

ON SOME POLYCHAETES FROM GUJARAT COAST

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INTRODUCTION

Our knowledge of the polychaete fauna of the Gujarat coast is mainly based on a few references by Fauvel (1953) and recently by Dalal and Dubale (1975 & 1976), but this is far from complete as was shown by our recent studies on the unnamed polychaete collections present in the Zoological Survey of India. These studies have indicated that this area is fairly rich in polychaete fauna and interestingly enough it shares several species with the Gulf of Mannar and the Andaman and Nicobar Islands, both of which like Gujarat coast abound in coral reefs which are important habitats for polychaete worms.

The present paper deals with specimens collected by different survey parties of the Zoological Survey of India, mainly from intertidal regions (though a few being collected from offshore localities through grab sample). Of the 37 species reported herein most of them form first locality records from the area and two are recorded for the first time from Indian waters. Since these species are well known taxonomically, only such variations have been remarked as are of some interest or relevance. The classification here is based on Fauvel (1953), Hartmann (1959) and Day (1967).

SYSTEMATIC ACCOUNT

Family APHRODITIDAE

***Lepidonotus* (*Thormora*) *jukesi* (Baird)**

1 ex. ; Z. S. I. reg. no. An 1012/1 ; Beyt Island, Okha ; 8. iv. 1977 ; *K. N. Reddy*.

Body with 27 segments ; elytra covering entire body, 12 pairs, each tough, unfringed and with small conical tubercles ; dorsomedian line exposed and greenish ; lateral tentacles situated terminally ; tentacles and cirri with broad bases and narrow tapering ends ; notosetae of two types, one short, broad, with serrations and blunt tips, the other long, narrow, with hastate blades and pointed ends ; neurosetae stout, spinulose and with unidentate tips.

Distribution : Earlier reported from Andaman Islands.

Lepidonotus cristatus (Grube)

1 ex. ; Z. S. I. reg. no. An 1013/1 ; Beyt Island, Okha ; 8. iv. 1977 ; *K. N. Reddy*.

Body with 26 segments ; elytra covering entire body, 12 pairs, each large, soft, unfringed, with a large bilobed crest, many small tubercles, and central brown-coloured spot ; lateral tentacles nearly equal to length of the median and situated terminally ; tentacles and cirri with tentaculophores and cirriphores ; notosetae few, stout, serrated and with blunt tips ; neurosetae spinulose and with unidentate tip.

Distribution : Earlier reported from Andaman Islands and Gulf of Mannar.

Lepidonotus tenuisetosus (Gravier)

7 exs. ; Z. S. I. reg. no. An 1014/1 ; Veraval beach ; 27. xi. 1968 ; A. Daniel.

Distribution : Earlier reported from the coasts of Madras, Orissa, and Andaman Islands.

Eunoe pallida (Ehlers)

2 exs. ; Z. S. I. reg. no. An 1015/1 ; Balapur Beach, Okha ; 7. iv. 1977 ; *K. N. Reddy*.

Elytra covering entire body, 15 pairs, each large, soft, unfringed, and with a few rounded tubercles ; lateral tentacles inserted ventrally ; cirri and tentacles with small papillae ; dorsal setae serrated on one side and stouter than ventral ones which are spinulose and with unidentate tips ; small ventral lamelle present at base of each parapodium.

Distribution : Earlier reported from Andaman Islands and Kerala Coast.

Family AMPHINOMIDAE

Amphinome rostrata (Pallas)

1 ex. ; Z. S. I. reg. no. An 1016/1 ; Mithapur Beach, Okha ; 11. ix. 1977 ; *K. N. Reddy*.

Distribution : Earlier reported from the Andamans and Orissa coast.

Eurythoe complanata (Pallas)

Several exs. ; Z. S. I. reg. no. An 1017/1 ; Mithapur Beach ; Okha ; 11. iv. 1977 ; *K. N. Reddy*.

Distribution : Commonly found along Indian coasts.

Family PHYLLODOCIDAE

Eulalia viridis (Müller)

2 exs. ; Z. S. I. reg. no. An 1018/1 ; Veraval beach ; 25. xi. 1968 ; A. Daniel. 2 exs., Z. S. I. reg. no. An 1019/1 ; Pireton Island ; 22. iv. 1977 ; K. N. Reddy.

