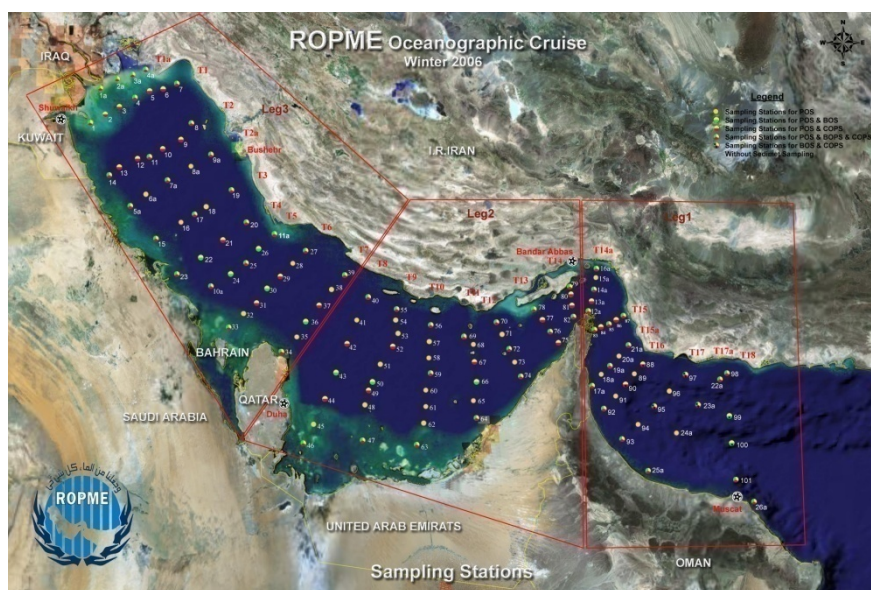




Regional Organization for the Protection of the Marine Environment

ROPME Oceanographic Cruise - Winter 2006



Technical Report Series

Technical Report: No. 10

Meiobenthos in the ROPME Sea Area

October 2013

ROPME Oceanographic Cruise - Winter 2006

Technical Report Series:

1. Physical Oceanography
2. Contaminants in Marine Sediments
3. Nutrients
4. Chlorophyll-a
5. Phytoplankton
6. Zooplankton
7. Decapod Larvae
8. Ichthyoplankton
9. Tintinnids
10. Meiobenthos
11. Macrobenthos

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Preface

In recognition of the importance of the Oceanographic Cruises in the ROPME Sea Area to understand the state of the marine environment, ROPME Council has assigned high priority to the ROPME scientific Cruises. In pursuance of the Council Decision CM12/7, ROPME was mandated to coordinate a comprehensive Oceanographic Cruise in winter 2006. The Cruise was planned in such a way that the results and reports of the studies can find their way into the synthesis of ROPME State of the Marine Environment Report.

As a result of sustained efforts, cooperation of Member States, guidance of the designated scientific committee for the Cruise, encouragements from the Executive Committee of ROPME and the generous provisions made by the Council, the historic Winter Cruise was carried out successfully on board of M/V Ghods of I.R.Iran during 1st February and 11th March 2006.

Totally, 115 stations covering the RSA have been surveyed and 97 experts from ROPME Member States participated in the Cruise. The survey covered most of the main oceanographic disciplines.

The collected samples during the Cruise were distributed on a competitive basis to the competent laboratories in the Region and elsewhere for detailed analyses while sub-sample sets were kept in ROPME Marine Sample Bank to enable repetitive analyses in future, when required

To enhance benefits from the reproduced results of the Cruise among Regional scientific community towards a better understanding of the marine environment in the RSA and to enable furtherance of marine researches, ROPME Secretariat decided on the publication of the results in a series of Technical Reports as follows:

1. Physical Oceanography
2. Contaminants in Marine Sediments
3. Nutrients
4. Chlorophyll-a
5. Phytoplankton
6. Zooplankton
7. Decapod Larvae
8. Ichthyoplankton
9. Tintinnids
10. Meiobenthos
11. Macrobenthos

The present Technical Report is devoted to the community structure of Meiobenthos in the RSA. The analyses of Meiofauna samples and reporting have been conducted by a team of scientists led by Dr.M.S. Nabavi at Khoramshahr Marine Science & Technology University (KMSTU), Islamic Republic of Iran under a contract with ROPME.

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Executive Summary

This integrated report includes meiofauna of ROPME Sea Area, collected during three ROPME Cruises in Summer 2000, Summer 2001 and Winter 2006. The major focus of this task was to investigate the meiofauna communities in 51 stations for Winter 2006 Cruise and integrate them with the results of Summer 2000 and Summer 2001 Cruises. Seven main different community types of meiofauna group have been reported. These seven different community types were located at different benthic habitats, which were in coastal, offshore and deeper areas in the RSA. Meiofauna species abundance was found to be varied from station to station. Additional information such as meiofauna distribution and abundance, and species composition in relation to physical and chemical factors have also been reported.

The maximum abundance of meiofauna recorded during Cruise 2000 was 16104 individuals per 25.6 cm³ from station 80, whereas it was 30622 individuals per 25.6 cm³ at station 61 in Summer 2001. In Winter 2006 Cruise, the maximum abundance of meiofauna recorded was 11348 individuals per 25.6 cm³ at station 93 in the Omani coastal water of Sea of Oman. The analysis of meiofauna abundance indicated that foraminifera, ostracoda and molluscs were the dominant taxa that contributed to the variability between field sites in the RSA.

A total of 70 species of meiofauna were identified during the Summer 2000 Cruise. In Summer 2001 Cruise, 205 species of meiofauna were recorded, while in Winter 2006 Cruise, the total number was 281 species. During these three Cruises, a number of species were unidentified such as, 37 species of foraminifera; 25 species of Ostracoda; 15 species of micro molluscs and 7 species of nematodes. The highest number of meiofauna species recorded as 39 at station 18 for Summer 2000 Cruise; 40 species at station 50 in the middle of southern part of the I-RSA for Summer 2001 Cruise and 65 species at station 98 in the Iranian coast of Sea of Oman for Winter 2006 Cruise. The substrates of these three stations were dominated by high proportion of silt and clay fractions, ranging from 84.4% to 94.80% and relatively high proportions of Total Organic Matter ranging from 8.14% to 11.83%. Seven dominant groups of meiofauna were represented, out of them, foraminifera, Ostracoda and micro molluscs were the important taxa. Foraminifera contributed between 90 and 97.05% of the total numbers of meiofaunal groups during the three Cruises conducted in the RSA.

The result of grain size analysis of sediment during three Cruises revealed that many stations were dominated by high proportion of silt and clay fractions with relatively high proportion of organic matter. These sediment textures are normally hospitable substrates for meiofauna to reside, with larger pores than highly silty-clay sediment. Therefore, meiofaunal species from Stations 96 (in the Iranian offshore water in the Sea of Oman) and 89 in Summer 2000 cruise showed the highest

values of Diversity of Shannon Weaver Index 'H'. During Summer 2001 Cruise, the higher values of 'H' were observed in north and NE part of the I-RSA. Explanation of these values could be attributed to the input of water masses with high nutrients through the Strait of Hormuz rather than types of substrates.

The spatial distribution of meiofauna in RSA during the three ROPME Cruises showed some relationship with the environmental parameters. Significant correlations ($P < 0.05$) were found between meiofauna and depth ($r = -0.315$ for Summer 2000 and $r = -0.332$ for Summer 2001). There was also a significant correlation between total meiofauna and salinity ($r = -0.24$) during Winter 2006 Cruise. The temperature values showed negative significant correlation with depth ($r = -0.279$ for Summer 2000 and $r = -0.765$ for Summer 2001 at $p < 0.01$) and positive significant correlation ($r = 0.425$) in Winter 2006 Cruise. The dissolved oxygen concentration values during three Cruises showed a negative significant correlation with depth ($r = -0.739$ for Summer 2000, $r = -0.322$ for Summer 2001 and $r = -0.625$ for Winter 2006).

Abbreviations and Acronyms

EXCOM	Executive Committee
GEO	Global Environment Outlook
IMO	International Maritime Organization
IFRO	Iranian Fisheries Research Organization
IRIPP	Iranian Research Institute of Plant Protection
I-RSA	Inner ROPME Sea Area
MBSGUB	Marine Biology Section of Ghent University Belgium
M-RSA	Middle ROPME Sea Area
NFP	National Focal Point
O-RSA	Outer ROPME Sea Area
PAAC	Public Authority for the Assessment of Compensation
PAHs	Polycyclic Aromatic Hydrocarbons
PHCs	Petroleum Hydrocarbons
R/ V Ghods	Research/Vessel Ghods
SEM	Scanning Electron Microscope
TOM	Total Organic Matter

1. Introduction

ROPME Cruises were a success in which many disciplines, including physical, chemical, biological and geological as well as pollution survey, meteorology and radioactive measurements were carried out in the ROPME Sea Area (RSA). The area studied during the Summer 2000 and Summer 2001 Cruises only covered the inner part of the RSA, while in the Winter 2006 Cruise it was extended to the middle RSA (Sea of Oman) as well.

The present integrated research was aimed at examining the changes in the structure of meiofaunal assemblages and in the physico-chemical characteristics of sediment texture, total organic matter of the sediment, dissolved oxygen, salinity, temperature and pH in the ROPME Sea Area during the Summer 2000, Summer 2001 and Winter 2006 Cruises. It is hoped that by conducting these scientific Cruises, many questions and ambiguities about ROPME Sea Area are answered and a strong data basis for further research and cooperation is established for use in the Region and for other scientific research centers outside the Region.

1.1 Overview of Meiofauna in Marine Sediment

The meiofauna is defined on a methodological basis as all metazoans retained on a sieve of 42 μm (Mare, 1942). They are multi-cellular animal living in all seabed habitats from estuaries to the deep sea particularly in the sand and mud that predominate in the coastal areas and in the ocean world-wide. Twenty-three higher taxa of the thirty-three metazoan phyla have some meiobenthic representatives (Vinx, 1996).

In recent years the meiofauna of marine sediments has received an increasing interest for its potential biomonitoring studies (Gray, 1971; ICES, 1978; Coul *et al.*, 1981, 1982; Raffaelli & Mason, 1981; Warwick, 1981; Amjad & Gray, 1983; Lamshead, 1984; Shiells & Anderson, 1985; Gee *et al.*, 1985; Sandull *et al.*, 1995). In particular, the high sensitivity, rapid turnover rate, quick response, the life cycles entirely spent in sediment and relative population stability, represent the main characteristics that make meiofauna a valid means to assess the impact of environmental stress. Nevertheless, taxonomic difficulties related to species identification of several meiobenthic organisms have often induced scientists to use macrofauna rather than meiofauna for biomonitoring purpose. However, recent studies suggest that this taxonomic limitation may be reasonably overcome since the identification at level of family and even class or phylum may provide sufficient information about pollution responses (Warwick, 1987; Warwick, 1988; Sandull *et al.*, 1995; Schratzberger *et al.*, 2000; Udalov *et al.*, 2002; Nabavi *et al.*, 2005).

Meiofauna of marine sediments have been subjected to many reviews in which their role on various ecological processes has been emphasized (Swedmark, 1984; McIntyre, 1969; Gerlach, 1971; Fenchel, 1978; Gerlach, 1978; Coull & Bell, 1979; Platt & Warwick, 1980; Heip *et al.*, 1985; Martens & Schokaert, 1986; Coull, 1988; Gee, 1989). For example, these small creatures are important both directly, as food sources for organisms in higher trophic levels, such as shrimp and Juvenile fish, and also indirectly by processes such as bioturbation and the stimulation of bacterial metabolism (Hall, 1996). The nature of the sediment has been shown by several workers that affect the structure of meiobenthic

communities both in intertidal and subtidal sediments (Hicks & Coull, 1983; Heip *et al.*, 1985; Nabavi, 1988; Nabavi, 1996, 2008; Olafson, 1991).

Other environmental variables influencing the distribution of meiobenthic communities structure namely organic matter content of the sediment, salinity, temperature, dissolved oxygen, concentration and pH have been also noted by many workers (Olafson, 1991; Ansari & Parulekar, 1998; Paikaray *et al.*, 2012; Nabavi, 1996 and 2008).

Foraminifera are marine unicellular organisms belonging to the class Sarcodina within the Protista. They occur in substantial number within meiofaunal communities. They are common in present geological time marine sediments varying in abundance from about 10^3 to 2.5×10^6 living individuals per square meter (Loeblich & Tappan, 1964). Adult foraminifera species may range in diameter from 0.02 to 110 μ m. The number of exact foraminifera species is now estimated to be about 10000 (Vickerman, 1992). Foraminifera play a significant role in global biogeochemical cycles of inorganic and organic compounds, making them to be one of the most important animal groups on earth (Haynes, 1981; Lee and Anderson, 1991; Yanko *et al.*, 1999).

The second most dominant group was Ostracods. These metazoan organisms belong to the phylum Arthropoda, Class Crustacea. They occur in substantial number within meiofaunal communities. These organisms are one of the diverse groups of living crustacean with approximately 8000 described species. Ostracoda range in size from several microns to a few tens of millimeters (32 mm long). In recent years, the ostracods as an important part of the meiofauna of marine sediments, has received an increasing interest for its potential in biomonitoring studies.

Marine molluscs are among the major groups of invertebrates which may be as many as 60000 or more species mostly living in the world's seas. Thousands are less than half an inch in size, even in the adult stage, and many hundreds are confined to the great depths of the oceans (Abbott and Dance, 1983). Gastropoda and bivalvia are the most diverse groups of marine molluscs which have an extraordinary diversification of habitats and worldwide distribution from the near Arctic and Antarctic zones to the tropics.

Polychaetes is another group of meiofauna which are found in nearly every marine habitat from intertidal zone to the deepest sediments of the oceans. They vary greatly in form and size from a fraction of millimeter to well over 6 meters. They are present in meiofauna of the marine sediments both as permanent or temporary members. It has been estimated (Pleijel, 2001) that the current number of accepted species is around 9000, though several thousand more have been named and are considered invalid. They play a major role in the functioning of benthic communities, in terms of recycling, reworking and bioturbation of marine sediments and in the burial of organic matter (Hutchings, 1998). Polychaetes are well suited as indicators of environmental changes since this group contains both sensitive and tolerant organisms among them and in addition they are to be found along the whole gradient from pristine to heavily disturbed areas (Del-Pilar-Ruso and De-La-Ossa-Carretero, 2008). The presence or absence of specific polychaetes in marine sediments, therefore, provides an excellent indication of the condition or health of the benthic environment (Pocklington & Wells 1992).

Harpacticoid copepods contain over 3000 species which most of them are benthic and usually dominant taxon of meiofauna in marine sediments. Their widespread occurrence, robust bodies, well-elucidated taxonomy and lower spatial heterogeneity (in comparison with nematodes) potentially make harpacticoids a suitable meiofaunal group for pollution monitoring purposes (Heip, 1980; Sandulli & De Nicola-Giudici, 1990; Sandulli & Nicola, 1991; Mu *et al.*, 2002; Araujo-Castro *et al.*, 2009) and they have shown to be sensitive to a range of anthropogenic disturbances (Coull & Chandler, 1992). In some studies copepods have shown to be more sensitive than nematodes to certain types of disturbance (Heip *et al.*, 1988). Distribution, species diversity and description of benthic copepod species in the RSA is poorly studied.

Marine benthic nematodes are another important component of meiofauna having worldwide distribution. The whole phylum currently contains some 20000 nominal species. About 4000 species are free living marine forms mostly ranging in size around 1-2 mm long. They are an excellent meiofauna taxon as ecological indicators of benthic environment as have been suggested by many workers (Schratzberger *et al.*, 2000; Nanajkar & Ingole, 2010; Ramasamy *et al.*, 2010).

1.2 Meiofauna in ROPME Sea Area

Information on the meiobenthos of the RSA is relatively scanty. Even though some workers have made isolated and strenuous efforts from time to time most of them have been localized in and around shallow coastal areas or in estuaries of the ROPME Member States. Most available data regarding meiofaunal ecology in the RSA is related to few groups namely foraminifera, ostracoda and gastropoda. In spite of the fact that many metazoan phyla have some representatives in meiofauna, but benthic copepods, Ostracods, nematods and turbellaria have been noted as dominant groups in many studies e.g. Vinx (1996), Ansari & Parulekar (1998), Austen and Wibdom (1991), Olafsson (1991), Sajan & Damodaran (2007) and Paikaray *et al.* (2012). The results of the three ROPME Cruises have indicated that foraminifera, Ostracoda and Gastropoda comprise more than 90% of the meiofauna in most stations of the study area.

In the last decades many studies on benthic foraminifera including Murray (1936, 1956, 1966, 1970), Lutz (1974, 1975), Ahmad (1991), Al-Zamel (1996), Nabavi (1992, 1996, 2004, 2008) and Saidova (2010) have been carried out in different areas of the RSA which provide only localized data about ecology, distribution and species diversity of foraminifera. During the three ROPME Cruises (2000, 2001 and 2006) the whole Inner and part of Middle RSA were investigated.

Ostracod fauna of the RSA are poorly studied. There are only a few references which deal with this subject from the Inner and Middle RSA as well as the Indian coasts of the Arabian Sea (e.g. Al-Abdul Razzaq, 1982; Bate, 1971, 1981; Bate and Gurney, 1981; Bhatia & Kumar, 1979; Haussain & Rajeshwara Rao, 1996; Jain, 1978, 1981; Mostafawi, 2001, 2003; Paik, 1976, 1977.)

The earliest studies on molluscs in RSA dates back to the 18th century by Melvill. He has published more than 22 papers on identification and description of marine molluscs in the RSA (e.g. Melvill, 1897, 1898a, 1898b, 1904, 1918, 1928). Many other workers such as

Hass (1952, 1954); Biggs (1958, 1973); Smithe (1972) Tadjalli-Pour (1974) and Bosch (1995) also have studied the molluscs in different parts of the RSA. Despite many information on molluscs in the RSA, micromolluscs of the Region are poorly known compared to their larger relatives, and thus there are undoubtedly numerous species which have yet to be discovered and described. The size of the very smallest micromollusc are less than one millimeter in adult size, and thus they are truly microscopic.

During the last decades many workers (Fauvel, 1908, 1911, 1918, 1919; Hove, 1970, 1990; Mohammad, 1970; Thomas, 1963; Wesenberg, 1949; Martin *et al.*, 2006; Bonyadi & Rahimian, 2009; Fazileh Hamzavi *et al.*, 2012) have studied the polychaeta identification and description of species. Despite the available data on polychaeta of the RSA, the ecology of this important group of benthic invertebrate in the entire RSA is poorly studied.

Although free-living marine nematodes are the most dominant meiofaunal group in many marine benthic habitats, there have been few studies involved in the nematodes community structure worldwide as well as in the RSA. Recently an investigation on marine nematodes has been pursued as joint project by IFRO (Iranian Fisheries Research Organization), IRIPP (Iranian Research Institute of Plant Protection) and MBSGUB (Biology Department, Marine Biology Section, Ghent University, Belgium) in intertidal waters of Bandar Abbas (I.R. Iran). During this study a total of 39 genera belonging to 17 families were identified (Sahraeian *et al.*, 2012).

2. Materials and Methods

2.1 Study Area

The conducted three ROPME Oceanographic Cruises during the last decade had different coverage in the surveyed areas, following the objective and established scientific programme for each Cruise. While the surveyed area during Summer 2000 Cruise was limited mainly to the northern part of the I-RSA (Figure 2.1 and Table 3.1), the area was extended during the Summer 2001 Cruise to cover the whole I-RSA (Figure 2.2 and Table 3.2), and it was further extended more to cover the I-RSA and part of the Sea of Oman during Winter 2006 Cruise (Figure 2.3 and Table 3.3). Cruise tracks and sampling stations for the last two Cruises followed those of the 100-days Mount Mitchell Cruise which was conducted during summer 1992, after the 1991 War. Details of surveyed areas and dominant meteorological and oceanographic conditions measured during the Winter 2006 Cruise were published by ROPME Secretariat in a special report (ROPME Technical Report No.1, 2010).

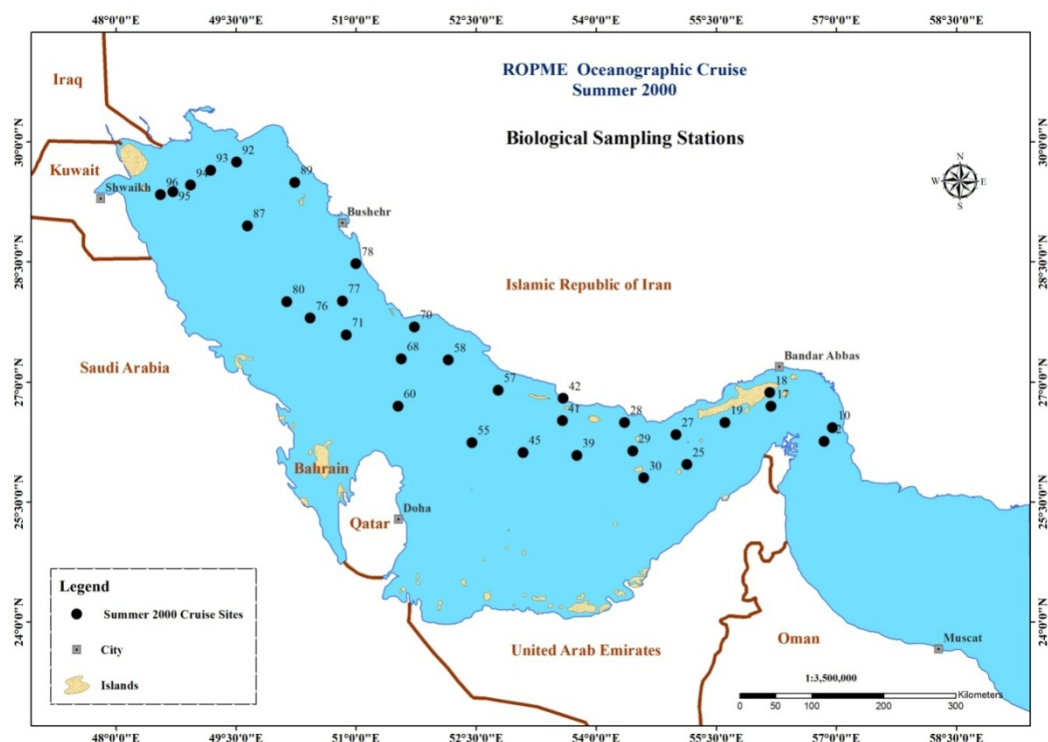


Figure 2.1: Sampling stations of ROPME Summer 2000 Cruise

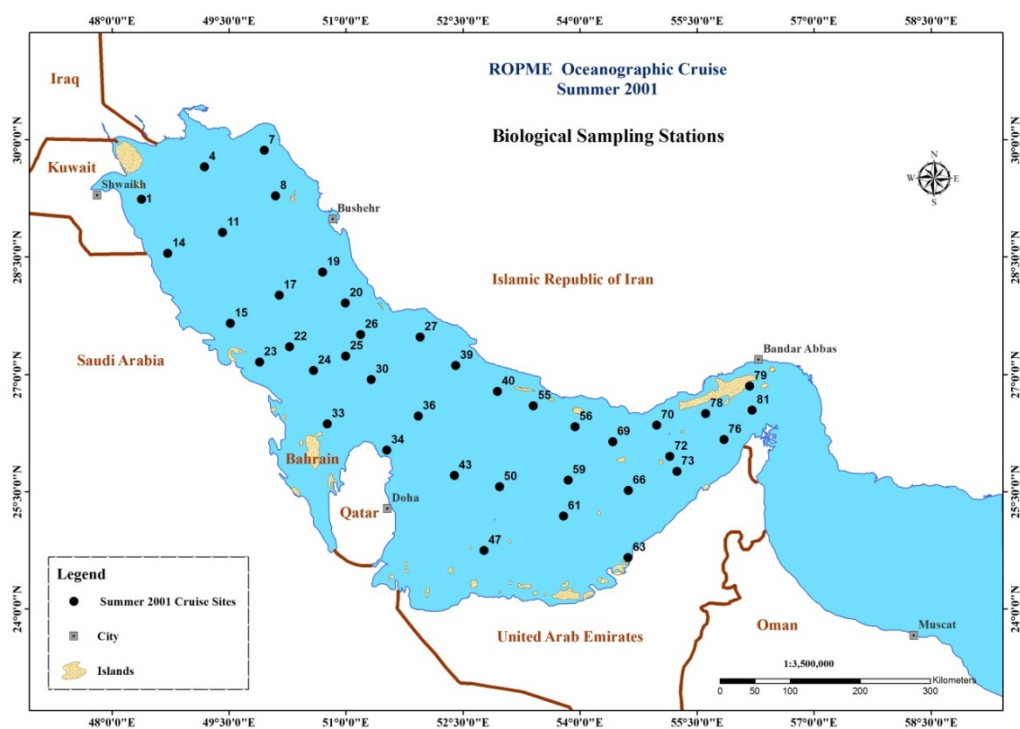


Figure 2.2: Sampling stations of ROPME Summer 2001 Cruise

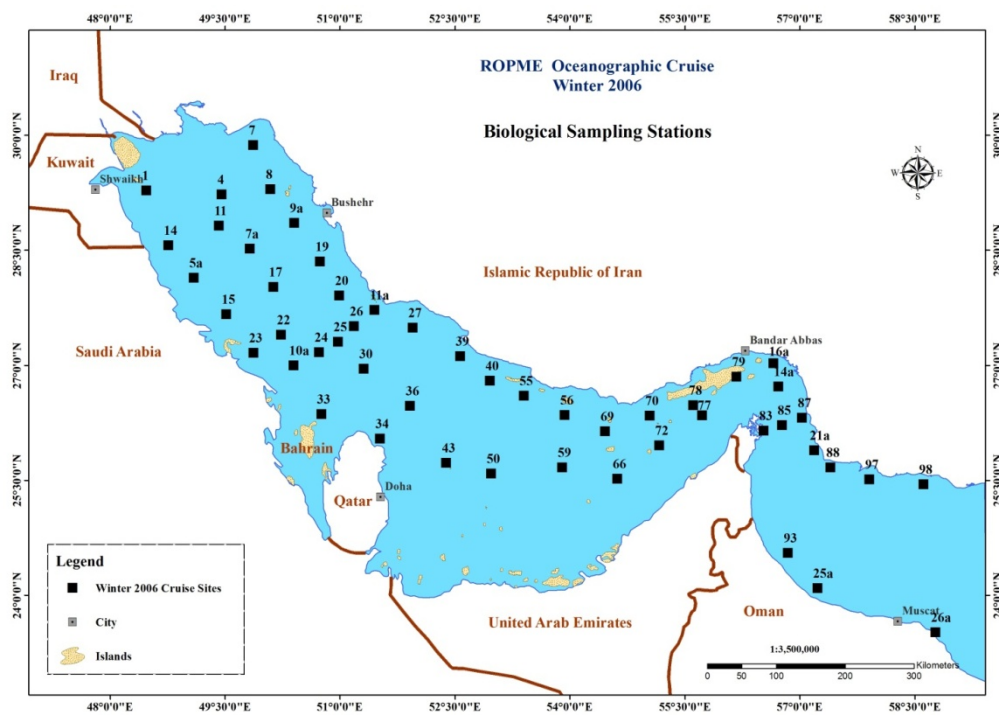


Figure 2.3: Sampling stations of ROPME Winter 2006 Cruise

2.2 Sampling Methods

In addition to the collection of sediment samples for the investigation of meiofauna, physical and chemical parameters for all stations have been measured and documented. Temperature, salinity, oxygen and pH have been measured on board of R/V Ghods, while the grain size of the sediments and total organic matter (TOM) have been analyzed and measured in the on land laboratory.

At each station, triplicate of sediment samples were taken using a Plexiglas corer (3.3cm diameter and 3cm height) from the upper 6 cm of the sediments collected by Van Veen grab and then transferred into prelabeled 200ml polyethylene container.

Sediment samples were preserved in 4-5% buffered formaldehyde for later processing in the laboratory. The samples were stained with Rose Bengal solution (1g/l) to facilitate better sorting of the meiobenthic organisms and then counted. Also, 200-300 gm of sub-sample of sediment for each station was taken for the analyses of grain size and its textural characteristics, and the measurement of total organic matter.

2.2.1 Separation of Meiofauna from sediments

Floatation by sea water and decantation methods were used to separate soft bodied meiofauna (nematodes, polychaetes,... etc.). Also, floatation by carbon tetrachloride and decantation was used for the separation of meiofauna with hard shells such as foraminifera, ostracodes and bivalves.

2.2.2 Staining procedure

To separate the meiofaunal assemblages with hard shell and dead specimens in the laboratory, the Rose Bengal technique developed by Walton (1952) was used. Rose Bengal stains the protoplasm of "living" specimens. The staining procedure in this study was similar to that of Murray (1979). Each preserved sediment sample was shaken in the laboratory and the contents were poured into a 230 mesh sieve (aperture 63 μ m) and washed with tap water to remove the clay until no further material passed through the sieve. The contents left on the sieve were then transferred into a container and an equal volume (with sample) of Rose Bengal dye (1 g Rose Bengal in 1000 ml distilled water) was added. After 45 minutes the sample was tipped into the sieve and washed again to remove the excess stain. The sample was then returned to the container and to oven dry at 70°C overnight. After drying, it was allowed to cool to room temperature and gently poured into a beaker filled with carbon tetrachloride (CCl₄). This was stirred with a glass rod to throw the material into suspension and then allowed to settle. Thus, the sediment sunk to the bottom while the meiofauna and other lighter materials floated as a scum on the surface of the liquid. The floating materials were then decanted into filter paper in a funnel. This operation was repeated three times until no further scum formed. Both parts of the sample were dried in the fume chamber before they were examined.

The whole procedure was carried out in a fume chamber. The bright red stain protoplasm produced by Rose Bengal is usually visible through the translucent walls or the entrance of gastropoda. On those shells whose walls are usually thick or opaque, as well as

the entrance of other meiofauna with hard shells, the stained protoplasm is visible around the aperture. Other meiofauna, with no shell have been separated by decantation.

2.2.3 Sorting, Picking and Examination of Meiofauna

For removing the lighter materials and debris from the meiofaunal assemblages, the contents of each extracted sample were poured into a card board tray. Special brushes were used for separating and picking hard shell meiofauna from other materials. The different species were separated using a wetting picking brush and then the samples were counted by using hand counter. The specimens were then mounted on the black 64 cell microfaunal slides (with a glass cover which is held in a sleeve). Before mounting, the surface of each microfaunal slide was painted with dilute water-soluble gum tragacanth and allowed to dry. When a moistened meiofauna with hardshell are placed on the slide it will automatically stick (Murray, 1979). It is possible to remove or change the orientation of specimens by adding one drop of water onto the slide using a moistened paint brush. The examination of meiofaunal specimens were carried out, using a stereoscopic bionocular microscope.

2.2.4 Coating and Photography

To identify the meiofaunal species, the scanning electron microscope was used. Selected specimens were mounted on the specimen stubs using a double- sided adhesive tape. All specimens were cleaned with a moistened paint brush before coating. They were then coated in vacuum with gold. Preparation of meiofauna photographs was carried out using Scanning Electron Microscope (SEM). The identification of meiofauna was done according to different identification keys including: Loeblich and Tappan (1964), Cushman (1969) and Murray (1971), Abbott and Dance (1983), Bosch *et al.* (1995) and Rouse and Pleijel (2001) keys.

2.2.5 Granulometry analysis of sediment

Rapid partial analysis by wet sieving was carried out using a standard technique outlined by Buchanan (1984). This briefly involves an initial splitting of the sediment into sand ($>63\ \mu\text{m}$) fractions. The procedure is explained as follows:

- The sediment sample from each site was oven-dried at 70°C for 24 hours.
- Approximately 25 g of sediment was weighed using a digital balance.
- To this, 250 ml of tap water and 10 ml of aqueous sodium hexa-metaphosphate (NaPO_3)₆ (6.2g/l) were added.
- The sodium hexa-metaphosphate was used as sequestering agent to separate sediment particles.
- The sediment was then mechanically stirred for 15 minutes, allowed to soak overnight, stirred again for 15 minutes before sieving.
- The sediment then passed immediately through a 63 μm sieve and washed thoroughly with a jet of tap water onto a white tray until no further material passed through the sieve.
- The remaining material was then dried at 70°C over night and agitated over a large sheet of white paper until no further material was notable to pass through the sieve.

The material remaining on the 63 µm sieve was carefully transferred into the uppermost of a stacked series of graded sand sieves (aperture 4, 2, 1, 0.5, 0.25, 0.125, and 0.063 mm). Any material passing through each sieve was added to the content of the sieve below. The remaining material on each sieve was then carefully removed and weighed, thus obtaining the weight of sediment for each sand fraction. The percentage of each sand fraction was calculated to show the frequency distribution of particle sizes.

Two scaling system namely the Krumbein scales (1936) and Wentworth (1984) were used in the present study. The Wentworth scale is based on 1 mm and a ratio of 2 and; the logarithmic transformation of this scale (introduced by Krumbein) provides an arithmetic series of integers known as the notation, where $\phi = -\log_2$ of the particle diameter in mm.

2.2.6 Measurement of organic matter in the sediment

The total organic matter (TOM) in each sample was measured. For determination of TOM in sediment samples, each crucible was weighed (C) and half filled with wet sediment and dried in an oven at 70°C to constant weight (about 24 hours). After removing from the oven, it was allowed to cool in a desiccator and reweighed (A). It was then placed in a Muffle Furnace at 55°C overnight, removed and cooled in a desiccator and reweighed (B). The total content of the organic material (TOM) was then determined by loss of weight on ignition at this temperature (Equation 2.1).

$$\text{Equation 2.1: TOM} = \frac{A - B}{A - C} \times 100\%$$

2.2.7. Statistical Analyses

One of the most important parameters of marine communities is their diversity, that is, the number of species present and their numerical composition (Sanders, 1968). It is at its maximum when all individuals belong to the different species and at its minimum when all individuals belong to the same species. A number of methods are available for determining diversity, and, although some are more reliable than others, none of them is perfect (Murray, 1968). To measure benthic meiofauna diversity, the most common indices were used. These are:

2.2.7.1 Shannon Weaver Index

The Shannon index (Equation 2.2), as an information entropy of the distribution, treating species as symbols and their relative population sizes as the probability. This measurement takes into account species richness and proportion of each species within aquatic community. This statistics is said to relate cybernetic theory to ecology (Gray, 1981). It has the advantage of combining both species richness and dominance. It can also be interpreted as a measure of the degree of uncertainty involved in predicting the species identify of a randomly selected individual (Parson *et al.* 1984) The values range from 0

where there is only one species, increasing with the increase in numbers of species and equitability. The Shannon's index of diversity has been calculated based on:

$$\text{Equation 2.2: } H' = - \sum_{i=1}^S p_i \ln p_i$$

p_i = the observed proportion of individuals belonging to its species (1,2,3, ... etc.)

S = total number of all species

2.2.7.2 Simpson's Diversity Index

Simpson Index is a measurement that accounts for the richness (the number of different species present), diversity, the abundance, evenness (compares the similarity of the population size of each of the species present) and the percentage of each species from a biodiversity sample within a local aquatic community. The Simpson index represents the probability that two randomly selected individuals in the habitat will not belong to the same species. The index assumes that the proportion of individuals in an area indicate their importance to diversity.

The species richness (**S**) is simply the total number of species present in an ecosystem. This index makes no use of relative abundances. It does not take into account the proportion and distribution of each species within the local aquatic community. In practice, measuring the total species richness in an ecosystem is impossible. The observed number of species in the system is a biased estimate of the true species richness in the system, and the observed species number increases non-linearly with sampling effort. Thus (**S**), if indicating the observed species richness in an ecosystem, is usually referred to as species density.

The Simpson's index of diversity has been calculated based on: $0 \leq D \leq 1$, where $D = \sum_{i=1}^S p_i^2$, considering $1-D$. Then $\frac{\sum_{i=1}^S n_i(n_i-1)}{N(N-1)}$ is an estimate for Simpson's index for sampling without replacement.

A perfectly homogeneous population would have a diversity index score of 0. A perfectly heterogeneous population would have a diversity index score of 1.

In order to compare the similarities among meiofauna groups and surrounding environmental parameters, the correlation coefficient was used.

3. Results

3.1 Environmental Variables

During the investigation, the physical and chemical characteristics of water such as, pH, Salinity and Oxygen content of water were monitored close to the sea bed and the results are reported in Tables 3.1, 3.2 and 3.3. These abiotic factors were measured in the field for all stations. Additionally, measurement of sediment grain size including organic matter as food source for meiofauna was carried out. Results of sediment grain size and Total Organic Matter (TOM) are given in Tables 3.4 to 3.9.

3.1.1 Temperature

Summer 2000 Cruise: Temperature ranged from 21.8°C at station 80 to the maximum of 35.2°C recorded at station 57 (Table 3.1).

Summer 2001 Cruise: It ranged from 19.5°C at stations 55 and 56 to the maximum of 32.5 °C recorded at stations 15 and 47 (Table 3.2).

Winter 2006 Cruise: It ranged from 17.08°C at stations 1 to the maximum of 22.77°C recorded at station 83 (Table 3.3).

3.1.2 pH

Summer 2000 Cruise: It ranged from 7.55 at stations 12 and 87, to a maximum of 8.08 measured at station 42 (Table 3.1).

Summer 2001 Cruise: It ranged from 7.78 at station 8 to a maximum of 8.25 measured at station 50 (Table 3.2).

Winter 2006 Cruise: It ranged from minimum of 7.47 for station 9a to a maximum of 8.49 measured at station 1 (Table 3.3).

3.1.3 Salinity

Summer 2000 Cruise: The minimum salinity of 37.371 ppt was found at station 12 while the maximum value of 40.719 ppt at station 45 (Table 3.1).

Summer 2001 Cruise: The minimum salinity of 34.90 ppt was recorded at station 14 while the maximum value of 41.12 ppt at stations 11 and 23 (Table 3.2).

Winter 2006 Cruise: The minimum salinity of 36.46 ppt was measured at station 88, whereas the maximum salinity of 44.07 ppt at station 33 (Table 3.3).

3.1.4 Dissolved Oxygen

Summer 2000 Cruise: Dissolved Oxygen ranged with a minimum value of 3.76 ml/l at station 12 and the maximum of 8 ml/l at station 70 ml/l (Table 3.1).

Summer 2001 Cruise: The measured Dissolved Oxygen level during this Cruise ranged from 1.37 ml/l at stations 17 and 66 to a maximum of 4.89 ml/l at stations 1, 4, 7, 14 and 79 (Table 3.2).

Winter 2006 Cruise: The level of DO measured during the Cruise ranged from 3.29 ml/l at station 25a to a maximum of 8.25 ml/l at station 1 (Table 3.3).

3.1.5 Water Depth

Summer 2000 Cruise: The water depth varied from 10(m) to a maximum depth of 80(m) and showed a distinct increase in depth from coastal stations towards offshore. The maximum water depth was found at Stations 25 and 29 while the minimum depth at Station 93 (Table 3.1).

Summer 2001 Cruise: During this Cruise, the recorded water depth varied from 13.5 m at stations 1, 4, 7, 34 to a maximum of 89.90 m at stations 76 and 40 (Table 3.2).

Winter 2006 Cruise: The recorded water depth changed from 13 m at station 1 to 104 m at station 85 (Table 3.3).

Table 3.1: Position, Depth, Salinity, Temperature, Dissolved Oxygen and pH measurements at the sampling stations during Summer 2000 Cruise

St. No	Date	Position		Depth (m)	Salinity (‰)	T (°C)	DO (ml/l)	pH
		N	E					
10	15/08/2000	26°54'48.7"	56°50'54.8"	25.7	37.58	32.6	7.73	7.53
12	15/08/2000	26°15'23.1"	56°50'33.5"	70.0	37.37	32.5	3.76	7.55
17	16/08/2000	26°41'37.9"	56°11'15.1"	73.0	39.53	31.3	4.80	7.78
18	14/08/2000	26°51'01.5"	56°10'30.1"	44.0	37.54	33.2	4.12	7.77
19	17/08/2000	26°29'57.6"	55°36'37.2"	39.0	38.71	32.5	5.50	8.05
25	17/08/2000	25°57'06.1"	55°08'59.4"	80.0	40.50	33.3	4.31	7.75
27	18/08/2000	26°20'58.1"	54°59'08.2"	42.0	39.44	33.4	4.47	7.85
28	18/08/2000	26°29'59.8"	54°21'06.1"	33.5	37.63	33.2	6.05	7.98
29	18/08/2000	26°08'26.2"	54°27'44.8"	80.0	39.46	30.0	5.12	7.88
30	19/08/2000	25°47'09.4"	54°35'53.3"	63.0	40.44	33.4	3.88	7.81
39	19/08/2000	25°52'32.9"	53°56'28.1"	75.0	40.38	34.4	3.97	7.83
41	20/08/2000	26°27'57.9"	53°34'28.1"	30.0	38.84	31.8	5.40	7.98
42	21/08/2000	26°44'01.1"	53°17'52.2"	32.0	38.06	28.2	8.05	8.08
45	21/08/2000	26°04'03.7"	53°34'45.4"	78.0	40.72	22.2	4.27	7.67
55	22/08/2000	26°06'42.0"	52°51'39.8"	60.0	40.40	23.0	4.10	7.81
57	22/08/2000	26°47'26.6"	52°43'04.1"	36.0	38.30	35.2	4.10	8.04
58	23/08/2000	27°16'22.9"	52°09'07.2"	37.0	39.13	27.1	4.41	8.01
60	23/08/2000	26°41'05.7"	51°31'27.9"	65.0	41.34	22.3	3.80	7.60
68	24/08/2000	27°06'59.2"	52°10'47.8"	73.0	39.58	22.3	4.06	7.59
70	24/08/2000	27°41'49.7"	51°11'04.2"	34.0	39.67	32.6	8.35	8.05
71	25/08/2000	26°30'28.2"	50°36'30.4"	73.0	40.61	22.3	4.06	7.78
76	25/08/2000	27°38'30.0"	51°09'05.9"	48.0	40.66	22.7	5.38	7.71
77	26/08/2000	28°00'13.4"	50°31'27.9"	33.0	39.53	31.6	5.35	8.01
78	26/08/2000	28°28'54.0"	50°59'01.0"	35.0	39.14	22.1	5.20	7.95
80	26/08/2000	28°00'53.3"	50°08'06.9"	57.0	40.19	21.8	5.37	7.83
87	29/08/2000	28°56'07.2"	49°38'02.6"	47.0	39.67	27.7	5.30	7.55
89	29/08/2000	29°29'07.8"	50°14'04.2"	31.0	38.61	31.3	4.30	7.73
92	01/09/2000	29°44'18.5"	49°30'07.0"	19.0	39.83	29.0	7.65	8.02
93	29/08/2000	29°38'46.3"	49°11'39.2"	10.0	39.72	33.7	7.94	7.95
94	31/08/2000	29°27'24.2"	48°55'40.0"	25.0	40.60	32.3	6.76	7.83
95	31/08/2000	29°22'05.6"	48°42'23.4"	11.0	40.15	31.2	7.84	7.91
96	31/08/2000	29°20'03.6"	48°33'15.4"	14.0	40.57	31.0	7.76	7.97

Table 3.2: Position, Depth, Salinity, Temperature, Dissolved Oxygen and pH measurements at the sampling stations during Summer 2001 Cruise

St. No.	Date	Position		Depth (m)	Salinity (‰)	T (°C)	DO (ml/l)	pH
		N	E					
1	27/08/2001	29°39'12.8"	49°11'19.0"	13.30	40.67	31.00	4.66	7.94
4	27/08/2001	29°39'12.8"	49°11'19.0"	13.30	40.67	31.00	4.66	7.94
7	27/08/2001	27°50'96.5"	49°54'34.1"	13.50	40.67	31.00	4.66	7.94
8	26/08/2001	29°16'86.2"	50°05'78.6"	38.00	39.64	25.00	2.38	7.78
11	26/08/2001	28°48'91.7"	49°24'91.9"	43.00	41.12	28.00	2.34	7.82
14	26/08/2001	27°34'51.1"	49°45'40.5"	29.00	34.90	31.00	4.77	7.81
15	25/08/2001	27°39'02.5"	49°31'01.9"	27.20	40.21	32.00	4.35	7.91
17	24/08/2001	28°00'63.1"	50°08'50.8"	56.80	40.27	23.00	1.75	7.90
19	23/08/2001	27°53'63.9"	50°44'56.2"	56.90	40.57	23.00	2.59	7.93
20	24/08/2001	27°09'45.5"	50°59'40.0"	59.00	40.71	23.00	3.03	7.98
22	25/08/2001	27°38'46.7"	50°36'47.9"	39.20	40.66	21.00	2.59	7.94
23	25/08/2001	27°09'45.5"	49°53'43.4"	46.00	41.12	29.00	2.23	7.81
24	22/08/2001	27°09'38.0"	50°42'88.3"	68.30	40.76	22.00	3.33	8.00
25	21/08/2001	27°18'36.7"	50°59'06.4"	66.50	40.83	ND	3.37	8.02
26	21/08/2001	27°30'39.4"	51°11'11.4"	73.90	40.78	22.00	3.70	8.02
27	21/08/2001	27°28'53.2"	51°57'00.7"	55.40	40.14	ND	3.02	7.95
30	20/08/2001	26°56'08.6"	51°19'25.9"	68.50	40.84	ND	3.55	7.94
33	20/08/2001	26°21'82.9"	50°45'45.7"	14.00	38.50	ND	4.52	7.90
34	15/08/2001	26°01'72.0"	51°31'21.9"	13.80	40.17	31.20	2.43	7.91
36	14/08/2001	26°27'82.8"	51°55'43.2"	52.00	40.77	24.20	4.03	8.01
39	14/08/2001	27°06'75.1"	52°24'28.9"	78.80	40.25	20.20	3.02	8.04
40	14/08/2001	26°46'89.2"	52°56'31.0"	89.30	40.30	20.40	2.62	8.03
43	13/08/2001	25°42'50.3"	52°23'30.8"	36.80	40.43	28.00	2.81	8.01
47	13/08/2001	24°44'84.2"	52°46'14.0"	19.80	40.72	32.50	4.12	8.03
50	12/08/2001	25°33'84.0"	52°58'19.3"	40.40	40.25	26.00	3.10	8.25
55	12/08/2001	26°35'91.9"	53°24'09.2"	86.70	40.49	19.50	3.11	8.01
56	11/08/2001	26°19'79.3"	53°56'00.3"	87.70	40.52	19.50	3.12	7.99
59	10/08/2001	25°38'78.9"	53°50'76.5"	58.10	40.40	23.00	3.58	7.99
61	10/08/2001	25°11'26.0"	53°47'23.9"	34.50	39.87	21.50	2.62	7.96
63	10/08/2001	24°39'35.1"	53°96'96.7"	18.00	40.09	32.20	4.53	8.04
66	09/08/2001	25°30'81.1"	54°37'19.4"	41.80	40.45	26.00	1.37	7.86
69	09/08/2001	26°08'38.1"	54°25'21.6"	82.30	40.49	24.00	3.24	8.01
70	08/08/2001	26°21'08.0"	54°58'90.2"	42.70	39.80	27.00	3.62	8.00
72	08/08/2001	25°57'01.7"	55°09'10.7"	46.00	40.28	22.22	3.30	8.00
73	07/08/2001	25°45'45.0"	55°14'54.1"	34.50	39.69	27.86	3.89	7.98
76	07/08/2001	26°09'84.1"	55°50'60.0"	89.90	40.33	23.19	3.81	8.00
78	07/08/2001	26°29'91.3"	55°36'64.7"	38.80	37.88	29.20	2.47	8.08
79	06/08/2001	26°50'92.4"	56°10'39.2"	45.00	37.46	30.90	4.89	8.12
81	06/08/2001	26°32'48.4"	56°12'40.9"	85.70	40.07	22.40	3.21	8.02

ND: Not Detected

Table 3.3: Position, Depth, Salinity, Temperature, Dissolved Oxygen and pH measurements at the sampling stations during Winter 2006 Cruise

St. No	Date	Position		Depth (m)	Salinity (‰)	T (°C)	DO (ml/l)	pH
		N	E					
1	09/03/2006	28°21'00.0"	48°29'00.0"	13	37.77	17.08	8.25	8.49
4	09/03/2006	28°13'24.5"	49°26'48.7"	41	41.07	17.97	7.39	8.42
5a	06/03/2006	28°08'50.1"	49°05'50.8"	21	41.07	17.62	8.07	8.25
7a	06/03/2006	28°31'14.5"	49°49'32.1"	54	41.07	17.97	7.14	8.24
7	08/03/2006	29°52'10.6"	49°52'04.9"	13	40.49	17.41	7.96	8.42
8	07/03/2006	29°17'58.0"	50°05'49.0"	42	40.79	18.05	7.46	8.41
9a	06/03/2006	28°51'20.0"	50°24'20.0"	47	40.62	18.56	7.47	7.47
10a	02/03/2006	26°59'80.0"	50°23'70.0"	26	40.89	19.24	7.27	8.19
11	07/03/2006	28°49'12.0"	49°25'12.0"	44	40.98	18.38	7.05	8.24
11a	03/03/2006	27°43'17.9"	51°27'08.8"	17	39.94	20.97	6.92	8.20
14	06/03/2006	28°33'88.5"	48°45'70.2"	24	40.43	18.58	7.54	8.28
14a	08/02/2006	26°43'20.0"	56°43'20.0"	64	36.91	22.57	5.59	7.94
15	04/03/2006	27°39'84.2"	49°30'92.8"	21	40.96	18.93	6.98	8.21
16a	09/02/2006	27°01'40.0"	56°39'30.0"	30	36.74	22.76	6.17	7.96
17	05/03/2006	28°01'11.5"	50°07'89.6"	60	40.78	19.03	6.94	8.24
19	05/03/2006	28°21'03.3"	50°44'31.2"	57	40.53	18.89	7.06	8.22
20	04/03/2006	27°54'41.0"	50°59'51.8"	63	40.36	18.77	7.18	8.20
21a	06/02/2006	25°53'40.0"	57°11'30.0"	57	36.47	22.28	5.40	7.93
22	04/03/2006	27°23'88.7"	50°13'95.2"	57	40.75	19.40	6.56	8.20
23	04/03/2006	27°09'56.1"	49°52'36.3"	43	40.97	18.59	6.59	8.20
24	02/03/2006	27°10'10.0"	50°43'50.0"	65	40.78	19.29	6.80	8.20
25	03/03/2006	27°18'29.0"	50°58'40.0"	67	40.54	19.68	6.51	8.18
25a	04/02/2006	24°05'50.5"	57°13'81.3"	55	36.33	21.69	3.29	7.76
26	03/03/2006	27°30'49.7"	51°11'06.0"	73	40.31	19.43	6.96	8.19
26a	03/02/2006	23°31'00.0"	58°46'10.0"	53	36.51	22.66	5.20	7.88
27	01/03/2006	27°29'20.0"	51°57'00.0"	54	39.98	21.47	7.01	8.14
30	01/03/2006	26°57'10.0"	51°18'50.0"	71	40.52	20.18	6.72	8.16
33	03/02/2006	26°21'80.0"	50°45'50.0"	14	44.07	18.93	7.31	8.17
34	27/02/2006	26°02'50.0"	51°31'20.0"	14	41.03	19.63	7.00	8.16
36	28/02/2006	26°28'19.0"	51°54'90.0"	52	40.78	19.99	6.69	8.15
39	28/02/2006	27°07'00.0"	52°34'10.0"	77	40.23	21.30	5.82	8.10
40	22/02/2006	26°47'80.0"	52°57'40.0"	86	ND	ND	ND	ND
43	23/02/2006	25°43'51.3"	52°23'17.0"	33	40.45	20.69	6.67	8.19
50	22/02/2006	25°35'09.2"	52°58'22.5"	39	40.75	21.03	6.40	8.20
55	22/02/2006	26°36'05.7"	53°24'05.7"	86	40.28	21.79	5.29	8.13
56	21/02/2006	26°20'90.5"	53°55'86.4"	93	40.30	21.68	5.60	8.37
59	21/02/2006	25°39'88.5"	53°53'94.4"	42	40.96	21.68	6.22	8.41
66	15/02/2006	25°31'09.0"	54°37'15.6"	42	41.49	21.68	6.19	8.38
69	15/02/2006	26°08'38.2"	54°27'50.6"	75	40.34	22.05	5.66	8.37
70	14/02/2006	26°32'10.4"	54°57'95.7"	44	38.30	22.74	6.41	8.18
72	14/02/2006	25°57'25.4"	55°10'08.0"	72	40.65	21.93	5.51	8.16
77	13/02/2006	26°20'67.1"	55°43'56.1"	61	40.29	22.48	4.91	8.09
78	14/02/2006	26°28'76.9"	55°36'47.4"	45	37.31	22.66	6.09	8.15
79	13/02/2006	26°51'04.6"	56°10'37.8"	45	36.74	22.76	6.17	7.96
83	08/02/2006	26°08'76.3"	56°31'76.7"	95	39.79	22.77	4.96	7.94
85	08/02/2006	26°13'00.0"	56°46'00.0"	104	39.59	22.65	4.93	7.93
87	07/02/2006	26°18'90.0"	57°01'80.0"	26	36.54	23.14	6.35	7.95
88	05/02/2006	25°40'04.3"	57°24'04.8"	65	36.46	22.13	5.44	7.95
93	05/02/2006	24°33'14.7"	56°50'73.9"	67	36.56	22.63	4.83	7.93
97	05/02/2006	25°38'20.0"	57°54'00.0"	54	36.54	22.55	5.64	7.95
98	03/02/2006	25°26'80.1"	58°36'91.4"	50	36.51	22.54	5.16	7.94

ND: Not Detected

3.2 Sediment Analysis

3.2.1 Sediment Analysis (Summer2000 Cruise)

Sediments from 32 stations were analyzed and the results were expressed in terms of percentage of dry weight as presented in Table 3.4. Sediments from most of the stations had a grain size of less than 63 μm . The exception was station 41 where sediment grain size fractions of 125 μm was dominant while at station 55, fractions of grain size of 0.5 mm as well as 63 μm were present in near equal proportion. The sediments from station 28 were totally composed of grain size fraction of less than 63 μm .

Total Organic Matter (TOM) in sediment ranged from 2.83 % at the station 41 to a maximum of 68.6% at station 70. The results of TOM are presented in Table 3.5.

