-adapted specialists (Serrano & Preciado 2007).

Coastal area of Gunung Kidul, Yogyakarta is mainly rocky intertidal shore with high wave energy (Damayanti & Ayuningtyas 2008). Some

species of seaweed grow in these area. In rocky intertidal shore, seaweed acts as protective area for polychaetes from wave pressure and other environmental variables (Serrano & Preciado 2007). Based on their characteristics, Gunung Kidul shores are representative area for study of polychaeta biodiversity in rocky intertidal zone.

MATERIAL AND METHODS

Sampling was conducted at Kukup, Sepanjang, Drini, Krakal and Sundak. Sample was taken using a frame of 20 x 20 cm. Seaweed was totally scraped, fixed in 10% formaldehyde seawater solution and sieved through 0,5 mm mesh. Polychaetes were preserved in 96% alcohol. Identification up to the lowest-level taxa based on external morphological characters. Record status of these specimens in Indonesian waters was determined based on previous reports. The materials examined in the present study are those deposited in the collections of the Research Center for Oceanography, Indonesian Institute of Sciences, Jakarta (abbreviated as "RCO").

TAXONOMY

Family Capitellidae

Pseudocapitella sp.

Materials examined. 3 (POL 1), Sundak, Gunungkidul, Yogyakarta, 27th March 2012, Hadiyanto.

Remarks. Thorax with 15 segments, one asetigerous segment present, up to segment 15 capillary setae only, branchiae absent. Genus *Pseudocapitella* in Indonesian waters also recorded by Mesnil & Fauvel (1939) as (?) *Pseudocapitella* spec. ind.

Habitat. Intertidal zone.

Notomastus sp.

Material examined. 2 (POL 2), Sundak, Gunungkidul, Yogyakarta, 27th March 2012, Hadiyanto.

Remarks. Thorax with 12 segments, one asetegerous segment present, first setiger complete. All thoracic setigers with capillary setae only. Some species of *Notomastus* that have been recorded from Indonesian waters were *Notomastus latericeus* Sars (Mesnil & Fauvel 1939), *Notomastus hemipodus* Hartman 1947, *Notomastus* cf. *latericeus*, *Notomastus* sp.1 and *Notomastus* sp.2 (Al-Hakim & Glasby 2004).

Habitat. Intertidal zone.

Family Maldanidae

Maldane sp.

Material Examined. 1 (POL 3), Sepanjang, Gunungkidul, Yogyakarta, 26th March 2012, Hadiyanto; 1 (POL 4), Sundak, Gunungkidul, Yogyakarta, 27th March 2012, Hadiyanto.

Remarks. Cephalic keel long and high, cephalic rim shallowly notched laterally. Neuroseta present from setiger 2, pygidium lost. According to Mesnil & Fauvel (1939), only one species, *M. sarsi* Malmgren has been recorded from Indonesian waters.

Habitat. Intertidal zone.

Family Glyceridae

Glycera brevicirris Boggemann 2002

***Glycera brevicirris* Boggemann 2002: 44-47, fig. 34-36**

Material examined. 2 (POL 5), Sepanjang, Gunungkidul, Yogyakarta, 26th March 2012, Hadiyanto; 5 (POL 6), Krakal, Gunungkidul, Yogyakarta, 24th March 2012, Hadiyanto; 4 (POL 7), Sundak, Gunungkidul, Yogyakarta, 27th March 2012, Hadiyanto.

Diagnosis. Prostomium long, with at least three annuli. Parapodia biramous throughout, parapodia of mid-body with two short, rounded postchaetal lobes. Proboscidial papillae without terminal fingernail structure, mainly digitiform with more than six ridges. Ailerons with deeply incised bases. Branchiae absent.

Remarks. Boggeman (2002) and Rizzo *et al*. (2007) described that digitiform prosbocidal papillae of *Glycera brevicirris* with about 6-20 transverse ridges, but their ridges of this specimen could not be clearly observed.

Habitat. Intertidal to 1118 m.