Body narrow and elongated ; prostomium with 5 tentacles and 4 pairs of tentacular cirri ; proboscis long with several soft papillae all over ; feet uniramous with dorsal lanceolate cirri, compound setae and small ventral cirri with blunt tips.

Distribution : Earlier reported from Gulf of Mannar.

Family HESIONIDAE

Hesione splendida Savigny

1 ex. ; Z. S. I. reg. no. An 1020/1 ; Miyani creek ; Porbandar ; 2. iv. 1977 ; K. N. Reddy.

Distribution : Earlier reported from Orissa coast, Gulf of Mannar, and the Andamans.

Leocrates claparedii (Costa)

3 exs. ; Z. S. I. reg. no. An 1021/1 ; Muddy shore, Pireton island, Okha ; 7. iv. 1977 ; K. N. Reddy.

Body with 16 segments ; prostomium with one median and two lateral tentacles, a pair of biarticulate palps, 2 pairs of eyes and a facial tubercle ; proboscis consisting of a dorsal and a ventral teeth, each of one piece ; peristomial tentacles 8 pairs ; notosetae thin, capillary ; neurosetae heterogomph falcigers with bidentate tips.

Distribution : Earlier reported from the Andamans and Gulf of Mannar.

Family NEREIDAE

Nereis (Nereis) persica Fauvel

1 ex. ; Z. S. I. reg. no. An 1022/1 ; Muddy flats, Beyt island ; 12. xi. 1968 ; A. Daniel.

Prostomium plate-like ; proboscis with group I=0, II=10-12 in two rows, III=many scattered, IV=several in a cluster, V=0, VI=several in a cluster, VII and VIII=several in many rows ; parapodia with 2 ligules in the dorsal ramus, an elongated dorsal cirrus, and homogomph

spinigers ; ventral ramus with 2 ligules, homogomph spinigers. heterogomph falcigers and a shorter ventral cirrus ; dorsal homogomph falcigerous setae of posterior parapodia with bidentate tips.

Distribution : Earlier reported from Gulf of Mannar and Mormugao Bay.

Ceratonereis burmensis Monro

4 exs. ; Z. S. I. reg. no. An 1023/1 ; Brackish water, Chorwada, Veraval ; 27. iii. 1977 ; *K. N. Reddy*.

Proboscis with group I very small, 4-5, II=8-10 in a cluster, III=several in many rows, IV=10 in a cluster ; basal ring without any paragnaths ; anterior feet with 3 dorsal and 4 ventral ligules ; setae homogomph and heterogomph spinigers ; posterior feet also with 3 dorsal and 4 ventral ligules ; setae homogomph spinigers, heterogomph spinigers and heterogomph falciger with slightly longer end pieces.

Distribution : Earlier reported from the coasts of Goa and Bombay.

Ceratonereis costae Grube

1 ex. ; Z. S. I. reg. no. An 1024/1 ; Veraval ; 26. iii. 1977 ; *K. N. Reddy*.

Proboscis with group I=0, II=several in a cluster, III=several in 3 rows, IV=several in 4 rows, basal ring of paragnath absent ; anterior feet with 2 dorsal and 3 ventral ligules, a few dorsal homogomph spinigers ; ventral homogomph spinigers and heterogomph falcigers with broad and small endpieces.

Distribution : This is the first record along the Indian coast.

Tylonereis bogoyawlenskyi Fauvel

1 ex. ; Z. S. I. reg. no. An 1025/1 ; grab sample, Beyt Island ; 13. iv. 1977 ; *K. N. Reddy*.

Proboscis with only fleshy papillae ; chitinous paragnaths absent ; dorsal ligule of the parapodia foliaceous in all segments ; in all setae homogomph spinigers only ; notopodia with 2 ligules ; neuropodia of anterior feet with 3 ligules, that of posterior with 2.

Distribution : Earlier reported from Andaman Islands, Gulf of Mannar and Kerala.