Table 3.4: Percentage of dry weight of sediment (Summer 2000 Cruise)

Leg	St. No.	Grain Size (mm)							
		4	2	1	0.5	0.25	0.125	0.063	<0.063
Leg I	10	0.00	0.00	0.00	3.76	9.20	20.48	23.76	42.80
	12	0.00	0.20	0.28	1.12	6.08	8.68	20.44	63.20
	17	0.08	0.28	0.88	1.24	1.76	6.68	20.48	66.60
	18	0.00	0.00	0.00	1.00	2.40	1.68	20.60	74.32
	19	0.00	0.00	0.00	0.80	3.20	6.00	18.00	72.00
	25	0.00	0.00	0.32	3.68	5.04	9.24	25.08	56.64
	27	0.00	0.00	0.24	0.32	4.20	2.08	28.48	64.68
	28	0.00	0.00	0.00	0.08	0.12	0.28	0.72	98.80
	29	0.00	0.00	2.32	1.68	3.80	4.08	24.72	67.40
	30	0.00	0.04	0.16	0.32	1.64	5.12	12.52	80.20
	39	0.00	0.16	0.16	0.44	0.52	3.16	6.08	89.48
	41	0.64	6.52	1.88	9.24	14.08	45.04	13.20	9.40
	42	0.00	0.00	1.20	2.80	5.60	2.80	15.60	72.00
	45	0.00	0.20	0.16	3.20	0.60	3.32	12.64	79.80
	55	1.60	1.60	10.80	31.20	5.60	7.20	3.20	38.80
Leg II	57	0.00	0.00	1.60	3.20	5.20	6.80	27.20	56.00
	58	0.00	0.80	2.40	3.20	2.80	9.20	20.80	60.80
	60	0.00	0.24	0.80	1.52	3.12	3.64	16.68	74.00
	68	0.00	0.00	0.96	7.49	12.80	10.12	12.48	56.16
	70	0.00	0.00	0.00	3.20	2.80	4.80	2.40	86.80
	71	0.00	3.20	4.08	3.92	1.00	8.84	16.44	62.52
	76	3.60	2.00	10.40	39.60	12.00	9.60	4.00	18.80
	77	0.00	1.20	4.40	3.60	5.60	5.20	21.20	58.80
	78	0.00	0.00	0.00	1.60	1.60	3.20	1.60	92.00
Leg III	80	0.00	0.00	0.16	0.28	3.72	4.20	28.60	63.04
	87	0.00	0.12	0.20	0.88	3.32	4.08	16.20	75.20
	89	2.80	2.00	3.20	4.80	1.20	2.40	1.60	82.00
	92	0.00	0.00	0.00	2.00	2.40	3.60	32.80	59.20
	93	0.00	0.00	0.00	2.40	7.60	8.40	31.20	50.40
	94	0.00	0.00	0.20	0.72	1.00	3.88	23.24	70.96
	95	0.00	0.00	1.20	3.60	2.80	7.20	26.80	58.40
	96	0.00	0.00	1.20	3.60	2.80	7.20	26.80	58.40

Dry weight (%)

Table 3.5: Range and percentage of Total Organic Matter (TOM) in Summer 2000Cruise

St. No.	Range(%)		Mean (%)
	Max	Min	
10	11.93	7.69	9.52
12	12.93	7.22	10.16
17	11.34	7.18	9.15
18	10.31	6.16	8.14
19	12.20	7.84	9.10
25	10.03	6.23	8.12
27	9.14	6.30	7.18
28	8.87	6.20	7.71
29	9.01	5.12	7.19
30	8.07	4.57	6.12
39	8.02	4.17	6.13
41	3.49	2.76	2.83
42	12.90	9.21	11.85
45	11.08	7.14	9.19
55	25.71	20.17	23.00
57	9.42	6.58	8.16
58	12.21	7.60	10.12
60	9.94	6.45	7.06
68	9.48	5.10	6.10
70	68.60	38.73	58.08
71	10.52	7.25	8.16
76	6.73	3.81	4.15
77	9.12	6.55	7.41
78	21.16	16.35	19.32
80	12.14	8.36	10.09
87	15.27	11.07	12.17
89	32.08	24.36	27.63
92	11.08	7.16	9.00
93	16.02	13.11	15.14
94	22.12	18.37	20.00
95	18.75	14.05	17.30
96	18.24	14.45	16.15

3.2.2 Sediment Analysis (Summer2001Cruise)

Sediments from 39 stations were analyzed and the results were expressed in terms of percentage of dry weight (%) as presented in Table 3.6. The collected sediment from most of the stations composed mainly of silt-clay fraction with high % composition, ranging from 50 to 93.60%. The exception was stations 34, 43, 47, 55, 69, 73, 76, and 76, where it varied between 5 and 36%. The minimum percentage of silt-clay fraction (5.20%) was found at station 34 while the maximum fraction (93.60%) was found at station 78.

Total Organic Matter (TOM) in sediment was in low levelsof4.64%, 5.21% 5.41% and 5.44% at stations 76,7,15 and19, respectively, whereas, the high levels of TOM recorded as 37.34%, 27.67%, 27.25%, 26.62% and 25.37% were at stations 78,63,66,39 and 81, respectively. The results of TOM are presented in Table 3.7.

Table 3.6: Percentage of dry weight of sediment (Summer 2001Cruise)

Leg	St. No.	Grain Size (mm)								
		4	2	1	0.5	0.25	0.125	0.063	<0.063	
Leg II	1	0.32	0.40	1.00	0.64	4.16	16.48	28.72	47.28	Dry weight (%)
	4	0.00	0.00	1.60	2.30	4.60	16.12	20.48	54.88	
	7	0.00	0.28	2.40	1.80	1.08	8.44	32.64	53.36	
	8	0.16	2.56	4.60	2.08	8.40	6.84	36.48	38.88	
	11	0.16	0.80	1.76	0.36	2.24	5.32	40.76	48.60	
	14	0.00	0.36	0.60	3.20	12.48	4.20	31.28	47.36	
	15	0.00	0.00	0.00	6.40	2.20	8.18	36.60	46.68	
	17	0.24	1.80	1.12	3.32	4.60	16.08	20.44	52.40	
	19	0.00	0.00	0.00	4.08	2.62	8.96	28.72	55.32	
	20	3.20	1.00	1.76	4.04	7.20	6.00	28.60	48.20	
	22	0.00	0.00	2.32	1.04	4.60	3.36	21.12	64.56	
	23	0.00	0.00	0.00	3.24	4.62	2.40	36.64	52.80	
	24	0.28	0.12	2.20	3.60	4.80	3.36	23.60	62.04	
	25	0.08	2.00	0.40	3.28	2.20	8.88	13.64	69.12	
	26	0.00	0.00	2.16	3.32	5.08	3.56	28.48	57.40	
	27	0.00	0.24	1.12	2.20	8.48	7.04	20.60	60.32	
	30	0.00	3.04	2.00	1.44	4.48	3.52	17.00	68.52	
	33	0.00	0.00	7.20	3.00	8.56	4.92	20.48	55.84	
Leg I	34	1.20	0.40	2.80	48.00	26.00	16.40	1.60	3.60	
	36	2.00	1.60	6.40	15.20	7.20	14.00	12.00	41.60	
	39	0.00	0.00	0.00	0.80	1.60	6.40	10.40	80.80	
	40	0.00	0.00	0.80	2.40	5.20	2.80	33.00	55.80	
	43	4.80	3.60	12.40	18.40	6.80	18.00	10.80	25.20	
	47	0.80	0.80	11.20	47.20	14.40	15.20	4.00	6.40	
	50	0.00	0.00	0.40	4.00	2.00	9.20	14.40	70.00	
	55	1.60	1.60	10.80	31.20	5.80	7.20	3.20	38.80	
	56	0.00	0.80	3.20	20.40	6.40	10.80	5.20	53.20	
	59	0.00	0.00	0.80	2.80	1.20	7.60	12.00	75.60	
	61	0.80	0.80	3.20	7.20	2.00	11.60	25.20	49.20	
	63	0.40	0.40	2.00	3.20	1.20	40.40	20.80	31.60	
	66	0.00	0.00	0.80	4.80	4.00	16.00	20.00	54.40	
	69	1.60	0.80	5.20	18.00	18.00	38.40	4.40	13.60	
	70	0.00	0.00	0.00	3.20	2.80	4.80	2.40	86.80	
	72	0.00	0.00	1.20	12.00	8.80	22.00	16.80	39.20	
	73	6.00	2.80	11.60	30.00	23.60	16.00	3.60	6.40	
	76	3.60	2.00	10.40	39.60	12.00	9.60	4.00	18.80	
	78	0.00	0.00	0.00	9.60	11.20	23.20	1.60	54.40	
	79	0.00	0.00	0.40	3.60	3.20	10.00	42.00	48.00	
	81	0.00	0.00	4.00	20.40	15.20	28.00	8.00	24.40	

Table 3.7:Range and percentage of Total Organic Matter (TOM) in Summer 2001 Cruise

St. No.	Range (%)		Mean (%)
	Min	Max	
1	7.62	10.18	8.27
4	5.53	10.46	7.18
7	4.62	7.58	5.21
8	6.19	9.07	7.25
11	7.71	11.44	9.12
14	9.14	13.05	11.35
15	4.12	7.17	5.41
17	5.81	9.19	7.40
19	4.02	7.18	5.44
20	6.68	11.50	9.54
22	7.01	10.09	8.23
23	8.48	13.15	11.03
24	5.67	9.03	7.31
25	6.08	8.11	7.64
26	8.02	11.16	9.57
27	7.41	10.15	8.42
30	8.05	12.25	10.38
33	8.13	12.14	10.54
34	14.42	19.92	17.67
36	8.69	23.47	16.40
39	17.42	32.78	26.62
40	7.15	10.50	8.17
43	5.21	9.65	6.96
47	4.89	31.27	21.96
50	7.61	11.09	9.48
55	20.70	25.47	23.00
56	7.97	10.06	9.12
59	12.67	18.11	15.50
61	14.76	15.90	15.42
63	20.29	32.62	27.67
66	20.77	33.92	27.25
69	9.00	9.97	9.44
70	5.16	11.05	7.69
72	13.47	26.06	13.17
73	2.48	10.83	5.39
76	4.12	5.55	4.64
78	30.30	45.57	37.34
79	15.16	18.63	16.17
81	21.71	28.88	25.37

3.2.3 Sediment Analysis (Winter Cruise 2006)

Sediments from 51 stations were analyzed and the obtained results on grain size are presented in Table 3.8. Silt-clay fraction represented with a range of 12 to 97.76%, in most of the stations. However, low percentage of this fraction ranging from 6.04% to 9.44% was recorded at few stations (93, 83, 69, 43, 10a and 15). The minimum percentage of silt – clay in sediment (3.16%) was found at station 69 while the maximum (97.76%) at station 11a.

Total Organic Matter (TOM) in sediment was in low levels of 2.73%, 2.75%, 3.02%, 3.16%, 3.53% and 3.54% at stations 69, 59, 43, 34, 5a and 79, respectively, whereas, the high levels of TOM recorded as 28.96%, 24.53%, 23.78% and 22.75% at stations 23, 14a, 7 and 8, respectively. The results of TOM are presented in Table 3.9.

According to the results of grain size analysis carried out for the three conducted ROPME Cruises in the RSA, there were four main classes of sediments: mud, muddy sand, sandy mud and sand. In general, the north-western and the north-eastern parts of the Inner RSA are dominated by mud and muddy sand while the area in between is characterized by the dominance of sand and sandy-mud sediments (Figures, 3.1, 3.2 and 3.3).

Table 3.8: Percentage of dry weight of sediment (Winter 2006 Cruise)

Leg	St. No.	Grain Size (mm)							
		4	2	1	0.5	0.25	0.125	0.063	<0.063
Leg I	14a	0.00	0.00	4.04	16.20	13.92	19.80	21.00	25.04
	16a	0.00	0.00	0.00	0.00	3.60	20.96	29.92	45.52
	26a	0.60	3.52	9.24	25.80	22.56	20.12	5.80	12.36
	98	0.00	0.00	0.00	0.00	10.32	3.00	27.00	59.68
	25a	0.00	1.12	6.00	11.96	20.08	37.72	8.04	15.08
	93	0.68	6.64	16.20	29.96	23.72	10.64	4.88	7.72
	97	0.00	0.00	0.00	0.00	0.00	42.48	25.20	32.32
	88	0.00	0.00	0.00	0.00	0.00	42.72	21.28	30.00
	21a	0.00	0.00	0.00	0.00	0.00	29.40	32.88	37.72
	87	0.00	0.00	0.00	0.00	0.00	21.92	29.20	48.88
	85	0.52	2.12	6.72	18.60	27.40	16.88	10.00	17.76
	83	0.52	3.08	9.00	21.64	23.44	27.60	5.84	8.88
Leg II	79	0.00	0.08	3.48	0.84	3.60	8.48	41.72	41.80
	77	0.00	0.00	1.12	5.00	19.72	15.28	7.84	51.04
	78	0.00	0.00	0.04	0.08	0.20	0.84	1.28	97.56
	70	0.00	2.44	3.40	8.24	13.04	12.32	6.44	54.12
	72	0.00	0.00	3.96	6.00	9.36	14.40	9.48	56.80
	66	0.00	0.08	1.28	1.04	1.92	10.72	31.16	53.80
	69	0.00	0.96	7.84	29.84	48.48	8.96	0.76	3.16
	56	0.00	0.00	3.88	5.52	19.24	14.76	7.40	49.20
	59	0.00	3.64	5.48	21.36	25.76	27.48	3.68	12.60
	50	0.00	0.12	0.64	1.36	1.72	6.08	16.68	73.40
	55	0.00	5.20	8.28	20.76	20.72	8.96	3.60	32.48
	40	0.00	2.12	7.28	8.52	15.40	21.84	12.28	32.56
	43	0.00	0.64	1.04	4.72	20.76	56.96	6.44	9.44
Leg III	5a	0.00	5.08	12.76	19.68	23.28	11.32	5.52	22.36
	14	0.00	3.92	8.16	15.80	17.72	8.88	3.48	42.04
	11	0.00	8.16	7.40	10.96	15.60	11.36	9.76	36.76
	8	0.00	1.20	2.44	3.72	5.28	7.20	7.52	72.64
	7	0.00	0.24	0.56	1.08	1.60	1.36	0.88	94.28
	4	0.00	0.44	1.08	1.80	3.88	9.40	18.24	65.16
	1	0.00	0.72	1.24	1.08	2.52	4.28	6.52	83.64
	34	0.00	3.96	10.84	8.16	7.24	14.56	33.88	21.36
	36	0.00	4.72	6.20	16.60	29.28	16.08	6.48	20.64
	39	0.00	2.24	3.00	5.76	7.52	17.08	26.56	37.84
	27	0.00	3.00	7.52	23.04	16.64	8.28	22.88	18.64
	30	0.00	5.68	6.72	9.04	11.36	11.68	11.28	44.24
	33	0.00	2.08	3.24	3.92	13.08	26.24	15.72	35.72
	10a	0.00	2.56	10.12	30.72	33.80	12.12	4.36	6.32
	24	0.00	2.12	4.64	8.76	13.76	18.76	15.16	36.80
	25	0.00	0.60	0.96	2.04	4.60	11.64	16.56	63.60
	26	0.00	0.80	1.68	2.20	4.40	14.64	26.04	50.24
	11a	0.00	0.00	0.04	0.12	0.40	0.56	1.12	97.76
	20	0.00	0.00	0.68	2.04	3.88	7.00	9.88	76.52
	22	0.00	2.00	4.20	11.36	15.24	17.04	8.00	42.16
	23	0.00	0.40	2.56	9.88	18.68	13.92	6.88	47.68
	15	0.00	13.28	14.20	22.64	33.96	9.12	0.76	6.04
	17	0.00	2.96	5.84	7.44	10.40	10.24	6.04	57.08
	19	0.00	0.48	1.64	3.28	6.32	12.64	11.56	64.08
	9a	0.00	3.04	4.76	7.72	14.28	20.24	6.52	43.44
	7a	0.00	1.80	3.04	4.88	9.28	22.92	17.84	40.24

Dry weight (%)

Table 3.9:Range and percentage of Total Organic Matter (TOM) in Winter 2006 Cruise

St. No.	Range (%)		Mean (%)
	Max	Min	
1	10.71	9.48	9.98
10a	4.48	4.21	4.39
11	6.76	6.22	6.42
11a	16.64	11.70	13.84
14	6.45	5.81	6.08
14a	25.20	23.41	24.53
15	5.57	5.50	5.55
16a	15.08	13.16	14.93
17	10.50	10.12	10.28
19	12.94	11.59	12.13
20	13.58	13.33	13.45
21a	14.89	11.45	13.79
22	8.29	8.19	8.24
23	31.25	26.83	28.96
24	7.40	6.97	7.19
25	11.24	10.66	10.92
25a	19.74	16.14	17.35
26	8.52	7.98	8.34
26a	9.83	7.19	8.29
27	9.97	9.03	9.55
30	10.87	5.56	8.29
33	8.30	8.10	8.17
34	3.27	2.99	3.16
36	6.14	5.83	5.95
39	13.41	9.41	12.01
4	8.83	8.68	8.76
40	5.24	5.07	5.18
43	3.10	2.95	3.02
50	4.85	4.76	4.82
55	5.80	4.90	5.30
56	3.77	3.71	3.75
59	2.91	2.62	2.75
5a	3.65	3.47	3.53
66	5.07	4.85	4.93
69	2.73	2.62	2.73
7	25.73	21.38	23.78
70	7.04	6.66	6.76
72	6.45	5.95	6.22
77	9.52	8.48	8.93
78	7.60	7.00	7.28
79	3.77	3.42	3.54
7a	5.69	5.11	5.36
8	26.53	20.70	22.75
83	11.15	8.92	9.82
85	12.02	10.38	11.75
87	15.18	14.01	14.63
88	14.90	12.56	13.97
93	9.54	7.87	8.08
97	14.22	11.63	12.97
98	12.94	10.23	11.83
9a	8.61	8.38	8.51

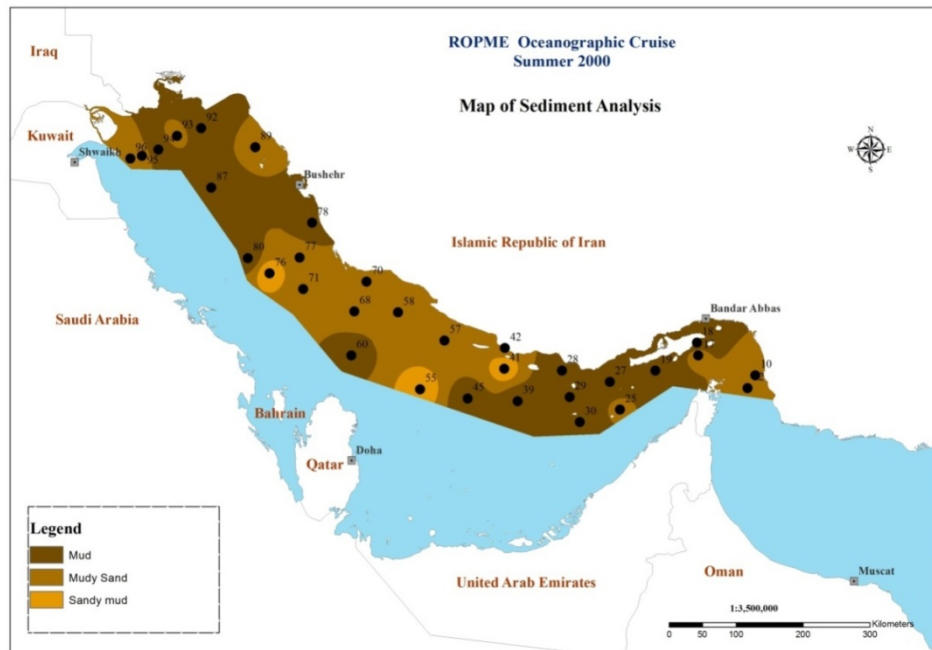


Figure 3.1:Distribution of sediment texture in the NW Inner RSA (Summer 2000 Cruise)

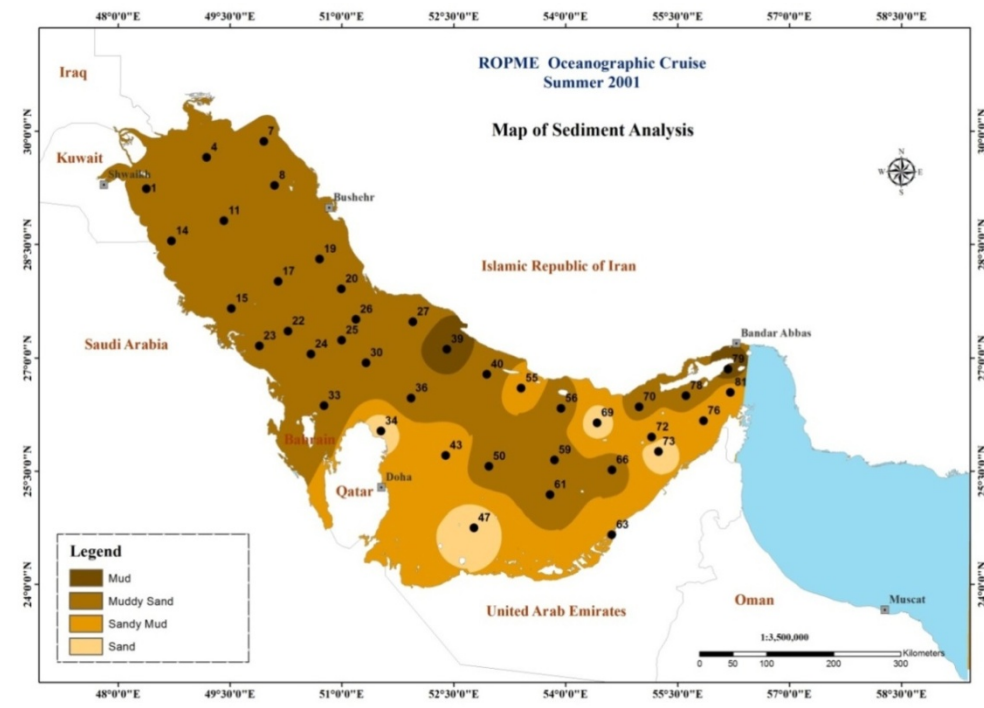


Figure3.2:Distribution of sediment texture in the NW Inner RSA (Summer 2001 Cruise)

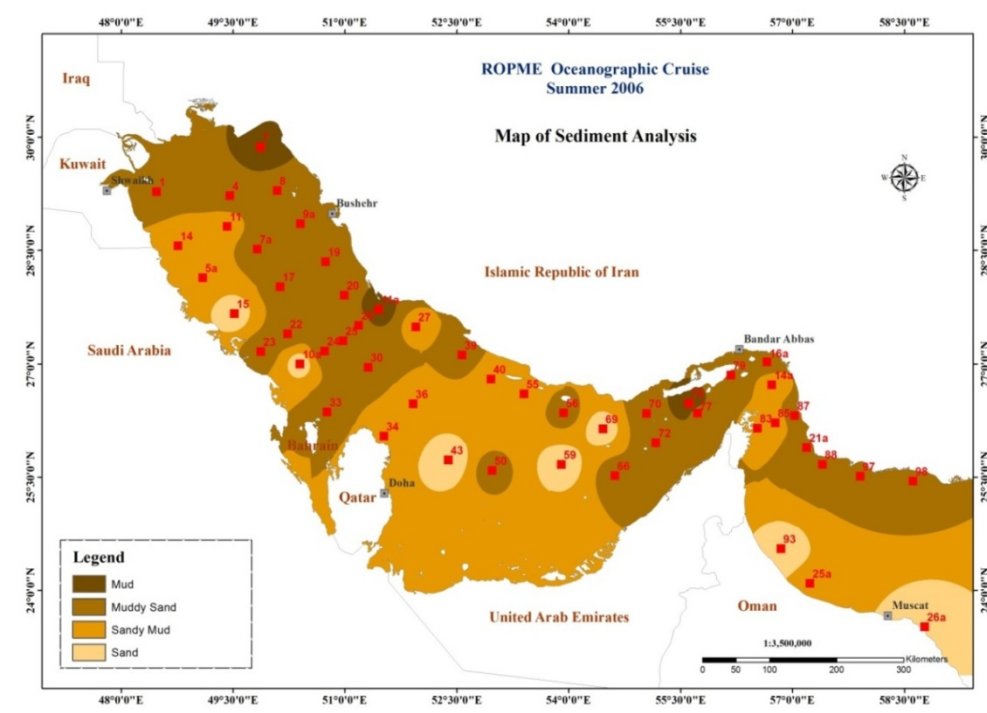


Figure3.3:Distribution of sediment texture in the NW Inner and Middle RSA (Winter 2006 Cruise)

3.3 Meiofauna Abundance and Distribution

3.3.1 Meiofauna Abundance and Distribution (Summer 2000Cruise)

In Summer 2000 Cruise, species of meiofauna community from 32 sampling stations within the I-RSA were collected, identified and counted. Seven main different community types of meiofauna group have been reported. These seven community types were located at different benthic habitats, in coastal, offshore and deeper water areas.

Meiofauna species abundance was varied from station to station (Table3.11). At most stations, the highest densities reported at the 3 cm horizon and densities below 2 cm dropped to low values. These values being similar at most stations.

A total of 70 species of meiofauna were identified during the Summer 2000Cruise. The highest species number occurred at Station 18, with 39 species; the lowest occurred at Station 39, with only 18 species. Comparing among species collected, the highest number of species belong to foraminifera with 41 species and the lowest belong to Copepode and polychaete larvae with 2 species.

The major recorded groups of meiiofauna in the sediments during this Cruise are: Foraminifera (90.33%), Ostracod (8.61%), Gastropode (0.64%), Nematode (0.20%), Bivalvie (0.14%), Copopodes (0.02%), Polychaete larvae (0.01%). Species diversity, abundance and the % composition of each group are depicted in Table 3.10, and Figures 3.4 and 3.5.

Different major groups of meiiofauna have occupied their own ecological niche in the area. During sediment core investigation, it was observed that Copepods inhabited almost at the upper layer in core sediments while the other groups of meiiofauna reside at the lower layers.

The results indicate a uniformity of contribution of major groups of meiiofauna in all stations as shown in Tables 3.11.1 and 3.11.2. The maximum abundance of meiiofauna was detected at station 80 with the contribution of 16104 individuals per 25.6 cm³ while the minimum abundance (3158 individuals) was recorded at station 76 (Table 3.11). Among the recorded meiiofauna groups, the highest contribution (90.33%) was due to forminifera while the lowest one (0.014%) was the ploycheate larvae.

Table 3.10: Meiofauna species found in the RSA during Summer 2000 Cruise

Leg No.	St. No.	Taxa	No. of Individual	Dominance (%)	
III	95	Foraminifera			
		<i>Ammonia beccarii</i> (Linne)	2184	93.36	
		<i>Quinqueloculina costata</i> d`Orbigny	1211		
		<i>Quinqueloculina seminulum</i> (Linne)	1056		
		<i>Quinqueloculina</i> sp.2	918		
		<i>Quinqueloculina</i> sp.1	715		
		<i>Quinqueloculina</i> sp.3	512		
		<i>Triloculina sidebottomi</i> (Martinotti)	328		
		<i>Triloculina</i> sp.	216		
		<i>Spiroloculina depressa</i> d`Orbigny,1826	341		
		<i>Discorbis nitida</i> (Williamson, 1858)	95		
		<i>Reophax scorpiurus</i> d` Montfort, 1808	66		
		<i>Adelosina laevigata</i> d`Orbigny, 1826	57		
		<i>Adelosina bicornis</i> (Walker & Jacob, 1798)	50		
		<i>Nonion</i> sp.	43		
		<i>Elphidium articulatum</i> (d`Orbigny,1839)	39		
		<i>Peneroplis planatus</i> (Fichtel & Moll, 1798)	22		
		<i>Trochammina nitida</i> Brady	18		
		<i>Lagena sulcata</i> (Walker & Jacob)	10		
		<i>Bolivina</i> sp.1	6		
		<i>Lagena semisteriata</i> Williamson	6		
		<i>Bolivina</i> sp.2	5		
		<i>Adelosina</i> sp.2	4		
		<i>Nodophthalmidium</i> sp.	2		
		<i>Sculptobaculites</i> sp.	2		
		Ostracoda			5.81
		<i>Puricythereis</i> sp.1	189		
		<i>Cytherella</i> sp.1	122		
		<i>Hemicytheridea</i> sp.	87		
		<i>Alocopocythere reticulata</i> (Hartman , 1964)	69		
		<i>Loxoconcha</i> sp.1	25		
		Gastropoda and Scaphopoda			0.41
		<i>Umbonium vestiarium</i> (Linnaeus,1758)	16		
		<i>Tornatina persiana</i> (Smith,1872)	8		
		<i>Lippistes</i> sp.ventral view	6		
		<i>Dentalium octangulatum</i> (Donovan,1803)	5		
Bivalvia			0.2		
<i>Tellina fabula</i> (Gmelin,1791)	12				
<i>Mactra</i> sp.	5				
Nematoda			0.21		
Nematodasp.1	18				

Table 3.10 (Contd...): Summer 2000Cruise

Leg No	St. No.	Taxa	No. of Individual	`Dominance (%)	
III	93	Foraminifera			
		Ammonia beccarii (Linne)	1863	91.97	
		Quinqueloculina poeyana d`Orbigny	616		
		Quinqueloculina sp.1	512		
		Quinqueloculina dimidiata Terquem, 1876	304		
		Triloculina sidebottomi (Martinotti)	221		
		Spiroloculina sp.1	125		
		Spiroloculina depressa d`Orbigny	86		
		Discorbis nitida (Williamson, 1858)	59		
		Triloculina sp.	51		
		Adelosina laevigata d`Orbigny, 1826	47		
		Nonion sp.	32		
		Adelosina ferrusaceii(d`Orbigny, 1826)	30		
		Elphidium articulatum (d`Orbigny)	26		
		Elphidium excavatum (Terquem, 1875)	22		
		Peneroplis planatus (Fichtel & Moll, 1798)	18		
		Bolivina tectiformis Cushman	17		
		Lagena sulcata (Walker & Jacob)	12		
		Trochammina nitida Brady	10		
		Nodulina gracilis (Kiaer,1900)	6		
		Bolivina sp.1	5		
		Lagena perlucida (Montagu, 1803)	3		
		Lagena semistriata Williamson	2		
		Reophax gracilis Kiaer, 1900	1		
		Ostracoda			7.09
		Alocopocythere reticulata (Hartman , 1964)	89		
		Cytherella sp.1	64		
		Puricythereis exquisita (Bate & Sheppard,1980)	43		
		Hemicytheridea sp.	37		
		Loxoconcha sp.1	36		
		Aglaioocypris sp.	29		
		Puricythereis sp.1	16		
		Gastropoda			0.54
		Tornatia persiana (Smith,1872)	12		
		Caecum californicum (Dall,1885)	7		
		Diala semistriata (Philippi,1849)	3		
		Ringicula propinquans (Hinds,1844)	2		
		Bivalvia			0.38
		Mactra sp.	17		

Table 3.10 (Contd...): Summer 2000 Cruise

Leg No	St. No.	Taxa	No. of Individual	Dominance (%)	
III	96	Foraminifera			
		Quinqueloculina costata d`Orbigny	2150	92.7	
		Ammonia beccarii (Linne)	1832		
		Quinqueloculina sp.1	1001		
		Quinqueloculina poeyana d`Orbigny	984		
		Quinqueloculina seminulum (Linne)	728		
		Triloculina sp.	415		
		Spiroloculina excavata d`Orbigny,1826	234		
		Triloculina sidebottomi (Martinotti)	215		
		Discorbis nitida (Williamson, 1858)	192		
		Pseudopyrgo milletti (Cushman)	87		
		Adelosina bicornis (Walker & Jacob, 1798)	62		
		Adelosina laevigata d`Orbigny, 1826	58		
		Elphidium articulatum (d`Orbigny)	35		
		Nonion sp.	27		
		Lagena sulcata (Walker & Jacob)	8		
		Bolivina sp.1	4		
		Bolivina sp.2	3		
		Triloculinellus sp.	3		
		Lagena semisteriata Williamson	2		
		Trochammina nitida Brady	2		
		Ostracoda			6.2
		Hemicytheridea sp.	207		
		Aglaiocypris sp.	155		
		Loxoconcha sp.1	88		
		Puricythereis sp.1	72		
		Alocopocythere reticulata (Hartman, 1964)	16		
		Gastropoda			0.7
		Caecum californicum (Dall,1885)	21		
		Diala semistriata (Philippi,1849)	15		
		Lippistes sp.ventral veiw	12		
		Tornatina persiana (Smith,1872)	7		
		Umbonium vestiarium (Linnaeus,1758)	6		
		Bivalvia			0.21
		Carditopsis majeeda (Biggs,1973)	14		
		Mactra sp.	5		
Nematoda			0.13		
Nematoda sp.3	12				
Copepoda			0.03		
Microsetella sp.	3				

Table 3.10 (Contd...): Summer 2000 Cruise

Leg No	St. No.	Taxa	Number of Individual	Dominance (%)
III	92	Foraminifera		
		Ammonia beccarii (Linne)	2960	90.02
		Quinqueloculina costata d`Orbigny	1221	
		Quinqueloculina sp.2	1108	
		Quinqueloculina seminulum (Linne)	993	
		Quinqueloculina sp.1	614	
		Spiroloculina depressa d`Orbigny	329	
		Triloculina sp.	216	
		Triloculinellus sp.	188	
		Spiroloculina excavata d`Orbigny	115	
		Quinqueloculina dimidiata Terquem, 1876	106	
		Spiroloculina sp.2	96	
		Discorbis nitida (Williamson, 1858)	83	
		Adelosina laevigata d`Orbigny, 1826	71	
		Elphidium articulatum (d`Orbigny)	65	
		Cyclogyra involvens Reuss	8	
		Lagena sulcata (Walker & Jacob)	7	
		Lagena semisteriata Williamson	6	
		Peneroplis planatus (Fichtel & Moll, 1798)	6	
		Trochammina nitida Brady	5	
		Textularia earlandi	4	
		Nodophthalmidium sp.	3	
		Bolivina sp.1	2	
		Bolivina tectiformis Cushman	2	
		Nonion sp.	1	
		Ostracoda		
		Cytherella sp.1	198	9.17
		Alocopocythere reticulata (Hartman , 1964)	161	
		Puricythereis exquisita (Bate & Sheppard,1980)	158	
		Loxoconcha sp.1	137	
		Aglaioocypris sp.	120	
		Hemicytheridea sp.	63	
		Gastropoda and Scaphopoda		
		Diala semistriata (Philippi,1849)	18	0.41
		Ceacum californicum (Dall,1885)	10	
Tornatina persiana (Smith,1872)	8			
Dentalium octangulatum (Donovan,1803)	2			
Bivalvia				
Carditopsis majeeda (Biggs,1973)	8	0.08		
Nematoda				
Nematoda sp.2	15	0.29		
Nematoda sp.1	12			

Table 3.10 (Contd...): Summer 2000 Cruise

Leg No	St. No.	Taxa	No. of Individual	Dominance (%)
III	94	Foraminifera		
		<i>Ammonia beccarii</i> (Linne)	1963	95.83
		<i>Quinqueloculina seminulum</i> (Linne)	1025	
		<i>Quinqueloculina costata</i> d`Orbigny	823	
		<i>Quinqueloculina dimidiata</i> Terquem, 1876	715	
		<i>Spiroloculina depressa</i> d`Orbigny,1826	612	
		<i>Triloculina</i> sp.	556	
		<i>Triloculina sidebottomi</i> (Martinotti)	218	
		<i>Spiroloculina excavata</i> d`Orbigny	383	
		<i>Reophax scorpiurus</i> d` Montfort, 1808	202	
		<i>Discorbis nitida</i> (Williamson, 1858)	156	
		<i>Quinqueloculina poeyana</i> d`Orbigny	129	
		<i>Nonion</i> sp.	88	
		<i>Adelosina laevigata</i> d`Orbigny, 1826	73	
		<i>Adelosina bicornis</i> (Walker & Jacob, 1798)	44	
		<i>Elphidium crispum</i> (Linne)	25	
		<i>Elphidium excavatum</i> (Terquem, 1875)	20	
		<i>Lagena sulcata</i> (Walker & Jacob)	10	
		<i>Lagena perlucida</i> (Montagu, 1803)	9	
		<i>Peneroplis planatus</i> (Fichtel & Moll, 1798)	8	
		<i>Trochammina nitida</i> Brady	5	
		Ostracoda		
		<i>Actinocythereis scutigera</i> (Brady,1868)	98	3.74
		<i>Aglaiocypris</i> sp.	76	
		<i>Alocopocythere reticulata</i> (Hartman , 1964)	59	
		<i>Hemicytheridea</i> sp.	43	
		Gastropoda		
		<i>Tornatina persiana</i> (Smith,1872)	11	0.25
		<i>Ringicula propinquans</i> (Hinds,1844)	8	
		Bivalvia		
		<i>Tellina fabula</i> (Gmelin,1791)	5	0.06
		Polychaeta larvae		
		<i>Glycera</i> sp.	4	0.09
		<i>Nephtys</i> sp.1	3	

Table 3.10 (Contd...): Summer 2000 Cruise

Leg No	St. No.	Taxa	No. of Individual	Dominance (%)	
I	10	Foraminifera			
		Ammonia beccari (Linne)	1964	93.68	
		Quinqueloculina sp.2	1212		
		Quinqueloculina costata d`Orbigny	1108		
		Quinqueloculina sp.1	1003		
		Quinqueloculina seminulum (Linne)	961		
		Quinqueloculina dimidiata Terquem, 1876	902		
		Spiroloculina sp.2	714		
		Triloculina sidebottomi (Martinotti)	609		
		Spiroloculina sp.1	421		
		Triloculina sp.	238		
		Spiroloculina excavata d`Orbigny	215		
		Spiroloculina depressa d`Orbigny	206		
		Discorbis nitida (Williamson, 1858)	189		
		Elphidium sp.1	162		
		Adelosina bicornis (Walker & Jacob, 1798)	97		
		Elphidium excavatum (Terquem, 1875)	66		
		Elphidium articulatum (d`Orbigny)	51		
		Cyclogyra involvens Reuss	18		
		Lagena perlucida (Montagu, 1803)	12		
		Lagena sulcata (Walker & Jacob)	9		
		Adelosina sp.2	8		
		Bolivina sp.1	4		
		Ostracoda			5.49
		Cytherella sp.1	229		
		Puricythereis sp.1	187		
		Loxoconcha sp.1	94		
		Alocopocythere reticulata (Hartman , 1964)	61		
		Hemicytheridea sp.	25		
		Gastropoda and Scaphopoda			0.47
		Caecum californicum (Dall,1885)	21		
		Dentalium octangulatum (Donovan,1803)	16		
		Tornatina persiana (Smith,1872)	10		
		Lippistes sp.ventral veiw	5		
		Bivalvia			0.11
		Tellina fabula (Gmelin,1791)	8		
Carditopsis majeeda (Biggs,1973)	5				
Nematoda			0.22		
Nematoda sp.3	14				
Nematoda sp.2	10				

Table 3.10 (Contd...): Summer 2000 Cruise

Leg No	St. No.	Taxa	No. of Individual	Dominance (%)	
I	41	Foraminifera			
		Quinqueloculina costata d`Orbigny	2123	93.47	
		Quinqueloculina dimidiata Terquem, 1876	1250		
		Quinqueloculina seminulum (Linne)	1132		
		Ammonia beccari (Linne)	1025		
		Quinqueloculina sp.2	993		
		Triloculina sp.	812		
		Triloculinellus sp.	318		
		Spiroloculina sp.2	187		
		Spiroloculina excavata d`Orbigny	150		
		Spiroloculina depressa d`Orbigny	133		
		Quinqueloculina sp.1	98		
		Discorbis nitida (Williamson, 1858)	92		
		Adelosina bicornis (Walker & Jacob, 1798)	61		
		Nonion sp.	53		
		Elphidium excavatum (Terquem, 1875)	45		
		Elphidium crispum (Linne)	28		
		Cyclogyra involvens Reuss	17		
		Lagena sulcata (Walker & Jacob)	11		
		Peneroplis planatus (Fichtel & Moll, 1798)	9		
		Elphidium crispum (Linne)	8		
		Nodophthalmidium sp.	5		
		Bolivina sp.1	3		
		Bolivina sp.2	2		
		Ostracoda			5.72
		Loxoconcha sp.1	221		
		Hemicytheridea sp.	129		
		Cytherella sp.1	94		
		Hemicytheridea sp.	53		
		Alocopocythere reticulata (Hartman, 1964)	27		
		Gastropoda and Scaphopoda			0.54
		Dentalium octangulatum (Donovan, 1803)	18		
		Tornatina persiana (Smith, 1872)	16		
		Diala semistriata (Philippi, 1849)	8		
		Lippistes sp.ventral veiw	5		
		Caecum californicum (Dall,1885)	3		
Bivalvia			0.25		
Mactra sp.	10				
Tellina fabula (Gmelin,1791)	8				
Carditopsis maieeda (Biggs.1973)	5				

Table 3.10 (continued): Summer 2000 Cruise

Leg No	St. No.	Taxa	No. of Individual	Dominance (%)
III	89	Foraminifera		
		<i>Ammonia beccarii</i> (Linne)	1827	95.15
		<i>Quinqueloculina costata</i> d`Orbigny	1216	
		<i>Quinqueloculina dimidiata</i> Terquem, 1876	821	
		<i>Triloculina</i> sp.	425	
		<i>Quinqueloculina</i> sp.1	284	
		<i>Spiroloculina depressa</i> d`Orbigny	176	
		<i>Quinqueloculina</i> sp.2	137	
		<i>Spiroloculina</i> sp.1	112	
		<i>Spiroloculina excavata</i> d`Orbigny	93	
		<i>Discorbis nitida</i> (Williamson, 1858)	82	
		<i>Quinqueloculina seminulum</i> (Linne)	71	
		<i>Triloculina</i> sp.	68	
		<i>Adelosina laevigata</i> d`Orbigny, 1826	44	
		<i>Nonion</i> sp.	35	
		<i>Elphidium articulatum</i> (d`Orbigny,1839)	27	
		<i>Elphidium excavatum</i> (Terquem, 1875)	18	
		<i>Lagena semisteriata</i> Williamson	15	
		<i>Cyclogyra involvens</i> Reuss	12	
		<i>Trochammina nitida</i> Brady	8	
		<i>Bolivina</i> sp.1	5	
		<i>Elphidium crispum</i> (Linne)	3	
		<i>Sculptobaculites</i> sp.	2	
		Ostracoda		
		<i>Aglaiocypris</i> sp.	89	3.47
		<i>Puricythereis</i> sp.1	53	
		<i>Alocopocythere reticulata</i> (Hartman, 1964)	29	
		<i>Puricythereis exquisita</i> (Bate & Sheppard, 1980)	17	
		<i>Cytherella</i> sp.1	12	
		Gastropoda and Scaphopoda		
		<i>Diala semistriata</i> (Philippi, 1849)	17	1.04
		<i>Dentalium octangulatum</i> (Donovan, 1803)	15	
		<i>Lippistes</i> sp. ventral veiw	11	
		<i>Ringicula propinquans</i> (Hinds, 1844)	10	
		<i>Tornatina persiana</i> (Smith, 1872)	7	
		Bivalvia		
<i>Carditopsis majeeda</i> (Biggs, 1973)	8	0.22		
<i>Mactra</i> sp.	5			
Copepoda				
<i>Microsetella</i> sp.	6	0.1		

Table 3.10 (Contd...): Summer 2000 Cruise

Leg No	St. No.	Taxa	No. of Individual	Dominance (%)
I	42	Foraminifera		
		Quinqueloculina costata d`Orbigny	1823	94.46
		Quinqueloculina dimidiata Terquem, 1876	791	
		Ammonia beccarii (Linne)	445	
		Spiroloculina sp.2	257	
		Triloculina sp.	176	
		Quinqueloculina sp.2	125	
		Quinqueloculina seminulum (Linne)	113	
		Triloculina sidebottomi (Martinotti)	95	
		Discorbis nitida (Williamson, 1858)	87	
		Adelosina bicornis (Walker & Jacob, 1798)	61	
		Nonion sp.	58	
		Adelosina laevigata d`Orbigny, 1826	32	
		Elphidium excavatum (Terquem, 1875)	25	
		Lagena semisteriata Williamson	18	
		Cyclogyra involvens Reuss	14	
		Bolivina sp.2	8	
		Bolivina sp.1	5	
		Ostracoda		
		Loxoconcha sp.1	74	4.25
		Puricythereis sp. 1	53	
		Hemicytheridea sp.	28	
		Alocopocythere reticulata (Hartman, 1964)	17	
		Cytherella sp.1	14	
		Gastropoda		
		Caecum californicum (Dall, 1885)	14	0.5
		Diala semistriata (Philippi, 1849)	8	
		Bivalvia		
		Carditopsis majeeda (Biggs, 1973)	5	0.11
		Polychaeta		
		Glycera sp.	8	0.18
		Nematoda		
		Nematoda sp.1	21	0.48

Table 3.10 (Contd...): Summer 2000 Cruise

Leg No	St. No.	Taxa	No. of Individual	Dominance (%)	
II	77	Foraminifera			
		Quinqueloculina costata d`Orbigny	2184	78.3	
		Quinqueloculina seminulum (Linne)	1346		
		Ammonia beccarii (Linne)	938		
		Quinqueloculina sp.2	743		
		Quinqueloculina dimidiata Terquem, 1876	621		
		Spiroloculina sp.2	408		
		Spiroloculina excavata d`Orbigny	202		
		Triloculina sp.	121		
		Triloculinellus sp.	93		
		Discorbis nitida (Williamson, 1858)	78		
		Adelosina laevigata d`Orbigny, 1826	62		
		Adelosina bicornis (Walker & Jacob, 1798)	59		
		Elphidium articulatum (d`Orbigny)	44		
		Elphidium excavatum (Terquem, 1875)	36		
		Elphidium Crispum (Linne)	27		
		Peneroplis planatus (Fichtel & Moll, 1798)	18		
		Bolivina sp.2	15		
		Nodophthalmidium sp.	8		
		Bolivina sp.1	7		
		Textularia earlandi	5		
		Lagena sulcata (Walker & Jacob)	3		
		Ostracoda			20.04
		Puricythereis sp. 1	1158		
		Cytherella sp.1	322		
		Aglaiocypris sp.	128		
		Hemicytheridea sp.	85		
		Loxoconcha sp.1	47		
		Puricythereis exquisita (Bate & Sheppard, 1980)	31		
		Alocopocythere reticulata (Hartman, 1964)	25		
		Gastropoda and Scaphopoda			1.08
		Diala semistriata (Philippi, 1849)	42		
		Dentalium octangulatum (Donovan, 1803)	26		
		Lippistes sp.ventral veiw	17		
		Caecum californicum (Dall, 1885)	12		
		Bivalvia			0.25
Carditopsis majeeda (Biggs,1973)	15				
Tellina fabula (Gmelin,1791)	8				
Nematoda			0.31		
Nematoda sp.1	16				
Nematoda sp.3	12				

Table 3.10 (Contd...): Summer 2000 Cruise

Leg No	St. No.	Taxa	No. of Individual	Dominance (%)
I	28	Foraminifera		
		<i>Ammonia beccarii</i> (Linne)	2820	90.6
		<i>Quinqueloculina dimidiata</i> Terquem, 1876	914	
		<i>Quinqueloculina costata</i> d`Orbigny	328	
		<i>Quinqueloculina seminulum</i> (Linne)	227	
		<i>Quinqueloculina</i> sp.1	193	
		<i>Spiroloculina</i> sp.1	108	
		<i>Spiroloculina depressa</i> d`Orbigny	102	
		<i>Triloculina</i> sp.	95	
		<i>Spiroloculina excavata</i> d`Orbigny	81	
		<i>Triloculina sidebottomi</i> (Martinotti)	77	
		<i>Discorbis nitida</i> (Williamson, 1858)	66	
		<i>Adelosina laevigata</i> d`Orbigny, 1826	59	
		<i>Elphidium articulatum</i> (d`Orbigny)	41	
		<i>Cyclogyra involvens</i> Reuss	14	
		<i>Lagena perlucida</i> (Montagu, 1803)	9	
		<i>Lagena sulcata</i> (Walker & Jacob)	7	
		<i>Peneroplis planatus</i> (Fichtel & Moll, 1798)	6	
		Ostracoda		
		<i>Puricythereis</i> sp. 1	216	8.18
		<i>Hemicytheridea</i> sp.	103	
		<i>Aglaioocypris</i> sp.	63	
		<i>Puricythereis exquisita</i> (Bate & Sheppard, 1980)	45	
		<i>Loxoconcha</i> sp.1	38	
		Gastropoda and Scaphopoda		
		<i>Diala semistriata</i> (Philippi, 1848)	19	0.56
		<i>Tornatina persiana</i> (Smith, 1872)	8	
<i>Dentalium octangulatum</i> (Donovan, 1803)	5			
Bivalvia				
<i>Mactra</i> sp.	3	0.05		
Nematoda				
Nematoda sp.2	21	0.51		
Nematoda sp.3	8			
Copepoda				
<i>Microsetella</i> sp.	5	0.08		

Table 3.10 (Contd...): Summer 2000 Cruise

Leg No	St. No.	Taxa	No. of Individual	Dominance (%)
II	70	Foraminifera		
		Quinqueloculina costata d`Orbigny	1128	75.93
		Quinqueloculina dimidiata Terquem, 1876	727	
		Quinqueloculina seminulum (Linne)	343	
		Spiroloculina sp.2	182	
		Spiroloculina depressa d`Orbigny	121	
		Spiroloculina excavata d`Orbigny	97	
		Ammonia beccarii (Linne)	95	
		Triloculina sp.	78	
		Discorbis nitida (Williamson, 1858)	63	
		Nonion sp.	32	
		Adelosina laevigata d`Orbigny, 1826	29	
		Adelosina bicornis (Walker & Jacob, 1798)	21	
		Cyclogyra involvens Reuss	10	
		Lagena semisteriata Williamson	8	
		Lagena perlucida (Montagu, 1803)	6	
		Peneroplis planatus (Fichtel & Moll, 1798)	5	
		Bolivina sp.2	4	
		Trochammina nitida Brady	4	
		Bolivina sp.1	3	
		Ostracoda		
		Cytherella sp.1	325	20.06
		Puricythereis sp.1	183	
		Aglaiocypris sp.	129	
		Loxoconcha sp.1	88	
		Alocopocythere reticulata (Hartman, 1964)	26	
		Puricythereis exquisita (Bate & Sheppard, 1980)	18	
		Hemicytheridea sp.	12	
		Gastropoda and Scaphopoda		
		Tornatina persiana (Smith, 1872)	35	2.28
		Caecum californicum (Dall, 1885)	30	
		Diala semistriata (philippi, 1849)	15	
		Dentalium octangulatum (Donovan, 1803)	9	
		Bivalvia		
		Carditopsis majeeda (Biggs, 1973)	28	1.25
		Mactra sp.	21	
		Nematoda		
		Nematoda sp.1	18	0.46

Table 3.10 (Contd...): Summer 2000 Cruise

Leg No	St. No.	Taxa	No. of Individual	Dominance (%)
II	78	Foraminifera		
		Quinqueloculina sp.2	1123	84.55
		Quinqueloculina sp.1	941	
		Quinqueloculina seminulum (Linne)	714	
		Quinqueloculina dimidiata Terquem, 1876	507	
		Ammonia beccarii (Linne)	424	
		Quinqueloculina poeyana d`Orbigny	311	
		Triloculina sp.	202	
		Spiroloculina depressa d`Orbigny	195	
		Adelosina laevigata d`Orbigny, 1826	87	
		Adelosina bicornis (Walker & Jacob, 1798)	45	
		Elphidium articulatum (d`Orbigny)	31	
		Elphidium excavatum (Terquem, 1875)	28	
		Elphidium Crispum (Linne)	19	
		Discorbis nitida (Williamson, 1858)	18	
		Cyclogyra involvens Reuss	11	
		Peneroplis planatus (Fichtel & Moll, 1798)	8	
		Lagena sulcata (Walker & Jacob)	7	
		Bolivina sp.2	4	
		Nodulina gracilis (Kiaer, 1900)	1	
		Ostracoda		
		Alocopocythere reticulata (Hartman, 1964)	325	13.85
		Cytherella sp.	188	
		Hemicytheridea sp.	110	
		Puricythereis sp.1	91	
		Loxoconcha sp.1	34	
		Puricythereis exquisita (Bate & Sheppard, 1980)	18	
Gastropoda and Scaphopoda				
Lippistes sp.ventral veiw	31	1.59		
Diala semistriata (Philippi,1849)	23			
Dentalium octangulatum (Donovan,1803)	16			
Caecum californicum (Dall,1885)	10			
Tornatina persiana (Smith,1872)	8			

Table 3.10 (Contd...): Summer 2000 Cruise

Leg No	St. No.	Taxa	No. of Individual	Dominance (%)
I	57	Foraminifera		
		<i>Ammonia beccarii</i> (Linne)	1248	87.54
		<i>Quinqueloculina costata</i> d`Orbigny	924	
		<i>Quinqueloculina</i> sp.2	645	
		<i>Spiroloculina depressa</i> d`Orbigny	328	
		<i>Triloculina</i> sp.	256	
		<i>Quinqueloculina seminulum</i> (Linne)	218	
		<i>Spiroloculina</i> sp.2	205	
		<i>Spiroloculina excavata</i> d`Orbigny	193	
		<i>Quinqueloculina dimidiata</i> Terquem, 1876	161	
		<i>Triloculinellus</i> sp.	127	
		<i>Adelosina bicornis</i> (Walker & Jacob, 1798)	114	
		<i>Nonion</i> sp.	93	
		<i>Elphidium articulatum</i> (d`Orbigny)	78	
		<i>Discorbis nitida</i> (Williamson, 1858)	65	
		<i>Elphidium Crispum</i> (Linne)	44	
		<i>Lagena semisteriata</i> Williamson	39	
		<i>Cyclogyra involvens</i> Reuss	9	
		<i>Nodulina gracilis</i> (Kiaer, 1900)	8	
		<i>Trochammina nitida</i> Brady	4	
		Ostracoda		
		<i>Aglaioocypris</i> sp.	193	11.69
		<i>Cytherella</i> sp.1	125	
		<i>Hemicytheridea</i> sp.	116	
		<i>Puricythereis</i> sp.1	108	
		<i>Alocopocythere reticulata</i> (Hartman, 1964)	94	
		Gastropoda and Scaphopoda		
		<i>Caecum californicum</i> (Dall,1885)	16	0.64
		<i>Diala semistriata</i> (Philippi,1849)	12	
		" <i>Laevidentalium</i> " cf <i>curvotracheatum</i> (plate, 1908)	7	
		Bivalvia		
		<i>Mactra</i> sp.	6	0.11

Table 3.10 (Contd...): Summer 2000 Cruise

Leg No	St. No.	Taxa	No. of Individual	Dominance (%)	
II	58	Foraminifera			
		Quinqueloculina costata d`Orbigny	1384	93.35	
		Quinqueloculina sp.2	1128		
		Spiroloculina depressa d`Orbigny,1826	1034		
		Spiroloculina excavata d`Orbigny	982		
		Triloculina sp.	716		
		Spiroloculina sp.2	421		
		Quinqueloculina seminulum (Linne)	229		
		Discorbis nitida (Williamson, 1858)	117		
		Quinqueloculina dimidiata Terquem, 1876	103		
		Ammonia beccarii (Linne)	99		
		Elphidium Crispum (Linne)	71		
		Elphidium articulatum (d`Orbigny)	64		
		Adelosina laevigata d`Orbigny, 1826	55		
		Adelosina bicornis (Walker & Jacob, 1798)	41		
		Elphidium excavatum (Terquem, 1875)	39		
		Bolivina sp.2	27		
		Nodophthalmidium sp.	19		
		Trochammina nitida Brady	16		
		Lagena semisteriata Williamson	9		
		Lagena sulcata (Walker & Jacob)	7		
		Peneroplis planatus (Fichtel & Moll, 1798)	5		
		Bolivina sp.1	4		
		Textularia earlandi	4		
		Nodulina gracilis (Kiaer, 1900)	2		
		Ostracoda			5.28
		Alocopocythere reticulata (Hartman, 1964)	128		
		Puricythereis sp.1	94		
		Puricythereis exquisita (Bate & Sheppard, 1980)	76		
		Hemicytheridea sp.	43		
		Loxoconcha sp.1	31		
		Gastropoda and Scaphopoda			1.17
		Lippistes sp.ventral veiw	25		
		Diala semistriata (Philippi, 1849)	17		
		Dentalium octangulatum (Donovan, 1803)	14		
		Umbonium vestiarium (Linnaeus, 1758)	10		
		Ringicula propinquans (Hinds, 1844)	8		
		Tornatina persiana (Smith, 1872)	6		
		Caecum californicum (Dall, 1885)	3		
		Bivalvia			0.11
		Tellina fabula (Gmelin, 1791)	8		
		Polychaeta larvae			0.07
		Glycera sp.	5		