Geographical distribution. West and east Atlantic, Gulf of Mexico to Brazil, Caribbean Sea, Red Sea, Indian Ocean, Indo-Pacific, Central Pacific Basin, east Pacific coasts, Indonesia. This species is indicated as first record to Indonesian waters.

Family Sigalionidae

***Euthalenessa* sp.**

Material examined. 1 (POL 8), Sundak, Gunungkidul, Yogyakarta, 27th March 2012, Hadiyanto.

Remarks. Three small antennae, lateral antennae fused to first setiger, all on the prostomium, ceratophores present. Two pairs of large eyes. This genus has not been previously recorded in Indonesian waters.

Habitat. Intertidal zone.

Family Polynoidae

***Lepidonotus cristatus* Day 1967**
***Lepidonotus cristatus* Day 1967: 82-83, fig. 1.14.f-i.**

Material Examined. 2 (POL 9), Sepanjang, Gunungkidul, Yogyakarta, 26th March 2012, Hadiyanto.

Diagnosis. Prostomium anteriorly tapering into the ceratophores. Palps well developed. Lateral antennae attached distally on the prostomium. Twelve pairs of elytra with smooth margins, anterior elytra with tumid, bilobed crests, pseudoelytra absent. Dorsal cirri cylindrical, ventral cirri and ventrum smooth. Renal papillae of similar length in all setigers. Notosetae slender and serrated, neurosetae with rows of coarse teeth and unidentate.

Remarks. Record of this species in Indonesian waters also has been reported by Horst (1917).

Habitat. Intertidal zone.

Geographical distribution. Indo-west-Pacific from the Red Sea to the Philipine Island, New Zealand, Japan.

***Lepidonotus tenuisetosus* Misra 1998**
***Lepidonotus tenuisetosus* Misra 1998: 133-134.**

Material Examined. 3 (POL 10), Sepanjang, Gunungkidul, Yogyakarta, 26th March 2012, Hadiyanto; 4 (POL 11), Sundak, Gunungkidul, Yogyakarta, 27th March 2012, Hadiyanto.

Diagnosis. Prostomium anteriorly tapering into the ceratophores. Palps well developed. Lateral antennae attached distally on the prostomium. Twelve pairs of elytra with fringed margins, tubercles on the elytra small, rounded to conical, pseudoelytra absent. Dorsal cirri cylindrical, ventral cirri and ventrum smooth. Renal papillae of similar length in all setigers. Notosetae slender and serrated, neurosetae with rows of coarse teeth and unidentate.

Remarks. This species is similar with *Lepidonotus cristatus*, but elytra with fringed margins and tubercles small, rounded to conical.

Habitat. Intertidal zone, crevices of wooden posts and pillars of jetty towards low water mark, salinity 8 – 19 ppt.

Geographical distribution. Tropical West Africa, Red Sea, Indo-west-Pacific to Japan, Indonesia. This species is indicated as first record to Indonesian waters.

Family Nereididae

Perinereis* aff. *arabica

Material Examined. 5 (POL 12), Kukup, Gunungkidul, Yogyakarta, 23rd March 2012, Hadiyanto; 5 (POL 13), Sepanjang, Gunungkidul, Yogyakarta, 26th March 2012, Hadiyanto; 1 (POL 14), Drini, Gunungkidul, Yogyakarta, 25th March 2012, Hadiyanto; 5 (POL 15), Krakal, Gunungkidul, Yogyakarta, 24th March 2012, 5 (POL 16), Sundak, Gunungkidul, Yogyakarta, 27th March 2012, Hadiyanto.

Remarks. Eversible pharynx with conical and transverse paragnaths on both rings, four pairs of

tentacular cirri, parapodia biramous. Anterior parapodia with three notopodial lobes, two subsequal and a short conical one. Notopodia of posterior parapodia has two lobes. Notosetae homogomph spiniger and heterogomph falciger. Arrangement of paragnath are Group I not observed, Group II a triangular patch on each side, Group III a rhomboidal cluster, Group IV a wedge-shaped patch on each side, Group V and VI two transverse rows, Group VII and VIII four iregular rows. This species is possible as *Perinereis arabica* Mohammad 1971 which has 16 paragnanth on Group I, but arrangement of paragnanth on Group I of this specimen difficult to see. *Perinereis arabica* has not been previously recorded in Indonesian waters.

