A checklist of marine polychaetous annelids (Polychaeta) for the Gulf of Paria, Trinidad, West Indies

JUDITH GOBIN Institute of Marine Affairs, Trinidad and Tobago, West Indies

GOBIN, J. 1990. A checklist of marine polychaetous annelids (Polychaeta) for the Gulf of Paria, Trinidad, West Indies. Caribb. Mar. Stud. 1: 37-47.

Major polychaete collections from the soft predominantly mud bottom of the Gulf of Paria, Trinidad, were made between 1979 and 1986. One hundred and eighty-eight species from 38 families including two new species were identified. A checklist of these species is reported together with their distribution and occurrence. Further treatment is required for formal designation of some species recorded.

Depuis 1979 jusqu'à 1986, l'on amassa des prélèvements énormes de polychaete du fond mou du Golfe de Paria à la Trinité, dont la plus grande partie est composée de boue. L'on identifia 188 espèces provenant de 38 familles, y compris deux nouvelles espèces. L'on fournit une liste de ces espèces, ainsi que des renseignements sur la distribution et l'existence à elles. Il faut le traitement supplémentaire afin de nommer de façon formelle un certain nombre des espèces constatées.

Desde 1979 hasta 1986, se acumularon tomas enormes de polikaete del fondo blando del Golfo de Paria en Trinidad, la mayor parte del que está compuesta de lodo. Se identificaron 188 especies que proceden de 38 familias, incluso dos nuevas especies. Se presenta una lista de dichas especies, así como la información sobre la distribución y la existencia de ellas. Es necesario el tratamiento suplementario para nombrar de manera formal algunas de las especies observadas

Introduction

Polychaetes may make up about 50–60 per cent of the macroinvertebrates in soft substrates (Fauchald 1984) and are also among the most "species-rich" groups (Fauchald and Jumars 1979). Polychaetes have contributed to the assessment of both temperate and tropical environments, especially in terms of sewage pollution (McNulty 1961, 1966; Taylor 1971) and in their use as indicators of pollution (Reish 1959; Pearson and Rosenberg 1978; Wade 1972). To complete a successful benthic investigation, the polychaetes should ideally be identified at least to the level of genera.

Apart from a checklist of polychaetes for the Caribbean region, by Perkins and Savage (1975), comprehensive papers on polychaete studies for the region are few. Most of the polychaete literature for Trinidad and Tobago are taxonomic accounts of specimens sent to taxonomists as a result of casual collections off the island. Monro (1928) described *Polyodontes oculea* and *Sabella bipunctata* with localities in Trinidad. Wesenberg-Lund (1958) described a new species of euryhaline spionid from Trinidad. Marsden (1960)

described *Hermodice carunculata* Pallas 1766 with localities including Arnos Vale, Tobago. Bacon (1968) produced a list of polychaetes for the mud sediments, rotting mangroves, and herbaceous swamp areas of the Caroni Swamp (Fig. 1) in Trinidad. This was the island's first record of a list of the annelid fauna which up till this time was poorly known. Bailey (1970) described *Spirorbis epichysis* (Spirorbinae) from Tobago and three other species from Trinidad. Ten Hove (1975) described *Pseudovermilia occidentalis* from Tobago.

Four multidisciplinary projects were carried out in the Gulf of Paria by the Institute of Marine Affairs over the period 1979 to 1986, in which collections of polychaetes were made. The coastal areas of the Port-of-Spain Harbour, Point Lisas [where two separate studies were carried out (PLIPDECO/IMA 1982; Gobin 1988)] and South Oropuche are shown in Fig. 1. In the original Point Lisas study (PLIPDECO/IMA 1982) the polychaetes were identified in most cases only to families. Four families which were recorded in PLIPDECO/IMA (1982) were not recorded by Gobin (1988) but have been included in this checklist.

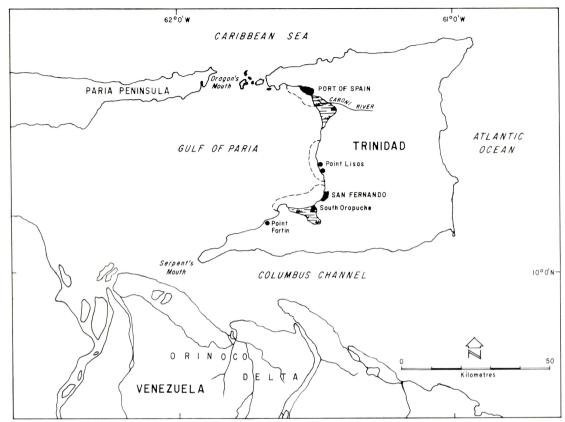


Fig. 1. Areas sampled in the Gulf of Paria, off Trinidad.

