

ON SOME POLYCHAETES FROM ORISSA COAST

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(With 1 Text-figure)

INTRODUCTION

While going through the unnamed material of polychaetes from the coast of Orissa collected on different occasions by parties of the Zoological Survey of India, we came across several specimens of a number of species, besides those of the exotic *Talehsapia annandalei* Fauvel. This latter species was originally described from Taleh-sap, Siam (now Thailand) and has not been subsequently reported from there or elsewhere and its occurrence now in Orissa is therefore of considerable interest as far as the distribution of brackish water species is concerned. In the present paper, apart from giving additional description of *T. annandalei* based on our specimens, we are giving a list of the other species in the collection alongwith relevant remarks about structural variations, distribution etc., where necessary.

SYSTEMATIC ACCOUNT

Family POLYNOIDAE

Gattyana deludens Fauvel

Material : 4 ex; Z.S.I. Reg. No. An 727/1; Locality—sandy shore near Chandipur; 24. i. 1972; Coll. *V* K. Premkumar.

Description : Prostomium with a long dorsal median tentacle and a pair of small ventral ones; body fully covered with 15 pairs of elytra, each divided into polygonal areas and fringed; dorsal cirri papillated; dorsal setae many, thin and spinulose; ventral setae stout with unidentate tip.

Lepidonotus dictyolepis Haswell

Material : 2 ex.; Z.S.I. Reg. No. An 728/1; locality—from a gastropod shell, Puri; 6. ii. 1972; Coll. *V* K. Premkumar.

Description : Prostomium with a large median ventral tentacle and a pair of small laterals situated dorsally; body fully covered with 12 pairs of elytra each fringed and divided into polygonal areas, these

in turn with a black rounded papilla; dorsal setae few, thin and spinulose; ventral setae many, stout, unidentate and without any spinous pouch.

Remarks : Earlier recorded from Shingle Island, Gulf of Mannar.

Family AMPHINOMIDAE

Amphinome rostrata Pallas

Material : 4 ex.; Z.S.I. Reg. No. An 729/1; locality—from damaged coconut trunks found on sandy shore near Paradeep Port; Coll. V. K. Premkumar. 31. i. 1972.

Eurythoe parvecarunculata Horst

Material : One ex. ; Z.S.I. Reg. No. An 730/1; locality—Gopalpur beach; 30. iii. 1973; Coll. V. K. Premkumar.

Family PHYLLODOCIDAE

Phyllodoce (Anaitides) madeirensis Langerhans

Material : 9 ex.; Z.S.I. Reg. No. An 731/1; locality—from intertidal mud, Bitarkanika river beach near Chandbali; 7. i. 1976. Coll. S. Biswas,

Description : Prostomium with 4 small tentacles and a pair of eyes; peristomial tentacles 4 pairs, largest reaching 15th segment; proboscis long and divided into two regions, basal and upper; basal region with 12 longitudinal rows of soft papillae, each row with 4-6 papillae; median row absent in all the specimens; upper region smooth and with papillae at its opening; dorsal cirri large and with a cirrophore, setae compound, ventral cirri smaller than dorsal.

Remarks : This is the first record of the species from Indian coasts. Earlier recorded from Andamans, Ceylon and Laccadive Islands.

Eulalia (Eumida) sanguinea Oersted

Material : 4 ex.; Z.S.I. Reg. No. An 732/1; locality—sandy shore, Puri; 6. ii. 1972; Coll. V. K. Premkumar.

Description : Prostomium with 5 tentacles with median one in between two eyes; peristomial tentacles 4 pairs; proboscis smooth; parapodia with heart-shaped dorsal cirri, compound setae and oval-shaped ventral cirri.

Remarks : Earlier recorded from Gulf of Mannar.

Eteone barantollae Fauvel

Material : 7 ex., Z.S.I. Reg. No. An 733/1; locality—muddy shore Bitarkanika river beach near Chandali; 9. i. 1976; Coll. S. Biswas.

Description : Prostomium with 2 pairs of antennae; eyes indistinct; peristomial tentacles 2 pairs; body with first few segments closely arranged and light brown in colour, subsequently they become broad and deep brown in colour; proboscis divided into two regions, basal and upper; basal region smooth and transparent; upper region long, deep brown in colour with 5 longitudinal rows of soft, large papillae; first setigerous segment without dorsal cirri; dorsal cirri symmetrical and rather broader than longer; a pair of anal cirri.