Habitat. Intertidal zone.

Family Syllidae

Syllis* cf. *amica

Material Examined. 1 (POL 17), Kukup, Gunungkidul, Yogyakarta, 23rd March 2012, Hadiyanto; 5 (POL 18), Sepanjang, Gunungkidul, Yogyakarta, 26th March 2012, Hadiyanto; 5 (POL 19), Krakal, Gunungkidul, Yogyakarta, 24th March 2012; 5 (POL 20), Sundak, Gunungkidul, Yogyakarta, 27th March 2012, Hadiyanto.

Remarks. The dorsal of body papillated. Three antennae, two pairs of tentacular cirri, all articulated. Eversible pharynx with a single tooth. Median dorsal cirri with fewer than 30 annulations. Median parapodia with a simple, thick seta and compound setae. This species is similar with *Syllis amica* Imajima 1966, but its dorsal of body papillated. Imajima (1966) did not explain about dorsal view of *S. amica*. *Syllis amica* has not been previously recorded in Indonesian waters.

Habitat. Intertidal zone.

Typosyllis* cf. *maculata

Material examined. 5 (POL 21), Kukup, Gunungkidul, Yogyakarta, 23rd March 2012, Hadiyanto; 5 (POL 22), Sepanjang, Gunungkidul, Yogyakarta, 26th March 2012, Hadiyanto; 5 (POL 23), Drini, Gunungkidul, Yogyakarta, 25th March 2012, Hadiyanto; 5 (POL 24), Krakal, Gunungkidul, Yogyakarta, 24th March 2012, Hadiyanto; 5 (POL 25), Sundak, Gunungkidul, Yogyakarta, 27th March 2012.

Remarks. Three antennae and two pairs of tentacular cirri, all articulated. Eversible pharynx with a single tooth. Dorsal cirri in median region with more than 20 articles, all sides regulary arranged pigmented annulations. Parapodia with a simple seta and compound unidentate or bidentate. This species is similar with *Typosyllis maculata* Imajima 1966, but all sides of their dorsal cirri regulary pigmented. Imajima (1966) described that dorsal cirri of *T. maculata* was pigmented on the ventral side and not pigmented dorsally. *Typosyllis maculata* has not been previously recorded in Indonesian waters.

Habitat. Intertidal zone.

Typosyllis* cf. *ehlersioides

Material examined. 3 (POL 26), Kukup, Gunungkidul, Yogyakarta, 23rd March 2012, Hadiyanto; 3 (POL 27), Sepanjang, Gunungkidul, Yogyakarta, 26th March 2012, Hadiyanto; 3 (POL 28), Sundak, Gunungkidul, Yogyakarta, 27th March 2012, Hadiyanto.

Remarks. The dorsal of each segment has a transverse chocolate-colored band. Three antennae and two pairs of tentacular cirri, all articulated. Eversible pharynx with a single tooth. Appendage of compound setae bidentate with minute accesory tooth. This species is similar with *Typosyllis ehlersioides* Imajima 1966, but the dorsal of each segment has a transverse chocolate-colored band. Imajima (1966) stated that the dorsal of body of *T. ehlersioides* has a transverse chocolate-colored band with the anterior part pale and posterior part white. *Typosyllis ehlersioides* has not been previously recorded in Indonesian waters.

Habitat. Intertidal zone.

Typosyllis* aff. *aciculata

Material examined. 2 (POL 29), Kukup, Gunungkidul, Yogyakarta, 23rd March 2012, Hadiyanto; 5 (POL 30), Sepanjang, Gunungkidul, Yogyakarta, 26th March 2012, Hadiyanto; 5 (POL 31), Krakal, Gunungkidul, Yogyakarta, 24th March 2012, Hadiyanto; 1 (POL 32), Sundak, Gunungkidul, Yogyakarta, 27th March 2012, Hadiyanto.