Locality

The Gulf of Paria is almost landlocked being bounded by the west coast of Trinidad and the east coast of Venezuela (Fig. 1). It is connected to the Atlantic Ocean by a long channel, the Serpent's Mouth, and the Caribbean Sea by a deep-island-studded trough of structural origin, the Dragon's Mouth (van Andel and Sachs 1964). There are marked salinity and turbidity fluctuations in the Gulf of Paria caused by the outflow from local rivers, which include the Caroni, Couva, Diego Martin, Guaracara, and Godineau rivers, as well as the great influence of the Orinoco River of Venezuela. The result is extensive mudflats and a brackish water environment. The bottom sediment in the major part consists of fine mud with occasional sandy patches. There is a sandy platform surrounding south-western Trinidad and there are rock outcrops around Soldado Rock and in the Dragon's Mouth.

Methods

Sediment samples were obtained using a 0.04-m² van Veen grab sampler. Replicate samples were taken and agitated in filtered sea water, and the suspended sediment was filtered through a 0.5-mm² sieve. The retained fauna were narcotized

using a MgCl₂ solution and stained with Rose Bengal, a proteinaceous dye, to facilitate sorting. All specimens were preserved in a 10% formalin solution and later stored in a 70% ethanol solution. Identifications were carried out using binocular and compound microscopes. Also, Hoyers solution was used for clearing tissue to examine setae under high power. All specimens are presently lodged at the Institute of Marine Affairs' Reference Collection and eventually duplicate collections with paratypes will be sent to the United States National Museum (USNM). The polychaetes were identified using taxonomic keys by Uebelacker and Johnson (1984) for the Northern Gulf of Mexico alongside other major keys (Day 1967; Fauchald 1977). Barry Vittor and Associates, environmental consultants of Alabama, assisted in verification of the identifications.

Specific names in the checklist are grouped in phylogenetic order by family, generally following the checklist of Hartman (1959, 1965) and thereafter in alphabetic order by genus and species. Specimens that were either unidentifiable beyond the level of genus or varied from previously recorded descriptions were labelled to the genus only, followed by sp. and a letter of the alphabet. This was similar to that given by Uebelacker and Johnson (1984). These unidentifiable specimens do not imply that they are new species, however.

Checklist of polychaetes for the Gulf of Paria

PHYLUM ANNELIDA CLASS POLYCHAETA

Family Polynoidae

Eunoe sp. a

Occurrence: Port-of-Spain Harbour

Harmothoe sp. b

Occurrence: Port-of-Spain Harbour, Point

Lisas

Harmothoe sp. e

Occurrence: Port-of-Spain Harbour, South

Oropuche

Harmothoe aculeata Andrews 1891

Distribution: North Carolina

Occurrence: Port-of-Spain Harbour

Lepidasthenia sp. a

Occurrence: Port-of-Spain Harbour

Lepidonotus sp. a

Occurrence: South Oropuche

Family Polyodontidae

Polyodontes sp. a

Occurrence: Point Lisas

Family Sigalionidae

Sthenelais sp. a

Occurrence: Port-of-Spain Harbour, Point Lisas

. h

Sthenelais sp. b

Occurrence: Port-of-Spain Harbour

Sthenelais sp. c

Occurrence: South Oropuche, Point Lisas

Sthenelais sp. d

Occurrence: Point Lisas

Sthenolepis cf. grubei (Treadwell, 1901)

Distribution: Puerto Rico, Brazil, Califor-

nia, Panama, Gulf of Mex-

ico. Ecuador

Occurrence: Point Lisas, South Oropuche

Family Eulepethidae

Grubeulepis ecuadorensis Pettibone, 1969 Distribution: Ecuador, Gulf of Mexico

Occurrence: Port-of-Spain Harbour

Grubeulepis mexicana

(Berkley & Berkley, 1939)

Distribution: Southern California to Gua-

temala, Gulf of Mexico

Occurrence : Port-of-Spain Harbour, Point

Lisas, South Oropuche

Family Amphinomidae

Paramphinome sp. b

Occurrence: Port-of-Spain Harbour, Point

Lisas, South Oropuche

Paramphinome sp. c

Occurrence: Point Lisas

Family Phyllodocidae

Eteone sp. a

Occurrence: South Oropuche

Eteone lactea Claparede, 1868

Distribution: Europe, North Sea, Gulf of

St. Lawrence to Florida,

Gulf of Mexico

Occurrence: South Oropuche

Eteone heteropoda Hartman, 1951

Distribution: Maine to North Carolina,

Gulf of Mexico

Occurrence: Port-of-Spain Harbour

Eumida cf. sanguinea Oersted, 1843

Distribution: Mediterranean, France, Nor-

way, Iceland, east and west coast of North and South America including Gulf of Mexico, Japan, Indian Ocean, New Zealand, South

Africa

Occurrence: South Oropuche

Phyllodoce sp. a

Occurrence: Point Lisas

Phyllodoce arenae Webster, 1880

Distribution: Maine to North Carolina.