Pesudonereis variegata (Grube)

2 exs. ; Z. S. I. reg. no. An 1026/1 ; Rocky shore, Chorwada ; 27. iii. 1977 ; *K. N. Reddy*.

Proboscis with group I=1-2, II=4 rows of pectinate paragnaths, III=4-5 rows of pectinate, paragnaths, IV=5 rows of pectinate, paragnathus, V=one, VI=one transverse on each side, VII and VIII=2 rows of conical paragnaths ; dorsal ligules of posterior feet enlarged.

Distribution : Earlier reported from Orissa coast, Gulf of Mannar, Mormugao Bay and Andaman Islands.

***Pesudonereis anomala* Gravier**

3 exs. ; Z. S. I. reg. no. An 1027/1 ; Okha ; 6. iv. 1977 ; *K. N. Reddy*.

Tentacular cirri long and reaching 7th segment ; proboscis with group I=2 in a line, II, III and IV=several pectinate paragnaths in many rows, V=0, VI=a transverse row of 7 conical paragnaths on each side, VII and VIII=one row ; dorsal ligule of posterior feet expanded.

Distribution : Earlier reported from Gulf of Mannar, Mormugao Bay and Andaman Islands.

***Perinereis nigropunctata* (Horst)**

4 exs. ; Z. S. I. reg. no. An 1028/1 ; New Kandla Port ; 27. iv. 1977 ; *K. N. Reddy*.

Proboscis with group I=6-10 in a cluster, II, III and IV=with several conical paragnaths in a cluster, V=3 in a triangle, VI=one transverse on each side, VII and VIII=several conical paragnaths in two rows ; dorsal ligule of posterior feet slightly enlarged.

Distribution : Earlier reported from Cape Comorin, Orissa coast and the Andamans.

***Perinereis vancaurica* Ehlers**

4 exs. ; Z. S. I. reg. no. An 1029/1 ; Porbandar ; 2. iv. 1977 ; *K. N. Reddy*.

Proboscis with group I=2 in a line, II=several in two rows, III and IV=several small ones, V=3 in a triangle, VI=2 small transverse ones on each side, VII and VIII=in two rows ; dorsal ligule of posterior feet not expanded.

Distribution : Earlier reported from Nicobar Islands.

***Perinereis nuntia* (Savigny)**

1 ex. ; Z. S. I. reg. no. An 1030/1 ; Okha ; 9. iv. 1977 ; *K. N. Reddy*.

1 ex. ; Z. S. I. reg. no. An 1031/1 ; Kandla Port ; 28. iv. 1977 ; *K. N. Reddy*. 2 exs. ; Z. S. I. reg. no. An 1032/1 ; Adatra beach, Okha ; 11. xi.

1968 ; *A. Daniel*. 7 exs. ; Z. S. I. reg. no. An 1033/9 ; Veraval beach ; 26. xi. 1968 ; *A. Daniel*.

Largest tentacular cirri reaching between 3-7 segments ; proboscis with group I=1-3 in a line, II=2-6 in a cluster, III and IV=several arranged in clusters, V=0 in some, 1 in some, 3 in a triangle in some, 2 in a line in some, VI=a row of 10-15 small ones on each side, VII and VIII=several in 3-4 rows ; dorsal ligule of the posterior parapodia enlarged in some specimens.

Distribution : Earlier reported from Nicobar Islands, Gulf of Mannar, and the coasts of Orissa and Bombay.

Family EUNICIDAE

***Eunice siciliensis* Grube**

1 ex. ; Z. S. I. reg. no. An 1034/1 ; Muddy shore, Beyt Island, Okha ; 7. iv. 1977 ; *K. N. Reddy*.

Body divided into two regions, anterior rounded, posterior large and flattened ; gills present in the last few segments ; parapodia with capillary setae and falcigers ; comb setae and acicular setae absent.

Distribution : Earlier reported from the Andamans and Gulf of Mannar.

***Eunice australis* Quatrefages**

1 ex. ; Z. S. I. reg. no. An 1035/1 ; Piroton Islands, Okha ; 22. iv. 1977 ; *K. N. Reddy*.

Tentacles annulated ; gills beginning from 6th segment and extending almost to end of body and having 6-10 filaments ; acicular setae tridentate.