Remarks : Hitherto, the only record of its occurrence was from the banks of a canal near Barantolla, Salt Lakes, Calcutta. This is the second record of the species.

Eteone flava (Fabricius)

(Text-fig. 1A)

Material : 9 ex.; Z.S.I. Reg. No. An 734/1; locality—sandy shore, Puri; 5. iii. 1972; Coll. V. K. Premkumar, 14 ex.; Z.S.I. Reg. No. An 735/1; locality—banks of Burhabalang river, Chandipur; 19. iii. 1973; Coll. V. K. Premkumar.

Description : Prostomium square-shaped with 2 pairs of tentacles and a pair of eyes; peristomial tentacles two pairs; first setigerous segment with setae and ventral cirrus but without dorsal cirrus; proboscis smooth, upper part occasionally with ridges; proboscis opening with papillae; parapodia with compound setae, dorsal cirrus broader than longer and symmetrical; ventral cirri smaller in size with a cirrophore; a pair of anal cirri.

Length 3-6 cm and 1-2 mm. in width.

Remarks : This is the first record of the species from Indian waters. Earlier recorded from Persian Gulf and Atlantic Ocean.

Family PILARGIIDAE

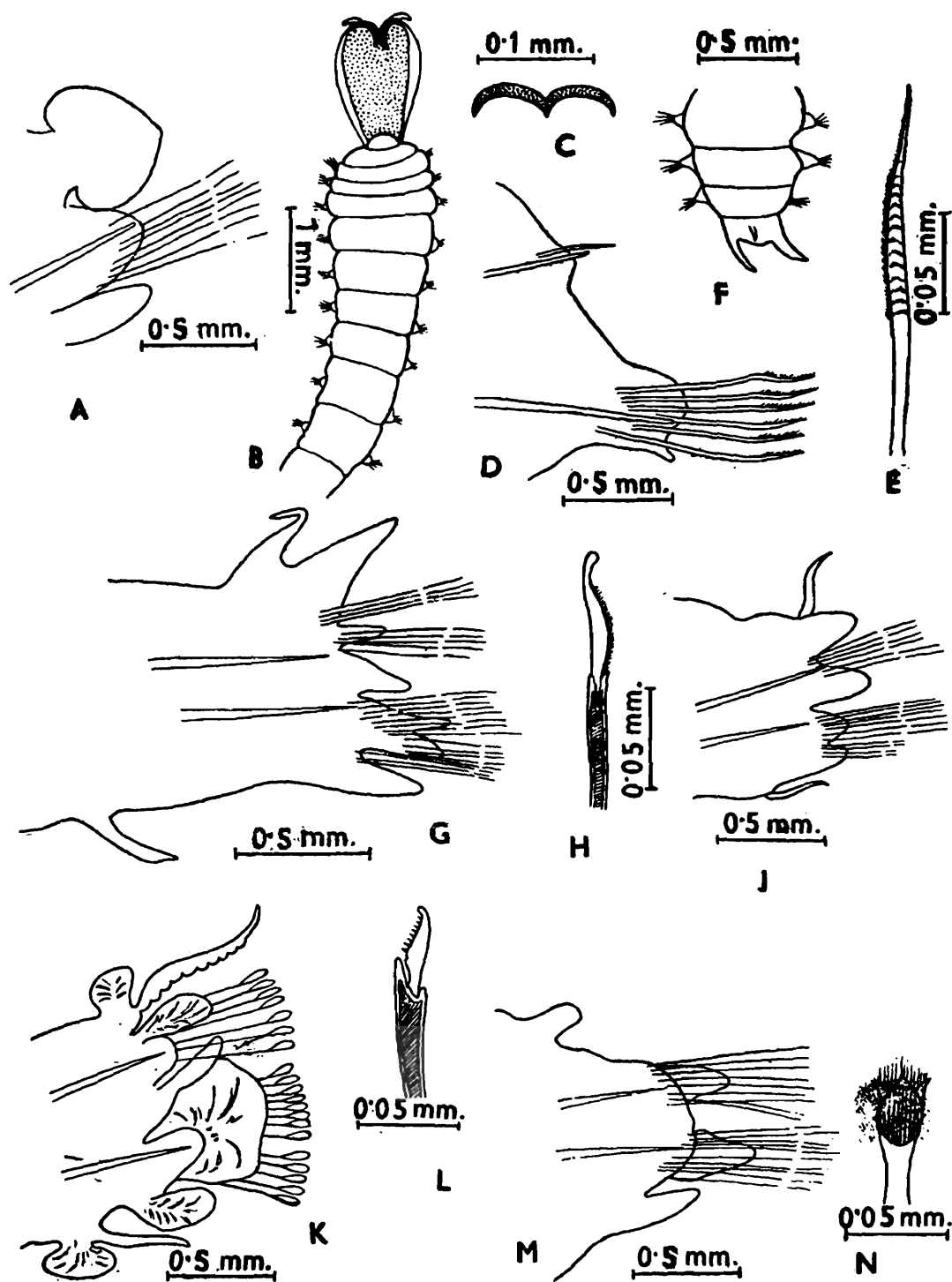
Talehasapia annandalei Fauvel

(Text-figs. 1, B-F)

Material : 6 ex.; Z.S.I. Reg. No. An 736/1; locality—Biatarani river beach, Chandbalai; 4. i. 1976; Coll. S. Biswas 6 ex.; Z.S.I. Reg. No. An 737/1; locality—Biatarani river mouth, Talchua; 12. i. 1976; Coll. S. Biswas.

Description : Body with approximately 150-280 segments; prostomium small, lobe-like, without eyes, antennae or palps; peristomium or first segment achaetous; peristomial tentacles absent; first few segments (5) bulbous and tessellated into polygonal areas; subsequent ones moniliform; proboscis in all the specimens extruded, covered outside by transparent membrane and with 2 jaws, chitinous, thin, curved and

joined with each other on both sides; proboscis opening dorso ventral with 10-12 soft papillae; parapodia uniramous with many long capillary setae, slightly curved and with hairy spines at its upper part; a small ventral cirrus; dorsal ramus rudimentary with 1-2 simple setae