Table 3.10 (Contd...): Summer 2000 Cruise

Leg No	St. No.	Taxa	No. of Individual	Dominance (%)
I	19	Foraminifera		
		<i>Ammonia beccarii</i> (Linne)	1184	89.29
		<i>Quinqueloculina dimidiata</i> Terquem, 1876	723	
		<i>Quinqueloculina costata</i> d`Orbigny	619	
		<i>Spiroloculina depressa</i> d`Orbigny	431	
		<i>Spiroloculina excavata</i> d`Orbigny	280	
		<i>Triloculina</i> sp.	194	
		<i>Quinqueloculina seminulum</i> (Linne)	163	
		<i>Quinqueloculina</i> sp.2	133	
		<i>Teriloculinellus</i> sp.	128	
		<i>Elphidium</i> sp.1	93	
		<i>Adelosina laevigata</i> d`Orbigny, 1826	87	
		<i>Discorbis nitida</i> (Williamson, 1858)	65	
		<i>Nonion</i> sp.	41	
		<i>Bolivina</i> sp.1	7	
		<i>Bolivina</i> sp.2	5	
		<i>Reophax scorpiurus</i> d` Montfort, 1808	2	
		Ostracoda		
		<i>Cytherella</i> sp.1	195	9.6
		<i>Puricythereis</i> sp.1	87	
		<i>Puricythereis exquisita</i> (Bate & Sheppard, 1980)	74	
		<i>Aglaioocypris</i> sp.	48	
		<i>Loxoconcha</i> sp.1	25	
		<i>Alocopocythere reticulata</i> (Hartman, 1964)	18	
		Gastropoda		
		<i>Lippistes</i> sp.ventral veiw	19	0.85
		<i>Tornatina persiana</i> (Smith, 1872)	10	
<i>Diala semistriata</i> (philippi, 1849)	7			
<i>Caecum californicum</i> (Dall, 1885)	4			
Nematoda				
Nematoda sp.2	8	0.17		
Copepoda				
<i>Microsetella</i> sp.	3	0.06		

Table 3.10 (Contd...): Summer 2000 Cruise

Leg No	St. No.	Taxa	No. of Individual	Dominance (%)	
I	27	Foraminifera			
		<i>Ammonia beccarii</i> (Linne)	2151	91.06	
		<i>Quinqueloculina costata</i> d`Orbigny	826		
		<i>Quinqueloculina seminulum</i> (Linne)	342		
		<i>Quinqueloculina dimidiata</i> Terquem, 1876	214		
		<i>Spiroloculina depressa</i> d`Orbigny,1826	202		
		<i>Spiroloculina</i> sp.2	184		
		<i>Triloculina sidebottomi</i> (Martinotti)	173		
		<i>Spiroloculina excavata</i> d`Orbigny	157		
		<i>Discorbis nitida</i> (Williamson, 1858)	115		
		<i>Bolivina</i> sp.2	96		
		<i>Elphidium excavatum</i> (Terquem, 1875)	86		
		<i>Adelosina bicornis</i> (Walker & Jacob, 1798)	52		
		<i>Elphidium articulatum</i> (d`Orbigny)	46		
		<i>Adelosina laevigata</i> d`Orbigny, 1826	39		
		<i>Nonion</i> sp.	31		
		<i>Elphidium Crispum</i> (Linne)	27		
		<i>Trochammina nitida</i> Brady	25		
		<i>Lagena perlucida</i> (Montagu, 1803)	14		
		<i>Nodophthalmidium</i> sp.	12		
		<i>Sculptobaculites</i> sp.	10		
		<i>Bolivina</i> sp.1	6		
		<i>Lagena sulcata</i> (Walker & Jacob)	4		
		Ostracoda			7.74
		<i>Loxoconcha</i> sp.1	193		
		<i>Hemicytheridea</i> sp.	78		
		<i>Aglaioocypris</i> sp.	60		
		<i>Alocopocythere reticulata</i> (Hartman, 1964)	53		
		<i>Puricythereis</i> sp.1	25		
		Gastropoda and Scaphopoda			0.52
		<i>Diala semistriata</i> (Philippi, 1849)	14		
		<i>Tornatina persiana</i> (Smith, 1872)	7		
		<i>Caecum californicum</i> (Dall, 1885)	5		
		" <i>Laevidentalium</i> " cf <i>curvotracheatum</i> (Plate, 1908)	2		
		Bivalvia			0.17
		<i>Tellina fabula</i> (Gmelin, 1791)	9		
		Nematoda			0.49
		Nematoda sp.1	17		
		Nematoda sp.5	9		

Table 3.10 (Contd...): Summer 2000 Cruise

Leg No	St. No.	Taxa	No. of Individual	Dominance (%)
I	18	Foraminifera		
		Quinqueloculina costata d`Orbigny	1404	93.15
		Quinqueloculina dimidiata Terquem, 1876	1129	
		Quinqueloculina sp.2	1007	
		Ammonia beccarii (Linne)	1001	
		Quinqueloculina seminulum (Linne)	792	
		Spiroloculina excavata d`Orbigny	615	
		Spiroloculina depressa d`Orbigny, 1826	323	
		Triloculina sidebottomi (Martinotti)	290	
		Triloculina sp.	245	
		Quinqueloculina sp.1	224	
		Quinqueloculina sp.3	163	
		Adelosina laevigata d`Orbigny, 1826	134	
		Discorbis nitida (Williamson, 1858)	109	
		Adelosina bicornis (Walker & Jacob, 1798)	103	
		Elphidium excavatum (Terquem, 1875)	87	
		Nonion sp.	62	
		Cyclogyra involvens Reuss	22	
		Elphidium articulatum (d`Orbigny)	19	
		Lagena sulcata (Walker & Jacob)	12	
		Lagena semisteriata Williamson	9	
		Trochammina nitida Brady	9	
		Peneroplis planatus (Fichtel & Moll, 1798)	7	
		Bolivina sp.2	3	
		Bolivina sp.1	2	
		Karaburunia sp.	1	
		Ostracoda		
		Alocopocythere reticulata (Hartman, 1964)	129	5.99
		Aglaiocypris sp.	107	
		Puricythereis sp.1	98	
		Puricythereis exquisita (Bate & Sheppard, 1980)	75	
		Hemicytheridea sp.	51	
		Loxoconcha sp.1	26	
		Cytherella sp.1	14	
		Gastropoda and Scaphopoda		
		Dentalium octangulatum (Donovan, 1803)	19	0.74
		Lippistes sp.ventral veiw	15	
Tornatina persiana (Smith, 1872)	11			
Ringicula propinquans (Hinds, 1844)	8			
Diala semistriata (Philippi, 1849)	6			
Caecum californicum (Dall, 1885)	3			
Bivalvia				
Mactra sp.	9	0.1		

Table 3.10 (Contd...): Summer 2000 Cruise

Leg No	St. No.	Taxa	No. of Individual	Dominance (%)
III	87	Foraminifera		
		<i>Ammonia beccarii</i> (Linne)	1829	94.11
		<i>Quinqueloculina dimidiata</i> Terquem, 1876	1241	
		<i>Quinqueloculina costata</i> d`Orbigny	1028	
		<i>Quinqueloculina seminulum</i> (Linne)	914	
		<i>Triloculina</i> sp.	712	
		<i>Spiroloculina excavata</i> d`Orbigny, 1826	501	
		<i>Spiroloculina depressa</i> d`Orbigny	318	
		<i>Triloculina sidebottomi</i> (Martinotti)	223	
		<i>Discorbis nitida</i> (Williamson, 1858)	165	
		<i>Adelosina laevigata</i> d`Orbigny, 1826	127	
		<i>Quinqueloculina poeyana</i> d`Orbigny	113	
		<i>Elphidium</i> sp.1	102	
		<i>Adelosina bicornis</i> (Walker & Jacob, 1798)	96	
		<i>Elphidium articulatum</i> (d`Orbigny)	64	
		<i>Elphidium excavatum</i> (Terquem, 1875)	50	
		<i>Nonion</i> sp.	38	
		<i>Cyclogyra involvens</i> Reuss	18	
		<i>Elphidium Crispum</i> (Linne)	15	
		<i>Peneroplis planatus</i> (Fichtel & Moll, 1798)	14	
		<i>Lagena sulcata</i> (Walker & Jacob)	11	
		<i>Lagena semisteriata</i> Williamson	9	
		<i>Bolivina</i> sp.2	6	
		<i>Sculptobaculites</i> sp.	5	
		<i>Nodophthalmidium</i> sp.	3	
		<i>Bolivina</i> sp.1	1	
		Ostracoda		
		<i>Loxoconcha</i> sp.1	216	5.21
		<i>Alocopocythere reticulata</i> (Hartman, 1964)	93	
		<i>Puricythereis</i> sp.1	46	
		<i>Hemicytheridea</i> sp.	35	
		<i>Puricythereis exquisita</i> (Bate & Sheppard, 1980)	22	
		<i>Aglaiocypris</i> sp.	9	
		Gastropoda		
		<i>Tornatina persiana</i> (Smith, 1872)	16	0.42
		<i>Umbonium vestiarium</i> (Linnaeus, 1758)	9	
<i>Diala semistriata</i> (Philippi, 1849)	6			
<i>Caecum californicum</i> (Dall, 1885)	3			
Bivalvia				
<i>Carditopsis majeeda</i> (Biggs, 1973)	8	0.12		
<i>Tellina fabula</i> (Gmelin, 1791)	2			
Nematoda				
Nematoda sp.6	10	0.12		

Table 3.10 (Contd...): Summer 2000 Cruise

Leg No	St. No.	Taxa	No. of Individual	Dominance (%)	
II	76	Foraminifera			
		Quinqueloculina seminulum (Linne)	823	83.66	
		Spiroloculina depressa d`Orbigny	514		
		Quinqueloculina dimidiata Terquem, 1876	228		
		Quinqueloculina poeyana d`Orbigny	183		
		Spiroloculina depressa d`Orbigny, 1826	161		
		Spiroloculina excavata d`Orbigny	145		
		Ammonia beccarii (Linne)	128		
		Triloculina sp.	102		
		Quinqueloculina sp.1	97		
		Discorbis nitida (Williamson, 1858)	71		
		Nonion depressulus (Walker & Jacob)	45		
		Adelosina bicornis (Walker & Jacob, 1798)	31		
		Adelosina laevigata d`Orbigny, 1826	26		
		Elphidium excavatum (Terquem, 1875)	19		
		Elphidium articulatum (d`Orbigny)	17		
		Elphidium Crispum (Linne)	15		
		Cyclogyra involvens Reuss	12		
		Trochammina nitida Brady	9		
		Lagena perlucida (Montagu, 1803)	7		
		Bolivina sp.1	6		
		Bolivina sp.2	2		
		Lagena sulcata (Walker & Jacob)	1		
		Ostracoda			14.56
		Cytherella sp.1	186		
		Puricythereis exquisita (Bate & Sheppard, 1980)	93		
		Hemicytheridea sp.	64		
		Aglaioocypris sp.	51		
		Loxoconcha sp.1	37		
		Puricythereis sp.1	29		
		Gastropoda			1.04
		Diala semistriata (Philippi, 1849)	16		
		Caecum californicum (Dall, 1885)	9		
Lippistes sp.ventral veiw	6				
Tornatina persiana (Smith, 1872)	2				
Nematoda			0.53		
Nematoda sp.5	17				
Copepoda			0.18		
Clytemnestra sp.	6				

Table 3.10 (Contd...): Summer 2000 Cruise

Leg No	St. No.	Taxa	No. of Individual	Dominance (%)	
II	80	Foraminifera			
		Quinqueloculina costata d`Orbigny	4325	72.13	
		Ammonia beccarii (Linne)	2181		
		Quinqueloculina seminulum (Linne)	1304		
		Quinqueloculina sp.2	1025		
		Quinqueloculina dimidiata Terquem, 1876	812		
		Quinqueloculina sp.1	618		
		Spiroloculina excavata d`Orbigny, 1826	414		
		Spiroloculina depressa d`Orbigny	215		
		Triloculina sp.	209		
		Discorbis nitida (Williamson, 1858)	147		
		Adelosina bicornis (Walker & Jacob, 1798)	123		
		Adelosina laevigata d`Orbigny, 1826	95		
		Nonion sp.	38		
		Elphidium excavatum (Terquem, 1875)	25		
		Elphidium articulatum (d`Orbigny)	24		
		Textularia earlandi	18		
		Peneroplis planatus (Fichtel & Moll, 1798)	16		
		Bolivina sp.1	10		
		Cyclogyra involvens Reuss	8		
		Lagena semisteriata Williamson	7		
		Lagena sulcata (Walker & Jacob)	3		
		Ostracoda			26.97
		Cytherella sp.1	1326		
		Aglaioocypris sp.	1171		
		Hemicytheridea sp.	983		
		Alocopocythere reticulata (Hartman, 1964)	615		
		Loxoconcha sp.1	214		
		Puricythereis exquisita (Bate & Sheppard, 1980)	35		
		Gastropoda			0.47
		Diala semistriata (Philippi, 1849)	38		
		Caecum californicum (Dall, 1885)	26		
		Lippistes sp.ventral veiw	12		
		Bivalvia			0.09
		Mactra sp.	15		
		Nematoda			0.32
		Nematoda sp.3	24		
		Nematoda sp.1	17		
		Nematoda sp.5	11		

Table 3.10 (Contd...): Summer 2000 Cruise

Leg No	St. No.	Taxa	No. of Individual	Dominance (%)
I	55	Foraminifera		
		Ammonia beccarii (Linne)	3375	79.99
		Quinqueloculina costata d`Orbigny	945	
		Quinqueloculina dimidiata Terquem, 1876	705	
		Quinqueloculina seminulum (Linne)	375	
		Spiroloculina sp.1	360	
		Spiroloculina depressa d`Orbigny	330	
		Spiroloculina excavata d`Orbigny	285	
		Triloculina sp.	273	
		Triloculina sidebottomi (Martinotti)	251	
		Discorbis nitida (Williamson, 1858)	210	
		Adelosina laevigata d`Orbigny, 1826	195	
		Adelosina bicornis (Walker & Jacob, 1798)	88	
		Elphidium excavatum (Terquem, 1875)	64	
		Lagena semisteriata Williamson	5	
		Lagena perlucida (Montagu, 1803)	4	
		Peneroplis planatus (Fichtel & Moll, 1798)	3	
		Ostracoda		
		Aglaicypris sp.	1025	20
		Cytherella sp.1	541	
		Hemicytheridea sp.	215	
		Puricythereis exquisita (Bate & Sheppard, 1980)	87	

Table 3.10 (Contd...): Summer 2000 Cruise

Leg No	St. No.	Taxa	No. of Individual	Dominance (%)
I	30	Foraminifera		
		Quinqueloculina costata d`Orbigny	1028	85
		Spiroloculina sp.2	623	
		Quinqueloculina sp.1	314	
		Quinqueloculina seminulum (Linne)	301	
		Triloculina sp.	285	
		Ammonia beccarii (Linne)	215	
		Triloculina sidebottomi (Martinotti)	187	
		Spiroloculina excavata d`Orbigny	162	
		Spiroloculina depressa d`Orbigny	155	
		Teriloculinellus sp.	126	
		Discorbis nitida (Williamson, 1858)	118	
		Elphidium Crispum (Linne)	94	
		Adelosina laevigata d`Orbigny, 1826	89	
		Adelosina bicornis (Walker & Jacob, 1798)	63	
		Nonion sp.	29	
		Elphidium excavatum (Terquem, 1875)	19	
		Elphidium articulatum (d`Orbigny)	15	
		Cyclogyra involvens Reuss	9	
		Ostracoda		
		Puricythereis sp.1	188	12.97
		Aglaiocypris sp.	142	
		Loxoconcha sp.1	115	
		Puricythereis exquisita (Bate & Sheppard, 1980)	77	
		Cytherella sp.1	43	
		Hemicytheridea sp.	15	
		Gastropoda		
		Tornatina persiana (Smith, 1872)	16	0.58
		Diala semistriata (Philippi, 1849)	8	
		Ringicula propinquans (Hinds, 1844)	2	
		Bivalvia		
		Tellina fabula (Gmelin, 1791)	7	0.15
		Nematoda		
		Nematodasp.1	15	0.55
		Nematodasp.4	10	

Table 3.10 (Contd...): Summer 2000 Cruise

Leg No	St. No.	Taxa	No. of Individual	Dominance (%)	
II	60	Foraminifera			
		Ammonia beccarii (Linne)	1488	94.54	
		Quinqueloculina costata d`Orbigny	1154		
		Triloculina sp.	823		
		Triloculina sidebottomi (Martinotti)	415		
		Spiroloculina depressa d`Orbigny, 1826	286		
		Spiroloculina excavata d`Orbigny, 1826	192		
		Elphidium sp.1	109		
		Discorbis nitida (Williamson, 1858)	94		
		Adelosina bicornis (Walker & Jacob, 1798)	83		
		Elphidium articulatum (d`Orbigny)	65		
		Quinqueloculina dimidiata Terquem, 1876	51		
		Quinqueloculina seminulum (Linne)	49		
		Teriloculinellus sp.	26		
		Trochammina nitida Brady	20		
		Nodophthalmidium sp.	16		
		Sculptobaculites sp.	12		
		Lagena semisteriata Williamson	8		
		Lagena perlucida (Montagu, 1803)	6		
		Textularia earlandi	2		
		Bolivina sp.1	2		
		Ostracoda			
		Puricythereis sp.1	86	4.61	
		Cytherella sp.1	53		
		Hemicytheridea sp.	41		
		Loxoconcha sp.1	32		
		Puricythereis exquisita (Bate & Sheppard, 1980)	19		
		Alocopocythere reticulata (Hartman, 1964)	8		
		Gastropoda			
		Tornatina persiana (Smith, 1872)	6	0.23	
		Caecum californicum (Dall, 1885)	4		
		Diala semistriata (Philippi, 1849)	2		
		Bivalvia			0.09
		Carditopsis majeeda (Biggs,1973)	5		
		Nematoda			0.52
		Nematoda sp.2	27		

Table 3.10 (Contd...): Summer 2000 Cruise

Leg No	St. No.	Taxa	No. of Individual	Dominance (%)
I	12	Foraminifera		
		<i>Ammonia beccari</i> (Linne)	1284	88.61
		<i>Quinqueloculina dimidiata</i> Terquem, 1876	1096	
		<i>Quinqueloculina costata</i> d`Orbigny	927	
		<i>Quinqueloculina seminulum</i> (Linne)	612	
		<i>Spiroloculina excavata</i> d`Orbigny, 1826	305	
		<i>Quinqueloculina</i> sp.1	229	
		<i>Spiroloculina depressa</i> d`Orbigny	193	
		<i>Triloculina</i> sp.	161	
		<i>Triloculina sidebottomi</i> (Martinotti)	154	
		<i>Discorbis nitida</i> (Williamson, 1858)	99	
		<i>Nonion depressulus</i> (Walker & Jacob)	61	
		<i>Adelosina bicornis</i> (Walker & Jacob, 1798)	58	
		<i>Elphidium articulatum</i> (d`Orbigny)	32	
		<i>Lagena perlucida</i> (Montagu, 1803)	18	
		<i>Bolivina</i> sp.2	12	
		<i>Sculptobaculites</i> sp.	9	
		<i>Bolivina</i> sp.1	6	
		Ostracoda		
		<i>Puricythereis</i> sp.1	230	9.81
		<i>Puricythereis exquisita</i> (Bate & Sheppard, 1980)	159	
		<i>Hemicytheridea</i> sp.	93	
		<i>Loxoconcha</i> sp.1	55	
		<i>Cytherella</i> sp.1	28	
		<i>Aglaiocypris</i> sp.	17	
		Gastropoda		
		<i>Diala semistriata</i> (Philippi, 1849)	15	1.01
		<i>Caecum californicum</i> (Dall, 1885)	28	
		<i>Tornatina persiana</i> (Smith, 1872)	17	
		Bivalvia		
		<i>Tellina fabula</i> (Gmelin, 1791)	6	0.1
		Nematoda		
		Nematoda sp.4	19	0.32
		Copepoda		
		Microsetella sp.	8	0.13

Table 3.10 (Contd...): Summer 2000 Cruise

Leg No	St. No.	Taxa	No. of Individual	Dominance (%)
I	17	Foraminifera		
		Quinqueloculina costata d`Orbigny	829	90.44
		Quinqueloculina seminulum (Linne)	612	
		Ammonia beccarii (Linne)	540	
		Quinqueloculina dimidiata Terquem, 1876	329	
		Spiroloculina excavata d`Orbigny, 1826	210	
		Triloculina sp.	178	
		Spiroloculina depressa d`Orbigny	151	
		Discorbis nitida (Williamson, 1858)	85	
		Reophax scorpiurus d` Montfort, 1808	63	
		Adelosina bicornis (Walker & Jacob, 1798)	49	
		Elphidium excavatum (Terquem, 1875)	32	
		Elphidium articulatum (d`Orbigny)	27	
		Triloculina sidebottomi (Martinotti)	26	
		Spiroloculina excavata d`Orbigny	19	
		Cyclogyra involvens Reuss	10	
		Lagena sulcata (Walker & Jacob)	7	
		Bolivina sp.1	5	
		Ostracoda		
		Loxoconcha sp.1	182	8.04
		Cytherella sp.1	64	
		Hemicytheridea sp.	21	
		Puricythereis sp.1	15	
		Gastropoda		
		Caecum californicum (Dall, 1885)	23	1.16
		Tornatina persiana (Smith, 1872)	16	
Diala semistriata (Philippi, 1849)	2			
Bivalvia				
Mactra sp.	5	0.14		
Copepoda				
Microsetellasp.	7	0.19		

Table 3.10 (Contd...): Summer 2000 Cruise

Leg No	St. No.	Taxa	No. of Individual	Dominance (%)
II	68	Foraminifera		
		Ammonia beccarii (Linne)	1793	96.25
		Quinqueloculina costata d`Orbigny	1215	
		Spiroloculina depressa d`Orbigny	1029	
		Spiroloculina excavata d`Orbigny	923	
		Quinqueloculina seminulum (Linne)	721	
		Quinqueloculina dimidiata Terquem, 1876	525	
		Triloculina sp.	211	
		Spiroloculina sp.2	193	
		Bolivina sp.1	128	
		Discorbis nitida (Williamson, 1858)	109	
		Nonion sp.	82	
		Adelosina laevigata d`Orbigny, 1826	56	
		Elphidium excavatum (Terquem, 1875)	36	
		Elphidium magelanicum Heron - Allen & Earland	25	
		Trochammina nitida Brady	19	
		Peneroplis planatus (Fichtel & Moll, 1798)	11	
		Textularia earlandi	8	
		Sculptobaculites sp.	6	
		Nodophthalmidium sp.	3	
		Ostracoda		
		Alocopocythere reticulata (Hartman, 1964)	86	3.21
		Aglaicypris sp.	53	
		Hemicytheridea sp.	41	
		Cytherella sp.1	39	
		Puricythereis exquisita (Bate & Sheppard, 1980)	18	
		Gastropoda		
		Umbonium vestiarium (Linnaeus, 1758)	12	0.29
		Ringicula propinquans (Hinds, 1844)	8	
		Caecum californicum (Dall, 1885)	2	
		Bivalvia		
		Tellina fabula (Gmelin,1791)	3	0.04
		Nematoda		
		Nematoda sp.5	8	0.18
		Nematoda sp.3	6	

Table 3.10 (Contd...): Summer 2000 Cruise

Leg No	St. No.	Taxa	No. of Individual	Dominance (%)	
II	71	Foraminifera			
		Ammonia beccarii (Linne)	1822	95.45	
		Spiroloculina excavata d`Orbigny, 1826	1214		
		Quinqueloculina seminulum (Linne)	1028		
		Quinqueloculina costata d`Orbigny	614		
		Quinqueloculina dimidiata Terquem, 1876	323		
		Quinqueloculina sp.1	218		
		Spiroloculina depressa d`Orbigny	203		
		Triloculina sp.	194		
		Bolivina sp.2	122		
		Spiroloculina sp.1	106		
		Teriloculinellus sp.	91		
		Triloculina sidebottomi (Martinotti)	69		
		Discorbis nitida (Williamson, 1858)	38		
		Bolivina sp.1	25		
		Adelosina laevigata d`Orbigny, 1826	19		
		Nonion sp.	15		
		Adelosina bicornis (Walker & Jacob, 1798)	12		
		Cyclogyra involvens Reuss	4		
		Ostracoda			3.85
		Cytherella sp.1	102		
		Puricythereis sp.1	86		
		Puricythereis exquisita (Bate & Sheppard, 1980)	29		
		Hemicytheridea sp.	18		
		Aglaiocypris sp.	12		
		Gastropoda and Scaphopoda			0.31
		Diala semistriata (Philippi, 1849)	10		
		Tornatina persiana (Smith, 1872)	8		
		Dentalium octangulatum (Donovan, 1803)	2		
Bivalvia			0.04		
Tellina fabula (Gmelin, 1791)	3				
Nematoda			0.32		
Nematoda sp.1	21				

Table 3.10 (Contd...): Summer 2000 Cruise

Leg No	St. No.	Taxa	No. of Individual	Dominance (%)
I	39	Foraminifera		
		<i>Ammonia beccarii</i> (Linne)	2123	96.17
		<i>Quinqueloculina seminulum</i> (Linne)	1095	
		<i>Quinqueloculina dimidiata</i> Terquem, 1876	821	
		<i>Spiroloculina depressa</i> d`Orbigny, 1826	480	
		<i>Spiroloculina excavata</i> d`Orbigny	334	
		<i>Triloculina sidebottomi</i> (Martinotti)	229	
		<i>Discorbis nitida</i> (Williamson, 1858)	184	
		<i>Adelosina laevigata</i> d`Orbigny, 1826	181	
		<i>Adelosina bicornis</i> (Walker & Jacob, 1798)	163	
		<i>Elphidium excavatum</i> (Terquem, 1875)	108	
		<i>Peneroplis planatus</i> (Fichtel & Moll, 1798)	31	
		<i>Trochammina nitida</i> Brady	18	
		<i>Nodophthalmidium</i> sp.	12	
		<i>Bolivina</i> sp.1	10	
		Ostracoda		
		<i>Loxoconcha</i> sp.1	84	3.82
		<i>Alocopocythere reticulata</i> (Hartman, 1964)	73	
		<i>Cytherella</i> sp.1	45	
<i>Puricythereis</i> sp.1	28			

Table 3.10 (Contd...): Summer 2000 Cruise

Leg No	St. No.	Taxa	No. of Individual	Dominance (%)	
I	45	Foraminifera			
		Ammonia beccarii (Linne)	1527	97.33	
		Quinqueloculina dimidiata Terquem, 1876	1211		
		Spiroloculina depressa d`Orbigny	1009		
		Quinqueloculina seminulum (Linne)	324		
		Quinqueloculina sp.1	293		
		Spiroloculina excavata d`Orbigny, 1826	251		
		Triloculina sp.	230		
		Spiroloculina depressa d`Orbigny	192		
		Bolivina sp.2	163		
		Elphidium excavatum (Terquem, 1875)	95		
		Quinqueloculina costata d`Orbigny	80		
		Discorbis nitida (Williamson, 1858)	33		
		Adelosina laevigata d`Orbigny, 1826	30		
		Trochammina nitida Brady	19		
		Sculptobaculites sp.	12		
		Lagena semisteriata Williamson	7		
		Bolivina sp.1	5		
		Nodulina gracilis (Kiaer, 1900)	3		
		Nodophthalmidium sp.	2		
		Lagena sulcata (Walker & Jacob)	2		
		Lagena semisteriata Williamson	1		
		Ostracoda			2.25
		Cytherella sp.1	48		
		Hemicytheridea sp.	39		
		Aglaiocypris sp.	22		
		Loxoconcha sp.1	18		
		Gastropoda			0.14
		Tornatina persiana (Smith, 1872)	5		
		Diala semistriata (Philippi, 1849)	3		
		Bivalvia			0.08
		Mactra sp.	5		
		Copepoda			0.17
		Microsetella sp.	10		

Table 3.10 (Contd...): Summer 2000 Cruise

Leg No	St. No.	Taxa	No. of Individual	Dominance (%)	
I	25	Foraminifera			
		Quinqueloculina costata d`Orbigny	1052	95.22	
		Quinqueloculina dimidiata Terquem, 1876	816		
		Ammonia beccarii (Linne)	529		
		Spiroloculina depressa d`Orbigny	214		
		Spiroloculina excavata d`Orbigny, 1826	208		
		Triloculina sp.	187		
		Bolivina sp.1	125		
		Discorbis nitida (Williamson, 1858)	89		
		Quinqueloculina poeyana d`Orbigny	63		
		Nonion sp.	41		
		Adelosina laevigata d`Orbigny, 1826	38		
		Triloculina sidebottomi (Martinotti)	31		
		Adelosina bicornis (Walker & Jacob, 1798)	29		
		Elphidium excavatum (Terquem, 1875)	23		
		Cyclogyra involvens Reuss	15		
		Lagena sulcata (Walker & Jacob)	9		
		Lagena semisteriata Williamson	7		
		Peneroplis planatus (Fichtel & Moll, 1798)	7		
		Sculptobaculites sp.	3		
		Bolivina sp.2	2		
		Ostracoda			3.98
		Cytherella sp.1	54		
		Puricythereis sp.1	37		
		Aglaioocypris sp.	29		
		Loxoconcha sp.1	26		
		Gastropoda			0.27
Tornatina persiana (Smith, 1872)	6				
Diala semistriata (Philippi, 1849)	4				
Polychaeta larvae			0.1		
Nephtys sp.1	4				
Nematoda			0.4		
Nematodasp.2	15				

Table 3.10 (Contd...): Summer 2000 Cruise

Leg No	St. No.	Taxa	No. of Individual	Dominance (%)	
I	29	Foraminifera			
		<i>Ammonia beccarii</i> (Linne)	1871	96.41	
		<i>Quinqueloculina dimidiata</i> Terquem, 1876	1305		
		<i>Quinqueloculina seminulum</i> (Linne)	1003		
		<i>Quinqueloculina costata</i> d`Orbigny	812		
		<i>Quinqueloculina</i> sp.2	629		
		<i>Triloculina</i> sp.	218		
		<i>Spiroloculina depressa</i> d`Orbigny	174		
		<i>Triloculina sidebottomi</i> (Martinotti)	93		
		<i>Spiroloculina excavata</i> d`Orbigny, 1826	86		
		<i>Discorbis nitida</i> (Williamson, 1858)	63		
		<i>Adelosina bicornis</i> (Walker & Jacob, 1798)	58		
		<i>Bolivina</i> sp.1	32		
		<i>Elphidium articulatum</i> (d`Orbigny)	24		
		<i>Sculptobaculites</i> sp.	18		
		<i>Elphidium Crispum</i> (Linne)	15		
		<i>Textularia earlandi</i>	12		
		<i>Lagena semisteriata</i> Williamson	8		
		<i>Lagena sulcata</i> (Walker & Jacob)	6		
		<i>Bolivina</i> sp.2	4		
		<i>Peneroplis planatus</i> (Fichtel & Moll, 1798)	3		
		Ostracoda			3.14
		<i>Hemicytheridea</i> sp.	83		
		<i>Aglaioocypris</i> sp.	69		
		<i>Loxoconcha</i> sp.1	37		
		<i>Cytherella</i> sp.1	21		
		Gastropoda			0.31
<i>Caecum californicum</i> (Dall, 1885)	15				
<i>Diala semistriata</i> (Philippi, 1849)	6				
Bivalvia			0.11		
<i>Mactra</i> sp.	8				

Table 3.11.1: Abundance of different meiofauna groups recorded during Summer 2000 Cruise

St.No.	Foraminifera	Ostracoda	Gastropoda	Bivalvia	Nematoda	Copepoda	Polychaeta larvae	Total number
10	10169	596	52	13	24	0	0	10854
12	5256	582	60	6	19	8	0	5931
17	3172	282	41	5	0	7	0	3507
18	7772	500	62	9	0	0	0	8343
19	4155	447	40	0	8	3	0	4653
25	3488	146	10	0	4	0	15	3663
27	4812	409	28	9	26	0	0	5284
28	5147	465	32	3	29	5	0	5681
29	6434	210	21	8	0	0	0	6673
30	3832	580	26	7	25	0	0	4470
39	5789	230	0	0	0	0	0	6019
41	8555	524	50	23	0	0	0	9152
42	4133	186	22	5	21	0	8	4375
45	5489	127	8	5	0	10	0	5639
55	7468	1868	0	0	0	0	0	9336
57	4759	636	35	6	0	0	0	5436
58	6576	372	83	8	0	0	5	7044
60	4901	239	12	5	27	0	0	5184
68	7093	237	22	3	14	0	0	7369
70	2956	781	89	49	18	0	0	3893
71	6117	247	20	3	21	0	0	6408
76	2642	460	33	0	17	6	0	3158
77	7018	1796	97	23	28	0	0	8962
78	4676	766	88	0	0	0	0	5530
80	11617	4344	76	15	52	0	0	16104
87	7603	421	34	10	10	0	0	8078
89	5481	200	60	13	0	6	0	5760
92	8209	837	38	8	27	0	0	9119
93	4068	314	24	17	0	0	0	4423
94	7064	276	19	5	0	0	7	7371
95	7906	492	35	17	18	0	0	8468
96	8041	338	61	19	12	3	0	8474
Average	6012	622	40	9	13	2	1	6705

Table3.11.2: Percentage composition of different meiofauna groups recorded during Summer 2000 Cruise

St.No.	Foraminifera	Ostracoda	Gastropoda	Bivalvia	Nematoda	Copepoda	Polychaeta larvae	Total number
10	93.68	5.49	0.47	0.11	0.22	0.00	0.00	10854
12	88.61	9.81	1.01	0.10	0.32	0.13	0.00	5931
17	90.44	8.04	1.16	0.14	0.00	0.19	0.00	3507
18	93.15	5.99	0.74	0.10	0.00	0.00	0.00	8343
19	89.29	9.60	0.85	0.00	0.17	0.06	0.00	4653
25	95.22	3.98	0.27	0.00	0.40	0.00	0.10	3663
27	91.06	7.74	0.52	0.17	0.49	0.00	0.00	5284
28	90.60	8.18	0.56	0.05	0.51	0.08	0.00	5681
29	96.41	3.14	0.31	0.11	0.00	0.00	0.00	6673
30	85.75	12.97	0.58	0.15	0.55	0.00	0.00	4470
39	96.17	3.82	0.00	0.00	0.00	0.00	0.00	6019
41	93.47	5.72	0.54	0.25	0.00	0.00	0.00	9152
42	94.46	4.25	0.50	0.11	0.48	0.00	0.18	4375
45	97.33	2.25	0.14	0.08	0.00	0.17	0.00	5639
55	79.99	20.00	0.00	0.00	0.00	0.00	0.00	9336
57	87.54	11.69	0.64	0.11	0.00	0.00	0.00	5436
58	93.35	5.28	1.17	0.11	0.00	0.00	0.07	7044
60	94.54	4.61	0.23	0.09	0.52	0.00	0.00	5184
68	96.25	3.21	0.29	0.04	0.18	0.00	0.00	7369
70	75.93	20.06	2.28	1.25	0.46	0.00	0.00	3893
71	95.45	3.85	0.31	0.04	0.32	0.00	0.00	6408
76	83.66	14.56	1.04	0.00	0.53	0.18	0.00	3158
77	78.30	20.04	1.08	0.25	0.31	0.00	0.00	8962
78	84.55	13.85	1.59	0.00	0.00	0.00	0.00	5530
80	72.13	26.97	0.47	0.09	0.32	0.00	0.00	16104
87	94.11	5.21	0.42	0.12	0.12	0.00	0.00	8078
89	95.15	3.47	1.04	0.22	0.00	0.10	0.00	5760
92	90.02	9.17	0.41	0.08	0.29	0.00	0.00	9119
93	91.97	7.09	0.54	0.38	0.00	0.00	0.00	4423
94	95.83	3.74	0.25	0.06	0.00	0.00	0.09	7371
95	93.36	5.81	0.41	0.20	0.21	0.00	0.00	8468
96	92.70	6.20	0.70	0.21	0.13	0.03	0.00	8675
Average	90.33	8.618	0.64	0.14	0.20	0.03	0.01	6705

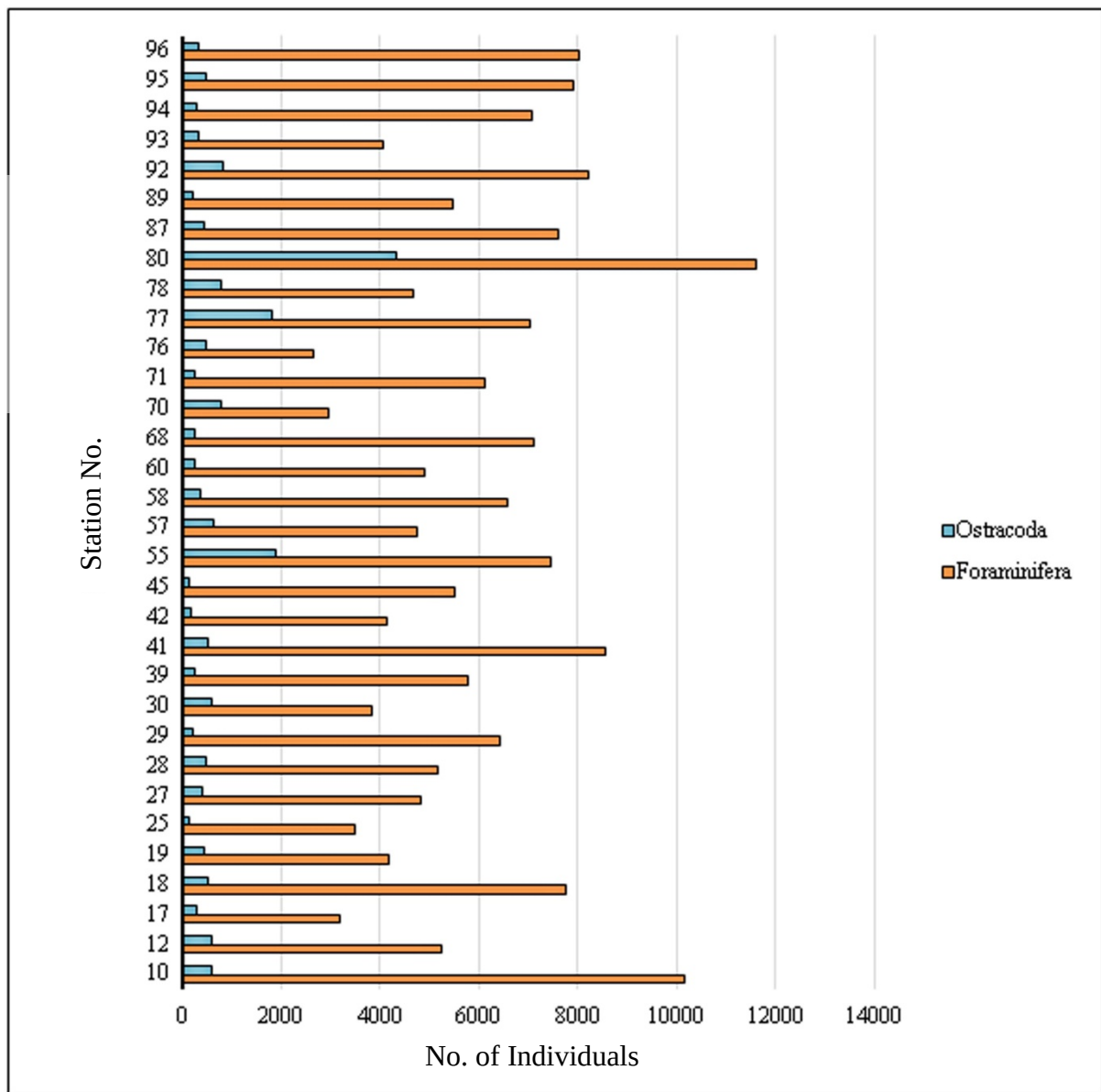


Figure 3.4: Occurrence and Abundance of Foraminifera and Ostracod groups (ROPME Summer 2000 Cruise)

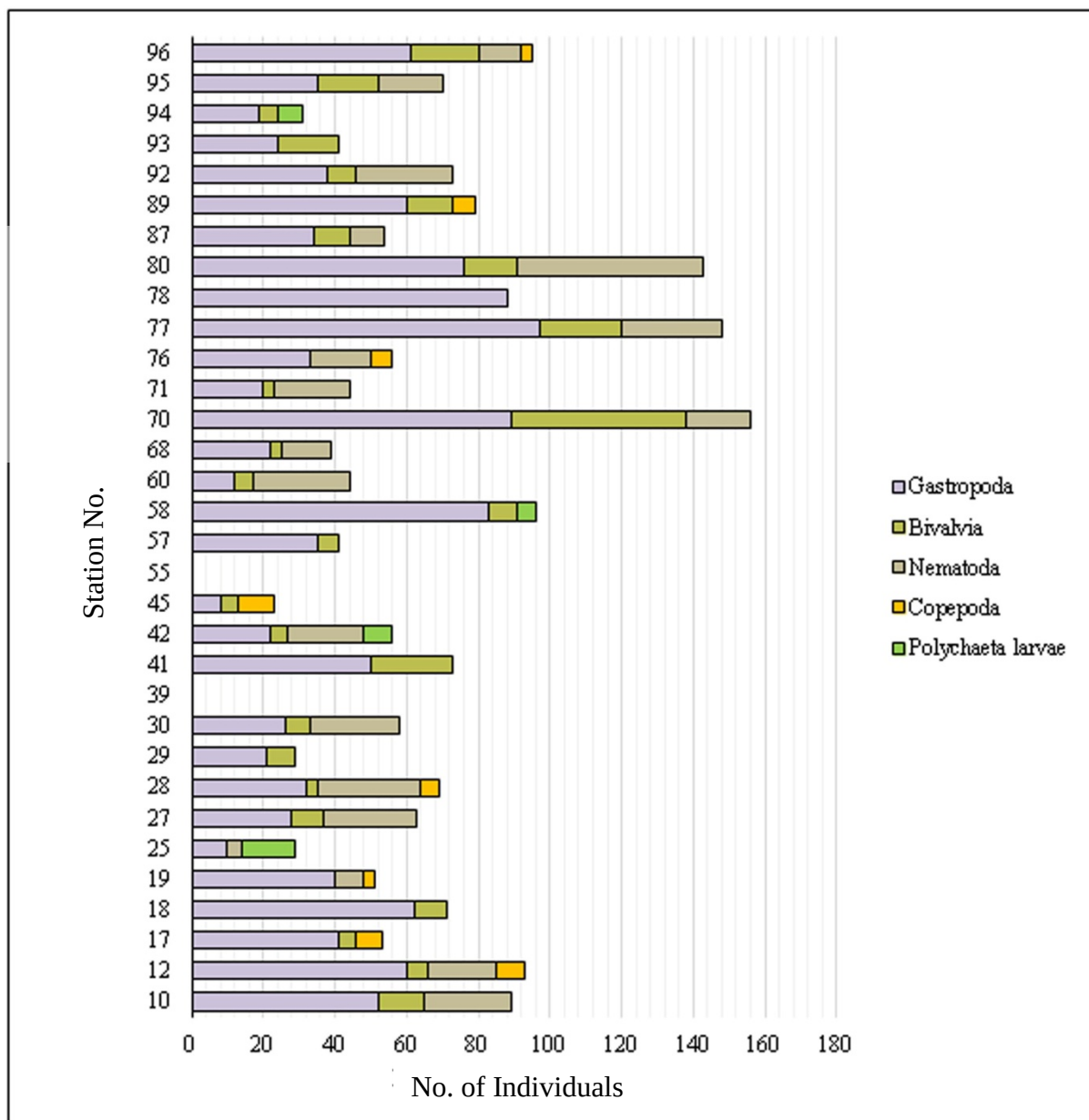


Figure 3.5: Occurrence and Abundance of Gastropod, Bivalvia, Nematod, Copepod and Polychaet larvae groups (ROPME Summer 2000 Cruise)

3.3.2 Meiofauna Abundance and Distribution (Summer 2001 Cruise)

In Summer 2001 Cruise, species of meiofauna community from 39 sampling stations within inner RSA were collected, identified and counted. Seven main different community types of meiofauna have been reported. These seven communities were located at different benthic habitats in coastal, offshore and deeper water.

In most of the stations, the highest density of meiofauna was reported at the upper 3 cm of sediments and dropped to lower values below. These values being similar at most of the stations (Table 3.12).

A total of 205 species of marine meiofauna were identified during the Summer 2001 Cruise which represent 3 times that of Summer 2000 Cruise. The highest species number occurred at Station 50, with 40 species; the lowest occurred at Station 39, with only 17 species. Comparing among species recorded, the highest number of species belong to foraminifera with 102 species and the lowest belong to Copepoda with 3 species.

Abundance of meiofauna showed variations among stations (Table 3.13), with a minimum of 1565 individuals in station 70 and the maximum of 30622 in station 61. The maximum species number was in foraminifera group (102 species) and the minimum in copepods (3 species).

The following groups of meiofauna were found to be the major contributors with the percentage compositions of: Foraminifera (85.27%), Ostracoda (13.28%), Gastropoda (0.92%), Bivalvia (0.24%), Nematoda (0.17%), Polychaeta larvae (0.08%) and Copepods (0.03%). The species of foraminifera were the dominant contributors in all stations with the highest level of 97.89% in station 39. The maximum contribution of the remaining species recorded as: Ostracoda 41.56% (sta. 34), Polychaeta larvae 2.11% (Sta. 70), Gastropoda 4.49% (Sta. 55), Bivalvia 1.24% (sta. 56), Nematoda 0.93% (Sta. 55) and Copepods 0.32% in station 55 (Table 3.13, and Figures 3.6 and 3.7).

Deformity in 9 species of foraminifera was also recorded (Table 3.16). In the meantime, the following foraminifera may be considered as pollution resistant species: *Ammonia beccarii*, *Trochammina inflata*, *Elphidium articulatum*, *Elphidium excavatum*, *Cibicides* sp., *Quinqueloculina seminulum* and *Spiroloculina excavata* and *Quinqueloculina* spp.

Table 3.12: Meiofauna species found in the RSA during Summer 2001 Cruise

Leg No	St.No.	Taxa	No. of Individual	Dominance (%)
I	79	Foraminifera		
		<i>Ammonia beccari</i> (Linne)	4079	75.96
		<i>Protelphidium anglicum</i> Murray, 1965b	1836	
		<i>Quniqueloculina seminulum</i> (Linne)	1231	
		<i>Quniqueloculina</i> sp.2	1127	
		<i>Quniqueloculina dimidiata</i> Terquem	825	
		<i>Quniqueloculina costata</i> d"Orbigny	728	
		<i>Quniqueloculina</i> sp.1	315	
		<i>Spiroloculina depressa</i> d"Orbigny	217	
		<i>Spiroloculina excavata</i> d"Orbigny	184	
		<i>Triloculina sidebottomi</i> (Martinotti)	201	
		<i>Triloculina</i> sp.	153	
		Unknown foraminiferasp.1	140	
		<i>Discorbis nitida</i> (Williamson, 1858)	92	
		<i>Trochamina intlata</i> (Montagu)	89	
		<i>Nonion</i> sp.	72	
		<i>Cyclogyra involvens</i> Reuss	21	
		<i>Lagena perlucida</i> (Montagu, 1803)	11	
		<i>Lagena semistriata</i> Williamson	9	
		<i>Lagena sulcata</i> (Walker & Jacob)	5	
		<i>Bolimina marginata</i> d"Orbigny	3	
		<i>Bolivina</i> sp.1	1	
		Ostracoda		
		<i>Actinocythereis scutigera</i> (Brady, 1868)	1028	23.38
		Unknown Ostracoda sp.6	923	
		<i>Hemicytheridea</i> sp.	747	
		<i>Puricythereis</i> sp.2	561	
		<i>Loxoconcha</i> sp.1	129	
		<i>Aglaioocypris</i> sp.	78	
		<i>Loxoconcha amygdalanux</i>	24	
		Gastropoda		
		<i>Turbonilla linjaica</i> Melvill & Standen, 1901	28	0.45
		Unkown gastropoda sp.1	17	
		<i>Acme</i> sp.	14	
		<i>Umbonium vestiarium</i> (Linnaeus,1758)	8	
		Bivalvia		
		<i>Bassina calophylla</i> (Philippi. 1836)	12	0.11
		<i>Lucina</i> sp.	5	
		Polychaeta larvae		
		<i>Nephtys</i> sp.2	3	0.02
		Nematoda		
		Nematoda sp.1	12	0.08

Table 3.12 (Contd...): Summer 2001 Cruise

Leg No	St. No.	Taxa	No. of Individual	Dominance (%)
I	81	Foraminifera		
		<i>Ammonia beccari</i> (Linne)	829	91.81
		<i>Quniqueloculina costata</i> d"Orbigny	731	
		<i>Quniqueloculina seminulum</i> (Linne)	582	
		<i>Quniqueloculina dimidiata</i> Terquem	422	
		<i>Quniqueloculina</i> sp.5	312	
		<i>Triloculina sidebottomi</i> (Martinotti)	215	
		<i>Pseudopyrgo milletti</i> (Cushman)	193	
		<i>Eliphidium articulatum</i> (d"Orbigny)	151	
		<i>Triloculina</i> sp.	143	
		<i>Bolimina marginata</i> d"Orbigny	127	
		<i>Adelosina honghensis</i> (Lak)	109	
		<i>Nonion</i> sp.	85	
		<i>Trochamina inflata</i> (Montagu)	77	
		<i>Nodophthalmidium antillarum</i> (Cushman, 1922)	25	
		<i>Nodosaria</i> sp.2	18	
		<i>Entosolenia globosa</i> (Reuss)	12	
		Unknown foraminiferasp.4	8	
		<i>Nodosaria</i> sp.1	2	
		<i>Bolivina</i> sp.5	2	
		<i>Textularia</i> sp.2	2	
		Ostracoda		
		<i>Callistocythere</i> sp.	117	6.47
		<i>Puricythereis</i> sp.1	83	
		<i>Cytherella</i> sp.2	48	
		<i>Alocopocythere reticulata</i> (Hartman, 1964)	21	
		<i>Aglaiocypris</i> sp.	16	
		Gastropoda		
		<i>Tornatina persiana</i> Smith, 1872	21	1.09
		<i>Caecum californicum</i> Dall, 1885	16	
		<i>Diala semistriata</i> (Pilippi, 1949)	11	
		Bivalvia		
		<i>Carditopsis majeeda</i> (Biggs, 1973)	8	0.23
		<i>Mactra</i> sp.	2	
		Nematoda		
		Nematoda sp.3	18	0.41

Table 3.12 (Contd...): Summer 2001 Cruise

Leg No	St. No.	Taxa	No. of Individual	Dominance (%)
I	73	Foraminifera		
		<i>Ammonia beccari</i> (Linne)	825	76.12
		<i>Protelphidium anglicum</i> Murray, 1965b	428	
		<i>Quniqueloculina dimidiata</i> Terquem	216	
		<i>Quniqueloculina seminulum</i> (Linne)	208	
		<i>Discorbis nitida</i> (Williamson, 1858)	177	
		<i>Quniqueloculina</i> sp.3	151	
		<i>Spiroloculina excavata</i> d"Orbigny	118	
		<i>Spiroloculina depressa</i> d"Orbigny	101	
		<i>Elphidium excavatum</i> (Terquem, 1875)	73	
		<i>Elphidium articulatum</i> (d"Orbigny)	60	
		<i>Bolimina marginata</i> d"Orbigny	31	
		<i>Quniqueloculina</i> sp.4	28	
		Unknown foraminiferasp.2	22	
		<i>Spirophthalmidium acutimargo</i> (Brady)	17	
		<i>Nonion</i> sp.	15	
		<i>Trochamina inflata</i> (Montagu)	12	
		<i>Lagena perlucida</i> (Montagu, 1803)	7	
		<i>Cyclogyra involvens</i> Reuss	6	
		<i>Bolivina</i> sp.6	3	
		<i>Lagena calvata</i> (d"orbingny)	1	
		Ostracoda		
		<i>Loxoconcha amygdalanux</i>	321	20.93
		<i>Puricythereis exquisita</i> (Bate & Sheppard, 1980)	184	
		Unknown ostracodasp.4	83	
		<i>Hemicytheridea</i> sp.	48	
		Unknown ostracodasp.3	39	
		<i>Loxoconcha</i> sp.4	12	
		Gastropoda		
		Unkown gastropoda sp.2	29	1.89
<i>Tornatina persiana</i> Smith, 1872	17			
<i>Caecum californicum</i> Dall, 1885	15			
Bivalvia				
<i>Tellina</i> sp.2	18	0.55		
Nematoda				
Nematoda sp.5	10	0.55		
Nematoda sp.2	8			

Table 3.12 (Contd...): Summer 2001 Cruise

Leg No	St. No.	Taxa	No. of Individual	Dominance (%)
I	76	Foraminifera		
		<i>Ammonia beccari</i> (Linne)	485	86.18
		<i>Protelphidium anglicum</i> Murray, 1965b	312	
		<i>Quniqueloculina seminulum</i> (Linne)	308	
		<i>Discorbis nitida</i> (Williamson, 1858)	291	
		<i>Quniqueloculina dimidiata</i> Terquem	254	
		<i>Quniqueloculina</i> sp.1	187	
		<i>Quniqueloculina</i> sp.5	161	
		<i>Spiroloculina depressa</i> d"Orbigny	139	
		<i>Spiroloculina excavata</i> d"Orbigny	127	
		<i>Triloculina sidebottomi</i> (Martinotti)	120	
		<i>Triloculina</i> sp.	94	
		<i>Elphidium articulatum</i> (d"Orbigny)	81	
		<i>Elphidium excavatum</i> (Terquem, 1875)	68	
		<i>Lagena sulcata</i> (Walker & Jacob)	8	
		<i>Lagena semistriata</i> Williamson	8	
		<i>Bolimina marginata</i> d"Orbigny	6	
		<i>Cyclogyra involvens</i> Reuss	4	
		<i>Spiroloculina</i> sp.2	2	
		<i>Textularia</i> sp.1	2	
		Ostracoda		
		<i>Alocopocythere reticulata</i> (Hartman, 1964)	174	11.51
		Unknown ostracoda sp.5	87	
		<i>Hemicytheridea</i> sp.	45	
		Unknown ostracoda sp.2	31	
		Unknown ostracoda sp.6	18	
		Gastropoda		
		<i>Tornatina persiana</i> Smith, 1872	26	1.85
		<i>Diala</i> sp.1	12	
		<i>Caecum californicum</i> Dall, 1885	8	
Unkown gastropoda sp.4	6			
<i>Turbonilla linjaica</i> Melvill & Standen, 1901	3			
<i>Natica</i> sp.	2			
Nematoda				
Nematoda sp.4	11	0.36		
Copepoda				
<i>Clytemnestra</i> sp.	3	0.10		

Table 3.12 (Contd...): Summer 2001 Cruise

Leg No	St. No.	Taxa	No. of Individual	Dominance (%)
I	78	Foraminifera		
		<i>Quniqueloculina dimidiata</i> Terquem	481	81.36
		<i>Quniqueloculina</i> sp.1	352	
		<i>Quniqueloculina seminulum</i> (Linne)	312	
		<i>Quniqueloculina</i> sp.6	302	
		<i>Protelphidium anglicum</i> Murray, 1965b	187	
		<i>Discorbis nitida</i> (Williamson, 1858)	135	
		<i>Quniqueloculina</i> sp.7	111	
		<i>Spiroloculina excavata</i> d"Orbigny	108	
		<i>Triloculina sidebottomi</i> (Martinotti)	93	
		<i>Triloculina</i> sp.	87	
		<i>Elphidium articulatum</i> (d"Orbigny)	64	
		<i>Elphidium excavatum</i> (Terquem, 1875)	60	
		<i>Trochamina inflata</i> (Montagu)	29	
		<i>Nonion</i> sp.	21	
		<i>Nodophthalmidium</i> sp.	19	
		<i>Spiroloculina</i> sp.3	14	
		<i>Nodophthalmidium antillarum</i> (Cushman, 1922)	14	
		<i>Sigmoihauerina brady</i> (Cushman)	12	
		<i>Bolivina</i> sp.5	10	
		<i>Bolimina marginata</i> d"Orbigny	8	
		<i>Nodosaria</i> sp.3	2	
		<i>Textularia</i> sp.2	2	
		Ostracoda		
		<i>Alocopocythere reticulata</i> (Hartman, 1964)	183	15.41
		Unknown ostracoda sp.6	151	
		<i>Venericythere</i> sp.1	74	
		Unknown Ostracoda sp.6	28	
		<i>Loxoconcha</i> sp.1	15	
		<i>Loxoconcha amygdalanux</i>	8	
		Gastropoda		
		<i>Tornatina persiana</i> Smith, 1872	27	1.85
		<i>Phenacovolva</i> sp.	16	
		<i>Salinator</i> sp.	12	
		Bivalvia		
		<i>Tellina</i> sp.2	16	1.21
<i>Macra</i> sp.	12			
<i>Carditopsis majeeda</i> (Biggs, 1973)	8			
Polychaeta larvae				
Phyllodocidae sp.2	5	0.02		

