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## 16. Abstract

The current Louisiana Offshore Port (LOOP) monitoring program includes seasonal monitoring of aquatic and marine resources, sediment composition, and water quality on a five (5) -year cycle. These data provide an update to the existing long-term LOOP dataset that was collected annually from 1979 to 1994, as well as a measure of natural environmental variability in the project area. The monitoring program was designed to identify environmental impacts that could occur due to offshore vessel operations (at the Single-Point Mooring and Terminal Complex), brine discharge, storage facility operations, and pipeline construction and operation. Inshore benthic samples were collected utilizing a 0.023 $m^2$ Ekman grab sampler. Five replicates were collected at each inshore Lake Jesse and Clovelly station. Offshore samples were collected with a 0.1 $m^2$ Smith-McIntyre grab sampler. There were six replicates collected at each station adjacent to the LOOP brine diffuser and seven replicates collected at each station in the area of the LOOP Marine Terminal Complex (offshore). Samples were collected during August and November 2001 and June 2002. Environmental data and hydrographic profiles were conducted in conjunction with the benthic sampling. Sediment core samples were collected at the inshore benthic stations using a Barret-type coring device. Sediment core samples collected at the offshore benthic stations were collected using a Smith-McIntyre Grab sampler. Samples were analyzed for Polynuclear Aromatic Hydrocarbons (PAH) and grain size (percent gravel, sand, silt, clay).

Sediments at the Clovelly stations during all seasons were dominated by silt+clay (except Station 464 in June). Sediments at Station 464 were greater than 20% sand during August and November, but were completely organic during June. Estuarine salinities were present during all seasons, ranging from < 2 ppt in August to 6 ppt in June. Dissolved oxygen levels varied seasonally. DO levels were lowest in August (< 5 mg/l) and were greater than 7 mg/l during November and June. The gastropod, *Probythinella louisianae* dominated the benthic assemblage in August, the gastropod, *Amnicola limosa*, dominated in November, and the bivalve, *Mytilopsis leucophaeata*, dominated in June. There were significant differences in density and taxa richness between stations for each season. In no instance was the control station significantly different than both of the test stations. These differences could be explained by subtle variations in sediment type between stations as well as stochastic variability inherent in benthic assessments. There was no measurable impact of the LOOP facilities on benthic macroinfaunal assemblages at the Clovelly site.

Sediments at the Lake Jesse stations during all seasons were dominated by silt+clay. Estuarine salinities were present during all seasons, ranging from 4.7 ppt in August to 6.8 ppt in November. Dissolved oxygen levels did not vary seasonally and were between 7 and 8 mg/l during all sampling events. The oligochaete family, Tubificidae (LPIL), dominated the benthic assemblage in August, the polychaete, *Mediomastus* (LPIL), dominated in November, and he ascidiacean family, Ascidiacea (LPIL), dominated the assemblage in June. There were no significant differences in density or taxa richness between stations for each season. There was no measurable impact of the LOOP facilities on benthic macroinfaunal assemblages at the Lake Jesse site.

Sediments at the Brine Diffuser stations during all seasons were dominated by silt + clay. The sediment at Station 475 in August was 45% sand. Bottom salinities varied seasonally and were between 28-30 ppt in August, 31-32 ppt in November and 35-36 ppt in June. Hypoxic conditions (DO = 1.88 mg/l) were present at Station 435 during August; however, DO levels at the remaining stations ranged from 2.79 mg/l at Station 473 to 3.66 mg/l at Station 475. In November, bottom DO levels ranged from 4.8 mg/l at Station 475 to 7.1 mg/l at Station 435. In June, hypoxic conditions were present at all stations with DO ranging from 1.0 mg/l at Station 475 to 1.5 at Stations 435 and 474. The polychaete, *Paraprionospio pinnata*, dominated the benthic assemblage in August and November, while the polychaete, *Mediomastus* (LPIL), dominated the benthos in June. There were no significant differences in densities between stations for each season. There were no significant differences in taxa richness between stations during August and November; in June, Station 435 had significantly greater taxa richness than the remaining stations. It is probable that the hypoxia experienced by the benthic assemblage in June was responsible for variations in taxa richness. There was no measurable impact of the LOOP facilities on benthic macroinfaunal assemblages at the Brine Diffuser site.

Sediments at the Offshore stations during all seasons were dominated by silt + clay. Bottom salinities varied seasonally and ranged from 32.4 ppt at Station 481 in August to 38.6 ppt at Station 484 in August. Hypoxic conditions were present at Stations 481 (DO = 1.60 mg/l) and 484 (DO = 1.88 mg/l) during August; no bottom DO data was collected from Station 484. In November, bottom DO levels ranged from 2.8 mg/l at Station 481 to 8.1 mg/l at Station 482. In June, bottom DO levels ranged from 6.0 mg/l at Station 482 to 6.9 mg/l at Station 484. The polychaete, *Paraprionospio pinnata*, dominated the benthic assemblage in August and June, while the gastropod, *Vitrinella helicoidea*, dominated the benthos in November. There were significant differences in density and taxa richness between stations in August and November. Station 481 had significantly higher density and taxa richness than Stations 482 and 484. There were no significant differences in density and taxa richness between stations in June. There was no measurable impact of the LOOP facilities on benthic macroinfaunal assemblages at the Offshore site.

# Louisiana Offshore Terminal Authority Environmental Monitoring
# 2001-2002 Marine/Estuarine

by

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Louisiana Transportation Research Center

The contents of this report reflect the views of the author who is responsible for the facts and accuracy of the data presented herein. The contents do not necessarily reflect the views or policies of the Louisiana Department of Transportation and Development or the Louisiana Transportation Research Center. This report does not constitute a standard, specification, or regulation.

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## ABSTRACT

The current Louisiana Offshore Oil Port (LOOP) monitoring program includes seasonal monitoring of aquatic and marine resources, sediment composition, and water quality on a five (5) -year cycle. These data provide an update to the existing long-term LOOP dataset that was collected annually from 1979 to 1994, as well as a measure of natural environmental variability in the project area. The monitoring program was designed to identify environmental impacts that could occur due to offshore vessel operations (at the Single-Point Mooring and Terminal Complex), brine discharge, storage facility operations, and pipeline construction and operation. Inshore benthic samples were collected utilizing a 0.023 $m^2$ Ekman grab sampler. Five replicates were collected at each inshore Lake Jesse and Clovelly station. Offshore samples were collected with a 0.1 $m^2$ Smith-McIntyre grab sampler. There were six replicates collected at each station adjacent to the LOOP brine diffuser and seven replicates collected at each station in the area of the LOOP Marine Terminal Complex (offshore). Samples were collected during August and November 2001 and June 2002. Environmental data and hydrographic profiles were conducted in conjunction with the benthic sampling. Sediment core samples were collected at the inshore benthic stations using a Barret-type coring device. Sediment core samples collected at the offshore benthic stations were collected using a Smith-McIntyre Grab sampler. Samples were analyzed for Polynuclear Aromatic Hydrocarbons (PAH) and grain size (percent gravel, sand, silt, clay).

Sediments at the Clovelly stations during all seasons were dominated by silt+clay (except Station 464 in June). Sediments at Station 464 were greater than 20% sand during




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August and November, but were completely organic during June. Estuarine salinities were present during all seasons, ranging from < 2 ppt in August to 6 ppt in June. Dissolved oxygen (DO) levels varied seasonally. DO levels were lowest in August (< 5 mg/l) and were greater than 7 mg/l during November and June. The gastropod, *Probythinella louisianae* dominated the benthic assemblage in August, the gastropod, *Amnicola limosa*, dominated in November, and the bivalve, *Mytilopsis leucophaeata*, dominated in June. There were significant differences in density and taxa richness between stations for each season. In no instance was the control station significantly different than both of the test stations. These differences could be explained by subtle variations in sediment type between stations as well as stochastic variability inherent in benthic assessments. There was no measurable impact of the LOOP facilities on benthic macroinfaunal assemblages at the Clovelly site.

Sediments at the Lake Jesse stations during all seasons were dominated by silt+clay. Estuarine salinities were present during all seasons, ranging from 4.7 ppt in August to 6.8 ppt in November. DO levels did not vary seasonally and were between 7 and 8 mg/l during all sampling events. The oligochaete family, Tubificidae (LPIL), dominated the benthic assemblage in August, the polychaete, *Mediomastus* (LPIL), dominated in November, and the ascidiacean family, Ascidiacea (LPIL), dominated the assemblage in June. There were no significant differences in density or taxa richness between stations for each season. There was no measurable impact of the LOOP facilities on benthic macroinfaunal assemblages at the Lake Jesse site.

Sediments at the Brine Diffuser stations during all seasons were dominated by silt + clay. The sediment at Station 475 in August was 45% sand. Bottom salinities varied



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seasonally and were between 28-30 ppt in August, 31-32 ppt in November, and 35-36 ppt in June. Hypoxic conditions (DO = 1.88 mg/l) were present at Station 435 during August; however, DO levels at the remaining stations ranged from 2.79 mg/l at Station 473 to 3.66 mg/l at Station 475. In November, bottom DO levels ranged from 4.8 mg/l at Station 475 to 7.1 mg/l at Station 435. In June, hypoxic conditions were present at all stations with DO ranging from 1.0 mg/l at Station 475 to 1.5 mg/l at Stations 435 and 474. The polychaete, *Paraprionospio pinnata*, dominated the benthic assemblage in August and November, while the polychaete, *Mediomastus* (LPIL), dominated the benthos in June. There were no significant differences in densities between stations for each season. There were no significant differences in taxa richness between stations during August and November; in June, Station 435 had significantly greater taxa richness than the remaining stations. It is probable that the hypoxia experienced by the benthic assemblage in June was responsible for variations in taxa richness. There was no measurable impact of the LOOP facilities on benthic macroinfaunal assemblages at the Brine Diffuser site.

Sediments at the Offshore stations during all seasons were dominated by silt + clay. Bottom salinities varied seasonally and ranged from 32.4 ppt at Station 481 in August to 38.6 ppt at Station 484 in August. Hypoxic conditions were present at Stations 481 (DO = 1.60 mg/l) and 484 (DO = 1.88 mg/l) during August; no bottom DO data were collected from Station 484. In November, bottom DO levels ranged from 2.8 mg/l at Station 481 to 8.1 mg/l at Station 482. In June, bottom DO levels ranged from 6.0 mg/l at Station 482 to 6.9 mg/l at Station 484. The polychaete, *Paraprionospio pinnata*, dominated the benthic assemblage in August and June, while the gastropod, *Vitrinella helicoidea*, dominated the



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benthos in November. There were significant differences in density and taxa richness between stations in August and November. Station 481 had significantly higher density and taxa richness than Stations 482 and 484. There were no significant differences in density and taxa richness between stations in June. There was no measurable impact of the LOOP facilities on benthic macroinfaunal assemblages at the Offshore site.



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**Figure 11.** Taxa richness data for the LOOP - Clovelly stations, 2001-2002.

**Figure 12.** Taxa diversity (H') for the LOOP - Lake Jesse stations, 2001-2002.

**Figure 13.** Taxa evenness (J') for the LOOP - Lake Jesse Stations, 2001- 2002.

**Figure 14.** Sediment composition for the LOOP - Brine stations, 2000-2001.

**Figure 15**. Water quality data for the LOOP - Brine Station 435, 2001-2002.

**Figure 16.** Water quality data for the LOOP - Brine Station 473, 2001-2002.

**Figure 17.** Water quality data for the LOOP - Brine Station 474, 2001-2002.

**Figure 18.** Water quality data for the LOOP - Brine Station 475, 2001-2002.

**Figure 19.** Percent abundance of major taxonomic groups for the LOOP - Brine stations,



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2001-2002.

**Figure 20.** Macroinvertebrate density data for the LOOP - Brine stations, 2001-2002.

**Figure 21.** Taxa richness data for the LOOP - Brine stations, 2001-2002.

**Figure 22.** Taxa diversity (H') data for the LOOP - Brine stations, 2001-2002.

**Figure 23.** Taxa evenness (J') for the LOOP - Brine Stations, 2001-2002.

**Figure 24.** Sediment composition for the LOOP - Offshore stations, 2000-2001.

**Figure 25.** Water quality data for the LOOP - Offshore Station 481, 2001-2002.

**Figure 26.** Water quality data for the LOOP - Offshore Station 482, 2001-2002.

**Figure 27.** Water quality data for the LOOP - Offshore Station 484, 2001-2002.

**Figure 28.** Percent abundance of major taxonomic groups for the LOOP - Offshore stations, 2001-2002.

**Figure 29.** Macroinvertebrate density data for the LOOP - Offshore stations, 2001-2002.

**Figure 30.** Taxa richness data for the LOOP - Offshore stations, 2001-2002.

**Figure 31.** Taxa diversity (H') data for the LOOP - Offshore stations, 2001-2002.

**Figure 32.** Taxa evenness (J') for the LOOP - Offshore Stations, 2001-2002.



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# INTRODUCTION

The Louisiana Offshore Terminal Authority (LOTA) Monitoring Program was initiated in 1979 and began with pre-construction monitoring of the Louisiana Offshore Oil Port (LOOP) and associated facilities (Clovelly, offshore brine diffuser, pipelines). The LOOP facilities were monitored yearly for 15 years, after which monitoring was performed every five years. Barry A. Vittor & Associates, Inc. (BVA) was contracted by LOTA to carry out the 2001-02 marine/estuarine monitoring.



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## OBJECTIVES

The objectives of the monitoring program are to (1) to maintain seasonal environmental and ecological data so that conditions existing during operations can be related to historical baseline conditions; (2) to detect during the operation of the deepwater port any adverse alterations or damages to the environment so that corrective action can be taken as soon as possible; (3) to maintain sufficient data to determine the cause or causes of environmental damages or alterations so that responsibility can be properly placed; and (4) to provide information in order to evaluate long and short-term impacts of the deepwater port.



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## SCOPE

The current LOOP monitoring program includes seasonal monitoring of aquatic and marine resources, sediment composition, and water quality on a five -year cycle. These data provide an update to the existing long-term LOOP dataset that was collected annually from 1979 to 1994, as well as a measure of natural environmental variability in the project area. The monitoring program was designed to identify environmental impacts that could occur due to offshore vessel operations (at the Single-Point Mooring and Terminal Complex), brine discharge, storage facility operations, and pipeline construction and operation.



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# METHODOLOGY

Vittor & Associates (BVA) conducted each study element of the monitoring program in accordance with the specifications in the previous section, using methodologies similar to the past program to ensure that proposed program data were compatible with previously collected data.

BVA's principal modifications to the present program included use of Differential Global Positioning System for sample station positioning, availability of back-up field equipment for all survey tasks, use of certified analytical laboratories for water and sediment chemistries, and use of a database management system that provides monthly data compilation/reduction.

## Biological Methods

### Benthos

Benthic samples were collected at various inshore and offshore sample stations (Figure 1). Inshore benthic samples were collected utilizing a 0.023 $m^2$ Ekman grab sampler. Five replicates were collected at each inshore benthic station. Offshore samples were collected with a 0.1 $m^2$ Smith-McIntyre grab sampler. There were six replicates collected at each station adjacent to the LOOP brine diffuser and seven replicates collected at each station in the area of the LOOP Marine Terminal Complex (= offshore). Samples were sieved through a 0.533 mm-mesh brass screen. All material retained on the screen was preserved in a 10-15% solution of filtered ambient water and buffered formalin stained with Rose Bengal. Samples were collected during August and November 2001 and June 2002.



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**Benthic Sample Analysis**

In BVA's laboratory, benthic samples were inventoried, rinsed gently through a 0.5–mm mesh sieve to remove preservatives and sediment, stained with Rose Bengal, and stored in 70% isopropanol solution until processing. Sample material (sediment, detritus, organisms) was placed in white enamel trays for sorting under Wild M-5A dissecting microscopes. All macroinvertebrates were removed with forceps and placed in labeled glass vials containing 70% isopropanol. Each vial represented a major taxonomic group (*e.g.* Oligochaeta, Mollusca, Arthropoda). Oligochaetes were individually mounted and cleared on microscope slides prior to identification. All sorted macroinvertebrates were identified to the lowest practical identification level (LPIL), which in most cases was to species level unless the specimen was a juvenile, damaged, or otherwise unidentifiable. The number of individuals of each taxon, excluding fragments, was recorded. A voucher collection was prepared, composed of representative individuals of each species not previously encountered in samples from the Gulf of Mexico region.

**Assemblage Analyses**

All data generated as a result of laboratory analysis of macroinfauna samples were first coded on data sheets. Enumeration data were entered for each species according to station and replicate. These data were reduced to a data summary report for each station, which included a taxonomic species list and benthic community parameters information. Documentation of BVA's standard QA/QC procedures can be seen in the Quality Assurance Plan submitted to LOTA (BVA 2001) and QA/QC results for this project are available upon request.



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Several numerical indices were chosen for analysis and interpretation of the macroinfaunal data. Abundance is reported as the total number of individuals per station and the total number of individuals per square meter (= density). Taxa richness is reported as the total number of taxa represented in a given station collection. Taxa diversity, which is often related to the ecological stability and environmental "quality" of the benthos, was estimated by the Shannon-Weaver Diversity Index H' (Pielou 1966), according to the following formula:

$$H' = -\sum_{i=1}^{S} p_i(\ln p_i)$$

where, S = is the number of taxa in the sample,

i = is the $i^{th}$ taxon in the sample, and

$p_i$ = is the number of individuals of the $i^{th}$ taxon divided by the total number of individuals in the sample.

Taxa diversity within a given community is dependent upon the number of taxa present (taxa richness) and the distribution of all individuals among those taxa (equitability or evenness). In order to quantify and compare the equitability in the fauna to the taxa diversity for a given area, Pielou's Evenness Index J' (Pielou 1966) was calculated as $J' = H'/\ln S$, where $\ln S = H'_{max}$, or the maximum possible diversity, when all taxa are represented by the same number of individuals; thus, $J' = H'/H'_{max}$.

Density and taxa richness data for a given facility (Offshore Pumping Station and Single Point Mooring Complex, Brine Diffuser, Lake Jesse pipeline crossing, Clovelly Salt Domes) were graphically and statistically analyzed for potential impacts (comparisons to control stations) and seasonal differences.



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## Hydrography

Continuous hydrographic profiles were conducted in conjunction with the benthic sampling. The following environmental data were collected at all sampling stations:

| | |
|---|---|
| Air Temperature: | Brunton portable weather station, degrees Centigrade |
| Barometric Pressure: | Brunton portable weather station, mm of mercury |
| Wind Speed: | Brunton portable weather station, recorded in knots |
| Wind Direction: | Brunton portable weather station, recorded in degrees from which the wind is coming |
| Cloud Cover: | Visually estimated percentage of the celestial dome covered by clouds |
| Wave Height: | Visually estimated in meters from crest to trough |
| Secchi Depth: | 30 cm Secchi disc lowered until no longer visible, then raised until visible and the average of two readings recorded in meters. |

A HydroLab Surveyor and a Datasonde 4 were used to collect instantaneous measurements (depth, temperature, salinity, dissolved oxygen) at all monitoring stations. Continuous hydrographic profiles were collected at all offshore stations during each sampling event. The instrument was lowered by hand to discrete depths (1 meter intervals or surface, middle, and bottom) and the data recorded on field data sheets. In August 2001 there was an equipment failure at the Offshore site and a continuous profile was not captured for Station 484.

## Sediment

Sediment samples were collected in conjunction with benthic sampling events. Sediment core samples were collected at the inshore benthic stations using a Barret-type coring device. Sediment core samples collected at the offshore benthic stations were collected using a Smith-McIntyre Grab sampler. There were two



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samples collected at each station. The samples were collected in a butyrate core tube (6.99 cm outside diameter x 6.67 inside diameter x 30.48 cm long). The interstitial pH of one sample was tested in the field with a hand-held Orion pH probe by the slurry method. One sediment sample was analyzed for Polynuclear Aromatic Hydrocarbons (PAH; Appendices I, II and III) and another was analyzed for grain size (percent gravel, sand, silt, clay).

## Laboratory Analysis Specifications

Water and sediment chemistry analysis USEPA methods, and method detection limits, are: Dissolved Oxygen, Method 4500-OG, 0.01 mg/L; Salinity, Method 2520-OB; Turbidity, Method 180.1, 0.1 NTU; and Sediment PAH, Method 8100. Severn Trent Laboratories (STL-Mobile) are certified for sediment PAH analysis, and used standard QA/QC procedures such as sample spikes, sample blanks, and duplicate analyses.

BVA's taxonomy laboratory conducts routine QA/QC checks for all benthic analyses, including re-analysis of 10% of all samples, use of verified reference collections, and use of outside taxonomic experts for verification of laboratory identifications.



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# RESULTS

## Clovelly

### Sediment Characteristics

**August 2001.** Station location and sediment data for the Clovelly stations in August are given in Table 1 and Figure 2. Station 461 was dominated by silt (68%), while Stations 463 and 464 were dominated by clay (79% and 48%, respectively). Sand composition varied from 5% at Station 463 to 32% at Station 464.

**November 2001.** Station location and sediment data for the Clovelly stations in November are given in Table 2 and Figure 2. Stations 461 and 464 were dominated by silt (45% and 43% , respectively) and Station 463 was dominated by clay (70%). Sand composition varied from 5% at Station 463 to 41% at Station 464.

**June 2002.** Station location and sediment data for the Clovelly stations in June are given in Table 3 and Figure 2. Stations 461 and 463 were dominated by silt + clay (79%) and the sediment at Station 464 was all organic material.

### Weather and Water Quality Data

**August 2001.** Weather condition and water quality data for the Clovelly stations in August are given in Tables 4 and 5. Bottom temperatures ranged from 30.6 °C at Station 463 to 31.4 °C at Station 461. Bottom dissolved oxygen levels ranged from 3.8 mg/l to 4.9 mg/l, and bottom salinities were < 2 ppt.

**November 2001.** Weather condition and water quality data for the Clovelly stations in November are given in Tables 6 and 7. Bottom temperatures ranged from 20.5 °C at Station 464 to 21.8 °C at Station 461. Bottom dissolved oxygen levels for all stations were above 7.8 mg/l and bottom salinities ranged from 2.7 ppt to 3.7 ppt.



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**June 2002.** Weather condition and water quality data for the Clovelly stations in June are given in Tables 8 and 9. Bottom temperatures ranged from 29.1 °C at Station 461 to 29.8 °C at Station 463. Bottom dissolved oxygen levels for all stations were > 7 mg/l and bottom salinities ranged from 3.52 ppt at Station 463 to 6.34 ppt at Station 464.

**Benthic Assemblage Characteristics**

**August 2001.** Thirty-one taxa representing 5,013 individuals were collected from the Clovelly stations in August (Table 10). Polychaetes, malacostracans (primarily amphipods), and gastropods were the most numerous taxa collected representing 36%, 23%, and 16% of the total taxa, respectively (Table 10). Gastropods, malacostracans, and polychaetes also represented 66%, 22%, and 7% of the total number of individuals collected, respectively.

Major taxonomic groups collected from the Clovelly stations in August are summarized by station in Table 11 and Figure 3. The distribution and abundance of individual families collected at the Clovelly stations are given in Table 12. Those families which made up greater than 10% of the total assemblage at a given station are listed in Table 13.

The distribution and abundance of individual taxa collected at the Clovelly stations are given in Table 14. The gastropod, *Probythinella louisianae*, made up 52% of the total assemblage, and several taxa were widely distributed occurring at 100% of the Clovelly stations (Table 14). Those taxa which made up greater than 10% of the total assemblage at a given station are listed in Table 15.

A summary of assemblage parameters for the Clovelly stations in August is given in Table 16 and Figures 4, 5, 6, and 7. Mean macroinvertebrate densities ranged from



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2904.3 nos/$m^2$ (± 1170.0) at Station 461 to 36373.9 nos/$m^2$ (± 6550.6) at Station 464 (Figure 4). Mean number of taxa (taxa richness) ranged from 11.4 (± 1.3) at Station 463 to 16.4 (± 3.4) at Station 461 (Figure 5). Diversity (H') ranged from 1.48 at Station 464 to 2.68 at Station 461 (Figure 6). Evenness (J') ranged from 0.46 at Station 464 to 0.76 at Station 461 (Figure 7). Taxa richness at Station 463 was significantly higher than at Stations 461 and 464 (Table 17; F = 5.643, Prob >F = 0.019). Densities at Station 464 were significantly higher than at Stations 461 and 463 (Table 17; F = 114.344, Prob >F < 0.0001).

**November 2001.** Sixty-seven taxa representing 5,905 individuals were collected from the Clovelly stations in November (Table 18). Aquatic insects, malacostracans (primarily amphipods), and polychaetes were the most numerous taxa collected representing 28%, 19%, and 16% of the total, respectively (Table 18). Gastropods, malacostracans and aquatic insects also represented 33%, 30%, and 23% of the total number of individuals collected, respectively.

Major taxonomic groups collected from the Clovelly stations in November are summarized by station in Table 19 and Figure 3. The distribution and abundance of individual families collected at the Clovelly stations are given in Table 20. Those families which made up greater than 10% of the total assemblage at a given station are listed in Table 21.

The distribution and abundance of individual taxa collected at the Clovelly stations in November are given in Table 22. The gastropod, *Amnicola limosa*, made up 18% of the total assemblage, and several taxa were widely distributed occurring at 100%



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of the Clovelly stations (Table 22). Those taxa which made up greater than 10% of the total assemblage at a given station are listed in Table 23.

A summary of assemblage parameters for the Clovelly stations in November is given in Table 24 and Figures 4, 5, 6, and 7. Mean macroinvertebrate densities ranged from 736.0 nos/$m^2$ (± 703.5) at Station 463 to 6464.0 nos/$m^2$ (± 862.7) at Station 464 (Figure 4). Mean number of taxa (taxa richness) ranged from 12.4 (± 4.2) at Station 463 to 25.6 (± 3.6) at Station 461 (Figure 5). Diversity (H') ranged from 2.07 at Station 464 to 2.68 at Station 461 (Figure 6). Evenness (J') ranged from 0.58 at Station 464 to 0.71 at both Stations 461 and 463 (Figure 7). Taxa richness at Station 463 was significantly higher than at Stations 461 and 464 (Table 17; F = 17.630, Prob > F = 0.0003). Densities at Station 464 were significantly higher than at both Stations 461 and 463, and densities at Station 461 were significantly higher than at 463 (Table 17; F = 32.669, Prob > F < 0.0001).

**June 2002.** Seventy-four taxa representing 1,743 individuals were collected from the Clovelly stations in June (Table 25). Aquatic insects, malacostracans, and polychaetes were the most numerous taxa collected representing 28%, 27%, and 19% of the total, respectively (Table 25). Malacostracans, bivalves and aquatic insects also represented 32%, 24%, and 18% of the total number of individuals collected, respectively.

Major taxonomic groups collected from the Clovelly stations in June are summarized by station in Table 26 and Figure 3. The distribution and abundance of individual families collected at the Clovelly stations are given in Table 27. Those families which made up greater than 10% of the total assemblage at a given station are listed in Table 28.



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The distribution and abundance of individual taxa collected at the Clovelly stations in June are given in Table 29. The bivalve, *Mytilopsis leucophaeata*, made up 12% of the total assemblage, and several taxa were widely distributed occurring at 100% of the stations (Table 29). Those taxa which made up greater than 10% of the total assemblage at a given station are listed in Table 30.

A summary of assemblage parameters for the Clovelly stations in June is given in Table 31 and Figures 4, 5, 6, and 7. Mean macroinvertebrate densities ranged from 2991.3 nos/$m^2$ (± 740.7) at Station 463 to 7730.4 nos/$m^2$ (± 3421.1) at Station 464 (Figure 4). Mean number of taxa (taxa richness) ranged from 15.2 (± 5.1) at Station 461 to 21.8 (± 5.3) at Station 464 (Figure 5). Diversity (H') ranged from 2.58 at Station 461 to 2.85 at Station 463 (Figure 6). Evenness (J') ranged from 0.70 at Station 464 to 0.77 at Station 463 (Figure 7). There was no significant difference in taxa richness between the stations (Table 17; F = 3.932, Prob > F = 0.049). Densities at Stations 461 and 463 were significantly higher than at Stations 463 (Table 17; F = 6.296, Prob > F = 0.014).

## Lake Jesse

### Sediment Characteristics

**August 2001.** Station location and sediment data for the Lake Jesse stations in August are given in Table 32 and Figure 8. Station 407 was dominated by silt (49%) and Station 462 was dominated by clay (52%). Sand composition varied from 7% at Station 407 to 14% at Station 462.

**November 2001.** Station location and sediment data for the Lake Jesse stations in November are given in Table 33 and Figure 8. Stations 407 and 462 were dominated by



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silt (62% and 52%, respectively). Sand composition varied from 9% at Station 407 to 21% at Station 462.

**June 2002.** Station location and sediment data for the Lake Jesse stations in November are given in Table 34 and Figure 8. Stations 407 and 462 were both dominated by silt + clay (93% and 88%, respectively). Sand composition varied from 7% at Station 407 to 12% at Station 462.

**Weather and Water Quality Data**

**August 2001.** Weather condition and water quality data for the Lake Jesse stations in August are given in Tables 35 and 36. Bottom temperatures ranged from 31.8 °C at Station 407 to 32.0°C at Station 462. Bottom dissolved oxygen was 7.8 mg/l for both stations and bottom salinities were 4.67 ppt and 6.84 ppt for Stations 407 and 462, respectively.