Text-fig. 1.— A. *Eteone flava*, parapodium; (B-F) *Talehasapia annandalei*, B. anterior end showing everted proboscis, C. Jaw, D. Parapodium, E. Ventral setae, F. Posterior end showing 3 anal cirri; (G-H) *Leonnates persica*; G. Anterior parapodium, H. Heterogomph falciger from 10th segment; (J-L) *Nereis (Neanthes) willeyi*; J. Anterior parapodium, K. Modified parapodium, L. Heterogomph falciger; (M-N) *Glycera lancadivae*, M. Parapodium, N. papilla of the proboscis with nail-like appendage.

and an aciculum; anal segment plate-like with 2 lateral and a median small ventral cirrus; 10-12 cm in length and 2-3 mm in width; the specimens yellowish white in colour.

Remarks : Fauvel (1932) on the basis of 2 incomplete specimens from Taleh-sap, Siam (now Thailand) established the genus *Talehasapia* with *T. annandalei* as its type species and placed it in the family Hosionidae. Hartman (1947) included this species in the family Pilargiidae and gave a comprehensive account of the genus along with other genera of the family. Since then this monotypic genus has not been reported from anywhere else. However, its present record from Orissa, India, extends its range of distribution considerably further westwards.

Family NEREIDAE

Leonnates persica Wesenberg-Lund

(Text figs. 1, G, H)

Material : One ex. with only anterior 52 segments; Z.S.I. Reg. No. An 738/1; locality—intertidal mud, Bitarkanika river beach near Chandbali; 1.1. 1976; Coll. *S. Biswas*.

Description : Prostomium with long pointed palps and 2 pairs of eyes; peristomial tentacles 4 pairs; anterior 20 segments broader than subsequent ones; proboscis with 1st and 3rd lobe of maxillary ring without any paragnath, 2nd and 4th each with 4, Chitinous ones, 5th and 6th lobes of oral ring with a few soft ones arranged irregularly, 7th and 8th with many soft ones arranged in 5-6 rows; parapodia with 3 ligules in each ramus; dorsal cirri just above dorsal ligule, ventral cirri at base of parapodia; dorsal setae long and homogomph spinegers; ventral setae of two kinds, homogomph spinegers and a few heterogomph falcigers with tips ending abruptly; the above type of falcigers present from 7th to last segment of the specimen.