Table 3.12 (Contd...): Summer 2001 Cruise

Leg No	St. No.	Taxa	No. of Individual	Dominance (%)
I	56	Foraminifera		
		<i>Quniqueoloculina dimidiata</i> Terquem	467	75.25
		<i>Spiroloculina excavata</i> d"Orbigny	385	
		<i>Quniqueoloculina</i> sp.2	212	
		<i>Triloculina</i> sp.	115	
		<i>Triloculina sidebottomi</i> (Martinotti)	98	
		<i>Quniqueoloculina seminulum</i> (Linne)	93	
		<i>Discorbis nitida</i> (Williamson, 1858)	78	
		<i>Quniqueoloculina</i> sp.1	64	
		<i>Elphidium excavatum</i> (Terquem, 1875)	61	
		<i>Adelosina</i> sp.2	55	
		<i>Elphidium articulatum</i> (d"Orbigny, 1839)	43	
		<i>Lagena sulcata</i> (Walker & Jacob)	40	
		<i>Lagena perlucida</i> (Montagu, 1803)	31	
		<i>Cyclogyra involvens</i> Reuss	27	
		<i>Bolimina marginata</i> d"Orbigny	16	
		<i>Nonion</i> sp.	12	
		<i>Adelosina bicornis</i> (Walker & Jacob, 1798)	9	
		<i>Adplosina</i> sp.1	7	
		<i>Nodosaria pauciloculata</i> var. Luzonensis Cushman, 1921	2	
		<i>Textularia</i> sp.4	2	
		<i>Bolivina</i> sp.4	1	
		Ostracoda		
		Unkown ostracoda sp.7	215	19.78
		Unkown ostracoda sp.8	106	
		<i>Hemicytheridea</i> sp.	87	
		<i>Loxoconcha amygdalanux</i>	55	
		<i>Loxoconcha</i> sp.4	15	
		Gastropoda		
		<i>Diala semistriata</i> (Philippi, 1849)	32	2.93
		<i>Tornatina persiana</i> Smith, 1872	25	
		<i>Caecum californicum</i> Dall, 1885	14	
		Bivalvia		
		<i>Tellina</i> sp.1	18	1.24
		<i>Tellina fabula</i> Gmelin, 1791	12	
		Plychaeta		
		<i>Phyllodocidae</i> sp.1	5	0.21
		Nematoda		
		Nematoda sp.3	14	0.58

Table 3.12 (Contd...): Summer 2001 Cruise

Leg No	St. No.	Taxa	No. of Individual	Dominance (%)
I	70	Foraminifera		
		<i>Ammonia beccari</i> (Linne)	325	69.14
		<i>Discorbis nitida</i> (Williamson, 1858)	212	
		<i>Quniqueloculina</i> sp.1	128	
		<i>Quniqueloculina excavata</i> d"Orbigny	102	
		<i>Triloculina</i> sp.	88	
		<i>Elphidium excavatum</i> (Terquem, 1875)	73	
		<i>Spiroloculina depressa</i> d"Orbigny	57	
		<i>Bolimina marginata</i> d"Orbigny	45	
		<i>Entosolenia globsa</i> (Reuss)	31	
		<i>Lagena</i> sp.1	11	
		<i>Lagena clavata</i> d" Orbigny, (1846) var. setigera Millett. 1901	5	
		<i>Bolivina</i> sp.1	3	
		<i>Textularia</i> sp.1	2	
		Ostracoda		
		<i>Loxoconcha</i> sp.1	182	25.30
		<i>Loxoconcha amygdalanux</i>	87	
		<i>Triebelina</i> sp.	51	
		<i>Aglaioocypris pellucida</i>	49	
		<i>Loxoconcha</i> sp.2	27	
		Gastropoda		
		<i>Lippistes</i> sp.	23	2.94
		<i>Morchiella moreleti</i> (Fischer,1877)	10	
		Unkown gastropoda sp.6	8	
		<i>Diala</i> sp.1	5	
		Bivalvia		
		<i>Tellina</i> sp.1	8	0.51
Polychaeta larvae				
<i>Nephtys</i> sp.1	18	2.11		
<i>Glycera</i> sp.	15			

Table 3.12 (Contd...): Summer 2001 Cruise

Leg No	St. No.	Taxa	No. of Individual	Dominance (%)
I	72	Foraminifera		
		<i>Ammonia beccari</i> (Linne)	6845	78.79
		<i>Protelphidium anglicum</i> Murray, 1965b	3268	
		<i>Quniqueloculina seminulum</i> (Linne)	3021	
		<i>Quniqueloculina dimidiata</i> Terquem	2943	
		<i>Quniqueloculina</i> sp.7	1759	
		<i>Spiroloculina excavata</i> d"Orbigny	951	
		<i>Spiroloculina depressa</i> d"Orbigny	874	
		<i>Triloculina</i> sp.	662	
		<i>Triloculina sidebottomi</i> (Martinotti)	508	
		<i>Adelosina</i> sp.3	373	
		<i>Elphidium excavatum</i> (Terquem, 1875)	251	
		<i>Lagena semistriata</i> Williamson	18	
		<i>Lagena sulcata</i> (Walker & Jacob)	16	
		<i>Trochamina inflata</i> (Montagu)	14	
		<i>Bolimina marginata</i> d"Orbigny	11	
		<i>bolivina</i> sp.5	10	
		<i>Textularia</i> sp.4	7	
		<i>Nonion</i> sp.	3	
		Ostracoda		
		Unknown ostracodasp.6	1972	19.56
		<i>Cytherella</i> sp.1	1028	
		<i>Aglaocypris pellucida</i>	1007	
		<i>Puricythereis exquisita</i> (Bate &sheppard, 1980)	823	
		<i>Hemicytheridea</i> sp.	329	
		<i>Cytherella</i> sp.2	187	
		Gastropoda		
		<i>Natica</i> sp.	173	1.34
		<i>Diala</i> sp.2	95	
		Unkown gastropoda sp.7	71	
		Unkown gastropoda sp.8	28	
		Bivalvia		
		<i>Carditopsis majeeda</i> (Biggs, 1973)	44	0.24
		<i>Bassina calophylla</i> (Philippi. 1836)	21	
		Polychaeta larvae		
		<i>Glycera</i> sp.	2	0.01
		<i>Nephtys</i> sp.1	1	
		Nematoda		
		Nematoda sp.1	16	0.06

Table 3.12 (Contd...): Summer 2001 Cruise

Leg No	St. No.	Taxa	No. of Individual	Dominance (%)
I	66	Foraminifera		
		<i>Quniqueloculina dimidiata</i> Terquem	2115	88.92
		<i>Ammonia beccari</i> (Linne)	1118	
		<i>Protelphidium anglicum</i> Murray, 1965b	974	
		<i>Quniqueloculina seminulum</i> (Linne)	716	
		<i>Discorbis nitida</i> (Williamson, 1858)	261	
		<i>Quniqueloculina costata</i> d"Orbigny	197	
		<i>Spiroloculina excavata</i> d"Orbigny	162	
		<i>Spiroloculina depressa</i> d"Orbigny	128	
		<i>Triloculina</i> sp.	120	
		<i>Elphidium excavatum</i> (Terquem, 1875)	117	
		<i>Elphidium</i> sp.2	98	
		<i>Cyclogyra involvens</i> Reuss	87	
		<i>Trochamina inflata</i> (Montagu)	62	
		<i>Elphidium</i> sp.1	55	
		<i>Lagena semistriata</i> Williamson	9	
		<i>Lagena perlucida</i> (Montagu, 1803)	3	
		Ostracoda		
		<i>Alocopocythere reticulata</i> (Hartman, 1964)	316	10.20
		<i>Aglaioocythere</i> sp.	210	
		<i>Puricythereis exquisita</i> (Bate &sheppard, 1980)	115	
		<i>Loxoconcha</i> sp.1	28	
		<i>Loxoconcha amygdalanux</i>	20	
		<i>Loxoconcha</i> sp.4	15	
		<i>Puricythereis</i> sp.2	10	
		Gastropoda		
		<i>Pseudonoba</i> sp.	21	0.47
		<i>Ringicula propinquans</i> Hinds, 1844	12	
		Bivalvia		
		<i>Laevicardium papyraceum</i> (Bruguiere,1789)	15	0.29
		<i>Lucina</i> sp.	5	
		Polychaeta		
		<i>Nephtys</i> sp.2	8	0.11

Table 3.12 (Contd...): Summer 2001 Cruise

Leg No	St. No.	Taxa	No. of Individual	Dominance (%)
I	69	Foraminifera		
		<i>Ammonia beccari</i> (Linne)	1716	90.56
		<i>Protelphidium anglicum</i> Murray, 1965b	1029	
		<i>Quniqueloculina dimidiata</i> Terquem	1001	
		<i>Quniqueloculina seminulum</i> (Linne)	914	
		<i>Discorbis nitida</i> (Williamson, 1858)	810	
		<i>Spiroloculina excavata</i> d"Orbigny	661	
		<i>Triloculina</i> sp.	514	
		<i>Elphidium excavatum</i> (Terquem, 1875)	218	
		<i>Spiroloculina</i> sp.1	191	
		<i>Elphidium crispum</i> (Linne)	62	
		<i>Nodophthalmidium antillarum</i> (Cushman, 1922)	25	
		<i>Picouina mississippiensis</i> (Cushman)	20	
		Unknown foraminiferasp.3	10	
		<i>Karaburunia</i> sp.	5	
		Ostracoda		
		<i>Callistocythere</i> sp.	298	8.35
		<i>Venericythere</i> sp.2	120	
		<i>Puricythereis</i> sp.2	98	
		<i>Hemicytheridea</i> sp.	55	
		<i>Loxoconcha</i> sp.4	43	
		<i>Loxoconcha amygdalanux</i>	28	
		<i>Loxoconcha</i> sp.1	20	
		Gastropoda		
		<i>Turbonilla linjaica</i> Melvill & Standen, 1901	21	0.45
		Unkown gastropoda sp.1	15	
		Bivalvia		
<i>Tellina</i> sp.1	10	0.19		
<i>Mactra</i> sp.	5			
Nematoda				
Nematoda sp.3	27	0.34		
Copepoda				
<i>Microsetella</i> sp.	8	0.10		

Table 3.12 (Contd...): Summer 2001 Cruise

Leg No	St. No.	Taxa	No. of Individual	Dominance (%)
I	61	Foraminifera		
		<i>Ammonia beccari</i> (Linne)	6400	74.31
		<i>Quniqueloculina seminulum</i> (Linne)	4830	
		<i>Quniqueloculina dimidiata</i> Terquem	3221	
		<i>Discorbis nitida</i> (Williamson, 1858)	2487	
		<i>Quniqueloculina</i> sp.8	1640	
		<i>Quniqueloculina poeyana</i> d"Orbigny	1024	
		<i>Triloculina sidebottomi</i> (Martinotti)	938	
		<i>Spiroloculina excavata</i> d"Orbigny	784	
		<i>Triloculina</i> sp.	557	
		<i>Elphidium excavatum</i> (Terquem, 1875)	275	
		<i>Elphidium articulatum</i> (d"Orbigny, 1839)	218	
		<i>Nonion</i> sp.	193	
		<i>Adelosina laevigata</i> d"Orbigny, 1826	82	
		<i>Bolimina marginata</i> d"Orbigny	41	
		<i>Trochamina inflata</i> (Montagu)	29	
		<i>Lagena</i> sp.1	12	
		<i>Lagena semistriata</i> Williamson	10	
		<i>Lagena sulcata</i> (Walker & Jacob)	7	
		<i>Lagena perlucida</i> (Montagu, 1803)	5	
		<i>Nodosaria pauciloculata</i> var. Luzonensis		
		Cushman, 1921	2	
		<i>Textularia</i> sp.3	2	
		Ostracoda		
		<i>Cytherella</i> sp.2	1987	23.62
		<i>Puricythereis exquisita</i> (Bate & Sheppard, 1980)	1826	
		<i>Hemicytheridea</i> sp.	1003	
		<i>Cytherella</i> sp.1	726	
		<i>Alocopocythere reticulata</i> (Hartman, 1964)	621	
		<i>Loxoconcha</i> sp.4	408	
		Unkown ostracoda sp.7	325	
		Unkown ostracoda sp.8	218	
		<i>Cytherella</i> sp.3	119	
		Gastropoda		
		<i>Diala</i> sp.1	186	1.60
		<i>Caecum californicum</i> Dall, 1885	112	
		<i>Tornatina persiana</i> Smith, 1872	98	
		<i>Turbonilla linjaica</i> Melvill & Standen, 1901	73	
		Unkown gastropoda sp.9	22	
		Bivalvia		
		<i>Carditopsis majeeda</i> (Biggs, 1973)	85	0.37
		<i>Tellina</i> sp.1	16	
		<i>Tellina</i> sp.2	12	
		Nematoda		
		Nematoda sp.1	28	0.09

Table 3.12 (Contd...): Summer 2001 Cruise

Leg No	St. No.	Taxa	No. of Individual	Dominance (%)
I	50	Foraminifera		
		<i>Quniqueloculina seminulum</i> (Linne)	4791	87.37
		<i>Quniqueloculina costata</i> d"Orbigny	2183	
		<i>Quniqueloculina dimidiata</i> Terquem	1925	
		<i>Ammonia beccari</i> (Linne)	1235	
		<i>Protelphidium anglicum</i> Murray, 1965b	1182	
		<i>Quniqueloculina</i> sp.2	1021	
		<i>Quniqueloculina</i> sp.5	983	
		<i>Spiroloculina excavata</i> d"Orbigny	712	
		<i>Spiroloculina depressa</i> d"Orbigny	525	
		Unknown foraminiferasp.5	285	
		<i>Triloculina sidebottomi</i> (Martinotti)	198	
		<i>Elphidium excavatum</i> (Terquem, 1875)	133	
		<i>Elphidium articulatum</i> d"Orbigny	129	
		<i>Bolimina marginata</i> d"Orbigny	120	
		<i>Trochamina inflata</i> (Montagu)	71	
		<i>Cyclogyra involvens</i> Reuss	22	
		<i>Nonion</i> sp.	18	
		<i>Spiroloculina</i> sp.4	16	
		<i>Paleomiliolina monstrosa</i> (E.V.Bykova)	12	
		<i>Mesosigmoilina</i> sp.	10	
		<i>Nodophthalmidium antillarum</i> (Cushman, 1922)	10	
		<i>Spiroloculina</i> sp.7	8	
		<i>Lagena semistriata</i> Williamson	6	
		<i>Lagena sulcata</i> (Walker & Jacob)	3	
		Ostracoda		
		<i>Loxoconcha</i> sp.2	1025	12.11
		<i>Loxoconcha amygdalanux</i>	812	
		<i>Cytherella</i> sp.2	139	
		<i>Aglaocypris</i> sp.	96	
		<i>Propontocypris</i> sp.1	35	
		<i>Hemicytheridea</i> sp.	28	
		Unkown ostracoda sp.9	15	
		<i>Alocopocythere reticulata</i> (Hartman, 1964)	12	
		Gastropoda		
		<i>Tornatina persiana</i> Smith, 1872	27	0.37
		<i>Diala</i> sp.1	16	
		Unkown gastropoda sp.10	10	
		<i>Caecum californicum</i> Dall, 1885	8	
		<i>Turbonilla linjaica</i> Melvill & Standen, 1901	5	
		Bivalvia		
		<i>Mactra</i> sp.	9	0.08
		<i>Tellina</i> sp.1	6	
		Nematoda		
		Nematoda sp.1	12	0.07

Table 3.12 (Contd...): Summer 2001 Cruise

Leg No	St. No.	Taxa	No. of Individual	Dominance (%)
I	59	Foraminifera		
		<i>Ammonia beccari</i> (Linne)	2551	94.47
		<i>Quniqueloculina dimidiata</i> Terquem	1982	
		<i>Quniqueloculina seminulum</i> (Linne)	1230	
		<i>Spiroloculina excavata</i> d"Orbigny	1115	
		<i>Spiroloculina depressa</i> d"Orbigny	1003	
		<i>Triloculina</i> sp.	922	
		<i>Discorbis nitida</i> (Williamson, 1858)	215	
		<i>Nonion</i> sp.	51	
		<i>Elphidium articulatum</i> (d"Orbigny)	46	
		<i>Elphidium excavatum</i> Terquem	37	
		<i>Elphidium crispum</i> (Linne)	20	
		<i>Elphidium</i> sp.2	19	
		<i>Lagena sulcata</i> (Walker & Jacob)	15	
		<i>Trochamina inflata</i> (Montagu)	12	
		<i>Bolimina marginata</i> d"Orbigny	10	
		<i>Bolivina</i> sp.2	10	
		<i>Textularia earlandi</i> parker	8	
		<i>Adelosina ferrusaceii</i> (d`Orbigny, 1826)	7	
		<i>Triloculinellus</i> sp.	1	
		Ostracoda		
		Unkown ostracoda sp.8	248	4.77
		<i>Cytherella</i> sp.2	124	
		<i>Loxoconcha</i> sp.1	84	
		<i>Hemicytheridea</i> sp.	10	
		Gastropoda		
		<i>Diala</i> sp.1	22	0.33
		Unkown gastropoda sp.5	10	
		Bivalvia		
		<i>Carditopsis majeeda</i> (Biggs, 1973)	15	0.23
		<i>Lucina</i> sp.	8	
		Plychaeta		
		<i>Nerillidae</i> sp.	4	0.04
		Nematoda		
		Nematoda sp.1	17	0.17

Table 3.12 (Contd...): Summer 2001 Cruise

Leg No	St. No.	Taxa	No. of Individual	Dominance (%)
I	63	Foraminifera		
		<i>Ammonia beccari</i> (Linne)	6421	71.34
		<i>Quniqueloculina seminulum</i> (Linne)	2018	
		<i>Quniqueloculina dimidiata</i> Terquem	1490	
		<i>Quniqueloculina costata</i> d"Orbigny	1012	
		<i>Quniqueloculina</i> sp.1	974	
		<i>Spiroloculina excavata</i> d"Orbigny	816	
		<i>Spiroloculina depressa</i> d"Orbigny	413	
		<i>Triloculina</i> sp.	401	
		<i>Triloculina sidebottomi</i> (Martinotti)	238	
		<i>Adplosina</i> sp.4	115	
		<i>Discorbis nitida</i> (Williamson, 1858)	96	
		<i>Elphidium excavatum</i> (Terquem, 1875)	68	
		<i>Elphidium</i> sp.1	54	
		<i>Lagena sulcata</i> (Walker & Jacob)	12	
		<i>Lagena semistriata</i> Williamson	8	
		<i>Bolimina marginata</i> d"Orbigny	7	
		<i>Trochamina inflata</i> (Montagu)	7	
		<i>Bolivina</i> sp.1	6	
		<i>Textularia</i> sp.3	4	
		Ostracoda		
		<i>Propontocypris</i> sp.1	2825	27.81
		<i>Krithe</i> sp.	1026	
		<i>Propontocypris</i> sp.3	904	
		<i>Hemicytheridea</i> sp.	621	
		<i>Cytherella</i> sp.2	116	
		<i>Loxoconcha amygdalanux</i>	16	
		<i>Propontocypris</i> sp.2	11	
		Gastropoda		
		<i>Tornatina persinana</i> Smith, 1872	34	0.58
		<i>Caecum californicum</i> Dall, 1885	22	
		Unkown gastropoda sp.10	18	
		<i>Acme</i> sp.	15	
		<i>Epitonium</i> sp.1	14	
		<i>Diala semistriata</i> (Philippi, 1849)	12	
		Bivalvia		
		<i>Carditopsis majeeda</i> (Biggs, 1973)	38	0.19
		Nematoda		
		Nematoda sp.4	16	0.08

Table 3.12 (Contd...): Summer 2001 Cruise

Leg No	St. No.	Taxa	No. of Individual	Dominance (%)
I	55	Foraminifera		
		<i>Ammonia beccari</i> (Linne)	514	69.69
		<i>Protelphidium anglicum</i> Murray, 1965b	218	
		<i>Quniqueloculina seminulum</i> (Linne)	155	
		<i>Quniqueloculina dimidiata</i> Terquem	132	
		<i>Quniqueloculina costata</i> d"Orbigny	115	
		<i>Quniqueloculina</i> sp.7	108	
		<i>Spiroloculina excavata</i> d"Orbigny	75	
		<i>Triloculina sidebottomi</i> (Martinotti)	32	
		<i>Triloculina</i> sp.	28	
		<i>Discorbis nitida</i> (Williamson, 1858)	25	
		<i>Elphidium excavatum</i> (Terquem, 1875)	20	
		<i>Spiroloculina</i> sp.5	19	
		<i>Bolimina marginata</i> d"Orbigny	15	
		<i>Trochamina inflata</i> (Montagu)	15	
		Unknown foraminiferasp.7	12	
		<i>Nonion</i> sp.	10	
		<i>Bolivina multicostata</i>	7	
		<i>Lagena semistriata</i> Williamson	6	
		Ostracoda		
		<i>Alocopocythere reticulata</i> (Hartman, 1964)	229	24.02
		<i>Aglaocypris</i> sp.	114	
		<i>Loxoconcha</i> sp.2	62	
		<i>Hemicytheridea</i> sp.	58	
		<i>Cytherella</i> sp.1	44	
		<i>Cytherella</i> sp.2	12	
		Gastropoda		
		<i>Epitonium</i> sp.2	32	4.49
		<i>Ringicula propinquans</i> Hinds, 1844	20	
		<i>Caecum californicum</i> Dall, 1885	28	
<i>Turbonilla linjaica</i> Melvill & Standen, 1901	10			
<i>Tornatina persiana</i> Smith, 1872	7			
Bivalvia				
<i>Carditopsis majeeda</i> (Biggs, 1973)	12	0.56		
Nematoda				
Nematoda sp.1	20	0.93		
Copepoda				
<i>Microsetella</i> sp.	7	0.32		

Table 3.12 (Contd...): Summer 2001 Cruise

Leg No	St. No.	Taxa	No. of Individual	Dominance (%)
I	43	Foraminifera		
		<i>Ammonia beccari</i> (Linne)	4880	81.83
		<i>Quniqueloculina dimidiata</i> Terquem	2160	
		<i>Quniqueloculina seminulum</i> (Linne)	2026	
		<i>Quniqueloculina costata</i> d"Orbigny	1038	
		<i>Quniqueloculina poeyana</i> d"Orbigny	842	
		<i>Quniqueloculina</i> sp.1	615	
		<i>Triloculina</i> sp.	487	
		<i>Spiroloculina depressa</i> d"Orbigny	314	
		<i>Quniqueloculina</i> sp.3	289	
		<i>Elphidium excavatum</i> (Terquem, 1875)	146	
		<i>Elphidium articulatum</i> (d"Orbigny, 1839)	112	
		<i>Lagena sulcata</i> (Walker & Jacob)	12	
		<i>Lagena semistriata</i> Williamson	8	
		<i>Lagena perlucida</i> (Montagu, 1803)	6	
		<i>Cyclogyra involvens</i> Reuss	4	
		<i>Trochamina inflata</i> (Montagu)	2	
		<i>Bolimina marginata</i> d"Orbigny	2	
		<i>Textularia</i> sp.4	1	
		<i>Bolivina aff. Variabilis</i> Williamson,1985	1	
		Ostracoda		
		<i>Hemicytheridea</i> sp.	1283	17.53
		<i>Cytherella</i> sp.2	1125	
		<i>Loxoconcha</i> sp.1	103	
		<i>Aglaioocypris</i> sp.	98	
		<i>Loxoconcha amygdalanux</i>	76	
		Unknown ostracoda sp.9	64	
		Unknown ostracoda sp.10	25	
		Gastropoda		
		<i>Caecum californicum</i> Dall, 1885	35	0.49
		<i>Diala</i> sp.1	18	
		<i>Tornatina persiana</i> Smith, 1872	12	
		Unknown gastropoda sp.11	8	
		Unknown gastropoda sp.12	5	
		Bivalvia		
		<i>Lucina</i> sp.	16	0.15
		<i>Tellina</i> sp.2	7	

Table 3.12 (Contd...): Summer 2001 Cruise

Leg No	St. No.	Taxa	No. of Individual	Dominance (%)	
I	47	Foraminifera			
		<i>Ammonia beccari</i> (Linne)	4730	88.18	
		<i>Protelphidium anglicum</i> Murray, 1965b	1839		
		<i>Quniqueloculina dimidiata</i> Terquem	1181		
		<i>Quniqueloculina seminulum</i> (Linne)	1007		
		<i>Quniqueloculina costata</i> d"Orbigny	1001		
		<i>Spiroloculina excavata</i> d"Orbigny	895		
		<i>Quniqueloculina</i> sp.3	712		
		<i>Elphidium articulatum</i> (d"Orbigny, 1839)	548		
		<i>Triloculina</i> sp.	320		
		<i>Spiroloculina depressa</i> d"Orbigny	118		
		<i>Bolimina marginata</i> d"Orbigny	73		
		<i>Bolivina</i> sp.1	28		
		<i>Textularia</i> sp.2	21		
		<i>Textulariopsis indistincta</i> (Akimets)	17		
		<i>Brizalina spatulata</i> (Cushman)	14		
		<i>Lagena</i> sp.1	10		
		<i>Lagena perlucida</i> (Montagu, 1803)	8		
		<i>Spiroloculina</i> sp.7	6		
		<i>Adelosina laevigata</i> d'Orbigny, 1826	3		
		Ostracoda			10.93
		<i>Puricythereis</i> sp.1	823		
		<i>Aglaioocypris</i> sp.	314		
		<i>Hemicytheridea</i> sp.	291		
		<i>Loxoconcha amygdalanux</i>	125		
		Gastropoda			0.89
		<i>Caecum californicum</i> Dall, 1885	68		
		<i>Stosicia</i> sp.	35		
		Unkown gastropoda sp.13	24		

Table 3.12 (Contd...): Summer 2001 Cruise

Leg No	St. No.	Taxa	No. of Individual	Dominance (%)	
I	36	Foraminifera			
		<i>Quniqueoloculina seminulum</i> (Linne)	5250	85.80	
		<i>Ammonia beccari</i> (Linne)	2930		
		<i>Quniqueoloculina</i> sp.1	2124		
		<i>Protelphidium anglicum</i> Murray, 1965b	1230		
		<i>Quniqueoloculina poeyana</i> d"Orbigny	1184		
		<i>Triloculina</i> sp.	1025		
		<i>Spiroloculina excavata</i> d"Orbigny	988		
		<i>Spiroloculina</i> sp.6	814		
		<i>Elphidium articulatum</i> (d"Orbigny, 1839)	500		
		<i>Elphidium excavatum</i> (Terquem, 1875)	402		
		<i>Lagena</i> sp.1	12		
		<i>Lagena perlucida</i> (Montagu, 1803)	8		
		<i>Lagena semistriata</i> Williamson	6		
		<i>Lagena sulcata</i> (Walker & Jacob)	2		
		<i>Cyclogyra involvens</i> Reuss	2		
		Ostracoda			13.23
		<i>Callistocythere</i> sp.	1261		
		<i>Cytherella</i> sp.1	823		
		<i>Loxoconcha</i> sp.1	241		
		<i>Aglaiocypris</i> sp.	129		
		<i>Puricythereis</i> sp.1	87		
		Gastropoda			0.45
		<i>Ringicula propinquans</i> Hinds, 1844	34		
		<i>Caecum californicum</i> Dall, 1885	28		
		<i>Diala</i> sp.1	25		
		Bivalvia			0.46
<i>Bassina calophylla</i> (Philippi. 1836)	67				
<i>Carditopsis majeeda</i> (Biggs, 1973)	21				
Nematoda			0.05		
Nematoda sp.2	10				

Table 3.12 (Contd...): Summer 2001 Cruise

Leg No	St. No.	Taxa	No. of Individual	Dominance (%)
I	39	Foraminifera		
		<i>Ammonia beccari</i> (Linne)	7680	97.89
		<i>Quniqueloculina seminulum</i> (Linne)	3264	
		<i>Protelphidium anglicum</i> Murray, 1965b	567	
		<i>Discorbis nitida</i> (Williamson, 1858)	384	
		<i>Quniqueloculina</i> sp.2	288	
		<i>Spiroloculina excavata</i> d"Orbigny	196	
		<i>Triloculina</i> sp.	96	
		<i>Elphidium excavatum</i> (Terquem, 1875)	48	
		<i>Lagena semistriata</i> Williamson	41	
		<i>Nonion</i> sp.	22	
		Ostracoda		
		<i>Loxoconcha</i> sp.1	99	1.55
		<i>Hemicytheridea</i> sp.	57	
		<i>Loxoconcha</i> sp.2	43	
		Gastropoda		
		<i>Ringicula propinquans</i> Hinds, 1844	25	0.56
		<i>Epitonium</i> sp.1	18	
		<i>Epitonium</i> sp.2	17	
<i>Diala semistriata</i> (Philippi, 1849)	12			

Table 3.12 (Contd...): Summer 2001 Cruise

Leg No	St. No.	Taxa	No. of Individual	Dominance (%)
I	40	Foraminifera		
		<i>Ammonia beccari</i> (Linne)	2723	83.81
		<i>Protelphidium anglicum</i> Murray, 1965b	1028	
		<i>Discorbis nitida</i> (Williamson, 1858)	415	
		<i>Quniqueloculina seminulum</i> (Linne)	297	
		<i>Spiroloculina excavata</i> d"Orbigny	215	
		<i>Quniqueloculina dimidiata</i> Terquem	173	
		<i>Quniqueloculina costata</i> d"Orbigny	155	
		<i>Quniqueloculina poeyana</i> d"Orbigny	129	
		<i>Quniqueloculina</i> sp.5	108	
		<i>Triloculina</i> sp.	94	
		<i>Spiroloculina</i> sp.8	76	
		<i>Elphidium excavatum</i> (Terquem, 1875)	32	
		<i>Elphidium articulatum</i> (d"Orbigny)	45	
		<i>Lagena sulcata</i> (Walker & Jacob)	21	
		<i>Lagena semistriata</i> Williamson	8	
		<i>Lagena calvata</i> (d"orbingny)	6	
		<i>Cribroelphidium gerthi</i> (Van voorthuysen,1957)	5	
		<i>Cyclogyra involovens</i> Reuss (Van voorthuysen,1953)	3	
		<i>Nonion</i> sp.	2	
		<i>Bolivina</i> sp.1	2	
		<i>Nodosaria</i> sp.2	1	
		Ostracoda		
		<i>Actinocythereis scutigera</i> (Brady,1868)	481	14.63
		<i>Puricythereis</i> sp.1	286	
		<i>Loxoconcha amygdalanux</i>	115	
		<i>Hemicytheride</i> sp.	38	
		<i>Cytherella</i> sp.1	24	
		<i>Cytherella</i> sp.2	16	
		<i>Aglaocypris</i> sp.	7	
		Gastropoda		
		<i>Caecum californicum</i> Dall, 1885	32	1.20
		<i>Diala</i> sp.1	25	
		<i>Tornatina persiana</i> Smith, 1872	14	
		<i>Turbonilla linjaca</i> Melvill & standen,1901	8	
		Bivalvia		
<i>Mactra</i> sp.	15	0.29		
<i>Tellina</i> sp.2	4			
Polychaeta larvae				
<i>Prionospio</i> sp.1	5	0.08		

Table 3.12 (Contd...): Summer 2001 Cruise

Leg No	St. No.	Taxa	No. of Individual	Dominance (%)
I	34	Foraminifera		
		<i>Ammonia beccari</i> (Linne)	2341	57.80
		<i>Quniqueloculina dimidiata</i> Terquem	1182	
		<i>Discorbis nitida</i> (Williamson, 1858)	824	
		<i>Quniqueloculina seminulum</i> (Linne)	439	
		<i>Quniqueloculina poeyana</i> d"Orbigny	338	
		<i>Quniqueloculina</i> sp.7	291	
		<i>Spiroloculina excavata</i> d"Orbigny	201	
		<i>Spiroloculina depressa</i> d"Orbigny	189	
		<i>Triloculina</i> sp.	178	
		<i>Quniqueloculina</i> sp.3	153	
		<i>Triloculina sidebottomi</i> (Martinotti)	108	
		<i>Elphidium excavatum</i> (Terquem, 1875)	97	
		<i>Elphidium articulatum</i> (d"Orbigny)	75	
		<i>Lagena sulcata</i> (Walker & Jacob)	15	
		<i>Lagena semistriata</i> Williamson	13	
		<i>Cyclogyra involvens</i> Reuss	12	
		<i>Trochamina inflata</i> (Montagu)	10	
		<i>Nonion</i> sp.	8	
		<i>Bolimina marginata</i> d"Orbigny	6	
		<i>Reophax textana</i> (cushman)	6	
		<i>Nodosaria pauciloculata</i> var. Luzonensis Cushman, 1921	5	
		Ostracoda		
		<i>Cytherella</i> sp.2	1936	41.56
		<i>Loxoconcha amygdalanux</i>	1250	
		<i>Aglaioocypris</i> sp.	729	
		<i>Loxoconcha</i> sp.1	248	
		<i>Triebelina</i> sp.	221	
		<i>Hemicytheridea</i> sp.	188	
		<i>Puricythereis</i> sp.1	96	
		Gastropoda		
		<i>Caecum californicum</i> Dall, 1885	23	0.57
		<i>Niso Venosa</i> Sowerby.1895	18	
		<i>Tornatina persiana</i> Smith, 1872	14	
		Unknown gastropoda sp.14	9	
		Bivalvia		
		<i>Lucina</i> sp.	5	0.07
		<i>Tellina</i> sp.2	3	

Table 3.12 (Contd...): Summer 2001 Cruise

Leg No	St. No.	Taxa	No. of Individual	Dominance (%)
II	30	Foraminifera		
		<i>Quniqueoloculina costata</i> d"Orbigny <i>Quniqueoloculina seminulum</i> (Linne) <i>Quniqueoloculina dimidiata</i> Terquem <i>Quniqueoloculina</i> sp.1 <i>Triloculina</i> sp. <i>Spiroloculina depressa</i> d"Orbigny <i>Triloculina sidebottomi</i> (Martinotti) <i>Sculptobaculites</i> sp. <i>Elphidium articulatum</i> (d"Orbigny) <i>Elphidium excavatum</i> (Terquem, 1875) <i>Lagena sulcata</i> (Walker & Jacob) <i>Lagena perlucida</i> (Montagu, 1803) <i>Trochamina inflata</i> (Montagu)	1893 728 412 335 221 218 193 165 133 109 9 8 3	91.96
		Ostracoda		
		<i>Aglaioocypris</i> sp. <i>Cytherelloidea</i> sp. <i>Cytherella</i> sp.1 <i>Loxoconcha</i> sp.2 <i>Actinocythereis scutigera</i> (Brady, 1868)	196 69 43 24 17	7.25
		Gastropoda		
		<i>Caecum californicum</i> Dall, 1885 <i>Diala</i> sp.2 <i>Tornatina persiana</i> Smith, 1872	19 12 7	0.79

Table 3.12 (Contd...): Summer 2001 Cruise

Leg No	St. No.	Taxa	No. of Individual	Dominance (%)
II	33	Foraminifera		
		Ammonia beccari (Linne)	3264	86.37
		Protelphidium anglicum Murray, 1965b	1673	
		Quniqueloculina seminulum (Linne)	1215	
		Quniqueloculina costata d"Orbigny	1027	
		Quniqueloculina dimidiata Terquem	946	
		Quniqueloculina sp.2	715	
		Quniqueloculina sp.5	562	
		Discorbis nitida (Williamson, 1858)	317	
		Spiroloculina excavata d"Orbigny	223	
		Spiroloculina depressa d"Orbigny	217	
		Triloculina sp.	175	
		Spirotexatularia.sp	155	
		Elphidium articulatum (d"Orbigny, 1839)	128	
		Elphidium excavatum (Terquem, 1875)	119	
		Lagena semistriata Williamson	10	
		Cyclogyra involovens Reuss	10	
		Trochamina inflata (Montagu)	6	
		Bolimina marginata d"Orbigny	4	
		Ostracoda		
		Actinocythereis scutigera (Brady, 1868)	726	12.90
		Callistocythere sp.	419	
		Loxoconcha sp.4	221	
		Hemicytheridea sp.	145	
		Aglaioocypris sp.	97	
		Gastropoda		
		Clypeomorus bifasciatus Persicus Hobrick,1985	28	0.51
		Unknown gastropodasp.15	16	
		Creceis acicula (Rang,1828)	10	
		Diala sp.1	7	
		Tornatina persiana Smith, 1872	3	
		Nematoda		
		Nematoda sp.3	17	0.22
		Nematoda sp.1	10	

Table 3.12 (Contd...): Summer 2001 Cruise

Leg No	St. No.	Taxa	No. of Individual	Dominance (%)
II	25	Foraminifera		
		<i>Ammonia beccari</i> (Linne)	3468	87.46
		<i>Quniqueloculina seminulum</i> (Linne)	1724	
		<i>Quniqueloculina costata</i> d"Orbigny	1215	
		<i>Quniqueloculina dimidiata</i> Terquem	1147	
		<i>Quniqueloculina poeyana</i> d"Orbigny	989	
		<i>Spiroloculina depressa</i> d"Orbigny	718	
		<i>Spiroloculina excavata</i> d"Orbigny	543	
		<i>Brizalina</i> sp.	226	
		<i>Triloculina</i> sp.	189	
		<i>Triloculina sidebottomi</i> (Martinotti)	157	
		<i>Elphidium excavatum</i> (Terquem, 1875)	126	
		<i>Elphidium articulatum</i> (d"Orbigny)	113	
		<i>Lagena perlucida</i> (Montagu, 1803)	12	
		<i>Lagena clavata</i> d" Orbigny, (1846) var. setigera Millett. 1901	8	
		<i>Lagena</i> sp.8	6	
		<i>Trochamina inflata</i> (Montagu)	4	
		<i>Cyclogyra involvens</i> Reuss	2	
		Ostracoda		
		<i>Puricythereis</i> sp.1	916	11.89
		<i>Callistocythere</i> sp.	214	
		<i>Hemicytheridea</i> sp.	128	
		<i>Loxoconcha</i> sp.1	93	
		<i>Cytherella</i> sp.1	81	
		<i>Alocopocythere reticulata</i> (Hartman, 1964)	15	
		Gastropoda and Scaphopoda		
		<i>Diala</i> sp.1	18	0.44
		<i>Caecum californicum</i> Dall, 1885	15	
		<i>Turbonilla linjaica</i> Melvill & Standen, 1901	10	
		<i>Tornatina persiana</i> Smith, 1872	7	
		<i>Dentalium octangulatum</i> Donovan, 1803	3	
		Nematoda		
		Nematoda sp.1	15	0.22
		Nematoda sp.3	12	

Table 3.12 (Contd...): Summer 2001 Cruise

Leg No	St. No.	Taxa	No. of Individual	Dominance (%)
II	26	Foraminifera		
		<i>Quniqueoloculina seminulum</i> (Linne)	1895	94.87
		<i>Quniqueoloculina dimidiata</i> Terquem	1314	
		<i>Quniqueoloculina costata</i> d"Orbigny	1150	
		<i>Quniqueoloculina</i> sp.1	821	
		<i>Ammonia beccari</i> (Linne)	596	
		<i>Protelphidium anglicum</i> Murray, 1965b	312	
		<i>Discorbis nitida</i> (Williamson, 1858)	198	
		<i>Quniqueoloculina poeyana</i> d"Orbigny	115	
		<i>Spiroloculina excavata</i> d"Orbigny	108	
		<i>Spiroloculina depressa</i> d"Orbigny	94	
		<i>Triloculina sidebottomi</i> (Martinotti)	81	
		<i>Triloculina</i> sp.	77	
		<i>Elphidium excavatum</i> (Terquem, 1875)	62	
		<i>Elphidium articulatum</i> (d"Orbigny)	52	
		<i>Lagena sulcata</i> (Walker & Jacob)	12	
		<i>Lagena semistriata</i> Williamson	10	
		<i>Cyclogyra involvens</i> Reuss	8	
		<i>Trochamina inflata</i> (Montagu)	7	
		<i>Nonion</i> sp.	6	
		<i>Bolimina marginata</i> d"Orbigny	2	
		Ostracoda		
		<i>Loxoconcha</i> sp.1	89	3.95
		<i>Loxoconcha amygdalanux</i>	74	
		<i>Aglaiocypris</i> sp.	55	
		<i>Loxoconcha</i> sp.2	31	
		<i>Cytherella</i> sp.2	22	
		<i>Hemicytheridea</i> sp.	17	
		Gastropoda		
		<i>Diala</i> sp.2	25	0.67
		<i>Caecum californicum</i> Dall, 1885	16	
		<i>Tornatina persiana</i> Smith, 1872	8	
		Nematoda		
		Nematoda sp.3	26	0.51
		Nematoda sp.2	11	

Table 3.12 (Contd...): Summer 2001 Cruise

Leg No	St. No.	Taxa	No. of Individual	Dominance (%)
II	27	Foraminifera		
		<i>Ammonia beccari</i> (Linne)	2230	85.55
		<i>Protelphidium anglicum</i> Murray, 1965b	1821	
		<i>Quniqueloculina costata</i> d"Orbigny	1482	
		<i>Quniqueloculina seminulum</i> (Linne)	1203	
		<i>Quniqueloculina dimidiata</i> Terquem	822	
		<i>Discorbis nitida</i> (Williamson, 1858)	215	
		<i>Quniqueloculina</i> sp.2	151	
		<i>Triloculina</i> sp.	148	
		<i>Spiroloculina depressa</i> d"Orbigny	116	
		<i>Bolivina testiformis</i> Cushman	109	
		<i>Elphidium articulatum</i> (d"Orbigny)	93	
		<i>Elphidium excavatum</i> (Terquem, 1875)	55	
		<i>Cyclogyra involvens</i> Reuss	15	
		<i>Trochamina inflata</i> (Montagu)	12	
		<i>Bolimina marginata</i> d"Orbigny	8	
		<i>Lagena perlucida</i> (Montagu, 1803)	6	
		<i>Lagena</i> sp.2	3	
		<i>Textularia</i> sp.2	2	
		<i>Bolivina</i> sp.5	2	
		Ostracoda		
		<i>Cytherella</i> sp.1	625	13.78
		<i>Actinocythereis scutigera</i> (Brady, 1868)	319	
		<i>Loxoconcha</i> sp.2	182	
		<i>Loxoconcha amygdalanux</i>	103	
		<i>Puricythereis</i> sp.1	89	
		<i>Hemicytheridea</i> sp.	35	
		<i>Aglaiocypris</i> sp.	15	
		Gastropoda		
		<i>Diala</i> sp.1	18	0.40
<i>Diala</i> sp.2	15			
<i>Caecum californicum</i> Dall, 1885	7			
Bivalvia				
<i>Tellina</i> sp.1	16	0.16		
Polychaeta larvae				
<i>Glycera</i> sp.	2	0.02		
Nematoda				
Nematoda sp.5	8	0.08		

Table 3.12 (Contd...): Summer 2001 Cruise

Leg No	St. No.	Taxa	No. of Individual	Dominance (%)
II	24	Foraminifera		
		<i>Spiroloculina excavata</i> d"Orbigny	825	92.09
		<i>Quniqueoloculina seminulum</i> (Linne)	641	
		<i>Ammonia beccari</i> (Linne)	513	
		<i>Protelphidium anglicum</i> Murray, 1965b	401	
		<i>Discorbis nitida</i> (Williamson, 1858)	218	
		<i>Quniqueoloculina costata</i> d"Orbigny	172	
		<i>Quniqueoloculina dimidiata</i> Terquem	115	
		<i>Quniqueoloculina</i> sp.1	88	
		<i>Elphidium excavatum</i> (Terquem, 1875)	57	
		<i>Bolimina marginata</i> d"Orbigny	43	
		<i>Peneroplis planatus</i> (Fichtel & Moll, 1798)	31	
		<i>Peneroplis arietinus</i> (Batsch)	28	
		<i>Cyclogyra involvens</i> Reuss	19	
		<i>Lagena sulcata</i> (Walker & Jacob)	8	
		<i>Nonion</i> sp.	5	
		<i>Lagena clavata</i> d" Orbigny, (1846) var. setigera Millett. 1901	3	
		Ostracoda		
		<i>Cytherella</i> sp.1	96	5.93
		<i>Puricythereis</i> sp.2	62	
		<i>Hemicytheridea</i> sp.	24	
		<i>Loxoconcha</i> sp.2	14	
		<i>Loxoconcha amygdalanux</i>	8	
		Gastropoda		
		<i>Caecum californicum</i> Dall, 1885	21	1.22
		<i>Diala</i> sp.2	15	
		<i>Diala</i> sp.1	6	
Bivalvia				
<i>Tellina</i> sp.1	14	0.49		
<i>Lucina</i> sp.	3			
Copepoda				
<i>Euterpina</i> sp.	6	0.26		
<i>Microsetella</i> sp.	3			

Table 3.12 (Contd...): Summer 2001 Cruise

Leg No	St. No.	Taxa	No. of Individual	Dominance (%)
II	19	Foraminifera		
		Ammonia beccari (Linne)	2150	82.84
		Quniqueloculina dimidiata Terquem	1624	
		Quniqueloculina seminulum (Linne)	1205	
		Quniqueloculina costata d"Orbigny	928	
		Quniqueloculina poeyana d"Orbigny	214	
		Protelphidium anglicum Murray, 1965b	201	
		Dendritina arbuscula d"Orbigny, 1826	176	
		Spiroloculina excavata d"Orbigny	165	
		Triloculina sp.	144	
		Triloculina sidebottomi (Martinotti)	129	
		Spiroloculina depressa d"Orbigny	116	
		Elphidium excavatum (Terquem, 1875)	83	
		Elphidium articulatum (d"Orbigny)	67	
		Lagena sulcata (Walker & Jacob)	14	
		Lagena perlucida (Montagu, 1803)	10	
		Trochamina inflata (Montagu)	8	
		Bolimina marginata d"Orbigny	6	
		Georhianinasp.	5	
		Discorbis nitida (Williamson, 1858)	3	
		Nodophthalmidium sp.	2	
		Ostracoda		
		Loxoconcha sp.1	643	16.35
		Puricythereis sp.2	318	
		Hemicytheridea sp.	208	
		Aglaiocypris sp.	154	
		Loxoconcha amygdalanux	83	
		Cytherella sp.2	25	
		Gastropoda		
		Diala sp.1	21	0.53
		Caecum californicumDall, 1885	18	
		Tornatina persiana Smith, 1872	7	
		Bivalvia		
		Tellina sp.2	15	0.17
		Nematoda		
		Nematoda sp.1	10	0.11

Table 3.12 (Contd...): Summer 2001 Cruise

Leg No	St. No.	Taxa	No. of Individual	Dominance (%)
II	17	Foraminifera		
		<i>Ammonia beccari</i> (Linne)	2018	92.99
		<i>Quniqueloculina dimidiata</i> Terquem	1816	
		<i>Quniqueloculina seminulum</i> (Linne)	1215	
		<i>Quniqueloculina costata</i> d"Orbigny	1103	
		<i>Quniqueloculina</i> sp.1	1009	
		<i>Protelphidium anglicum</i> Murray, 1965b	816	
		<i>Discorbis nitida</i> (Williamson, 1858)	610	
		<i>Triloculina</i> sp.	425	
		<i>Triloculina sidebottomi</i> (Martinotti)	317	
		<i>Spiroloculina depressa</i> d"Orbigny	105	
		<i>Spiroloculina excavata</i> d"Orbigny	96	
		<i>Elphidium</i> sp.3	55	
		<i>Elphidium excavatum</i> (Terquem, 1875)	34	
		<i>Elphidium crispm</i> (Linne)	22	
		<i>Lagena semistriata</i> Williamson	18	
		<i>Trochamina inflata</i> (Montagu)	15	
		<i>Cyclogyra involvens</i> Reuss	10	
		<i>Nonion</i> sp.	8	
		<i>Bolimina marginata</i> d"Orbigny	5	
		<i>Bolivina</i> sp.6	2	
		<i>Nodosaria</i> sp.1	2	
		<i>Textularia</i> sp.3	1	
		Ostracoda		
		<i>Puricythereis</i> sp.1	316	6.44
		<i>Cytherella</i> sp.1	218	
		<i>Aglaiocypris</i> sp.	83	
		<i>Hemicytheridea</i> sp.	25	
		<i>Loxoconcha</i> sp.1	17	
		<i>Loxoconcha</i> sp.2	8	
		<i>Alocopocythere reticulata</i> (Hartman, 1964)	5	
		Gastropoda		
		<i>Caecum californicum</i> Dall, 1885	16	0.31
		<i>Turbonilla linjaica</i> Melvill & Standen, 1901	8	
		<i>Diala</i> sp.2	5	
		<i>Pupa affinis</i> (A.Adams, 1854)	3	
		Nematoda		
		Nematoda sp.4	15	0.26
		Nematoda sp.2	12	

Table 3.12 (Contd...): Summer 2001 Cruise

Leg No	St. No.	Taxa	No. of Individual	Dominance (%)
II	20	Foraminifera		
		<i>Ammonia beccari</i> (Linne)	2251	92.58
		<i>Protelphidium anglicum</i> Murray, 1965b	1318	
		<i>Quniqueloculina dimidiata</i> Terquem	1107	
		<i>Triloculina sidebottomi</i> (Martinotti)	915	
		<i>Spiroloculina excavata</i> d"Orbigny	412	
		<i>Triloculina</i> sp.	210	
		<i>Quniqueloculina seminulum</i> (Linne)	188	
		<i>Quniqueloculina</i> sp.3	171	
		<i>Spiroloculina depressa</i> d"Orbigny	155	
		<i>Discorbis nitida</i> (Williamson, 1858)	107	
		<i>Elphidium articulatum</i> (d"Orbigny)	83	
		<i>Bolimina marginata</i> d"Orbigny	35	
		<i>Trochamina inflata</i> (Montagu)	17	
		<i>Nonion</i> sp.	15	
		<i>Nodosaria</i> sp.3	15	
		<i>Cyclogyra involvens</i> Reuss	10	
		<i>Lagena sulcata</i> (Walker & Jacob)	6	
		<i>Lagena perlucida</i> (Montagu, 1803)	5	
		<i>Lagena clavata</i> d" Orbigny, (1846) var. setigera Millett. 1901	3	
		<i>Bojarkaella firma</i> V.A.Basov, 1968	2	
		Ostracoda		
		<i>Propontocypris</i> sp.2	227	6.66
		<i>Cytherella</i> sp.2	116	
		<i>Bythoceratina</i> sp.	69	
		<i>Hemicytheridea</i> sp.	54	
		<i>Aglaioocypris</i> sp.	25	
		<i>Loxoconcha</i> sp.2	14	
		Gastropoda		
		<i>Diala semistriata</i> (Philippi,1849)	23	0.55
		<i>Tornatina persiana</i> Smith, 1872	15	
		<i>Epitonium</i> sp.1	4	
		Bivalvia		
		<i>Tellina</i> sp.2	12	0.16
		Polychaeta larvae		
		<i>Nephtys</i> sp.2	3	0.05
		<i>Glycera</i> sp.	1	

Table 3.12 (Contd...): Summer 2001 Cruise

Leg No	St. No.	Taxa	No. of Individual	Dominance (%)
II	15	Foraminifera		
		<i>Ammonia beccari</i> (Linne)	1945	95.12
		<i>Quniqueloculina dimidiata</i> Terquem	1614	
		<i>Quniqueloculina seminulum</i> (Linne)	1239	
		<i>Protelphidium anglicum</i> Murray, 1965b	1191	
		<i>Quniqueloculina</i> sp.2	1006	
		<i>Discorbis nitida</i> (Williamson, 1858)	915	
		<i>Quniqueloculina</i> sp.3	718	
		<i>Spiroloculina excavata</i> d"Orbigny	662	
		<i>Triloculina sidebottomi</i> (Martinotti)	519	
		<i>Spiroloculina depressa</i> d"Orbigny	411	
		<i>Triloculina</i> sp.	217	
		<i>Elphidium excavatum</i> (Terquem, 1875)	194	
		<i>Elphidium articulatum</i> (d"Orbigny)	157	
		<i>Bolimina marginata</i> d"Orbigny	54	
		<i>Nonion</i> sp.	28	
		<i>Cyclogyra involvens</i> Reuss	17	
		<i>Nodosaria</i> sp.3	8	
		<i>Textularia</i> sp.3	6	
		<i>Lagena perlucida</i> (Montagu, 1803)	3	
		<i>Lagena semistriata</i> Williamson	2	
		Ostracoda		
		<i>Puricythereis</i> sp.3	146	4.27
		<i>Loxoconcha</i> sp.1	107	
		<i>Cytherella</i> sp.2	98	
		<i>Puricythereis exquisita</i> (Bate & Sheppard, 1980)	93	
		<i>Hemicytheridea</i> sp.	46	
		Bivalvia		
		<i>Lucina</i> sp.	24	0.34
		<i>Macra</i> sp.	15	
		Nematoda		
		Nematoda sp.1	19	0.23
		Nematoda sp.5	7	
		Copepoda		
		<i>Microsetella</i> sp.	4	0.03

Table 3.12 (Contd...): Summer 2001 Cruise

Leg No	St. No.	Taxa	No. of Individual	Dominance (%)
II	22	Foraminifera		
		<i>Quniqueloculina dimidiata</i> Terquem	944	87.62
		<i>Quniqueloculina seminulum</i> (Linne)	719	
		<i>Quniqueloculina costata</i> d"Orbigny	641	
		<i>Ammonia beccari</i> (Linne)	620	
		<i>Discorbis nitida</i> (Williamson, 1858)	245	
		<i>Protelphidium anglicum</i> Murray, 1965b	193	
		<i>Quniqueloculina</i> sp.2	148	
		<i>Spiroloculina depressa</i> d"Orbigny	122	
		<i>Triloculina</i> sp.	119	
		<i>Triloculina sidebottomi</i> (Martinotti)	96	
		<i>Bolivina</i> sp.4	71	
		<i>Bolimina marginata</i> d"Orbigny	43	
		<i>Trochamina inflata</i> (Montagu)	39	
		<i>Cyclogyra involvens</i> Reuss	15	
		<i>Nonion</i> sp.	12	
		<i>Bolivina spissa</i> Cushman	10	
		<i>Lagena sulcata</i> (Walker & Jacob)	7	
		<i>Lagena semistriata</i> Williamson	4	
		Ostracoda		
		<i>Hemicytheridea</i> sp.	249	10.80
		<i>Loxoconcha</i> sp.2	115	
		<i>Aglaiocypris</i> sp.	81	
		<i>Cytherella</i> sp.2	27	
		<i>Puricythereis</i> sp.1	19	
		<i>Puricythereis</i> sp.3	8	
		Gastropoda		
<i>Diala</i> sp.1	23	1.00		
<i>Turbonilla linjaica</i> Melvill & Standen, 1901	15			
<i>Caecum californicum</i> Dall, 1885	8			
Bivalvia				
<i>Carditopsis majeeda</i> (Biggs, 1973)	6	0.13		
Nematoda				
Nematoda sp.3	13	0.45		
Nematoda sp.1	8			

Table 3.12 (Contd...): Summer 2001 Cruise

Leg No	St. No.	Taxa	No. of Individual	Dominance (%)
II	23	Foraminifera		
		<i>Ammonia beccari</i> (Linne)	1328	74.21
		<i>Protelphidium anglicum</i> Murray, 1965b	812	
		<i>Quniqueloculina seminulum</i> (Linne)	329	
		<i>Quniqueloculina dimidiata</i> Terquem	253	
		<i>Discorbis nitida</i> (Williamson, 1858)	116	
		<i>Spiroloculina excavata</i> d"Orbigny	97	
		<i>Spiroloculina depressa</i> d"Orbigny	93	
		<i>Triloculina</i> sp.	71	
		<i>Triloculina sidebottomi</i> (Martinotti)	64	
		<i>Elphidium excavatum</i> (Terquem, 1875)	35	
		<i>Lagen a semistriata</i> Williamson	29	
		<i>Lagen a perlucida</i> (Montagu, 1803)	17	
		<i>Cyclogyra involvens</i> Reuss	15	
		<i>Trochamina inflata</i> (Montagu)	11	
		<i>Bolivina</i> sp.1	8	
		<i>Bolimina marginata</i> d"Orbigny	5	
		Ostracoda		
		<i>Cytherella</i> sp.1	722	25.79
		<i>Loxoconcha amygdalanux</i>	283	
		<i>Puricythereis</i> sp.1	58	
		<i>Alocopocythere reticulata</i> (Hartman, 1964)	39	
		<i>Aglaiocypris</i> sp.	21	
		<i>Triebelina</i> sp.	10	
		<i>Loxoconcha</i> sp.1	8	