**November 2001.** Weather condition and water quality data for the Lake Jesse stations in November are given in Tables 37 and 38. Bottom temperatures were 20.7 °C and bottom dissolved oxygen was 7.8 mg/l at both stations. Bottom salinities were 6.87 ppt and 7.38 ppt at Stations 407 and 462.

**June 2002.** Weather condition and water quality data for the Lake Jesse stations in June are given in Tables 39 and 40. The bottom temperature was 30.6 °C at both stations. Bottom dissolved oxygen levels were 7.2 mg/l and 7.6 mg/l, and bottom salinities were 4.94 ppt and 5.33 ppt at Stations 407 and 462, respectively.



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## Benthic Assemblage Characteristics

**August 2001.** Forty-three taxa representing 695 individuals were collected from the Lake Jesse stations in August (Table 41). Polychaetes, malacostracans, bivalves, and gastropods were the most numerous taxa collected representing 44%, 30%, 7%, and 7% of the total, respectively (Table 41). Polychaetes, oligochaetes, and malacostracans also represented 53%, 28%, and 13% of the total number of individuals collected, respectively.

Major taxonomic groups collected from the Lake Jesse stations in August are summarized by station in Table 42 and Figure 9. The distribution and abundance of individual families collected at the Lake Jesse stations are given in Table 43. Those families that made up greater than 10% of the total assemblage at a given station are listed in Table 44.

The distribution and abundance of individual taxa collected at the Lake Jesse stations in August are given in Table 45. The oligochaete family, Tubificidae (LPIL), made up 28% of the total assemblage, and several taxa were widely distributed occurring at 100% of the Lake Jesse stations (Table 45). Those taxa which made up greater than 10% of the total assemblage at a given station are listed in Table 46.

A summary of assemblage parameters for the Lake Jesse stations in August is given in Table 47 and Figures 10, 11, 12, and 13. Mean macroinvertebrate densities ranged from 2791.3 nos/m$^2$ (± 1113.8) at Station 462 to 3252.2 nos/m$^2$ (± 1206.2) at Station 407 (Figure 10). Mean number of taxa (taxa richness) ranged from 13.4 (± 3.9) at Station 462 to 16.4 (± 2.3) at Station 407 (Figure 11). Diversity (H') ranged from 2.50 at Station 462 to 2.52 at Station 407 (Figure 12). Evenness (J') ranged from 0.71 at Station



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407 to 0.74 at Station 462 (Figure 13). There was no significant difference in taxa richness (Table 17; F = 2.185, Prob >F = 0.178) or densities (Table 17; F = 0.394, Prob > F = 0.548) between the stations.

**November 2001.** Fifty-four taxa representing 551 individuals were collected from the Lake Jesse stations in November (Table 48). Polychaetes, malacostracans , and gastropods were the most numerous taxa collected representing 37%, 19%, and 13% of the total, respectively (Table 48). Polychaetes, malacostracans, and other taxa also represented 64%, 16%, and 6% of the total number of individuals collected, respectively.

Major taxonomic groups collected from the Lake Jesse stations in November are summarized by station in Table 49 and Figure 9. The distribution and abundance of individual families collected at the Lake Jesse stations are given in Table 50. Those families which made up greater than 10% of the total assemblage at a given station are listed in Table 51.

The distribution and abundance of individual taxa collected at the Lake Jesse stations in November are given in Table 52. The polychaete, *Mediomastus* (LPIL), made up 34% of the total assemblage, and several taxa were widely distributed occurring at 100% of the Lake Jesse stations (Table 52). Those taxa which made up greater than 10% of the total assemblage at a given station are listed in Table 53.

A summary of assemblage parameters for the Lake Jesse stations in November is given in Table 54 and Figures 10, 11, 12, and 13. Mean macroinvertebrate densities ranged from 1991.3 nos/$m^2$ (± 979.7) at Station 462 to 2800.0 nos/$m^2$ (± 951.9) at Station 407 (Figure 10). Mean number of taxa (taxa richness) ranged from 14.0 (± 3.1) at Station 462 to 15.4 (± 2.7) at Station 407 (Figure 11). Diversity (H') ranged from 2.25 at Station

462 to 2.71 at Station 407 (Figure 12). Evenness (J') ranged from 0.63 at Station 462 to 0.76 at Station 407 (Figure 13). There was no significant difference in taxa richness (Table 17; F = 1.624, Prob > F = 0.238) or densities (Table 17; F = 0.036, Prob > F = 0.853) between the stations.

**June 2002.** Forty-five taxa representing 938 individuals were collected from the Lake Jesse stations in June (Table 55). Polychaetes, malacostracans, and bivalves were the most numerous taxa collected representing 44%, 18%, and 11% of the total, respectively (Table 55). Polychaetes and oligochaetes also represented 45% and 11% of the total number of individuals collected, respectively.

Major taxonomic groups collected from the Lake Jesse stations in June are summarized by station in Tables 56 and Figure 9. The distribution and abundance of individual families collected at the Lake Jesse stations are given in Table 57. Those families which made up greater than 10% of the total assemblage at a given station are listed in Table 58.

The distribution and abundance of individual taxa collected at the Lake Jesse stations in June are given in Table 59. The ascidiacean family, Ascidiacea (LPIL), made up 31% of the total assemblage, and several taxa were widely distributed occurring at 100% of the Lake Jesse stations (Table 59). Those taxa which made up greater than 10% of the total assemblage at a given station are listed in Table 60.

A summary of assemblage parameters for the Lake Jesse stations in June is given in Table 61 and Figures 10, 11, 12, and 13. Mean macroinvertebrate densities ranged from 3887.0 nos/m$^2$ (± 3494.3) at Station 462 to 4269.6 nos/m$^2$ (± 2808.5) at Station 407 (Figure 10). Mean number of taxa (taxa richness) ranged from 12.2 (± 5.4) at Station 407



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to 15.8 (± 3.3) at Station 462 (Figure 11). Diversity (H') ranged from 2.18 at Station 407 to 2.42 at Station 462 (Figure 12). Evenness (J') ranged from 0.65 at Station 407 to 0.68 at Station 462 (Figure 13). There was no significant difference in taxa richness (Table 17; $F = 0.583$, Prob $> F = 0.467$) or densities (Table 17; $F = 1.753$, Prob $> F = 0.222$) between the stations.



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## Brine Diffuser

### Sediment Characteristics

**August 2001.** Station location and sediment data for the Brine stations in August are given in Table 62 and Figure 14. The sediment at Station 475 was dominated by sand (45%), and the sediment at Stations 435, 473, and 474 was dominated by clay (50%, 63%, and 75 %, respectively).

**November 2001.** Station location and sediment data for the Brine stations in November are given in Table 63 and Figure 14. The sediment at all stations was dominated by the silt + clay fraction. Sand composition varied from 4% at Station 475 to 13% at Station 474.

**June 2002.** Station location and sediment data for the Brine stations in November are given in Table 64 and Figure 14. The sediment at all stations was dominated by the silt + clay fractions (99%, 94%, 95%, 80% for Stations 435, 473, 474, and 475, respectively). Sand composition varied from 0.5% at Station 435 to 20% at Station 475.

### Weather and Water Quality Data

**August 2001.** Weather condition data for the Brine stations in August are given in Table 65. Water quality data and depth profiles are provided in Tables 66, 67, 68, and 69 and Figures 15, 16, 17, and 18. Bottom temperatures ranged from 29.3 °C at Station 473 to 30.1 °C at Station 475. Hypoxic conditions were present at Station 435 (9.8 m depth; 1.88 mg/l DO). Bottom dissolved oxygen levels were above hypoxic levels at Stations 473 (9.5 m depth; 2.79 mg/l DO), 474 (9.4 m depth; 3.30 mg/l DO) and 475 (9.4 m depth; 3.66 mg/l DO). Bottom salinities were between 28 ppt and 30 ppt at the four stations.



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**November 2001.** Weather condition data for the Brine stations in November are given in Table 70. Water quality data and depth profiles are provided in Tables 71, 72, 73 and 74 and Figures 15, 16, 17, and 18. The bottom temperature was 23°C at all stations. Bottom dissolved oxygen levels ranged from 4.8 mg/l at Station 475 to 7.1 mg/l at Station 435. Bottom salinities were between 31 and 32 ppt for the four stations.

**June 2002.** Weather condition data for the Brine stations in June are given in Table 75. Water quality data and depth profiles are provided in Tables 76, 77, 78, and 79 and Figures 15, 16, 17, and 18. The bottom temperature was 24.8°C for all stations. Hypoxic conditions were present at Stations 435 (9.5 and 10.1 m depth; 1.5 and 1.4 mg/l DO), 473 (9.2 and 10.4 m depth; 1.1 and 1.2 mg/l DO), 474 (8.9 and 10.5 m depth; 1.5 and 1.3 mg/l DO), and 475 (8.8 and 10.1 m depth; 1.0 and 1.2 mg/l DO). Bottom salinities were between 35 and 36 ppt at all stations.

**Benthic Assemblage Characteristics**

**August 2001.** Twenty-eight taxa representing 1,553 individuals were collected from the Brine stations in August (Table 80). Polychaetes, gastropods and other taxa were the most numerous taxa collected representing 57%, 25%, and 14% of the total, respectively (Table 80). Polychaetes and gastropods also represented 94% and 5% of the total number of individuals collected, respectively.

Major taxonomic groups collected from the Brine stations in August are summarized by station in Table 81 and Figure 19. The distribution and abundance of individual families collected at the Brine stations are given in Table 82. Those families which made up greater than 10% of the total assemblage at a given station are listed in Table 83.



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The distribution and abundance of individual taxa collected at the Brine stations in August are given in Table 84. The polychaete, *Paraprionospio pinnata*, made up 67% of the total assemblage, and several taxa were widely distributed occurring at 100% of the stations (Table 84). Those taxa which made up greater than 10% of the total assemblage at a given station are listed in Table 85.

A summary of assemblage parameters for the Brine stations in August is given in Table 86 and Figures 20, 21, 22, and 23. Mean macroinvertebrate densities ranged from 4741.7 nos/$m^2$ (± 365) at Station 473 to 916.7 nos/$m^2$ (± 414) at Station 474 (Figure 20). Mean number of taxa (taxa richness) ranged from 5.7 (± 2.4) at Station 473 to 6.5 (±2.4 and ±1.5, respectively) at Stations 435 and 474 (Figure 21). Diversity (H') ranged from 0.89 at Station 435 to 1.21 at Station 473 (Figure 22). Evenness (J') ranged from 0.31 at Station 435 to 0.44 at Station 473 (Figure 23). There was no significant difference in taxa richness (Table 17; F = 0.120, Prob >F = 0.895) or densities (Table 17; F = 1.441, Prob > F = 0.261) between the stations.

**November 2001.** Ninety-three taxa representing 4,048 individuals were collected from the Brine stations in November (Table 87). Polychaetes, bivalves, and gastropods were the most numerous taxa collected representing 47%, 14%, and 14% of the total, respectively (Table 87). Polychaetes, bivalves and rhynchocoels represented 69%, 10%, and 8% of the total number of individuals collected, respectively.

Major taxonomic groups collected from the Brine stations in November are summarized by station in Tables 88 and Figure 19. The distribution and abundance of individual families collected at the Brine stations are given in Table 89. Those families

which made up greater than 10% of the total assemblage at a given station are listed in Table 90.

The distribution and abundance of individual taxa collected at the Brine stations in November are given in Table 91. The polychaete, *Paraprionospio pinnata*, made up 23% of the total assemblage, and several taxa were widely distributed at 100% of the Brine stations (Table 91). Those taxa which made up greater than 10% of the total assemblage at a given station are listed in Table 92.

A summary of assemblage parameters for the Brine stations in November is given in Table 93 and Figures 20, 21, 22, and 23. Mean macroinvertebrate densities ranged from 1153.3 nos/m$^2$ (± 566) at Station 475 to 2093.3 nos/m$^2$ (± 668) at Station 435 (Figure 20). Mean number of taxa (taxa richness) ranged from 21.5 (± 6.1) at Station 473 to 28.8 (±4.9) at Station 435 (Figure 21). Diversity (H') ranged from 2.62 at Station 473 to 3.07 at Station 435 (Figure 22). Evenness (J') ranged from 0.68 at Station 473 to 0.75 at Station 475 (Figure 23). There was no significant difference in taxa richness (Table 17; F = 1.779, Prob >F = 0.184) or densities (Table 17; F = 1.965, Prob >F = 0.152) between the stations.

**June 2002.** One hundred and fourteen taxa representing 3,791 individuals were collected from the Brine stations in June (Table 94). Polychaetes, bivalves and gastropods were the most numerous taxa collected representing 47%, 18%, and 17% of the total, respectively (Table 94). Polychaetes, bivalves and other taxa also represented 73%, 17%, and 6% of the total number of individuals collected, respectively.

Major taxonomic groups collected from the Brine stations in June are summarized by station in Tables 95 and Figure 19. The distribution and abundance of individual



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families collected at the Brine stations are given in Table 96. Those families which made up greater than 10% of the total assemblage at a given station are listed in Table 97.

The distribution and abundance of individual taxa collected at the Brine stations in June are given in Table 98. The polychaete, *Mediomastus* (LPIL), made up 28% of the total assemblage, and several taxa were widely distributed occurring at 100% of the Brine stations (Table 98). Those taxa which made up greater than 10% of the total assemblage at a given station are listed in Table 99.

A summary of assemblage parameters for the Brine stations in June is given in Table 100 and Figures 20, 21, 22, and 23. Mean macroinvertebrate densities ranged from 938.3 nos/$m^2$ (± 302) at Station 473 to 2001.7 nos/$m^2$ (± 1096) at Station 435 (Figure 20). Mean number of taxa (taxa richness) ranged from 15.5 (± 4.0) at Station 473 to 32.2 (± 7.3) at Stations 435 (Figure 21). Diversity (H') ranged from 2.23 at Station 473 to 3.07 at Station 435 (Figure 22). Evenness (J') ranged from 0.57 at Station 474 to 0.71 at Station 435 (Figure 23). Control station 435 had significantly greater taxa richness than Stations 473, 474, and 475 (Table 17; F = 8.128, Prob > F = 0.001). There were no significant difference in taxa densities (Table 17; F = 1.440, Prob > F = 0.261) between the stations.

## Offshore Stations

### Sediment Characteristics

**August 2001.** Station location and sediment data for the Offshore stations in August are given in Table 101 and Figure 24. Clay was the dominant sediment type at all stations (>54%). Sand composition varied from 7% at Station 482 to 18% at Station 484.



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**November 2001.** Station location and sediment data for the Offshore stations in November are given in Table 102 and Figure 24. The sediment at stations 481 and 484 were dominated by silt (49% and 52%, respectively), and sediments at Station 482 were dominated by clay (62%). Sand composition varied from 0.5% at Station 482 to 22% at Station 481.

**June 2002.** Station location and sediment data for the Offshore stations in November are given in Table 103 and Figure 24. The sediment at stations 481 and 482 was dominated by silt (54%), and sediments at Station 484 were dominated by clay (47%). Sand composition varied from 0.7% at Station 482 to 14% at Station 481.

**Weather and Water Quality Data**

**August 2001.** Weather condition data for the Offshore stations in August are given in Table 104. Water quality and depth profile data are provided in Tables 105, 106, and 107 and Figures 25, 26, and 27. No bottom water quality data was collected at Station 482 in August due to a mechanical problem with the sampling equipment. The bottom temperature was 24°C at both stations. Hypoxic conditions were present at Stations 481 (30.1 and 32.7 m depth; 1.55 and 1.60 mg/l DO) and 484 (32.7m depth; 1.88 mg/l DO). Bottom salinities were 32.4 and 38.6 ppt at Stations 481 and 484, respectively.

**November 2001.** Weather condition data for the Offshore stations in November are given in Table 108. Water quality data and depth profiles are provided in Tables 109, 110, and 111 and Figures 25, 26, and 27. The bottom temperature was 24°C at all stations. Bottom dissolved oxygen levels ranged from 2.8 mg/l at Station 481 (33.2 m depth) to 8.1 mg/l at Station 482 (31.8m depth). Bottom salinities were 35 ppt at the three stations.



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**June 2002.** Weather condition data for the Brine stations in June are given in Table 112. Water quality data and depth profiles are provided in Tables 113, 114, and 115 and Figures 25, 26, and 27. Bottom temperatures were between 25 and 26°C at all stations. Bottom dissolved oxygen levels ranged from 6.0 mg/l at Station 482 (31.6 m depth) to 6.9 mg/l at Station 484 (32.7 m depth). Bottom salinities were 36 ppt at the three stations.

**Benthic Assemblage Characteristics**

**August 2001.** Eighty-seven taxa representing 490 individuals were collected from the Offshore stations in August (Table 116). Polychaetes, malacostracans, and bivalves were the most numerous taxa collected representing 63%, 12%, and 10% of the total, respectively (Table 116). Polychaetes, gastropods, and bivalves represented 76%, 9%, and 6% of the total number of individuals collected, respectively.

Major taxonomic groups collected from the Offshore stations in August are summarized by station in Table 117 and Figure 28. The distribution and abundance of individual families collected at the Offshore stations are given in Table 118. Those families which made up greater than 10% of the total assemblage at a given station are listed in Table 119.

The distribution and abundance of individual taxa collected at the Offshore stations in August are given in Table 120. The polychaete, *Paraprionospio pinnata*, made up 16% of the total assemblage, and several taxa were widely distributed occurring at 100% of the Offshore stations (Table 120). Those taxa which made up greater than 10% of the total assemblage at a given station are listed in Table 121.

A summary of assemblage parameters for the Offshore stations in August is given in Table 122 and Figures 29, 30, 31, and 32. Mean macroinvertebrate densities ranged



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from 141.4 nos/$m^2$ (± 91.0) at Station 484 to 341.4 nos/$m^2$ (± 204.0) at Station 481 (figure 29). Mean number of taxa (taxa richness) ranged from 8.4 (± 1.5) at Station 482 to 17.3 (± 6.0) at Station 481 (Figure 30). Diversity (H') ranged from 2.15 at Station 482 to 3.55 at Station 481 (Figure 31). Evenness (J') ranged from 0.66 at Station 482 to 0.93 at Station 484 (Figure 32). Station 481 had significantly greater taxa richness than Stations 482 and 484 (Table 17; F = 6.407, Prob > F = 0.008). Station 481 had significantly greater taxa richness than Station 484 and Station 482 had significantly greater taxa richness than Station 484 (Table 17; F = 3.892, Prob > F = 0.039).

**November 2001.** Eighty-nine taxa representing 527 individuals were collected from the Offshore stations in November (Table 123). Polychaetes, gastropods, and bivalves were the most numerous taxa collected representing 57%, 12%, and 11% of the total, respectively (Table 123). Polychaetes, gastropods, and rhynchocoels represented 58%, 15%, and 10% of the total number of individuals collected, respectively.

Major taxonomic groups collected from the Offshore stations in November are summarized by station in Table 124 and Figure 28. The distribution and abundance of individual families collected at the Offshore stations are given in Table 125. Those families that made up greater than 10% of the total assemblage at a given station are listed in Table 126.

The distribution and abundance of individual taxa collected at the Offshore stations in November are given in Table 127. The gastropod, *Vitrinella helicoidea*, made up 8% of the total assemblage, and several taxa were widely distributed occurring at 100% of the Offshore stations (Table 127). Those taxa which made up greater than 10% of the total assemblage at a given station are listed in Table 128.



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A summary of assemblage parameters for the Offshore stations in November is given in Table 129 and Figures 29, 30, 31, and 32. Mean macroinvertebrate densities ranged from 95.7 nos/$m^2$ (± 68.0) at Station 482 to 434.3 nos/$m^2$ (± 140.1) at Station 481 (Figure 29). Mean number of taxa (taxa richness) ranged from 10.0 (± 1.4) at Station 482 to 23.1 (± 6.7) at Station 481 (Figure 30). Diversity (H') ranged from 3.18 at Station 482 to 3.70 at Station 481 (Figure 31). Evenness (J') ranged from 0.87 at Station 481 to 0.91 at Station 482 (Figure 32). Station 481 had significantly greater taxa richness than Stations 482 and 484 (Table 17; F = 11.704, Prob >F = 0.0006). Station 481 had significantly greater densities than Stations 482 and 484 (Table 17; F = 15.532, Prob >F = 0.0001).

**June 2002.** Ninety-eight taxa representing 844 individuals were collected from the Offshore stations in June (Table 130). Polychaetes, malacostracans, and gastropods were the most numerous taxa collected representing 54%, 15%, and 14% of the total, respectively (Table 130). Polychaetes, bivalves and gastropods also represented 65%, 15% and 8% of the total number of individuals collected, respectively.

Major taxonomic groups collected from the Offshore stations in June are summarized by station in Table 131 and Figure 28. The distribution and abundance of individual families collected at the Offshore stations are given in Table 132. Those families that made up greater than 10% of the total assemblage at a given station are listed in Table 133.

The distribution and abundance of individual taxa collected at the Offshore stations in June are given in Table 134. The polychaete, *Paraprionospio pinnata*, made up 14% of the total assemblage, and several taxa were widely distributed occurring at



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100% of the Offshore stations (Table 134). Those taxa which made up greater than 10% of the total assemblage at a given station are listed in Table 135.

A summary of assemblage parameters for the Offshore stations in June is given in Table 136 and Figures 29, 30, 31, and 32. Mean macroinvertebrate densities ranged from 374.3 nos/$m^2$ (± 245.2) at Station 484 to 451.4 nos/$m^2$ (± 284.1) at Station 481 (Figure 29). Mean number of taxa (taxa richness) ranged from 14.9 (± 5.6) at Station 482 to 19.7 (± 7.5) at Station 481 (Figure 30). Diversity (H') ranged from 3.03 at Station 482 to 3.53 at Station 481 (Figure 31). Evenness (J') ranged from 0.77 at Station 482 to 0.84 at Station 481 (Figure 32). There was no significant difference in taxa richness (Table 17; F = 0.815, Prob >F = 0.459) or densities (Table 17; F = 0.223, Prob >F = 0.802) between the stations.

## CONCLUSIONS

### Clovelly

1. Sediments at the Clovelly stations during all seasons were dominated by silt+clay (except Station 464 in June). Sediments at Station 464 were greater than 20% sand during August and November, but were completely organic during June.

2. Estuarine salinities were present during all seasons, ranging from < 2 ppt in August to 6 ppt in June.

3. Dissolved oxygen levels varied seasonally. DO levels were lowest in August (< 5 mg/l) and were greater than 7 mg/l during November and June.

4. The gastropod *Probythinella louisianae* dominated the benthic assemblage in August; the gastropod *Amnicola limosa*, dominated in November; and the bivalve; *Mytilopsis leucophaeata* dominated in June.

5. There were significant differences in density and taxa richness between stations for each season. In no instance was the control station significantly different than both of the test stations. These differences could be explained by subtle variations in sediment type between stations as well as stochastic variability inherent in benthic assessments.

6. There was no measurable impact of the LOOP facilities on benthic macroinfaunal assemblages at the Clovelly site.

### Lake Jesse

1. Sediments at the Lake Jesse stations during all seasons were dominated by silt+clay.

2. Estuarine salinities were present during all seasons, ranging from 4.7 ppt in August to 6.8 ppt in November.

3. Dissolved oxygen levels did not vary seasonally and were between 7 and 8 mg/l during all sampling events.

4. The oligochaete family Tubificidae (LPIL) dominated the benthic assemblage in August; the polychaete *Mediomastus* (LPIL) dominated in November, and he ascidiacean family Ascidiacea (LPIL), dominated the assemblage in June.

5. There were no significant differences in density or taxa richness between stations for each season.



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6. There was no measurable impact of the LOOP facilities on benthic macroinfaunal assemblages at the Lake Jesse site.

**Brine Diffuser**

1. Sediments at the Brine Diffuser stations during all seasons were dominated by silt + clay. The sediment at Station 475 in August was 45% sand.

2. Bottom salinities varied seasonally and were between 28-30 ppt in August, 31-32 ppt in November, and 35-36 ppt in June.

3. Hypoxic conditions (DO = 1.88 mg/l) were present at Station 435 during August; however, DO levels at the remaining stations ranged from 2.79 mg/l at Station 473 to 3.66 mg/l at Station 475. In November, bottom DO levels ranged from 4.8 mg/l at Station 475 to 7.1 mg/l at Station 435. In June, hypoxic conditions were present at all stations with DO ranging from 1.0 mg/l at Station 475 to 1.5 at Stations 435 and 474.

4. The polychaete *Paraprionospio pinnata* dominated the benthic assemblage in August and November, while the polychaete *Mediomastus* (LPIL) dominated the benthos in June.

5. There were no significant differences in densities between stations for each season. There were no significant differences in taxa richness between stations during August and November; in June, Station 435 had significantly greater taxa richness than the remaining stations. It is probable that the hypoxia experienced by the benthic assemblage in June was responsible for variations in taxa richness.

6. There was no measurable impact of the LOOP facilities on benthic macroinfaunal assemblages at the Brine Diffuser site.

**Offshore Stations**

1. Sediments at the Offshore stations during all seasons were dominated by silt + clay.

2. Bottom salinities varied seasonally and ranged from 32.4 ppt at Station 481 in August to 38.6 ppt at Station 484 in August.

3. Hypoxic conditions were present at Stations 481 (DO = 1.60 mg/l) and 484 (DO = 1.88 mg/l) during August; no bottom DO data was collected from Station 484. In November, bottom DO levels ranged from 2.8 mg/l at Station 481 to 8.1 mg/l at Station 482. In June, bottom DO levels ranged from 6.0 mg/l at Station 482 to 6.9 mg/l at Station 484.



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4. The polychaete *Paraprionospio pinnata* dominated the benthic assemblage in August and June, while the gastropod *Vitrinella helicoidea* dominated the benthos in November.

5. There were significant differences in density and taxa richness between stations in August and November. Station 481 had significantly higher density and taxa richness than Stations 482 and 484. There were no significant differences in density and taxa richness between stations in June.

6. There was no measurable impact of the LOOP facilities on benthic macroinfaunal assemblages at the Offshore site.



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## LIST OF ABBREVIATIONS

BVA – Barry A. Vittor & Associates, Inc.

cm - centimeter

°C – degrees Celsius

DO – dissolved oxygen

H' – Shannon-Weaver Diversity

J' - Evenness

LOTA – Louisiana Offshore Terminal Authority

LOOP – Louisiana Offshore Oil Port, Inc.

LPIL – Lowest Possible Identification Level

m - meter

$m^2$ – square meter

mg/l – milligrams per liter

mm - millimeter

NTU – Nephelometric Turbidity Unit

PAH – Polyaromatic Hydrocarbon

ppt – parts per thousand

QA/QC – Quality Assurance/Quality Control

USEPA – U.S. Environmental Protection Agency



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## REFERENCES

Barry A. Vittor & Associates, Inc. 2001. "Quality Assurance Plan." Submitted to the Louisiana Department of Transportation and Development, July 2001.

Pielou, E.C. 1966. "The Measurement of Diversity in Different Types of Biological Collections." *Journal of Theoretical Biology* 13:131-144,1966.