Gulf of Mexico

Occurrence: Port-of-Spain Harbour

Phyllodoce madeirensis Langerhans, 1880

Distribution: Cosmopolitan in tropical seas

Occurrence: Port-of-Spain Harbour

Phyllodoce panamensis Treadwell, 1917

Distribution: Panama region

Occurrence: Port-of-Spain Harbour

Family Hesionidae

Gyptis sp. a

Occurrence : Point Lisas

Gyptis brevipalpa (Hartman-Schroeder, 1959)

Distribution: Washington, California,

Central America, Virginia

to Florida, Gulf of Mexico

Occurrence: Port-of-Spain Harbour, South Occurrence: Port-of-Spain Harbour, Point Lisas, South Oropuche Oropuche Pionosyllis sp. a Hesione sp. a Occurrence: Port-of-Spain Harbour Occurrence: Port-of-Spain Harbour, Point Hesione sp. b Lisas Occurrence: South Oropuche Pseudosyllides sp. a Hesione (picta) protochona Schmarda, 1861 Occurrence: South Oropuche Distribution: Arctic, West Indies, Puerto Syllis sp. Rico Occurrence: South Oropuche Occurrence: Port-of-Spain Harbour Typosyllis sp. Podarke sp. a Occurrence: South Oropuche Occurrence: Port-of-Spain Harbour Family Nereidae Family Pilargidae Ceratocephale oculata Banse, 1977 Ancistargis papillosa (Jones, 1961) Distribution: North Carolina, Gulf of Distribution: Gulf of Mexico off Florida, Mexico Texas Occurrence: Point Lisas, South Oropuche Occurrence: Port-of-Spain Harbour Genus a Parandalia sp. a Occurrence: Point Lisas, South Oropuche Occurrence: Port-of-Spain Harbour, South Laeonereis sp. a Oropuche, Point Lisas Occurrence: Point Lisas Parandalia americana (Hartman, 1947) Namalycastis sp. a Distribution: Gulf of Mexico, Florida Occurrence: Point Lisas Occurrence: Port-of-Spain Harbour Nereis sp. a Sigambra bassi (Hartman, 1945) Occurrence: Port-of-Spain Harbour, South Distribution: North Carolina to Florida, Oropuche Gulf of Mexico, southern Nereis micromma Harper, 1970 California Distribution: Mexico, Northern Gulf of Occurrence: Port-of-Spain Harbour, Point Mexico Lisas, South Oropuche Occurrence: Port-of-Spain Harbour, Point Sigambra tentaculata (Treadwell, 1941) Lisas, South Oropuche Distribution: Black Sea, Red Sea, South Nereis (Neanthes) succinea Africa, northeastern South (Frey & Leuckart, 1847) America, Gulf of Mexico, Distribution: Cosmopolitan in temperate New England to Florida, and tropical waters North Pacific, southern Occurrence: Point Lisas, South Oropuche California Platynereis sp. a Occurrence: Port-of-Spain Harbour, Point Occurrence: Point Lisas Lisas, South Oropuche Family Nephtyidae Family Syllidae Aglaophamus sp. a Exogone sp. Occurrence: Port-of-Spain Harbour, Point Occurrence: Port-of-Spain Harbour Lisas, South Oropuche Exogone atlantica Perkins, 1981 Aglaophamus verrilli (McIntosh, 1885) Distribution: East coast Florida, Gulf of Distribution: East and west Gulf of Mex-Mexico ico Occurrence: Port-of-Spain Harbour Occurrence: Point Lisas, South Oropuche

Micronephtys sp. a

Occurrence: Point Lisas, South Oropuche

Exogone lourei Berkley & Berkley 1938

Distribution: British Columbia to southern

California, Gulf of Mexico

Nephtys sp. d

Occurrence: Point Lisas, South Oropuche

Family Sphaerodoridae*

Family Glyceridae

Glycera sp. a

Occurrence: Port-of-Spain Harbour, Point Lisas, South Oropuche

Glycera abranchiata Treadwell, 1901

Distribution: Jamaica, Puerto Rico, Lesser

Antilles, Gulf of Mexico,

North Carolina

Occurrence: Port-of-Spain Harbour

Glycera convoluta Keferstein, 1862

Distribution: Mediterranean, Persian Gulf, Japan, West Africa, south-

ern California

Occurrence: Port-of-Spain Harbour, South

Oropuche

Glycera dibranchiata Ehlers, 1868

Distribution: West Atlantic from Gulf of

St. Lawrence to Florida, Gulf of Mexico, central California to Mexico

Occurrence: Port-of-Spain Harbour, Point

Lisas

Glycera longipinnis Grube, 1878

Distribution: Tropical Indo-west Pacific Occurrence: Port-of-Spain Harbour, South Oropuche