Table 3.12 (Contd...): Summer 2001 Cruise

Leg No	St. No.	Taxa	No. of Individual	Dominance (%)	
II	8	Foraminifera			
		<i>Ammonia beccari</i> (Linne)	1982	93.53	
		<i>Quniqueloculina dimidiata</i> Terquem	1315		
		<i>Quniqueloculina seminulum</i> (Linne)	1120		
		<i>Quniqueloculina costata</i> d"Orbigny	1012		
		<i>Quniqueloculina</i> sp.2	823		
		<i>Discorbis nitida</i> (Williamson, 1858)	317		
		<i>Protelphidium anglicum</i> Murray, 1965b	226		
		<i>Spiroloculina depressa</i> d"Orbigny	164		
		<i>Spiroloculina excavata</i> d"Orbigny	129		
		<i>Triloculina sidebottomi</i> (Martinotti)	108		
		<i>Elphidium excavatum</i> (Terquem, 1875)	96		
		<i>Triloculina</i> sp.	81		
		<i>Triloculinellus</i> sp.	67		
		<i>Elphidium articulatum</i> (d"Orbigny)	54		
		<i>Trochamina inflata</i> (Montagu)	23		
		<i>Gallitellia vivians</i> (Cushman, 1934)	18		
		<i>Bolimina marginata</i> d"Orbigny	12		
		<i>Lagena semistriata</i> Williamson	8		
		<i>Lagena sulcata</i> (Walker & Jacob)	5		
		<i>Cyclogyra involvens</i> Reuss	3		
		<i>Nonion</i> sp.	2		
		Ostracoda			5.44
		<i>Hemicytheridea</i> sp.	216		
		<i>Aglaiocypris</i> sp.	129		
		<i>Loxoconcha</i> sp.2	64		
		<i>Loxoconcha</i> sp.1	31		
		Gastropoda and Scaphopoda			0.78
		<i>Heliacus variegatus</i> (Gmelin, 1791)	21		
		<i>Dentalium octangulatum</i> Donovan,1803	16		
		<i>Natica</i> sp.	12		
		<i>Tornatina persiana</i> Smith, 1872	8		
		<i>Diala</i> sp.1	6		
		Copepoda			0.25
		<i>Microsetella</i> sp.	12		
		<i>Euterpina</i> sp.	8		

Table 3.12 (Contd...): Summer 2001 Cruise

Leg No	St. No.	Taxa	No. of Individual	Dominance (%)	
II	11	Foraminifera			
		Ammonia beccari (Linne)	2016	94.09	
		Quniqueloculina costata d"Orbigny	1822		
		Quniqueloculina sp.1	1304		
		Quniqueloculina dimidiata Terquem	819		
		Quniqueloculina seminulum (Linne)	554		
		Protelphidium anglicum Murray, 1965b	287		
		Spiroloculina depressa d"Orbigny	245		
		Spiroloculina excavata d"Orbigny	206		
		Triloculina sidebottomi (Martinotti)	116		
		Triloculina sp.	108		
		Textularia conica d"Orbigny	94		
		Elphidium excavatum (Terquem, 1875)	69		
		Elphidium articulatum (d"Orbigny)	53		
		Cyclogyra involvens Reuss	19		
		Bolimina marginata d"Orbigny	16		
		Trochamina inflata (Montagu)	15		
		Nonion sp.	10		
		Lagena perlucida (Montagu, 1803)	8		
		Lagena semistriata Williamson	5		
		Lagena clavata d" Orbigny, (1846) var. setigera Millett. 1901	3		
		Ostracoda			5.12
		Loxoconcha sp.2	196		
		Puricythereis sp.1	88		
		Cytherella sp.1	61		
		Hemicytheridea sp.	52		
		Aglaioocypris sp.	26		
		Gastropoda			0.34
		Diala sp.1	18		
		Caecum californicumDall, 1885	10		
		Bivalvia			0.21
		Tellina sp.1	12		
		Mactra sp.	5		
		Nematoda			0.24
		Nematoda sp.5	11		
		Nematoda sp.6	9		

Table 3.12 (Contd...): Summer 2001 Cruise

Leg No	St. No.	Taxa	No. of Individual	Dominance (%)
II	14	Foraminifera		
		<i>Quniqueloculina</i> sp.2	1810	92.65
		<i>Quniqueloculina dimidiata</i> Terquem	1331	
		<i>Quniqueloculina seminulum</i> (Linne)	1028	
		<i>Quniqueloculina costata</i> d"Orbigny	1001	
		<i>Spiroloculina excavata</i> d"Orbigny	915	
		<i>Spiroloculina depressa</i> d"Orbigny	710	
		<i>Triloculina</i> sp.	216	
		<i>Triloculinellus</i> sp.	210	
		<i>Triloculina sidebottomi</i> (Martinotti)	191	
		<i>Ammonia beccari</i> (Linne)	183	
		<i>Protelphidium anglicum</i> Murray, 1965b	155	
		<i>Elphidium excavatum</i> (Terquem, 1875)	142	
		<i>Elphidium articulatum</i> (d"Orbigny)	133	
		<i>Trochamina inflata</i> (Montagu)	27	
		<i>Nonion</i> sp.	25	
		<i>Bolimina marginata</i> d"Orbigny	21	
		<i>Lagena semistriata</i> Williamson	11	
		<i>Lagena sulcata</i> (Walker & Jacob)	8	
		<i>Lagena clavata</i> d" Orbigny, (1846) var. setigera Millett. 1901	3	
		Ostracoda		
		Unkown ostracoda sp.11	229	6.65
		<i>Propontocypris</i> sp.3	117	
		<i>Loxoconcha</i> sp.4	94	
		<i>Cytherella</i> sp.1	76	
		<i>Hemicytheridea</i> sp.	55	
		<i>Loxoconcha</i> sp.1	12	
		Gastropoda and Scaphopoda		
		<i>Dentalium octangulatum</i> Donovan,1803	27	0.49
		<i>Caecum californicum</i> Dall, 1885	11	
		<i>Diala</i> sp.2	5	
		Bivalvia		
		<i>Mactra</i> sp.	15	0.21
		<i>Tellina</i> sp.1	3	

Table 3.12 (Contd...): Summer 2001 Cruise

Leg No	St. No.	Taxa	No. of Individual	Dominance (%)	
II	1	Foraminifera			
		<i>Ammonia beccari</i> (Linne)	1231	91.54	
		<i>Quniqueloculina seminulum</i> (Linne)	1182		
		<i>Quniqueloculina</i> sp.5	1023		
		<i>Quniqueloculina dimidiata</i> Terquem	916		
		<i>Quniqueloculina costata</i> d"Orbigny	881		
		<i>Triloculina</i> sp.	615		
		<i>Spiroloculina depressa</i> d"Orbigny	418		
		<i>Spiroloculina excavata</i> d"Orbigny	229		
		<i>Triloculina sidebottomi</i> (Martinotti)	187		
		<i>Discorbis nitida</i> (Williamson, 1858)	98		
		<i>Protelphidium anglicum</i> Murray, 1965b	64		
		<i>Textularia</i> sp.5	39		
		<i>Elphidium excavatum</i> (Terquem, 1875)	32		
		<i>Elphidium articulatum</i> (d"Orbigny)	27		
		<i>Nonion</i> sp.	25		
		<i>Trochamina inflata</i> (Montagu)	21		
		<i>Nodophthalmidium antillarum</i> (Cushman, 1922)	17		
		<i>Bolivina vaughani</i> Natland,1938	12		
		<i>Bolivina</i> sp.6	8		
		<i>Nodosaria</i> sp.2	5		
		<i>Textularia</i> sp.3	3		
		<i>Lagena perlucida</i> (Montagu, 1803)	1		
		<i>Lagena sulcata</i> (Walker & Jacob)	1		
		Ostracoda			7.89
		<i>Hemicytheridea</i> sp.	294		
		<i>Loxoconcha</i> sp.1	183		
		<i>Cytherella</i> sp.2	72		
		<i>Propontocypris</i> sp.3	28		
		<i>Puricythereis exquisita</i> (Bate & Sheppard, 1980)	19		
		<i>Propontocypris</i> sp.1	10		
		Gastropoda			0.36
		<i>Caecum californicum</i> Dall, 1885	17		
		<i>Tornatina persiana</i> Smith, 1872	8		
		<i>Diala</i> sp.1	3		
		Polychaeta larvae			0.21
		<i>Phyllodocidae</i> sp.1	10		
		<i>Prionospio</i> sp.1	6		

Table 3.12 (Contd...): Summer 2001 Cruise

Leg No	St. No.	Taxa	No. of Individual	Dominance (%)
II	4	Foraminifera		
		<i>Quniqueloculina dimidiata</i> Terquem	1983	92.015
		<i>Quniqueloculina seminulum</i> (Linne)	1215	
		<i>Quniqueloculina</i> sp.2	1026	
		<i>Quniqueloculina costata</i> d"Orbigny	1001	
		<i>Triloculina</i> sp.	718	
		<i>Triloculina sidebottomi</i> (Martinotti)	612	
		<i>Spiroloculina excavata</i> d"Orbigny	381	
		<i>Spiroloculina</i> sp.2	205	
		<i>Elphidium excavatum</i> (Terquem, 1875)	187	
		<i>Elphidium articulatum</i> (d"Orbigny)	126	
		<i>Ammonia beccari</i> (Linne)	120	
		<i>Trochamina inflata</i> (Montagu)	117	
		<i>Bolivina</i> sp.3	89	
		<i>Bolivina</i> sp.2	63	
		<i>Nonion</i> sp.	32	
		<i>Turkmenella granata</i> Bugrova	12	
		<i>Cyclogyra involvens</i> Reuss	7	
		Ostracoda		
		<i>Hemicytheridea</i> sp.	281	6.94
		<i>Actinocythereis scutigera</i> (Brady, 1868)	103	
		<i>Aglaiocypris</i> sp.	85	
		<i>Cytherella</i> sp.1	61	
		<i>Puricythereis</i> sp.2	25	
		<i>Loxoconcha</i> sp.1	18	
		<i>Cytherella</i> sp.2	12	
		<i>Alocopocythere reticulata</i> (Hartman, 1964)	10	
		Gastropoda		
		<i>Diala</i> sp. 1	26	0.63
		<i>Caecum californicum</i> Dall, 1885	17	
<i>Turbonilla linjaica</i> Melvill & Standen, 1901	11			
Bivalvia				
<i>Mactra</i> sp.	15	0.26		
<i>Tellina</i> sp.1	7			
Nematoda				
Nematoda sp.6	14	0.16		

Table 3.12 (Contd...): Summer 2001 Cruise

Leg No	St. No.	Taxa	No. of Individual	Dominance (%)	
II	7	Foraminifera			91.41
		<i>Ammonia beccari</i> (Linne)	2120		
		<i>Quniqueloculina dimidiata</i> Terquem	1813		
		<i>Quniqueloculina seminulum</i> (Linne)	1026		
		<i>Quniqueloculina</i> sp.1	714		
		<i>Quniqueloculina costata</i> d"Orbigny	305		
		<i>Spiroloculina excavata</i> d"Orbigny	218		
		<i>Spiroloculina depressa</i> d"Orbigny	197		
		<i>Triloculina</i> sp.	163		
		<i>Triloculina sidebottomi</i> (Martinotti)	107		
		<i>Elphidium excavatum</i> (Terquem, 1875)	71		
		<i>Elphidium articulatum</i> (d"Orbigny)	64		
		<i>Lagena sulcata</i> (Walker & Jacob)	12		
		<i>Lagena semistriata</i> Williamson	7		
		<i>Lagena perlucida</i> (Montagu, 1803)	5		
		<i>Cyclogyra involvens</i> Reuss	3		
		<i>Trochamina inflata</i> (Montagu)	3		
		<i>Nonion</i> sp.	2		
		<i>Bolimina marginata</i> d"Orbigny	1		
		Ostracoda			7.29
		<i>Cytherella</i> sp.1	216		
		<i>Puricythereis</i> sp.1	171		
		<i>Loxoconcha</i> sp.2	68		
		<i>Hemicytheridea</i> sp.	54		
		<i>Loxoconcha</i> sp.1	36		
		Gastropoda			0.70
		<i>Caecum californicum</i> Dall, 1885	24		
		<i>Diala</i> sp.1	15		
		<i>Turbonilla linjaica</i> Melvill & Standen, 1901	8		
		<i>Tornatina persiana</i> Smith, 1872	5		
		Bivalvia			0.23
		<i>Tellina</i> sp.2	11		
		<i>Lucina</i> sp.	6		
		Nematoda			0.37
		Nematoda sp.2	15		
		Nematoda sp.5	13		

Table 3.13.1: Abundance of different meiofauna groups recorded during Summer 2001 Cruise

St. No.	Foraminifera	Ostracoda	Gastropoda	Bivalvia	Nematoda	Copepoda	Polychaeta larvae	Total number
1	7035	606	28	0	0	0	0	7685
4	7894	595	54	22	14	0	0	8579
7	6831	545	52	17	28	0	0	7473
8	7565	440	63	0	0	20	0	8088
11	7769	423	28	17	20	0	0	8257
14	8120	583	43	18	0	0	0	8764
15	10906	490	0	39	36	4	0	11475
17	9702	672	32	0	27	0	0	10433
19	7250	1431	46	15	10	0	0	8752
20	7025	505	42	12	0	0	4	7588
22	4048	499	46	6	21	0	0	4620
23	3283	1141	0	0	0	0	0	4424
24	3167	204	42	17	0	9	0	3439
25	10647	1447	53	0	27	0	0	12174
26	6920	288	49	0	37	0	0	7294
27	8493	1368	40	16	8	0	2	9927
30	4427	349	38	0	0	0	0	4814
33	10766	1608	64	0	27	0	0	12465
34	6491	4668	64	8	0	0	0	11231
36	16477	2541	87	88	10	0	0	19203
39	12586	199	72	0	0	0	0	12857
40	5538	967	79	19	0	0	5	6608
43	12945	2774	78	23	0	0	0	15820
47	12531	1553	127	0	0	0	0	14211
50	15598	2162	66	15	12	0	0	17853
55	1506	519	97	12	20	7	0	2161
56	1818	478	71	30	14	0	5	2416
59	9254	466	32	23	17	0	4	9796
61	22757	7233	491	113	28	0	0	30622
63	14160	5519	115	38	16	0	0	19848
66	6222	714	33	20	0	0	8	6997
69	7176	662	36	15	27	8	0	7924
70	1082	396	46	8	0	0	33	1565
72	21534	5346	367	65	16	0	3	27331
73	2499	687	61	18	18	0	0	3283
76	2657	355	57	0	11	3	0	3083
78	2423	459	55	36	0	0	5	2978
79	11339	3490	67	17	12	0	3	14928
81	4045	285	48	10	18	0	0	4406
Average	8268	1402	78	19	12	1	2	9779

Table 3.13.2: Percentage composition of different meiofauna groups recorded during Summer 2001 Cruise

St. No.	Foraminifera	Ostracoda	Gastropoda	Bivalvia	Nematoda	Copepoda	Polychaeta larvae	Total number
79	75.96	23.38	0.45	0.11	0.08	0.00	0.02	7685
81	91.81	6.47	1.09	0.23	0.41	0.00	0.00	8579
73	76.12	20.93	1.86	0.55	0.55	0.00	0.00	7473
76	86.18	11.51	1.85	0.00	0.36	0.10	0.00	8088
78	81.36	15.41	1.85	1.21	0.00	0.00	0.17	8257
70	69.14	25.30	2.94	0.51	0.00	0.00	2.11	8764
72	78.79	19.56	1.34	0.24	0.06	0.00	0.01	11475
66	88.92	10.20	0.47	0.29	0.00	0.00	0.11	10433
69	90.56	8.35	0.45	0.19	0.34	0.10	0.00	8752
59	94.47	4.76	0.33	0.23	0.17	0.00	0.04	7588
61	74.32	23.62	1.60	0.37	0.09	0.00	0.00	4620
63	71.34	27.81	0.58	0.19	0.08	0.00	0.00	4424
56	75.25	19.78	2.94	1.24	0.58	0.00	0.21	3439
50	87.37	12.11	0.37	0.08	0.07	0.00	0.00	12174
55	69.69	24.02	4.49	0.56	0.93	0.32	0.00	7294
43	81.83	17.53	0.49	0.15	0.00	0.00	0.00	9927
47	88.18	10.93	0.89	0.00	0.00	0.00	0.00	4814
36	85.80	13.23	0.45	0.46	0.05	0.00	0.00	12465
39	97.89	1.55	0.56	0.00	0.00	0.00	0.00	11231
40	83.81	14.63	1.20	0.29	0.00	0.00	0.08	19203
34	57.80	41.56	0.57	0.07	0.00	0.00	0.00	12857
30	91.96	7.25	0.79	0.00	0.00	0.00	0.00	6608
33	86.37	12.90	0.51	0.00	0.22	0.00	0.00	15820
25	87.46	11.89	0.44	0.00	0.22	0.00	0.00	14211
26	94.87	3.95	0.67	0.00	0.51	0.00	0.00	17853
27	85.55	13.78	0.40	0.16	0.08	0.00	0.02	2161
24	92.09	5.93	1.22	0.49	0.00	0.26	0.00	2416
19	82.84	16.35	0.53	0.17	0.11	0.00	0.00	9796
17	92.99	6.44	0.31	0.00	0.26	0.00	0.00	30622
20	92.58	6.66	0.55	0.16	0.00	0.00	0.05	19848
15	95.12	4.27	0.00	0.34	0.23	0.03	0.00	6997
22	87.62	10.80	1.00	0.13	0.45	0.00	0.00	7924
23	74.21	25.79	0.00	0.00	0.00	0.00	0.00	1565
8	93.53	5.44	0.78	0.00	0.00	0.25	0.00	27331
11	94.09	5.12	0.34	0.21	0.24	0.00	0.00	3283
14	92.65	6.65	0.49	0.21	0.00	0.00	0.00	3083
1	91.54	7.89	0.36	0.00	0.00	0.00	0.21	2978
4	92.02	6.94	0.63	0.26	0.16	0.00	0.00	14928
7	91.41	7.29	0.70	0.23	0.37	0.00	0.00	4406
Average	85.27	13.28	0.94	0.24	0.17	0.03	0.08	9778.769

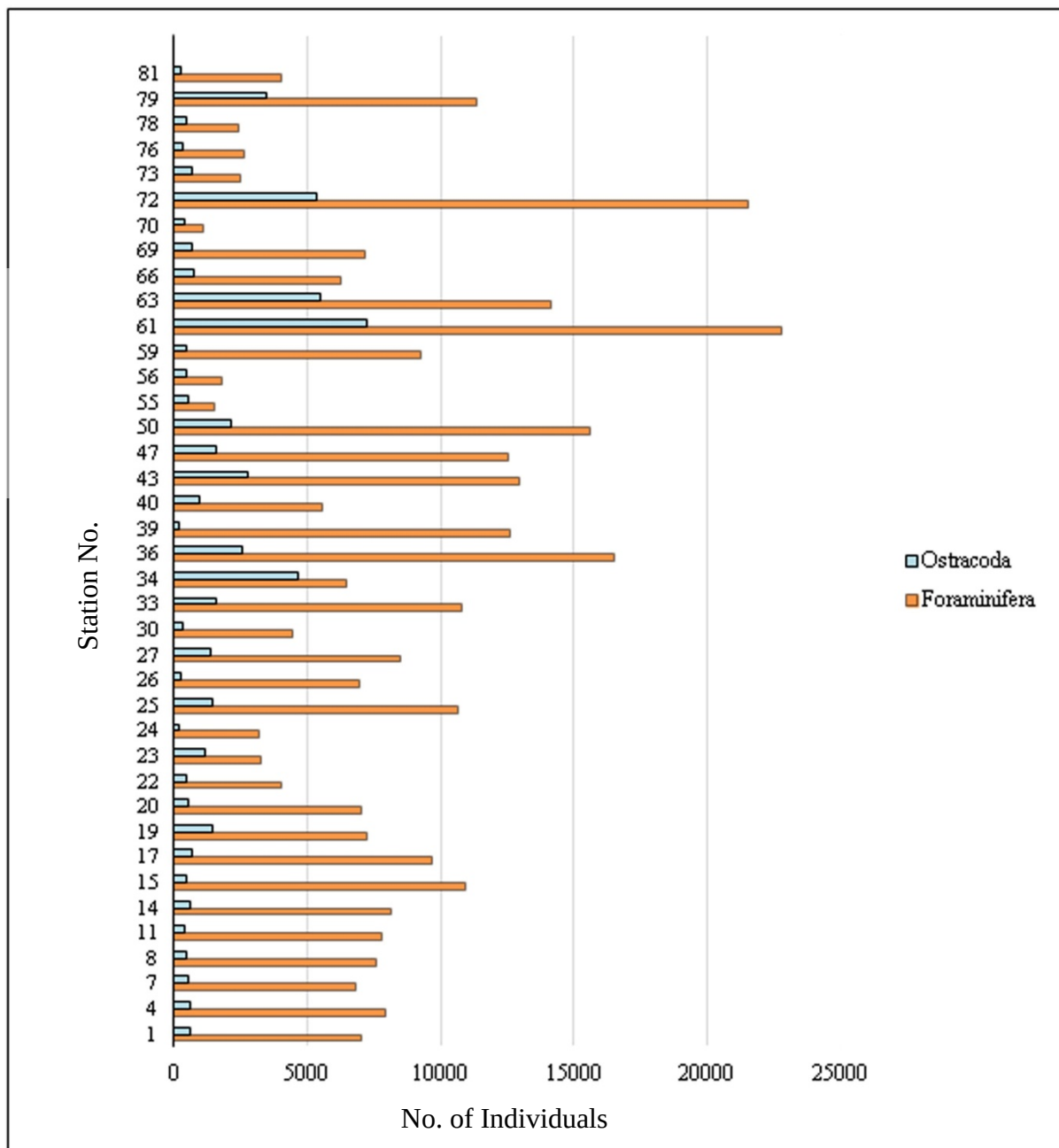


Figure 3.6: Occurrence and Abundance of Foraminifera and Ostracoda groups (ROPME Summer 2001Cruise)

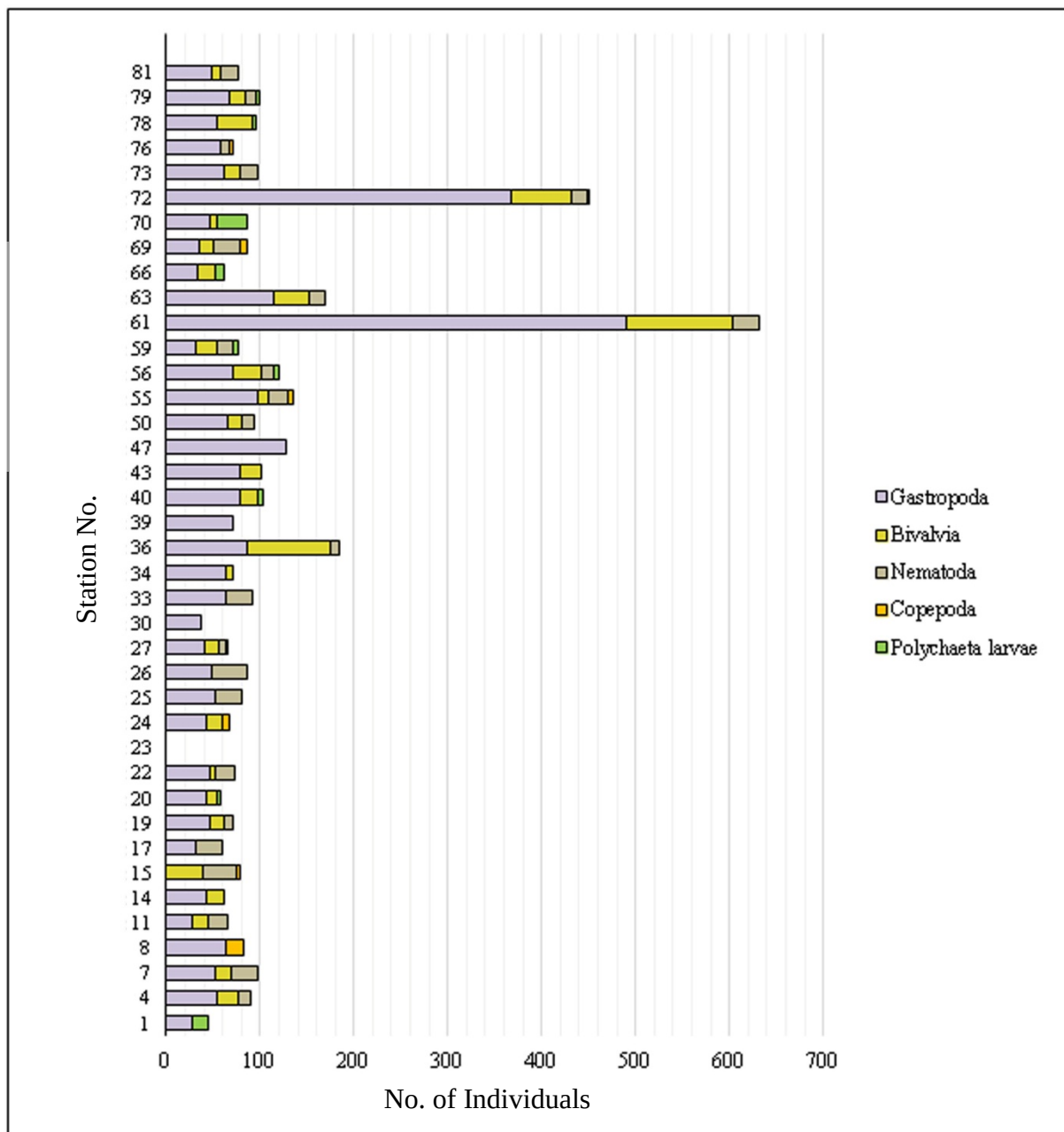


Figure 3.7: Occurrence and Abundance of Gastropoda, Bivalvia, Nematoda, Copepoda and Polychaeta larvae groups (ROPME Summer 2001 Cruise)

3.3.3 Meiofauna Abundance and Distribution (Winter 2006 Cruise)

In Winter 2006 Cruise, species of meiofauna community from 51 sampling stations in the RSA were collected, identified and counted. Seven main different communities of meiofauna group have been reported. These communities were located at different benthic habitats of coastal, offshore and deeper water.

In the most of the stations, the highest densities of meiofauna was reported at the upper 3 cm and dropped to lower values below (Table 3.14).

A total of 281 species of marine meiofauna were identified during the Winter 2006 Cruise which represent nearly 4 times those of Summer 2000. The highest species number was at Station 98 (65 species) and the lowest at Stations 69 and 88 (28 species). Comparing among species recorded, the highest number of species belong to foraminifera and the lowest belong to Copepoda and Polychaete larvae.

The results showed that the abundance of meiofauna varied from station to station, with a minimum abundance of 366 in station 70 and the maximum of 11348 in station 93. The maximum number of species was foraminifera (169 species) and the minimum was copepods (3 species).

The following groups of meiofauna were found to be the major contributors with the percentage compositions of: Foraminifera (82.88%), Ostracoda (8.23%), Gastropoda (3.58%), Bivalvia (3.10%), Nematoda (3.06%), Polychaeta larvae (0.85%) and Copepods (0.51%). The results showed that species of foraminifera are the dominant contributors in all stations with the highest level of 97.05% in station 93. The maximum contribution of the remaining species recorded as: Ostracoda (21.82%) in station 98, Bivalvia (20.29%) in station 40, Nematoda (13.06%) in station 98, Gastropoda (9.34%) in station 50, Polychaeta larvae (2.93%) in station 26a and Copepods (2.73%) in station 70. (Table 3.15, and Figures 3.8 and 3.9).

Deformity in 12 species of foraminifera was also recorded (Table 3.16). On the other side, the following foraminifera may be considered as pollution resistant species: *Ammonia beccarii*, *Trochammina inflata*, *Elphidium articulatum*, *Elphidium excavatum*, *Cibicides* sp., *Quinqueloculina seminulum*, *Spiroloculina excavata*, *Adelosina* sp., *Spiroloculina* sp., *Quinqueloculina* spp. and *Textularia* sp.

Table 3.14: Meiofaunal species found in the RSA during Winter 2006 Cruise

Leg No.	Tr. No.	St. No.	Taxa	No. of Individual	Dominance (%)
I	4a	14a	Foraminifera		
			<i>Ammonia beccarii</i> (Linne)	423	84.50
			<i>Quinqueloculina costata</i> d"orbigny	282	
			<i>Quinqueloculina dimidiate</i> (Terquem)	198	
			<i>Bolivina</i> sp.3	81	
			<i>Bolivina tectiformis</i> Cushman, 1926	66	
			<i>Textularia earlandi</i> Parker	61	
			<i>Spiroloculina deppressa</i> d"Orbigny, 1826	48	
			<i>Spiroloculina excavata</i> d"Orbigny, 1826	32	
			<i>Triloculina</i> sp.	25	
			<i>Mesosigmoilina</i> sp.	20	
			<i>Spiroloculina</i> sp.	18	
			Unknown foraminiferasp.24	15	
			<i>Assilina</i> sp.	10	
			<i>Cribroelphidium gerthi</i> (Van voorthuysen, 1957)	8	
			<i>Elphidium</i> sp.2	6	
			<i>Nodophthalmidium</i> sp.	5	
			<i>Lagena</i> sp.1	3	
			Ostracoda		
			<i>Cypriconcha</i> sp.1	61	8.49
			<i>Cytherella</i> sp.2	29	
			<i>Puricythereis</i> sp.1	17	
			<i>Calistocythere</i> sp.	12	
			<i>Hemicytheridea</i> sp.	8	
			<i>Entocythere</i> sp.1	4	
			Gastropoda		
			<i>Tornatina persiana</i> Smith, 1872	7	0.71
			<i>Ringicula propinquans</i> Hinds, 1844	4	
			Nematoda		
			Nematoda sp.1	39	5.06
			Nematoda sp.3	24	
			Nematoda sp.2	15	
			Copepoda		
			<i>Euterpina</i> sp.	11	1.23
			<i>Microsetella</i> sp.	5	
			<i>Clytemnestra</i> sp.	3	

Table 3.14 (Contd...): Winter 2006 Cruise

Leg No.	Tr. No.	St. No.	Taxa	No. of Individual	Dominance (%)		
I	14a	16a	Foraminifera				
			<i>Spiroloculina depressa</i> d"Orbigny, 1826	108	66.09		
			<i>Spiroloculina excavatq</i> d"Orbigny, 1826	67			
			<i>Ammonia beccarii</i> (Linne)	62			
			<i>Bolivina multicostata</i>	41			
			<i>Bolivina</i> sp.5	39			
			<i>Textulara earlandi</i> Parker	35			
			Unknown foraminiferasp.33	27			
			<i>Quinqueloculina dimidiata</i> Terquem, 1876	24			
			<i>Quinqueloculina seminulum</i> (Linne)	19			
			<i>Triloculina</i> sp.	15			
			<i>Quinqueloculina costata</i> d"Orbigny	12			
			<i>Quinqueloculina</i> sp.8	8			
			<i>Anomalinella rostrata</i> (Brady, 1881)	7			
			<i>Elphidium</i> sp.2	5			
			<i>Turkmenella granata</i> Bogrove	3			
			<i>Globorotalia</i> sp.2	2			
			Ostracoda				
			<i>Cypriconcha</i> sp.2	52	18.76		
			<i>Aglariocypris</i> sp.	27			
			<i>Loxoconcha amygdalanux</i>	15			
			<i>Puricythereis</i> sp.2	7			
			<i>Cytherella</i> sp.2	5			
			<i>Leptocythere</i> sp.	3			
			Gastropoda				
			<i>Tornatina perpersiana</i> Smith, 1872	9	3.10		
			<i>Salinator</i> sp.	4			
			<i>Ringicula propinquans</i> Hinds, 1844	3			
			<i>Acme</i> sp.	2			
			Bivalvia				
			<i>Tellina</i> sp.2	8	3.79		
			<i>Tellina fabula</i> Gmelin, 1791	7			
			<i>Bassina calophylla</i> (Philippi, 1836)	5			
			<i>Lucina</i> sp.	2			
			Nematoda				
			Nematoda sp.1	25	8.26		
			Nematoda sp.3	14			
			Nematoda sp.4	9			

Table 3.14 (Contd...): Winter 2006 Cruise

Leg No	Tr. No.	St. No.	Taxa	No. of Individual	Dominance (%)
II	14	79	Foraminifera		
			<i>Bolivina aff variabilis</i> Williamson, 1858	980	90.32
			<i>Bolivina multicoostat</i>	450	
			<i>Bolivina translucens</i> (Phlegr & E.L. Parker)	385	
			<i>Sigmoilinella</i> sp.	380	
			<i>Triloculina</i> sp.	185	
			<i>Quinqueloculina dimidiata</i> (Terquem)	159	
			<i>Spiroloculina depressa</i> d"Orbigny, 1826	125	
			<i>Triloculinellus</i> sp.	99	
			<i>Quinqueloculina costata</i> d"Orbigny	82	
			<i>Mesosigmoilina</i> sp.	74	
			Unknown foraminiferasp.22	69	
			<i>Textularia</i> sp.3	68	
			<i>Brizalina</i> sp.	49	
			<i>Bolivina</i> sp.5	37	
			<i>Reophax textana</i> (Cushman)	32	
			<i>Trochamina inflata</i> (Montagu)	29	
			<i>Textularia conivs</i> d"Orbigny	29	
			<i>Anomalinella rostrata</i> (Brady, 1881)	24	
			<i>Pseudopyrgo milletti</i> (Cushman)	22	
			<i>Adelosina honghensis</i> (Lak)	18	
			<i>Discorbis nitida</i> (Williamson, 1858)	17	
			<i>Globorotalia</i> sp.1	17	
			<i>Lobatula</i> sp.	12	
			<i>Paracibicides</i> sp.	8	
			<i>Georghaninasp.</i>	7	
			<i>Nodulina gracilis</i> Kiaer, 1900	5	
			<i>Nodophthalmidium antillarum</i> (Cushman, 1922)	5	
			<i>Pyramidulina</i> sp.	4	
			<i>Eoguttulina</i> sp.	3	
			<i>Entosolenia globosa</i> (Reuss)	3	
			<i>Lagena sulcata</i> (Walker & Jacob, 1798)	3	
			<i>Lagena clavata</i> d" Orbigny, (1846) var. setigera Millett. 1901	2	
			<i>Adelosina ferrusaceii</i> (d"Orbigny, 1826)	2	
			<i>Adelosina laevigata</i> d"Orbigny, 1826	2	
			Ostracoda		
			<i>Puricythereis</i> sp.1	26	2.35
			<i>Hemicytheridea</i> sp.	18	
			Unknown ostracoda sp.3	12	
			<i>Cypriconcha</i> sp.1	10	
			<i>Entocythere</i> sp.1	9	
			<i>Cypriconcha</i> sp.2	7	
			<i>Leptocythere</i> sp.	5	
			Unknown Ostracoda sp.3	1	
			Gastropoda and Scaphopoda		
			<i>Ringicula propinquans</i> Hinds, 1844	25	1.15
			<i>Epitonium</i> sp.1	8	
			<i>Clypeomorus bifasciatus persicus</i> Houbriek,1985	4	
			<i>Calyptreaa capensis</i> Tomlin, 1931	3	
			<i>Dentalium octangulatum</i> Donovan, 1803	3	
			Bivalvia		
			<i>Tellina fabula</i> Gmelin, 1791	131	5.63
			<i>Caditopsis majeeda</i> (Biggs, 1973)	80	
			Polychaeta larvae		
			<i>Nephtys</i> sp.2	4	0.19
			<i>Phyllodocidae</i> sp.1	2	
			<i>Nerillidae</i> sp.	1	
			Nematoda		
			Nematoda sp.2	4	0.29
			Nematoda sp.1	4	
			Nematoda sp.5	3	
			Copepoda		
			<i>Microsetella</i> sp.	2	0.08
			<i>Euterpina</i> sp.	1	

Table 3.14 (Contd...): Winter 2006 Cruise

Leg No.	Tr. No.	St. No.	Taxa	No. of Individual	Dominance (%)
II	13	77	Foraminifera		
			<i>Bolivina multicostata</i>	268	85.30
			<i>Bolivina</i> sp.4	124	
			<i>Bolivina tectiformis</i> Cushman, 1926	95	
			<i>Spiroloculina depressa</i> d"Orbigny, 1826	82	
			<i>Spiroloculina</i> sp.2	69	
			<i>Textularia</i> sp.3	41	
			<i>Textulariopsis indistinct</i> (akimets)	34	
			<i>Ammobaculite stenome</i> Cushman & waters	30	
			<i>Reophax scorpiurus</i> d` Montfort, 1808	28	
			<i>Quinqueloculina dimidiate</i> (Terquem)	23	
			<i>Sigmohauerina bradyi</i> (Cushman)	20	
			<i>Pseudopyrgo milletti</i> (Cushman)	17	
			<i>Picouina mississippiensis</i> (Cushman)	14	
			<i>Triloculina</i> sp.	12	
			Unknown foraminiferasp.18	11	
			<i>Anomalinella rostrata</i> (Brady, 1881)	9	
			<i>Pseudolamarckina rjasanensis</i> (Uhlig)	8	
			<i>Cibicides lobatulus</i> (Walker & Jacob)	7	
			<i>Globorotalia</i> sp.2	7	
			Unknown foraminiferasp.8	5	
			<i>Paracibicides</i> sp.	3	
			<i>Elphidium crispum</i> (Linne)	3	
			<i>Lagena</i> sp.4	2	
			<i>Lagena perlucida</i> (Montagu, 1803)	2	
			Ostracoda		
			<i>Actinocythereis scutigera</i> (Brady, 1868)	41	9.64
			Unknown ostracoda sp.9	23	
			<i>Puricythereis</i> sp.1	18	
			<i>Cypriconcha</i> sp.2	12	
			<i>Entrocythere</i> sp.2	7	
			Gastropoda		
			<i>Diala semistriata</i> (Philippi, 1849)	8	1.62
			<i>Stosicia</i> sp.	4	
			<i>Epitonium</i> sp.2	3	
			<i>Niso venosa</i> Sowerby, 1895	2	
			Nematoda		
			Nematoda sp.2	29	3.43
			Nematoda sp.3	15	
			Nematoda sp.1	8	
			Nematoda sp.6	6	
			Nematoda sp.5	5	
			Nematoda sp.4	3	

Table 3.14 (Contd...): Winter 2006 Cruise

Leg No.	Tr. No.	St. No.	Taxa	No. of Individual	Dominance (%)
II	13	78	Foraminifera		
			<i>Bolivina aff. Variabilis</i> Williamson, 1858	1202	95.83
			<i>Bolivina multicosata</i>	1007	
			<i>Bolivina translucens</i> (Phleger & F.L. Parker)	714	
			<i>Triloculina</i> sp.	508	
			<i>Quinqueloculina costata</i> d"Orbigny	215	
			<i>Spiroloculina excavata</i> d"Orbigny, 1826	93	
			<i>Spiroloculina depressa</i> d"Orbigny, 1826	90	
			<i>Spirophthalmidium acutimargo</i> (Brady)	87	
			<i>Sigmohauerina brady</i> (Cushman)	83	
			<i>Pseudopyrgo milletti</i> (Cushman)	71	
			<i>Quinqueloculina dimidiate</i> (Terquem)	65	
			Unknown foraminiferasp.22	42	
			<i>Adelosina laevigata</i> d`Orbigny, 1826	36	
			<i>Adelosina honghensis</i> (Lak)	30	
			<i>Adelosina bicornis</i> (Walker & Jacob, 1798)	22	
			<i>Spiroloculina</i> sp.7	18	
			<i>Reophax textana</i> (Cushman)	17	
			<i>Textularia</i> sp.3	14	
			<i>Sejunctella</i> sp.	10	
			<i>Discorbis nitida</i> (Williamson, 1858)	9	
			<i>Elphidium crispum</i> (Linne)	7	
			<i>Lagena</i> sp.2	5	
			<i>Lagena clavata</i> d" Orbigny, (1846) var. setigera Millett. 1901	4	
			Ostracoda		
			<i>Entocythere</i> sp.1	42	2.25
			<i>Leptocythere</i> sp.	26	
			<i>Venericythere</i> sp.1	18	
			<i>Puricythereis</i> sp.4	10	
			<i>Propontocypris</i> sp.3	6	
			Gastropoda and Scaphopoda		
			<i>Lippistes</i> sp.	8	0.48
			<i>Umbonium vestiarium</i> (Linnaeus, 1758)	7	
			<i>Dentalium</i> sp.	5	
			<i>Pupa affinis</i> (A. Adams, 1854)	2	
			Nematoda		
			Nematoda sp.1	31	1.17
			Nematoda sp.3	14	
			Nematoda sp.2	8	
			Copepoda		
			<i>Microsetella</i> sp.	7	0.26
			<i>Clytemnestra</i> sp.	5	

Table 3.14 (Contd...): Winter 2006 Cruise

Leg No.	Tr. No.	St. No.	Taxa	No. of Individual	Dominance (%)		
II	12	70	Foraminifera				
			<i>Spiroloculina depressa</i> d"Orbigny, 1826	78	69.67		
			<i>Spiroloculina</i> sp.7	53			
			<i>Spiroloculina excavata</i> d"Orbigny, 1826	22			
			<i>Triloculina</i> sp.	18			
			<i>Bolivina multicostata</i>	17			
			<i>Sigmoilinella</i> sp.	15			
			<i>Bolivina</i> sp.5	12			
			<i>Spirotextularia</i> sp.	10			
			<i>Trechamina inflata</i> (Montagu)	9			
			Unknown foraminiferasp.18	8			
			<i>Protelphidium anglicum</i> Murray, 1965b	7			
			<i>Dendritina arbuscula</i> d"Orbigny, 1826	2			
			<i>Entosoolenia globosa</i> (Reuss)	2			
			<i>Entosoolenia</i> sp.	2			
			Ostracoda				17.49
			Unknown Ostracodasp.1	23			
			<i>Leptocythere</i> sp.	15			
			<i>Puricythereis</i> sp.1	10			
			<i>Callistocythere</i> sp.	7			
			<i>Entocythere</i> sp.2	6			
			Unknown ostracoda sp.1	3			
			Gastropoda				3.82
			<i>Epitonium</i> sp.1	7			
			<i>Diala semistriata</i> (Philippi, 1849)	4			
			<i>Diala</i> sp.	2			
			<i>Niso venosa</i> Sowerby, 1895	1			
			Polychaeta larvae				1.09
			<i>Nephtys</i> sp.1	3			
			<i>Glycera</i> sp.	1			
			Nematoda				5.19
			Nematoda sp.2	12			
			Nematoda sp.1	7			
			Copepoda				2.73
			<i>Clytemnestra</i> sp.	6			
			<i>Microsetella</i> sp.	3			
			<i>Euterpina</i> sp.	1			

Table 3.14 (Contd...): Winter 2006 Cruise

Leg No.	Tr. No.	St. No.	Taxa	No. of Individual	Dominance (%)		
II	12	72	Foraminifera				
			<i>Spiroloculina excavata</i> d"Orbigny	68	76.10		
			<i>Spiroloculina</i> sp.1	53			
			<i>Spiroloculina</i> sp.4	50			
			<i>Triloculina</i> sp.	42			
			<i>Bolivina multicostata</i>	38			
			<i>Bolivina</i> sp.6	34			
			<i>Brizalina</i> sp.	31			
			Unknown foraminifera sp.13	27			
			<i>Globorotalia</i> sp.2	24			
			<i>Paracibicides</i> sp.	19			
			Unknown foraminiferasp.29	15			
			<i>Nodophthalmidium</i> sp.	11			
			<i>Georghianina</i> sp.	10			
			<i>Nodulina gracilis</i> Kiaer, 1900	9			
			<i>Lagena</i> sp.1	7			
			<i>Lagena gracillima</i> Cushman, J.A. 1913 (Seguenza, 1862)	6			
			<i>Cibicides</i> sp.	5			
			<i>Pseudopyrgo milletti</i> (Cushman)	4			
			<i>Adelosina laevigata</i> d`Orbigny, 1826	4			
			<i>Sejunctella</i> sp.	3			
			<i>Entosolenia</i> sp.				
			Ostracoda				
			<i>Cypriconcha</i> sp.2	28	11.62		
			<i>Leptocythere</i> sp.	18			
			<i>Entocythere</i> sp.1	14			
			<i>Loxoconcha</i> sp.2	10			
			Unknown Ostracoda sp.4	1			
			Gastropoda				
			<i>Salinator</i> sp.	7	2.13		
			<i>Diala</i> sp.1	4			
			<i>Pseudonoba</i> sp.	2			
			Nematoda				
			Nematoda sp.2	29	8.51		
			Nematoda sp.1	15			
			Nematoda sp.5	8			
			Copepoda				
			<i>Euterpina</i> sp.	7	1.64		
			<i>Microsetella</i> sp.	3			

Table 3.14 (Contd...): Winter 2006 Cruise

Leg No.	Tr. No.	St. No.	Taxa	No. of Individual	Dominance (%)
II	11	66	Foraminifera		
			<i>Spiroloculina excavata</i> d"Orbigny	585	83.97
			<i>Bolivina</i> sp.1	277	
			<i>Spiroloculina</i> sp.8	241	
			<i>Textularia</i> sp.3	196	
			<i>Bolivina multicostata</i>	94	
			<i>Triloculina</i> sp.	87	
			<i>Triloculinellus</i> sp.	42	
			<i>Adelosina laevigata</i> d`Orbigny, 1826	35	
			<i>Trochamina inflata</i> (Montagu)	30	
			<i>Discorbis nitida</i> (Williamson, 1858)	26	
			<i>Cibicides lobatulus</i> (Walker & Jacob)	23	
			<i>Adelosina bicornis</i> (Walker & Jacob, 1798)	21	
			<i>Sigmoihauerina bradyi</i> (Cushman)	18	
			<i>Pseudopyrgo milleti</i> (Cushman)	17	
			<i>Adelosina honghensis</i> (Lak.)	15	
			<i>Sigmoilinella</i> sp.	14	
			<i>Mesosigmoilina</i> sp.	12	
			<i>Cibicides</i> sp.	10	
			<i>Lagena</i> sp.2	8	
			<i>Elphidium</i> sp.2	7	
			<i>Lagena</i> sp.6	5	
			<i>Georghianinasp.</i>	2	
			Ostracoda		
			<i>Cypriconcha</i> sp.1	93	10.61
			<i>Cypriconcha</i> sp.2	71	
			<i>Entocythere</i> sp.1	34	
			<i>Loxoconcha</i> sp.2	25	
			Gastropoda and Scaphopoda		
			<i>Epitonium</i> sp.1	64	4.52
			<i>Dentalium</i> sp.	12	
			<i>Pupa affinis</i> (A.Adams, 1854)	10	
			<i>Ringicula propinquans</i> Hinds, 1844	9	
			Polychaeta larvae		
			<i>Phyllodocidae</i> sp.2	2	0.14
			<i>Glycera</i> sp.	1	
			Nematoda		
			Nematoda sp.3	8	0.76
			Nematoda sp.4	5	
			Nematoda sp.5	3	

Table 3.14 (Contd...): Winter 2006 Cruise

Leg No.	Tr. No.	St. No.	Taxa	No. of Individual	Dominance (%)
II	11	69	Foraminifera		
			<i>Bolivina aff. Variabilis</i> Williamson, 1858	104	89.04
			<i>Spiroloculina</i> sp.7	100	
			<i>Spiroloculina depressa</i> d"Orbigny, 1826	83	
			<i>Quinqueloculina dimidiate</i> (Terquem)	65	
			<i>Bolivina</i> sp.2	47	
			<i>Bolivina tectiformis</i> Cushman, 1926	31	
			<i>Spirolectinata</i> sp.	23	
			<i>Cibicides</i> sp.	14	
			<i>Globorotalia</i> sp.2	10	
			<i>Paracibicides</i> sp.	9	
			<i>Nonionella basispinata</i> (Cushman & Moyer)	8	
			<i>Valvulineria inaequalis</i> (d"Orbigny)	8	
			<i>Nodophthalmisium</i> sp.1	6	
			<i>Sigmoihauerina brady</i> (Cushman)	4	
			<i>Pseudopyrgo milletti</i> (Cushman)	3	
			<i>Mesosigmoilina</i> sp.	3	
			<i>Sigmoilinella</i> sp.	2	
			Ostracoda		
			<i>Cypriconcha</i> sp.2	8	4.62
			<i>Cypriconcha</i> sp.1	6	
			<i>Loxoconcha</i> sp.1	5	
			<i>Cytherella</i> sp.2	4	
			<i>Puricythereis</i> sp.2	2	
			<i>Entocythere</i> sp.1	2	
			Gastropoda		
			<i>Diala semistriata</i> (Philippi, 1849)	8	3.42
			<i>Stosicia</i> sp.	7	
			<i>Diala</i> sp.2	5	
			Bivalvia		
			<i>Tellina fabula</i> Gmelin, 1791	9	2.91
			<i>Bassina calophylla</i> (Philippi, 1836)	8	

Table 3.14 (Contd...): Winter 2006 Cruise

Leg No.	Tr. No.	St. No.	Taxa	No. of Individual	Dominance (%)
II	10	56	Foraminifera		
			Bolivina sp.4	542	84.44
			Bolivina multicosata	186	
			Spiroloculina sp.3	120	
			Spiroloculina depressa d"Orbigny, 1826	97	
			Textularia sp.1	90	
			Textulariopsis indistinct (Akimets)	64	
			Bolivina tectiformis Cushman, 1926	61	
			Spiroplectinata sp.	32	
			Reophax scorpiurus d` Montfort, 1808	31	
			Discorbis nitida (Williamson, 1858)	29	
			Trochamina inflate (Montagu)	27	
			Cibicides sp.	20	
			Mesosigmoilina sp.	18	
			Sigmoilinella sp.	16	
			Entosolenia globosa (Reuss)	15	
			Lagena gracillima Cushman, J.A. 1913 (Seguenza, 1862)	8	
				7	
			Nodosaria sp.2	7	
			Unknown foraminiferasp.32	5	
			Nonionella sp.	2	
			Nodulina gracilis Kiaer, 1900	2	
			Lagena sp.1		
			Ostracoda		
			Cypriconcha sp.1	26	3.61
			Leptocythere sp.	15	
			Loxoconcha sp.2	12	
			Cypriconcha sp.2	6	
			Gastropoda		
			Ringicula propinquans Hinds, 1844	98	8.88
			Unknown gastropodasp.7	26	
			Diala sp.1	15	
			Tornatina persiana Smith, 1872	6	
			Bivalvia		
			Lucina sp.	31	2.39
			Mactra sp.	8	
			Polychaeta larvae		
			Nephtys sp.1	4	0.37
			Glycera sp.	2	
			Nematoda		
			Nematoda sp.2	3	0.31
			Nematoda sp.3	2	

Table 3.14 (Contd...): Winter 2006 Cruise

Leg No.	Tr. No.	St. No.	Taxa	No. of Individual	Dominance (%)
II	10	59	Foraminifera		
			Bolivina aff. Variabilis Williamson, 1858	128	28.71
			Bolivina multicostata	97	
			Bolivina sp.5	71	
			Spiroloculina depressa d"Orbigny, 1826	65	
			Spiroloculina sp.3	60	
			Triloculina sp.	34	
			Cibicides sp.	28	
			Triloculinellus sp.	26	
			Unknown foraminiferasp.21	21	
			Sigmoilinella sp.	19	
			Mesosigmoilina sp.	17	
			Spiroplectinata sp.	14	
			Textularia conica d"Orbigny	11	
			Anomalinella rostrata (Brady, 1881)	9	
			Discorbis nitida (Williamson, 1858)	8	
			Trochamina inflate (Montagu)	7	
			Adelosina laevigata d`Orbigny, 1826	6	
			Adelosina bicornis (Walker & Jacob, 1798)	5	
			Lagena sulcata (Walker & Jacob, 1798)	4	
			Nodosaria sp.2	3	
			Eoguttulina sp.	2	
			Entosolenia sp.	1	
			Ostracoda		
			Cytherella sp.1	22	2.17
			Aglaicypris sp.	17	
			Cypriconcha sp.2	7	
			Leptocythere sp.	2	
			Gastropoda		
			Tellina sp.1	1420	64.92
			Lucina sp.	18	
			Bivalvia		
			Ringicula propinquans Hinds, 1844	75	3.75
			Stosicia sp.	8	
			Nematoda		
			Nematoda sp.7	4	0.41
			Nematoda sp.4	3	
			Nematoda sp.5	2	
			Copepoda		
			Microsetella sp.	1	0.04

Table 3.14 (Contd...): Winter 2006 Cruise

Leg No.	Tr. No.	St. No.	Taxa	No. of Individual	Dominance (%)
II	9	50	Foraminifera		
			<i>Bolivinellina translucens</i> (Phleger& F.L.Parker, 1951)	281	76.37
			<i>Bolivina spissa</i> Cushman	207	
			<i>Spiroloculina excavata</i> d"Orbigny	193	
			<i>Bolivina</i> sp.5	184	
			<i>Brizalina</i> sp.	149	
			<i>Cibicides lobatulus</i> (Walker & Jacob)	108	
			<i>Discorbis nitida</i> (Williamson, 1858)	91	
			<i>Spiroloculina</i> sp.1	75	
			<i>Trochamina inflata</i> (Montagu)	62	
			<i>Globorotalia</i> sp.2	47	
			<i>Paracibicides</i> sp.	36	
			Unknown foraminiferasp.18	30	
			<i>Noion</i> sp.	29	
			<i>Trioloculina</i> sp.	21	
			<i>Pseudopyrgo milletti</i> (Cushman)	18	
			<i>Adelosina honghensis</i> (Lak.)	15	
			Unknown foraminiferasp.30	14	
			<i>Adetosina bicornis</i> (Walker & Jacob)	12	
			<i>Adelosina</i> sp.2	11	
			<i>Triloculinellus</i> sp.	8	
			<i>Sigmoilinella</i> sp.	7	
			<i>Lagena</i> sp.3	5	
			<i>Georhianina</i> sp.	3	
			<i>Lagena</i> sp.1	2	
			<i>Nodosaria</i> sp.3	2	
			Ostracoda		
			<i>Cypriconcha</i> sp.	32	3.94
			<i>Loxconcha</i> sp.2	29	
			<i>Leptocythere</i> sp.	12	
			<i>Loxoconcha</i> sp.1	10	
			Gastropoda		
			<i>Ringicula propinquans</i> Hinds, 1844	110	9.34
			Unknown gastropoda sp.14	75	
			<i>Stosicia</i> sp.	12	
			Bivalvia		
			<i>Tellina</i> sp.1	185	9.63
			<i>Lucina</i> sp.	18	
			Nematoda		
			Nematoda sp.6	8	0.71
			Nematoda sp.2	4	
			Nematoda sp.1	3	

Table 3.14 (Contd...): Winter 2006 Cruise

Leg No.	Tr. No.	St. No.	Taxa	No. of Individual	Dominance (%)
III	2a	5a	Foraminifera		
			<i>Spiroloculina depressa</i> d"Orbigny, 1826	401	89.91
			<i>Spiroloculina excavata</i> d"Orbigny, 1826	272	
			Unknown foraminifera sp.2	240	
			<i>Quinqueloculina dimidiata</i> Terquem, 1876	169	
			<i>Ammonia beccarii</i> (Linne)	165	
			<i>Triloculina</i> sp.	97	
			<i>Bolivina multicostata</i>	91	
			<i>Quinqueloculina poeyana</i> d"Orbigny	85	
			<i>Quinqueloculina costata</i> d"Orbigny	73	
			<i>Trochamina inflata</i> (Montagu)	48	
			<i>Elphidium articulatum</i> (d"Orbigny, 1839)	46	
			<i>Protelphidium anglicum</i> Murray, 1965b	34	
			<i>Elphidium excavatum</i> (Terquem, 1875)	26	
			<i>Cribroelphidium gerthi</i> (Van Voorthuysen, 1957)	20	
			<i>Assilina</i> sp.	12	
			<i>Nonion</i> sp.	9	
			<i>Elphidium</i> sp.3	5	
			<i>Textularia</i> sp.3	4	
			<i>Lobatula</i> sp.	2	
			<i>Lagena</i> sp.8	1	
			Ostracoda		
			<i>Loxoconcha</i> sp.2	54	6.69
			<i>Cytherella</i> sp.	28	
			<i>Aglaocypris</i> sp.	17	
			<i>Puricythereis</i> sp.2	14	
			<i>Cypriconcha</i> sp.1	9	
			<i>Entrocythere</i> sp.1	8	
			Gastropoda and Scaphopoda		
			<i>Dentalium</i> sp.	8	0.50
			<i>Pupa affinis</i> (A.Adams, 1854)	2	
			Bivalvia		
			<i>Lucina</i> sp.	12	0.95
			<i>Tellina</i> sp.1	7	
			Nematoda		
			Nematoda sp.2	25	1.95
			Nematoda sp.5	14	

Table 3.14 (Contd...): Winter 2006 Cruise

Leg No.	Tr. No.	St. No.	Taxa	No. of Individual	Dominance (%)
III	2	14	Foraminifera		
			<i>Ammonia beccarii</i> (Linne)	482	89.87
			<i>Quinqueloculina costata</i> d"Orbigny	216	
			<i>Quinqueloculina dimidiata</i> Terquem, 1876	193	
			<i>Spiroloculina depressa</i> d"Orbigny, 1826	158	
			<i>Spiroloculina excavata</i> d"Orbigny, 1826	129	
			Unknown foraminifera sp.5	107	
			<i>Discorbis nitida</i> (Williamson, 1858)	91	
			<i>Elphidium excavatum</i> (Terquem, 1875)	82	
			<i>Anomalinella rostrata</i> (Brady, 1881)	64	
			<i>Textularia conica</i> d"Orbigny	51	
			<i>Cibicides</i> sp.	42	
			<i>Globorotalia</i> sp.1	30	
			<i>Elphidium articulatum</i> (d"Orbigny, 1839)	29	
			<i>Cribroelphidium gerthi</i> (Van Voorthuysen, 1957)	18	
			<i>Elphidium</i> sp.3	17	
			<i>Peneroplis arietinus</i> (Batsch)	8	
			<i>Nonionella</i> sp.1	7	
			<i>Bolivina</i> sp.2	5	
			<i>Lagena</i> sp.3	1	
			Ostracoda		
			<i>Cypriconcha</i> sp.1	41	7.01
			<i>Leptocythere</i> sp.	34	
			<i>Loxoconcha</i> sp.2	22	
			<i>Hemicytheridea</i> sp.	17	
			<i>Cytherella</i> sp.	11	
			<i>Puricythereis</i> sp.2	10	
			Gastropoda		
			<i>Tornatina persiana</i> Smith, 1872	4	0.36
			<i>Turbonilla linjaica</i> Melvill & Stenden, 1901	3	
			Bivalvia		
			<i>Tellina fabula</i> Gmelin, 1791	17	1.04
			<i>Mactra</i> sp.	3	
			Polychaeta larvae		
			<i>Nephtys</i> sp.2	2	0.10
			Nematoda		
			Nematoda sp.2	27	1.99
			Copepoda		
			<i>Euterpina</i> sp.	4	0.21

Table 3.14 (Contd...): Winter 2006 Cruise

Leg No.	Tr. No.	St. No.	Taxa	No. of Individual	Dominance (%)
III	2	11	Foraminifera		
			Quinqueloculina sp.7	328	87.27
			Quinqueloculina costata d"Orbigny	267	
			Spiroloculina depressa d"Orbigny, 1826	209	
			Ammonia beccarii (Linne)	196	
			Spiroloculina excavata d"Orbigny, 1826	116	
			Textularia sp.1	92	
			Textulariopsis indistinct (Akimets)	65	
			Bolivina tectiformis Cushman, 1926	55	
			Spirotextularia sp.	47	
			Bolivina spissa Cushman	39	
			Spiroplectinata sp.	26	
			Adelosina laevigata d`Orbigny, 1826	18	
			Mesosigmoilina sp.	12	
			Unknown foraminiferasp.7	10	
			Spirophthalmidium acutimargo (Brady)	8	
			Triloculina sp.	7	
			Quinqueloculina poeyana d"Orbigny	7	
			Reophax textana (Cushman)	6	
			Brizazalina sp.	6	
			Elphidium articulatum (d"Orbigny, 1839)	4	
			Peneroplis planatus (Fichtel & Moll, 1798)	3	
			Nodosaria sp.1	1	
			Ostracoda		
			Cytherella sp.1	43	8.20
			Aglaocypris sp.	26	
			Puricythereis sp.2	21	
			Callistocythere sp.	19	
			Unknown Ostracoda sp.6	14	
			Proponocypris sp.3	10	
			Loxoconcha sp.4	10	
			Gastropoda		
			Ringicula propinquans Hinds, 1844	12	1.09
			Unknown gastropoda sp.9	5	
			Nosovensa Sowerby, 1895	2	
			Bivalvia		
			Tellina fabula Gmelin, 1791	17	1.04
			Macra sp.	3	
			Nematoda		
			Nematoda sp.1	31	3.21
			Nematoda sp.5	16	
			Nematoda sp.3	9	
			Copepoda		
			Microsetella sp.	4	0.23

Table 3.14 (Contd...): Winter 2006 Cruise

Leg No.	Tr. No.	St. No.	Taxa	No. of Individual	Dominance (%)		
III	2	8	Foraminifera				
			<i>Bolivina aff. Variabilis</i> Williamson, 1858	287	83.14		
			<i>Quinqueloculina costata</i> d"Orbigny	204			
			<i>Spiroloculina depressa</i> d"Orbigny, 1826	166			
			<i>Ammonia beccarii</i> (Linne)	88			
			<i>Spiroloculina</i> sp.3	61			
			<i>Quinqueloculina seminulum</i> (Linne)	45			
			<i>Triloculinellus</i> sp.	30			
			<i>Triloculina sidebottomi</i> (Martinotti)	26			
			<i>Palaeomiliolina monstrosa</i> (E.V. Bykova)	22			
			<i>Adelosina bicornis</i> (Walker & Jacob, 1798)	19			
			<i>Discorbis nitida</i> (Williamson, 1858)	17			
			<i>Biapertorbis</i> sp.	15			
			<i>Turkmenella granata</i> Bogrova	13			
			<i>Cibicides</i> sp.	12			
			<i>Elphidium crispum</i> (Linne)	10			
			<i>Protelphidium</i> sp.	8			
			<i>Nodophthalmidium</i> sp.	8			
			<i>Peneroplis arietinus</i> (Batsch)	7			
			<i>Nonionella basispinata</i> (Cushman & Moyer)	6			
			<i>Coscinospira hemprichii</i> Ehrenberg, 1839	5			
			<i>Pyramidulina</i> sp.	4			
			<i>Pseudopyrgo milletti</i> (Cushman)	4			
			<i>Adelosina honghensis</i> (Lak.)	3			
			Ostracoda				15.45
			<i>Loxoconcha</i> sp.1	64			
			<i>Cypriconcha</i> sp.1	48			
			<i>Cytherella</i> sp.2	32			
			<i>Aglaioocypris</i> sp.	18			
			<i>Hemicytheridea</i> sp.	15			
			<i>Propontocypris</i> sp.3	12			
			<i>Loxoconcha</i> sp.4	8			
			Bivalvia				0.31
			<i>Bassina calophylla</i> (Philippi, 1836)	4			
			Polychaeta larvae				0.16
			<i>Glycera</i> sp.	2			
			Nematoda				0.94
			Nematoda sp.2	12			

Table 3.14 (Contd...): Winter 2006 Cruise.