Remarks. Three antennae and two pairs of tentacular cirri, all articulated. Eversible pharynx with a single tooth. Parapodia with simple setae, long and short compound bidentate setae, acicula mallet-headed. This species is possible as *Typosyllis aciculata* Licher 1999. *Typosyllis aciculata* has not been previously recorded in Indonesian waters.

Habitat. Intertidal zone.

***Trypanosyllis* (*Trypanedenta*) *gemmipara* Imajima & Hartman 1964**

***Trypanosyllis (Trypanedenta) gemmipara* Imajima & Hartman 1964: 126, figs. 30.f-g.**

Material examined. 1 (POL 33), Kukup, Gunung kidul, Yogyakarta, 23rd March 2012, Hadiyanto; 5 (POL 34), Sepanjang, Gunung kidul, Yogyakarta, 26th March 2012, Hadiyanto; 1 (POL 35), Drini, Gunungkidul, Yogyakarta, 25th March 2012, Hadiyanto; 3 (POL 36), Krakal, Gunungkidul, Yogyakarta, 24th March 2012, Hadiyanto; 5 (POL 37), Sundak, Gunungkidul, Yogyakarta, 27th March 2012, Hadiyanto.

Diagnosis. Body flattened with numerous short segment. Anterior dorsum without color makings. Three antennae and two tentacular cirri, all articulated. Eversible pharynx with trepan and single tooth. Parapodia in median region of the body with a single kind of compound setae.

Habitat. From the intertidal zone to dephts of 120 m, cryptic on hodlfast of *Laminaria*, cryptic on seaweed.

Geographical distribution. Washington, western Canada, Alaska to Mexico, Indian Ocean, north-west of Japan Sea, Kurile Island, northern to southern Japan, Indonesia. This species is indicated as first record to Indonesian waters.

Family Cirratulidae

***Tharyx marioni* Day 1967**

Tharyx marioni Day 1967: 505, fig. 20.2.e

Materail examined. 1 (POL 38), Sundak, Gunungkidul, Yogyakarta, 27th March 2012, Hadiyanto

Diagnosis. A pair of long grooved palps attached on the anterior dorsum. All setae capillary, blades long and finely spinulose to smooth. Branchial filamets in the middle of the body arise laterally just above the notosetae.

Habitat. Shallow water, deep sea, slope to abyssal, cryptic on seaweed.

Geographical distribution. Cosmopolite. North Atlantic to North Carolina and Scotland via English Channel to Morocco, Mediterranean, Persian Gulf and Madras, western Europe, Indonesia. This species is indicated as first record to Indonesian waters.

***Cirratulus chrysoderma* Mesnil & Fauvel 1939**

***Cirratulus chrysoderma* Mesnil & Fauvel 1939: 18.**

Material examined. 1 (POL 39), Sundak, Gunungkidul, Yogyakarta, 27th March 2012, Hadiyanto.

Diagnosis. Tentacular cirri present on one segment only. Acicular hooks absent, only capillary setae present even in posterior segments. Dorsal tentacular cirri first present from the same segment as the anteriormost branchiae. Tentacular cirri arise from setiger 5.

Remarks. Record of this species in Indonesian water also has been reported by Mesnil & Fauvel (1939).

Habitat. Intertidal zone.

Geographical distribution. Indonesia,

Mediterranean, Gulf of Manaar, India, Malaya, Japan.

Family Magelonidae

***Magelona* sp.**

Material examined. 1 (POL 40), Sundak, Gunungkidul, Yogyakarta, 27th March 2012, Hadiyanto

Remarks. Prostomium flattened and anteriorly ovate, without appendages. Palps at the junction of the pro- and peristomium on the ventral side. Branchiae absent. Special setae on setiger 9. Some species of *Magelona* that have been recorded from Indonesian waters were *Magelona cincta* Ehlers 1908, *Magelona crenulifrons* Gallardo 1968 and *Magelona gemmata* Mortimer & Mackie 2003 (Al-Hakim & Glasby, 2004).