Distribution : Earlier reported from the Andamans.

***Eunice tentaculata* Quatrefages**

2 exs. ; Z. S. I. reg. no. An 1036/1 ; Okha ; 8. iv. 1977 ; *K. N. Reddy*.

Distribution : Earlier reported from the Andamans, Gulf of Mannar and Laccadive Islands.

***Lysidice collaris* Grube**

2 exs. ; Z. S. I. reg. no. An 1037/1 ; Veraval ; 26. iii. 1977 ; *K. N. Reddy*.

Distribution : Earlier reported from Andaman Islands and Gulf of Mannar.

Diopatra neapolitana neapolitana Delle Chiaje

5 exs. ; Z. S. I. reg. no. An 1038/1 ; Muddy shore, Jamnagar ; 16. iv. 1977 ; *K. N. Reddy*.

Distribution : Earlier reported from coasts of Tamil Nadu and Orissa, and Gangetic delta.

Lumbriconereis pseudobifilaris Fauvel

4 exs. ; Z. S. I. reg. no. An 1039/1 ; Okha ; 2. xii. 1968 ; *A. Daniel*.

Body long and with numerous segments ; prostomium pointed, without eyes and tentacles ; first two segments achaetous ; parapodia with winged capillary setae ; hooks totally absent, anterior ligules short and rounded, posterior ones increasing in size towards the tail ; pygidium with 4 small anal cirri.

Distribution : Earlier reported from Kerala coast.

Arabella iricolor (Montagu)

3 exs. ; Z. S. I. reg. no. An 1040/1 ; Dwaraka ; 14. xi. 1968 ; *A. Daniel*.

Prostomium pointed, lobe-like and with 4 eyes ; palps, tentacles, and antennae absent ; parapodia without gills and cirri ; anterior ligule of feet short, posterior elongated ; setae simple and winged, dorsal setae geniculate with a denticulate crest, ventral with smooth edges ; acicular setae absent.

Distribution : Earlier reported from the Andamans, Gulf of Mannar and Waltair coast.

Marphysa sanguinea (Montagu)

3 exs. ; Z. S. I. reg. no. An 1041/1 ; Okha ; 6. iv. 1977 ; *K. N. Reddy*.

Distribution : Earlier reported from the coast of Andhra, Tamil Nadu, and Goa.

Family GLYCERIDAE

Goniada emerita Aud and M. Edwards

1 ex. ; Z. S. I. reg. no. An 1042/1 ; Muddy shore, Jamnagar ; 16. iv. 1977 ; *K. N. Reddy*.

Body long, narrow and divided into 2 regions, anterior part with 55-60 segments, posterior with more than this ; proboscis with 8-9 'V'-shaped chitinous paragnaths arranged in a lateral row, and a pair of jaws and a circular row of micrognaths at the opening ; anterior feet uniramous with 3 unequal podial lobes and homogomph spinegerous setae ;

posterior feet biramous consisting of a single notopodial lobe with 2-3 stout acicular setae, and neuropodia with 3 ligules and heterogomph spinigerous setae along with few capillary setae.

Distribution : Earlier reported from the coasts of Waltair and Cochin.

Family CIRRATULIDAE

Cirriformia tentaculata (Montagu)

Several exs. ; Z. S. I. reg. no. An 1043/1 ; Navalakhi ; 23. iv. 1977 ; *K. N. Reddy*.

Body black in colour ; prostomium pointed ; branchial filaments starting from first setiger ; tentacular filaments as two clusters on 4-5 segments ; both rami with capillary setae and hooks ; distance between both rami greater than distance between gill insertion and dorsal rami.

Distribution : The species is recorded for the first time from Indian waters.

Family ORBINIIDAE

Nainereis laevigata (Grube)

2 exs. ; Z. S. I. reg. no. An 1044/1 ; Dwaraka ; 14. xi. 1968 ; *A. Daniel*.

Prostomium lobe-like, with rounded tip ; extruded proboscis with palmate lobes ; gill filaments simple and starting on 7th segment ; anterior 40-50 segments flat, posterior ones rounded ; thoracic setae crenulate capillaries, forked setae and hooks ; abdominal setae subuluncini, hooks, forked setae and crenulate capillaries.