Remarks : The present specimen agrees in most of the character with Wesenberg—Lund's description of the species excepting in shape of falcigerous setae in which character it agrees with Days' (1957) description. It also differs from two Indian forms viz., *Leonnates jousseounei* Gravier and *L. decipens* Fauvel in shape of falcigerous setae and arrangement of paragnaths respectively.

This is the first record of the species from Indian waters. Earlier recorded from Iranian Gulf and estuarine waters of South Africa.

Dendronereides heteropoda Southern

Material : Several ex.; Z.S.I. Reg. No. An 739/1; locality—banks of Burhabalang river, Chandipur; 4. i. 1976; Coll. *S. Biswas*.

Dendronereis arborifera Peters

Material : Several ex.; Z.S.I. Reg. No. An740/1; locality—Bitarkanaka river beach near Chandbali; 8. i. 1976; Coll. *S. Biswas*.

Nereis chingharhataensis Fauval

Material : 9 ex.; Z.S.I. Reg. No. An 741/1; locality—Chandipur; 20. i. 1976; Coll. *S. Biswas*.

Description : Proboscis with 1st lobe having 2 paragnaths in a line, 2nd with 15-20 in 3 rows, 3rd and 4th with several in a cluster, 5th and 6th with the ones in a single row, and 7th and 8th in 3-4 rows; parapodia with 3 ligules in each ramus; falcigerous bristles absent all over body, only homogomph and heterogomph spinegers present; dorsal and ventral cirri nearly of same size; jaws transparent and light yellow in colour; a dorsal median reddish line present.

Remarks : Hitherto, the only record of its occurrence was from Chingrighatta, Salt Lakes, Calcutta. This is the second record of the species.

Nereis (Neanthes) willeyi Day

(Text. figs. 1, J-L)

Material : One ex.; Z.S.I. Reg. No. An 742/1; locality—from Gastropod shell, Puri; 6.ii.72; Coll: *V. K. Premkumar*.

Description : Heteronereid stage; prostomium with a pair of bulbous palps, 2 pairs of eyes and a pair of tentacles; peristomial tentacles 4 pairs; epitokous segments starting from 15th; proboscis with 1st lobe having one paragnath, 2nd with 20 in two oblique rows, 3rd with many in a cluster, 4th with several in 3 oblique rows, 5th with only one, 6th with 5 on each side, and 7th and 8th with many in 3-4 rows; parapodia in anterior region having 2 lobes each in dorsal and ventral rami and with rounded ends; dorsal setae homogomph spinegers, ventral homogomph, heterogomph spinegers and heterogomph falcigers; posterior feet with only oar-shaped setae and ligules modified into foliaceous lamellae; dorsal cirri larger than ventrals; a pair of long anal cirri.

2 cm in length and 1-2 mm. in width.

Remarks : This species has so far been recorded from coasts of Cape of Good Hope by Willey (1904) and of South Africa by Day (1934, 1951 and 1957). This is the first record of the species from Indian waters.

Pseudonereis gallapagensis Kinberg

Material : Several ex.; Z.S.I. Reg. No. An 743/1; locality—Gopalpur; 31 iii. 1973; Coll. *V* K. Premkumar.

Remarks : An heteronereid form was found in which the first epitokous segment is 16th setigerous segment; modified segments with oar-shaped setae and foliaceous lamellae. Earlier recorded from Gulf of Mannar and Andaman Islands.

Family NEPHTHYDIDAE

Nephtys oligobranchia Southern

Material : 4 ex.; Z.S.I. Reg. No. An 744/1; locality—intertidal mud, Bitarkanika river beach near Chandbali; 8. i. 1976; Coll. *S. Biswas*.

Description : Prostomium small, flattened, with 4 small tentacles and a pair of eyes; proboscis with soft papillae and a pair of horny jaws inside; branchiae long and foliaceous, starting from 7th segment and continuing to 27th; parapodial rami wide apart with both rami having simple capillary setae.

Family EUNICIDAE

Marphysa macintoshi Crossland

Material : 4 ex.; Z.S.I. Reg. No. An 745/1; locality—Gopalpur; 29. i. 1973; Coll. *V* K. Premkumar.