Glycera sphyrabrancha Schmarda, 1861

Distribution: North Carolina to West In-

dies, Gulf of Mexico, Indo-

Pacific

Occurrence: Port-of-Spain Harbour, Point Lisas, South Oropuche

Hemipodus sp. a

Occurrence: Point Lisas

Family Goniadidae

Glycinde sp. a

Occurrence: Port-of-Spain Harbour, Point

Lisas, South Oropuche

Glycinde sp. b

Occurrence: Point Lisas Glycinde solitaria Webster 1879

Distribution: New Jersey to North Caro-

lina, Gulf of Mexico, Puerto

Rico

Occurrence: Port-of-Spain Harbour

Goniada sp. a

Occurrence: Point Lisas

Goniada emerita

Audoin & Milne Edwards, 1833

Distribution: Scotland, Mediterranean,

New Zealand, North Atlan-

tic, Morocco

Occurrence: Port-of-Spain Harbour

Goniada littorea Hartman, 1950

Distribution: North Carolina, Gulf of

Mexico, southern California

Occurrence: South Oropuche Goniada maculata Hartman, 1959

Distribution: Northern Gulf of Mexico
Occurrence: Port-of-Spain Harbour, Point

Lisas, South Oropuche

Goniadides carolinae Day, 1973

Distribution: North Carolina, Gulf of

Mexico

Occurrence: South Oropuche

Family Onuphidae

Diopatra cuprea Bosc, 1802

Distribution: New England to Florida, Gulf

of Mexico, Panama

Occurrence: Port-of-Spain Harbour, Point

Lisas, South Oropuche

Kinbergonuphis sp. a

Occurrence: Point Lisas, South Oropuche

Kinbergonuphis sp. c

Occurrence: Point Lisas, South Oropuche *Mooreonuphis* cf. *nebulosa* (Moore, 1911)

Distribution: California, Gulf of Mexico

Occurrence: South Oropuche

Onuphis sp. a

Occurrence: Port-of-Spain Harbour, Point Lisas, South Oropuche

Onuphis sp. b

Occurrence: Port-of-Spain Harbour

Family Eunicidae

Eunice sp. a

Occurrence: South Oropuche

Euniphysa sp. a*

Occurrence: Port-of-Spain Harbour, Point

Lisas

^{*}Recorded in PLIPDECO/IMA (1982).

^{*}New species being described, Gobin and Wolf (In prep.).

Euniphysa sp. b Occurrence: Port-of-Spain Harbour Marphysa sp. a Occurrence: Point Lisas, South Oropuche Marphysa macintoshi Crossland, 1903 Distribution: Red Sea, Tropical Indian Ocean Occurrence: Port-of-Spain Harbour Marphysa sanguinea (Montagu, 1815) Distribution: Cosmopolitan in warm waters Occurrence: South Oropuche Family Lumbrineridae Lumbrineris sp. a Occurrence: Point Lisas, South Oropuche Lumbrineris ernesti Perkins, 1979 Distribution: North Carolina to Florida, Gulf of Mexico Occurrence: Port-of-Spain Harbour Lumbrineris verrilli Perkins 1979 Distribution: East coast of Florida, Gulf of Mexico Occurrence: Port-of-Spain Harbour, Point Lisas, South Oropuche Family Dorvilleidae Dorvillea sp. a Occurrence: Point Lisas, South Oropuche Schistomeringos sp. a Occurrence: Point Lisas, South Oropuche Schistomeringos pectinata Perkins, 1979 Distribution: East coast Florida, Gulf of Mexico Occurrence: Port-of-Spain Schistomeringos cf. rudolphi (Delle Chiaje, 1828) Distribution: Mediterranean; Atlantic-Norway to South Africa and Massachusetts to West Indies, Gulf of Mexico; Pacific-British Columbia to Chile Occurrence: Port-of-Spain Harbour, Point Lisas, South Oropuche Family Orbinidae Berkeleya sp. a

Occurrence: South Oropuche

Califia sp. a Occurrence: Port-of-Spain Harbour Leitoscoloplos sp. c Occurrence: South Oropuche Naineris sp. a Occurrence: Port-of-Spain Harbour, Point Lisas Naineris sp. b Occurrence: South Oropuche Scoloplos sp. a Occurrence: South Oropuche Scoloplos sp. b Occurrence: Point Lisas Scoloplos sp. c Occurrence: Point Lisas Scoloplos capensis (Day, 1961) Distribution: South Africa, North Carolina, Gulf of Mexico Occurrence: South Oropuche Scoloplos rubra (Webster, 1879) Distribution: Virginia, West Indies, Eastem Gulf of Mexico Occurrence: Port-of-Spain Harbour, Point Lisas, South Oropuche Scoloplos texana Maciolek & Holland, 1978 Distribution: Gulf of Mexico Occurrence: Point Lisas, South Oropuche Family Paraonidae Aricidea sp. a Occurrence: Port-of-Spain Harbour Aricidea sp. b Occurrence: Port-of-Spain Harbour Aricidea sp. c Occurrence: Port-of-Spain Harbour, Point Lisas, South Oropuche Aricidea sp. d Occurrence: Port-of-Spain Harbour Aricidea sp. e Occurrence: Port-of-Spain Harbour, Point Lisas, South Oropuche Aparaonis sp. a Occurrence: Port-of-Spain Harbour Cirrophorus sp. a