Leg No.	Tr. No.	St. No.	Taxa	No. of Individual	Dominance (%)
III	1	7	Foraminifera		
			Ammonia beccarii (Linne)	820	85.42
			Quinqueloculina dimidiata Terquem, 1876	283	
			Quinqueloculina seminulum (Linne)	170	
			Spiroloculina depressa d"Orbigny, 1826	94	
			Spiroloculina sp.1	71	
			Triloculina sp.	62	
			Textularia sp.3	53	
			Spirotextularia sp.	38	
			Reophax textana (Cushman)	31	
			Brizalina sp.	29	
			Textularia conica d"Orbigny	26	
			Discorbis nitida (Williamson, 1858)	22	
			Trochamina inflata (Montagu)	19	
			Elphidium excavatum (Terquem, 1875)	17	
			Unknown foraminifera sp.29	15	
			Adelosina bicornis (Walker & Jacob, 1798)	13	
			Nodosaria sp.2	9	
			Lagena sp.8	3	
			Lagena semistriata Williamson	2	
			Dentritina arbuscula d"Orbigny	1	
			Ostracoda		
			Candona sp.	56	8.70
			Cypriconcha sp.2	42	
			Leptocythere sp.	27	
			Entocythere sp.1	20	
			Limnocythere sp.	16	
			Loxoconcha amygdalanux	11	
			Gastropoda and Scaphopoda		
			Dentalium octangulatum Donovan, 1803	12	1.87
			Heliacus variegates (Gmelin, 1791)	7	
			Dentalium sp.	5	
			Ringicula propinquans Hinds, 1844	4	
			Acme sp.	3	
			Unknown gastropodasp.6	3	
			Epitoniumsp.2	2	
			Diala semistriata (Philippi, 1849)	1	
			Bivalvia		
			Tellina fabula Gmelin, 1791	14	1.31
			Laevicardium papyraceum (Brugiere, 1789)	6	
			Tellina sp.2	4	
			Mactra sp.	2	
			Polychaeta larvae		
Glycera sp.	4	0.56			
Nephtys sp.1	3				
Prionospio sp.2	2				
Phyllodocidae sp.1	2				
Nematoda					
Nematoda sp.6	16	1.82			
Nematoda sp.1	12				
Nematoda sp.7	8				
Copepoda					
Microsetella sp.	4	0.30			
Clytemnestra sp.	2				

Table 3.14 (Contd...): Winter 2006 Cruise

Leg No.	Tr. No.	St. No.	Taxa	No. of Individual	Dominance (%)		
III	1	4	Foraminifera				
			Ammonia beccarii (Linne)	649	86.56		
			Spiroloculina depressa d"Orbigny, 1826	219			
			Spiroloculina excavata d"Orbigny, 1826	202			
			Triloculina sidebottomi (Martinotti)	181			
			Quinqueloculina costata d"Orbigny	165			
			Triloculinellus sp.	123			
			Quinqueloculina dimidiata Terquem, 1876	108			
			Quinqueloculina seminulum (Linne)	91			
			Quinqueloculina sp.5	82			
			Trochamina inflata (Montagu)	70			
			Elphidium excavatum (Terquem, 1875)	66			
			Protelphidium sp.	47			
			Elphidium articulatum (d"Obigny, 1839)	45			
			Discorbis nitida (Williamson, 1858)	30			
			Cibicides lobatulus (Walker & Jacob)	26			
			Cribroelphidium gerthi (Van Voorthuysen, 1957)	21			
			Protelphidium anglicum Murray, 1965b	18			
			Elphidium sp.1	15			
			Peneroplis planatus (Fichtel & Moll, 1798)	12			
			Nodophthalmidium sp.	8			
			Nodulina gracilis Kiaer, 1900	4			
			Nodosaria sp.2	2			
			Ostracoda				
			Candona sp.	63	8.32		
			Cypriconcha sp.2	48			
			Entocythere sp.1	32			
			Limnocythere sp.	25			
			Leptocythere sp.	17			
			Loxoconcha sp.2	15			
			Hemicytheridea sp.	10			
			Gastropoda				
			Ringicula propinquans Hinds, 1844	16	1.23		
			Acme sp.	10			
			Diala sp.1	5			
			Bivalvia				
			Tellina sp.2	14	1.31		
			Tellina sp.1	12			
			Carditopsis majeeda (Biggs, 1973)	7			
			Nematoda				
			Nematoda sp.5	17	2.02		
			Nematoda sp.1	15			
			Nematoda sp.3	10			
			Nematoda sp.2	9			
			Copepoda				
			Microsetella sp.	9	0.55		
			Clytemnestra sp.	5			

Table 3.14 (Contd...): Winter 2006 Cruise

Leg No.	Tr. No.	St. No.	Taxa	No. of Individual	Dominance (%)		
III	1	1	Foraminifera				
			<i>Spiroloculina depressa</i> d"Orbigny, 1826	296	87.66		
			<i>Quinqueloculina dimidiata</i> Terquem, 1876	144			
			<i>Spiroloculina</i> sp.1	112			
			<i>Bolivina</i> sp.2	97			
			<i>Triloculina</i> sp.	95			
			<i>Ammonia beccarii</i> (Linne)	90			
			<i>Spirophthalmidium acutimargo</i> (Brady)	61			
			<i>Quinqueloculina seminulum</i> (Linne)	47			
			<i>Quinqueloculina costata</i> d"Orbigny	41			
			Unknown foraminiferasp.3	38			
			<i>Textularia</i> sp.5	34			
			<i>Protelphidium anglicum</i> Murray, 1965b	18			
			<i>Elphidium articulatum</i> (d"Orbigny)	16			
			<i>Assilina</i> sp.	15			
			<i>Cribroelphidium gerthi</i> (Van voorthusen, 1957)	12			
			<i>Cibicides</i> sp.	10			
			<i>Georgianinasp.</i>	8			
			<i>Nodophthalmidium</i> sp.	6			
			<i>Pyramidulina</i> sp.	5			
			<i>Nodosaria</i> sp.3	4			
			<i>Lagena</i> sp.6	2			
			Ostracoda				
			<i>Cypriconcha</i> sp.2	35	6.02		
			<i>Loxoconcha</i> sp.1	17			
			<i>Cytherella</i> sp.2	12			
			<i>Propontocypris</i> sp.1	10			
			<i>Bythoceratina</i> sp.	5			
			Gastropoda				
			<i>Morchiella moreleti</i> (Fischer, 1877)	5	0.61		
			<i>Umbonium vestiarium</i> (Linnaeus, 1758)	3			
			Nematoda				
			Nematoda sp.3	33	4.95		
			Nematoda sp.5	17			
			Nematoda sp.1	15			
			Copepoda				
			<i>Clytemnestra</i> sp.	6	0.76		
			<i>Euterpina</i> sp.	4			

Table 3.14 (Contd...): Winter 2006 Cruise

Leg No.	Tr. No.	St. No.	Taxa	No. of Individual	Dominance (%)
II	9	55	Foraminifera		
			Bolivina multicostata	403	73.74
			Bolivina aff. Variabilis Williamson, 1858	302	
			Spiroloculina sp.7	281	
			Spiroloculina excavata d'Orbigny, 1826	178	
			Textulariopsis indistinct (Akimets)	164	
			Bolivinellina translucens (Phleger&F.L. Parker, 1951)	150	
			Tochamina inflata (Montagu)	148	
			Discorbis nitida (Williamson, 1858)	87	
			Cibicides sp.	58	
			Spiroloculinella sp.	52	
			Pseudopyrgo milletti (Cushman)	41	
			Sigmoihauerina bradyi (Cushman)	35	
			Triloculina sp.	30	
			Adelosina laevigata d'Orbigny, 1826	26	
			Unknown foraminiferasp.9	23	
			Spirotextularia sp.	17	
			Sigmoilinella sp.	14	
			Palaeomiliolina monstrosa (E.V. Bykova)	11	
			Lagena sp.2	7	
			Nodosaria affinis Reuss, 1846	5	
			Lagena semistriata Williamson	3	
			Spiroplectinata sp.	2	
			Bojarkaella firma V.A. Basov, 1968	2	
			Ostracoda		
			Cypriconcha sp.1	58	4.70
			Candona sp.	37	
			Cypriconcha sp.2	15	
			Entocythere sp.1	9	
			Limnocythere sp.	5	
			Entocythere sp.2	4	
			Loxoconcha sp.	2	
			Gastropoda		
			Ringicula propinquans Hinds, 1844	250	13.02
			Unknown gastropoda sp.3	75	
			Lippistes sp.	27	
			Unknown gastropodasp.1	8	
			Bivalvia		
			Tellina fabula Gmelin, 1791	210	7.59
			Polychaeta larvae		
			Phyllodocidae sp.1	2	0.25
			Prionospio sp.2	2	
			Nerillidae sp.	1	
			Prionospio sp.1	1	
			Nephtys sp.1	1	
			Nematoda		
			Nematoda sp.6	4	0.51
			Nematoda sp.3	3	
			Nematoda sp.7	3	
			Nematoda sp.1	1	
			Nematoda sp.2	1	
			Nematoda sp.4	1	
			Nematoda sp.5	1	
			Copepoda		
			Microsetella sp.	3	0.18
			Euterpina sp.	2	

Table 3.14 (Contd...): Winter 2006 Cruise

Leg No.	Tr. No.	St. No.	Taxa	No. of Individual	Dominance (%)
II	8	40	Foraminifera		
			<i>Bolivina multicostata</i>	720	67.84
			<i>Bolivinella translucens</i> (Phleger & F.L.Parker)	510	
			<i>Trochamina inflata</i> (Montagu)	186	
			<i>Discorbis nitida</i> (Williamson, 1858)	168	
			<i>Spiroloculina depressa</i> d"Orbigny, 1826	71	
			<i>Adelosina bicornis</i> (Walker & Jacob, 1798)	35	
			<i>Triloculina</i> sp.	26	
			<i>Adelosina laevigata</i> d`Orbigny, 1826	20	
			Unknown foraminiferasp.6	19	
			<i>Spiroloculina</i> sp.5	15	
			<i>Textulariopsis indistinct</i> (Akimets)	12	
			<i>Reophax textana</i> (Cushman)	10	
			<i>Cibicides lobatulus</i> (Walker & Jacob)	8	
			Unknown foraminiferasp.12	5	
			<i>Lagena</i> sp.2	3	
			<i>Nodosaria</i> sp.3	2	
			<i>Lagena gracillima</i> Cushman, J.A. 1913 (Seguenza, 1862)	2	
			Ostracoda		
			<i>Condonia</i> sp.	57	4.68
			<i>Cypriconcha</i> sp.1	31	
			<i>Leptocythere</i> sp.	17	
			<i>Entocythere</i> sp.1	15	
			<i>Cypriconcha</i> sp.2	5	
			Gastropoda		
			<i>Ringicula propinquans</i> Hinds, 1844	85	5.80
			<i>Diala</i> sp.1	58	
			<i>Acme</i> sp.	12	
			Bivalvia		
			<i>Tellina</i> sp.2	280	20.29
			<i>Tellina</i> sp.1	250	
			<i>Mactra</i> sp.	12	
			Polychaeta larvae		
<i>Phyllodocidae</i> sp.2	3	0.19			
<i>Nephtys</i> sp.2	2				
Nematoda					
Nematoda sp.2	8	0.86			
Nematoda sp.4	6				
Nematoda sp.6	5				
Nematoda sp.1	4				
Copepoda					
<i>Euterpina</i> sp.	5	0.34			
<i>Microsetella</i> sp.	4				

Table 3.14 (Contd...): Winter 2006 Cruise

Leg No.	Tr. No.	St. No.	Taxa	No. of Individual	Dominance (%)		
II	8	43	Foraminifera				
			Bolivina aff. Variabilis Williamson, 1858	703	75.79		
			Bolivina sp.4	352			
			Spiroloculina excavata d'Orbigny, 1826	107			
			Bolivinellina translucens (Phleger& F.L.Parker, 1951)	98			
			Trochamina inflate (Montagu)	95			
			Triloculina sp.	86			
			Textulariopsis indistinct (Akimets)	71			
			Textularia sp.2	64			
			Sigmoilinella sp.	30			
			Mesosigmoilina sp.	25			
			Cibicides sp.	21			
			Nonion sp.	18			
			Quinqueloculina seminulum (Linne)	16			
			Ammonia beccarii (Linne)	15			
			Cibicides lobatulus (Walker & Jacob)	12			
			Discorbis nitida (Williamson, 1858)	10			
			Unknown foraminiferasp.14	9			
			Adelosina laevigata d`Orbigny, 1826	7			
			Nodosaria sp.2	5			
			Adelosina bicornis (Walker & Jacob, 1798)	4			
			Lagena gracillima Cushman, J.A. 1913 (Seguenza, 1862)	3			
			Lagena sp.1	2			
			Ostracoda				
			Puricythereis sp.2	18	2.51		
			Cypriconcha sp.1	15			
			Entocythere sp.1	10			
			Cytherella sp.2	10			
			Leptocythere sp.	2			
			Hemicytheridea sp.	2			
			Cypriconcha sp.2	1			
			Gastropoda				
			Ringicula propinquans Hinds, 1844	50	3.76		
			Unknown gastropoda sp.6	22			
			Diala sp.2	15			
			Bivalvia				
			Tellina sp.1	170	16.21		
			Tellina fabula Gmelin, 1791	160			
			Lucina sp.	45			
			Polychaeta larvae				
			Phyllodocidae sp.1	2	0.17		
			Phyllodocidae sp.2	1			
			Prionospino sp.2	1			
			Nematoda				
			Nematoda sp.2	8	1.43		
			Nematoda sp.1	7			
			Nematoda sp.4	5			
			Nematoda sp.6	5			
			Nematoda sp.3	4			
			Nematoda sp.5	4			
			Copepoda				
			Microsetella sp.	2	0.13		
			Euterpina sp.	1			

Table 3.14 (Contd...): Winter 2006 Cruise

Leg No.	Tr. No.	St. No.	Taxa	No. of Individual	Dominance (%)
III	7	34	Foraminifera		
			<i>Ammonia beccarii</i> (Linne)	823	90.75
			<i>Spiroloculina excavata</i> d"Orbigny	315	
			<i>Spiroloculina</i> sp.5	208	
			<i>Quinqueloculina seminulum</i> (Linne)	142	
			<i>Bolivina multicostata</i>	91	
			<i>Triloculina</i> sp.	86	
			<i>Quinqueloculina</i> sp.2	82	
			Unknown foraminiferasp.13	77	
			<i>Globorotalia</i> sp.2	65	
			<i>Turkmenella granata</i> Bugrova	36	
			<i>Protelphidium anglicum</i> Murray, 1965b	30	
			<i>Trochamina inflata</i> (Montagu)	28	
			<i>Nodophthalmidium antillarum</i> (Cushman, 1922)	25	
			<i>Discorbis nitida</i> (Williamson, 1858)	21	
			<i>Paracibicides</i> sp.	18	
			Unknown foraminifera sp.29	15	
			<i>Cribroelphidium gerthi</i> (Van voorthuysen, 1957)	11	
			<i>Elphidium excavatum</i> (Terquem, 1875)	7	
			<i>Lagena sulcata</i> (Walker & Jacob)	6	
			<i>Lagena semistriata</i> Williamson	3	
			Ostracoda		
			<i>Puricythereis</i> sp.4	38	4.04
			Unknown ostracodasp.5	20	
			<i>Propontocypris</i> sp.3	15	
			<i>Cypriconcha</i> sp.2	12	
			<i>Leptocythere</i> sp.	8	
			Gastropoda and Scaphopoda		
			<i>Nisovenosa</i> sp.Sowerby, 1895	11	0.95
			<i>Epitonium</i> sp.2	7	
			<i>Dentalium</i> sp.	4	
			Bivalvia		
			<i>Tellina</i> sp.2	17	1.48
<i>Tellina</i> sp.1	12				
<i>Bassina calophylla</i> (Philippi, 1836)	5				
Nematoda					
Nematoda sp.1	37	2.30			
Nematoda sp.3	16				
Copepoda					
<i>Euterpina</i> sp.	8	0.48			
<i>Clytemnestra</i> sp.	3				

Table 3.14 (Contd...): Winter 2006 Cruise

Leg No.	Tr. No.	St. No.	Taxa	No. of Individual	Dominance (%)
III	7	36	Foraminifera		
			<i>Spiroloculina excavata</i> d"Orbigny, 1826	642	94.86
			<i>Ammonia beccarii</i> (Linne)	315	
			<i>Bolivina</i> sp.2	301	
			<i>Bolivina multicostata</i>	263	
			Unknown foraminifera sp.18	185	
			<i>Quinqueloculina seminulum</i> (Linne)	160	
			<i>Quinqueloculina</i> sp.3	129	
			<i>Triloculina</i> sp.	94	
			<i>Quinqueloculina dimidiate</i> (Terquem)	81	
			<i>Spiroloculina</i> sp.4	67	
			<i>Textulariopsis indistinta</i> (Akimets)	60	
			<i>Bolivina tectiformis</i> Cushman	34	
			<i>Ammobaculite stenomeca</i> Cushman & Waters	31	
			<i>Reophax textana</i> (Cushman)	27	
			<i>Sculptobaculites</i> sp.	25	
			<i>Brizalina</i> sp.	22	
			<i>Discorbis nitida</i> (Williamson, 1858)	17	
			<i>Globorotulina</i> sp.	15	
			<i>Nonion</i> sp.	14	
			<i>Elphidium excavatum</i> (Terquem, 1875)	12	
			<i>Elphidium articulatum</i> (d"Orbigny, 1839)	9	
			<i>Lagena</i> sp.2	6	
			Ostracoda		
			<i>Cypriconcha</i> sp.2	41	3.97
			<i>Loxoconcha</i> sp.1	28	
			<i>Hemicytheridea</i> sp.	15	
			<i>Leptocythere</i> sp.	12	
			<i>Cytherella</i> sp.1	9	
			Gastropoda		
			<i>Diala semistriata</i> (Philippi, 1849)	4	0.34
			<i>Stosicia</i> sp.	3	
			Unknown gastropoda sp.14	2	
			Bivalvia		
			<i>Lucina</i> sp.	8	0.57
			<i>Tellina</i> sp.2	5	
			<i>Mactra</i> sp.	2	
			Copepoda		
			<i>Microsetella</i> sp.	7	0.26

Table 3.14 (Contd...): Winter 2006 Cruise

Leg No.	Tr. No.	St. No.	Taxa	No. of Individual	Dominance (%)
III	7	39	Foraminifera		
			<i>Bolivina multicostata</i>	621	89.46
			<i>Spiroloculina</i> sp.2	318	
			<i>Quinqueloculina</i> sp.5	205	
			<i>Bolivina</i> aff. <i>Variabilis</i> Williamson, 1858	167	
			<i>Textularia earlandi</i> Parker	151	
			<i>Brizalina spathulata</i> (Williamson)	84	
			<i>Cibicides lobatulus</i> (Walker & Jacob)	59	
			<i>Ammonia beccarii</i> (Linne)	43	
			<i>Discorbis nitida</i> (Williamson, 1858)	39	
			<i>Globorotalia</i> sp.1	31	
			<i>Protelphidium anglicum</i> Murray, 1965b	28	
			<i>Nonion</i> sp.	26	
			<i>Nodophthalmidium antillarum</i> (Cushman, 1922)	25	
			<i>Nodulina gracilis</i> Kiaer, 1900	22	
			<i>Entosolenia globosa</i> (Reuss)	19	
			<i>Quinqueloculina dimidiate</i> (Terquem)	15	
			<i>Adelosina laevigata</i> d`Orbigny, 1826	14	
			<i>Elphidium crispum</i> (Linne)	12	
			<i>Lagena sulcata</i> (Walker & Jacob, 1798)	9	
			Unknown foraminiferasp.37	5	
			Ostracoda		
			<i>Cytherella</i> sp.2	34	4.63
			<i>Puricythereis</i> sp.2	28	
			<i>Cypriconcha</i> sp.1	17	
			<i>Entocythere</i> sp.2	12	
			<i>Candona</i> sp.	7	
			Gastropoda		
			<i>Tornatina persiana</i> Smith, 1872	9	1.13
			Unknown gastropodasp.3	7	
			<i>Salinaton</i> sp.	5	
			<i>Ringicula propinquans</i> Hinds, 1844	3	
			Bivalvia		
			<i>Tellina</i> sp.2	17	1.23
			<i>Tellina</i> sp.1	9	
			Nematoda		
			Nematoda sp.3	45	3.54
			Nematoda sp.1	18	
			Nematoda sp.4	12	

Table 3.14 (Contd...): Winter 2006 Cruise

Leg No.	Tr. No.	St. No.	Taxa	No. of Individual	Dominance (%)
III	6	27	Foraminifera		
			Quinqueloculina sp.4	329	86.02
			Quinqueloculina dimidiata (Terquem)	241	
			Protelphidium anglicum Murray, 1965b	92	
			Bolivina sp.3	90	
			Brizalina spathulata (Williamson)	84	
			Textularia sp.4	61	
			Textularia earlandi Parker	47	
			Bolivina spissa Cushman	36	
			Discorbis nitida (Williamson, 1858)	30	
			Elphidium sp.4	25	
			Unknown foraminiferasp.27	17	
			Nonion sp.	16	
			Globorotalia menardii (Parker, Jones & Brady)	14	
			Peneroplis arietinus (Batsch)	13	
			Nodophthalmidium sp.	10	
			Lagena sp.3	7	
			Lagena semistriata Williamson	6	
			Nodosaria sp.1	5	
			Lagena clavata d" Orbigny, (1846) var. setigera Millett. 1901	3	
			Ostracoda		
			Cypriconcha sp.2	30	6.26
			Loxoconcha sp.1	18	
			Leptocythere sp.	15	
			Cytherella sp.2	11	
			Lymnocythere sp.	8	
			Gastropoda		
			Umbonium vestiarium (Linnaeus, 1758)	12	1.99
			Ringicula propinquans Hinds, 1844	9	
			Acme sp.	5	
			Polychaeta larvae		
			Nephtys sp.2	8	1.30
			Phyllodocidae sp.1	6	
			Prionospio sp.1	3	
			Nematoda		
			Nematoda sp.6	26	3.82
			Nematoda sp.1	14	
Nematoda sp.5	10				
Copepoda					
Euterpina sp.	6	0.61			
Microsetella sp.	2				

Table 3.14 (Contd...): Winter 2006 Cruise

Leg No.	Tr. No.	St. No.	Taxa	No. of Individual	Dominance (%)
III	6	30	Foraminifera		
			Ammonia beccarii (Linne)	289	82.48
			Quinqueloculina costata d"Orbigny	211	
			Quinqueloculina sp.1	183	
			Spiroloculina depressa d"Orbigny, 1826	105	
			Bolivina multicostata	88	
			Textularia sp.	64	
			Triloculina sp.	56	
			Triloculina sidebottomi (Martinotti)	50	
			Bolivina tectiformis Cushman, 1926	47	
			Spiroplectinata sp.	38	
			Reophax scorpiurus d` Montfort, 1808	21	
			Discorbis nitida (Williamson, 1858)	16	
			Cibicides lobatulus (Walker & Jacob)	15	
			Trochamina inflate (Montagu)	12	
			Elphidium crispum (Linne)	10	
			Nodosaria sp.2	8	
			Lagena gracillima Cushman, J.A. 1913 (Seguenza, 1862)	6	
			Lagena sp.8	5	
			Spiroloculina excavata d"Orbigny, 1826	5	
			Ostracoda		
			Cypriconcha sp.1	42	7.99
			Entocythere sp.2	37	
			Leptocythere sp.	24	
			Cytherella sp.2	16	
			Gastropoda		
			Ringicula propinquans Hinds, 1844	17	1.81
			Creseis acicula (Rang, 1826)	10	
			Bivalvia		
			Tellina sp.2	21	2.68
			Carditopsis majeeda (Biggs, 1973)	12	
			Laevicardium papyraceum (Bruguiere, 1789)	7	
			Polychaeta larvae		
			Prionospio sp.1	8	1.07
			Nephtys sp.2	5	
			Glycera sp.	3	
Nematoda					
Nematoda sp.3	25	3.96			
Nematoda sp.1	19				
Nematoda sp.6	15				

Table 3.14 (Contd...): Winter 2006 Cruise

Leg No.	Tr. No.	St. No.	Taxa	No. of Individual	Dominance (%)
III	6	33	Foraminifera		
			Ammonia beccarii (Linne)	291	83.78
			Quinqueloculina dimidiata (Terquem)	175	
			Quinqueloculina sininulum (Linne)	143	
			Triloculina sp.	130	
			Spiroloculina excavata d"Orbigny	92	
			Spiroloculina sp.2	68	
			Bolivina multicostata	61	
			Sculptobaculites sp.	22	
			Ammobaculite stenomeca Cushman & Walker	19	
			Reophax scorpiurus d` Montfort, 1808	16	
			Bolivina sp.6	12	
			Bolivina tectiformis Cushman, 1926	8	
			Cibicides lobatulus (Walker & Jacob)	6	
			Anomalinella rostrata (Brady, 1881)	5	
			Elphidium excavatum (Terquem, 1875)	3	
			Turkmenella granata Bugrova	3	
			Unknown foraminiferasp.16	2	
			Lagena sp.2	2	
			Nodosaria sp.2	1	
			Ostracoda		
			Leptocythere sp.	55	9.81
			Cytherella sp.1	27	
			Entocythere sp.1	17	
			Aglaicypris sp.	12	
			Loxoconcha sp.2	5	
			Unknown ostracoda sp.17	4	
			Unknown ostracoda sp.18	4	
			Gastropoda		
			Natica sp.	7	0.95
			Diala sp.1	5	
			Bivalvia		
			Tellina sp.1	8	0.63
			Nematoda		
			Nematoda sp.2	30	3.32
			Nematoda sp.1	12	
			Copepoda		
			Euterpina sp.	11	0.87

Table 3.14 (Contd...): Winter 2006 Cruise

Leg No.	Tr. No.	St. No.	Taxa	No. of Individual	Dominance (%)
III	5	10a	Foraminifera		
			Quinqueloculina costata d"Orbigny	721	92.67
			Quinqueloculina sp.2	411	
			Spiroloculina excavata d"Orbigny, 1826	287	
			Triloculina sp.	115	
			Bolivina multicostata	101	
			Spiroloculina depressa d"Orbigny, 1826	79	
			Textularia sp.1	72	
			Bolivina spissa Cushman	63	
			Bolivina tectiformis Cushman, 1926	60	
			Cibicides lobatulus (Walker & Jacob)	38	
			Ammonia beccarii (Linne)	33	
			Anomalinella rostrata (Brady, 1881)	25	
			Elphidium excavatum (Terquem, 1875)	19	
			Discorbis nitida (Williamson, 1858)	17	
			Elphidium articulatum (d"Orbigny, 1839)	15	
			Trochamino inflata (Montagu)	14	
			Noionella sp.	12	
			Unknown foraminifera sp.21	10	
			Nodophthalmidium antillarum (Cushman, 1922)	9	
			Lagena sp.4	7	
			Nodesaria sp.3	4	
			Ostracoda		
			Leptocythere sp.	43	4.91
			Loxoconcha sp.1	25	
			Cytherella sp.1	17	
			Entocythere sp.2	15	
			Cypriconcha sp.2	12	
			Gastropoda		
			Ringicula propinquans Hinds, 1844	8	0.74
			Diala sp.1	6	
			Natica sp.	3	
			Nematoda		
			Nematoda sp.3	18	1.53
			Nematoda sp.1	12	
			Nematoda sp.4	5	
			Copepoda		
			Euterpina sp.	3	0.13

Table 3.14 (Contd...): Winter 2006 Cruise

Leg No.	Tr. No.	St. No.	Taxa	No. of Individual	Dominance (%)
III	5	24	Foraminifera		
			Ammonia beccarii (Linne)	803	89.52
			Quinqueloculina seminulum (Linne)	214	
			Spiroloculina excavata d"Orbigny, 1826	109	
			Bolivina sp.2	94	
			Quinqueloculina costata d"Orbigny	81	
			Textularia sp.2	65	
			Triloculina sidebottomi (Martinatti)	52	
			Quinqueloculina sp.7	47	
			Adelosina laevigata d`Orbigny, 1826	32	
			Unknown foraminiferasp.5	27	
			Triloculinellus sp.	23	
			Adelosina honghensis (Lak.)	18	
			Unknown foraminiferasp.15	15	
			Adelosina bocornis (Walker & Jacob)	14	
			Cibicides sp.	11	
			Discorbis nitida (Williamson, 1858)	10	
			Elphidium sp.2	9	
			Globorotalia sp.2	6	
			Paracibicides sp.	5	
			Lagena perlucida (Montagu, 1803)	3	
			Elphidium sp.1	3	
			Ostracoda		
			Actinocythereis scutigera (Brady, 1868)	39	6.33
			Cytherella sp.1	20	
			Callistocythere sp.	18	
			Loxoconcha sp.1	15	
			Leptocythere sp.	14	
			Entocythere sp.2	10	
			Gastropoda		
			Epitoniumsp.1	5	0.44
			Creseis acicula (Rang, 1828)	3	
			Bivalvia		
			Tellina sp.1	22	1.74
			Tellina sp.2	10	
			Nematoda		
			Nematoda sp.2	18	1.80
			Nematoda sp.1	15	
			Copepoda		
			Euterpina sp.	3	0.16

Table 3.14 (Contd...): Winter 2006 Cruise

Leg No.	Tr. No.	St. No.	Taxa	No. of Individual	Dominance (%)
I	18	26a	Foraminifera		
			<i>Bolivina aff. variabilis</i> Williamson, 1858	493	70.29
			<i>Spiroliculina</i> sp.8	324	
			<i>Ammonia beccarii</i> (Linne)	301	
			<i>Quinqueloculina costata</i> d" Orbigny	185	
			<i>Spirotextularia</i> sp.	92	
			<i>Bolivina tectiformis</i> Cushman, 1926	90	
			<i>Bolivina spissa</i> Cushman	57	
			<i>Textularia conica</i> d" Orbigny	53	
			<i>Elphidium</i> sp.2	41	
			<i>Spiroplectinella Wrightii</i> (Silverstri)	38	
			Unknown foraminifera sp.12	32	
			Unknown foraminifera sp.19	26	
			<i>Globorotalia</i> sp.2	20	
			Unknown foraminiferasp.25	17	
			<i>Planorbulina mediterraneensis</i> (Walker & Jacob)	12	
			Unknown foraminiferasp.15	11	
			<i>Gallitellina vivans</i> (Cushman)	8	
			<i>Elphidium gerthi</i> Van voorthuysen, 1957	7	
			<i>Globorotalia menardi</i> (Parker, Jones& Brady)	5	
			<i>Nodosaria pauciloculata</i> var. Luzonensis Cushman, 1921	4	
			<i>Nodosaria</i> sp.1	3	
			<i>Legena perlucida</i> (Montagu)	1	
			<i>Lagena</i> sp.7	1	
			<i>Lagena gracillima</i> Cushman, J.A. 1913 (Seguenza, 1862)	1	
			OSTACODA		
			<i>Loxoconcha</i> sp.2	123	12.50
			<i>Puricythereis</i> sp.1	90	
			<i>Cytherella</i> sp.2	54	
			<i>Lymnocythere</i> sp.	22	
			<i>Entocythere</i> sp.2	20	
			<i>Venericythere</i> sp.2	15	
			GASTROPODA		
			<i>Ringicula propinquans</i> Hinds, 1844	21	2.55
			<i>Dontolium octangulatum</i> Donovan, 1803	16	
			<i>Diala semistriata</i> (Philippi, 1849)	12	
			<i>Caecum californicum</i> Dall, 1885	7	
			<i>Lippistes</i> sp.	5	
			<i>Natica</i> sp.	3	
			<i>Epitonium</i> sp.	2	
			Bivalvia		
			<i>Laevicardium papyraceum</i> (Bruguiere, 1789)	19	1.66
			<i>Tellina fabula</i> Gmelin, 1791	12	
			<i>Tellina</i> sp.2	8	
			<i>Tellina</i> sp.1	4	
			Polychaeta larvae		
			<i>Nephtys</i> sp.1	34	2.93
			<i>Nerillidae</i> sp.	15	
			<i>Phyllodocidae</i> sp.2	8	
			<i>Phyllodocidae</i> sp.1	7	
			<i>Prionospio</i> sp.1	5	
			<i>Glycera</i> sp.	3	
			<i>Prionospio</i> sp.2	2	
			Nematoda		
			Nematoda sp.2	149	9.10
			Nematoda sp.5	67	
			Nematoda sp.1	11	
			Nematoda sp.7	9	
			Copepoda		
			<i>Microsetella</i> sp.	18	0.96
			<i>Clytemnestra</i> sp.	7	

Table 3.14 (Contd...): Winter 2006 Cruise

Leg No.	Tr. No.	St. No.	Taxa	No. of Individual	Dominance (%)
I	18	98	Foraminifera		
			<i>Bolivina multicostrata</i>	716	55.33
			<i>Bolivina</i> sp.1	202	
			<i>Ammonia beccarii</i> (Linne)	96	
			<i>Quinqueloculina dimidiata</i> (Terquem)	71	
			<i>Quinqueloculina costata</i> d"Orbigny	64	
			<i>Bolivina</i> aff. <i>Variabilis</i> Williamson, 1858	60	
			<i>Spiroloculina</i> sp.6	57	
			<i>Sigmoilinella</i> sp.	43	
			<i>Ammobaculite stenomeca</i> Cushman & Waters	41	
			<i>Reophax scorpiurus</i> d` Montfort, 1808	24	
			<i>Cribrostomoides Jeffreysii</i> Cushman, 1920	22	
			<i>Brizalina</i> sp.	20	
			<i>Cibicides</i> sp.	20	
			Unknown foraminifera sp.11	18	
			<i>Anomalinella rostrata</i> (Brady, 1881)	18	
			<i>Globorotalia</i> sp.1	17	
			Unknown sp.14	8	
			<i>Biapertorbis</i> sp.	6	
			<i>Turkmenella</i> sp.	5	
			<i>Paracibicides</i> sp.	3	
			<i>Elphidium articulatum</i> (d"Orbigny, 1839)	3	
			<i>Elphidium</i> sp.3	1	
			<i>Protelphidium</i> sp.	1	
			Ostracoda		
			<i>Loxoconcha</i> sp.2	219	21.82
			<i>Loxoconcha</i> sp.1	165	
			<i>Puricythereis</i> sp.2	83	
			<i>Propontocypris</i> sp.3	40	
			<i>Venericythere</i> sp.1	37	
			<i>Callistocythere</i> sp.	28	
			Unknown Ostracoda sp.6	15	
			Unknown Ostracodasp.13	7	
			UnknownOstracodasp.12	3	
			<i>Bythoceratina</i> sp.	2	
			Gastropoda and Scaphopoda		
			<i>Ringicula propinquans</i> Hinds, 1844	18	2.59
			<i>Laevidentalium</i> " of <i>curvotracheatum</i> (Plate,1908)	10	
			<i>Dentalium octangulatum</i> Donovan, 1803	9	
			<i>Salinator</i> sp.	8	
			<i>Tornatina persiana</i> Smith, 1872	8	
			<i>Parastrophia asturiana</i> De Folin, 1870	6	
			<i>Calyptreaa capensis</i> Tomlin, 1931	4	
			Unknown gastropoda sp.3	3	
			Unknown gastropoda sp.9	2	
			Unknown gastropoda sp.12	1	
			<i>Phenacovalva</i> sp.	1	
			<i>Natica</i> sp.	1	
			Bivalvia		
			<i>Mactra</i> sp.	48	4.82
			<i>Tellina</i> sp.1	43	
			<i>Carditopsis maejeeda</i> (Biggs, 1973)	19	
			<i>Tellina fabula</i> Gmelin, 1791	12	
			<i>Bassina calophylla</i> (Philippi, 1836)	7	
			<i>Lucina</i> sp.	5	
			Polychaeta larvae		
			<i>Phyllodocidae</i> sp.2	19	1.75
			<i>Prionospio</i> sp.1	14	
			<i>Nerillidae</i> sp.	8	
			<i>Glycera</i> sp.2	4	
			<i>Nephtys</i> sp.2	3	
			Nematoda		
			Nematoda sp.1	208	13.06
			Nematoda sp.4	93	
			Nematoda sp.2	42	
			Nematoda sp.3	15	
			Copepoda		
			<i>Microetella</i> sp.	12	0.62
			<i>Euterpina</i> sp.	5	

Table 3.14 (Contd...): Winter 2006 Cruise

Leg No.	Tr. No.	St. No.	Taxa	No. of Individual	Dominance (%)
I	17a	25a	Foraminifera		
			<i>Ammonia beccarii</i> (Linne)	1352	83.98
			<i>Quinqueloculina costata</i> d"Orbigny	260	
			<i>Textular</i> sp.4	253	
			<i>Textular earland</i> Parker	197	
			<i>Spiroloculina excavata</i> d"Orbigny	93	
			<i>Spiroloculina depressa</i> d"Orbigny	91	
			<i>Textularia indistinct</i> (Akimets)	89	
			<i>Bolivina translucens</i> (Phleger & F.L.Parker)	80	
			<i>Brizalina</i> sp.	74	
			<i>Brizalina spathulata</i> (Williamson)	71	
			Unknown foraminifera sp.21	63	
			Unknown foraminiferasp.19	42	
			<i>Elphidium excavatum</i> (Terquem, 1875)	37	
			<i>Elphidium crispum</i> (Linne)	21	
			Unknown foraminiferasp.34	15	
			<i>Valvulineria inaequalis</i> (d"orbigny)	8	
			Unknown foraminifera sp.31	5	
			<i>Pyramidulina</i> sp.	3	
			<i>Lagena</i> sp.3	2	
			<i>Lagena sulcata</i> (Walker & Jacob, 1798)	2	
			Ostracoda		
			<i>Actinocythereis scutigera</i> (Brandy, 1868)	92	8.02
			<i>Loxoconcha amygdalanux</i>	48	
			<i>Cytherella</i> sp.1	34	
			<i>Entocythere</i> sp.1	26	
			<i>Leptocythere</i> sp.	18	
			<i>Cypriconcha</i> sp.1	13	
			Unknown ostracoda sp.14	10	
			Unknown ostracoda sp.17	8	
			Unknown ostracoda sp.24	4	
			<i>Proponto cypris</i> sp.3	2	
			Gastropoda		
			<i>Ringicula propinquans</i> Hinds, 1844	21	1.57
			<i>Acme</i> sp.	14	
			Unknowngastropodasp.12	6	
			<i>Tornatina persiana</i> Smith, 1872	3	
			<i>Diala</i> sp.1	2	
			Unknowngastropodasp.10	2	
			<i>Epitonium</i> sp.2	2	
			Bivalvia		
			<i>Tellina</i> sp.2	12	0.82
			<i>Tellina fabula</i> Gmelin, 1791	9	
			<i>Bassina calophylla</i> (Philippi, 1836)	5	
			Polycheta		
			<i>Nephtys</i> sp.1	16	1.41
			<i>Glycera</i> sp.	11	
			<i>Phyllodacidae</i> sp.2	9	
			<i>Prionospio</i> sp.2	6	
			<i>Nerillidae</i> sp.	3	
			Nematoda		
			Nematoda sp.3	63	3.37
			Nematoda sp.4	29	
			Nematoda sp.1	15	
			Copepoda		
			<i>Clytemnestra</i> sp.	17	0.82
			<i>Microsetella</i> sp.	9	

Table 3.14 (Contd...): Winter 2006 Cruise

Leg No.	Tr. No.	St. No.	Taxa	No. of Individual	Dominance (%)		
I	17	93	Foraminifera				
			<i>Nodosaria affinis</i> Reuss, 1846	2940	97.05		
			<i>Quinqueloculina costata</i> d"Orbigny	2922			
			<i>Quinqueloculina dimidiata</i> (Terquem)	1860			
			<i>Spiroloculina depressa</i> d"Orbigny, 1826	826			
			<i>Spiroloculina excavata</i> d"Orbigny, 1826	817			
			<i>Spiroloculina</i> sp.1	403			
			<i>Textularia conica</i> d"Orbigny	332			
			<i>Textularia</i> sp.5	188			
			<i>Textularia</i> sp.3	170			
			<i>Bolivina</i> sp.2	145			
			<i>Bolivina spissa</i> Cushman	93			
			<i>Spirotextularia</i> sp.	88			
			Unknown foraminifera sp.22	80			
			Unknown foraminifera sp.17	67			
			<i>Biapertorbis</i> sp.	18			
			<i>Quinqueloculina</i> sp.5	17			
			<i>Quinqueloculina</i> sp.7	15			
			Unknown foraminifera sp.20	12			
			<i>Elphidium excavatum</i> (Terqum)	8			
			<i>Elphidium</i> sp.4	4			
			<i>Lagena</i> sp.8	3			
			<i>Nodosaria</i> sp.2	2			
			Ostracoda				
			<i>Alocopocythere reticulata</i> (Hartman, 1964)	49	1.93		
			<i>Puricythereis</i> sp.2	45			
			<i>Loxoconcha amygdalanux</i>	37			
			Unknown ostracoda sp.16	31			
			Unknown ostracoda sp.15	24			
			<i>Leptocythere</i> sp.	18			
			<i>Entocythere</i> sp.2	7			
			<i>Aglaiocypris</i> sp.	5			
			Unknown ostracoda sp.20	3			
			Gastropoda and Scaphopoda				
			<i>Stoscia</i> sp.	12	0.25		
			<i>Diala semistriata</i> (Philippi, 1849)	6			
			<i>Epitonium</i> sp.2	4			
			<i>Ringicula propinquans</i> Hinds, 1844	3			
			<i>Caecum californicum</i> Dall, 1855	2			
			<i>Dentalium</i> sp.	2			
			Bivalvia				
			<i>Bassina calophylla</i> (Philippi, 1836)	8	0.15		
			<i>Tellina</i> sp.2	4			
			<i>Carditopsis majeeda</i> (Biggs, 1973)	3			
			<i>Lucina</i> sp.	2			
			Polychaeta larvae				
			<i>Nephtys</i> sp.2	4	0.07		
			<i>Glycera</i> sp.	2			
			<i>Phyllodocidae</i> sp.2	1			
			<i>Prionospio</i> sp.2	1			
			Nematoda				
			Nematoda sp.3	25	0.47		
			Nematoda sp.4	16			
			Nematoda sp.6	12			
			Copepoda				
			<i>Microsetella</i> sp.	9	0.08		

Table 3.14 (Contd...): Winter 2006 Cruise

Leg No.	Tr. No.	St. No.	Taxa	No. of Individual	Dominance (%)
I	17	97	Foraminifera		
			Bolivina tectifromis Cushman, 1926	394	69.20
			Bolivina vaughani Natland, 1938	182	
			Unknownforaminiferasp.9	96	
			Quinqueloculina sp.7	80	
			Unknown foraminifera sp.27	67	
			Nonionella basispinata (Cushman & Moyer)	51	
			Nonionella sp.	23	
			Coscinospira hemprichii Ehrenberg, 1839	14	
			Unknownforaminiferasp.32	11	
			Entosolenia globosa (Reuss)	8	
			Elphidium excavatum (Terquem, 1875)	7	
			Elphidium sp.4	6	
			Unknown foraminifera sp.36	3	
			Lagena sp.6	2	
			Lagena sp.8	1	
			Lagena clavata d" Orbigny, (1846) var. setigera Millett. 1901	1	
			Ostracoda		
			Loxoconcha sp.1	98	21.29
			Cytherella sp.2	63	
			Hemicytheridea sp.	54	
			Leptocythere sp.	31	
			Cypriconcha sp.2	17	
			Entocythere sp.2	12	
			Triebelina sp.	8	
			Aglaiocypris sp.	4	
			Puricythereis sp.4	2	
			Puricythereis sp.3	2	
			Gastropoda and Scaphopoda		
			Turbonilla linjaica Melvill & Standen, 1901	11	3.35
			Ringicula propinquans Hinds, 1884	8	
			Unknowngastropodasp.13	6	
			Epitom sp.1	5	
			Nisovenosa Sowerby, 1895	4	
			Unknown gastropoda sp.15	4	
			Pupa affinis (A.Adams, 1854)	3	
			Heliacus variegates (Gmelin, 1791)	2	
			Dentalium sp.	2	
			Unknown gastropoda sp.4	1	
			Dentalium octangulatum Donovan, 1803	1	
			Bivalvia		
			Tellina fabulaGmelin, 1791	9	1.24
			Tellina sp.1	6	
			Mactra sp.	2	
			Polychaeta larvae		
			Phyllodocidae sp.1	14	2.19
			Glycera sp.	8	
			Nephtys sp.2	5	
			Nerillidae sp.	3	
			Nematoda		
			Nematoda sp.3	16	2.19
			Nematoda sp.1	10	
			Nematoda sp.7	4	
			Copepoda		
			Euterpina sp.	5	0.36

Table 3.14 (Contd...): Winter 2006 Cruise

Leg No.	Tr. No.	St. No.	Taxa	No. of Individual	Dominance (%)
I	16	88	Foraminifera		
			<i>Bolivina aff variabilis</i> Williamson, 1858	325	79.64
			<i>Bolivina multicostata</i>	108	
			<i>Textular</i> sp.1	67	
			<i>Sculptobaculites</i> sp.	34	
			Unknownforaminiferasp.23	21	
			<i>Triloculina</i> sp.	18	
			<i>Triloculina sidebottomi</i> (Martinotti)	13	
			<i>Quinqueloculina</i> sp.6	9	
			<i>Reophax textana</i> (Cushman)	7	
			<i>Brizalina spathulata</i> (Williamson)	5	
			<i>Elphidium</i> sp.1	4	
			<i>Assilina</i> sp.	3	
			Unknown foraminiferasp.26	2	
			<i>Nodophthalmidium antillarum</i> (Cushman, 1922)	2	
			<i>Lagena</i> sp.1	2	
			<i>Lagena swcata</i> (Walkcob& Jacob, 1798)	1	
			<i>Nodosaria</i> sp.3	1	
			Ostracoda		
			<i>Puricythereis exquisite</i> (Bate & Sheppard, 1980)	43	14.21
			<i>Propontocypris</i> sp.2	21	
			<i>Loxoconcha amygdalanux</i>	19	
			<i>Cytherella</i> sp.1	16	
			<i>Venericythere</i> sp.1	12	
			Gastropoda		
			<i>Tornatina persiana</i> Smith, 1872	11	2.18
			<i>Salinator</i> sp.	4	
			<i>Ringicula propinquans</i> Hinds, 1844	2	
			Bivalvia		
			<i>Tellina fabula</i> Gmelin, 1791	10	1.28
			Polychaeta larvae		
			<i>Glycera</i> sp.	8	2.69
			<i>Nephtys</i> sp.2	3	

Table 3.14 (Contd...): Winter 2006 Cruise

Leg No.	Tr. No.	St. No.	Taxa	No. of Individual	Dominance (%)		
I	15a	21a	Foraminifera				
			<i>Bolivina multicostata</i>	389	76.91		
			<i>Bolivina</i> sp.5	165			
			<i>Ammonia beccarii</i> (Linne)	94			
			<i>Spiroloculina depressa</i> d"Orbigny, 1826	80			
			<i>Elphidium excavatum</i> (Terquem, 1875)	32			
			<i>Spiroloculina excavatum</i> d"Orbigny	28			
			<i>Spiroloculina dimidiate</i> Terquem	24			
			<i>Quinqueloculina</i> sp.3	20			
			<i>Spiroplectinata</i> sp.	17			
			<i>Textularia</i> sp.2	14			
			<i>Cribrostomoides jeffreysii</i> Cushman, 1920	11			
			<i>Brizalina</i> sp.	8			
			Unknown foraminifera sp.35	6			
			<i>Entosolenia</i> sp	5			
			<i>Lagena clavata</i> d" Orbigny, (1846) var. setigera Millett. 1901	3			
			Ostracoda			15.54	
			<i>Cytherella</i> sp.3	51			
			Unknown ostracoda sp.15	43			
			<i>Actinocythereis scutigera</i> (Brandy, 1868)	39			
			Unknwon ostracoda sp.2	16			
			<i>Puricythereis</i> sp.1	11			
			<i>Loxoconcha</i> sp.2	7			
			<i>Loxoconcha</i> sp.1	5			
			<i>Krithe</i> sp.	4			
			<i>Propontocypris</i> sp.1	3			
			<i>Loxconcha</i> sp.4	2			
			Gastropoda			1.80	
			<i>Phenacovolva</i> sp.	8			
			Unknowngastropodasp.1	7			
			<i>Lippistes</i> sp.	4			
			<i>Morchiella moreleti</i> (Fisher, 1877)			2	0.15
			Polchaeta				
			<i>Nephtys</i> sp.1			6	
			Nematoda			5.24	
			Nematoda sp.2				38
			Nematoda sp.1				15
			Nematoda sp.6			8	