Habitat. Intertidal zone.

Family Spionidae

***Prionospio (Minuspio) cirrifera* Light 1978**
***Prionospio (Minuspio) cirrifera* Light 1978: 81-83, fig. 81.a-c; 82.a-e.**

Material examined. 3 (POL 41), Sundak, Gunungkidul, Yogyakarta, 27th March 2012, Hadiyanto.

Diagnosis. Prostomium anteriorly blunt, peristomium with large lateral wings. Branchiae present from setiger 2 to about setiger 18, all cirriform. Anterior setae all capillaries in both rami.

Remarks. *Prionospio (Minuspio) cirrifera* is closely related to *P. japonica* Okuda, 1935 from brackishwater lakes in Japan, however *P. japonica* bears only 4 pairs of cirriform branchie on setiger 2-5, whereas *P. cirrifera* never exhibits fewer than 6 pairs (Light 1978).

Habitat. Shallow water, preference for silt and sandy silt, also found in sand and silty sand, predominantly mud bottoms, silty mud, off jetties, intertidal rock pool, sand, eurybathyal, intertidal to 2500 m, fine sand in brackishwater pond, cryptic on seaweed.

Geographical distribution. Cosmopolitan. Artic, North Atlantic from Greenland, North and South America and Sweden to the North Sea, English Channel and Portugal, India, North Pacific from the Behring Sea to southern California, Indonesia. This species is indicated as first record to Indonesian waters.

***Prionospio (Paraprionospio)* sp.**

Material examined. 1 (POL 42), Sundak, Gunungkidul, Yogyakarta, 27th March 2012, Hadiyanto.

Remarks. Prostomium anteriorly rounded, peristomium with large lateral wings. Second segment asetigerous. Three pairs of pinnate branchiae present from setiger 1, parapodia of first setiger well developed. All anterior setae capillaries. Record of this genus also has been reported by Al-Hakim & Glasby (2004) as *Paraprionospio* sp.

Habitat. Cryptic on seaweed in rocky intertidal shore.

***Spio filicornis* Bailey-Brock & Hartman 1987**
***Spio filicornis* Bailey-Brock & Hartman 1987: 363-364, fig. 3.II.142.a-b.**

Material examined. 5 (POL 43), Sepanjang, Gunungkidul, Yogyakarta, 26th March 2012, Hadiyanto; 1 (POL 44), Drini, Gunungkidul, Yogyakarta, 25th March 2012, Hadiyanto; 4 (POL 45), Krakal, Gunungkidul, Yogyakarta, 24th March 2012, Hadiyanto; 2 (POL 46), Sundak, Gunungkidul, Yogyakarta, 27th March 2012, Hadiyanto.

Diagnosis. Prostomium anteriorly rounded. Branchiae present from setiger 1, at least anteriorly fused with the notopodial postsetal lobe. Notosetae all capillaries. Hooded hock of neuropodia bidentate and present from setiger 9.

Habitat. Intertidal zone, shallow water, mud with coral rubble, sedimen on coral flat, cryptic on seaweed.

Geographical distribution. Artic, North Atlantic from Greenland and the North Sea to the Bay of Biscay, Pacific from the Behring Sea and Japan to

California, Solomon Island, Hawai, Indonesia. This species is indicated as first record to Indonesian waters.

Family Opheliidae

***Polyopthalmus pictus* Day 1967**

***Polyopthalmus pictus* Day 1967: 579-580, fig. 25.2.k-m.**

Material examined. 1 (POL 47), Kukup, Gunungkidul, Yogyakarta, 23rd March 2012, Hadiyanto; 5 (POL 48), Sepanjang, Gunungkidul, Yogyakarta, 26th March 2012, Hadiyanto; 1 (POL 49), Krakal, Gunungkidul, Yogyakarta, 24th March 2012, Hadiyanto; 3 (POL 50), Sundak, Gunungkidul, Yogyakarta, 27th March 2012, Hadiyanto.