Occurrence: Port-of-Spain Harbour

Occurrence: Port-of-Spain Harbour

Cirrophorus sp. b

America, Gulf of Mexico, Family Spionidae Apoprionospio dayi (Foster, 1969) Chile, Falkland Islands Occurrence: Port-of-Spain Harbour, South Distribution: North Carolina, Gulf of Oropuche Mexico Occurrence: Point Lisas, South Oropuche Prionospio sp. a Apoprionospio pygmaea (Hartman, 1961) Occurrence: Point Lisas Distribution: Gulf of Mexico, Southern Prionospio cristata Foster, 1971 California, Baja California Distribution: North Atlantic, North Caro-Occurrence: Port-of-Spain Harbour, Point lina, Florida, Gulf of Mexico, Caribbean Sea Lisas, South Oropuche Occurrence: Port-of-Spain Harbour, Point Aquilaspio sp. a Lisas, South Oropuche Occurrence: South Oropuche Prionospio fallax Soderstrom, 1920 Dispio uncinata Hartman, 1951 Distribution: North Atlantic, Massachu-Distribution: Gulf of Mexico, Atlantic from Sweden to Madeira. setts to Florida, Gulf of Mexico, Caribbean, Central Mediterranean, South Africa, southern California, America, Panama, Califorwestern Canada nia Occurrence: Point Lisas Occurrence: Port-of-Spain Harbour, Point Malacoceros sp. a Lisas, South Oropuche Occurrence: Point Lisas Prionospio heterobranchia Moore, 1907 Distribution: Texas Minuspio sp. a Occurrence: Port-of-Spain Harbour Occurrence: Port-of-Spain Harbour, Point Prionospio steenstrupi Malmgren, 1867 Lisas Distribution: North Atlantic from Norway Minuspio sp. b Occurrence: South Oropuche to Greenland and New Microspio pigmentata (Reish, 1959) Brunswick to Florida, Gulf Distribution: North Carolina, Gulf of of Mexico, Alaska to Mexico, Southern Califor-Southern California, Japan, nia South Africa, southeastern Occurrence: Port-of-Spain Harbour Australia Paraprionospio pinnata (Ehlers, 1901) Occurrence: Port-of-Spain Harbour, Point Distribution: Chesapeake Bay to Florida, Lisas, South Oropuche Gulf of Mexico, Caribbean, Scolelepis sp. c Morocco, Africa, Indian Occurrence: Point Lisas Ocean, western Canada to Spio pettiboneae Foster, 1971 Chile, Japan, New Zealand, Distribution: North Carolina, Gulf of New South Wales Mexico Occurrence: Port-of-Spain Harbour, Point Occurrence: Port-of-Spain Harbour, South Lisas, South Oropuche Oropuche Polydora sp. Spiophanes sp. a Occurrence: Point Lisas Occurrence: Point Lisas Polydora plena (Berkley & Berkley, 1936) Spiophanes missionensis Hartman, 1941 Distribution: North Carolina, California, Distribution: Central California, Gulf of British Columbia, Massa-Mexico chusetts, Chile Occurrence: Port-of-Spain Harbour, Point Occurrence: Port-of-Spain Harbour Lisas Polydora socialis (Schmarda, 1861) Streblospio benedicti Webster, 1879 Distribution: East and west coasts of North Distribution: Cosmopolitan

Occurrence: Port-of-Spain Harbour, Point Lisas, South Oropuche Family Magelonidae Magelona sp. a Occurrence: Port-of-Spain Harbour Magelona sp. b Occurrence: Point Lisas, South Oropuche Magelona sp. c Occurrence: Point Lisas, South Oropuche Magelona sp. d Occurrence: Point Lisas, South Oropuche Magelona sp. e Occurrence: Point Lisas, South Oropuche Magelona sp. f Occurrence: Point Lisas Magelona sp. g Occurrence: South Oropuche, Point Lisas Magelona sp. h Occurrence: South Oropuche, Point Lisas Magelona sp. i Occurrence: South Oropuche, Point Lisas Magelona sp. l Occurrence: South Oropuche, Point Lisas Magelona pettiboneae Jones, 1963 Distribution: Gulf of Mexico Occurrence: Port-of-Spain Harbour, Point Lisas, South Oropuche Family Chaetopteridae Chaetopterus variopedatus (Renier, 1804) Distribution: Cosmopolitan in temperate and tropical waters Occurrence: Port-of-Spain, Point Lisas, South Oropuche Mesochaetopterus capensis (McIntosh, 1885) Distribution: South Africa, Gulf of Mexico Occurrence: Port-of-Spain Harbour Spiochaetopterus sp. a Occurrence: Point Lisas, South Oropuche Spiochaetopterus oculatus Webster, 1879 Distribution: New England, North Carolina Occurrence: Port-of-Spain Harbour, Point Lisas