Description : Prostomium horse-shoe shaped with 5 equal tentacles; gills starting from 18th segment and with 1-4 filaments; dorsal setae capillary, ventral setae compound with kinfe-like terminal pieces, and comb setae.

Remarks : Earlier recorded from Krusadai Island.

Marphysa corallina Kinberg

Material : 2 ex.; Z.S.I. Reg. No. An 746/1; locality—Gopalpur; 31. ii. 1972; Coll. *V* K. Premkumar.

Description : Prostomium rounded with palps, eyes and 5 tentacles; gills starting from 22-24 segments and with 1-4 filaments; parapodia with dorsal simple setae and ventral compound, bidentate sickle-shaped setae.

Remarks : Earlier recorded from Gulf of Mannar.

Family ONUPHIDAE

Diopatra neapolitana Delle Chiaje

Material : One ex.; Z.S.I. Reg. No. An 747/1; locality—Chandipur; 18. i. 1976; Coll. *S. Biswas*.

***Onuphis eremita* Audouin and Milne-Edwards**

Material : One ex.; Z.S.I. Reg. No. An 748/1; locality—Puri, 22.i. 1976; Coll. *S. Biswas*.

Family LUMBRICONEREIDAE

***Lumbriconereis polydesma* Southern**

Material : 5 ex.; Z.S.I. Reg. No. An 749/1; locality—Chandipur; 10. iii. 1973; Coll. *V K. Premkumar*.

Description : Prostomium pointed without any appendage; peristomium achaetous; dorsal and ventral cirri absent; simple capillary setae and simple hooded hooks; posterior segments with elongated posterior ligule; 4 anal cirri.

Family GLYCERIDAE

***Glycera lancadivae* Schmarda**

(Text-figs. 1, M-N)

Material : 4 ex.; Z.S.I. Reg. No. An 750/1; locality—sandy shore, Gopalpur; 27.iii.1973; Coll. *V K. Premkumar*.

Description : Prostomium pointed; body segments with 2-3 annulations; branchiae absent; parapodia with a pair of equally elongated anterior lobes and a single posterior rounded one; dorsal setae simple, ventral setae compound; proboscis with two types of papillae, one long with pointed end, and other broad with a nail-like appendage hitherto unrecorded; chitinous Jaws with 2 unequal supporting limbs.

Remarks : Earlier recorded from Madras coast and Laccadives.

Family SPIONIDAE

***Polydora (Polydora) ciliata* Johnston**

Material : Several ex., Z.S.I. Reg. No. An 751/1; locality—Talchua near Chandbali; 12. i. 1976; Coll. *S. Biswas*.

Family CIRRATULIDAE

***Tharyx multifilis* Moore**

Material : One ex.; Z.S.I. Reg. No. An 752/1; locality—Baitarani river beach, Haripur, Chandbali; 4. i. 1976; Coll. *S. Biswas*.

Description : Prostomium conical and pointed without any appendage; peristomium and subsequent two segments achaetous; first setigerous segment showing only markings of attachments of palps and gills; gills attached very near parapodial base; parapodial rami slightly apart; both rami with simple setae; dorsal setae longer than ventral,

anterior segments thin and closely arranged, deep brown in colour; posterior segments broad, pale brown in colour.

Remarks : Earlier recorded from Madras and Californian coasts; the present report of its occurrence in estuarine habitat is of interest.

Family OWENIDAE
Owenia fusiformis Delle Chiaje

Material : Several ex.; Z.S.I. Reg. No. An 753/1; locality—Chandipur; 18. i. 1976; Coll. S. Biswas.

Description : Specimens found in long tubes formed of fine sand particles with openings at both ends.

Remarks : Earlier recorded from Pearl Banks, Tuticorin.

SUMMARY

A collection of polychaetes from Orissa coast has been reported in the paper. The material contains 25 species of 22 genera and 13 families. Brief taxonomic notes including morphological variations, new locality records and other relevant information is furnished with respect to each species listed herein. Chief highlight of the report is the discovery from the Orissa coast of *Talehasapia annandalei* Fauvel, originally reported from Taleh-sap, Siam (now Thailand). This species has never been rediscovered nor redescribed. Based on the examination of the material at our disposal, we have given additional description of this species. Five species are being recorded for the first time from Indian waters.

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