Diagnosis. Body slender with a pattern of brown marks dorsally, ventral groove along the whole length. Branchiae absent, lateral eyes present on setiger 7-19 but difficult to see. Anal tube rudimentary with small marginal papillae.

Habitat. Intertidal zone and estuarine, cryptic on *Halichondria* sp. and seaweed, seagrass, muddy sand, subtidal zone.

Geographical distribution. All warm and tropical seas. Atlantic from the English Channel to the Gulf of Mexico and tropical west Africa, Madagascar, Mediterranean, Red Sea, Indo Pacific to Japan, western Canada and Southern California, Solomon Island, New Zealand, Indonesia. This species is indicated as first record to Indonesian waters.

Family Sabellidae

***Branchiomma violacea* Day 1967**

***Branchiomma violacea* Day 1967: 768, fig. 37.4.e-i.**

Material examined. 2 (POL 51), Sepanjang, Gunungkidul, Yogyakarta, 26th March 2012, Hadiyanto; 2 (POL 52), Krakal, Gunungkidul, Yogyakarta, 24th March 2012, Hadiyanto; 5 (POL 53), Sundak, Gunungkidul, Yogyakarta, 27th March 2012, Hadiyanto.

Diagnostic characters. Thoracic uncini avicular, thoracic neuropodial companion setae absent, uncini with very numerous (over 40). Radioli with external styloides, branchial lobes not spiral.

Habitat. Intertidal zone, estuarine to depth of 100 m.

Geographical distribution. Endemic in southern Africa, Indonesia. This species is indicated as first record to Indonesian waters.

***Manayunkia* sp.**

Material examined. 1 (POL 54), Sepanjang, Gunungkidul, Yogyakarta, 26th March 2012, Hadiyanto.

Remarks. Two pairs of radioli, free to the base and without pinnule. Thoracic uncini long and acicular, abdominal uncini in short row. This species has not been previously recorded in Indonesian waters.

Habitat. Intertidal zone.

Family Terebellidae

Pista* aff. *macrolobata

Material examined. 3 (POL 55), Sepanjang, Gunungkidul, Yogyakarta, 26th March 2012, Hadiyanto.

Remarks. Proboscis absent. Thoracic uncini in single rows in all setiger. Tentacular lobe without eye spots. Buccal segment with a pair of very large square lateral lobe extending forwards as a sheath to the tentacles, lateral lobe on segment 2. Two pairs of dichotomously branched gills. Notosetae with smooth tips. This species is possible as *Pista macrolobata* Day 1967, but shape of uncini difficult to see. This species has not been previously recorded in Indonesian waters.

Habitat. Intertidal zone.

Pista* aff. *foliigera

Material examined. 1 (POL 56), Kukup, Gunungkidul, Yogyakarta, 23rd March 2012, Hadiyanto; 2 (POL 57), Sepanjang, Gunungkidul, Yogyakarta, 26th March 2012, Hadiyanto; 1 (POL 58), Krakal, Gunungkidul, Yogyakarta, 24th March 2012, Hadiyanto.

Remarks. Proboscis absent. Thoracic uncini in single rows in all setiger. Tentacular lobe with reddish-brown tentacles and numerous eye spots. Buccal segment with ventro-lateral lobes. Two pairs of dichotomously branched gills with relatively few. Notosetae with smooth tips. This species is possible as *Pista foliigera* Caullery 1915, but shape of uncini difficult to see. Record of *Pista foliigera* in Indonesian waters has been reported by Caullery (1944).

Habitat. Intertidal zone.

***Pista* sp.1**

Material examined. 2 (POL 59), Sepanjang, Gunungkidul, Yogyakarta, 26th March 2012, Hadiyanto.