Family Cirratulidae Chaetozone sp. a

Occurrence: Port-of-Spain Harbour, Point

Lisas

Chaetozone sp. c

Occurrence: South Oropuche

Dodecaceria sp. a

Occurrence: Point Lisas, South Oropuche

Tharyx sp. a

Occurrence: Port-of-Spain Harbour, Point Lisas, South Oropuche

Tharyx annulosus Hartman, 1965 Distribution: Florida, Texas

Occurrence: Port-of-Spain, Point Lisas,

South Oropuche

Tharyx marioni (Saint-Joseph, 1894)

Distribution: North Atlantic, Scotland, Mediterranean, Morocco

Occurrence: Port-of-Spain Harbour, Point Lisas, South Oropuche

Genus c

Occurrence: Port-of-Spain Harbour

Genus d

Occurrence: Port-of-Spain Harbour

Family Cossuridae

Cossura sp. a

Occurrence: Port-of-Spain Harbour, Point Lisas, South Oropuche

Cossura soyeri Laubier, 1963

Distribution: Mediterranean Sea, North Carolina, Gulf of Mexico

Occurrence: Point Lisas

Family Scalibregmidae*

Family Ophelidae

Armandia agilis (Andrews, 1891)

Distribution: Bermuda, North Carolina,

Gulf of Mexico

Occurrence: South Oropuche

Armandia intermedia (Fauvel, 1902)

Distribution: Senegal, Ghana, Persian Gulf,

New Caledonia, Japan,

N.W. Australia

Occurrence: Port-of-Spain Harbour, South

Oropuche

Armandia maculata (Webster, 1884)

Distribution: Bermuda, North Carolina,

Gulf of Mexico

Occurrence: Port-of-Spain Harbour, Point

Lisas, South Oropuche

^{*}Recorded in PLIPDECO/IMA (1982).

Family Sternaspidae

Sternaspis scutata (Renier, 1807)

Distribution: Gulf of Mexico, Mississippi,

Panama

Occurrence: South Oropuche

Family Capitellidae

Capitella sp. a

Occurrence: Port-of-Spain Harbour Capitella capitata (Fabricius, 1780)

Distribution: Cosmopolitan

Occurrence: Port-of-Spain Harbour, Point

Lisas, South Oropuche,

Caroni Swamp

Capitomastus sp. a

Occurrence: South Oropuche

Dasybranchus sp. a

Occurrence: Port-of-Spain Harbour

Decamastus gracilis Hartman, 1963

Distribution: Southern California, Gulf of

Mexico

Occurrence: Point Lisas

Heteromastus filiformis (Claparede 1864) Distribution: North Atlantic, North Caro-

lina, Gulf of Mexico, Pa-

cific, Morocco, south Cali-

fornia

Occurrence: Port-of-Spain Harbour

Lumbricomastus sp. a

Occurrence: Port-of-Spain Harbour

Mediomastus sp. a

Occurrence: Point Lisas, South Oropuche Mediomastus californiensis Hartman, 1944

Distribution: North Carolina to Florida,

Gulf of Mexico, Oregon to California, Australia

Occurrence: Port-of-Spain Harbour, South Oropuche

Notomastus sp. a

Occurrence: Point Lisas

Notomastus hemipodus Hartman, 1945

Distribution: North Carolina, Gulf of

Mexico, California

Occurrence: Port-of-Spain Harbour, Point Lisas

Notomastus lobatus Hartman, 1947

Distribution: North California, Gulf of

Mexico, southern California

to Mexico

Occurrence: Point Lisas

Notomastus tenuis Moore, 1909

Distribution: Canada to California, Gulf of

Mexico

Occurrence: Port-of-Spain Harbour

Family Arenicolidae*

Family Maldanidae

Axiothella sp. a

Occurrence: South Oropuche

Clymaldane sp. a

Occurrence: Port-of-Spain Harbour, Point

Lisas, South Oropuche

Euclymene sp. a

Occurrence: Point Lisas

Johnstonia sp. a[†]