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Table 1. Station location and sediment composition data for the LOOP - Clovelly stations, August 2001.

| Station | Latitude | Longitude | % Gravel | % Sand | % Silt | % Clay | USACE Description | Median Particle Size (phi) | Interstitial pH |
|---|---|---|---|---|---|---|---|---|---|
| **461** | N29.47234 | W90.26042 | 0.00 | 8.53 | 67.65 | 23.83 | Clayey Silt | 4.763 | 7.43 |
| **463** | N29.47556 | W90.25528 | 0.00 | 4.96 | 15.90 | 79.14 | Clay | 11.144 | 7.25 |
| **464** | N29.50194 | W90.21750 | 0.00 | 32.03 | 19.91 | 48.06 | Sandy Clay | 7.464 | 7.49 |

Table 2. Station location and sediment composition data for the LOOP - Clovelly stations, November 2001.

| Station | Latitude | Longitude | % Gravel | % Sand | % Silt | % Clay | USACE Description | Median Particle Size (phi) | Interstitial pH |
|---|---|---|---|---|---|---|---|---|---|
| **461** | N29.46471 | W90.26042 | 0.00 | 16.51 | 45.32 | 38.17 | silty clay | 6.661 | 7.11 |
| **463** | N29.47556 | W90.25528 | 0.00 | 5.34 | 25.04 | 69.62 | clay | 8.908 | 6.78 |
| **464** | N29.50194 | W90.21750 | 0.00 | 40.66 | 43.06 | 16.26 | sandy silt | 5.567 | 7.41 |

Table 3. Station location and sediment composition data for the LOOP - Clovelly stations, June 2002.

| Station | Latitude | Longitude | % Gravel | % Sand | % Silt | % Clay | USACE Description | Median Particle Size (phi) | Interstitial pH |
|---|---|---|---|---|---|---|---|---|---|
| **461** | N29.46471 | W90.26042 | 0.00 | 20.50 | 40.47 | 39.02 | silty clay | 6.373 | 7.11 |
| **463** | N29.47556 | W90.25528 | 0.00 | 20.62 | 17.93 | 61.45 | clay | 9.909 | 7.06 |
| **464** | N29.50194 | W90.21750 | *** | *** | *** | *** | *** | *** | 7.4 |

***Sample consisted totally of organic material

Table 4. Environmental data for the LOOP-Clovelly stations, August 2001.

| Station | Barometric Pressure (mm of Hg) | Air Temperature (°C) | Wind Speed (kts) | Wind Direction | Cloud Cover % | Wave Height (m) | Secchi Depth (m) |
|---|---|---|---|---|---|---|---|
| **461** | 30.08 | 35 | 2 | NE | 25 | 0 | 0.50 |
| **463** | 30.07 | 33 | 3 | NE | 10 | 0 | 0.25 |
| **464** | 30.08 | 32 | 5 | NE | 0 | 0.1 | 0.50 |

Table 5. Water quality data for the LOOP - Clovelly stations, August 2001.

| Station | | Time (24hr) | Depth (m) | Temp (deg C) | Sal (ppt) | Conductivity µS/cm | DO (mg/l) | % DO | pH |
|---|---|---|---|---|---|---|---|---|---|
| **461** | **surface** | **1045** | 0.5 | 32.2 | 1.17 | 2.18 | 5.9 | 80.9 | 7.50 |
| | **bottom** | | 1.3 | 31.4 | 1.23 | 2.29 | 4.9 | 64.1 | 7.37 |
| **463** | **surface** | **942** | 0.5 | 31.0 | 1.13 | 2.11 | 4.8 | 63.9 | 7.32 |
| | **bottom** | | 1.5 | 30.6 | 1.13 | 2.12 | 3.8 | 50.4 | 7.21 |
| **464** | **surface** | **830** | 0.4 | 31.2 | 1.23 | 2.29 | 4.5 | 60.4 | 7.36 |
| | **bottom** | | 1.3 | 31.2 | 1.23 | 2.29 | 4.8 | 62.7 | 7.38 |

Table 6. Environmental data for the LOOP-Clovelly stations, November 2001.

| Station | Barometric Pressure (mm of Hg) | Air Temperature (°C) | Wind Speed (kts) | Wind Direction | Cloud Cover % | Wave Height (m) | Secchi Depth (m) |
|---|---|---|---|---|---|---|---|
| **461** | 30.06 | 28 | 4 | SE | 75 | 0 | 0.50 |
| **463** | 30.05 | 32 | 8 | SE | 50 | 0 | 0.30 |
| **464** | 30.8 | 27 | 9 | SE | 75 | 0.2 | 0.15 |

Table 7. Water quality data for the LOOP - Clovelly stations, November 2001.

| Station | | Time (24hr) | Depth (m) | Temp (°C) | Sal (ppt) | Conductivity µS/cm | DO (mg/l) | % DO | pH |
|---|---|---|---|---|---|---|---|---|---|
| **461** | **surface** | **1335** | 0.2 | 22.2 | 2.69 | 4.92 | 6.8 | 78.7 | 7.64 |
| | **bottom** | | 0.8 | 21.8 | 2.70 | 4.92 | 7.8 | 86.6 | 7.63 |
| **463** | **surface** | **1400** | 0.2 | 21.8 | 3.31 | 5.99 | 8.4 | 97.8 | 8.14 |
| | **bottom** | | 1.3 | 21.6 | 3.31 | 6.00 | 8.4 | 97.1 | 7.98 |
| **464** | **surface** | **1250** | 0.3 | 20.5 | 3.63 | 6.55 | 8.4 | 94.3 | 7.92 |
| | **bottom** | | 1.3 | 20.5 | 3.69 | 6.66 | 8.5 | 95.7 | 7.86 |

Table 8. Environmental data for the LOOP - Clovelly stations, June 2002.

| Station | Barometric Pressure (mm of Hg) | Air Temperature (°C) | Wind Speed (kts) | Wind Direction | Cloud Cover % | Wave Height (m) | Secchi Depth (m) |
|---|---|---|---|---|---|---|---|
| **461** | 29.92 | 30 | calm | E | 25 | 0 | 0.25 |
| **463** | 29.97 | 30 | calm | E | 25 | 0 | 0.25 |
| **464** | 29.92 | 30 | calm | E | 25 | 0 | 1.00 |

Table 9. Water quality data for the LOOP - Clovelly stations, June 2002.

| Station | | Time (24hr) | Depth (m) | Temp (°C) | Sal (ppt) | Conductivity µS/cm | DO (mg/l) | % DO | pH |
|---|---|---|---|---|---|---|---|---|---|
| **461** | **surface** | **1020** | 0.3 | 30.2 | 4.53 | 62.50 | 7.4 | 4.4 | 7.77 |
| | **bottom** | | 0.9 | 29.1 | 3.97 | 51.70 | 7.3 | 4.4 | 7.80 |
| **463** | **surface** | **1055** | 0.3 | 30.7 | 5.04 | 69.10 | 7.3 | 4.3 | 7.63 |
| | **bottom** | | 0.6 | 29.8 | 3.52 | 47.50 | 7.2 | 4.3 | 7.64 |
| **464** | **surface** | **930** | 0.3 | 29.3 | 6.36 | 86.40 | 7.6 | 6.3 | 11.07 |
| | **bottom** | | 1.0 | 29.2 | 6.34 | 91.30 | 7.5 | 6.4 | 11.16 |

Table 10. Summary of overall abundance of major benthic macroinfauna taxonomic groups for the LOOP - Clovelly stations, August 2001.

| Taxa | Total No. Taxa | % Total | Total No. Individuals | % Total |
|---|---|---|---|---|
| **Annelida** | | | | |
| Oligochaeta | 1 | 2.4 | 122 | 2.4 |
| Polychaeta | 11 | 26.2 | 345 | 6.7 |
| **Mollusca** | | | | |
| Bivalvia | 4 | 9.5 | 103 | 2.0 |
| Gastropoda | 5 | 11.9 | 3,317 | 64.8 |
| **Arthropoda** | | | | |
| Arachnida | 1 | 2.4 | 1 | 0.0 |
| Insecta | 11 | 26.2 | 105 | 2.1 |
| Malacostraca | 7 | 16.7 | 1,097 | 21.4 |
| Ostracoda | 1 | 2.4 | 12 | 0.2 |
| **Rhynchocoela** | 1 | 2.4 | 16 | 0.3 |
| **Total** | **42** | | **5,118** | |

Table 11. Summary of abundance of major benthic macroinfauna taxonomic groups by station for the LOOP - Clovelly stations, August 2001.

| Station | Taxa | No. of Taxa | % of Total | No. of Individuals | % of Total |
|---|---|---|---|---|---|
| **461** | Annelida | 11 | 32.4 | 85 | 25.4 |
| | Mollusca | 7 | 20.6 | 115 | 34.4 |
| | Arthropoda | 15 | 44.1 | 124 | 37.1 |
| | Rhynchocoela | 1 | 2.9 | 10 | 3.0 |
| | **Total** | **34** | | **334** | |
| **463** | Annelida | 5 | 29.4 | 183 | 30.4 |
| | Mollusca | 4 | 23.5 | 376 | 62.6 |
| | Arthropoda | 7 | 41.2 | 36 | 6.0 |
| | Rhynchocoela | 1 | 5.9 | 6 | 1.0 |
| | **Total** | **17** | | **601** | |
| **464** | Annelida | 6 | 24.0 | 199 | 4.8 |
| | Mollusca | 9 | 36.0 | 2,929 | 70.0 |
| | Arthropoda | 10 | 40.0 | 1,055 | 25.2 |
| | Rhynchocoela | 0 | 0.0 | 0 | 0.0 |
| | **Total** | **25** | | **4,183** | |

Table 12. Distrubition and abundance of families for the LOOP - Clovelly stations, August 2001.

| Family | Phylum | Class | Individuals | % of Total | Cumulative % | Station Occurrence | Station % Occurrence |
|---|---|---|---|---|---|---|---|
| Hydrobiidae | Mol | Gast | 3289 | 64.26 | 64.26 | 3 | 100 |
| Corophiidae | Art | Mala | 624 | 12.19 | 76.46 | 3 | 100 |
| Ischyroceridae | Art | Mala | 283 | 5.53 | 81.99 | 1 | 33 |
| Ampharetidae | Ann | Poly | 259 | 5.06 | 87.05 | 3 | 100 |
| Idoteidae | Art | Mala | 144 | 2.81 | 89.86 | 3 | 100 |
| Tubificidae | Ann | Olig | 122 | 2.38 | 92.24 | 3 | 100 |
| Mactridae | Mol | Biva | 73 | 1.43 | 93.67 | 3 | 100 |
| Chironomidae | Art | Inse | 72 | 1.41 | 95.08 | 2 | 67 |
| Other Taxa | – | – | 69 | 1.35 | 96.42 | 3 | 100 |
| Spionidae | Ann | Poly | 57 | 1.11 | 97.54 | 3 | 100 |
| Aoridae | Art | Mala | 38 | 0.74 | 98.28 | 2 | 67 |
| Ceratopogonidae | Art | Inse | 29 | 0.57 | 98.85 | 2 | 67 |
| Mytilidae | Mol | Biva | 23 | 0.45 | 99.30 | 3 | 100 |
| Capitellidae | Ann | Poly | 20 | 0.39 | 99.69 | 2 | 67 |
| Nereidae | Ann | Poly | 5 | 0.10 | 99.79 | 2 | 67 |
| Acteonidae | Mol | Gast | 2 | 0.04 | 99.82 | 1 | 33 |
| Tellinidae | Mol | Biva | 2 | 0.04 | 99.86 | 1 | 33 |
| Arrenuridae | Art | Arac | 1 | 0.02 | 99.88 | 1 | 33 |
| Goniadidae | Ann | Poly | 1 | 0.02 | 99.90 | 1 | 33 |
| Maldanidae | Ann | Poly | 1 | 0.02 | 99.92 | 1 | 33 |
| Munnidae | Art | Mala | 1 | 0.02 | 99.94 | 1 | 33 |
| Pilargiidae | Ann | Poly | 1 | 0.02 | 99.96 | 1 | 33 |
| Syllidae | Ann | Poly | 1 | 0.02 | 99.98 | 1 | 33 |
| Xanthidae | Art | Mala | 1 | 0.02 | 100.00 | 1 | 33 |

**Taxa Key**

Ann = Annelida
- Olig = Oligochaeta
- Poly = Polychaeta

Art = Arthropoda
- Arac = Arachnida
- Inse = Insecta
- Mala = Malacostraca

Mol = Mollusca
- Biva = Bivalvia
- Gast = Gastropoda

Table 13. Percentage abundance of dominant families (>10% of the total) for the LOOP - Clovelly stations, August 2001.

| Taxa | 461 | 463 | 464 |
|---|---|---|---|
| **Annelida** | | | |
| Oligochaeta | | | |
| Tubificidae | 13.2 | 12.3 | |
| Polychaeta | | | |
| Ampharetidae | | 16.0 | |
| **Arthropoda** | | | |
| Insecta | | | |
| Other Taxa | 11.4 | | |
| Malacostraca | | | |
| Aoridae | 10.2 | | |
| Corophiidae | | | 14.2 |
| **Mollusca** | | | |
| Gastropoda | | | |
| Hydrobiidae | 27.5 | 59.4 | 67.9 |

Table 14. Distribution and abundance of taxa for the LOOP - Clovelly stations, August 2001.

| Taxon Name | Phylum | Class | Individuals | % Total | Cumulative % | Station Occurrence | Station % Occurrence |
|---|---|---|---|---|---|---|---|
| *Probythinella louisianae* | Mol | Gast | 2583 | 50.47 | 50.47 | 3 | 100 |
| *Texadina sphinctostoma* | Mol | Gast | 667 | 13.03 | 63.50 | 3 | 100 |
| *Monocorophium acherusicum* | Art | Mala | 624 | 12.19 | 75.69 | 3 | 100 |
| *Cerapus benthophilus* | Art | Mala | 283 | 5.53 | 81.22 | 1 | 33 |
| *Hobsonia florida* | Ann | Poly | 197 | 3.85 | 85.07 | 3 | 100 |
| *Edotea triloba* | Art | Mala | 144 | 2.81 | 87.89 | 3 | 100 |
| Tubificidae (LPIL) | Ann | Olig | 122 | 2.38 | 90.27 | 3 | 100 |
| *Rangia cuneata* | Mol | Biva | 73 | 1.43 | 91.70 | 3 | 100 |
| Ampharetidae (LPIL) | Ann | Poly | 62 | 1.21 | 92.91 | 3 | 100 |
| *Streblospio benedicti* | Ann | Poly | 55 | 1.07 | 93.98 | 3 | 100 |
| Hydrobiidae (LPIL) | Mol | Gast | 39 | 0.76 | 94.74 | 2 | 67 |
| *Grandidierella bonnieroides* | Art | Mala | 38 | 0.74 | 95.49 | 2 | 67 |
| Ceratopogonidae (LPIL) | Art | Inse | 29 | 0.57 | 96.05 | 2 | 67 |
| Gastropoda (LPIL) | Mol | Gast | 26 | 0.51 | 96.56 | 2 | 67 |
| Mytilidae (LPIL) | Mol | Biva | 23 | 0.45 | 97.01 | 3 | 100 |
| *Polypedilum scalaenum* group | Art | Inse | 23 | 0.45 | 97.46 | 1 | 33 |
| *Mediomastus* (LPIL) | Ann | Poly | 19 | 0.37 | 97.83 | 2 | 67 |
| *Coelotanypus* (LPIL) | Art | Inse | 18 | 0.35 | 98.18 | 2 | 67 |
| Rhynchocoela (LPIL) | Rhy | – | 16 | 0.31 | 98.50 | 2 | 67 |
| *Parachironomus* (LPIL) | Art | Inse | 15 | 0.29 | 98.79 | 1 | 33 |
| Podocopida (LPIL) | Art | Ostr | 12 | 0.23 | 99.02 | 2 | 67 |
| Chironomidae (LPIL) | Art | Inse | 6 | 0.12 | 99.14 | 2 | 67 |
| Decapoda (LPIL) | Art | Mala | 6 | 0.12 | 99.26 | 3 | 100 |
| Bivalvia (LPIL) | Mol | Biva | 5 | 0.10 | 99.36 | 2 | 67 |
| *Laeonereis culveri* | Ann | Poly | 5 | 0.10 | 99.45 | 2 | 67 |
| *Goeldichironomus* (LPIL) | Art | Inse | 4 | 0.08 | 99.53 | 1 | 33 |
| Lepidoptera (LPIL) | Art | Inse | 3 | 0.06 | 99.59 | 1 | 33 |
| *Polypedilum* (LPIL) | Art | Inse | 3 | 0.06 | 99.65 | 2 | 67 |
| *Macoma pulleyi* | Mol | Biva | 2 | 0.04 | 99.69 | 1 | 33 |
| *Polypedilum halterale* group | Art | Inse | 2 | 0.04 | 99.73 | 1 | 33 |
| *Rictaxis punctostriatus* | Mol | Gast | 2 | 0.04 | 99.77 | 1 | 33 |
| Spionidae (LPIL) | Ann | Poly | 2 | 0.04 | 99.80 | 1 | 33 |
| *Arrenurus* (LPIL) | Art | Arac | 1 | 0.02 | 99.82 | 1 | 33 |
| *Goniadides carolinae* | Ann | Poly | 1 | 0.02 | 99.84 | 1 | 33 |
| *Heteromastus* (LPIL) | Ann | Poly | 1 | 0.02 | 99.86 | 1 | 33 |
| *Labrundinia* (LPIL) | Art | Inse | 1 | 0.02 | 99.88 | 1 | 33 |
| *Munna reynoldsi* | Art | Mala | 1 | 0.02 | 99.90 | 1 | 33 |
| *Sabaco americanus* | Ann | Poly | 1 | 0.02 | 99.92 | 1 | 33 |
| *Syllis cornuta* | Ann | Poly | 1 | 0.02 | 99.94 | 1 | 33 |
| *Synelmis acuminata* | Ann | Poly | 1 | 0.02 | 99.96 | 1 | 33 |
| Trichoptera (LPIL) | Art | Inse | 1 | 0.02 | 99.98 | 1 | 33 |
| Xanthidae (LPIL) | Art | Mala | 1 | 0.02 | 100.00 | 1 | 33 |

**Taxa Key**

Ann = Annelida
- Olig = Oligochaeta
- Poly = Polychaeta

Art = Arthropoda
- Arac = Arachnida
- Inse = Insecta
- Mala = Malacostraca
- Ostr = Ostracoda

Mol = Mollusca
- Biva = Bivalvia
- Gast = Gastropoda

Rhy = Rhynchocoela

Table 15. Percentage abundance of dominant taxa (>10% of the total) for the LOOP - Clovelly stations,August 2001.

| **Taxa** | **461** | **463** | **464** |
|---|---|---|---|
| **Annelida** | | | |
| Oligochaeta | | | |
| Tubificidae (LPIL) | 13.2 | 12.3 | |
| Polychaeta | | | |
| *Hobsonia florida* | | 10.6 | |
| **Arthropoda** | | | |
| Malacostraca | | | |
| *Grandidierella bonnieroides* | 10.2 | | |
| *Monocorophium acherusicum* | | | 14.2 |
| **Mollusca** | | | |
| Gastropoda | | | |
| *Probythinella louisianae* | | 13.0 | 59.8 |
| *Texadina sphinctostoma* | 26.0 | 46.4 | |

Table 16. Summary of benthic macroinfaunal data for the LOOP - Clovelly stations, August 2001.

| Station | Rep | Taxa | Indvs | Density | Mean No. Taxa | Taxa (SD) | Mean Density | Density (SD) | Total No. Taxa | Total No. Individuals | H' Diversity | J' Evenness |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **461** | A | 14 | 35 | 1522 | 16.4 | 3.4 | 2904.3 | 1170.0 | 34 | 334 | 2.68 | 0.76 |
| | B | 19 | 102 | 4435 | | | | | | | | |
| | C | 21 | 75 | 3261 | | | | | | | | |
| | D | 13 | 45 | 1957 | | | | | | | | |
| | E | 15 | 77 | 3348 | | | | | | | | |
| **463** | A | 10 | 149 | 6478 | 11.4 | 1.3 | 5226.1 | 1241.8 | 17 | 601 | 1.79 | 0.63 |
| | B | 12 | 107 | 4652 | | | | | | | | |
| | C | 13 | 148 | 6435 | | | | | | | | |
| | D | 12 | 115 | 5000 | | | | | | | | |
| | E | 10 | 82 | 3565 | | | | | | | | |
| **464** | A | 13 | 628 | 27304 | 16.2 | 2.8 | 36373.9 | 6550.6 | 25 | 4183 | 1.48 | 0.46 |
| | B | 20 | 810 | 35217 | | | | | | | | |
| | C | 15 | 969 | 42130 | | | | | | | | |
| | D | 18 | 997 | 43348 | | | | | | | | |
| | E | 15 | 779 | 33870 | | | | | | | | |

Table 17. Results of statistical comparisons of taxa richness and density between station locations for each season.

| Location | Stations | Date | Variable | Result | F Value | Prob > F |
|---|---|---|---|---|---|---|
| **Clovelly** | 461(C), 463, 464 | August | Taxa | 463 < 462, 464 | 5.643 | 0.019 |
| | | | Density | 464 > 461, 463 | 114.344 | <0.0001 |
| | | November | Taxa | 463 < 461, 464 | 17.630 | 0.0003 |
| | | | Density | 464 > 461 > 463 | 32.669 | <0.0001 |
| | | June | Taxa | NS | 3.932 | 0.049 |
| | | | Density | 464>463; 461>463 | 6.296 | 0.014 |
| **Lake Jesse** | 407(C), 462 | August | Taxa | NS | 2.185 | 0.178 |
| | | | Density | NS | 0.394 | 0.548 |
| | | November | Taxa | NS | 1.624 | 0.238 |
| | | | Density | NS | 0.036 | 0.853 |
| | | June | Taxa | NS | 0.583 | 0.467 |
| | | | Density | NS | 1.753 | 0.222 |
| **Brine Diffuser** | 435(C), 473, 474, 475 | August | Taxa | NS | 0.120 | 0.895 |
| | | | Density | NS | 1.441 | 0.261 |
| | | November | Taxa | NS | 1.779 | 0.184 |
| | | | Density | NS | 1.965 | 0.152 |
| | | June | Taxa | 435 > 473, 474, 475 | 8.128 | 0.001 |
| | | | Density | NS | 1.440 | 0.261 |
| **Offshore** | 481, 482(C), 484 | August | Taxa | 481 > 482, 484 | 6.407 | 0.008 |
| | | | Density | 481>484; 482>484 | 3.892 | 0.039 |
| | | November | Taxa | 481 > 482, 484 | 11.704 | 0.0006 |
| | | | Density | 481 > 482, 484 | 15.532 | 0.0001 |
| | | June | Taxa | NS | 0.815 | 0.459 |
| | | | Density | NS | 0.223 | 0.802 |

NS = Not significantly different; (C) = Control station

Table 18. Summary of overall abundance of major benthic macroinfauna taxonomic groups for the LOOP - Clovelly stations, November 2001.

| Taxa | Total No. Taxa | % of Total | Total No. Individuals | % of Total |
|---|---|---|---|---|
| **Annelida** | | | | |
| Hirudinea | 1 | 1.5 | 3 | 0.1 |
| Oligochaeta | 2 | 3.0 | 55 | 0.9 |
| Polychaeta | 11 | 16.4 | 388 | 6.6 |
| **Arthropoda** | | | | |
| Arachnida | 1 | 1.5 | 20 | 0.3 |
| Branchiopoda | 1 | 1.5 | 24 | 0.4 |
| Insecta | 19 | 28.4 | 1,378 | 23.3 |
| Malacostraca | 13 | 19.4 | 1,788 | 30.3 |
| Ostracoda | 2 | 3.0 | 162 | 2.7 |
| **Mollusca** | | | | |
| Bivalvia | 9 | 13.4 | 106 | 1.8 |
| Gastropoda | 5 | 7.5 | 1,940 | 32.9 |
| **Rhynchocoela** | 1 | 1.5 | 15 | 0.3 |
| **Other Taxa** | 2 | 3.0 | 26 | 0.4 |
| **Total** | **67** | | **5,905** | |

Table 19. Summary of abundance of major benthic macroinfauna taxonomic groups by station for the LOOP - Clovelly stations, November 2001.

| Station | Phylum | No. of Taxa | % of Total | No. of Individuals | % of Total |
|---|---|---|---|---|---|
| **461** | Annelida | 5 | 11.6 | 14 | 0.6 |
| | Mollusca | 6 | 14.0 | 36 | 1.6 |
| | Arthropoda | 29 | 67.4 | 2184 | 96.9 |
| | Rhynchocoela | 1 | 2.3 | 15 | 0.7 |
| | Other Taxa | 2 | 4.7 | 6 | 0.3 |
| | **Total** | **43** | | **2255** | |
| **463** | Annelida | 9 | 36.0 | 260 | 70.7 |
| | Mollusca | 2 | 8.0 | 27 | 7.3 |
| | Arthropoda | 14 | 56.0 | 81 | 22.0 |
| | Rhynchocoela | 0 | 0.0 | 0 | 0.0 |
| | Other Taxa | 0 | 0.0 | 0 | 0.0 |
| | **Total** | **25** | | **368** | |
| **464** | Annelida | 10 | 28.6 | 172 | 5.2 |
| | Mollusca | 11 | 31.4 | 1983 | 60.4 |
| | Arthropoda | 12 | 34.3 | 1107 | 33.7 |
| | Rhynchocoela | 0 | 0.0 | 0 | 0.0 |
| | Other Taxa | 2 | 5.7 | 20 | 0.6 |
| | **Total** | **35** | | **3282** | |

Table 20. Distribution and abundance of families for the LOOP - Clovelly stations, November 2001.

| Family | Phylum | Class | Total No. Individuals | % of Total | Cumulative % | Station Occurrence | % Station Occurrence |
|---|---|---|---|---|---|---|---|
| Hydrobiidae | Mol | Gast | 1928 | 32.65 | 32.65 | 3 | 100 |
| Corophiidae | Art | Mala | 1307 | 22.13 | 54.78 | 3 | 100 |
| Chironomidae | Art | Inse | 917 | 15.53 | 70.31 | 3 | 100 |
| Ampharetidae | Ann | Poly | 352 | 5.96 | 76.27 | 3 | 100 |
| Idoteidae | Art | Mala | 307 | 5.20 | 81.47 | 3 | 100 |
| Ceratopogonidae | Art | Inse | 225 | 3.81 | 85.28 | 2 | 67 |
| Caenidae | Art | Inse | 199 | 3.37 | 88.65 | 2 | 67 |
| Cytherideidae | Art | Ostr | 162 | 2.74 | 91.40 | 2 | 67 |
| Aoridae | Art | Mala | 102 | 1.73 | 93.12 | 2 | 67 |
| Tubificidae | Ann | Olig | 55 | 0.93 | 94.06 | 3 | 100 |
| Mactridae | Mol | Biva | 54 | 0.91 | 94.97 | 2 | 67 |
| Ischyroceridae | Art | Mala | 53 | 0.90 | 95.87 | 1 | 33 |
| Other Taxa | – | – | 52 | 0.88 | 96.75 | 2 | 67 |
| Macrothricidae | Art | Bran | 24 | 0.41 | 97.15 | 1 | 33 |
| Mytilidae | Mol | Biva | 21 | 0.36 | 97.51 | 3 | 100 |
| Spionidae | Ann | Poly | 21 | 0.36 | 97.87 | 2 | 67 |
| Unionicolidae | Art | Arac | 20 | 0.34 | 98.20 | 2 | 67 |
| Dreissenidae | Mol | Biva | 19 | 0.32 | 98.53 | 1 | 33 |
| Melitidae | Art | Mala | 16 | 0.27 | 98.80 | 2 | 67 |
| Leptoceridae | Art | Inse | 15 | 0.25 | 99.05 | 2 | 67 |
| Pyramidellidae | Mol | Gast | 11 | 0.19 | 99.24 | 1 | 33 |
| Hydroptilidae | Art | Inse | 10 | 0.17 | 99.41 | 1 | 33 |
| Nereidae | Ann | Poly | 10 | 0.17 | 99.58 | 2 | 67 |
| Hydrophilidae | Art | Inse | 5 | 0.08 | 99.66 | 1 | 33 |
| Tellinidae | Mol | Biva | 4 | 0.07 | 99.73 | 1 | 33 |
| Capitellidae | Ann | Poly | 3 | 0.05 | 99.78 | 2 | 67 |
| Coenagrionidae | Art | Inse | 3 | 0.05 | 99.83 | 1 | 33 |
| Erpobdellidae | Ann | Hiru | 3 | 0.05 | 99.88 | 1 | 33 |
| Hyalellidae | Art | Mala | 2 | 0.03 | 99.92 | 1 | 33 |
| Anthuridae | Art | Mala | 1 | 0.02 | 99.93 | 1 | 33 |
| Cirratulidae | Ann | Poly | 1 | 0.02 | 99.95 | 1 | 33 |
| Pilargiidae | Ann | Poly | 1 | 0.02 | 99.97 | 1 | 33 |
| Sphaeriidae | Mol | Biva | 1 | 0.02 | 99.98 | 1 | 33 |
| Viviparidae | Mol | Gast | 1 | 0.02 | 100.00 | 1 | 33 |

**Taxa Key**

Ann = Annelida
- Hiru = Hirudinea
- Olig = Oligochaeta
- Poly = Polychaeta

Art = Arthropoda
- Arac = Arachnida
- Bran = Branchiopoda
- Inse = Insecta
- Mala = Malacostraca
- Ostr = Ostracoda

Mol = Mollusca
- Biva = Bivalvia
- Gast = Gastropoda

Table 21. Percentage abundance of dominant families (>10% of the total) for the LOOP - Clovelly stations, November 2001.

| Taxa | 461 | 463 | 464 |
|---|---|---|---|
| **Annelida** | | | |
| Polychaeta | | | |
| Ampharetidae | | 59.0 | |
| **Arthropoda** | | | |
| Insecta | | | |
| Chironomidae | 39.1 | | |
| Malacostraca | | | |
| Corophiidae | 23.1 | | 23.3 |
| **Mollusca** | | | |
| Gastropoda | | | |
| Hydrobiidae | | | 57.1 |

Table 22. Distribution and abundance of taxa for the LOOP - Clovelly stations, November 2001.