Remarks. Proboscis absent. Thoracic uncini in single rows in all setiger. Tentacular lobe with reddish-brown tentacles and one eye spots. Buccal segment with small ventro-lateral lobes. Notosetae with smooth tips. Some species of *Pista* which have been recorded in Indonesia waters were *Pista robustiseta* Caullery 1944, *Pista foliigera* Caullery 1944, *Pista obesiseta* Caullery 1944, *Pista brevibranchia* Caullery 1944, *Pista typha* Grube, *Pista* sp. (Caullery 1944).

Habitat. Intertidal zone.

***Pista* sp.2**

Material examined. 1 (POL 60), Kukup, Gunungkidul, Yogyakarta, 23rd March 2012, Hadiyanto; 1 (POL 61), Krakal, Gunungkidul, Yogyakarta, 24th March 2012, Hadiyanto; 2 (POL 62), Sundak, Gunungkidul, Yogyakarta, 27th March 2012.

Remarks. Proboscis absent. Thoracic uncini in single rows in all setiger. Tentacular lobe with colorless tentacles and without eye spots. Buccal segment with small ventro-lateral lobes. Notosetae with smooth tips.

Habitat. Intertidal zone.

Family Oenonidae

***Oenone* sp.1**

Material examined. 4 (POL 63), Sepanjang, Gunungkidul, Yogyakarta, 26th March 2012, Hadiyanto.

Remarks. Dorsal of body black-colored. Prostomium rounded, one distinct peristomial ring, eyes two pairs, three antenna covered by peristomium. This genus has not been previously recorded in Indonesian waters.

Habitat. Intertidal zone.

***Oenone* sp.2**

Material examined. 1 (POL 64), Kukup, Gunungkidul, Yogyakarta, 23rd March 2012, Hadiyanto.

Remarks. Dorsal of body colorless. Prostomium rounded, one distinct peristomial ring, eyes two pairs, three antenna covered by peristomium. This genus has not been previously recorded in Indonesian waters.

Habitat. Intertidal zone.

Family Eunicidae

***Lysidice* sp.**

Material examined. 1 (POL 65), Kukup, Gunungkidul, Yogyakarta, 23rd March 2012, Hadiyanto; 3 (POL 66), Sepanjang, Gunungkidul, Yogyakarta, 26th March 2012, Hadiyanto; 1 (POL 67), Krakal, Gunungkidul, Yogyakarta, 24th March 2012, Hadiyanto; 1 (POL 68), Sundak, Gunungkidul, Yogyakarta, 27th March 2012, Hadiyanto.

Remarks. Two chusion-shaped palps which are partly fused so that the anterior margin of the head is bilobed. Two eyes. Three antennae. This genus has not been previously recorded in Indonesian waters.

Habitat. Intertidal zone.

Family Amphinomidae

***Eurythoe complanata* Horst 1912**

***Eurythoe complanata* Horst 1912: 34-35, Pl. IX, fig. 20.**

Material examined. 4 (POL 69), Kukup, Gunungkidul, Yogyakarta, 23rd March 2012, Hadiyanto; 5 (POL 70), Sepanjang, Gunungkidul, Yogyakarta, 26th March 2012, Hadiyanto; 5 (POL 71), Krakal, Gunungkidul, Yogyakarta, 24th March 2012, Hadiyanto; 5 (POL 72), Sundak, Gunungkidul, Yogyakarta, 27th March 2012, Hadiyanto.

Diagnosis. Body elongated and flattened. Caruncle elongated with a flat keel, attached as far back as setiger 3. Branchiae present on all segments from the second. Spurred and forked setae smooth.

Remarks. Size of this specimen is shorter than specimen examined by Day (1967) and Bailey-Brock & Hartman (1987), possible as young specimen. Record of this species in Indonesian water also has been reported by Horst (1912).

Habitat. Intertidal zone, shallow water, coral reef, under rock and coral rubble.

Geographical distribution. All tropical and subtropical seas.