Occurrence: Point Lisas, South Oropuche

Family Oweniidae

Owenia cf. fusiformis Delle Chiaje, 1844

Distribution: Altantic, North Carolina,

Gulf of Mexico, Mediterranean and Red Sea, Indian Ocean, North Pacific, Chile

Occurrence: South Oropuche

Family Ampharetidae

Amphicteis scaphobranchiata Moore, 1906a

Distribution: Washington to Baja Califor-

nia. Gulf of Mexico

Occurrence: Port-of-Spain Harbour, Point

Lisas

Amphicteis sp. a

Occurrence: Port-of-Spain Harbour, Point

Lisas, South Oropuche

Melinna sp. a

Occurrence: Point Lisas, South Oropuche

Melinna cristata (Sars, 1851)

Distribution: Widespread in the cold wa-

ters of the Artic, north Atlantic and south Pacific, north Carolina, Gulf of

Mexico

Occurrence: Port-of-Spain Harbour, Point

Lisas

Melinna maculata Webster, 1879

Distribution: Virginia to Gulf of Mexico, West Indies

^{*}Recorded in PLIPDECO/IMA (1982).

New Species being described by Gobin and Mackie (In prep.).

Occurrence: Port-of-Spain, Point Lisas, South Oropuche

Genus a (unknown)

Occurrence: South Oropuche

Family Lacydoniidae*

Family Terebellidae

Loimia sp. a

Occurrence: Point Lisas, South Oropuche

Loimia medusa (Savigny, 1818)

Distribution: Northern Gulf of Mexico

Occurrence: South Oropuche Loimia viridis (Moore, 1903)

Distribution: Massachusetts, North Caro-

lina, Gulf of Mexico

Occurrence : Port-of-Spain Harbour, Point

Lisas, South Oropuche

Family Trichobranchidae

Terebellides stroemi Sars, 1935

Distribution: Cosmopolitan, from Artic to

sub-Antartic

Occurrence: Port-of-Spain Harbour, Point

Lisas, South Oropuche

Family Sabellidae

Branchiomma nigromaculata (Baird, 1865)

Distribution: Pacific, Red Sea, West In-

dies, Gulf of Mexico

Occurrence: Caroni Swamp Chone cf. americana Day, 1973

Distribution: North Carolina, Gulf of

Mexico

Occurrence: Port-of-Spain Harbour, Point

Lisas, South Oropuche

Fabricia sp. a

Occurrence: Point Lisas

Megalomma sp. a

Occurrence: Port-of-Spain Harbour, Point

Lisas

Potamilla sp. a

Occurrence: Point Lisas

Family Serpulidae

Eupomatus (Hydroides) sanctaecrucis

(Kroyer, 1863)

Distribution: Gulf of Mexico Occurrence: Caroni Swamp

Discussion and Conclusions

One hundred and eighty species from 38 families were identified for the coastal waters of the Gulf of Paria which provides intertidal habitats and includes mud flats, sandy mud bottoms, and mangrove swamp areas. Categories of polychaetes represented included typically tropical species (Diopatra cuprea, Glycera sphyrabrancha), cosmopolitan species (Nereis succinea, Capitella capitata, Streblospio benedicti), and some new species (see checklist).

Polychaetes when identified may provide valuable information to benthic community research. Agard (1984) described the ubiquitous S. benedicti as indicative of a very polluted environment. In the South Oropuche area C. capitata and S. benedicti were abundant at inshore stations where pollution was suspected (Agard and Gobin, in preparation). Both studies suggest the possibility that these two polychaetes are indicator species for the tropics. They have already been described as indicator species for the temperate areas (Pearson and Rosenberg 1978; Reish 1959). Change in spatial and temporal distribution of organisms in an area may be due to natural occurrences, physical perturbation, or pollution. The effect of these influences may be reflected in the abundance and species composition of polychaetes within a benthic community (Wade 1972: Agard 1984; Gobin 1988).

Knowledge of species or genera present is therefore of prime importance in benthic surveys. Standardization of identification aids should be encouraged for use by future polychaete workers. This checklist is only for the Gulf of Paria (predominantly a muddy bottom). More oceanic areas as well as coral reef areas of the east and north coasts are virtually unknown with regard to the polychaete fauna. It is expected that polychaete species in these areas will be varied and typical of sandy and rocky bottoms.

Acknowledgements

The major polychaete collections were made during four separate projects: PLIPDECO/IMA project (1979–1981), the Diego Martin to Portof-Spain project (Port-of-Spain Harbour 1982–1983), the South Oropuche project (1983–1984), and the Point Lisas project

^{*}Recorded in PLIPDECO/IMA (1982).

(1984–1986). The author thanks the boat operators, field assistants, sorters, and researchers who at any time worked on any of these projects. The author also thanks Mr. G. Escayg, Mr. P. Wolf, Mr. J. Agard, and Dr. A. Siung-Chang for their invaluable assistance during the taxonomic studies, as well as Ms. C. Milan and Mrs. S. Haskell for typing of the manuscript and Mr. A. Cummings and Mr. R. Ramkissoon for preparation of the figure. UNESCO is acknowledged for the financial assistance to the author to attend The Second Polychaete Conference in Denmark in 1986.