| Taxon Name | Phylum | Class | Total No. Individuals | % of Total | Cumulative % | Station Occurrence | % Station Occurrence |
|---|---|---|---|---|---|---|---|
| *Amnicola limosa* | Mol | Gast | 1084 | 18.36 | 18.36 | 1 | 33 |
| *Texadina sphinctostoma* | Mol | Gast | 815 | 13.80 | 32.16 | 2 | 67 |
| *Corophium* (LPIL) | Art | Mala | 723 | 12.24 | 44.40 | 3 | 100 |
| *Goeldichironomus* (LPIL) | Art | Inse | 368 | 6.23 | 50.64 | 2 | 67 |
| *Apocorophium louisianum* | Art | Mala | 347 | 5.88 | 56.51 | 2 | 67 |
| *Edotea triloba* | Art | Mala | 307 | 5.20 | 61.71 | 3 | 100 |
| *Apocorophium lacustre* | Art | Mala | 237 | 4.01 | 65.72 | 3 | 100 |
| *Glyptotendipes* (LPIL) | Art | Inse | 226 | 3.83 | 69.55 | 2 | 67 |
| Ceratopogonidae (LPIL) | Art | Inse | 225 | 3.81 | 73.36 | 2 | 67 |
| *Caenis diminuta* | Art | Inse | 199 | 3.37 | 76.73 | 2 | 67 |
| *Haplocytheridea* sp. D | Art | Ostr | 161 | 2.73 | 79.46 | 2 | 67 |
| *Hobsonia florida* | Ann | Poly | 145 | 2.46 | 81.91 | 2 | 67 |
| Chironomidae (LPIL) | Art | Inse | 135 | 2.29 | 84.20 | 2 | 67 |
| *Amphicteis gunneri* | Ann | Poly | 110 | 1.86 | 86.06 | 2 | 67 |
| *Grandidierella bonnieroides* | Art | Mala | 102 | 1.73 | 87.79 | 2 | 67 |
| Ampharetidae (LPIL) | Ann | Poly | 97 | 1.64 | 89.43 | 3 | 100 |
| *Tanytarsus limneticus* | Art | Inse | 76 | 1.29 | 90.72 | 1 | 33 |
| Tubificidae (LPIL) | Ann | Olig | 51 | 0.86 | 91.58 | 3 | 100 |
| *Polypedilum beckae* | Art | Inse | 44 | 0.75 | 92.33 | 1 | 33 |
| Mactridae (LPIL) | Mol | Biva | 42 | 0.71 | 93.04 | 1 | 33 |
| Hydrobiidae (LPIL) | Mol | Gast | 29 | 0.49 | 93.53 | 1 | 33 |
| *Cerapus tubularis* | Art | Mala | 27 | 0.46 | 93.99 | 1 | 33 |
| *Cerapus* (LPIL) | Art | Mala | 26 | 0.44 | 94.43 | 1 | 33 |
| *Ilyocryptus* (LPIL) | Art | Bran | 24 | 0.41 | 94.83 | 1 | 33 |
| Turbellaria (LPIL) | Pla | Turb | 24 | 0.41 | 95.24 | 2 | 67 |
| *Coelotanypus* (LPIL) | Art | Inse | 23 | 0.39 | 95.63 | 3 | 100 |
| Koenikea (LPIL) | Art | Arac | 20 | 0.34 | 95.97 | 2 | 67 |
| *Polypedilum scalaenum* group | Art | Inse | 20 | 0.34 | 96.31 | 2 | 67 |
| *Mytilopsis leucophaeata* | Mol | Biva | 19 | 0.32 | 96.63 | 1 | 33 |
| *Streblospio benedicti* | Ann | Poly | 17 | 0.29 | 96.92 | 2 | 67 |
| *Oecetis inconspicua* complex | Art | Inse | 15 | 0.25 | 97.17 | 2 | 67 |
| Rhynchocoela (LPIL) | Rhy | - | 15 | 0.25 | 97.43 | 1 | 33 |
| *Geukensia demissa* | Mol | Biva | 12 | 0.20 | 97.63 | 1 | 33 |
| *Polypedilum* (LPIL) | Art | Inse | 12 | 0.20 | 97.83 | 1 | 33 |
| Pyramidellidae (LPIL) | Mol | Gast | 11 | 0.19 | 98.02 | 1 | 33 |
| *Mulinia lateralis* | Mol | Biva | 10 | 0.17 | 98.19 | 2 | 67 |
| *Orthotrichia* (LPIL) | Art | Inse | 10 | 0.17 | 98.36 | 1 | 33 |
| *Laeonereis culveri* | Ann | Poly | 9 | 0.15 | 98.51 | 2 | 67 |
| Melitidae (LPIL) | Art | Mala | 9 | 0.15 | 98.66 | 1 | 33 |
| Mytilidae (LPIL) | Mol | Biva | 9 | 0.15 | 98.81 | 3 | 100 |
| Bivalvia (LPIL) | Mol | Biva | 7 | 0.12 | 98.93 | 2 | 67 |
| *Tanytarsus* (LPIL) | Art | Inse | 6 | 0.10 | 99.03 | 1 | 33 |
| *Berosus* (LPIL) | Art | Inse | 5 | 0.08 | 99.12 | 1 | 33 |
| *Phaenopsectra* (LPIL) | Art | Inse | 5 | 0.08 | 99.20 | 1 | 33 |
| *Melita* (LPIL) | Art | Mala | 4 | 0.07 | 99.27 | 1 | 33 |
| Odonata (LPIL) | Art | Inse | 4 | 0.07 | 99.34 | 1 | 33 |
| *Tellina* (LPIL) | Mol | Biva | 4 | 0.07 | 99.41 | 1 | 33 |
| *Tubificoides heterochaetus* | Ann | Olig | 4 | 0.07 | 99.48 | 2 | 67 |
| *Enallagma* (LPIL) | Art | Inse | 3 | 0.05 | 99.53 | 1 | 33 |
| Erpobdellidae (LPIL) | Ann | Hiru | 3 | 0.05 | 99.58 | 1 | 33 |
| *Mediomastus* (LPIL) | Ann | Poly | 3 | 0.05 | 99.63 | 2 | 67 |
| *Polydora cornuta* | Ann | Poly | 3 | 0.05 | 99.68 | 1 | 33 |
| *Hyalella azteca* | Art | Mala | 2 | 0.03 | 99.71 | 1 | 33 |
| Hydrozoa (LPIL) | Cni | Hydr | 2 | 0.03 | 99.75 | 2 | 67 |
| *Melita* sp. E | Art | Mala | 2 | 0.03 | 99.78 | 1 | 33 |
| *Rangia cuneata* | Mol | Biva | 2 | 0.03 | 99.81 | 1 | 33 |
| Cirratulidae (LPIL) | Ann | Poly | 1 | 0.02 | 99.83 | 1 | 33 |

Table 22 continued:

| Taxon Name | Phylum | Class | Total No. Individuals | % of Total | Cumulative % | Station Occurrence | % Station Occurrence |
|---|---|---|---|---|---|---|---|
| *Cyathura polita* | Art | Mala | 1 | 0.02 | 99.85 | 1 | 33 |
| *Dipolydora socialis* | Ann | Poly | 1 | 0.02 | 99.86 | 1 | 33 |
| *Haplocytheridea setipunctata* | Art | Ostr | 1 | 0.02 | 99.88 | 1 | 33 |
| *Melita intermedia* | Art | Mala | 1 | 0.02 | 99.90 | 1 | 33 |
| Nereididae (LPIL) | Ann | Poly | 1 | 0.02 | 99.92 | 1 | 33 |
| *Parachironomus directus* | Art | Inse | 1 | 0.02 | 99.93 | 1 | 33 |
| *Parandalia tricuspis* | Ann | Poly | 1 | 0.02 | 99.95 | 1 | 33 |
| *Sphaerium* (LPIL) | Mol | Biva | 1 | 0.02 | 99.97 | 1 | 33 |
| *Tanypus neopunctipennis* | Art | Inse | 1 | 0.02 | 99.98 | 1 | 33 |
| Viviparidae (LPIL) | Mol | Gast | 1 | 0.02 | 100.00 | 1 | 33 |

**Taxa Key**

Ann = Annelida
- Hiru = Hirudinea
- Olig = Oligochaeta
- Poly = Polychaeta

Art = Arthropoda
- Arac = Arachnida
- Bran = Branchiopoda
- Inse = Insecta
- Mala = Malacostraca
- Ostr = Ostracoda

Cni = Cnidaria
- Hydr = Hydrozoa

Mol = Mollusca
- Biva = Bivalvia
- Gast = Gastropoda

Pla = Platyhelminthes
- Turb = Turbellaria

Rhy = Rhynchocoela

Table 23. Percentage abundance of dominant taxa (>10% of the total) for the LOOP - Clovelly stations, November 2001.

| Taxa | 461 | 463 | 464 |
|---|---|---|---|
| **Annelida** | | | |
| Polychaeta | | | |
| Ampharetidae (LPIL) | | 22.6 | |
| *Amphicteis gunneri* | | 16.0 | |
| *Hobsonia florida* | | 20.4 | |
| **Arthropoda** | | | |
| Insecta | | | |
| *Goeldichironomus* (LPIL) | 16.2 | | |
| Malacostraca | | | |
| *Corophium* (LPIL) | 14.5 | | 11.9 |
| **Mollusca** | | | |
| Gastropoda | | | |
| *Amnicola limosa* | | | 33.0 |
| *Texadina sphinctostoma* | | | 24.0 |

Table 24. Summary of benthic macroinfaunal data for the LOOP - Clovelly stations, November 2001.

| Station | Rep | Taxa | Indvs | Density | Mean No. Taxa | Taxa (SD) | Mean Density | Density (SD) | Total No. Taxa | Total No. Individuals | H' Diversity | J' Evenness |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **461** | A | 23 | 376 | 3760 | 25.6 | 3.6 | 4510.0 | 1665.2 | 43 | 2255 | 2.68 | 0.71 |
| **461** | B | 24 | 378 | 3780 | | | | | | | | |
| **461** | C | 25 | 527 | 5270 | | | | | | | | |
| **461** | D | 32 | 701 | 7010 | | | | | | | | |
| **461** | E | 24 | 273 | 2730 | | | | | | | | |
| **463** | A | 13 | 71 | 710 | 12.4 | 4.2 | 736.0 | 703.5 | 25 | 368 | 2.29 | 0.71 |
| **463** | B | 17 | 192 | 1920 | | | | | | | | |
| **463** | C | 11 | 34 | 340 | | | | | | | | |
| **463** | D | 6 | 10 | 100 | | | | | | | | |
| **463** | E | 15 | 61 | 610 | | | | | | | | |
| **464** | A | 22 | 594 | 5940 | 23.0 | 3.2 | 6564.0 | 862.7 | 35 | 3282 | 2.07 | 0.58 |
| **464** | B | 23 | 682 | 6820 | | | | | | | | |
| **464** | C | 28 | 796 | 7960 | | | | | | | | |
| **464** | D | 19 | 590 | 5900 | | | | | | | | |
| **464** | E | 23 | 620 | 6200 | | | | | | | | |

Table 25. Summary of overall abundance of major benthic macroinfaunal taxonomic groups for the LOOP - Clovelly stations, June 2002.

| Taxa | Total No. Taxa | % of Total | Total No. Individuals | % of Total |
|---|---|---|---|---|
| **Annelida** | | | | |
| Hirudinea | 1 | 1.4 | 1 | 0.1 |
| Oligochaeta | 2 | 2.7 | 83 | 4.8 |
| Polychaeta | 14 | 18.9 | 225 | 12.9 |
| **Arthropoda** | | | | |
| Arachnida | 1 | 1.4 | 10 | 0.6 |
| Insecta | 21 | 28.4 | 316 | 18.1 |
| Malacostraca | 20 | 27.0 | 551 | 31.6 |
| Ostracoda | 2 | 2.7 | 7 | 0.4 |
| **Mollusca** | | | | |
| Bivalvia | 5 | 6.8 | 415 | 23.8 |
| Gastropoda | 6 | 8.1 | 127 | 7.3 |
| **Other Taxa** | 2 | 2.7 | 8 | 0.5 |
| **Total** | **74** | | **1,743** | |

Table 26. Summary of abundance of major benthic macroinfaunal taxonomic groups by station for the LOOP - Clovelly stations, June 2002.

| Station | Taxa | No. of Taxa | % of Total | No. of Individuals | % of Total |
|---|---|---|---|---|---|
| **461** | Annelida | 4 | 12.9 | 37 | 7.3 |
| | Mollusca | 5 | 16.1 | 118 | 23.1 |
| | Arthropoda | 22 | 71.0 | 355 | 69.6 |
| | Other Taxa | 0 | 0.0 | 0 | 0.0 |
| | **Total** | **31** | | **510** | |
| **463** | Annelida | 12 | 30.0 | 160 | 46.5 |
| | Mollusca | 3 | 7.5 | 22 | 6.4 |
| | Arthropoda | 24 | 60.0 | 158 | 45.9 |
| | Other Taxa | 1 | 2.5 | 4 | 1.2 |
| | **Total** | **40** | | **344** | |
| **464** | Annelida | 14 | 31.8 | 112 | 12.6 |
| | Mollusca | 9 | 20.5 | 402 | 45.2 |
| | Arthropoda | 19 | 43.2 | 371 | 41.7 |
| | Other Taxa | 2 | 4.5 | 4 | 0.4 |
| | **Total** | **44** | | **889** | |

Table 27. Distribution and abundance of families for the LOOP - Clovelly stations, June 2002.

| Family | Phylum | Class | No. of Individuals | % of Total | Cumulative % | Station Occurrence | % Station Occurrence |
|---|---|---|---|---|---|---|---|
| Dreissenidae | Mol | Biva | 214 | 12.28 | 12.28 | 3 | 100 |
| Chironomidae | Art | Inse | 179 | 10.27 | 22.55 | 3 | 100 |
| Anthuridae | Art | Mala | 156 | 8.95 | 31.50 | 1 | 33 |
| Corophiidae | Art | Mala | 142 | 8.15 | 39.64 | 3 | 100 |
| Ampharetidae | Ann | Poly | 135 | 7.75 | 47.39 | 3 | 100 |
| Hydrobiidae | Mol | Gast | 120 | 6.88 | 54.27 | 3 | 100 |
| Gammaridae | Art | Mala | 119 | 6.83 | 61.10 | 3 | 100 |
| Mactridae | Mol | Biva | 110 | 6.31 | 67.41 | 3 | 100 |
| Ceratopogonidae | Art | Inse | 107 | 6.14 | 73.55 | 2 | 67 |
| Mytilidae | Mol | Biva | 91 | 5.22 | 78.77 | 1 | 33 |
| Tubificidae | Ann | Olig | 83 | 4.76 | 83.53 | 3 | 100 |
| Idoteidae | Art | Mala | 52 | 2.98 | 86.52 | 1 | 33 |
| Melitidae | Art | Mala | 42 | 2.41 | 88.93 | 2 | 67 |
| Spionidae | Ann | Poly | 40 | 2.29 | 91.22 | 2 | 67 |
| Nereidae | Ann | Poly | 33 | 1.89 | 93.12 | 3 | 100 |
| Caenidae | Art | Inse | 24 | 1.38 | 94.49 | 1 | 33 |
| Aoridae | Art | Mala | 19 | 1.09 | 95.58 | 3 | 100 |
| Phyllodocidae | Ann | Poly | 14 | 0.80 | 96.39 | 1 | 33 |
| Other Taxa | – | – | 11 | 0.63 | 97.02 | 2 | 67 |
| Unionicolidae | Art | Arac | 10 | 0.57 | 97.59 | 1 | 33 |
| Munnidae | Art | Mala | 6 | 0.34 | 97.93 | 3 | 100 |
| Cytherideidae | Art | Ostr | 6 | 0.34 | 98.28 | 2 | 67 |
| Neritidae | Mol | Gast | 6 | 0.34 | 98.62 | 1 | 33 |
| Coenagrionidae | Art | Inse | 5 | 0.29 | 98.91 | 1 | 33 |
| Xanthidae | Art | Mala | 5 | 0.29 | 99.20 | 1 | 33 |
| Ischyroceridae | Art | Mala | 3 | 0.17 | 99.37 | 1 | 33 |
| Palaemonidae | Art | Mala | 3 | 0.17 | 99.54 | 1 | 33 |
| Pilargiidae | Ann | Poly | 2 | 0.11 | 99.66 | 2 | 67 |
| Sphaeromatidae | Art | Mala | 2 | 0.11 | 99.77 | 1 | 33 |
| Capitellidae | Ann | Poly | 1 | 0.06 | 99.83 | 1 | 33 |
| Ampeliscidae | Art | Mala | 1 | 0.06 | 99.89 | 1 | 33 |
| Nannastacidae | Art | Mala | 1 | 0.06 | 99.94 | 1 | 33 |
| Planorbidae | Mol | Gast | 1 | 0.06 | 100.00 | 1 | 33 |

**Taxa Key**

Ann = Annelida
- Olig = Oligochaeta
- Poly = Polychaeta

Art = Arthropoda
- Arac = Arachnida
- Inse = Insecta
- Mala = Malacostraca
- Ostr = Ostracoda

Mol = Mollusca
- Biva = Bivalvia
- Gast = Gastropoda

Rhy = Rhynchocoela

Table 28. Percentage abundance of dominant families (>10% of the total) for the LOOP - Clovelly stations, June 2002.

| Taxa | 461 | 463 | 464 |
|---|---|---|---|
| **Annelida** | | | |
| Oligochaeta | | | |
| Tubificidae | | 18.0 | |
| Polychaeta | | | |
| Ampharetidae | | 18.6 | |
| **Arthropoda** | | | |
| Insecta | | | |
| Ceratopogonidae | 10.6 | 15.4 | |
| Chironomidae | 25.3 | 12.5 | |
| Malacostraca | | | |
| Anthuridae | | | 17.5 |
| Corophiidae | | 12.2 | 10.1 |
| Gammaridae | 22.2 | | |
| **Mollusca** | | | |
| Bivalvia | | | |
| Dreissenidae | | | 23.2 |
| Mactridae | | | 10.7 |
| Mytilidae | | | 10.2 |
| Gastropoda | | | |
| Hydrobiidae | 22.5 | | |

Table 29. Distribution abundance of taxa for the LOOP - Clovelly stations, June 2002.

| Taxon Name | Phylum | Class | No. of Individuals | % of Total | Cumulative % | Station Occurrence | % Station Occurrence |
|---|---|---|---|---|---|---|---|
| *Mytilopsis leucophaeata* | Mol | Biva | 214 | 12.28 | 12.28 | 3 | 100 |
| *Cyathura polita* | Art | Mala | 156 | 8.95 | 21.23 | 1 | 33 |
| *Gammarus mucronatus* | Art | Mala | 118 | 6.77 | 28.00 | 3 | 100 |
| Ceratopogonidae (LPIL) | Art | Inse | 107 | 6.14 | 34.14 | 2 | 67 |
| *Rangia cuneata* | Mol | Biva | 105 | 6.02 | 40.16 | 3 | 100 |
| *Pyrogophorus platyrachis* | Mol | Gast | 97 | 5.57 | 45.73 | 2 | 67 |
| Ampharetidae (LPIL) | Ann | Poly | 88 | 5.05 | 50.77 | 3 | 100 |
| *Ischadium recurvum* | Mol | Biva | 88 | 5.05 | 55.82 | 1 | 33 |
| *Apocorophium lacustre* | Art | Mala | 71 | 4.07 | 59.90 | 2 | 67 |
| *Apocorophium louisianum* | Art | Mala | 63 | 3.61 | 63.51 | 3 | 100 |
| *Edotea triloba* | Art | Mala | 52 | 2.98 | 66.49 | 1 | 33 |
| *Tubificoides heterochaetus* | Ann | Olig | 44 | 2.52 | 69.02 | 2 | 67 |
| Tubificidae (LPIL) | Ann | Olig | 39 | 2.24 | 71.26 | 3 | 100 |
| *Chironomus* (LPIL) | Art | Inse | 38 | 2.18 | 73.44 | 2 | 67 |
| *Parachironomus directus* | Art | Inse | 38 | 2.18 | 75.62 | 2 | 67 |
| *Laeonereis culveri* | Ann | Poly | 31 | 1.78 | 77.40 | 2 | 67 |
| *Amphicteis gunneri* | Ann | Poly | 28 | 1.61 | 79.00 | 3 | 100 |
| *Tanytarsus limneticus* | Art | Inse | 28 | 1.61 | 80.61 | 1 | 33 |
| *Dipolydora socialis* | Ann | Poly | 26 | 1.49 | 82.10 | 2 | 67 |
| *Caenis diminuta* | Art | Inse | 24 | 1.38 | 83.48 | 1 | 33 |
| Chironomidae (LPIL) | Art | Inse | 22 | 1.26 | 84.74 | 2 | 67 |
| Hydrobiidae (LPIL) | Mol | Gast | 21 | 1.20 | 85.94 | 2 | 67 |
| *Labrundinia* (LPIL) | Art | Inse | 19 | 1.09 | 87.03 | 1 | 33 |
| *Grandidierella bonnieroides* | Art | Mala | 19 | 1.09 | 88.12 | 3 | 100 |
| *Hobsonia florida* | Ann | Poly | 18 | 1.03 | 89.16 | 2 | 67 |
| Melitidae (LPIL) | Art | Mala | 17 | 0.98 | 90.13 | 1 | 33 |
| *Melita* (LPIL) | Art | Mala | 15 | 0.86 | 90.99 | 2 | 67 |
| Phyllodocidae (LPIL) | Ann | Poly | 12 | 0.69 | 91.68 | 1 | 33 |
| *Polydora cornuta* | Ann | Poly | 11 | 0.63 | 92.31 | 2 | 67 |
| *Koenikea* (LPIL) | Art | Arac | 10 | 0.57 | 92.89 | 1 | 33 |
| *Melita intermedia* | Art | Mala | 10 | 0.57 | 93.46 | 2 | 67 |
| *Corophium* (LPIL) | Art | Mala | 8 | 0.46 | 93.92 | 2 | 67 |
| *Polypedilum scalaenum* group | Art | Inse | 7 | 0.40 | 94.32 | 2 | 67 |
| *Dicrotendipes* (LPIL) | Art | Inse | 6 | 0.34 | 94.66 | 2 | 67 |
| *Uromunna reynoldsi* | Art | Mala | 6 | 0.34 | 95.01 | 3 | 100 |
| *Haplocytheridea* sp. D | Art | Ostr | 6 | 0.34 | 95.35 | 2 | 67 |
| *Neritina usnea* | Mol | Gast | 6 | 0.34 | 95.70 | 1 | 33 |
| *Enallagma* (LPIL) | Art | Inse | 5 | 0.29 | 95.98 | 1 | 33 |
| Mactridae (LPIL) | Mol | Biva | 5 | 0.29 | 96.27 | 1 | 33 |
| Rhynchocoela (LPIL) | Rhy | – | 5 | 0.29 | 96.56 | 2 | 67 |
| *Rhithropanopeus harrisii* | Art | Mala | 4 | 0.23 | 96.79 | 1 | 33 |
| *Streblospio benedicti* | Ann | Poly | 3 | 0.17 | 96.96 | 2 | 67 |
| *Coelotanypus* (LPIL) | Art | Inse | 3 | 0.17 | 97.13 | 1 | 33 |
| *Endochironomus* (LPIL) | Art | Inse | 3 | 0.17 | 97.30 | 2 | 67 |
| *Goeldichironomus* (LPIL) | Art | Inse | 3 | 0.17 | 97.48 | 1 | 33 |
| Phaenopsectra (LPIL) | Art | Inse | 3 | 0.17 | 97.65 | 2 | 67 |
| *Cerapus benthophilus* | Art | Mala | 3 | 0.17 | 97.82 | 1 | 33 |
| Mytilidae (LPIL) | Mol | Biva | 3 | 0.17 | 97.99 | 1 | 33 |
| Turbellaria (LPIL) | Pla | Turb | 3 | 0.17 | 98.16 | 1 | 33 |
| *Hypereteone heteropoda* | Ann | Poly | 2 | 0.11 | 98.28 | 1 | 33 |
| *Parandalia tricuspis* | Ann | Poly | 2 | 0.11 | 98.39 | 2 | 67 |
| *Nanocladius* (LPIL) | Art | Inse | 2 | 0.11 | 98.51 | 1 | 33 |
| *Tanypus* (LPIL) | Art | Inse | 2 | 0.11 | 98.62 | 1 | 33 |
| *Tanytarsus* (LPIL) | Art | Inse | 2 | 0.11 | 98.74 | 1 | 33 |

Table 29 continued:

| Taxon Name | Phylum | Class | No. of Individuals | % of Total | Cumulative % | Station Occurrence | % Station Occurrence |
|---|---|---|---|---|---|---|---|
| *Cassidinidea ovalis* | Art | Mala | 2 | 0.11 | 98.85 | 1 | 33 |
| *Macrobrachium ohione* | Art | Mala | 2 | 0.11 | 98.97 | 1 | 33 |
| Hirudinea (LPIL) | Ann | Hiru | 1 | 0.06 | 99.02 | 1 | 33 |
| *Asabellides oculata* | Ann | Poly | 1 | 0.06 | 99.08 | 1 | 33 |
| *Mediomastus* (LPIL) | Ann | Poly | 1 | 0.06 | 99.14 | 1 | 33 |
| *Nereis* (LPIL) | Ann | Poly | 1 | 0.06 | 99.20 | 1 | 33 |
| *Nereis succinea* | Ann | Poly | 1 | 0.06 | 99.25 | 1 | 33 |
| Odonata (LPIL) | Art | Inse | 1 | 0.06 | 99.31 | 1 | 33 |
| *Polypedilum* (LPIL) | Art | Inse | 1 | 0.06 | 99.37 | 1 | 33 |
| *Polypedilum halterale* group | Art | Inse | 1 | 0.06 | 99.43 | 1 | 33 |
| *Procladius* (LPIL) | Art | Inse | 1 | 0.06 | 99.48 | 1 | 33 |
| *Almyracuma proximoculi* | Art | Mala | 1 | 0.06 | 99.54 | 1 | 33 |
| *Ampelisca abdita* | Art | Mala | 1 | 0.06 | 99.60 | 1 | 33 |
| *Gammarus* (LPIL) | Art | Mala | 1 | 0.06 | 99.66 | 1 | 33 |
| *Macrobrachium* (LPIL) | Art | Mala | 1 | 0.06 | 99.71 | 1 | 33 |
| Xanthidae (LPIL) | Art | Mala | 1 | 0.06 | 99.77 | 1 | 33 |
| Ostracoda (LPIL) | Art | Ostr | 1 | 0.06 | 99.83 | 1 | 33 |
| Planorbidae (LPIL) | Mol | Gast | 1 | 0.06 | 99.89 | 1 | 33 |
| *Probythinella louisianae* | Mol | Gast | 1 | 0.06 | 99.94 | 1 | 33 |
| *Texadina sphinctostoma* | Mol | Gast | 1 | 0.06 | 100.00 | 1 | 33 |

**Taxa Key**

Ann = Annelida
- Hiru = Hirudinea
- Olig = Oligochaeta
- Poly = Polychaeta

Art = Arthropoda
- Arac = Arachnida
- Inse = Insecta
- Mala = Malacostraca
- Ostr = Ostracoda

Mol = Mollusca
- Biva = Bivalvia
- Gast = Gastropoda

Pla = Platyhelminthes
- Turb = Turbellaria
- Rhy = Rhynchocoela

Table 30. Percentage abundance of dominant taxa (>10% of the total) for the LOOP - Clovelly stations, June 2002.

| Taxa | 461 | 463 | 464 |
|---|---|---|---|
| **Annelida** | | | |
| Polychaeta | | | |
| Ampharetidae (LPIL) | | 12.8 | |
| **Arthropoda** | | | |
| Insecta | | | |
| Ceratopogonidae (LPIL) | 10.6 | 15.4 | |
| Malacostraca | | | |
| *Cyathura polita* | | | 17.5 |
| *Gammarus mucronatus* | 22.2 | | |
| **Mollusca** | | | |
| Bivalvia | | | |
| *Mytilopsis leucophaeata* | | | 23.2 |
| *Rangia cuneata* | | | 10.1 |
| Gastropoda | | | |
| *Pyrogophorus platyrachis* | 18.8 | | |

Table 31. Summary of benthic macroinfaunal data for the LOOP - Clovelly stations, June 2002.

| Station | Rep | Taxa | Indvs | Density | Mean No. Taxa | Taxa (SD) | Mean Density | Density (SD) | Total No. Taxa | Total No. Individuals | H' Diversity | J' Evenness |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **461** | A | 21 | 142 | 6173.91 | 15.2 | 5.1 | 4434.8 | 1344.0 | 31 | 510 | 2.58 | 0.75 |
| | B | 10 | 76 | 3304.35 | | | | | | | | |
| | C | 10 | 66 | 2869.57 | | | | | | | | |
| | D | 19 | 115 | 5000 | | | | | | | | |
| | E | 16 | 111 | 4826.09 | | | | | | | | |
| **463** | A | 17 | 81 | 3521.74 | 16.0 | 1.6 | 2991.3 | 740.7 | 40 | 344 | 2.85 | 0.77 |
| | B | 15 | 39 | 1695.65 | | | | | | | | |
| | C | 16 | 76 | 3304.35 | | | | | | | | |
| | D | 18 | 77 | 3347.83 | | | | | | | | |
| | E | 14 | 71 | 3086.96 | | | | | | | | |
| **464** | A | 24 | 180 | 7826.09 | 21.8 | 5.3 | 7730.4 | 3421.1 | 44 | 889 | 2.64 | 0.70 |
| | B | 22 | 224 | 9739.13 | | | | | | | | |
| | C | 19 | 202 | 8782.61 | | | | | | | | |
| | D | 29 | 240 | 10434.8 | | | | | | | | |
| | E | 16 | 43 | 1869.57 | | | | | | | | |

Table 32. Station location and sediment composition data for the LOOP - Lake Jesse stations, August 2001.

| Station | Latitude | Longitude | % Gravel | % Sand | % Silt | % Clay | USACE Description | Median Particle Size (phi) | Interstitial pH |
|---|---|---|---|---|---|---|---|---|---|
| **407** | N29.25472 | W90.18943 | 0.00 | 7.41 | 49.29 | 43.30 | silty clay | 6.687 | 7.20 |
| **462** | N29.25472 | W90.19611 | 0.00 | 13.87 | 34.09 | 52.04 | clay | 8.456 | 7.22 |

Table 33. Station location and sediment composition data for the LOOP - Lake Jesse stations, November 2001.