Table 3.14 (Contd...): Winter 2006 Cruise

Leg No.	Tr. No.	St. No.	Taxa	No. of Individual	Dominance (%)
I	15	87	Foraminifera		
			Bolivina aff. Kvariabilis Williamson, 1858	285	77.51
			Ammonia beccarii (Linne)	168	
			Bolivina sp.3	94	
			Textularia earlandi Parker	53	
			Texdtularia indistinct (Akimets)	39	
			Spiroloculina sp.7	27	
			Quinqueloculina seminulum (Linne)	25	
			Quinqueloculina costata d"Orbigny	21	
			Spiroloculina depressa d"Orbigny, 1826	19	
			Bolivina multicostata	15	
			Bolivina spissa Cushman	13	
			Spirotextularia sp.	10	
			Reophax textana (Cushman)	9	
			Brizalina sp.	7	
			Elphidium excavatum (Terquem, 1875)	6	
			Elphidium sp.1	4	
			Lagena sp.3	3	
			Pyramidulina sp.	3	
			Quasisproplectamina nuda (Lalicker)	2	
			Ostracoda		
			Puricythereis sp.1	44	11.29
			Triebelina sp.	26	
			Loxoconcha sp.4	20	
			Hemicytheridea sp.	15	
			Cytherella sp.1	12	
			Gastropoda and Scaphopoda		
			Epitoniumsp.1	14	3.96
			Diala semistriata (Philippi, 1849)	11	
			Ringicula propinquans Hinds, 1844	7	
			Caecum californicum Dall, 1885	6	
			Dentalium sp.	3	
			Bivalvia		
			Tellina fobula Gmelin, 1791	12	1.64
			Tellina sp.1	5	
			Nematoda		
			Nematoda sp.1	28	4.34
			Nematoda sp.2	17	
			Copepoda		
			Clytemnestra sp.	85	1.25
			Microsetella sp.	8	

Table 3.14 (Contd...): Winter 2006 Cruise

Leg No.	Tr. No.	St. No.	Taxa	No. of Individual	Dominance (%)
I	15	85	Foraminifera		
			<i>Ammonia beccarii</i> (Linne)	561	89.80
			<i>Spiroloculina depressa</i> d"orbigny, 1826	428	
			<i>Spiroloculina</i> sp.1	264	
			<i>Spiroloculina dimidiata</i> (Terquem)	195	
			<i>Quinqueloculina</i> sp.5	82	
			<i>Quinqueloculina seminulum</i> (Linne)	80	
			<i>Spiroloculina</i> sp.4	73	
			<i>Spiroloculina</i> sp.8	55	
			<i>Textularia concia</i> d"Orbigny	47	
			<i>Protelphidium</i> sp.	31	
			<i>Elphidium excavatum</i> (Terquem, 1875)	28	
			<i>Nonionella</i> sp.	24	
			<i>Geogianina</i> sp.	19	
			<i>Textularia</i> sp.5	18	
			<i>Elphidium</i> sp.2	16	
			<i>Lagena</i> sp.3	14	
			<i>Nodophthalmidium</i> sp.	11	
			<i>Lagena perlucida</i> (Montagu, 1803)	9	
			<i>Nodosaria</i> sp.2	7	
			Unknownforaminiferasp.37	6	
			<i>Lagena clavata</i> d" Orbigny, (1846) var. setigera Millett. 1901	5	
			Ostracoda		
			<i>Leptocythere</i> sp.	67	6.01
			<i>Entocythere</i> sp.1	24	
			Unknown Ostracoda sp.6	16	
			<i>Puricythereis</i> sp.2	10	
			<i>Loxoconcha</i> sp.4	8	
			<i>Cypriconcha</i> sp.1	6	
			<i>Bosasella</i> sp.	1	
			Gastropoda		
			<i>Ringicula propinquans</i> Hinds, 1844	17	1.77
			<i>Tornatina persiana</i> Smith, 1872	9	
			Unknowngastropodasp.11	7	
			<i>Umbonium vestiarium</i> (Linneeus, 1758)	4	
			<i>Morchiella moreleti</i> (Fischer, 1877)	2	
			Nematoda		
			Nematoda sp.2	26	1.82
			Nematoda sp.5	8	
			Nematoda sp.1	6	
			Copepoda		
			<i>Micosetella</i> sp.	8	0.59
			<i>Clytemnestra</i> sp.	5	

Table 3.14 (Contd...): Winter 2006 Cruise

Leg No.	Tr. No.	St. No.	Taxa	No. of Individual	Dominance (%)
I	15	83	Foraminifera		
			Ammonia beccarii (Linne)	823	84.27
			Quinqueloculina costata d"Orbigny	412	
			Quinqueloculina sp.2	207	
			Spiroloculina depressa d"Orbigny	165	
			Spiroloculina excavata d"Orbigny 1826	143	
			Quinqueloculina sp.4	108	
			Triloculinellus sp.	94	
			Quinqueloculina seminulum (Linne)	65	
			Textularia conica d"Orbigny	61	
			Textularia sp.5	57	
			Palaeomiliolina monstrosa (E.V. Bykova)	22	
			Sigmoilinella sp.	18	
			Bolivina costata	12	
			Bolivina sp.4	9	
			Textular sp.3	6	
			Brizalina spathulata (Williamson)	5	
			Elphidium excavatum (Terquem, 1875)	2	
			Elphidium sp.3	2	
			Unknown foraminifera sp.29	1	
			Unknown foraminifera sp.30	1	
			Ostracoda		
			Actinocythereis scutigera (Brady, 1868)	93	12.15
			Unknown ostracodasp.6	62	
			Cytherella sp.2	58	
			Aglaioocypris sp.	40	
			Loxconcha sp.2	24	
			Alocopocythere reticulate (Hartman, 1964)	15	
			Unknown ostracoda sp.20	10	
			Unknown ostracoda sp.21	7	
			Polychaeta larvae		
			Nephtys sp.1	14	1.03
			Nerillidae sp.	6	
			Glycera sp.	4	
			Phyllodocidae sp.2	3	
			Nematoda		
			Nematoda sp.2	47	2.55
			Nematoda sp.7	12	
			Nematoda sp.3	8	

Table 3.14 (Contd...): Winter 2006 Cruise

Leg No.	Tr. No.	St. No.	Taxa	No. of Individual	Dominance (%)
III	5	25	Foraminifera		
			Ammonia beccarii (Linne)	464	89.47
			Spiroloculina depressa d"Orbigny, 1826	276	
			Quinqueloculina dimidata (Terquem)	151	
			Spiroloculina sp.2	138	
			Spiroloculina excavata d"Orbigny	112	
			Spiroloculina sp.3	97	
			Triloculina sidebottomi (Martinotti)	66	
			Quinqueloculina seminulum (Linne)	60	
			Quinqueloculina costata d"Orbigny	47	
			Textularia sp.5	41	
			Textularia conica d"Orbigny	39	
			Discorbis nitida (Williamson, 1858)	32	
			Turkmenella granata Bugrova	25	
			Criboelphidium gerthi (Van Voorthuysen,1957)	21	
			Elphidium excavatum (Terquem)	18	
			Nonionella sp.	16	
			Peneproplis arietinus (Batsch)	16	
			Unknown foraminiferasp.13	12	
			Dendritina arbuscula d"Orbigny, 1826	10	
			Lagena clavata d" Orbigny, (1846) var. setigera	6	
			Millett. 1901	2	
			Lagena sp.1		
			Ostracoda		
			Loxoconcha amygdalanux	50	6.56
			Puricythereis sp.2	27	
			Cytherella sp.2	15	
			Propontocypris sp.2	12	
			Candona sp.	9	
			Entocythere sp.2	8	
			Gastropoda		
			Ringicula propinquans Hinds, 1844	7	0.70
			Acme sp.	4	
			Diala sp.1	2	
			Nematoda		
			Nematoda sp.4	25	3.15
			Nematoda sp.1	12	
			Nematoda sp.5	9	
			Nematoda sp.3	7	
			Nematoda sp.6	5	
			Copepoda		
			Clytemnestra sp.	2	0.11

Table 3.14 (Contd...): Winter 2006 Cruise

Leg No.	Tr. No.	St. No.	Taxa	No. of Individual	Dominance (%)
III	5	26	Foraminifera		
			Quinqueloculina dimidiata Terquem, 1876	315	85.90
			Triloculina sp.	209	
			Quinqueloculina sp.2	173	
			Bolivina aff. variabilis Williamson, 1858	88	
			Quinqueloculina poeyana d"Orbigny	67	
			Bolivina sp.5	65	
			Spiroloculina depressa d"Orbigny, 1826	60	
			Trochamina inflata (Montagu)	46	
			Protelphidium anglicum Murray, 1965b	40	
			Peneroplis planatus (Fichtel & Moll, 1798)	34	
			Unknown foraminiferasp.28	26	
			Spirophthalmidium acutimargo (Brady)	24	
			Adelosina bicornis (Walker & Jacob, 1798)	21	
			Spiroloculina excavata d"Orbigny, 1826	17	
			Brizalina spathulata (Williamson)	14	
			Textularia sp.4	12	
			Sculptobaculites sp.	9	
			Lagena sp.3	8	
			Lagena semistriata Williamson	6	
			Nodosaria sp.3	3	
			Ostracoda		
			Candona sp.	48	7.71
			Leptocythere sp.	35	
			Entocythere sp.1	18	
			Loxoconcha sp.2	10	
			Alocopocythere reticulata(Hartman, 1964)	8	
			Gastropoda		
			Umbonium vestiarium (Linnaeus, 1758)	8	1.04
			Ringicula propinquans Hinds, 1844	7	
			Bivalvia		
			Laevicardium papyraceum (Bruguiere, 1789)	5	0.76
			Tellina sp.2	4	
			Lucina sp.	2	
			Nematoda		
			Nematoda sp.1	30	4.37
			Nematoda sp.5	21	
Nematoda sp.3	12				
Copepoda					
Euterpina sp.	3	0.21			

Table 3.14 (Contd...): Winter 2006 Cruise

Leg No.	Tr. No.	St. No.	Taxa	No. of Individual	Dominance (%)
III	5	11a	Foraminifera		
			Quinqueloculina sp.2	334	85.10
			Quinqueloculina dimidiata Terquem, 1876	169	
			Unknown foraminiferasp.3	161	
			Discorbis nitida (Williamson, 1858)	147	
			Ammonia beccarii (Linne)	124	
			Globorotalia sp.1	108	
			Adelosina honghensis (Lak.)	91	
			Trochamina inflata (Montagu)	83	
			Spiroloculina sp.7	82	
			Adelosina laevigata d`Orbigny, 1826	69	
			Bolivina multicostata	44	
			Peneroplis planatus (Fichtel & Moll, 1798)	35	
			Unknown foraminifera sp.10	29	
			Nodophthalmidium sp.	26	
			Nodulina gracilis Kiaer, 1900	19	
			Georghianinasp.	15	
			Pyramidulina sp.	12	
			Bojarkaella firma V.A. Basov, 1968	8	
			Nodosaria pauciloculata var. Luzonensis Cushman, 1921	7	
			Lagena sp.7	2	
			Ostracoda		
			Cytherella sp.1	49	8.32
			Loxoconcha sp.2	37	
			Cypriconcha sp.1	25	
			Enthocythere sp.2	18	
			Puricythereis sp.2	14	
			Hemicytheridea sp.	10	
			Gastropoda and Scaphopoda		
			Ringicula propinquans Hinds, 1844	15	1.47
			Acme sp.	7	
			Dentalium sp.	5	
			Nematoda		
			Nematoda sp.5	34	5.11
			Nematoda sp.1	20	
			Nematoda sp.3	15	
			Nematoda sp.6	10	
			Nematoda sp.2	8	
			Nematoda sp.7	7	

Table 3.14 (Contd...): Winter 2006 Cruise

Leg No.	Tr. No.	St. No.	Taxa	No. of Individual	Dominance (%)
III	4	20	Foraminifera		
			Quinqueloculina dimidiata Terquem, 1876	318	86.88
			Bolivina spissa Cushman	205	
			Spiroloculina depressa d"Orbigny	183	
			Quinqueloculina sp.1	160	
			Triloculinellus sp.	137	
			Textularia sp.2	74	
			Textulariopsis indistinct (Akimets)	68	
			Ammonia beccarii (Linne)	51	
			Reophax textana (Cushman)	37	
			Spiroplectinella wrightii (Silvestri)	32	
			Discorbis nitida (Williamson, 1858)	25	
			Globorotalia sp.2	17	
			Protelphidium sp.	13	
			Elphidium excavatum (Terquem, 1875)	12	
			Peneroplis planatus (Fichtel & Moll, 1798)	10	
			Nodophthalmidium sp.	8	
			Nonionella basispinata (Cushman & Moyer)	7	
			Pyramidulina sp.	6	
			Lagena perlucida (Montagu, 1803)	5	
			Lagena sp.2	3	
			Ostracoda		
			Loxoconcha sp.2	42	7.22
			Leptocythere sp.	21	
			Cypriconcha sp.1	17	
			Cypriconcha sp.2	15	
			Cytherella sp.1	10	
			Entocythere sp.2	9	
			Gastropoda		
			Ringicula propinquans Hinds, 1844	9	0.89
			Acme sp.	5	
			Nematoda		
			Nematoda sp.2	29	4.69
			Nematoda sp.3	18	
			Nematoda sp.1	15	
			Nematoda sp.5	12	
			Copepoda		
			Clytemnestra sp.	5	0.32

Table 3.14 (Contd...): Winter 2006 Cruise

Leg No.	Tr. No.	St. No.	Taxa	No. of Individual	Dominance (%)
III	4	22	Foraminifera		
			Quinqueloculina sp.2	710	90.83
			Ammonia beccarii (Linne)	283	
			Quinqueloculina dimidiata Terquem, 1876	154	
			Bolivina tectiformis Cushman, 1926	98	
			Spiroloculina depressa d"Orbigny, 1826	72	
			Textularia sp.1	65	
			Spiroloculina excavatia d"Orbigny, 1826	60	
			Reophax scorpiurus d` Montfort, 1808	49	
			Sculptobaculites sp.	41	
			Unknown foraminiferasp.12	32	
			Trochamina inflata (Montagu)	26	
			Protelphidium anglicum Murray, 1965b	22	
			Elphidium excavatum (Terquem, 1875)	19	
			Georghianinasp.	15	
			Adelosina bicornis (Walker & Jacob, 1798)	14	
			Spiroloculina sp.7	10	
			Adelosina laevigata d`Orbigny, 1826	9	
			Lagena sp.3	3	
			Modosaria sp.2	2	
			Dendritina arbuscula d"Orbigny, 1826	1	
			Ostracoda		
			Cytherella sp.2	33	5.61
			Puricythereis sp.3	24	
			Entocythere sp.2	20	
			Cypriconcha sp.1	15	
			Candona sp.	12	
			Gastropoda		
			Diala semistriata (Philippi, 1849)	7	0.75
			Epitoniumsp.1	5	
			Unknown gastropoda sp.15	2	
			Nematoda		
			Nematoda sp.3	28	2.59
			Nematoda sp.1	11	
			Nematoda sp.6	9	
			Copepoda		
			Euterpina sp.	4	0.21

Table 3.14 (Contd...): Winter 2006 Cruise

Leg No.	Tr. No.	St. No.	Taxa	No. of Individual	Dominance (%)
III	4	23	Foraminifera		
			Quinqueloculina dimidiata Terquem, 1876	314	84.89
			Quinqueloculina sp.2	181	
			Textularia sp.2	76	
			Triloculina sidebottomi (Martinotte)	71	
			Triloculinellus sp.	45	
			Triloculina sp.	40	
			Ammonia beccarii (Linne)	38	
			Bolivina multicostata	34	
			Bolivina spissa Cushman	31	
			Reophax textana (Cushman)	27	
			Cribr stomoides jeffreysii Cushman, 1920	23	
			Spiroplectinella wrightii (Silvestri)	19	
			Discorbis nitida (Williamson, 1858)	18	
			Cibicides lobatulus (Walker & Jacob)	15	
			Anomalinella rostrata (Brady, 1881)	12	
			Elphidium excavatum (Terquem, 1875)	10	
			Globorotalia sp.1	8	
			Biapertorbis sp.	7	
			Elphidium sp.2	6	
			Lagena sp.3	2	
			Lagena sp.1	1	
			Ostracoda		
			Puricythereis sp.2	74	11.46
			Hemicytheridea sp.	23	
			Aglaicypris sp.	18	
			Loxoconcha sp.1	15	
			Cypriconcha sp.2	11	
			Limnocythere sp.	10	
			Leptocythere sp.	8	
			Bivalvia		
			Tellina fabula Gmelin, 1791	7	1.13
			Bassina calophylla (Philippi, 1836)	5	
			Carditopsis majeeda (Biggs, 1973)	1	
			Nematoda		
			Nematoda sp.2	19	2.34
			Nematoda sp.1	8	
			Copepoda		
			Euterpina sp.	2	0.17

Table 3.14 (Contd...): Winter 2006 Cruise

Leg No.	Tr. No.	St. No.	Taxa	No. of Individual	Dominance (%)
III	3	15	Foraminifera		
			<i>Spiroloculina excavata</i> d"Orbigny, 1826	415	92.39
			<i>Ammonia beccarii</i> (Linne)	317	
			<i>Bolivina</i> sp.1	210	
			<i>Spiroloculina</i> sp.2	202	
			<i>Spiroloculina depressa</i> d"orbigny, 1826	187	
			<i>Triloculina</i> sp.	85	
			<i>Quinqueloculina dimidiata</i> Terquem, 1876	71	
			<i>Quinqueloculina seminulum</i> (Linne)	70	
			<i>Quinqueloculina costata</i> d"Orbigny	66	
			<i>Adelosina laevigata</i> d`Orbigny, 1826	42	
			<i>Quinqueloculina poeyana</i> d"Orbigny	40	
			<i>Spirotextularia</i> sp.	29	
			<i>Brizalina</i> sp.	22	
			<i>Lobatula</i> sp.	20	
			<i>Elphidium articulatum</i> (d"Orbigny, 1839)	19	
			<i>Protelphidium anglicum</i> Murray, 1965b	15	
			<i>Elphidium excavatum</i> (Terquem, 1875)	11	
			<i>Criboelphidium gerthi</i> (Van Voorthuysen, 1957)	10	
			<i>Trochamina inflata</i> (Montagu)	10	
			<i>Nodophthalmidium</i> sp.	6	
			<i>Lagena semistriata</i> Williamson	1	
			Ostracoda		
			<i>Cytherella</i> sp.1	29	6.02
			<i>Puricythereis</i> sp.1	24	
			<i>Loxoconcha</i> sp.2	18	
			<i>Alocopocythere reticulate</i> (Hartman, 1964)	15	
			<i>Cypriconcha</i> sp.1	12	
			<i>Entocythere</i> sp.2	9	
			<i>Leptocythere</i> sp.	7	
			Gastropoda		
			<i>Tornatina persiana</i> Smith, 1872	6	0.63
			Unknown gastropodasp.3	4	
			<i>Pseudonoba</i> sp.	2	
			Nematoda		
			Nematoda sp.1	18	0.95
			Copepoda		
			<i>Microsetella</i> sp.	4	0.21

Table 3.14 (Contd...): Winter 2006 Cruise

Leg No.	Tr. No.	St. No.	Taxa	No. of Individual	Dominance (%)
III	3	17	Foraminifera		
			Ammonia beccarii (Linne)	726	93.90
			Spiroloculina excavata d"Orbigny, 1826	518	
			Quinqueloculina dimidiata Terquem, 1876	305	
			Spiroloculina depressa d"Orbigny, 1826	229	
			Quinqueloculina sp.2	161	
			Triloculina sp.	144	
			Triloculina sidebottomi (Martinotte)	98	
			Triloculinellus sp.	91	
			Quinqueloculina seminulum (Linne)	88	
			Bolivina multicostata	66	
			Quinqueloculina poeyana d"Orbigny	64	
			Textularia sp.2	34	
			Reophax textana (Cushman)	27	
			Bizalina sp.	21	
			Brizalina spathulata (Williamson)	18	
			Trochamina inflate (Montagu)	12	
			Elphidium articulatum (d"Orbigny, 1839)	11	
			Procerolagena gracilis (Williamson, 1848)	2	
			Discorbis nitida (Williamson, 1858)	2	
			Ostracoda		
			Loxoconcha sp.1	36	4.09
			Actinocythereis scutigera (Brady, 1868)	31	
			Cytherella sp.1	25	
			Triebelina sp.	12	
			Callistocythere sp.	10	
			Gastropoda		
			Morchiella moreleti (Fischer, 1877)	8	0.57
			Tornatina persians Smith, 1872	4	
			Acme sp.	4	
			Bivalvia		
			Tellina sp.1	12	0.43
			Polychaeta larvae		
			Nephtys sp.1	6	0.21
			Nematoda		
			Nematoda sp.3	15	0.79
			Nematoda sp.2	7	

Table 3.14 (Contd...): Winter 2006 Cruise

Leg No.	Tr. No.	St. No.	Taxa	No. of Individual	Dominance (%)
III	3	19	Foraminifera		
			Quinqueloculina dimidiata Terquem, 1876	710	87.81
			Quinqueloculina sp.8	425	
			Bolivina aff. variabilis Williamson, 1858	116	
			Spiroloculina sp.2	96	
			Spirophthamidium acutimargo (Brady)	31	
			Spiroloculina depressa d"Orbigny, 1826	26	
			Textularia sp.1	20	
			Triloculinellus sp.	18	
			Triloculina sidebottomii (Mortinotti)	16	
			Bolivina sp.4	15	
			Discorbis nitida (Williamson, 1858)	15	
			Globorotalia sp.1	12	
			Elphidium sp.4	10	
			Nodophthalmidium sp.	8	
			Noninella sp.	6	
			Pyramidulina sp.	6	
			Entosolenia globosa (Reuss)	5	
			Elphidium crispum (Linne)	4	
			Nodosaria affinis Reuss, 1846	2	
			Lagena gracillima Cushman, J.A. 1913 (Seguenza, 1862)	1	
			Ostracoda		
			Aglaiocypris sp.	41	6.32
			Cytherella sp.2	26	
			Loxoconcha sp.4	15	
			Propontocypris sp.1	12	
			Leptocythere sp.	9	
			Loxoconcha sp.2	8	
			Gastropoda		
			Ringicula propinquans Hinds, 1844	12	1.08
			Acme sp.	7	
			Bivalvia		
			Tellina fabula Gmelin, 1791	17	0.97
			Nematoda		
			Nematoda sp.3	25	3.81
			Nematoda sp.1	18	
			Nematoda sp.5	16	
			Nematoda sp.6	8	

Table 3.14 (Contd...): Winter 2006 Cruise

Leg No.	Tr. No.	St. No.	Taxa	No. of Individual	Dominance (%)
III	2a	9a	Foraminifera		
			<i>Spiroloculina</i> sp.1	391	89.78
			<i>Spiroloculina depressa</i> d"Orbigny, 1826	284	
			<i>Quinqueloculina dimidiata</i> Terquem, 1876	195	
			<i>Triloculina</i> sp.	160	
			Unknown foraminifera sp.2	142	
			<i>Triloculinellus</i> sp.	63	
			<i>Quinqueloculina costata</i> d"Orbigny	44	
			<i>Textularia</i> sp.5	37	
			<i>Spiroplectinella wrightii</i> (Silvestri)	21	
			<i>Cibicides lobatulus</i> (Walker & Jacob)	18	
			<i>Anomalinella rostrata</i> (Brady, 1881)	16	
			<i>Elphidium</i> sp.1	16	
			<i>Discorbis nitida</i> (Williamson, 1858)	12	
			<i>Globorotalia</i> sp.1	11	
			<i>Adelosina laevigata</i> d`Orbigny, 1826	9	
			<i>Sigmoilinella</i> sp.	8	
			<i>Bolivina</i> sp.1	8	
			<i>Ammonia beccarii</i> (Linne)	7	
			<i>Lagena</i> sp.3	5	
			<i>Lagena gracillima</i> Cushman, J.A. 1913 (Seguenza, 1862)	4	
				3	
			<i>Nodosaria pauciloculata</i> var. Luzonensis Cushman, 1921	2	
				2	
			<i>Elphidium crispum</i> (Linne)	1	
			<i>Peneroplis planatus</i> (Fichtel & Moll, 1798)		
			<i>Bojarkaella firma</i> V.A. Basov, 1968		
			Ostracoda		
			<i>Alocopocythere reticulata</i> (Hartman, 1964)	49	7.38
			<i>Cytherella</i> sp.2	26	
			<i>Puricythereis</i> sp.2	18	
			<i>Loxoconcha amygdalanux</i>	15	
			<i>Krithe</i> sp.	12	
			Gastropoda		
			<i>Lippistes</i> sp.	6	0.55
			<i>Umbonium vestiarium</i> (Linnaeus, 1758)	3	
			Bivalvia		
			<i>Tellina fabula</i> Gmelin, 1791	14	0.98
			<i>Lucina</i> sp.	2	
Nematoda					
Nematoda sp.3	21	1.29			

Table 3.14 (Contd...): Winter 2006 Cruise

Leg No.	Tr. No.	St. No.	Taxa	No. of Individual	Dominance (%)
III	2a	7a	Foraminifera		
			Ammonia beccarii (Linne)	642	88.73
			Quinqueloculina sp.1	218	
			Spiroloculina excavata d"Orbigny, 1826	133	
			Quinqueloculina dimidiata Terquem, 1876	101	
			Triloculina sp.	87	
			Elphidium articulatum (d"Orbigny, 1839)	63	
			Discorbis nitida (Williamson, 1858)	49	
			Globorotalia sp.1	44	
			Elphidium sp.1	41	
			Unknown Foraminifera sp.19	35	
			Textularia earlandi Parker	27	
			Bolivina sp.2	23	
			Adelosina laevigata d`Orbigny, 1826	18	
			Triloculinellus sp.	15	
			Spirotextularia sp.	12	
			Spiroplectinata sp.	8	
			Textularia sp.3	7	
			Brizalina sp.	7	
			Textularia conica d"Orbigny	5	
			Lagena sp.3	4	
			Nodosaria pauciloculata var. Luzonensis Cushman, 1921	2	
			Eoguttulina sp.	2	
			Procerolagena gracilis (Williamson, 1848)	1	
			Ostracoda		
			Cypriconcha sp.1	63	8.16
			Loxoconcha sp.2	39	
			Leptocythere sp.	24	
			Cytherella sp.1	16	
			Bivalvia		
			Tellina fabula Gmelin, 1791	12	1.09
			Corditopsis majeeda (Biggs, 1973)	4	
			Tellina sp.2	3	
			Polychaeta larvae		
			Nephtys sp.2	3	0.29
			Phyllodocidae sp.1	2	
Nematoda					
Nematoda sp.1	27	1.55			
Copepoda					
Euterpina sp.	3	0.17			

Table 3.15.1: Abundance of different meiofauna groups recorded during Winter 2006 Cruise

St. No.	Foraminifera	Ostracoda	Gastropoda	Bivalvia	Nematoda	Copepoda	Polychaeta larvae	Total number
1	1151	79	8	0	65	10	0	1313
10a	2112	112	17	0	35	2	0	2278
11	1522	143	19	0	56	4	0	1744
11a	1565	153	27	0	94	0	0	1839
14	1730	135	7	20	27	4	2	1925
14a	1301	131	11	0	78	19	0	1540
15	1848	114	12	0	18	4	0	1996
16a	474	109	18	22	48	0	0	671
17	2617	114	16	12	15	0	6	2780
19	1542	111	19	17	67	0	0	1756
20	1371	114	14	0	74	5	0	1578
21a	896	181	21	0	61	0	6	1165
22	1685	104	14	0	48	4	0	1855
23	978	159	0	13	27	2	0	1179
24	1641	116	8	32	33	3	0	1833
25	1649	121	13	0	58	2	0	1843
25a	2758	255	50	26	107	26	45	3267
26	1237	119	15	11	63	3	0	1448
26a	1822	324	66	43	236	25	74	2590
27	1126	82	26	0	50	8	17	1309
30	1229	119	27	40	59	0	16	1490
33	1059	124	12	8	42	11	0	1256
34	2089	93	22	34	53	11	0	2302
36	2509	105	9	15	0	7	0	2645
39	1893	98	24	26	75	0	0	2116
4	2184	210	31	33	51	14	0	2523
40	1812	125	155	542	23	9	5	2671
43	1753	58	87	375	33	3	4	2313
50	1610	83	197	203	15	0	0	2108
55	2039	130	360	210	14	5	7	2765
56	1379	59	145	39	5	0	6	1633
59	636	48	1438	83	9	1	0	2215
5a	1800	130	10	19	39	0	0	1998
66	1765	223	95	0	16	0	3	2102
69	520	27	20	17	0	0	0	584
7	1778	172	37	26	36	6	11	2066
70	255	64	14	0	19	10	4	366
72	465	71	13	0	52	10	0	611
77	914	101	17	0	66	0	0	1098
78	4349	102	22	0	53	12	0	4538
79	3386	88	43	211	11	3	7	3749
7a	1544	142	0	19	27	3	5	1740
8	1060	197	0	4	12	0	2	1275
83	2213	219	0	0	67	0	27	2526
85	1973	132	39	0	40	13	0	2197
87	803	117	41	17	45	85	0	1108
88	622	111	17	10	0	0	11	771
93	11010	219	29	17	53	9	8	11345
97	946	291	47	17	30	5	30	1366
98	1516	599	71	134	358	17	48	2743
9a	1459	120	9	16	21	0	0	1625
Average	1757	140	67	45	51	7	7	2074

Table 3.15.2: Percentage composition of different meiofauna groups recorded during Winter 2006 Cruise

St. No.	Foraminifera	Ostracoda	Gastropoda	Bivalvia	Nematoda	Copepoda	Polychaeta larvae	Total number
1	87.66	6.02	0.61	--	4.95	0.76	--	1313
10a	92.67	4.91	0.74	--	1.53	0.13	--	2278
11	87.27	8.20	1.09	--	3.21	0.23	--	1744
11a	85.10	8.32	1.47	--	5.11	--	--	1839
14	89.87	7.01	0.36	1.04	1.99	0.21	0.10	1925
14a	84.50	8.49	0.71	--	5.06	1.23	--	1540
15	92.39	6.02	0.63	--	0.95	0.21	--	1996
16a	66.09	18.76	3.10	3.79	8.26	--	--	671
17	93.90	4.09	0.57	0.43	0.79	--	0.21	2780
19	87.81	6.32	1.08	0.97	3.81	--	--	1756
20	86.88	7.22	0.89	--	4.69	0.32	--	1578
21a	76.91	15.54	1.80	--	5.24	--	0.51	1165
22	90.83	5.61	0.75	--	2.59	0.21	--	1855
23	84.89	11.46	--	1.13	2.34	0.17	--	1179
24	89.52	6.33	0.44	1.74	1.80	0.16	--	1833
25	89.47	6.56	0.70	--	3.15	0.11	--	1843
25a	83.98	8.02	1.57	0.82	3.37	0.82	1.41	3267
26	85.90	7.71	1.04	0.76	4.37	0.21	--	1448
26a	70.29	12.5	2.55	1.66	9.10	0.96	2.93	2590
27	86.02	6.26	1.99	--	3.82	0.61	1.30	1309
30	82.48	7.99	1.81	2.68	3.96	--	1.07	1490
33	83.78	9.81	0.95	0.63	3.32	0.87	--	1256
34	90.75	4.04	0.95	1.48	2.30	0.48	--	2302
36	94.86	3.97	0.34	0.57	--	0.26	--	2645
39	89.46	4.63	1.13	1.23	3.54	--	--	2116
4	86.56	8.32	1.23	1.31	2.02	0.55	--	2523
40	67.84	4.68	5.80	20.29	0.86	0.34	0.19	2671
43	75.79	2.51	3.76	16.21	1.43	0.13	0.17	2313
50	76.37	3.94	9.34	9.63	0.71	--	--	2108
55	73.74	4.70	13.02	7.59	0.51	0.18	0.25	2765
56	84.44	3.61	8.88	2.39	0.31	--	0.37	1633
59	28.71	2.17	64.92	3.75	0.41	0.04	--	2215
5a	89.91	6.69	0.50	0.95	1.95	--	--	1998
66	83.97	10.61	4.52	--	0.76	--	0.14	2102
69	89.04	4.62	3.42	2.91	--	--	--	584
7	85.42	8.70	1.87	1.31	1.82	0.30	0.56	2066
70	69.67	17.49	3.82	--	5.19	2.73	1.09	366
72	76.10	11.62	2.13	--	8.51	1.64	--	611
77	85.30	9.64	1.62	--	3.43	--	--	1098
78	95.83	2.25	0.48	--	1.17	0.26	--	4538
79	90.32	2.35	1.15	5.63	0.29	0.08	0.19	3749
7a	88.72	8.16	--	1.09	1.55	0.17	0.29	1740
8	83.14	15.45	--	0.31	0.94	--	0.16	1275
83	84.27	12.15	--	--	2.55	--	1.03	2526
85	89.80	6.01	1.77	--	1.82	0.59	--	2197
87	77.51	11.29	3.96	1.64	4.34	1.25	--	1108
88	79.64	14.21	2.18	1.28	--	--	2.69	771
93	97.05	1.93	0.25	0.15	0.47	0.08	0.07	11345
97	69.20	21.29	3.35	1.24	2.19	0.36	2.19	1366
98	55.33	21.82	2.59	4.82	13.06	0.62	1.75	2743
9a	89.78	7.38	0.55	0.98	1.29	--	--	1625
Average	82.88	8.22	3.58	3.10	3.06	0.51	0.85	2074

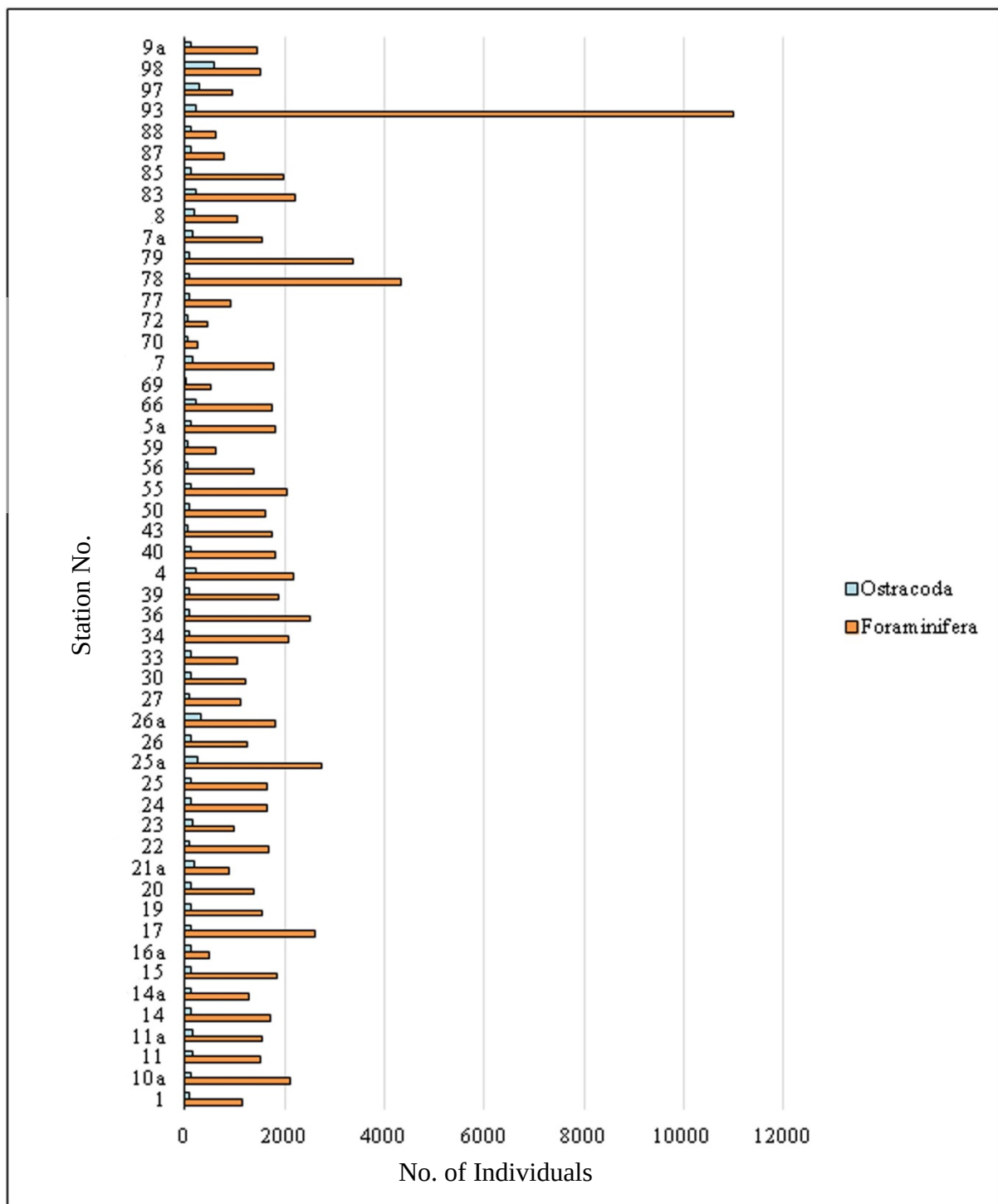


Figure 3.8: Occurrence and Abundance of Foraminifera and Ostracoda groups (ROPME Winter 2006 Cruise)

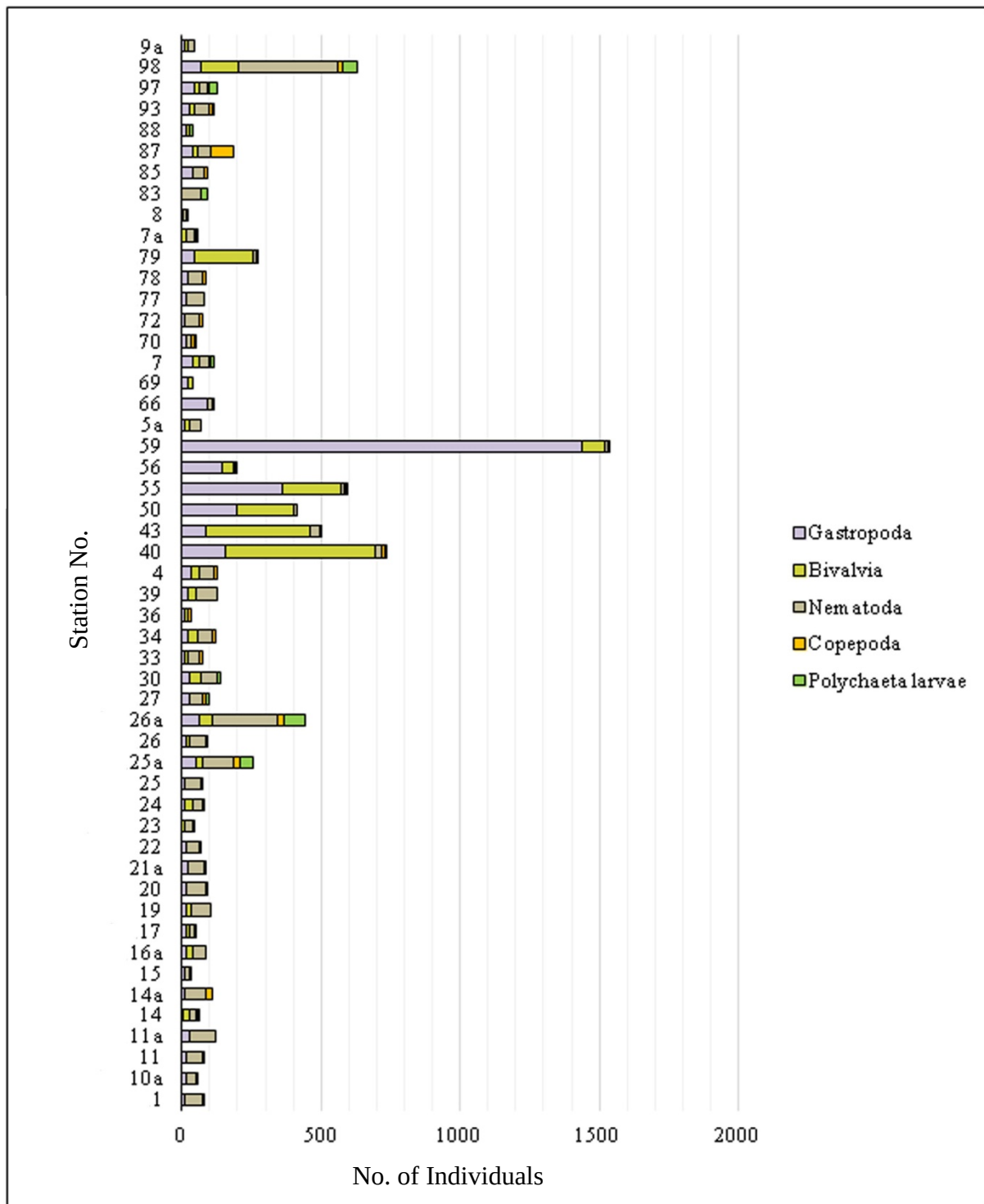


Figure 3.9: Occurrence and Abundance of Gastropoda, Bivalvia, Nematoda, Copepoda and Polychaeta larvae groups (ROPME Winter 2006 Cruise)

Table 3.16: Number of deformed species of foraminefera found in the RSA during the three ROPME Cruises

Species name	No. of individuals (in 25.6 cm ³ of sediment)		
	Summer 2000	Summer 2001	Winter 2006
<i>Adelosina</i> sp.	15	-	-
<i>Spiroloculina</i> sp.	18	-	-
<i>Spiroloculina</i> sp.	16	-	-
<i>Quinqueloculina</i> sp.	15	-	-
<i>Textularia</i> sp.	-	4	2
<i>Quinqueloculina</i> sp.	-	19	15
<i>Criboelphidium</i> sp.	-	2	1
<i>Criboelphidium</i> sp.	-	3	1
<i>Turkmenella</i> sp.	-	-	3
<i>Quinqueloculina</i> sp.	-	-	2
<i>Criboelphidium</i> sp.	-	4	7
<i>Protelphidium anglicum</i> Murray	-	9	13
<i>Lobatula</i> sp.	-	2	20
<i>Elphidium</i> sp.	-	9	5
<i>Georgianina</i> sp.	-	8	3
<i>Elphidium gerthi</i> Van voorthuysen, 1957	-	-	7

3.4 Statistical Analyses

3.4.1 Shannon & Simpson Indices Analyses of Diversity (Summer 2000 Cruise)

The meiofauna abundance in 32 stations has been analyzed based on Shannon & Simpson Indices. These Indices were applied considering total species counted in the area. The minimum value for Shannon was 1.9 in station 28 and the maximum value was found in station 96 with the value of 3 (Figure 3.10 and Table 3.17). Considering Simpson index, the minimum value was 0.076 in station 96 and the maximum value was found in station 28 with the value of 0.285. Table 3.17 depicts the results of the Shannon and Simpson indices.

Table 3.17:The calculated values of Shannon and Simpson indices (Summer 2000 Cruise)

St. No	Simpson (D)	Shannon (H')	Total No. of individuals
10	0.091	2.670	10854
12	0.126	2.430	5931
17	0.132	2.340	3507
18	0.096	2.670	8343
19	0.124	2.480	4653
25	0.160	2.210	3663
27	0.205	2.260	2584
28	0.285	1.900	5681
29	0.160	2.130	6673
30	0.100	2.700	4470
39	0.190	2.060	6019
41	0.012	2.440	9152
42	0.227	2.051	4375
45	0.160	2.170	5639
55	0.170	2.270	9336
57	0.110	2.610	5436
58	0.120	2.460	7044
60	0.170	2.180	5187
68	0.140	2.280	7369
70	0.144	2.450	3893
71	0.160	2.230	6408
76	0.120	2.600	3158
77	0.127	2.440	8962
78	0.112	2.500	5530
80	0.124	2.460	16104
87	0.120	2.480	8078
89	0.090	2.920	5760
92	0.144	2.450	9119
93	0.220	2.150	4423
94	0.130	2.400	7371
95	0.130	2.440	8468
96	0.076	3.000	8675

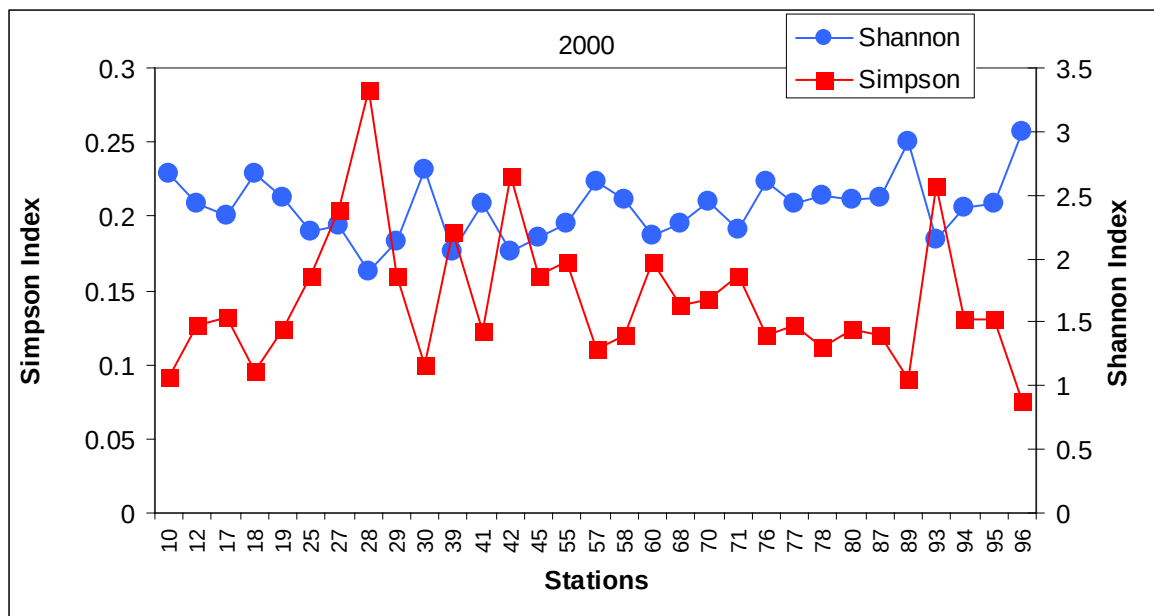


Figure 3.10:Range of values of Shannon (H') and Simpson (D) Indices (Summer 2000 Cruise)

3.4.2 Shannon & Simpson Indices Analyses of Diversity (Summer 2001Cruise)

The meiofauna abundance in 39 stations has been analyzed based on Shannon & Simpson Indices. These indices were applied considering total species counted in the area. The maximum value for Shannon was 2.83 in station 78 and the minimum value was found in station 39 with the value of 1.25. The value for Shannon for all stations (except station 39), was more than 2 and less than 3 (Table 3.18).

Considering Simpson index, the minimum value for Simpson was 0.08 in station 78 and the maximum one was found in station 39 with value of 0.42 (Figure 3.11). Table 3.18 depicts the results of the Shannon and Simpson indices.

Table 3.18:The calculated values of Shannon and Simpson indices (Summer 2001 Cruise)

St. No.	Simpson(D)	Shannon(H')	Total No. of individuals
1	0.100	2.420	7669
4	0.119	2.477	8565
7	0.1741	2.144	7445
8	0.137	2.339	8068
11	0.152	2.255	8237
14	0.114	2.491	8764
15	0.098	2.557	11444
17	0.116	2.411	10406
19	0.136	2.385	8742
20	0.161	2.234	7584
23	0.166	2.184	4424
24	0.139	2.326	3430
25	0.140	2.327	12147
26	0.149	2.272	7257
27	0.135	2.325	9917
30	0.200	2.113	4814
22	0.121	2.490	12438
33	0.116	2.494	4599
34	0.112	2.552	11231
36	0.133	2.348	19193
39	0.424	1.253	12867
40	0.211	2.183	6603
43	0.152	2.271	15820
47	0.157	2.287	14211
50	0.123	2.494	17841
55	0.102	2.733	2134
56	0.093	2.769	2397
59	0.159	2.099	9775
61	0.103	2.658	30596
63	0.155	2.316	19832
66	0.154	2.319	6997
69	0.115	2.434	8053
70	0.099	2.622	1565
72	0.118	2.494	27312
73	0.112	2.620	3264
76	0.079	2.760	3069
78	0.081	2.829	2966
79	0.122	2.526	14913
81	0.105	2.582	4388

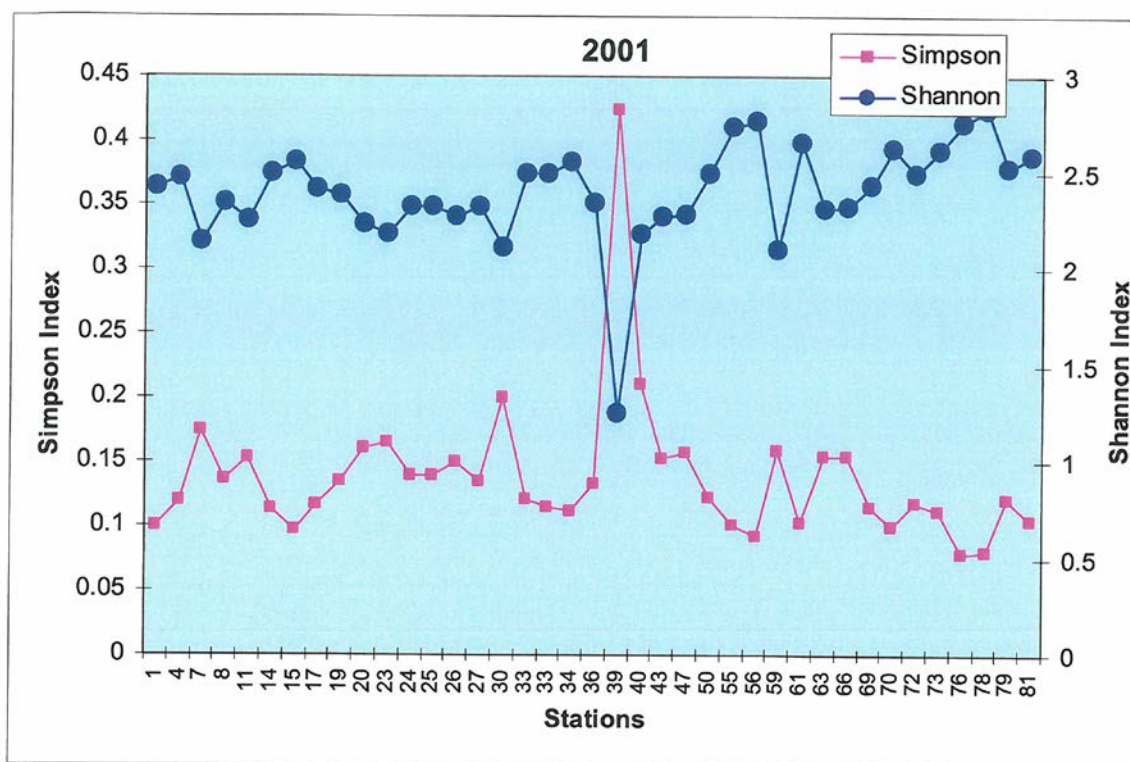


Figure 3.11:Range of values of Shannon (H') and Simpson (D) Indices (Summer 2000 Cruise)

The meiofauna abundance in 39 stations has been analyzed based on Shannon & Simpson Indices. These indices were applied considering total species counted in the area. The maximum value for Shannon was 2.83 in station 78 and the minimum value was found in station 39 with the value of 1.25. The value for Shannon for all stations (except station 39), was more than 2 and less than 3 (Table 3.18).

Considering Simpson index, the minimum value for Simpson was 0.08 in station 78 and the maximum one was found in station 39 with value of 0.42 (Figure 3.11). Table 3.18 depicts the results of the Shannon and Simpson indices.

3.4.3 Shannon & Simpson Indices Analyses of Diversity (Winter 2006 Cruise)

The meiofauna abundance in 51 stations has been analyzed based on Shannon & Simpson Indices. These indices were applied considering total species counted in the area. The maximum value for Shannon was 1.68 in station 98 and the minimum value was found in station 8 with the value of 0.89 (Table 3.19).

Considering Simpson index, the minimum value was 0.21 in station 98 and the maximum value was found in station 8 with the value of 0.51 (Figure 3.12).

Table 3.19: The calculated values of Shannon and Simpson indices (Winter 2006 Cruise)

St. No.	Simpson (D)	Shannon (H')	Total No. of individuals
1	0.426	1.131	1313
4	0.323	1.393	2523
7	0.230	1.657	1976
8	0.519	0.898	1275
11	0.410	1.133	1744
14	0.379	1.295	1925
15	0.443	1.046	1892
17	0.398	1.219	2789
19	0.402	1.145	1756
22	0.415	1.136	1854
23	0.419	1.108	1152
24	0.406	1.207	1833
25	0.378	1.194	1843
26	0.369	1.293	1440
27	0.321	1.405	1309
30	0.333	1.386	1490
33	0.404	1.193	1264
34	0.350	1.346	2302
36	0.440	1.096	2645
40	0.254	1.608	2671
43	0.268	1.575	2313
50	0.470	1.071	2108
55	0.372	1.206	2765
56	0.378	1.293	1633
59	0.431	1.185	2215
66	0.415	1.162	2102
69	0.410	1.061	584
70	0.252	1.521	366
72	0.422	1.149	611
77	0.414	1.084	1045
78	0.410	1.168	4538
79	0.390	1.330	3749
83	0.382	1.116	2626
85	0.359	1.248	2197
87	0.326	1.378	1036
88	0.397	1.157	781
93	0.253	1.587	11348
97	0.206	1.665	1367
98	0.215	1.685	2740
10a	0.428	1.116	2280
11a	0.375	1.135	1839
14a	0.340	1.276	1542
16a	0.284	1.391	581
21a	0.301	1.300	1165
25a	0.223	1.660	3178
26a	0.261	1.508	2592
5a	0.419	1.128	2002
7a	0.469	1.105	1740
9a	0.513	0.965	1625

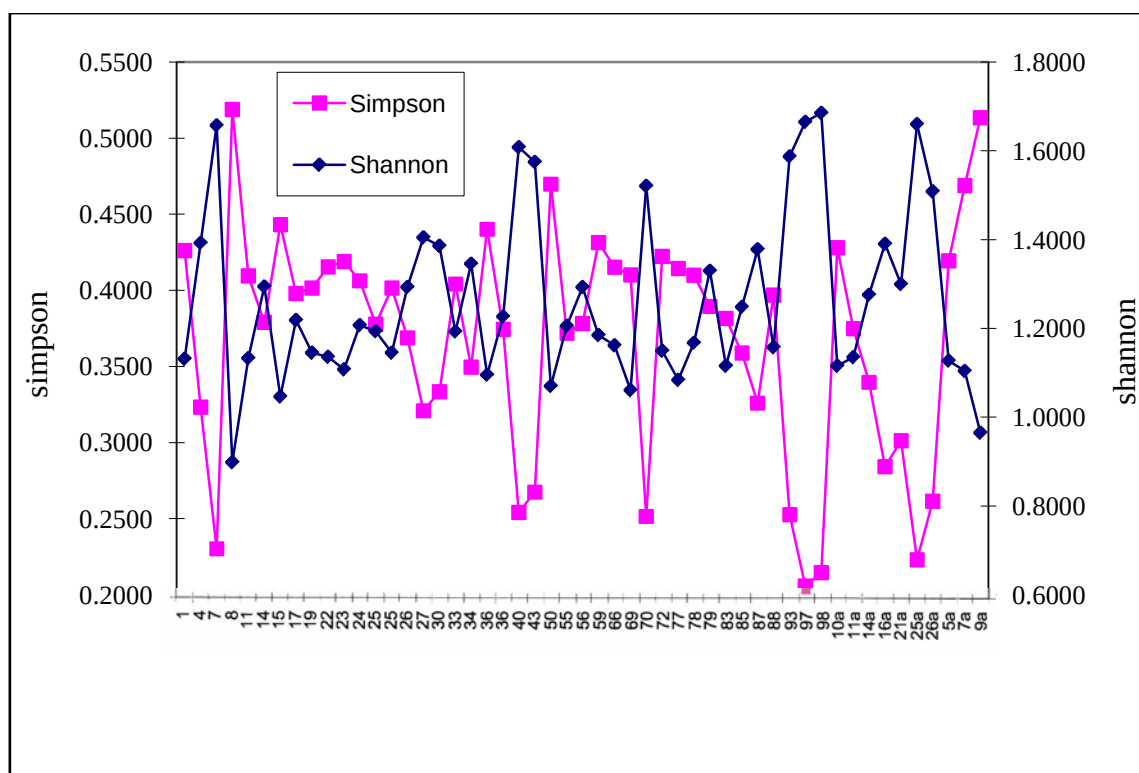


Figure 3.12: Range of values of Shannon (H') and Simpson (D) Indices (Winter 2006 Cruise)

3.4.4 Correlation Coefficient (Summer 2000 Cruise)

The calculated Correlation coefficient values between the counted total number of meiofauna and the measured environmental parameters are given in Table 3.20.