- Agard, J. B. 1984. A baseline study of the effects of pollution on the benthos of the nearshore Diego Martin to Portof-Spain coastal area. I.M.A. Tech. Rep. Inst. Mar. Aff., Trinidad, W.I. 79 pp.
- Bacon, P. R. 1968. The ecology of Caroni Swamp, Trinidad, with special reference to plankton and cirripedes. Ph.D. Thesis, U.W.I., St. Augustine, Trinidad, W.I. 252 pp.
- Bailey, J. H. 1970. Spirorbinae (Polychaeta) from the West Indies. Stud. Fauna Curacao other Caribb. Is. XXX11: 58-81.
- Day, J. 1967. A monograph on the Polychaeta of Southern Africa. Parts 1 and 2. British Museum (Natural History), London. 878 pp.
- Fauchald, K. 1977. The polychaete worms. Definitions and Keys to the Orders, Families, and Genera. Nat. Hist. Sci. Ser., Los Angeles, U.S.A. 28: 1–190.
- _____. 1984. In: preface to Uebelacker and Johnson 1984. Fauchald, K., and P. Jumars. 1979. The diet of worms A study of polychaete feeding gills. Oceanogr. Mar. Biol. Ann. Rev. 17: 193–284.
- Gobin, J. 1988. The polychaete macrofauna near a large industrial complex at Point Lisas, Gulf of Paria, Trinidad. M.Phil. Thesis, U.W.I., St. Augustine, Trinidad, W.I. 156 pp.
- Hartman, O. 1959. Catalogue of the polychaetous annelids of the world. Parts I and II. Allan Hancock Fdn. Occas. Pap. 23: 628 pp.
- _____. 1965. Catalog of the polychaetous annelids of the world. Supplement 1960–1965 and Index. Allan Hancock Fdn. Occas. Pap. 28: 378 pp.

- Marsden, J. R. 1960. Polychaetous annelids from the shallow waters around Barbados and other islands of the West Indies with notes on larval forms. Can. J. Zool. 38: 989–1020.
- McNulty, J. K. 1961. Ecological effects of sewage pollution in Biscayne Bay, Florida: sediments and distribution of benthic and fouling macro-organisms. Bull. Mar. Sci. Gulf Caribb. 11(3): 394–447.
- _____. 1966. Recovery of Biscayne Bay from pollution. Ph.D. Thesis, Univ. Miami, FL. 178 pp.
- Monro, C. C. A. 1928. On the Polychaetes collected by Dr. T. Mortensen off the coast of Panama. Vidensk. Medd. Naturhist. Forsk. Copenhagen 85: 75–103.
- Pearson, T. H., and R. Rosenberg. 1978. Macrobenthic succession in relation to organic enrichment and pollution of the marine environment. Oceanogr. Mar. Biol. Ann. Rev. 16: 229–311.
- Perkins, T. H., and T. Savage. 1975. A bibliography and checklist of polychaetous annelids of Florida, and the Gulf of Mexico and the Caribbean Region. Fla. Mar. Res. Publ. 14: 62 pp.
- PLIPDECO/IMA. 1982. A joint study of the Point Lisas Development Corporation Limited (PLIPDECO) and the Institute of Marine Affairs (IMA). Point Lisas environmental project, Trinidad, W.I. Vols. I–VIII.
- Reish, D. J. 1959. An ecological study of pollution in Los Angeles Long Beach Harbour, California. Allan Hancock Fdn. Occas. Pap. 22: 119 pp.
- Taylor, J. L. 1971. Polychaetous annelids and benthic environments in Tampa Bay, Florida. Ph.D. Thesis, Univ. Florida, FL. 1332 pp.
- Ten Hove, H. A. 1975. Serpulinae (Polychaeta) from the Caribbean: III The genus *Pseudovermilia* (including species from other regions). Stud. Fauna Curacao other Caribb. Is. XLIII: 46–101.
- Uebelacker, J. M., and P. G. Johnson. 1984. Taxonomic guide to polychaetes of the Northern Gulf of Mexico. Vol. 1–7. Barry Vittor and Assoc. Inc., Mobile, Alabama.
- van Andel, T. H., and P. L. Sachs. 1964. Sedimentation in the Gulf of Paria during the Holecene Transgression; a subsurface acoustic reflection study. J. Mar. Res. 22(1): 30–50.
- Wade, B. A. 1972. A description of a highly diverse soft bottom community in Kingston Harbour, Jamaica. Mar. Biol. 13: 57–69.
- Wesenberg-Lund, E. 1958. Lesser Antillean polychaetes, chiefly from brackish water, with a survey and a bibliography of fresh and brackish-water polychaetes. Stud. Fauna Curacao other Caribb. Is. VIII: 1–41.