| Station | Latitude | Longitude | % Gravel | % Sand | % Silt | % Clay | USACE Description | Median Particle Size (phi) | Interstitial pH |
|---|---|---|---|---|---|---|---|---|---|
| **407** | N29.25472 | W90.18943 | 0.00 | 8.69 | 62.23 | 29.08 | clayey silt | 6.708 | 7.04 |
| **462** | N29.25472 | W90.19611 | 0.00 | 20.71 | 51.67 | 27.62 | clayey silt | 6.546 | 7.6 |

Table 34. Station location and sediment composition data for the LOOP - Lake Jesse stations, June 2002.

| Station | Latitude | Longitude | % Gravel | % Sand | % Silt | % Clay | USACE Description | Median Particle Size (phi) | Interstitial pH |
|---|---|---|---|---|---|---|---|---|---|
| **407** | N29.25472 | W90.18943 | 0.00 | 6.87 | 49.70 | 43.43 | silty clay | 7.118 | 7.42 |
| **462** | N29.25472 | W90.19611 | 0.00 | 12.32 | 38.20 | 49.48 | silty clay | 7.897 | 7.29 |

Table 35. Environmental data for the LOOP-Lake Jesse stations, August 2001.

| Station | Barometric Pressure (mm of Hg) | Air Temperature (°C) | Wind Speed (kts) | Wind Direction | Cloud Cover % | Wave Height (m) | Secchi Depth (m) |
|---|---|---|---|---|---|---|---|
| **407** | 30.06 | 34 | 10 | NE | 25 | 0.1 | 0.25 |
| **462** | 30.05 | 35 | 10 | NE | 30 | 0.1 | 0.25 |

Table 36. Water quality data for the LOOP - Lake Jesse stations, August 2001.

| Station | | Time (24hr) | Depth (m) | Temp (°C) | Sal (ppt) | Conductivity µS/cm | DO (mg/l) | % DO | pH |
|---|---|---|---|---|---|---|---|---|---|
| **407** | **surface** | **1355** | 0.5 | 31.9 | 6.45 | 99.10 | 7.8 | 20.4 | 32.60 |
| | **bottom** | | 1.4 | 31.8 | 4.67 | 71.80 | 7.8 | 20.3 | 32.50 |
| **462** | **surface** | **1430** | 0.5 | 32.0 | 6.88 | 106.00 | 7.8 | 20.2 | 32.37 |
| | **bottom** | | 1.3 | 32.0 | 6.84 | 105.00 | 7.8 | 20.2 | 32.40 |

Table 37. Environmental data for the LOOP-Lake Jesse stations, November 2001.

| Station | Barometric Pressure (mm of Hg) | Air Temperature (°C) | Wind Speed (kts) | Wind Direction | Cloud Cover % | Wave Height (m) | Secchi Depth (m) |
|---|---|---|---|---|---|---|---|
| **407** | 30.14 | 23 | 10 | SE | 75 | 0.1 | 0.60 |
| **462** | 30.14 | 24 | 9 | SE | 75 | 0.1 | 0.60 |

Table 38. Water quality data for the LOOP - Lake Jesse stations, November 2001.

| Station | | Time (24hr) | Depth (m) | Temp (°C) | Sal (ppt) | Conductivity µS/cm | DO (mg/l) | % DO | pH |
|---|---|---|---|---|---|---|---|---|---|
| **407** | **surface** | **910** | 0.2 | 20.7 | 6.63 | 83.10 | 7.8 | 21.0 | 33.51 |
| | **bottom** | | 0.9 | 20.7 | 6.87 | 86.80 | 7.8 | 21.3 | 33.98 |
| **462** | **surface** | **945** | 0.2 | 20.7 | 6.89 | 85.80 | 7.8 | 20.2 | 32.37 |
| | **bottom** | | 1.0 | 20.7 | 7.38 | 91.20 | 7.8 | 20.2 | 32.40 |

Table 39. Environmental data for the LOOP- Lake Jesse stations, June 2002.

| Station | Barometric Pressure (mm of Hg) | Air Temperature (°C) | Wind Speed (kts) | Wind Direction | Cloud Cover % | Wave Height (m) | Secchi Depth (m) |
|---|---|---|---|---|---|---|---|
| **407** | 29.92 | 32 | calm | E | 25 | 0 | 0.10 |
| **462** | 29.92 | 32 | calm | E | 25 | 0 | 0.10 |

Table 40. Water quality data for the LOOP - Lake Jesse stations, June 2002.

| Station | | Time (24hr) | Depth (m) | Temp (°C) | Sal (ppt) | Conductivity µS/cm | DO (mg/l) | % DO | pH |
|---|---|---|---|---|---|---|---|---|---|
| **407** | **surface** | **1415** | 0.3 | 30.6 | 5.37 | 80.70 | 7.2 | 18.6 | 30.03 |
| | **bottom** | | 1.0 | 30.6 | 4.94 | 75.20 | 7.2 | 18.6 | 29.99 |
| **462** | **surface** | **1440** | 0.3 | 30.6 | 5.39 | 82.10 | 7.6 | 18.7 | 30.26 |
| | **bottom** | | 1.2 | 30.6 | 5.33 | 80.17 | 7.6 | 18.7 | 30.26 |

Table 41. Summary of overall abundance of major benthic macroinfauna taxonomic groups for the LOOP - Lake Jesse stations, August 2001.

| Taxa | Total No. Taxa | % Total | Total No. Individuals | % Total |
|---|---|---|---|---|
| **Annelida** | | | | |
| **Oligochaeta** | 1 | 2.3 | 191 | 27.5 |
| **Polychaeta** | 19 | 44.2 | 365 | 52.5 |
| **Mollusca** | | | | |
| **Bivalvia** | 3 | 7.0 | 21 | 3.0 |
| **Gastropoda** | 3 | 7.0 | 16 | 2.3 |
| **Arthropoda** | | | | |
| **Malacostraca** | 13 | 30.2 | 88 | 12.7 |
| **Ostracoda** | 1 | 2.3 | 1 | 0.1 |
| **Echinodermata** | | | | |
| **Ophiuroidea** | 1 | 2.3 | 1 | 0.1 |
| **Other Taxa** | 2 | 4.7 | 12 | 1.7 |
| **Total** | **43** | | **695** | |

Table 42. Summary of abundance of major benthic macroinfauna taxonomic groups by station for the LOOP - Lake Jesse stations, August 2001.

| Station | Taxa | No. of Taxa | % of Total | No. of Individuals | % of Total |
|---|---|---|---|---|---|
| **407** | Annelida | 17 | 48.6 | 297 | 79.4 |
| | Mollusca | 4 | 11.4 | 13 | 3.5 |
| | Arthropoda | 11 | 31.4 | 56 | 15.0 |
| | Echinodermata | 1 | 2.9 | 1 | 0.3 |
| | Other Taxa | 2 | 5.7 | 7 | 1.9 |
| | **Total** | **35** | | **374** | |
| **462** | Annelida | 14 | 48.3 | 259 | 80.7 |
| | Mollusca | 5 | 17.2 | 24 | 7.5 |
| | Arthropoda | 8 | 27.6 | 33 | 10.3 |
| | Echinodermata | 0 | 0.0 | 0 | 0.0 |
| | Other Taxa | 2 | 6.9 | 5 | 1.6 |
| | **Total** | **29** | | **321** | |

Table 43. Distribution and abundance of families for the LOOP - Lake Jesse stations, August 2001.

| Family | Phylum | Class | No. of Individuals | % of Total | Cumulative % | Station Occurrence | Station % Occurrence |
|---|---|---|---|---|---|---|---|
| Tubificidae | Ann | Olig | 191 | 27.48 | 27.48 | 2 | 100 |
| Capitellidae | Ann | Poly | 154 | 22.16 | 49.64 | 2 | 100 |
| Spionidae | Ann | Poly | 77 | 11.08 | 60.72 | 2 | 100 |
| Cossuridae | Ann | Poly | 61 | 8.78 | 69.50 | 2 | 100 |
| Leuconidae | Art | Mala | 30 | 4.32 | 73.81 | 2 | 100 |
| Goniadidae | Ann | Poly | 28 | 4.03 | 77.84 | 2 | 100 |
| Other Taxa | – | – | 26 | 3.74 | 81.58 | 2 | 100 |
| Mysidae | Art | Mala | 21 | 3.02 | 84.60 | 2 | 100 |
| Orbiniidae | Ann | Poly | 20 | 2.88 | 87.48 | 2 | 100 |
| Hesionidae | Ann | Poly | 16 | 2.30 | 89.78 | 2 | 100 |
| Mytilidae | Mol | Biva | 12 | 1.73 | 91.51 | 2 | 100 |
| Corophiidae | Art | Mala | 11 | 1.58 | 93.09 | 1 | 50 |
| Bodotriidae | Art | Mala | 10 | 1.44 | 94.53 | 1 | 50 |
| Tubulanidae | Rhy | Anop | 7 | 1.01 | 95.54 | 2 | 100 |
| Ampeliscidae | Art | Mala | 4 | 0.58 | 96.12 | 2 | 100 |
| Ogyrididae | Art | Mala | 4 | 0.58 | 96.69 | 2 | 100 |
| Pyramidellidae | Mol | Gast | 4 | 0.58 | 97.27 | 1 | 50 |
| Idoteidae | Art | Mala | 3 | 0.43 | 97.70 | 2 | 100 |
| Amphinomidae | Ann | Poly | 2 | 0.29 | 97.99 | 2 | 100 |
| Aoridae | Art | Mala | 2 | 0.29 | 98.27 | 1 | 50 |
| Glyceridae | Ann | Poly | 2 | 0.29 | 98.56 | 2 | 100 |
| Nereidae | Ann | Poly | 2 | 0.29 | 98.85 | 1 | 50 |
| Vitrinellidae | Mol | Gast | 2 | 0.29 | 99.14 | 1 | 50 |
| Alpheidae | Art | Mala | 1 | 0.14 | 99.28 | 1 | 50 |
| Lumbrineridae | Ann | Poly | 1 | 0.14 | 99.42 | 1 | 50 |
| Pilargiidae | Ann | Poly | 1 | 0.14 | 99.57 | 1 | 50 |
| Pinnotheridae | Art | Mala | 1 | 0.14 | 99.71 | 1 | 50 |
| Polynoidae | Ann | Poly | 1 | 0.14 | 99.86 | 1 | 50 |
| Sarsiellidae | Art | Ostr | 1 | 0.14 | 100.00 | 1 | 50 |

**Taxa Key**

Ann = Annelida
- Olig = Oligochaeta
- Poly = Polychaeta

Art = Arthropoda
- Mala = Malacostraca
- Ostr = Ostracoda

Mol = Mollusca
- Biva = Bivalvia
- Gast = Gastropoda

Rhy = Rhynchocoela
- Anop = Anopla

Table 44. Percentage abundance of dominant families (10% of the total) for the LOOP - Lake Jesse stations, August 2001.

| Taxa | | 407 | 462 |
|---|---|---|---|
| **Annelida** | | | |
| Oligochaeta | | | |
| | Tubificidae | 25.7 | 29.6 |
| Polychaeta | | | |
| | Capitellidae | 25.1 | 18.7 |
| | Cossuridae | 11.0 | |
| | Spionidae | | 16.2 |

Table 45. Distribution and abundance of taxa for the LOOP - Lake Jesse stations, August 2001.

| Taxon Name | Phylum | Class | No. of Individuals | % of Total | Cumulative % | Station Occurrence | Station % Occurrence |
|---|---|---|---|---|---|---|---|
| Tubificidae (LPIL) | Ann | Olig | 191 | 27.48 | 27.48 | 2 | 100 |
| Mediomastus (LPIL) | Ann | Poly | 131 | 18.85 | 46.33 | 2 | 100 |
| *Cossura delta* | Ann | Poly | 61 | 8.78 | 55.11 | 2 | 100 |
| *Streblospio benedicti* | Ann | Poly | 42 | 6.04 | 61.15 | 2 | 100 |
| *Carazziella hobsonae* | Ann | Poly | 31 | 4.46 | 65.61 | 2 | 100 |
| *Leucon americanus* | Art | Mala | 30 | 4.32 | 69.93 | 2 | 100 |
| *Glycinde solitaria* | Ann | Poly | 28 | 4.03 | 73.96 | 2 | 100 |
| *Mediomastus californiensis* | Ann | Poly | 21 | 3.02 | 76.98 | 2 | 100 |
| *Leitoscoloplos robustus* | Ann | Poly | 19 | 2.73 | 79.71 | 2 | 100 |
| *Americamysis bahia* | Art | Mala | 18 | 2.59 | 82.30 | 2 | 100 |
| *Podarkeopsis levifuscina* | Ann | Poly | 16 | 2.30 | 84.60 | 2 | 100 |
| Mytilidae (LPIL) | Mol | Biva | 11 | 1.58 | 86.19 | 2 | 100 |
| *Apocorophium louisianum* | Art | Mala | 10 | 1.44 | 87.63 | 1 | 50 |
| *Cyclaspis varians* | Art | Mala | 10 | 1.44 | 89.06 | 1 | 50 |
| Gastropoda (LPIL) | Mol | Gast | 10 | 1.44 | 90.50 | 2 | 100 |
| Bivalvia (LPIL) | Mol | Biva | 9 | 1.29 | 91.80 | 2 | 100 |
| *Tubulanus* (LPIL) | Rhy | Anop | 7 | 1.01 | 92.81 | 2 | 100 |
| Rhynchocoela (LPIL) | Rhy | – | 5 | 0.72 | 93.53 | 2 | 100 |
| *Ampelisca abdita* | Art | Mala | 4 | 0.58 | 94.10 | 2 | 100 |
| *Odostomia* (LPIL) | Mol | Gast | 4 | 0.58 | 94.68 | 1 | 50 |
| *Ogyrides alphaerostris* | Art | Mala | 4 | 0.58 | 95.25 | 2 | 100 |
| *Edotea triloba* | Art | Mala | 3 | 0.43 | 95.68 | 2 | 100 |
| Mysidae (LPIL) | Art | Mala | 3 | 0.43 | 96.12 | 1 | 50 |
| *Paraprionospio pinnata* | Ann | Poly | 3 | 0.43 | 96.55 | 1 | 50 |
| Aoridae (LPIL) | Art | Mala | 2 | 0.29 | 96.83 | 1 | 50 |
| *Glycera americana* | Ann | Poly | 2 | 0.29 | 97.12 | 2 | 100 |
| *Nereis succinea* | Ann | Poly | 2 | 0.29 | 97.41 | 1 | 50 |
| *Paramphinome* sp. B | Ann | Poly | 2 | 0.29 | 97.70 | 2 | 100 |
| Vitrinellidae (LPIL) | Mol | Gast | 2 | 0.29 | 97.99 | 1 | 50 |
| *Alpheus* (LPIL) | Art | Mala | 1 | 0.14 | 98.13 | 1 | 50 |
| *Amygdalum papyria* | Mol | Biva | 1 | 0.14 | 98.27 | 1 | 50 |
| Capitellidae (LPIL) | Ann | Poly | 1 | 0.14 | 98.42 | 1 | 50 |
| *Corophium* (LPIL) | Art | Mala | 1 | 0.14 | 98.56 | 1 | 50 |
| Decapoda (LPIL) | Art | Mala | 1 | 0.14 | 98.71 | 1 | 50 |
| *Eusarsiella zostericola* | Art | Ostr | 1 | 0.14 | 98.85 | 1 | 50 |
| *Heteromastus filiformis* | Ann | Poly | 1 | 0.14 | 98.99 | 1 | 50 |
| *Leitoscoloplos* (LPIL) | Ann | Poly | 1 | 0.14 | 99.14 | 1 | 50 |
| *Malmgreniella taylori* | Ann | Poly | 1 | 0.14 | 99.28 | 1 | 50 |
| Ophiuroidea (LPIL) | Ech | Ophi | 1 | 0.14 | 99.42 | 1 | 50 |
| *Pinnixa* (LPIL) | Art | Mala | 1 | 0.14 | 99.57 | 1 | 50 |
| *Prionospio* (LPIL) | Ann | Poly | 1 | 0.14 | 99.71 | 1 | 50 |
| *Scoletoma verrilli* | Ann | Poly | 1 | 0.14 | 99.86 | 1 | 50 |
| *Sigambra grubii* | Ann | Poly | 1 | 0.14 | 100.00 | 1 | 50 |

**Taxa Key**

Ann = Annelida
- Olig = Oligochaeta
- Poly = Polychaeta

Mol = Mollusca
- Biva = Bivalvia
- Gast = Gastropoda

Art = Arthropoda
- Mala = Malacostraca
- Ostr = Ostracoda

Ech = Echinodermata
- Ophi = Ophiuroidea

Rhy = Rhynchocoela
- Anop = Anopla

Table 46. Percentage abundance of dominant taxa (>10% of the total) for the LOOP - Lake Jesse stations, August 2001.

| **Taxa** | | **407** | **462** |
|---|---|---|---|
| **Annelida** | | | |
| Oligochaeta | | | |
| | Tubificidae (LPIL) | 25.7 | 29.6 |
| Polychaeta | | | |
| | *Cossura delta* | 11.0 | |
| | *Mediomastus* (LPIL) | 21.7 | 15.6 |

Table 47. Summary of benthic macroinfaunal data for the LOOP - Lake Jesse stations, August 2001.

| Station | Rep | Taxa | Indvs | Density | Mean No. Taxa | Taxa (SD) | Mean Density | Density (SD) | Total No. Taxa | Total No. Individuals | H' Diversity | J' Evenness |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **407** | A | 17 | 59 | 2565.22 | 16.4 | 2.3 | 3252.2 | 1206.2 | 35 | 374 | 2.52 | 0.71 |
| | B | 15 | 90 | 3913.04 | | | | | | | | |
| | C | 14 | 40 | 1739.13 | | | | | | | | |
| | D | 16 | 73 | 3173.91 | | | | | | | | |
| | E | 20 | 112 | 4869.57 | | | | | | | | |
| **462** | A | 13 | 64 | 2782.61 | 13.4 | 3.9 | 2791.3 | 1113.8 | 29 | 321 | 2.50 | 0.74 |
| | B | 13 | 56 | 2434.78 | | | | | | | | |
| | C | 19 | 85 | 3695.65 | | | | | | | | |
| | D | 14 | 90 | 3913.04 | | | | | | | | |
| | E | 8 | 26 | 1130.43 | | | | | | | | |

Table 48 Summary of overall abundance of major benthic macroinfauna taxonomic groups for the LOOP - Lake Jesse stations, November 2001.

| Taxa | Total. No Taxa | % Total | Total. No Individuals | % Total |
|---|---|---|---|---|
| **Annelida** | | | | |
| Oligochaeta | 1 | 1.9 | 33 | 6.0 |
| Polychaeta | 20 | 37.0 | 351 | 63.7 |
| **Mollusca** | | | | |
| Bivalvia | 6 | 11.1 | 14 | 2.5 |
| Gastropoda | 7 | 13.0 | 18 | 3.3 |
| **Arthropoda** | | | | |
| Insecta | 2 | 3.7 | 2 | 0.4 |
| Malacostraca | 10 | 18.5 | 87 | 15.8 |
| **Echinodermata** | | | | |
| Ophiuroidea | 2 | 3.7 | 4 | 0.7 |
| **Rhynchocoela** | | | | |
| Anopla | 1 | 1.9 | 4 | 0.7 |
| Rhynchocoela (LPIL) | 1 | 1.9 | 3 | 0.5 |
| **Other Taxa** | 4 | 7.4 | 35 | 6.4 |
| **Total** | **54** | | **551** | |

Table 49. Summary of abundance of major benthic macroinfauna taxonomic groups by station for the LOOP - Lake Jesse stations, November 2001.

| Station | Taxa | No. of Taxa | % of Total | No. of Individuals | % of Total |
|---|---|---|---|---|---|
| **407** | Annelida | 18 | 50.0 | 197 | 61.2 |
| | Mollusca | 5 | 13.9 | 12 | 3.7 |
| | Arthropoda | 8 | 22.2 | 74 | 23.0 |
| | Echinodermata | 1 | 2.8 | 1 | 0.3 |
| | Rhynchocoela | 2 | 5.6 | 5 | 1.6 |
| | Other Taxa | 2 | 5.6 | 33 | 10.2 |
| | **Total** | **36** | | **322** | |
| **462** | Annelida | 13 | 37.1 | 187 | 81.7 |
| | Mollusca | 10 | 28.6 | 20 | 8.7 |
| | Arthropoda | 7 | 20.0 | 15 | 6.6 |
| | Echinodermata | 2 | 5.7 | 3 | 1.3 |
| | Rhynchocoela | 1 | 2.9 | 2 | 0.9 |
| | Other Taxa | 2 | 5.7 | 2 | 0.9 |
| | **Total** | **35** | | **229** | |

Table 50. Distribution and abundance of families for the LOOP - Lake Jesse stations, November 2001.

| Family | Phylum | Class | No. of Individuals | % of Total | Cumulative % | Station Occurrence | % Station Occurrence |
|---|---|---|---|---|---|---|---|
| Capitellidae | Ann | Poly | 188 | 34.12 | 34.12 | 2 | 100 |
| Cossuridae | Ann | Poly | 68 | 12.34 | 46.46 | 2 | 100 |
| Corophiidae | Art | Mala | 64 | 11.62 | 58.08 | 2 | 100 |
| Other Taxa | Ech | Ophi | 48 | 8.71 | 66.79 | 2 | 100 |
| Tubificidae | Ann | Olig | 33 | 5.99 | 72.78 | 2 | 100 |
| Spionidae | Ann | Poly | 28 | 5.08 | 77.86 | 2 | 100 |
| Hesionidae | Ann | Poly | 17 | 3.09 | 80.94 | 2 | 100 |
| Goniadidae | Ann | Poly | 15 | 2.72 | 83.67 | 2 | 100 |
| Lumbrineridae | Ann | Poly | 12 | 2.18 | 85.84 | 2 | 100 |
| Pyramidellidae | Mol | Gast | 10 | 1.81 | 87.66 | 2 | 100 |
| Leuconidae | Art | Mala | 9 | 1.63 | 89.29 | 2 | 100 |
| Amphinomidae | Ann | Poly | 7 | 1.27 | 90.56 | 2 | 100 |
| Mactridae | Mol | Biva | 5 | 0.91 | 91.47 | 1 | 50 |
| Ogyrididae | Art | Mala | 5 | 0.91 | 92.38 | 2 | 100 |
| Orbiniidae | Ann | Poly | 5 | 0.91 | 93.28 | 1 | 50 |
| Idoteidae | Art | Mala | 4 | 0.73 | 94.01 | 1 | 50 |
| Maldanidae | Ann | Poly | 4 | 0.73 | 94.74 | 1 | 50 |
| Scaphandridae | Mol | Gast | 4 | 0.73 | 95.46 | 2 | 100 |
| Tubulanidae | Rhy | Anop | 4 | 0.73 | 96.19 | 2 | 100 |
| Ampeliscidae | Art | Mala | 2 | 0.36 | 96.55 | 2 | 100 |
| Amphiuridae | Ech | Ophi | 2 | 0.36 | 96.91 | 1 | 50 |
| Chaetopteridae | Ann | Poly | 2 | 0.36 | 97.28 | 1 | 50 |
| Glyceridae | Ann | Poly | 2 | 0.36 | 97.64 | 1 | 50 |
| Nassariidae | Mol | Gast | 2 | 0.36 | 98.00 | 1 | 50 |
| Polynoidae | Ann | Poly | 2 | 0.36 | 98.37 | 1 | 50 |
| Tellinidae | Mol | Biva | 2 | 0.36 | 98.73 | 1 | 50 |
| Aeginellidae | Art | Mala | 1 | 0.18 | 98.91 | 1 | 50 |
| Bodotriidae | Art | Mala | 1 | 0.18 | 99.09 | 1 | 50 |
| Caenidae | Art | Inse | 1 | 0.18 | 99.27 | 1 | 50 |
| Chironomidae | Art | Inse | 1 | 0.18 | 99.46 | 1 | 50 |
| Mytilidae | Mol | Biva | 1 | 0.18 | 99.64 | 1 | 50 |
| Pilargiidae | Ann | Poly | 1 | 0.18 | 99.82 | 1 | 50 |
| Ungulinidae | Mol | Biva | 1 | 0.18 | 100.00 | 1 | 50 |

**Taxa Key**

Ann = Annelida
- Olig = Oligochaeta
- Poly = Polychaeta

Art = Arthropoda
- Inse = Insecta
- Mala = Malacostraca

Ech = Echinodermata
- Ophi = Ophiuroidea

Mol = Mollusca
- Biva = Bivalvia
- Gast = Gastropoda

Rhy = Rhynchocoela
- Anop = Anopla

Table 51. Percentage abundance of dominant families (10% of the total) for the LOOP - Lake Jesse stations, November 2001.

| Taxa | 407 | 462 |
|---|---|---|
| **Annelida** | | |
| Polychaeta | | |
| Capitellidae | 25.5 | 46.3 |
| Cossuridae | | 15.7 |
| **Arthropoda** | | |
| Malacostraca | | |
| Corophiidae | 18.6 | |
| **Other Taxa** | 13.0 | |

Table 52. Distribution and abundance of taxa for the LOOP - Lake Jesse stations, November 2001.

| Taxon Name | Phylum | Class | No. of Individuals | % of Total | Cumulative % | Station Occurrence | % Station Occurrence |
|---|---|---|---|---|---|---|---|
| *Mediomastus* (LPIL) | Ann | Poly | 184 | 33.39 | 33.39 | 2 | 100 |
| *Cossura delta* | Ann | Poly | 68 | 12.34 | 45.74 | 2 | 100 |
| *Apocorophium lacustre* | Art | Mala | 43 | 7.80 | 53.54 | 2 | 100 |
| Tubificidae (LPIL) | Ann | Olig | 33 | 5.99 | 59.53 | 2 | 100 |
| Ascidiacea (LPIL) | Cho | Asci | 31 | 5.63 | 65.15 | 1 | 50 |
| *Corophium* (LPIL) | Art | Mala | 21 | 3.81 | 68.97 | 1 | 50 |
| *Glycinde solitaria* | Ann | Poly | 15 | 2.72 | 71.69 | 2 | 100 |
| *Streblospio benedicti* | Ann | Poly | 14 | 2.54 | 74.23 | 2 | 100 |
| *Scoletoma verrilli* | Ann | Poly | 12 | 2.18 | 76.41 | 2 | 100 |
| *Leucon americanus* | Art | Mala | 9 | 1.63 | 78.04 | 2 | 100 |
| *Parahesione luteola* | Ann | Poly | 9 | 1.63 | 79.67 | 1 | 50 |
| *Paraprionospio pinnata* | Ann | Poly | 9 | 1.63 | 81.31 | 2 | 100 |
| *Podarkeopsis levifuscina* | Ann | Poly | 8 | 1.45 | 82.76 | 2 | 100 |
| *Paramphinome* sp. B | Ann | Poly | 7 | 1.27 | 84.03 | 2 | 100 |
| Bivalvia (LPIL) | Mol | Biva | 5 | 0.91 | 84.94 | 2 | 100 |
| *Odostomia* (LPIL) | Mol | Gast | 5 | 0.91 | 85.84 | 2 | 100 |
| *Ogyrides alphaerostris* | Art | Mala | 5 | 0.91 | 86.75 | 2 | 100 |
| *Carazziella hobsonae* | Ann | Poly | 4 | 0.73 | 87.48 | 1 | 50 |
| *Edotea triloba* | Art | Mala | 4 | 0.73 | 88.20 | 1 | 50 |
| *Leitoscoloplos* (LPIL) | Ann | Poly | 4 | 0.73 | 88.93 | 1 | 50 |
| Mactridae (LPIL) | Mol | Biva | 4 | 0.73 | 89.66 | 1 | 50 |
| Maldanidae (LPIL) | Ann | Poly | 4 | 0.73 | 90.38 | 1 | 50 |
| *Tubulanus* (LPIL) | Rhy | Anop | 4 | 0.73 | 91.11 | 2 | 100 |
| *Turbonilla* (LPIL) | Mol | Gast | 4 | 0.73 | 91.83 | 1 | 50 |
| *Mediomastus californiensis* | Ann | Poly | 3 | 0.54 | 92.38 | 2 | 100 |
| Rhynchocoela (LPIL) | Rhy | - | 3 | 0.54 | 92.92 | 1 | 50 |
| *Acteocina* (LPIL) | Mol | Gast | 2 | 0.36 | 93.28 | 1 | 50 |
| *Acteocina canaliculata* | Mol | Gast | 2 | 0.36 | 93.65 | 1 | 50 |
| Amphiuridae (LPIL) | Ech | Ophi | 2 | 0.36 | 94.01 | 1 | 50 |
| Gastropoda (LPIL) | Mol | Gast | 2 | 0.36 | 94.37 | 1 | 50 |
| *Glycera americana* | Ann | Poly | 2 | 0.36 | 94.74 | 1 | 50 |
| *Malmgreniella taylori* | Ann | Poly | 2 | 0.36 | 95.10 | 1 | 50 |
| *Nassarius* (LPIL) | Mol | Gast | 2 | 0.36 | 95.46 | 1 | 50 |
| Ophiuroidea (LPIL) | Ech | Ophi | 2 | 0.36 | 95.83 | 2 | 100 |
| Sipuncula (LPIL) | Sip | - | 2 | 0.36 | 96.19 | 1 | 50 |
| *Spiochaetopterus oculatus* | Ann | Poly | 2 | 0.36 | 96.55 | 1 | 50 |
| *Tellina* (LPIL) | Mol | Biva | 2 | 0.36 | 96.91 | 1 | 50 |
| *Ampelisca* (LPIL) | Art | Mala | 1 | 0.18 | 97.10 | 1 | 50 |
| *Ampelisca abdita* | Art | Mala | 1 | 0.18 | 97.28 | 1 | 50 |
| *Amygdalum papyria* | Mol | Biva | 1 | 0.18 | 97.46 | 1 | 50 |
| *Ancistrosyllis hartmanae* | Ann | Poly | 1 | 0.18 | 97.64 | 1 | 50 |
| *Caenis diminuta* | Art | Inse | 1 | 0.18 | 97.82 | 1 | 50 |
| Cumacea (LPIL) | Art | Mala | 1 | 0.18 | 98.00 | 1 | 50 |
| *Cyclaspis varians* | Art | Mala | 1 | 0.18 | 98.19 | 1 | 50 |
| *Diplodonta* (LPIL) | Mol | Biva | 1 | 0.18 | 98.37 | 1 | 50 |
| *Heteromastus filiformis* | Ann | Poly | 1 | 0.18 | 98.55 | 1 | 50 |
| Hydrozoa (LPIL) | Cni | Hydr | 1 | 0.18 | 98.73 | 1 | 50 |
| *Leitoscoloplos robustus* | Ann | Poly | 1 | 0.18 | 98.91 | 1 | 50 |
| *Mulinia lateralis* | Mol | Biva | 1 | 0.18 | 99.09 | 1 | 50 |
| *Paracaprella tenuis* | Art | Mala | 1 | 0.18 | 99.27 | 1 | 50 |
| *Polypedilum* (LPIL) | Art | Inse | 1 | 0.18 | 99.46 | 1 | 50 |
| Pyramidellidae (LPIL) | Mol | Gast | 1 | 0.18 | 99.64 | 1 | 50 |
| Spionidae (LPIL) | Ann | Poly | 1 | 0.18 | 99.82 | 1 | 50 |
| Turbellaria (LPIL) | Pla | Turb | 1 | 0.18 | 100.00 | 1 | 50 |