Table 3.20: Correlation between total meiofauna and environmental parameters of Summer 2000 Cruise

Parameter	Depth (m)	Salinity (‰)	Temp (°C)	DO (ml/l)	pH	Silt and Clay (%)	TOM (%)
Salinity (‰)	0.262						
Temp(°C)	-0.279	-0.426*					
DO(ml/l)	-0.739*	-0.081	0.215				
pH	-0.51	-0.104	0.298	0.426*			
Silt and Clay (%)	-0.024	-0.1	-0.144	-0.171	-0.172		
TOM(%)	-0.294	0.042	0.055	0.419*	0.219	-0.228	
Total meiofauna	-0.315*	0.015	-0.116	0.196	-0.026	0.041	0.037

*Correlation is significant at the 0.05 level (2-tailed)

3.4.5 Correlation Coefficient Cruise 2001

The calculated Correlation coefficient values between the counted total number of meiofauna and the measured environmental parameters are given in Table 3.21.

Table 3.21: Correlation coefficient between total meiofauna and environmental parameters of Summer 2001 Cruise)

Parameter	Depth (m)	Salinity (‰)	Temp (°C)	DO (ml/l)	pH	Silt and Clay (%)	TOM (%)
Depth (m)							
Salinity (‰)	.231						
Temp (°C)	-.765**	-.309					
DO (ml/l)	-.322*	-.315	.487**				
pH	.260	.049	-.192	.212			
Silt and Clay (%)	.014	.090	-.053	-.056	.026		
TOM (%)	.000	-.210	.056	-.149	.254	-.065	
Total meiofauna	-.332*	-.045	.054	.106	.213	-.144	.129

** . Correlation is significant at the 0.01 level (2-tailed)

* . Correlation is significant at the 0.05 level (2-tailed)

3.4.6 Correlation Coefficient Winter 2006 Cruise

The calculated Correlation coefficient values between the counted total number of meiofauna and the measured environmental parameters are given in Table 3.22.

Table 3.22: Correlation coefficient between total meiofauna and environmental parameters of Winter 2006 Cruise

Parameter	Depth (m)	Salinity (‰)	Temp (°C)	DO (mg/l)	pH	Silt and clay (%)	TOM (%)
Salinity (‰)	-0.103						
Temp (°C)	0.425	-0.619					
DO (mg/l)	-0.605*	0.534	-0.814*				
pH	-0.250	0.543*	-0.49*	0.531*			
Silt and clay (%)	-0.239	0.036	-0.265	0.364*	0.321*		
TOM (%)	-0.052	-0.196	-0.092	-0.029	-0.153	0.303*	
Total meiofauna	0.103	-0.24	0.163	-0.265	-0.183	-0.169	-0.166

*Correlation is significant at the 0.05 level (2-tailed)

The distribution of meiofauna in RSA during the three ROPME Cruises was found to be closely correlated to certain environmental parameters (Tables 3.19 to 3.21 and Figures 3.13 to 3.29). Significant correlations ($P < 0.05$) were found between meiofauna and depth ($r = -0.315$ for Summer 2000 and $r = -0.332$ for Summer 2001). There was also a significant correlation between total meiofauna and salinity ($r = -0.24$) during Winter 2006

Cruise. Asignificant correlation were also found between some environmental parameters in three Cruises as presented in Tables 3.19 to 3.21. The temperature values showed negative significant correlation with depth ($r = -0.279$ for Summer 2000 and $r = -0.765$ for Summe 2001 with $p < 0.01$) and positive significant correlation ($r = 0.425$) in Winter 2006 Cruise. The dissolved oxygen concentration values during the three Cruises showed a negative significant correlation with depth ($r = -0.739$ for Summer 2000, $r = -0.322$ for Summer 2001 and $r = -0.625$ for Winter 2006).

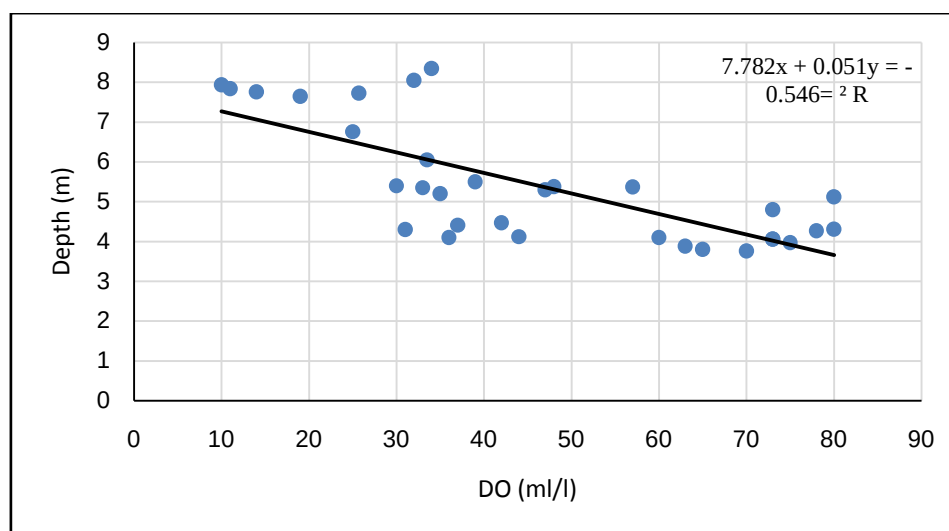


Figure 3.13: Relation between Dissolved Oxygen and Depth (Summer 2000 Cruise)



Figure 3.14: Relation between Salinity and Temperature (Summer 2000 Cruise)

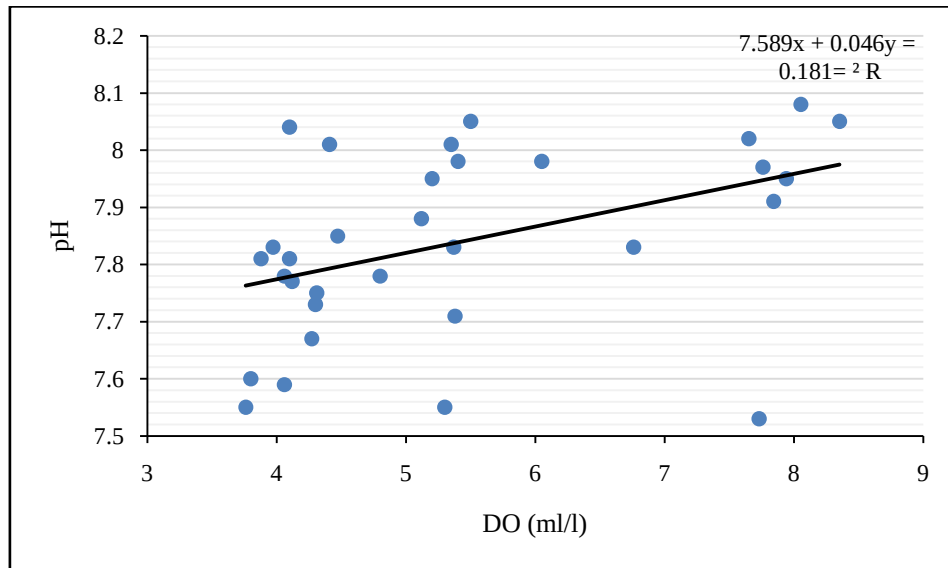


Figure 3.15:Relation between Dissolved Oxygen and pH (Summer 2000 Cruise)

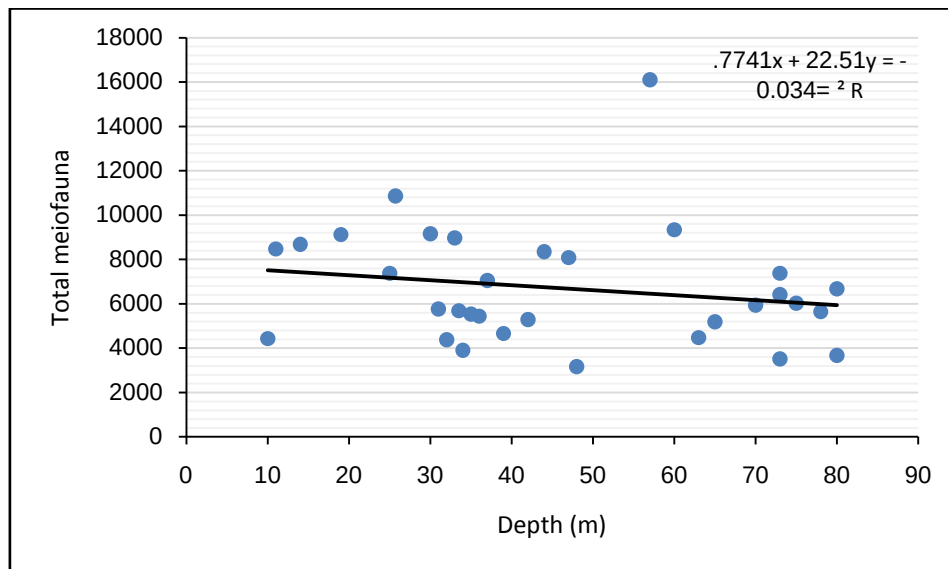


Figure 3.16:Relation between Depth and Total meiofauna (Summer 2000 Cruise)

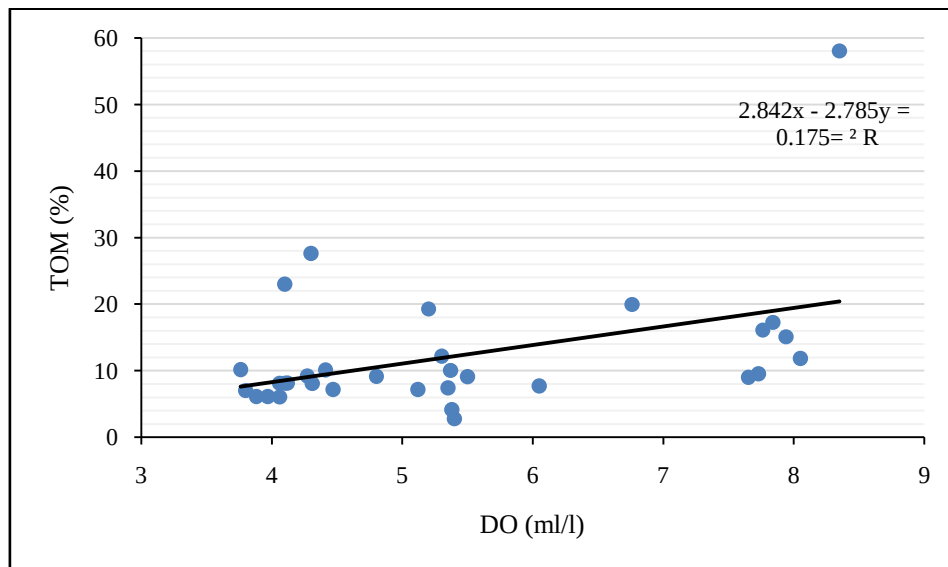


Figure 3.17:Relation between Dissolved Oxygen and Total Organic Matter(Summer 2000 Cruise)

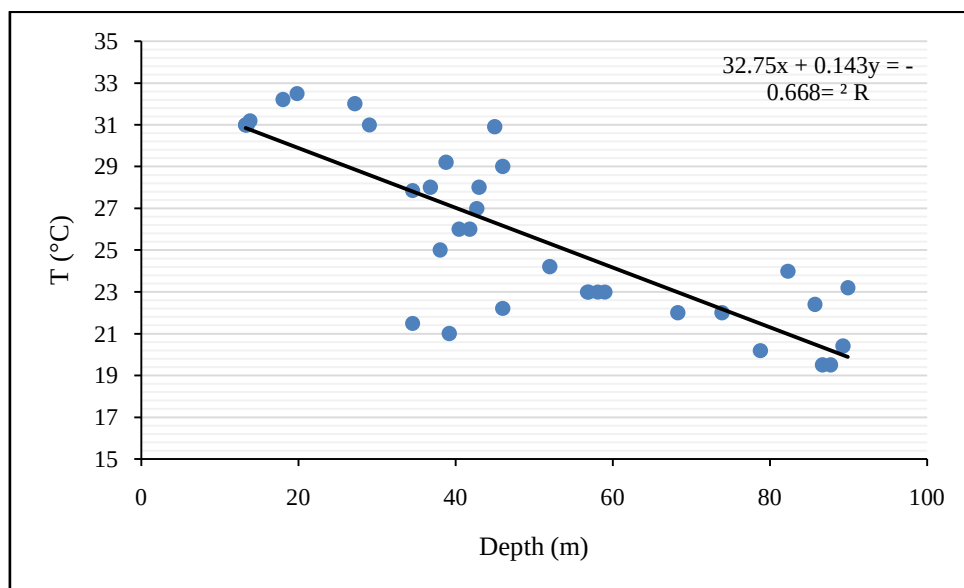


Figure 3.18:Relation between Depth and Temperature (Summer 2001 Cruise)

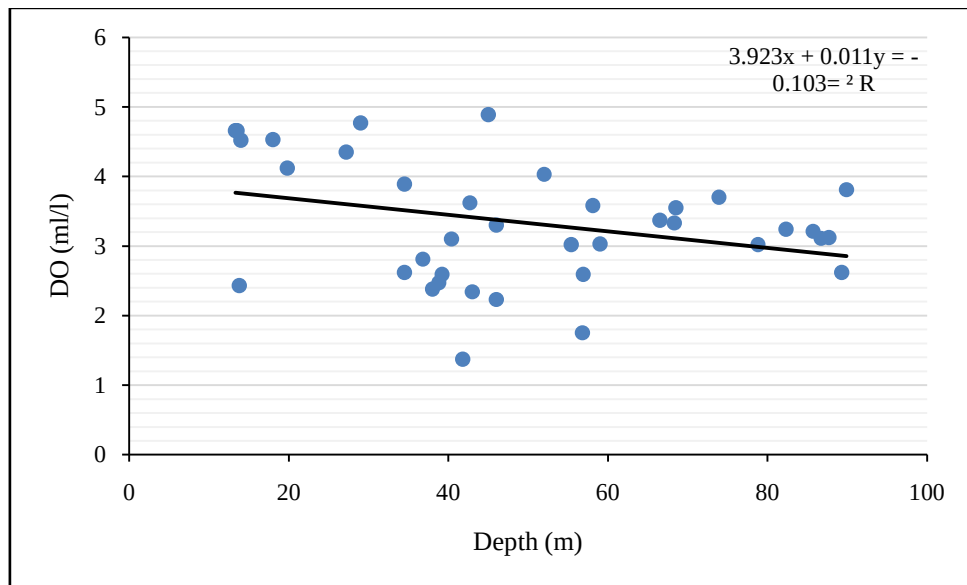


Figure 3.19:Relation between Depth and Dissolved Oxygen(Summer 2001 Cruise)

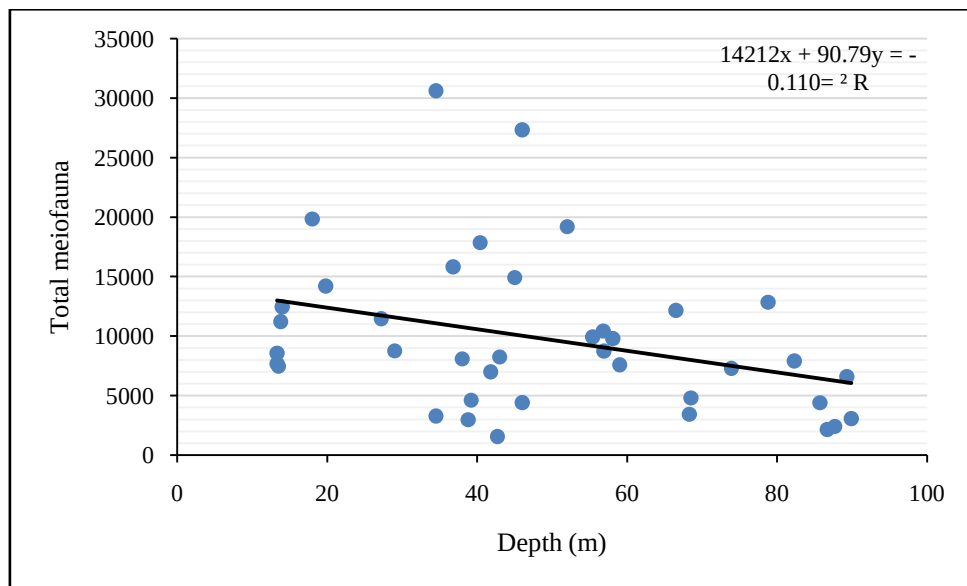


Figure 3.20:Relation between Depth and Total meiofauna (Summer 2001 Cruise)

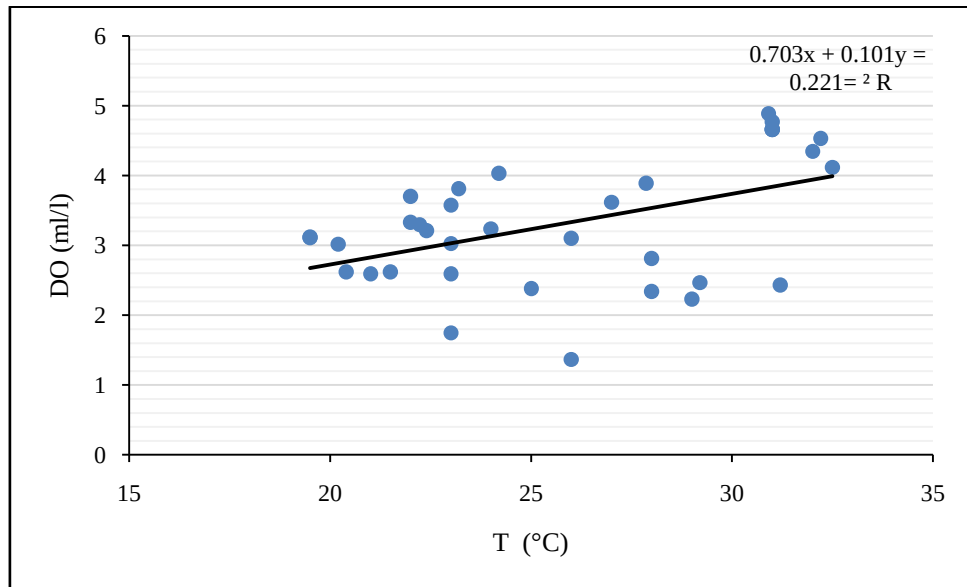


Figure 3.21:Relation between Dissolved Oxygen and Temperature (Summer 2001 Cruise)

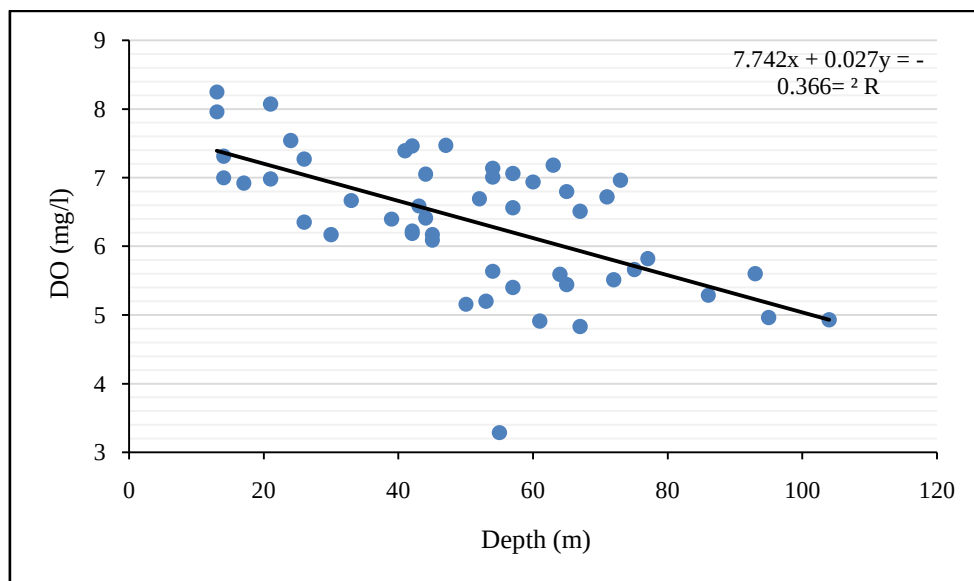


Figure 3.22:Relation between Dissolved Oxygen and Depth (Winter 2006 Cruise)

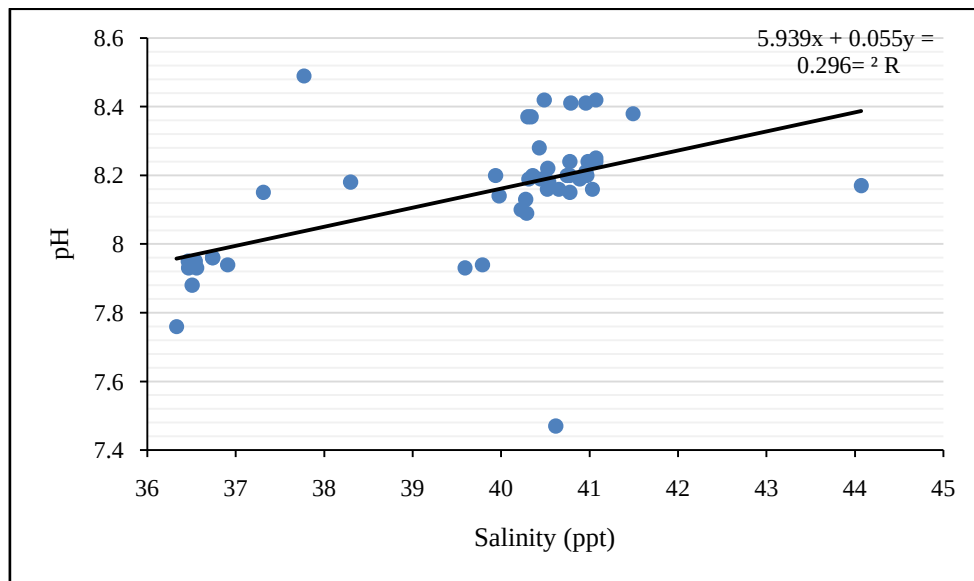


Figure 3.23:Relation between Salinity and pH (Winter 2006 Cruise)

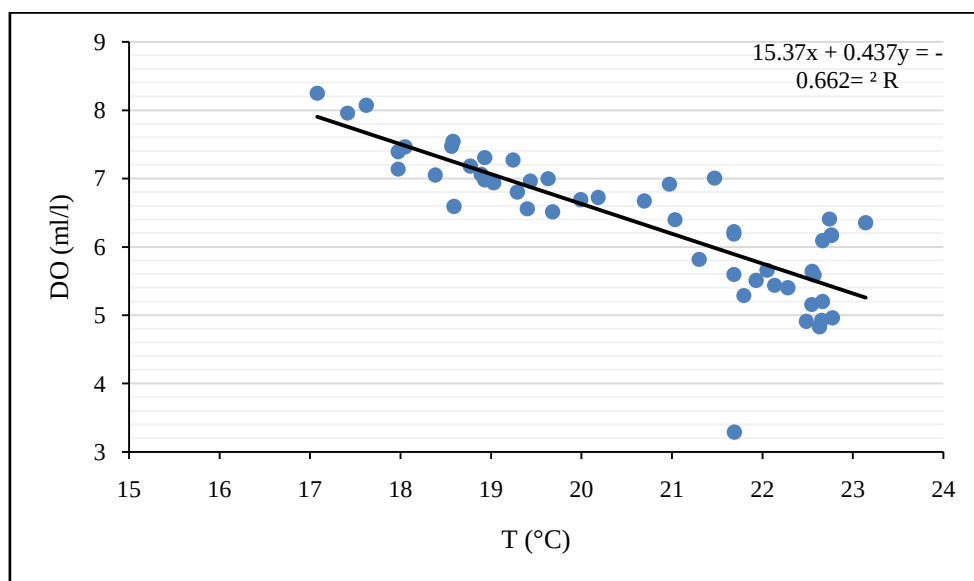


Figure 3.24: Relation between Temperature and Dissolved Oxygen (Winter 2006 Cruise)

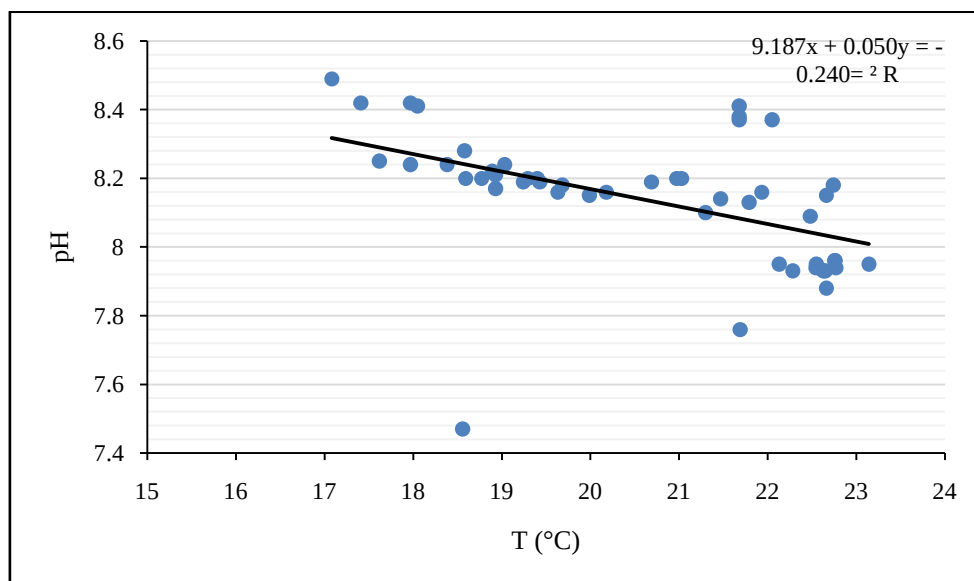


Figure 3.25:Relation between Temperature and pH (Winter 2006 Cruise)

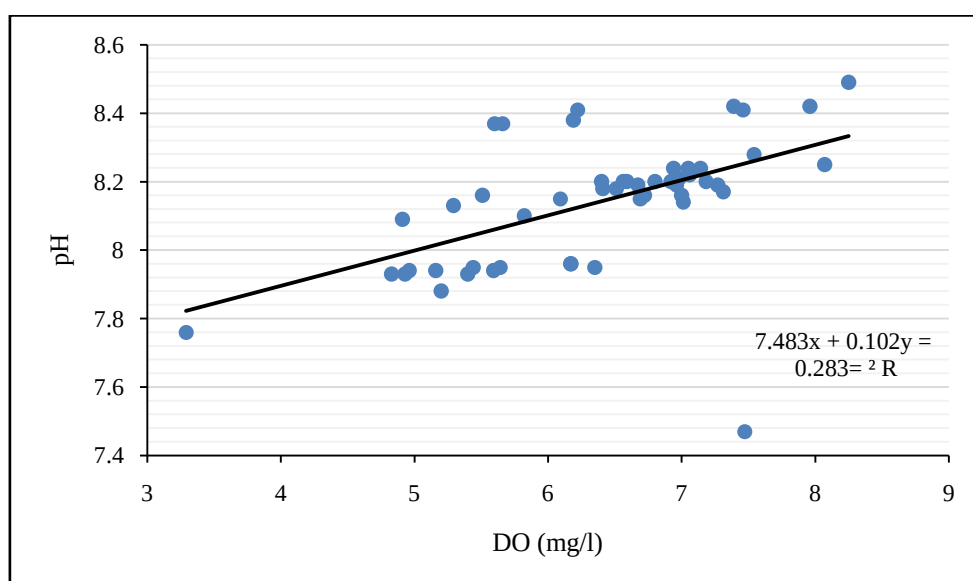


Figure 3.26: Relation between Dissolved Oxygen and pH (Winter 2006 Cruise)

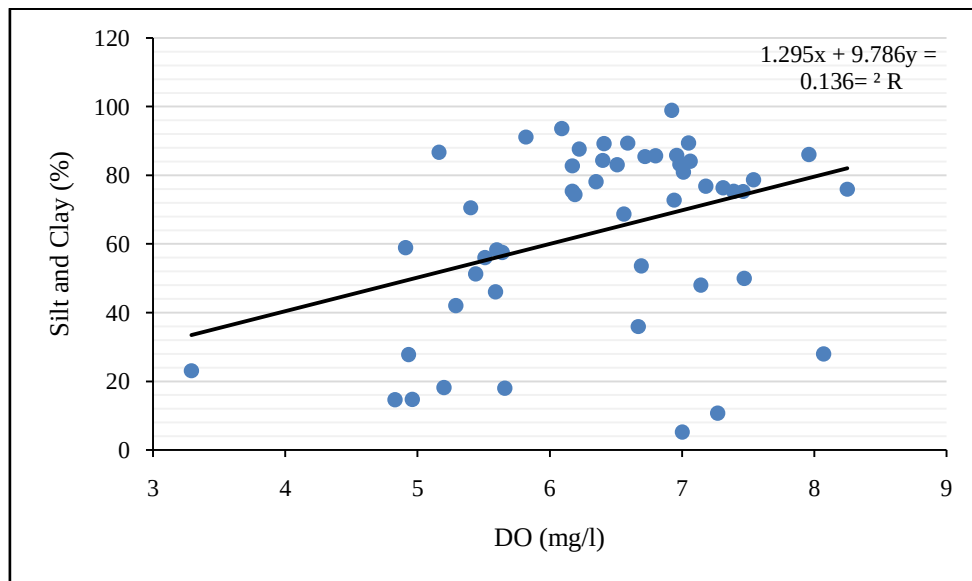


Figure 3.27:Relation between Dissolved Oxygen and Silt-Clay (Winter 2006 Cruise)

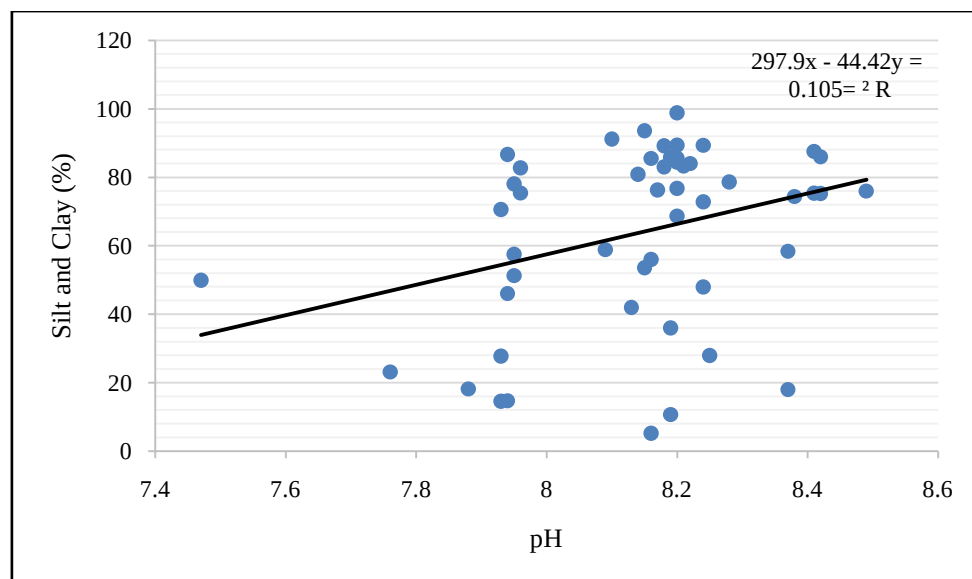


Figure 3.28:Relation between pH and Silt-Clay (Winter 2006 Cruise)

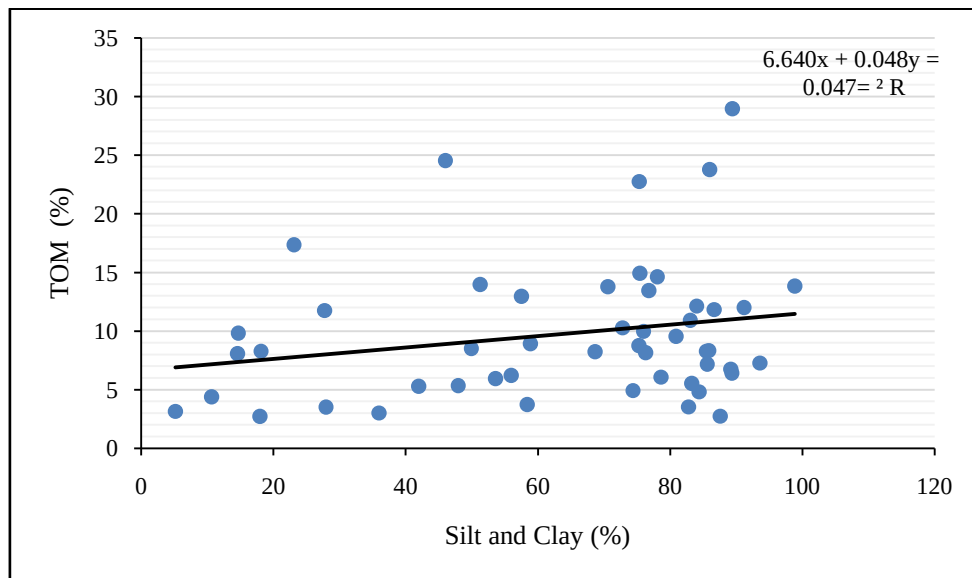


Figure 3.29:Relation between Trace Organic Matter and Silt-Clay (Winter 2006 Cruise)

4. Discussion

There are no comprehensive key works carried out on meiofauna in the RSA before the year of 2006. However, after the latest ROPME Oceanographic Cruise was successfully carried out during Winter 2006, the results of meiofauna for all the three ROPME Cruises (Summer 2000&2001 and Winter 2006) were utilized to prepare the present integrated report to fill the existing gaps.

Benthic meiofauna communities are known to be affected by a complex of environmental variables including grain size of the sediment, food availability, salinity, temperature, level of oxygen in the sediment and pollution. Due to the shallowness (average of 35 m), semi-enclosed nature of the Inner RSA and variation of air temperature especially during the warm seasons, the water temperature may exceed 35°C. This high temperature value can restrict the distribution of many species in the Region. According to achieved data, the highest value of temperature (35°C) was noted in territorial waters of I.R. Iran at station 57 during Summer 2000 Cruise and 32°C at station 47 near Saudi Arabian waters in Summer 2001. The lowest water temperatures in summer were recorded in Iranian waters (near Lengeh) and central part of the Inner RSA having values of 19.5°C and 21.8°C in Summer 2001 Cruise and Summer 2000, respectively. The previous works and ROPME reports indicated temperature variations in the RSA ranging between 12°C in Winter and >35°C in Summer. During the Winter 2006 Cruise, surface water temperatures varied between 17.08°C near Kuwait coastal waters at station 1 and 22.77°C near UAE coastal waters at station 83. Despite the fact that temperature has an important role in the distribution and life cycle of many organisms with respect to their thermal tolerance, that is a complex of interacting factors can influence the benthic meiofaunal communities. This point has been emphasised by many investigators including Maaiké *et al.* (1999); Nabavi (1999); Moodley *et al.* (2000) and Gheskiere *et al.* (2002, 2004). Although the water temperature shows variation from surface to the depth of 104 m, in the three conducted Cruises, temperature does not show significant correlation with the meiobenthic communities. The *r*-values (the correlation coefficient between temperature and meiofauna communities) were -0.116, 0.054 and 0.163 ($p < 0.05$) for the years 2000, 2001 and 2006, respectively. These results could be related to the shallow depth of the stations.

Salinity is another important abiotic factor which can influence the meiofauna diversity in the marine environment. Salinity influences organisms primarily through osmosis, which in turn, osmoregulation as well as density, viscosity and ability to dissolve oxygen are influenced by salinity and temperature. The tolerance of benthic fauna (both macro and meiofauna) to environmental factors is different among species. For instance, *Cossura* spp. (polychaete worm), *Capitella capitata* (polychaete worm) and *Ammonia beccarii* (foraminifera) can tolerate extreme conditions. These kinds of species are considered as suitable tools for evaluation of marine environmental conditions and as bioindicators of environmental health. The ranges of salinity tolerated by foraminifera is from 0 to about 70 (Murray, 2006). Due to its hydrographical properties, the inner RSA is a unique oceanographic environment. Evaporation in the I-RSA by far exceeds freshwater influx, which gradually leads to high salinity of the surface water (Mostafawi, 2003). The extremely high salinity is usually above 39‰ and rises to 50‰ and more in some areas such as Khor

Musa in NW of I-RSA. According to Purser and Seibold (1973), this value may even exceed 70‰ in some localities such as Gulf of Salwah at its southern extremity. The salinity profile measurement during the Oceanographic Summer 2001 Cruise showed that maximum and minimum levels occurred in Strait of Hormuz and Kuwaiti waters, respectively. In the same time a salinity measurement showed higher values on the bottom of all stations with an overall maximum bottom salinity of 41.35‰ as recorded in Kuwaiti waters (SOMER, 2003). The variation in salinity in the surface to bottom water column of the Sea of Oman is small, which indicates a thorough mixing of waters.

The results of salinity measurements during ROPME Oceanographic Winter 2006 Cruise showed small variations along both Iranian and Omani Coasts ranging from 36.3‰ (st. 25a) to 36.5‰ in stations (26a, 93, 98, 97, 86 and 21a). In the same time, the highest value of salinity was measured in the I-RSA at station 33 (44.07‰) in Bahraini waters. As can be concluded from the results of the three Cruises, there are two clear trends of decrease and increase in salinity levels: first, decreased salinity levels as measured from Strait of Hormuz along Iranian coasts (Hormozgan Province) where there is a less saline waters inflow to I-RSA. The second trend is dense saline water masses along south western part of I-RSA passing through Kuwaiti, Saudi Arabian, Bahraini and Qatari waters which flow into the Sea of Oman via the Strait of Hormuz (Figures 2.1 to 2.3 and Tables 3.1 to 3.3).

During the three Oceanographic Cruises, a negative significant correlation between salinity and temperature levels was noted. The correlation coefficient values were: r -value = -0.426; r -value = -0.309 and r -value = -0.619 ($P < 0.05$) for the years of 2000, 2001 and 2006, respectively.

The oxygen level in the bottom waters in the three ROPME Cruises ranged from 3.76 ml/l to 8.35 ml/l (2000 Cruise), 1.37 ml/l to 4.89 ml/l (2001 Cruise) and 3.29 ml/l to 8.25 ml/l (2006 Cruise). As noted from the available data, there is a trend of decrease of dissolved oxygen levels during Summer Cruises in 2000 and 2001 to higher levels in Winter 2006 Cruise.

A number of parameters are responsible to evaluate the fluctuations of dissolved oxygen levels. Among them temperature has a key role in this respect which can control major distribution patterns of dissolved oxygen. However, other parameters including degradation of organic matters, the rate of dissolved oxygen consumption in the water column as well as in the bottom, seasonal changes and finally the rate of primary production are also contributive. The availability of the oxygen concentration both in the sediment and in water is vital for marine organisms. The oxygen solubility in sea water varies with temperature and salinity. As temperature and salinity increase, the dissolved oxygen in water reduces. There is also a close relationship between oxygen content of the sediment and food availability (organic flux). As the amount of organic matters in muddy substrate increases, the oxygen concentration in the sediment will decrease rapidly and may drop to zero. This phenomenon will be significant in areas with low bottom currents, large number of oxygen consumers causing excess of organic matters from decayed materials which result in oxygen depletion.

The data collected during the two Summer Cruises indicated the negative correlation between oxygen and temperature (Tables 3.19 and 3.20). This situation causes significant

stratification of the water column which in turn leads to the reduction of oxygen level in the bottom sediment. However, this is in contrast to the Winter Cruise, where a positive correlation is found between oxygen and temperature (Table 3.21). This is mainly due to the mixing of water layers during winter.

Considering pH value, the results show a slight pH variation between stations during the three ROPME 2000, 2001 and 2006 Cruises.

The sediment type and the organic content available in the sediments are considered as the most important limiting factor for the distribution and abundance of the meiofauna. Many investigators including, Heip *et al.* (1985); Olafson. (1991); Ansari & Parulekar (1998); Nabavi (2008) and Paikaray *et al.* (2012) have reported a positive relationship between finer particle size of the sediment, organic matter content of the sediment and meiofauna distribution. As it has been stated by Purser and Seibold (1973), much of the RSA floor is biogenic sediment, as produced by micro-organisms predominantly foraminifera. It has also been reported by ROPME (SOMER 2003) that muddy sediments predominant in the north-western part of the RSA and reflect the influence of the river inputs in the area. According to the three ROPME Cruises (2000, 2001 and 2006), all investigated sites share similar sediment grain size composition (63μ), which may indicate comparable hydrodynamic conditions. The data of the three ROPME Cruises also support the dominance of mud and muddy-sand sediments in most of the north and north-western parts of the RSA. The south and south-western and eastern parts of the RSA are mostly covered by sandy-mud and the remaining areas by sand (Figures 3.1 to 3.3). It is a fact that mud sediment with the dominance of silt and clay has the capacity in absorption and accumulation of organic materials as well as chemicals. Therefore, there is a similarity in composition of meiofauna in most of the study sites. As shown in Tables 3.4 to 3.9, the proportions of total organic matter are higher in stations with higher proportions of silt and clay fractions. This excess of organic materials which most likely originate from both allochthonous and autochthonous sources including degraded dead animal, plant and bacterial mats, can cause oxygen depletion in the upper most layer of the sediment and a decline in benthic species diversity. In this condition, the most resistant species will survive and increase their population sizes. These habitats are characterized by low species diversity and high density of a few species.

The recorded maximum abundance of meiofauna were 16104 (st.80), 30622 (st.60) and 11348 (st.93) individuals per 25.6 cm^3 of sediment in Summer 2000, Summer 2001 and Winter 2006 Cruises, respectively.

In the three Cruises, seven different communities of meiofauna were found at different benthic habitats in coastal, offshore and deeper areas of the RSA. Meiofauna species abundance was varied from station to station (Tables 3.10, 3.12 and 3.14).

A total of 70 species of marine meiofauna were identified during Summer 2000 Cruise, whereas it was 205 species in Summer 2001 Cruise and 281 species in Winter 2006 Cruise. During these three Cruises, a number of species were unidentified (37 species of foraminifera; 25 species of Ostracoda; 15 species of molluscs and 7 species of nematoda). The highest number of species was recorded as 39 (st.18) in the Strait of Hormuz during Summer 2000 Cruise; 40 species (st.50) in the offshore waters of Qatar during Summer 2001 Cruise and 65 species (st.98) in the Iranian coasts of the Sea of Oman during

Winter 2006 Cruise. It was noted that the substrate of these three stations were characterized by high proportion of silt and clay fractions of sediment, ranging from 84.4% to 94.80% and relatively high content of organic matter, ranging from 8.14% to 11.83%. Among the seven dominant groups of meiofauna, foraminifera, Ostracoda and molluscs were the important taxa (Tables 3.10, 3.12 and 3.14). Foraminifera contributed between 90% and 97.05% of the total numbers of meiofauna during all the three Cruises in the RSA.

Marine benthic organisms, especially foraminifera, play a significant role in global biochemical cycles of inorganic and organic compounds (Anderson, 1988; Lee and Anderson, 1991 and SenGupta, 1999). Among meiofauna, foraminifera have received the most attention by researchers (Murray, 1936, 1965, 1966, 1970; Al-Zamel, 1996; Nabavi, 1996, 2001 and 2005) as is the case in the RSA. While Saidova (2010) in his study reported 80 species of foraminifera for the I-RSA, the obtained results from the three ROPME Cruises disclosed the existence of 173 species in the area, of which 37 species are still unidentified and seem to be new species in the Region. The high dominance of foraminifera as part of the meiofauna in the RSA has also been reported by other workers (Lutz, 1974; Lutz and Wolf, 1975; Murray, 1936, 1965, 1966, 1970; Sarthien and Wallger, 1973; Al-Zamel, *et al.* 1996 and Nabavi, 2008).

Foraminifera as a major group of meiofauna has the potential to respond to pollutants and hence could be used as an indicator for pollution monitoring. In recent years, reports of deformities in foraminifera have increased (Bogdanowich, 1952, 1960; Pflum and Frerichs, 1976; Boltovskoy and Wright, 1976; Nabavi, 1988 and Boltovskoy *et al.* (1991). Deformed tests of foraminifera have been reported from areas contaminated by heavy metals, domestic sewage, and various chemicals, including liquid hydrocarbons (Sen Gupta, 1999). The types of deformity include: abnormal growth of chambers, aberrant chamber shape, twin specimens, abnormal coiling, multiple apertures and enlargement of the chambers.

It has also been reported by Sen Gupta (1999) that some foraminifera species are tolerant and resistant to pollution such as *Ammonia beccarii*, *Quinqueloculina seminulum*, *Elphidium articulatum* and *E. excavatum*. As Sen Gupta (1991) states, resident species in polluted and stressed environments are tolerant species or at least more resistant to the surrounding conditions. In contrast to the sensitive benthic meiofauna especially the foraminifera, which exhibit deformities in response to the surrounding environmental stress, tolerant species were also found in the RSA. Among the recorded species, the tolerant species noted are: *Ammonia beccarii*; *Elphidium articulatum*; *E. excavatum*; *E. poeyana*; *Spiroloculina excavata*; *Quinqueloculina seminulum*; *Cibicides* spp.; and *Cibicides* spp.. These tolerant species of foraminifera could be considered as bioindicators in the RSA. According to some workers (Yanko, *et al.*, 1998; Sharifi *et al.*, 1991; Nabavi, 1988), test deformity of living benthic foraminifera is generally related to the sensitivity towards marine pollution by heavy metals. Sen Gupta (1999) stated that *Amphistegina lobifera* has shown more deformity in response to the increase of Cd, *Cibicides advenum* to Cr and *Pseudotriloculina sugraulatata* to Ti. Since relatively a small number of test abnormalities of foraminifera is found during the present study, it is difficult to assess the cause/effect relations. It seems that there is a need for more research to discover the causes of deformities and the magnitude of pollution effects.

Foraminifera species such as *Ammonia beccarii*, *Quinqueloculina* spp., *Spiroloculina* sp. and *Triloculina* sp. had a wide range of distribution in the RSA. Some species such as *Discorbis nitida*, *Adelosina* spp., *Elphidium* spp. and *Nonion* spp. have indicated sub-dominance in distribution. A number of species such as *Bolivina* spp., *Lagena* spp., *Noasaria* spp., *Peneroplis* spp. and *Textularia* spp. were rare in their abundance and distribution in the study area.

The same situation is for Ostracoda species such as: *Puricythereis* spp., *Cytheralla* spp., *Hemicytheridea* sp. *Loxoconcha* spp. and *Aglaioocypris* sp. These species are considered as dominant and well distributed in the whole RSA. Some species of *Loxoconcha* and *Alocopocytherea* are among Ostracoda with sub-dominance in distribution. Species from the family Ponotocyprididae, namely *Propontocypris* spp. and *Actinocythereis* (Trachyleberidae) are among rare species with low dominance in distribution. The Ostracoda, such as *Bythoceratina* sp. and *Triebelina* sp. were only recorded in Winter 2006 Cruise. Among the recorded 53 Ostracoda species during the three ROPME Cruises, the 31 dominant species were identified up to Genus and species levels, the remaining 22 species were rare in sediment samples and could not be identified.

Despite the vast distribution and species diversity of ostracoda in marine sediments, the ostracoda fauna of the RSA has been little studied. The first survey of ostracoda in the Region was carried out by Bate (1971) where 47 species were identified in Abu Dhabi Lagoon. Paik (1977) conducted a comprehensive study on ostracoda and recorded 52 species from the whole RSA. Al- Abdul Razzaq *et al* (1982) studied the ostracod distribution within Sulaibikhat Bay in Kuwait. Mostafawi (2001, 2003) also recorded 50 ostracode species from the I-RSA. As Mostafawi (2003) has stated, it is likely that the I-RSA itself supports over 87 ostracod taxa, most of them live in the littoral area on soft substrate. Other studies are concerned with single taxonomic groups from scattered areas. In this respect, more surveys and investigations are needed to find out the species diversity and the ecological roles of this important group of meiofauna in the RSA.

Marine molluscs are among the major groups of invertebrates which have an extraordinary diversification of habitats and world-wide distributions. Many molluscs' species are temporary members of meiofauna when they are in an early stage of their life cycles. Despite the existence of considerable information on molluscs world-wide as well as in the RSA, meiobenthic molluscs of the Region are poorly known compared to their larger relatives. These meiobenthic molluscs are small in size (2-4 mm). However, much smaller adult molluscs (around 0.6 mm) also exist at their larval or juvenile stages.

During the three ROPME Cruises, 51 meiobenthic mollusc species were recorded, out of which 15 species were unidentified. Some of the identified species such as *Tornatina persiana*, *Diala semistriata* and *Rinicola propinquans* had wider range of distribution and dominant in the RSA. However, the species such as *Caecum* sp. and *Lippistes* sp. were sub-dominant in distribution. The species *Creseis acicula*, *Dentalium* sp., *Diala* sp., *Epitonium* sp., *Lippistes* sp., *Natica* sp., *Pseudonoba* sp., *Salinator* sp. and *Stosicia* sp. have been recorded for the first time from the north-western part of the I-RSA, whereas *Natica* sp., *Pupa affinis* and *Turbonilla jaica* have been recorded with less regional distribution and abundance.

Despite of the key roles of some environmental factors such as the sediment texture and food availability in controlling meiofauna distribution and abundance, it must be emphasized that meiofauna spatial distribution patterns are related to groups of factors instead of being related to one or two isolated factors. This has been particularly noted by many workers, including Witte and Zijlstra (1984); McArthur *et al.* (2000); Asencio *et al.* (2009) and NGO *et al.* (2013).

Statistically, the calculated correlation coefficient values between total meiofauna and dissolved oxygen have not shown significant values in all the three Cruises. The *r*-values were 0.196, 0.106 and 0.265 for the years 2000, 2001 and 2006, respectively. However, there was a positive correlation ($P < 0.05$) between dissolved oxygen and silt-clay sediment in Winter 2006 Cruise. Penetration of water into silt-clay sediment is less as the sediment grain size gets smaller and dissolved oxygen is reduced. Hence, this condition limits the existence of meiofauna.

The measured pH levels have not shown a significant variation during the three Cruises. Hence, it does not have any significant effect on meiofauna communities in the RSA.

The community structure of meiofauna, their distribution both spatial and temporal and diversity have been studied by many workers including Coull 1999; Dernie, *et al.* 2003; Danovaro, *et al.* 2004; Pinto and Santos, 2006; Nabavi, 2008 and Asencio, 2009. Many studies have pointed out that meiofauna community structure is strongly determined by the sediment characteristics of the environment (Hicks & Coull, 1983; Coull, 1999; Danovaro *et al.* 2004). Particularly, the grain size and the organic matter contents of sediment as well as salinity, dissolved oxygen and temperature are the key factors for the spatial and temporal variation of meiofauna communities. The result of grain size analysis of sediment during the three Cruises revealed that many sites were dominated by high proportion of silt and clay fractions with relatively high contents of organic matter. The excess of organic matter can cause dissolved oxygen reduction in the upper most layer of the sediment. This hypoxia condition could affect the meiofauna, and also a limiting factor for many sensitive species which could cause a reduction in meiofauna species diversity.

In the recent study, high values of Shannon index of diversity ($H' > 4$) has been recorded in the muddy-sand sediments of the NW part of the I-RSA with the availability of food and suitability of sediment characteristics. The mixture of silt-clay and sandy sediments is favourable substrates for meiofauna to reside with larger pores than highly silty-clay sediment. Therefore, meiofaunal species diversity and abundance is higher in substrates with a mixture of silt-clay and sandy sediments than highly silty-clay sediment. Stations 96 and 89 in Summer 2000 with highest values of H' contained 81.6% and 83.6% of silt and clay fractions with 18.4% and 16.4% of sand fractions, respectively. During Summer 2001, the higher values of H' were observed in north and NE parts of the I-RSA ranging between 2.62 (st. 73) to 2.83 (st. 78) indicating of moderate values according to Welch model (1992). These values could be attributed to the input of oceanic water with high nutrients through the Strait of Hormuz rather than to the types of substrates.

In Winter 2006 Cruise, high values of H' (1.60-1.68) were calculated for both sides of Sea of Oman and a few sites along the Iranian coasts in the I-RSA. However, these values were generally lower than those calculated for Summer 2000 and 2001 Cruises. More

energetic waves and turbulence of water during winter lead to the agitation of water and the resuspension of sediments to water column. In this condition, meiofauna could be transported to distant areas by water masses and currents. Water currents are an important means of meiofaunal dispersal in the marine environment. The calculated species diversity index shows reduction in values during Winter 2006 Cruise in the inner and middle RSA. The same phenomenon has been noted by Gooday et al (2000) in the Arabian Sea.

Welch (1992) has developed a model to check the health conditions of the ecosystems. According to this model, the regions with no stress or any kind of pollution have the H' (Shannon Index) values of 3 or more. The ecosystems with H' values of >1 and <3 have moderate conditions of environmental stress, or pollution. The H' values of 1 or less is the indication of heavy pollution or high stress conditions in the environment. Comparing the results of three ROPME Cruises with Welch Model, it was found that all sampled areas have H' values ranged between 1 and 3 which means that the area is under moderate stress condition. The stress can be numerous and differ from one site to another.

Speight and Henderson (2010) stated that large areas of a homogeneous habitat are unlikely to support large numbers of species. The obtained results from the three Cruises support this idea. The species diversity index (H') values were very similar among stations. The high values of H' were observed near Strait of Hormuz along the Iranian side in the north and NW parts of I-RSA with the highest value in stations 96 and 89 ($H' = 3$ and 2.9, respectively) in the northern end of I-RSA during Summer 2000 Cruise. Favorable environmental conditions in the NW part as well as the low energy zone located in the northern part of the I-RSA, seem to be the reason of this higher H' values. The input of fresh waters from Rivers (Karun, Euphrate, Tigris, Zohreh) bring high amounts of organic materials and nutrients which can support the growth of phytoplankton and benthic organisms. The presence of such a rich input waters in the I-RSA creates a favourable condition to some endemic species living in the marshlands and lagoons. A noticeable foraminifera species in this regard is *Trochammina inflata*. In fact, the north western part of I-RSA is considered to be static zone which promotes resident species diversity.

Benthic fauna in marginal seas including RSA, are subjected to a wide variety of anthropogenic pressures that strongly enhance the environmental stress on biological diversity. Due to the complexity of these environmental ecosystems, it is often difficult to assess the effects of one individual variable on the composition and distribution of benthic fauna. Types and magnitude of these stressors may vary from one Region to another. Oil and its related industries, for example, operational and accidental oil spills, hot brine discharges from desalination plants, domestic sewage and discharges from power plants and other major industries are among the main concerns which can affect the benthic fauna of the RSA.

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