DISCUSSION

Based on previous reports from Horst (1912; 1917; 1924), Mesnil & Fauvel (1939), Caullery (1944), Pillai (1965), Al-Hakim & Glasby (2004) and Aguado *et al*. (2008), Indonesian polychaetes consist of 525 species belonging to 44 families. So, this finding completed previous reports about biodiversity of polychaeta in Indonesian waters. Some specimens are complete and in good condition, so that can be described more detail for taxonomic report. Nineteen species were indicated as new record to Indonesian waters, so these become an important note for exploration of Indonesian polychaetes. However, further discussion with some taxonomists and compared with taxonomic reports from several museums are needed to confirm these records. Actually, finding a new record of polychaeta in Indonesian waters is possible, especially on species from rocky intertidal shores, because taxonomic reports of Indonesian polychaeta are virtually unknown and mainly collected from offshore (Horst 1912; 1917; 1924; Mesnil & Fauvel 1939; Caullery 1944; Al-Hakim & Glasby 2004; Aguado *et al*. 2008) and milkfish farms (Pillai 1965).

Most species were also found in other regions, even cosmopolitan. Finding *Branchiomma violacea* and *Perinereis* af. *arabica* in Indonesian waters was interesting note. *Branchiomma violacea* was recorded as endemic species in southern Africa by Day (1967), while *Perinereis arabica* was recorded as only found in intertidal shore of Kuwait and Arabian Gulf by Mohammad (1971). However, this report is needed to be confirmed.

Some polychaetes in Gunung Kidul shores were also found at different habitats in other regions from intertidal zone until deep sea. Only *Lepidonotus cristatus* and *Lepidonotus tenuisetosus* were found in intertidal shore of Gunung Kidul and other regions. This fact showed that these species are indicated as a specific-species in rocky intertidal shore.

Only nine species widely distributed in Gunung Kidul because these can be found in more than three locations (Table 1). *Perinereis* af. *arabica*, *Syllis* cf. *amica*, *Typosyllis* cf. *maculata* and *Eurythoe complanata* were the most dominant species may be related to their adaptation to environmetal variables in rocky intertidal shore of Gunung Kidul. Serrano & Preciado (2007) have explained that polychaete communities in intertidal shore were mainly controlled by physical factors. Therefore, ecological studies of polychaeta in Gunung Kidul and their behaviour are still interested.

CONCLUSION

Thirty polychaete species from rocky intertidal shores of Gunung Kidul, Yogyakarta have been identified. Nineteen of all species identified

Table 1. Distribution of polychaeta in rocky intertidal shores of Gunung Kidul, Yogyakarta.

	Kukup	Sepanjang	Drini	Krakal	Sundak
Pseudocapitella sp.					+
Notomastus sp.					+
Maldane sp.		+			+
Glycera brevicirris Boggemann 2002*		+		+	+
Euthalenessa sp.*					+
Lepidonotus cristatus Day 1967		+			
Lepidonotus tenuisetosus Misra 1998*		+			+
Tharyx marioni Day 1967*					+
Cirratulus chrysoderma Mesnil & Fauvel 1939					+
Magelona sp.					+
Prionospio (Minuspio) cirrifera Light 1978*					+
Prionospio (Paraprionospio) sp.					+
Spio filicornis Bailey-Brock & Hartman 1987*		+	+	+	+
Polyopthalmus pictus Day 1967*	+	+		+	+
Branchiomma violacea Day 1967*		+		+	+
Manayunkia sp.*		+			
Pista af. *macrolobata**		+			
Pista af. *foliigera*	+	+		+	
Pista sp.1		+		+	+
Pista sp.2	+				
Oenone sp.1*		+			
Oenone sp.2*	+				
Lysidice sp.*	+	+		+	+
Perinereis af. *arabica**	+	+	+	+	+
Syllis cf. *amica**	+	+		+	+
Typosyllis cf. *maculata**	+	+	+	+	+
Typosyllis cf. *ehlersioides**	+	+			+
Typosyllis af. *aciculata**	+	+		+	+
Trypanosyllis (Trypanedenta) gemmipara Imajima & Hartman 1964*	+	+	+	+	+
Eurythoe complanata Horst 1912	+	+		+	+

Note: * indicates as first record to Indonesian waters

were indicated as new record to Indonesian waters, but these records in particular need to be verified.

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