**Taxa Key**

Ann = Annelida
Olig = Oligochaeta
Poly = Polychaeta

Art = Arthropoda
Inse = Insecta
Mala = Malacostraca

Cho = Chordata
Asci = Ascidiacea

Cni = Cnidaria
Hydr = Hydrozoa

Ech = Echinodermata
Ophi = Ophiuroidea

Mol = Mollusca
Biva = Bivalvia
Gast = Gastropoda

Pla = Platyhelminthes
Turb = Turbellaria

Rhy = Rhynchocoela
Anop = Anopla

Sip = Sipuncula

Table 53. Percentage abundance of dominant taxa (>10% of the total) for the LOOP - Lake Jesse stations, November 2001.

| **Taxa** | **407** | **462** |
|---|---|---|
| **Annelida** | | |
| Polychaeta | | |
| *Cossura delta* | | 15.7 |
| *Mediomastus* (LPIL) | 24.5 | 45.9 |
| **Arthropoda** | | |
| Malacostraca | | |
| *Apocorophium lacustre* | 12.1 | |

Table 54. Summary of benthic macroinfaunal data for the LOOP - Lake Jesse stations, November 2001

| Station | Rep | Taxa | Indvs | Density | Mean No. Taxa | Taxa (SD) | Mean Density | Density (SD) | Total No. Taxa | Total No. Individuals | H' Diversity | J' Evenness |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **407** | A | 17 | 72 | 3130.43 | 15.4 | 2.7 | 2800.0 | 951.9 | 36 | 322 | 2.71 | 0.76 |
| | B | 19 | 64 | 2782.61 | | | | | | | | |
| | C | 12 | 43 | 1869.57 | | | | | | | | |
| | D | 14 | 97 | 4217.39 | | | | | | | | |
| | E | 15 | 46 | 2000 | | | | | | | | |
| **462** | A | 15 | 39 | 1695.65 | 14.0 | 3.1 | 1991.3 | 979.7 | 35 | 229 | 2.25 | 0.63 |
| | B | 18 | 52 | 2260.87 | | | | | | | | |
| | C | 10 | 42 | 1826.09 | | | | | | | | |
| | D | 12 | 17 | 739.13 | | | | | | | | |
| | E | 15 | 79 | 3434.78 | | | | | | | | |

Table 55. Summary of overall abundance of major benthic macroinfaunal taxonomic groups for the LOOP - Lake Jesse stations, June 2002.

| Taxa | Total No. Taxa | % Total | Total No. Individuals | % Total |
|---|---|---|---|---|
| **Annelida** | | | | |
| **Oligochaeta** | 2 | 4.4 | 101 | 10.8 |
| **Polychaeta** | 20 | 44.4 | 419 | 44.7 |
| **Mollusca** | | | | |
| **Bivalvia** | 5 | 11.1 | 35 | 3.7 |
| **Gastropoda** | 3 | 6.7 | 4 | 0.4 |
| **Arthropoda** | | | | |
| **Malacostraca** | 8 | 17.8 | 79 | 8.4 |
| **Ostracoda** | 1 | 2.2 | 1 | 0.1 |
| **Echinodermata** | | | | |
| **Ophiuroidea** | 1 | 2.2 | 1 | 0.1 |
| **Other Taxa** | 5 | 11.1 | 298 | 31.8 |
| **Total** | **45** | | **938** | |

Table 56. Summary of abundance of major benthic macroinfaunal taxonomic groups by stations for the LOOP - Lake Jesse stations, June 2002.

| Station | Taxa | No. of Taxa | % of Total | No. of Individuals | % of Total |
|---|---|---|---|---|---|
| **407** | Annelida | 16 | 55.2 | 278 | 56.6 |
| | Mollusca | 3 | 10.3 | 17 | 3.5 |
| | Arthropoda | 7 | 24.1 | 41 | 8.4 |
| | Echinodermata | 0 | 0.0 | 0 | 0.0 |
| | Other Taxa | 3 | 10.3 | 155 | 31.6 |
| | **Total** | **29** | | **491** | |
| **462** | Annelida | 17 | 48.6 | 242 | 54.1 |
| | Mollusca | 7 | 20.0 | 22 | 4.9 |
| | Arthropoda | 6 | 17.1 | 39 | 8.7 |
| | Echinodermata | 1 | 2.9 | 1 | 0.2 |
| | Other Taxa | 4 | 11.4 | 143 | 32.0 |
| | **Total** | **35** | | **447** | |

Table 57. Distribution and abundance of families for the LOOP - Lake Jesse stations, June 2002.

| Taxa | Phylum | Class | No. of Individuals | % of Total | Cumulative % | Station Occurrence | % of Station Occurrence |
|---|---|---|---|---|---|---|---|
| Other Taxa | – | – | 302 | 32.20 | 32.20 | 2 | 100 |
| Capitellidae | Ann | Poly | 206 | 21.96 | 54.16 | 2 | 100 |
| Tubificidae | Ann | Olig | 101 | 10.77 | 64.93 | 2 | 100 |
| Cossuridae | Ann | Poly | 81 | 8.64 | 73.56 | 2 | 100 |
| Spionidae | Ann | Poly | 55 | 5.86 | 79.42 | 2 | 100 |
| Corophiidae | Art | Mala | 49 | 5.22 | 84.65 | 2 | 100 |
| Orbiniidae | Ann | Poly | 36 | 3.84 | 88.49 | 2 | 100 |
| Mytilidae | Mol | Biva | 20 | 2.13 | 90.62 | 2 | 100 |
| Goniadidae | Ann | Poly | 16 | 1.71 | 92.32 | 2 | 100 |
| Hesionidae | Ann | Poly | 15 | 1.60 | 93.92 | 2 | 100 |
| Leuconidae | Art | Mala | 15 | 1.60 | 95.52 | 2 | 100 |
| Ampeliscidae | Art | Mala | 10 | 1.07 | 96.59 | 2 | 100 |
| Mactridae | Mol | Biva | 8 | 0.85 | 97.44 | 1 | 50 |
| Lumbrineridae | Ann | Poly | 3 | 0.32 | 97.76 | 2 | 100 |
| Sabellidae | Ann | Poly | 3 | 0.32 | 98.08 | 1 | 50 |
| Vitrinellidae | Mol | Gast | 3 | 0.32 | 98.40 | 2 | 100 |
| Aoridae | Art | Mala | 2 | 0.21 | 98.61 | 2 | 100 |
| Tellinidae | Mol | Biva | 2 | 0.21 | 98.83 | 1 | 50 |
| Amphinomidae | Ann | Poly | 1 | 0.11 | 98.93 | 1 | 50 |
| Nereidae | Ann | Poly | 1 | 0.11 | 99.04 | 1 | 50 |
| Pilargiidae | Ann | Poly | 1 | 0.11 | 99.15 | 1 | 50 |
| Polynoidae | Ann | Poly | 1 | 0.11 | 99.25 | 1 | 50 |
| Gammaridae | Art | Mala | 1 | 0.11 | 99.36 | 1 | 50 |
| Melitidae | Art | Mala | 1 | 0.11 | 99.47 | 1 | 50 |
| Ogyrididae | Art | Mala | 1 | 0.11 | 99.57 | 1 | 50 |
| Cytherideidae | Art | Ostr | 1 | 0.11 | 99.68 | 1 | 50 |
| Scaphandridae | Mol | Gast | 1 | 0.11 | 99.79 | 1 | 50 |
| Lineidae | Rhy | Anop | 1 | 0.11 | 99.89 | 1 | 50 |
| Tubulanidae | Rhy | Anop | 1 | 0.11 | 100.00 | 1 | 50 |

**Taxa Key**

Ann = Annelida
- Olig = Oligochaeta
- Poly = Polychaeta

Art = Arthropoda
- Mala = Malacostraca
- Ostr = Ostracoda

Mol = Mollusca
- Biva = Bivalvia
- Gast = Gastropoda

Rhy = Rhynchocoela
- Anop = Anopla

Table 57. Distribution and abundance of families for the LOOP - Lake Jesse stations, June 2002.

| Taxa | Phylum | Class | No. of Individuals | % of Total | Cumulative % | Station Occurrence | % of Station Occurrence |
|---|---|---|---|---|---|---|---|
| Other Taxa | – | – | 302 | 32.20 | 32.20 | 2 | 100 |
| Capitellidae | Ann | Poly | 206 | 21.96 | 54.16 | 2 | 100 |
| Tubificidae | Ann | Olig | 101 | 10.77 | 64.93 | 2 | 100 |
| Cossuridae | Ann | Poly | 81 | 8.64 | 73.56 | 2 | 100 |
| Spionidae | Ann | Poly | 55 | 5.86 | 79.42 | 2 | 100 |
| Corophiidae | Art | Mala | 49 | 5.22 | 84.65 | 2 | 100 |
| Orbiniidae | Ann | Poly | 36 | 3.84 | 88.49 | 2 | 100 |
| Mytilidae | Mol | Biva | 20 | 2.13 | 90.62 | 2 | 100 |
| Goniadidae | Ann | Poly | 16 | 1.71 | 92.32 | 2 | 100 |
| Hesionidae | Ann | Poly | 15 | 1.60 | 93.92 | 2 | 100 |
| Leuconidae | Art | Mala | 15 | 1.60 | 95.52 | 2 | 100 |
| Ampeliscidae | Art | Mala | 10 | 1.07 | 96.59 | 2 | 100 |
| Mactridae | Mol | Biva | 8 | 0.85 | 97.44 | 1 | 50 |
| Lumbrineridae | Ann | Poly | 3 | 0.32 | 97.76 | 2 | 100 |
| Sabellidae | Ann | Poly | 3 | 0.32 | 98.08 | 1 | 50 |
| Vitrinellidae | Mol | Gast | 3 | 0.32 | 98.40 | 2 | 100 |
| Aoridae | Art | Mala | 2 | 0.21 | 98.61 | 2 | 100 |
| Tellinidae | Mol | Biva | 2 | 0.21 | 98.83 | 1 | 50 |
| Amphinomidae | Ann | Poly | 1 | 0.11 | 98.93 | 1 | 50 |
| Nereidae | Ann | Poly | 1 | 0.11 | 99.04 | 1 | 50 |
| Pilargiidae | Ann | Poly | 1 | 0.11 | 99.15 | 1 | 50 |
| Polynoidae | Ann | Poly | 1 | 0.11 | 99.25 | 1 | 50 |
| Gammaridae | Art | Mala | 1 | 0.11 | 99.36 | 1 | 50 |
| Melitidae | Art | Mala | 1 | 0.11 | 99.47 | 1 | 50 |
| Ogyrididae | Art | Mala | 1 | 0.11 | 99.57 | 1 | 50 |
| Cytherideidae | Art | Ostr | 1 | 0.11 | 99.68 | 1 | 50 |
| Scaphandridae | Mol | Gast | 1 | 0.11 | 99.79 | 1 | 50 |
| Lineidae | Rhy | Anop | 1 | 0.11 | 99.89 | 1 | 50 |
| Tubulanidae | Rhy | Anop | 1 | 0.11 | 100.00 | 1 | 50 |

**Taxa Key**

Ann = Annelida
- Olig = Oligochaeta
- Poly = Polychaeta

Art = Arthropoda
- Mala = Malacostraca
- Ostr = Ostracoda

Mol = Mollusca
- Biva = Bivalvia
- Gast = Gastropoda

Rhy = Rhynchocoela
- Anop = Anopla

Table 58. Percentage abundance of dominant families (>10% of the total) for the LOOP - Lake Jesse stations, June 2002.

| **Taxa** | **407** | **462** |
|---|---|---|
| **Annelida** | | |
| Oligochaeta | | |
| Tubificidae | | 13.6 |
| Polychaeta | | |
| Capitellidae | 24.2 | 19.5 |
| **Other Taxa** | 32.2 | 32.2 |

Table 59. Distribution and abundance of taxa for the LOOP - Lake Jesse stations, June 2002.

| Taxon Name | Phylum | Class | No. of Individuals | % of Total | Cumulative % | Station Occurrence | % Station Occurrence |
|---|---|---|---|---|---|---|---|
| Ascidiacea (LPIL) | Cho | Asci | 292 | 31.13 | 31.13 | 2 | 100 |
| *Mediomastus* (LPIL) | Ann | Poly | 204 | 21.75 | 52.88 | 2 | 100 |
| *Cossura delta* | Ann | Poly | 81 | 8.64 | 61.51 | 2 | 100 |
| Tubificidae (LPIL) | Ann | Olig | 80 | 8.53 | 70.04 | 2 | 100 |
| *Monocorophium acherusicum* | Art | Mala | 44 | 4.69 | 74.73 | 2 | 100 |
| *Leitoscoloplos* (LPIL) | Ann | Poly | 29 | 3.09 | 77.83 | 2 | 100 |
| *Streblospio benedicti* | Ann | Poly | 29 | 3.09 | 80.92 | 2 | 100 |
| *Tubificoides heterochaetus* | Ann | Olig | 21 | 2.24 | 83.16 | 1 | 50 |
| *Carazziella hobsonae* | Ann | Poly | 20 | 2.13 | 85.29 | 1 | 50 |
| *Amygdalum papyria* | Mol | Biva | 20 | 2.13 | 87.42 | 2 | 100 |
| *Glycinde solitaria* | Ann | Poly | 15 | 1.60 | 89.02 | 2 | 100 |
| *Leucon americanus* | Art | Mala | 15 | 1.60 | 90.62 | 2 | 100 |
| *Podarkeopsis levifuscina* | Ann | Poly | 11 | 1.17 | 91.79 | 2 | 100 |
| *Ampelisca* (LPIL) | Art | Mala | 10 | 1.07 | 92.86 | 2 | 100 |
| *Leitoscoloplos robustus* | Ann | Poly | 7 | 0.75 | 93.60 | 2 | 100 |
| Mactridae (LPIL) | Mol | Biva | 7 | 0.75 | 94.35 | 1 | 50 |
| *Paraprionospio pinnata* | Ann | Poly | 5 | 0.53 | 94.88 | 2 | 100 |
| *Corophium* (LPIL) | Art | Mala | 5 | 0.53 | 95.42 | 1 | 50 |
| Bivalvia (LPIL) | Mol | Biva | 5 | 0.53 | 95.95 | 2 | 100 |
| *Parahesione luteola* | Ann | Poly | 4 | 0.43 | 96.38 | 2 | 100 |
| *Chone* (LPIL) | Ann | Poly | 3 | 0.32 | 96.70 | 1 | 50 |
| *Scoletoma verrilli* | Ann | Poly | 3 | 0.32 | 97.01 | 2 | 100 |
| Rhynchocoela (LPIL) | Rhy | – | 3 | 0.32 | 97.33 | 2 | 100 |
| *Grandidierella bonnieroides* | Art | Mala | 2 | 0.21 | 97.55 | 2 | 100 |
| *Tellina* (LPIL) | Mol | Biva | 2 | 0.21 | 97.76 | 1 | 50 |
| *Vitrinella helicoidea* | Mol | Gast | 2 | 0.21 | 97.97 | 1 | 50 |
| *Dipolydora socialis* | Ann | Poly | 1 | 0.11 | 98.08 | 1 | 50 |
| Goniadidae (LPIL) | Ann | Poly | 1 | 0.11 | 98.19 | 1 | 50 |
| *Heteromastus filiformis* | Ann | Poly | 1 | 0.11 | 98.29 | 1 | 50 |
| *Malmgreniella taylori* | Ann | Poly | 1 | 0.11 | 98.40 | 1 | 50 |
| *Mediomastus californiensis* | Ann | Poly | 1 | 0.11 | 98.51 | 1 | 50 |
| *Nereis* (LPIL) | Ann | Poly | 1 | 0.11 | 98.61 | 1 | 50 |
| *Paramphinome* sp. B | Ann | Poly | 1 | 0.11 | 98.72 | 1 | 50 |
| *Sigambra grubii* | Ann | Poly | 1 | 0.11 | 98.83 | 1 | 50 |
| *Gammarus mucronatus* | Art | Mala | 1 | 0.11 | 98.93 | 1 | 50 |
| Melitidae (LPIL) | Art | Mala | 1 | 0.11 | 99.04 | 1 | 50 |
| *Ogyrides alphaerostris* | Art | Mala | 1 | 0.11 | 99.15 | 1 | 50 |
| *Haplocytheridea setipunctata* | Art | Ostr | 1 | 0.11 | 99.25 | 1 | 50 |
| Ophiuroidea (LPIL) | Ech | Ophi | 1 | 0.11 | 99.36 | 1 | 50 |
| *Mulinia lateralis* | Mol | Biva | 1 | 0.11 | 99.47 | 1 | 50 |
| *Acteocina canaliculata* | Mol | Gast | 1 | 0.11 | 99.57 | 1 | 50 |
| Vitrinellidae (LPIL) | Mol | Gast | 1 | 0.11 | 99.68 | 1 | 50 |
| Turbellaria (LPIL) | Pla | Turb | 1 | 0.11 | 99.79 | 1 | 50 |
| Lineidae (LPIL) | Rhy | Anop | 1 | 0.11 | 99.89 | 1 | 50 |
| *Tubulanus* (LPIL) | Rhy | Anop | 1 | 0.11 | 100.00 | 1 | 50 |

**Taxa Key**

Ann = Annelida
- Olig = Oligochaeta
- Poly = Polychaeta

Art = Arthropoda
- Mala = Malacostraca
- Ostr = Ostracoda

Cho = Chordata
- Asci = Ascidiacea

Ech = Echinodermata
- Ophi = Ophiuroidea

Mol = Mollusca
- Biva = Bivalvia
- Gast = Gastropoda

Pla = Platyhelminthes
- Turb = Turbellaria

Rhy = Rhynchocoela
- Anop = Anopla

Table 60. Percentage abundance of dominant taxa (>10% of the total) for the LOOP - Lake Jesse stations, June 2002.

| **Taxa** | **407** | **462** |
|---|---|---|
| **Annelida** | | |
| Polychaeta | | |
| *Mediomastus* (LPIL) | 24.0 | 19.2 |
| **Chordata** | | |
| Ascidiacea | | |
| Ascidiacea (LPIL) | 31.2 | 31.1 |

Table 61. Summary of benthic macroinfaunal data for the LOOP - Lake Jesse stations, June 2002.

| Station | Rep | Taxa | Indvs | Density | Mean No. Taxa | Taxa (SD) | Mean Density | Density (SD) | Total No. Taxa | Total No. Individuals | H' Diversity | J' Evenness |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **407** | A | 6 | 35 | 1521.739 | 12.2 | 5.4 | 4269.6 | 2808.5 | 29 | 491 | 2.18 | 0.65 |
| | B | 14 | 70 | 3043.478 | | | | | | | | |
| | C | 7 | 62 | 2695.652 | | | | | | | | |
| | D | 16 | 197 | 8565.217 | | | | | | | | |
| | E | 18 | 127 | 5521.739 | | | | | | | | |
| **462** | A | 12 | 36 | 1565.217 | 15.8 | 3.3 | 3887.0 | 3494.3 | 35 | 447 | 2.42 | 0.68 |
| | B | 13 | 39 | 1695.652 | | | | | | | | |
| | C | 19 | 230 | 10000.00 | | | | | | | | |
| | D | 19 | 71 | 3086.957 | | | | | | | | |
| | E | 16 | 71 | 3086.957 | | | | | | | | |

Table 62. Station location and sediment composition data for the LOOP - Brine stations, August 2001.

| Station | Latitude | Longitude | % Gravel | % Sand | % Silt | % Clay | USACE Description | Median Particle Size (phi) | Interstitial pH |
|---|---|---|---|---|---|---|---|---|---|
| **435** | N29.12278 | W90.08333 | 0 | 20.97 | 29.09 | 49.94 | silty clay | 7.949 | 7.35 |
| **473** | N29.12278 | W90.08333 | 0 | 6.45 | 30.15 | 63.4 | clay | 9.492 | 8.07 |
| **474** | N29.09750 | W90.11389 | 0 | 17.56 | 9.98 | 72.46 | clay | 10.253 | 7.66 |
| **475** | N29.10028 | W90.11833 | 0 | 44.62 | 18.97 | 36.41 | sandy clay | 5.235 | 7.76 |

Table 63. Station location and sediment composition data for the LOOP - Brine stations, November 2001.

| Station | Latitude | Longitude | % Gravel | % Sand | % Silt | % Clay | USACE Description | Median Particle Size (phi) | Interstitial pH |
|---|---|---|---|---|---|---|---|---|---|
| **435** | N29.12278 | W90.08333 | 0 | 4.82 | 49.05 | 46.13 | silty clay | 7.362 | 7.71 |
| **473** | N29.12278 | W90.08333 | 0 | 6.65 | 52.55 | 40.79 | silty clay | 7.440 | 7.53 |
| **474** | N29.09750 | W90.11389 | 0 | 12.78 | 53.40 | 33.82 | silty clay | 6.794 | 7.39 |
| **475** | N29.10028 | W90.11833 | 0 | 3.75 | 49.59 | 46.66 | silty clay | 7.353 | 7.34 |

Table 64. Station location and sediment composition data for the LOOP - Brine stations, June 2002.

| Station | Latitude | Longitude | % Gravel | % Sand | % Silt | % Clay | USACE Description | Median Particle Size (phi) | Interstitial pH |
|---|---|---|---|---|---|---|---|---|---|
| **435** | N29.12278 | W90.08333 | 0.00 | 0.54 | 39.84 | 59.63 | clay | 9.129 | 7.29 |
| **473** | N29.12278 | W90.08333 | 0.00 | 5.55 | 44.09 | 50.36 | clay | 8.012 | 7.64 |
| **474** | N29.09750 | W90.11389 | 0.00 | 5.44 | 32.23 | 62.33 | clay | 9.311 | 7.76 |
| **475** | N29.10028 | W90.11833 | 0.00 | 20.19 | 45.37 | 34.44 | silty clay | 5.789 | 7.95 |

Table 65. Environmental data for the LOOP-Brine stations, August 2001.

| Station | Barometric Pressure (mm of Hg) | Air Temperature (°C) | Wind Speed (kts) | Wind Direction | Cloud Cover % | Wave Height (m) | Secchi Depth (m) |
|---|---|---|---|---|---|---|---|
| **435** | 30.02 | 31 | 3 | NE | 10 | 0.75 | >4.0 |
| **473** | -- | 26 | 3 | NE | 0 | 0.75 | >4.0 |
| **474** | 30.01 | 30 | 3 | NE | 0 | 0.75 | >4.0 |
| **475** | 30.02 | 30 | 1 | NE | 0 | 0.75 | >4.0 |

Table 66. Water quality data for the LOOP - Brine Station 435, August 2001.

| Depth (m) | Temp (°C) | Sal (ppt) | Conductivity µS/cm | DO (mg/l) | % DO | pH |
|---|---|---|---|---|---|---|
| 0.2 | 30.3 | 25.3 | 40.8 | 7.09 | 109.7 | 8.39 |
| 1.3 | 30.3 | 25.9 | 40.5 | 7.13 | 109.9 | 8.39 |
| 2.6 | 30.3 | 26.4 | 39.9 | 6.98 | 109.4 | 8.39 |
| 3.9 | 30.3 | 26.3 | 42.2 | 6.2 | 96.4 | 8.32 |
| 4.6 | 30.5 | 27.4 | 41.5 | 5.7 | 88.1 | 8.28 |
| 5.3 | 30.4 | 27.2 | 42.2 | 5.45 | 85.2 | 8.24 |
| 6.7 | 30.4 | 26.9 | 42.3 | 5.36 | 84.7 | 8.22 |
| 8.1 | 30.5 | 27.7 | 42.3 | 5.07 | 81.2 | 8.21 |
| 9.8 | 29.5 | 28.4 | 48.2 | 1.88 | 39.0 | 7.97 |

Table 67. Water quality data for LOOP-Brine Station 473, August 2001.

| Depth (m) | Temp (°C) | Sal (ppt) | Conductivity µS/cm | DO (mg/l) | % DO | pH |
|---|---|---|---|---|---|---|
| 0.2 | 30.6 | 24.7 | 38.9 | 8.19 | 127.6 | 8.42 |
| 1.5 | 30.7 | 25.0 | 39.0 | 8.19 | 127.4 | 8.4 |
| 2.8 | 30.8 | 26.2 | 40.1 | 7.56 | 115.6 | 8.33 |
| 4.0 | 30.6 | 26.6 | 41.6 | 6.71 | 101.0 | 8.26 |
| 5.4 | 30.7 | 27.5 | 42.4 | 5.81 | 88.3 | 8.19 |
| 6.4 | 30.9 | 27.8 | 43.1 | 5.62 | 89.6 | 8.16 |
| 7.9 | 30.9 | 28.0 | 43.5 | 5.53 | 88.0 | 8.13 |
| 9.5 | 29.3 | 29.9 | 48.1 | 2.79 | 61.7 | 7.92 |

Table 68. Water quality data for the LOOP-Brine Station 474, August 2001.

| Depth (m) | Temp (°C) | Sal (ppt) | Conductivity µS/cm | DO (mg/l) | % DO | pH |
|---|---|---|---|---|---|---|
| 0.3 | 30.40 | 25.10 | 39.20 | 8.32 | 128.4 | 8.4 |
| 1.2 | 30.50 | 24.90 | 39.20 | 8.20 | 128.0 | 8.4 |
| 2.8 | 30.70 | 25.80 | 40.00 | 7.59 | 114.3 | 8.4 |
| 3.7 | 30.60 | 26.40 | 41.00 | 6.50 | 102.2 | 8.3 |
| 5.0 | 30.70 | 27.40 | 42.20 | 5.96 | 93.0 | 8.2 |
| 6.5 | 30.80 | 27.80 | 43.30 | 5.63 | 88.5 | 8.2 |
| 7.7 | 31.00 | 28.00 | 43.50 | 5.64 | 89.8 | 8.2 |
| 9.0 | 30.90 | 29.80 | 45.30 | 4.30 | -- | 8.1 |
| 9.4 | 29.60 | 29.80 | 46.40 | 3.30 | 59.0 | 8.0 |

Table 69. Water quality data for the LOOP-Brine Station 475, August 2001.

| Depth (m) | Temp (°C) | Sal (ppt) | Conductivity µS/cm | DO (mg/l) | % DO | pH |
|---|---|---|---|---|---|---|
| 0.5 | 30.4 | 24.8 | 38.9 | 7.98 | 123.6 | 8.44 |
| 1.3 | 30.5 | 24.8 | 39.0 | 8.01 | 124.7 | 8.44 |
| 1.6 | 30.5 | 28.1 | 43.0 | 4.87 | 74.5 | 8.12 |
| 2.4 | 30.7 | 25.4 | 39.6 | 7.48 | 118.5 | 8.40 |
| 3.7 | 30.7 | 26.3 | 40.7 | 6.83 | 106.0 | 8.33 |
| 4.4 | 30.6 | 26.5 | 41.2 | 6.38 | 101.2 | 8.30 |
| 5.7 | 30.5 | 27.0 | 41.8 | 5.78 | 90.0 | 8.25 |
| 6.3 | 30.5 | 27.2 | 42.2 | 5.32 | 85.4 | 8.23 |
| 7.7 | 30.5 | 27.8 | 43.1 | 4.84 | 76.1 | 8.17 |
| 8.2 | 30.5 | 28.3 | 43.5 | 4.65 | 72.1 | 8.15 |
| 8.8 | 30.4 | 28.5 | 43.7 | 4.59 | 72.2 | 8.12 |
| 9.4 | 30.1 | 29.2 | 45.3 | 3.66 | 61.1 | 8.08 |

Table 70. Environmental data for the LOOP - Brine stations, November 2001.