Distribution : Earlier reported from Andaman Islands.

Family CAPITELLIDAE

Notomastus latericeus Sars

1 ex. ; Z. S. I. reg. no. An 1045/1 ; Okha ; 8. iv. 1977 ; *K. N. Reddy*.

Body divided into two regions ; prostomium small and lobe-like ; peristome achaetous ; thoracic segments 11 with capillary setae on both rami ; abdominal segments several, broad, and with hooded hooks on both rami ; gills very much reduced and discernible on dorsal tori of posterior segments ; ventral tori of abdominal segments long, elevated and appearing to meet on midventral line ; anal segment with a pair of cirri.

Distribution : Earlier reported from Andaman Islands and Bay of Bengal.

Family OPHELIIDAE

Ophelina acuminata Oersted

8 exs. ; Z. S. I. reg. no. An 1046/1 ; grab sample, Beyt Islands ; 13. iv. 1977 ; *K. N. Reddy*.

Body consisting of 45-55 segments ; dorsal side smooth, ventral and lateral grooves present all along ; prostomium pointed with subdermal eyes ; extruded proboscis lobe-like ; gill filaments from 2nd setigerous segment ; gills with small lateral papillae on either side ; dorsal cirri absent, ventral small and with pointed tips ; small setigerous lobe with two bundles of capillary setae ; pygidium with a ventral cirrus and several marginal papillae.

Distribution : Earlier reported from the coasts of Tamil Nadu and Orissa.

Family TERESELLIDAE

Terebella ehrenbergi Grube

2 exs. ; Z. S. I. reg. no. An 1047/1 ; Jaleshwar beach : Veraval ; 26. iii. 1977 ; *K. N. Reddy*.

Distribution : Earlier reported from Gulf of Mannar, Gujarat and Andaman Islands.

Loimia medusa (Savigny)

5 exs. ; Z. S. I. reg. no. An 1048/1 ; Beyt Island, Okha ; 7. iv. 1977 ; *K. N. Reddy*.

Distribution : Earlier reported from Gulf of Mannar and Andaman Islands.

Streblosoma persica (Fauvel)

1 ex. ; Z. S. I. reg. no. An 1049/1 ; Okha ; 10. iv. 1968 ; *A. Daniel*.

Distribution : Earlier reported from Gulf of Mannar and Andaman Islands.

Terebellides stroemi Sars

1 ex. ; Z. S. I. reg. no. An 1050/1 ; Grab sample, Beyt Island, Okha ; 13. iv. 1977 ; *K. N. Reddy*.

Body small with 45 segments ; prostomium with many tentacular filaments ; thoracic segments 18, with dorsal capillary setae having pointed tips and ventral tori consisting of acicular hooks ; tori of abdomen with avicular uncini having two rows of teeth ; single pectinate gill.

Distribution : Earlier reported from Andaman Islands, and the coasts of Madras and Orissa.

Family SABELLIDAE

Sabella fusca Grube

1 ex. ; Z. S. I. reg. no. An 1051/1 ; Adatra beach, Okha ; 6. iv. 1977 ; *K. N. Reddy*.

Distribution : Earlier reported from Andaman Islands.

Sabellastarte sanctijosephe (Gravier)

1 ex. ; Z. S. I reg. no. An 1052/1 ; Adatra beach ; Okha ; 6. iv. 1977 ; *K. N. Reddy*.

Thorax with 8 segments ; abdomen long with many segments ; thoracic setae all of one type ; uncini avicular, pick-axe setae absent ; collar separated dorsally ; gill filaments numerous, arranged in two circles and without eyes and radioles.

Distribution : Earlier reported from Andaman Islands, and coasts of Madras and Kerala.

SUMMARY

The paper deals with 37 species of polychaetes of Gujarat coast collected by survey parties of the Zoological Survey of India. Most of the species from new locality records for the area, two for the Indian waters, and a few show interesting variations. Also included are comparative observations of the similarities of the habitats, namely coral reefs, of the above area with those of two other areas, Gulf of Mannar and Andaman and Nicobar Islands.

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