| Station | Barometric Pressure (mm of Hg) | Air Temperature (°C) | Wind Speed (kts) | Wind Direction | Cloud Cover % | Wave Height (m) | Secchi Depth (m) |
|---|---|---|---|---|---|---|---|
| **435** | 30.15 | 31 | 10 | SE | 20 | 1.0 | 4.50 |
| **473** | 30.17 | 25 | 9 | SE | 10 | 1.2 | 4.50 |
| **474** | 30.18 | 29 | 8 | SE | 10 | 1.2 | 4.50 |
| **475** | 30.00 | 20 | 8 | SE | 10 | 1.2 | 4.50 |

Table 71. Water quality data for the LOOP - Brine Station 435, November 2001.

| Depth (m) | Temp (°C) | Sal (ppt) | Conductivity µS/cm | DO (mg/l) | % DO | pH |
|---|---|---|---|---|---|---|
| 0.2 | 22.1 | 25.53 | 39.95 | 9.7 | 128.2 | 8.71 |
| 0.4 | 22.1 | 25.53 | 39.95 | 10.1 | 134.1 | 8.72 |
| 0.4 | 22.1 | 25.54 | 39.97 | 9.7 | 128.4 | 8.71 |
| 1.7 | 22.1 | 25.55 | 39.97 | 13.4 | 177.9 | 8.71 |
| 2.2 | 22.1 | 25.55 | 39.97 | 12.0 | 159.0 | 8.71 |
| 2.2 | 22.1 | 25.53 | 39.95 | 12.3 | 170.0 | 8.71 |
| 4.3 | 22.1 | 25.75 | 40.26 | 14.7 | 195.5 | 8.69 |
| 5.0 | 22.1 | 26.38 | 41.14 | 13.5 | 180.5 | 8.68 |
| 5.6 | 22.3 | 26.32 | 41.06 | 13.9 | 186.9 | 8.65 |
| 6.1 | 22.5 | 27.11 | 42.15 | 15.0 | 200.0 | 8.59 |
| 6.3 | 22.7 | 27.67 | 42.93 | 15.9 | 200.0 | 8.44 |
| 6.8 | 22.8 | 30.23 | 46.46 | 15.2 | 200.0 | 8.41 |
| 6.8 | 22.8 | 30.07 | 46.25 | 11.5 | 158.9 | 8.41 |
| 9.9 | 23.1 | 31.11 | 47.67 | 7.1 | 99.2 | 8.18 |

Table 72. Water quality data for the LOOP - Brine Station 473, November 2001.

| Depth (m) | Temp (°C) | Sal (ppt) | Conductivity µS/cm | DO (mg/l) | % DO | pH |
|---|---|---|---|---|---|---|
| 0.2 | 22.0 | 3.42 | 6.18 | 9.6 | 126.7 | 8.73 |
| 0.3 | 22.0 | 2.56 | 4.68 | 11.2 | 129.3 | 8.73 |
| 1.7 | 22.0 | 25.44 | 39.80 | 10.9 | 144.3 | 8.73 |
| 2.2 | 22.0 | 25.43 | 39.81 | 11.5 | 151.8 | 8.73 |
| 2.5 | 21.9 | 25.56 | 39.99 | 11.6 | 153.5 | 8.73 |
| 3.9 | 22.0 | 25.73 | 40.23 | 13.1 | 173.5 | 8.72 |
| 5.2 | 22.2 | 26.54 | 41.35 | 16.7 | 200.0 | 8.65 |
| 6.2 | 22.8 | 29.45 | 45.39 | 16.8 | 200.0 | 8.51 |
| 7.2 | 23.1 | 30.94 | 47.43 | 16.6 | 200.0 | 8.43 |
| 7.3 | 23.0 | 30.93 | 47.42 | 15.2 | 200.0 | 8.43 |
| 7.3 | 23.1 | 30.70 | 47.10 | 14.2 | 198.8 | 8.43 |
| 8.7 | 22.9 | 31.45 | 48.13 | 8.3 | 115.6 | 8.37 |
| 9.6 | 22.9 | 31.51 | 48.22 | 9.2 | 128.3 | 8.32 |
| 10.4 | 23.2 | 31.63 | 48.38 | 5.9 | 83.3 | 8.17 |

Table 73. Water quality data for the LOOP - Brine Station 474, November 2001.

| Depth (m) | Temp (°C) | Sal (ppt) | Conductivity µS/cm | DO (mg/l) | % DO | pH |
|---|---|---|---|---|---|---|
| 0.4 | 22.0 | 25.51 | 39.92 | 10.4 | 138.0 | - |
| 1.2 | 22.0 | 25.51 | 39.91 | 10.3 | 136.5 | - |
| 2.5 | 21.9 | 25.51 | 39.92 | 11.9 | 157.1 | - |
| 3.9 | 21.9 | 25.67 | 40.14 | 16.1 | 200.0 | - |
| 5.1 | 22.2 | 26.21 | 40.90 | 18.6 | 200.0 | - |
| 5.4 | 22.4 | 28.35 | 43.87 | 17.6 | 200.0 | - |
| 6.0 | 22.9 | 29.37 | 45.28 | 16.7 | 200.0 | - |
| 6.3 | 23.0 | 30.28 | 46.53 | 14.6 | 200.0 | - |
| 7.2 | 23.1 | 30.50 | 46.83 | 12.6 | 175.1 | - |
| 8.9 | 22.9 | 31.74 | 48.53 | 8.4 | 118.0 | - |
| 10.1 | 23.2 | 32.04 | 48.93 | 6.1 | 86.0 | - |

Table 74. Water quality data for the LOOP - Brine Station 475, November 2001.

| Depth (m) | Temp (°C) | Sal (ppt) | Conductivity µS/cm | DO (mg/l) | % DO | pH |
|---|---|---|---|---|---|---|
| 0.4 | 21.9 | 25.47 | 39.87 | 10.3 | 136.7 | 8.72 |
| 1.5 | 21.9 | 25.48 | 39.87 | 12.0 | 159.4 | 8.72 |
| 3.3 | 21.9 | 25.63 | 40.09 | 12.1 | 159.7 | 8.72 |
| 4.3 | 21.9 | 25.81 | 40.34 | 14.3 | 189.7 | 8.70 |
| 4.6 | 22.3 | 26.64 | 41.51 | 11.3 | 152.0 | 8.66 |
| 5.0 | 22.2 | 26.05 | 40.67 | 11.6 | 154.3 | 8.67 |
| 5.6 | 22.5 | 26.73 | 41.62 | 12.8 | 173.2 | 8.57 |
| 5.7 | 22.8 | 29.38 | 45.29 | 13.1 | 180.0 | 8.52 |
| 5.8 | 22.7 | 29.28 | 45.16 | 10.8 | 147.3 | 8.54 |
| 6.1 | 23.0 | 30.61 | 46.98 | 9.5 | 132.7 | 8.46 |
| 6.2 | 23.0 | 30.28 | 46.53 | 11.1 | 154.5 | 8.46 |
| 7.4 | 22.9 | 30.75 | 47.17 | 10.0 | 139.0 | 8.44 |
| 7.6 | 22.8 | 30.96 | 47.46 | 8.7 | 121.3 | 8.41 |
| 8.4 | 22.9 | 31.68 | 48.44 | 7.8 | 108.8 | 8.38 |
| 8.6 | 22.9 | 31.17 | 47.74 | 9.9 | 138.2 | 8.40 |
| 9.7 | 23.0 | 31.74 | 48.53 | 6.1 | 85.0 | 8.29 |
| 9.9 | 23.2 | 32.01 | 48.89 | 8.3 | 116.2 | 8.27 |
| 10.0 | 23.1 | 31.79 | 48.59 | 4.8 | 66.9 | 8.24 |

Table 75. Environmental data for the LOOP - Brine stations, June 2002.

| Station | Barometric Pressure (mm of Hg) | Air Temperature (°C) | Wind Speed (kts) | Wind Direction | Cloud Cover % | Wave Height (m) | Secchi Depth (m) |
|---|---|---|---|---|---|---|---|
| **435** | 29.94 | 33 | 5 | E | 10 | 0.25 | 1 |
| **473** | 29.96 | 32 | 5 | E | 10 | 0.25 | 1.2 |
| **474** | 29.92 | 32 | 4 | E | 10 | 0.25 | 1 |
| **475** | 29.97 | 32 | 6 | E | 10 | 0.25 | 1 |

Table 76. Water quality data for the LOOP - Brine Station 435, June 2002.

| Depth (m) | Temp (°C) | Sal (ppt) | Conductivity µS/cm | DO (mg/l) | % DO | pH |
|---|---|---|---|---|---|---|
| 0.7 | 30.6 | 11.46 | 19.33 | 11.3 | 161.8 | 8.78 |
| 1.9 | 28.6 | 16.43 | 26.86 | 8.9 | 126.5 | 8.45 |
| 2.9 | 26.2 | 22.72 | 35.98 | 5.1 | 72.6 | 7.99 |
| 4.9 | 26.5 | 31.89 | 48.60 | 6.0 | 90.7 | 8.05 |
| 6.4 | 26.5 | 33.07 | 50.34 | 4.7 | 71.5 | 7.98 |
| 7.7 | 25.9 | 34.65 | 52.48 | 3.1 | 47.0 | 7.87 |
| 9.5 | 24.9 | 35.17 | 53.17 | 1.4 | 21.4 | 7.74 |
| 10.1 | 24.9 | 35.17 | 53.18 | 1.5 | 22.5 | 7.73 |

Table 77. Water quality data for the LOOP - Brine Station 473, June 2002.

| Depth (m) | Temp (°C) | Sal (ppt) | Conductivity µS/cm | DO (mg/l) | % DO | pH |
|---|---|---|---|---|---|---|
| 0.4 | 29.5 | 13.78 | 22.89 | 11.6 | 165.2 | 8.75 |
| 2.1 | 27.3 | 17.60 | 28.59 | 6.1 | 86.0 | 8.33 |
| 3.8 | 26.4 | 28.15 | 43.60 | 5.8 | 85.4 | 8.08 |
| 5.3 | 26.6 | 31.95 | 48.81 | 5.0 | 75.5 | 8.03 |
| 6.5 | 26.2 | 33.63 | 51.10 | 3.7 | 56.7 | 7.96 |
| 8.0 | 25.2 | 34.37 | 52.11 | 1.6 | 23.8 | 7.78 |
| 9.2 | 24.9 | 34.93 | 52.86 | 1.1 | 16.0 | 7.72 |
| 10.4 | 24.8 | 35.31 | 53.36 | 1.2 | 18.1 | 7.72 |

Table 78. Water quality data for the LOOP - Brine Station 474, June 2002.

| Depth (m) | Temp (°C) | Sal (ppt) | Conductivity µS/cm | DO (mg/l) | % DO | pH |
|---|---|---|---|---|---|---|
| 0.3 | 30.5 | 10.98 | 18.58 | 9.9 | 140.8 | 8.72 |
| 0.6 | 29.1 | 15.10 | 24.88 | 8.7 | 124.3 | 8.58 |
| 2.7 | 26.2 | 22.89 | 36.23 | 5.0 | 71.3 | 8.11 |
| 4.6 | 26.5 | 30.44 | 46.74 | 5.8 | 87.2 | 8.10 |
| 6.0 | 26.5 | 32.84 | 50.19 | 4.5 | 68.7 | 8.01 |
| 7.4 | 25.4 | 33.94 | 51.52 | 2.5 | 37.8 | 7.86 |
| 8.9 | 24.9 | 34.66 | 52.49 | 1.5 | 22.2 | 7.79 |
| 10.5 | 24.8 | 35.33 | 53.40 | 1.3 | 19.7 | 7.76 |

Table 79. Water quality data for the LOOP - Brine Station 475, June 2002.

| Depth (m) | Temp (°C) | Sal (ppt) | Conductivity µS/cm | DO (mg/l) | % DO | pH |
|---|---|---|---|---|---|---|
| 0.4 | 29.8 | 12.39 | 20.77 | 9.8 | 141.7 | 8.66 |
| 1.1 | 28.8 | 16.34 | 26.74 | 8.8 | 125.9 | 8.56 |
| 2.8 | 26.2 | 21.69 | 34.52 | 4.9 | 69.8 | 8.30 |
| 4.1 | 26.5 | 30.47 | 46.78 | 5.8 | 86.1 | 8.10 |
| 5.6 | 26.6 | 32.03 | 48.92 | 5.1 | 76.6 | 8.04 |
| 6.8 | 25.9 | 33.71 | 51.20 | 2.7 | 41.1 | 7.93 |
| 8.8 | 24.9 | 34.69 | 52.54 | 1.0 | 15.5 | 7.74 |
| 10.1 | 24.8 | 35.26 | 53.30 | 1.2 | 18.3 | 7.74 |

Table 80. Summary of overall abundance of major benthic macroinfauna taxonomic groups for the LOOP - Brine stations, August 2001.

| Taxa | Total No. Taxa | % Total | Total No. Individuals | % Total |
|---|---|---|---|---|
| **Annelida** | | | | |
| **Polychaeta** | 16 | 57.1 | 1,458 | 93.9 |
| **Mollusca** | | | | |
| **Gastropoda** | 7 | 25.0 | 83 | 5.3 |
| **Arthropoda** | | | | |
| **Malacostraca** | 1 | 3.6 | 2 | 0.1 |
| **Other Taxa** | 4 | 14.3 | 10 | 0.6 |
| **Total** | **28** | | **1,553** | |

Table 81. Summary of abundance of major benthic macroinfauna taxonomic groups by station for the LOOP - Brine stations, August 2001.

| Station | Taxa | No. of Taxa | % of Total | No. of Individuals | % of Total |
|---|---|---|---|---|---|
| **435** | Annelida | 11 | 61.1 | 327 | 90.3 |
| | Mollusca | 5 | 27.8 | 32 | 8.8 |
| | Cnidaria | 1 | 5.6 | 2 | 0.6 |
| | Other Taxa | 1 | 5.6 | 1 | 0.3 |
| | **Total** | **18** | | **362** | |
| **473** | Annelida | 9 | 56.3 | 260 | 91.9 |
| | Mollusca | 4 | 25.0 | 18 | 6.4 |
| | Arthropoda | 1 | 6.3 | 1 | 0.4 |
| | Other Taxa | 2 | 12.5 | 4 | 1.4 |
| | **Total** | **16** | | **283** | |
| **474** | Annelida | 10 | 66.7 | 530 | 96.4 |
| | Mollusca | 4 | 26.7 | 19 | 3.5 |
| | Arthropoda | 0 | 0.0 | 0 | 0.0 |
| | Other Taxa | 1 | 6.7 | 1 | 0.2 |
| | **Total** | **15** | | **550** | |
| **475** | Annelida | 12 | 75.0 | 341 | 95.3 |
| | Mollusca | 1 | 6.3 | 14 | 3.9 |
| | Arthropoda | 1 | 6.3 | 1 | 0.3 |
| | Other Taxa | 2 | 12.5 | 2 | 0.6 |
| | **Total** | **16** | | **358** | |

Table 82. Distribution and abundance of families for the LOOP - Brine stations, August 2001.

| Taxon Name | Phylum | Class | No. of Individuals | % of Total | Cumulative % | Station Occurrence | Station % Occurrence |
|---|---|---|---|---|---|---|---|
| Spionidae | Ann | Poly | 1039 | 66.90 | 66.90 | 4 | 100 |
| Magelonidae | Ann | Poly | 324 | 20.86 | 87.77 | 4 | 100 |
| Nassariidae | Mol | Gast | 73 | 4.70 | 92.47 | 4 | 100 |
| Pilargiidae | Ann | Poly | 51 | 3.28 | 95.75 | 4 | 100 |
| Nereidae | Ann | Poly | 15 | 0.97 | 96.72 | 4 | 100 |
| Cossuridae | Ann | Poly | 10 | 0.64 | 97.36 | 4 | 100 |
| Other Taxa | – | – | 10 | 0.64 | 98.00 | 4 | 100 |
| Goniadidae | Ann | Poly | 8 | 0.52 | 98.52 | 3 | 75 |
| Amphinomidae | Ann | Poly | 5 | 0.32 | 98.84 | 4 | 100 |
| Polynoidae | Ann | Poly | 4 | 0.26 | 99.10 | 3 | 75 |
| Naticidae | Mol | Gast | 3 | 0.19 | 99.29 | 3 | 75 |
| Vitrinellidae | Mol | Gast | 3 | 0.19 | 99.48 | 2 | 50 |
| Calyptraeidae | Mol | Gast | 2 | 0.13 | 99.61 | 2 | 50 |
| Phyllodocidae | Ann | Poly | 2 | 0.13 | 99.74 | 2 | 50 |
| Pinnotheridae | Art | Mala | 2 | 0.13 | 99.87 | 2 | 50 |
| Lineidae | Rhy | Anop | 1 | 0.06 | 99.94 | 1 | 25 |
| Pyramidellidae | Mol | Gast | 1 | 0.06 | 100.00 | 1 | 25 |

**Taxa Key**

Ann = Annelida
Poly = Polychaeta

Art = Arthropoda
Mala = Malacostraca

Mol = Mollusca
Gast = Gastropoda

Table 83. Percentage abundance of dominant families (>10% of the total) for the LOOP - Brine stations, August 2001.

| Taxa | 435 | 473 | 474 | 475 |
|---|---|---|---|---|
| **Annelida** | | | | |
| Polychaeta | | | | |
| Magelonidae | | 30.4 | 16.9 | 37.7 |
| Spionidae | 80.7 | 56.9 | 72.9 | 51.7 |

Table 84. Distribution and abundance of taxa for the LOOP - Brine stations, August 2001.

| Taxon Name | Phylum | Class | No. of Individuals | % Total | Cumulative % | Station Occurrence | Station % Occurrence |
|---|---|---|---|---|---|---|---|
| *Paraprionospio pinnata* | Ann | Poly | 1039 | 66.90 | 66.90 | 4 | 100 |
| *Magelona* sp. H | Ann | Poly | 324 | 20.86 | 87.77 | 4 | 100 |
| *Nassarius acutus* | Mol | Gast | 73 | 4.70 | 92.47 | 4 | 100 |
| *Sigambra tentaculata* | Ann | Poly | 32 | 2.06 | 94.53 | 4 | 100 |
| *Ancistrosyllis jonesi* | Ann | Poly | 14 | 0.90 | 95.43 | 4 | 100 |
| *Laeonereis culveri* | Ann | Poly | 10 | 0.64 | 96.07 | 3 | 75 |
| *Cossura delta* | Ann | Poly | 8 | 0.52 | 96.59 | 3 | 75 |
| *Glycinde solitaria* | Ann | Poly | 7 | 0.45 | 97.04 | 2 | 50 |
| Actiniaria (LPIL) | Cni | Anth | 5 | 0.32 | 97.36 | 3 | 75 |
| Nereididae (LPIL) | Ann | Poly | 5 | 0.32 | 97.68 | 3 | 75 |
| *Paramphinome* sp. B | Ann | Poly | 5 | 0.32 | 98.00 | 4 | 100 |
| *Sigambra* (LPIL) | Ann | Poly | 4 | 0.26 | 98.26 | 2 | 50 |
| Polynoidae (LPIL) | Ann | Poly | 3 | 0.19 | 98.45 | 3 | 75 |
| Rhynchocoela (LPIL) | Rhy | – | 3 | 0.19 | 98.65 | 2 | 50 |
| *Tectonatica pusilla* | Mol | Gast | 3 | 0.19 | 98.84 | 3 | 75 |
| Calyptraeidae (LPIL) | Mol | Gast | 2 | 0.13 | 98.97 | 2 | 50 |
| *Cossura* (LPIL) | Ann | Poly | 2 | 0.13 | 99.10 | 1 | 25 |
| *Phyllodoce arenae* | Ann | Poly | 2 | 0.13 | 99.23 | 2 | 50 |
| *Pinnixa* (LPIL) | Art | Mala | 2 | 0.13 | 99.36 | 2 | 50 |
| Vitrinellidae (LPIL) | Mol | Gast | 2 | 0.13 | 99.48 | 2 | 50 |
| Gastropoda (LPIL) | Mol | Gast | 1 | 0.06 | 99.55 | 1 | 25 |
| *Lepidasthenia varia* | Ann | Poly | 1 | 0.06 | 99.61 | 1 | 25 |
| Lineidae (LPIL) | Rhy | Anop | 1 | 0.06 | 99.68 | 1 | 25 |
| *Ophioglycera* sp. A | Ann | Poly | 1 | 0.06 | 99.74 | 1 | 25 |
| Pyramidellidae (LPIL) | Mol | Gast | 1 | 0.06 | 99.81 | 1 | 25 |
| *Sigambra grubii* | Ann | Poly | 1 | 0.06 | 99.87 | 1 | 25 |
| Turbellaria (LPIL) | Pla | Turb | 1 | 0.06 | 99.94 | 1 | 25 |
| *Vitrinella helicoidea* | Mol | Gast | 1 | 0.06 | 100.00 | 1 | 25 |

**Taxa Key**

Ann = Annelida
Poly = Polychaeta

Cni = Cnidaria
Anth = Anthozoa

Pla = Platyhelminthes
Turb = Turbellaria

Art = Arthropoda
Mala = Malacostraca

Mol = Mollusca
Gast = Gastropoda

Rhy = Rhynchocoela
Anop = Anopla

Table 85. Percentage abundance of dominant taxa (10% of the total) for the LOOP - Brine stations, August 2001.

| **Taxa** | **435** | **473** | **474** | **475** |
|---|---|---|---|---|
| **Annelida** | | | | |
| Polychaeta | | | | |
| *Magelona* sp. H | | 30.4 | 16.9 | 37.7 |
| *Paraprionospio pinnata* | 80.7 | 56.9 | 72.9 | 51.7 |

Table 86. Summary of benthic macroinfaunal data for the LOOP - Brine stations, August 2001.

| Station | Rep | Taxa | Indvs | Density | Mean No. Taxa | Taxa (SD) | Mean Density | Density (SD) | Total No Taxa | Total No. Individuals | H' Diversity | J' Evenness |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **435** | A | 4 | 54 | 540 | 6.5 | 2.4 | 603.3 | 427.9 | 18 | 362 | 0.89 | 0.31 |
| | B | 9 | 138 | 1380 | | | | | | | | |
| | C | 6 | 53 | 530 | | | | | | | | |
| | D | 5 | 71 | 710 | | | | | | | | |
| | E | 5 | 31 | 310 | | | | | | | | |
| | F | 10 | 15 | 150 | | | | | | | | |
| **473** | A | 6 | 78 | 780 | 5.7 | 2.4 | 471.7 | 364.5 | 16 | 283 | 1.21 | 0.44 |
| | B | 6 | 21 | 210 | | | | | | | | |
| | C | 5 | 11 | 110 | | | | | | | | |
| | D | 4 | 50 | 500 | | | | | | | | |
| | E | 10 | 102 | 1020 | | | | | | | | |
| | F | 3 | 21 | 210 | | | | | | | | |
| **474** | A | 5 | 64 | 640 | 6.5 | 1.5 | 916.7 | 414.2 | 15 | 550 | 0.96 | 0.36 |
| | B | 5 | 74 | 740 | | | | | | | | |
| | C | 7 | 134 | 1340 | | | | | | | | |
| | D | 6 | 33 | 330 | | | | | | | | |
| | E | 7 | 109 | 1090 | | | | | | | | |
| | F | 9 | 136 | 1360 | | | | | | | | |
| **475** | A | 3 | 6 | 60 | 6.2 | 2.1 | 596.7 | 334.2 | 16 | 358 | 1.17 | 0.42 |
| | B | 5 | 40 | 400 | | | | | | | | |
| | C | 6 | 75 | 750 | | | | | | | | |
| | D | 8 | 104 | 1040 | | | | | | | | |
| | E | 6 | 70 | 700 | | | | | | | | |
| | F | 9 | 63 | 630 | | | | | | | | |

Table 87. Summary of overall abundance of major benthic macroinfauna taxonomic groups for the LOOP - Brine stations, November 2001.

| Taxa | Total No. Taxa | % Total | Total No. Individuals | % Total |
|---|---|---|---|---|
| **Annelida** | | | | |
| Polychaeta | 44 | 47.3 | 2,793 | 69.0 |
| **Mollusca** | | | | |
| Bivalvia | 13 | 14.0 | 413 | 10.2 |
| Gastropoda | 13 | 14.0 | 242 | 6.0 |
| **Arthropoda** | | | | |
| Malacostraca | 11 | 11.8 | 125 | 3.1 |
| **Echinodermata** | | | | |
| Ophiuroidea | 1 | 1.1 | 10 | 0.2 |
| **Rhynchocoela** | | | | |
| Anopla | 2 | 2.2 | 312 | 7.7 |
| Rhynchocoela (LPIL) | 1 | 1.1 | 65 | 1.6 |
| **Other Taxa** | 8 | 8.6 | 88 | 2.2 |
| **Total** | **93** | | **4,048** | |

Table 88. Summary of abundance of major benthic macroinfauna taxonomic groups by station for the LOOP - Brine stations, November 2001.

| Station | Taxa | No. of Taxa | % of Total | No. of Individuals | % of Total |
|---|---|---|---|---|---|
| **435** | Annelida | 34 | 51.5 | 901 | 71.7 |
| | Mollusca | 19 | 28.8 | 152 | 12.1 |
| | Arthropoda | 3 | 4.5 | 18 | 1.4 |
| | Echinodermata | 1 | 1.5 | 9 | 0.7 |
| | Rhynchocoela | 3 | 4.5 | 139 | 11.1 |
| | Other Taxa | 6 | 9.1 | 37 | 2.9 |
| | **Total** | **66** | | **1,256** | |
| **473** | Annelida | 24 | 50.0 | 645 | 76.1 |
| | Mollusca | 14 | 29.2 | 105 | 12.4 |
| | Arthropoda | 4 | 8.3 | 18 | 2.1 |
| | Echinodermata | 1 | 2.1 | 1 | 0.1 |
| | Rhynchocoela | 3 | 6.3 | 69 | 8.1 |
| | Other Taxa | 2 | 4.2 | 10 | 1.2 |
| | **Total** | **48** | | **848** | |
| **474** | Annelida | 28 | 50.0 | 741 | 59.2 |
| | Mollusca | 15 | 26.8 | 328 | 26.2 |
| | Arthropoda | 8 | 14.3 | 59 | 4.7 |
| | Echinodermata | 0 | 0.0 | 0 | 0.0 |
| | Rhynchocoela | 3 | 5.4 | 117 | 9.3 |
| | Other Taxa | 2 | 3.6 | 7 | 0.6 |
| | **Total** | **56** | | **1,252** | |
| **475** | Annelida | 29 | 55.8 | 506 | 73.1 |
| | Mollusca | 10 | 19.2 | 70 | 10.1 |
| | Arthropoda | 6 | 11.5 | 30 | 4.3 |
| | Echinodermata | 0 | 0.0 | 0 | 0.0 |
| | Rhynchocoela | 3 | 5.8 | 52 | 7.5 |
| | Other Taxa | 4 | 7.7 | 34 | 4.9 |
| | **Total** | **52** | | **692** | |

Table 89. Distribution and abundance of families for the LOOP - Brine stations, November 2001.

| Family | Phylum | Class | Total No. Individuals | % of Total | Cumulative % | Station Occurrence | % Station Occurrence |
|---|---|---|---|---|---|---|---|
| Spionidae | Ann | Poly | 1027 | 25.37 | 25.37 | 4 | 100 |
| Capitellidae | Ann | Poly | 481 | 11.88 | 37.25 | 4 | 100 |
| Pilargiidae | Ann | Poly | 477 | 11.78 | 49.04 | 4 | 100 |
| Magelonidae | Ann | Poly | 274 | 6.77 | 55.81 | 4 | 100 |
| Other Taxa | Art | Mala | 273 | 6.74 | 62.55 | 4 | 100 |
| Tubulanidae | Rhy | Anop | 231 | 5.71 | 68.26 | 4 | 100 |
| Semelidae | Mol | Biva | 172 | 4.25 | 72.50 | 4 | 100 |
| Ampharetidae | Ann | Poly | 105 | 2.59 | 75.10 | 4 | 100 |
| Diastylidae | Art | Mala | 101 | 2.50 | 77.59 | 4 | 100 |
| Sigalionidae | Ann | Poly | 101 | 2.50 | 80.09 | 4 | 100 |
| Nassariidae | Mol | Gast | 87 | 2.15 | 82.24 | 4 | 100 |
| Lineidae | Rhy | Anop | 81 | 2.00 | 84.24 | 4 | 100 |
| Scaphandridae | Mol | Gast | 76 | 1.88 | 86.12 | 4 | 100 |
| Ptychoderidae | Hem | Ente | 71 | 1.75 | 87.87 | 4 | 100 |
| Opheliidae | Ann | Poly | 62 | 1.53 | 89.40 | 4 | 100 |
| Amphinomidae | Ann | Poly | 58 | 1.43 | 90.83 | 2 | 50 |
| Goniadidae | Ann | Poly | 58 | 1.43 | 92.27 | 4 | 100 |
| Hesionidae | Ann | Poly | 56 | 1.38 | 93.65 | 4 | 100 |
| Mactridae | Mol | Biva | 46 | 1.14 | 94.79 | 4 | 100 |
| Vitrinellidae | Mol | Gast | 30 | 0.74 | 95.53 | 4 | 100 |
| Nereidae | Ann | Poly | 29 | 0.72 | 96.25 | 4 | 100 |
| Pyramidellidae | Mol | Gast | 27 | 0.67 | 96.91 | 4 | 100 |
| Cossuridae | Ann | Poly | 21 | 0.52 | 97.43 | 4 | 100 |
| Phyllodocidae | Ann | Poly | 19 | 0.47 | 97.90 | 4 | 100 |
| Pinnotheridae | Art | Mala | 13 | 0.32 | 98.22 | 3 | 75 |
| Naticidae | Mol | Gast | 12 | 0.30 | 98.52 | 3 | 75 |
| Tellinidae | Mol | Biva | 12 | 0.30 | 98.81 | 3 | 75 |
| Oweniidae | Ann | Poly | 11 | 0.27 | 99.09 | 4 | 100 |
| Chaetopteridae | Ann | Poly | 6 | 0.15 | 99.23 | 3 | 75 |
| Arcidae | Mol | Biva | 5 | 0.12 | 99.36 | 2 | 50 |
| Paguridae | Art | Mala | 4 | 0.10 | 99.46 | 2 | 50 |
| Nuculanidae | Mol | Biva | 3 | 0.07 | 99.53 | 2 | 50 |
| Onuphidae | Ann | Poly | 3 | 0.07 | 99.60 | 2 | 50 |
| Polynoidae | Ann | Poly | 3 | 0.07 | 99.68 | 2 | 50 |
| Aspidosiphonidae | Sip | - | 1 | 0.02 | 99.70 | 1 | 25 |
| Epitoniidae | Mol | Gast | 1 | 0.02 | 99.73 | 1 | 25 |
| Glyceridae | Ann | Poly | 1 | 0.02 | 99.75 | 1 | 25 |
| Melitidae | Art | Mala | 1 | 0.02 | 99.78 | 1 | 25 |
| Paraonidae | Ann | Poly | 1 | 0.02 | 99.80 | 1 | 25 |
| Penaeidae | Art | Mala | 1 | 0.02 | 99.83 | 1 | 25 |
| Philinidae | Mol | Gast | 1 | 0.02 | 99.85 | 1 | 25 |
| Phoronidae | Pho | - | 1 | 0.02 | 99.88 | 1 | 25 |
| Processidae | Art | Mala | 1 | 0.02 | 99.90 | 1 | 25 |
| Sipunculidae | Sip | - | 1 | 0.02 | 99.93 | 1 | 25 |
| Solenidae | Mol | Biva | 1 | 0.02 | 99.95 | 1 | 25 |
| Turridae | Mol | Gast | 1 | 0.02 | 99.98 | 1 | 25 |
| Veneridae | Mol | Biva | 1 | 0.02 | 100.00 | 1 | 25 |

**Taxa Key**

Ann = Annelida
Poly = Polychaeta

Art = Arthropoda
Mala = Malacostraca

Hem = Hemichordata
Ente = Enteropneusta

Mol = Mollusca
Biva = Bivalvia
Gast = Gastropoda

Pho = Phoronida

Rhy = Rhynchocoela
Anop = Anopla

Sip = Sipuncula

Table 90. Percentage abundance of dominant families (>10% of the total) for LOOP - Brine stations, November 2001.

| Taxa | 435 | 473 | 474 | 475 |
|---|---|---|---|---|
| **Annelida** | | | | |
| Polychaeta | | | | |
| Capitellidae | 11.9 | | 16.9 | |
| Magelonidae | | | | 12.4 |
| Pilargiidae | 14.3 | 16.7 | | |
| Spionidae | 20.8 | 34.6 | 23.0 | 26.7 |

Table 91. Distribution and abundance of taxa for the LOOP - Brine stations, November 2001.

| Taxon Name | Phylum | Class | Total No. Individuals | % of Total | Cumulative % | Station Occurrence | % Station Occurrence |
|---|---|---|---|---|---|---|---|
| *Paraprionospio pinnata* | Ann | Poly | 937 | 23.15 | 23.15 | 4 | 100 |
| *Mediomastus* (LPIL) | Ann | Poly | 470 | 11.61 | 34.76 | 4 | 100 |
| *Sigambra tentaculata* | Ann | Poly | 335 | 8.28 | 43.03 | 4 | 100 |
| *Magelona* sp. H | Ann | Poly | 272 | 6.72 | 49.75 | 4 | 100 |
| *Tubulanus* (LPIL) | Rhy | Anop | 231 | 5.71 | 55.46 | 4 | 100 |
| Bivalvia (LPIL) | Mol | Biva | 173 | 4.27 | 59.73 | 4 | 100 |
| *Ancistrosyllis jonesi* | Ann | Poly | 120 | 2.96 | 62.70 | 4 | 100 |
| *Sthenelais* sp. A | Ann | Poly | 101 | 2.50 | 65.19 | 4 | 100 |
| Ampharetidae (LPIL) | Ann | Poly | 95 | 2.35 | 67.54 | 4 | 100 |
| *Nassarius acutus* | Mol | Gast | 87 | 2.15 | 69.69 | 4 | 100 |
| *Abra* (LPIL) | Mol | Biva | 83 | 2.05 | 71.74 | 1 | 25 |
| Lineidae (LPIL) | Rhy | Anop | 81 | 2.00 | 73.74 | 4 | 100 |
| *Acteocina bidentata* | Mol | Gast | 76 | 1.88 | 75.62 | 4 | 100 |
| *Balanoglossus* (LPIL) | Hem | Ente | 71 | 1.75 | 77.37 | 4 | 100 |
| Rhynchocoela (LPIL) | Rhy | - | 65 | 1.61 | 78.98 | 4 | 100 |
| *Armandia maculata* | Ann | Poly | 61 | 1.51 | 80.48 | 4 | 100 |
| *Paramphinome* sp. B | Ann | Poly | 58 | 1.43 | 81.92 | 2 | 50 |
| *Glycinde solitaria* | Ann | Poly | 56 | 1.38 | 83.30 | 4 | 100 |
| *Oxyurostylis* (LPIL) | Art | Mala | 51 | 1.26 | 84.56 | 4 | 100 |
| *Prionospio* (LPIL) | Ann | Poly | 51 | 1.26 | 85.82 | 4 | 100 |
| *Oxyurostylis lecroyae* | Art | Mala | 50 | 1.24 | 87.06 | 4 | 100 |
| *Podarkeopsis levifuscina* | Ann | Poly | 46 | 1.14 | 88.19 | 4 | 100 |
| Semelidae (LPIL) | Mol | Biva | 45 | 1.11 | 89.30 | 2 | 50 |
| *Abra aequalis* | Mol | Biva | 44 | 1.09 | 90.39 | 4 | 100 |
| Mactridae (LPIL) | Mol | Biva | 42 | 1.04 | 91.43 | 4 | 100 |
| *Nereis micromma* | Ann | Poly | 27 | 0.67 | 92.09 | 4 | 100 |
| Spionidae (LPIL) | Ann | Poly | 26 | 0.64 | 92.74 | 3 | 75 |
| *Cossura delta* | Ann | Poly | 21 | 0.52 | 93.26 | 4 | 100 |
| *Odostomia weberi* | Mol | Gast | 17 | 0.42 | 93.68 | 4 | 100 |
| *Vitrinella helicoidea* | Mol | Gast | 16 | 0.40 | 94.07 | 3 | 75 |
| *Prionospio perkinsi* | Ann | Poly | 13 | 0.32 | 94.39 | 2 | 50 |
| *Phyllodoce arenae* | Ann | Poly | 12 | 0.30 | 94.69 | 4 | 100 |
| *Tectonatica pusilla* | Mol | Gast | 12 | 0.30 | 94.99 | 3 | 75 |
| *Tellina* (LPIL) | Mol | Biva | 11 | 0.27 | 95.26 | 3 | 75 |
| Vitrinellidae (LPIL) | Mol | Gast | 11 | 0.27 | 95.53 | 2 | 50 |
| Ophiuroidea (LPIL) | Ech | Ophi | 10 | 0.25 | 95.78 | 2 | 50 |
| *Pinnixa* (LPIL) | Art | Mala | 10 | 0.25 | 96.02 | 3 | 75 |
| Turbellaria (LPIL) | Pla | Turb | 9 | 0.22 | 96.25 | 3 | 75 |
| Gastropoda (LPIL) | Mol | Gast | 7 | 0.17 | 96.42 | 2 | 50 |
| *Owenia fusiformis* | Ann | Poly | 7 | 0.17 | 96.59 | 4 | 100 |
| *Phyllodoce* (LPIL) | Ann | Poly | 7 | 0.17 | 96.76 | 4 | 100 |
| Genus C Hesionidae Genus C | Ann | Poly | 6 | 0.15 | 96.91 | 1 | 25 |
| *Hobsonia florida* | Ann | Poly | 6 | 0.15 | 97.06 | 1 | 25 |
| *Mediomastus californiensis* | Ann | Poly | 6 | 0.15 | 97.21 | 2 | 50 |
| *Sigambra* (LPIL) | Ann | Poly | 6 | 0.15 | 97.36 | 4 | 100 |
| *Sigambra pettiboneae* | Ann | Poly | 6 | 0.15 | 97.50 | 3 | 75 |
| *Spiochaetopterus oculatus* | Ann | Poly | 6 | 0.15 | 97.65 | 3 | 75 |
| *Turbonilla* (LPIL) | Mol | Gast | 6 | 0.15 | 97.80 | 3 | 75 |
| *Mediomastus ambiseta* | Ann | Poly | 5 | 0.12 | 97.92 | 1 | 25 |
| *Sigambra grubii* | Ann | Poly | 5 | 0.12 | 98.05 | 4 | 100 |
| Arcidae (LPIL) | Mol | Biva | 4 | 0.10 | 98.15 | 2 | 50 |
| *Galathowenia oculata* | Ann | Poly | 4 | 0.10 | 98.25 | 2 | 50 |
| *Mulinia lateralis* | Mol | Biva | 4 | 0.10 | 98.34 | 2 | 50 |
| *Odostomia* (LPIL) | Mol | Gast | 4 | 0.10 | 98.44 | 1 | 25 |
| *Pagurus* (LPIL) | Art | Mala | 4 | 0.10 | 98.54 | 2 | 50 |
| *Sigambra wassi* | Ann | Poly | 4 | 0.10 | 98.64 | 3 | 75 |
| Actiniaria (LPIL) | Cni | Anth | 3 | 0.07 | 98.72 | 2 | 50 |
| *Amphicteis gunneri* | Ann | Poly | 3 | 0.07 | 98.79 | 2 | 50 |
| *Cyclostremiscus pentagonus* | Mol | Gast | 3 | 0.07 | 98.86 | 1 | 25 |

Table 91 continued:

| Taxon Name | Phylum | Class | Total No. Individuals | % of Total | Cumulative % | Station Occurrence | % Station Occurrence |
|---|---|---|---|---|---|---|---|
| *Diopatra cuprea* | Ann | Poly | 3 | 0.07 | 98.94 | 2 | 50 |
| Nuculanidae (LPIL) | Mol | Biva | 3 | 0.07 | 99.01 | 2 | 50 |
| Pinnotheridae (LPIL) | Art | Mala | 3 | 0.07 | 99.09 | 2 | 50 |
| Goniadidae (LPIL) | Ann | Poly | 2 | 0.05 | 99.14 | 2 | 50 |
| Hesionidae (LPIL) | Ann | Poly | 2 | 0.05 | 99.18 | 2 | 50 |
| Magelonidae (LPIL) | Ann | Poly | 2 | 0.05 | 99.23 | 1 | 25 |
| Mysidacea (LPIL) | Art | Mala | 2 | 0.05 | 99.28 | 1 | 25 |
| *Parahesione luteola* | Ann | Poly | 2 | 0.05 | 99.33 | 1 | 25 |
| Polynoidae (LPIL) | Ann | Poly | 2 | 0.05 | 99.38 | 2 | 50 |
| *Anadara transversa* | Mol | Biva | 1 | 0.02 | 99.41 | 1 | 25 |
| *Ancistrosyllis hartmanae* | Ann | Poly | 1 | 0.02 | 99.43 | 1 | 25 |
| *Aricidea* (LPIL) | Ann | Poly | 1 | 0.02 | 99.46 | 1 | 25 |
| *Asabellides oculata* | Ann | Poly | 1 | 0.02 | 99.48 | 1 | 25 |
| *Aspidosiphon albus* | Sip | - | 1 | 0.02 | 99.51 | 1 | 25 |
| Brachiopoda (LPIL) | Bra | - | 1 | 0.02 | 99.53 | 1 | 25 |
| *Chione* sp. B | Mol | Biva | 1 | 0.02 | 99.56 | 1 | 25 |
| *Cryoturris cerinella* | Mol | Gast | 1 | 0.02 | 99.58 | 1 | 25 |
| Decapoda (LPIL) | Art | Mala | 1 | 0.02 | 99.60 | 1 | 25 |
| *Ensis* (LPIL) | Mol | Biva | 1 | 0.02 | 99.63 | 1 | 25 |
| *Epitonium* (LPIL) | Mol | Gast | 1 | 0.02 | 99.65 | 1 | 25 |
| *Glycera americana* | Ann | Poly | 1 | 0.02 | 99.68 | 1 | 25 |
| *Lepidasthenia varia* | Ann | Poly | 1 | 0.02 | 99.70 | 1 | 25 |
| Melitidae (LPIL) | Art | Mala | 1 | 0.02 | 99.73 | 1 | 25 |
| *Nereis falsa* | Ann | Poly | 1 | 0.02 | 99.75 | 1 | 25 |
| *Nereis succinea* | Ann | Poly | 1 | 0.02 | 99.78 | 1 | 25 |
| Opheliidae (LPIL) | Ann | Poly | 1 | 0.02 | 99.80 | 1 | 25 |
| Penaeidae (LPIL) | Art | Mala | 1 | 0.02 | 99.83 | 1 | 25 |
| *Philine sagra* | Mol | Gast | 1 | 0.02 | 99.85 | 1 | 25 |
| *Phoronis* (LPIL) | Pho | - | 1 | 0.02 | 99.88 | 1 | 25 |
| *Processa* (LPIL) | Art | Mala | 1 | 0.02 | 99.90 | 1 | 25 |
| Sipuncula (LPIL) | Sip | - | 1 | 0.02 | 99.93 | 1 | 25 |
| *Sipunculus nudus* | Sip | - | 1 | 0.02 | 99.95 | 1 | 25 |
| Stomatopoda (LPIL) | Art | Mala | 1 | 0.02 | 99.98 | 1 | 25 |
| *Tellina versicolor* | Mol | Biva | 1 | 0.02 | 100.00 | 1 | 25 |

**Taxa Key**

Ann = Annelida
Poly = Polychaeta

Cni = Cnidaria
Anth = Anthozoa

Mol = Mollusca
Biva = Bivalvia
Gast = Gastropoda

Rhy = Rhynchocoela
Anop = Anopla

Art = Arthropoda
Mala = Malacostraca

Ech = Echinodermata
Ophi = Ophiuroidea

Pho = Phoronida

Sip = Sipuncula

Bra = Brachiopoda

Hem = Hemichordata
Ente = Enteropneusta

Pla = Platyhelminthes
Turb = Turbellaria

Table 92. Percentage abundance of dominant taxa (>10% of the total) for the LOOP - Brine stations, November 2001.

| **Taxa** | **435** | **473** | **474** | **475** |
|---|---|---|---|---|
| **Annelida** | | | | |
| Polychaeta | | | | |
| *Magelona* sp. H | | | | 12.4 |
| *Mediomastus* (LPIL) | 11.1 | | 16.8 | |
| *Paraprionospio pinnata* | 17.8 | 34.2 | 21.8 | 21.7 |
| *Sigambra tentaculata* | 10.9 | | | |

Table 93. Summary of benthic macroinfaunal data for the LOOP - Brine stations, November 2001.

| Station | Rep | Taxa | Indvs | Density | Mean No. Taxa | Taxa (SD) | Mean Density | Density (SD) | Total No. Taxa | Total No. Individuals | H' Diversity | J' Evenness |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **435** | A | 27 | 198 | 1980 | 28.8 | 4.9 | 2093.3 | 668.2 | 66 | 1256 | 3.07 | 0.73 |
| | B | 27 | 199 | 1990 | | | | | | | | |
| | C | 25 | 120 | 1200 | | | | | | | | |
| | D | 35 | 320 | 3200 | | | | | | | | |
| | E | 35 | 240 | 2400 | | | | | | | | |
| | F | 24 | 179 | 1790 | | | | | | | | |
| **473** | A | 27 | 148 | 1480 | 21.5 | 6.1 | 1413.3 | 528.5 | 48 | 848 | 2.62 | 0.68 |
| | B | 19 | 88 | 880 | | | | | | | | |
| | C | 31 | 222 | 2220 | | | | | | | | |
| | D | 17 | 112 | 1120 | | | | | | | | |
| | E | 16 | 96 | 960 | | | | | | | | |
| | F | 19 | 182 | 1820 | | | | | | | | |
| **474** | A | 30 | 230 | 2300 | 26.3 | 7.6 | 2086.7 | 1319.1 | 56 | 1252 | 2.87 | 0.71 |
| | B | 39 | 447 | 4470 | | | | | | | | |
| | C | 28 | 242 | 2420 | | | | | | | | |
| | D | 19 | 110 | 1100 | | | | | | | | |
| | E | 21 | 114 | 1140 | | | | | | | | |
| | F | 21 | 109 | 1090 | | | | | | | | |
| **475** | A | 29 | 222 | 2220 | 23.7 | 4.3 | 1153.3 | 566.4 | 52 | 692 | 2.97 | 0.75 |
| | B | 24 | 90 | 900 | | | | | | | | |
| | C | 16 | 60 | 600 | | | | | | | | |
| | D | 23 | 89 | 890 | | | | | | | | |
| | E | 24 | 104 | 1040 | | | | | | | | |
| | F | 26 | 127 | 1270 | | | | | | | | |

Table 94. Summary of overall abundance of major benthic macroinfaunal taxonomic groups for the LOOP - Brine stations, June 2002.

| Taxa | Total No. Taxa | % of Total | Total No. Individuals | % of Total |
|---|---|---|---|---|
| **Annelida** | | | | |
| Polychaeta | 53 | 46.5 | 2,754 | 72.6 |
| **Mollusca** | | | | |
| Bivalvia | 20 | 17.5 | 636 | 16.8 |
| Gastropoda | 19 | 16.7 | 115 | 3.0 |
| **Arthropoda** | | | | |
| Malacostraca | 11 | 9.6 | 43 | 1.1 |
| Ostracoda | 1 | 0.9 | 1 | 0.0 |
| **Echinodermata** | | | | |
| Ophiuroidea | 2 | 1.8 | 2 | 0.1 |
| **Other Taxa** | 8 | 7.0 | 240 | 6.3 |
| **Total** | **114** | | **3,791** | |

Table 95. Summary of abundance of major benthic macroinfaunal taxonomic groups by station for the LOOP - Brine stations, June 2002.

| Station | Taxa | No. of Taxa | % of Total | No. of Individuals | % of Total |
|---|---|---|---|---|---|
| **435** | Annelida | 30 | 39.5 | 572 | 47.6 |
| | Mollusca | 28 | 36.8 | 515 | 42.9 |
| | Arthropoda | 12 | 15.8 | 39 | 3.2 |
| | Echinodermata | 1 | 1.3 | 1 | 0.1 |
| | Other Taxa | 5 | 6.6 | 74 | 6.2 |
| | **Total** | **76** | | **1,201** | |
| **473** | Annelida | 19 | 44.2 | 477 | 84.7 |
| | Mollusca | 17 | 39.5 | 45 | 8.0 |
| | Arthropoda | 0 | 0.0 | 0 | 0.0 |
| | Echinodermata | 0 | 0.0 | 0 | 0.0 |
| | Other Taxa | 7 | 16.3 | 41 | 7.3 |
| | **Total** | **43** | | **563** | |
| **474** | Annelida | 32 | 53.3 | 991 | 84.1 |
| | Mollusca | 19 | 31.7 | 112 | 9.5 |
| | Arthropoda | 2 | 3.3 | 4 | 0.3 |
| | Echinodermata | 0 | 0.0 | 0 | 0.0 |
| | Other Taxa | 7 | 11.7 | 72 | 6.1 |
| | **Total** | **60** | | **1,179** | |
| **475** | Annelida | 29 | 54.7 | 714 | 84.2 |
| | Mollusca | 18 | 34.0 | 79 | 9.3 |
| | Arthropoda | 1 | 1.9 | 1 | 0.1 |
| | Echinodermata | 1 | 1.9 | 1 | 0.1 |
| | Other Taxa | 4 | 7.5 | 53 | 6.3 |
| | **Total** | **53** | | **848** | |

Table 96. Distribution and abundance of families for the LOOP - Brine stations, June 2002.

| Family | Phylum | Class | No. of Individuals | % of Total | Cumulative % | Station Occurrence | % Station Occurrence |
|---|---|---|---|---|---|---|---|
| Capitellidae | Ann | Poly | 1078 | 28.44 | 28.44 | 4 | 100 |
| Spionidae | Ann | Poly | 587 | 15.48 | 43.92 | 4 | 100 |
| Petricolidae | Mol | Biva | 336 | 8.86 | 52.78 | 1 | 25 |
| Magelonidae | Ann | Poly | 290 | 7.65 | 60.43 | 4 | 100 |
| Ampharetidae | Ann | Poly | 245 | 6.46 | 66.90 | 4 | 100 |
| Pilargiidae | Ann | Poly | 200 | 5.28 | 72.17 | 4 | 100 |
| Goniadidae | Ann | Poly | 179 | 4.72 | 76.89 | 4 | 100 |
| Tubulanidae | Rhy | Anop | 121 | 3.19 | 80.08 | 4 | 100 |
| Other Taxa | – | – | 104 | 2.74 | 82.83 | 4 | 100 |
| Arcidae | Mol | Biva | 72 | 1.90 | 84.73 | 3 | 75 |
| Nuculanidae | Mol | Biva | 64 | 1.69 | 86.42 | 4 | 100 |
| Amphinomidae | Ann | Poly | 59 | 1.56 | 87.97 | 4 | 100 |
| Lineidae | Rhy | Anop | 52 | 1.37 | 89.34 | 4 | 100 |
| Tellinidae | Mol | Biva | 47 | 1.24 | 90.58 | 4 | 100 |
| Nassariidae | Mol | Gast | 39 | 1.03 | 91.61 | 4 | 100 |
| Mactridae | Mol | Biva | 30 | 0.79 | 92.40 | 4 | 100 |
| Onuphidae | Ann | Poly | 27 | 0.71 | 93.12 | 3 | 75 |
| Semelidae | Mol | Biva | 26 | 0.69 | 93.80 | 3 | 75 |
| Columbellidae | Mol | Gast | 19 | 0.50 | 94.30 | 4 | 100 |
| Sigalionidae | Ann | Poly | 17 | 0.45 | 94.75 | 4 | 100 |
| Paguridae | Art | Mala | 17 | 0.45 | 95.20 | 2 | 50 |
| Pyramidellidae | Mol | Gast | 17 | 0.45 | 95.65 | 4 | 100 |
| Vitrinellidae | Mol | Gast | 15 | 0.40 | 96.04 | 4 | 100 |
| Cirratulidae | Ann | Poly | 13 | 0.34 | 96.39 | 3 | 75 |
| Veneridae | Mol | Biva | 13 | 0.34 | 96.73 | 3 | 75 |
| Hesionidae | Ann | Poly | 12 | 0.32 | 97.05 | 4 | 100 |
| Nereidae | Ann | Poly | 10 | 0.26 | 97.31 | 4 | 100 |
| Naticidae | Mol | Gast | 10 | 0.26 | 97.57 | 4 | 100 |
| Cossuridae | Ann | Poly | 8 | 0.21 | 97.78 | 3 | 75 |
| Scaphandridae | Mol | Gast | 8 | 0.21 | 98.00 | 4 | 100 |
| Pinnotheridae | Art | Mala | 6 | 0.16 | 98.15 | 2 | 50 |
| Lumbrineridae | Ann | Poly | 5 | 0.13 | 98.29 | 2 | 50 |
| Maldanidae | Ann | Poly | 5 | 0.13 | 98.42 | 1 | 25 |
| Xanthidae | Art | Mala | 5 | 0.13 | 98.55 | 1 | 25 |
| Phyllodocidae | Ann | Poly | 4 | 0.11 | 98.65 | 3 | 75 |
| Polynoidae | Ann | Poly | 4 | 0.11 | 98.76 | 3 | 75 |
| Terebellidae | Ann | Poly | 4 | 0.11 | 98.87 | 2 | 50 |
| Ptychoderidae | Hem | Ente | 4 | 0.11 | 98.97 | 1 | 25 |
| Terebridae | Mol | Gast | 4 | 0.11 | 99.08 | 2 | 50 |
| Golfingiidae | Sip | – | 4 | 0.11 | 99.18 | 3 | 75 |
| Nephtyidae | Ann | Poly | 3 | 0.08 | 99.26 | 1 | 25 |
| Diastylidae | Art | Mala | 3 | 0.08 | 99.34 | 2 | 50 |
| Isaeidae | Art | Mala | 3 | 0.08 | 99.42 | 1 | 25 |
| Mysidae | Art | Mala | 3 | 0.08 | 99.50 | 1 | 25 |
| Sergestidae | Art | Mala | 3 | 0.08 | 99.58 | 1 | 25 |
| Corbulidae | Mol | Biva | 3 | 0.08 | 99.66 | 2 | 50 |
| Oweniidae | Ann | Poly | 2 | 0.05 | 99.71 | 1 | 25 |
| Portunidae | Art | Mala | 2 | 0.05 | 99.76 | 1 | 25 |
| Phoronidae | Pho | – | 2 | 0.05 | 99.82 | 2 | 50 |

Table 96 continued:

| Family | Phylum | Class | No. of Individuals | % of Total | Cumulative % | Station Occurrence | % Station Occurrence |
|---|---|---|---|---|---|---|---|
| Chaetopteridae | Ann | Poly | 1 | 0.03 | 99.84 | 1 | 25 |
| Opheliidae | Ann | Poly | 1 | 0.03 | 99.87 | 1 | 25 |
| Liljeborgiidae | Art | Mala | 1 | 0.03 | 99.89 | 1 | 25 |
| Sarsiellidae | Art | Ostr | 1 | 0.03 | 99.92 | 1 | 25 |
| Amphiuridae | Ech | Ophi | 1 | 0.03 | 99.95 | 1 | 25 |
| Epitoniidae | Mol | Gast | 1 | 0.03 | 99.97 | 1 | 25 |
| Turridae | Mol | Gast | 1 | 0.03 | 100.00 | 1 | 25 |

**Taxa Key**

Ann = Annelida
Poly = Polychaeta
Art = Arthropoda
Mala = Malacostraca
Ostr = Ostracoda
Ech = Echinodermata
Ophi = Ophiuroidea
Hem = Hemichordata
Ente = Enteropneusta
Mol = Mollusca
Biva = Bivalvia
Gast = Gastropoda
Pho = Phoronida
Rhy = Rhynchocoela
Anop = Anopla
Sip = Sipuncula

Table 97. Percentage abundance of dominant families (>10 % of the total) for the LOOP - Brine stations, June 2002.

| Taxa | 435 | 473 | 474 | 475 |
|---|---|---|---|---|
| **Annelida** | | | | |
| Polychaeta | | | | |
| Capitellidae | | 18.3 | 45.2 | 40.3 |
| Magelonidae | | | 10.4 | |
| Spionidae | 11.8 | 41.4 | 10.3 | 10.6 |
| **Mollusca** | | | | |
| Bivalvia | | | | |
| Petricolidae | 28.0 | | | |

Table 98. Distribution and abundance of taxa for the LOOP - Brine stations, June 2002.

| Taxon Name | Phylum | Class | No. of Individuals | % of Total | Cumulative % | Station Occurrence | % Station Occurrence |
|---|---|---|---|---|---|---|---|
| *Mediomastus* (LPIL) | Ann | Poly | 1071 | 28.25 | 28.25 | 4 | 100 |
| *Paraprionospio pinnata* | Ann | Poly | 489 | 12.90 | 41.15 | 4 | 100 |
| *Petricola pholadiformis* | Mol | Biva | 336 | 8.86 | 50.01 | 1 | 25 |
| *Magelona* sp. H | Ann | Poly | 288 | 7.60 | 57.61 | 4 | 100 |
| *Asabellides oculata* | Ann | Poly | 245 | 6.46 | 64.07 | 4 | 100 |
| *Glycinde solitaria* | Ann | Poly | 179 | 4.72 | 68.79 | 4 | 100 |
| *Tubulanus* (LPIL) | Rhy | Anop | 121 | 3.19 | 71.99 | 4 | 100 |
| *Ancistrosyllis jonesi* | Ann | Poly | 118 | 3.11 | 75.10 | 4 | 100 |
| *Sigambra tentaculata* | Ann | Poly | 68 | 1.79 | 76.89 | 4 | 100 |
| *Paramphinome* sp. B | Ann | Poly | 59 | 1.56 | 78.45 | 4 | 100 |
| *Anadara transversa* | Mol | Biva | 59 | 1.56 | 80.01 | 3 | 75 |
| Lineidae (LPIL) | Rhy | Anop | 52 | 1.37 | 81.38 | 4 | 100 |
| Bivalvia (LPIL) | Mol | Biva | 45 | 1.19 | 82.56 | 4 | 100 |
| *Nuculana concentrica* | Mol | Biva | 41 | 1.08 | 83.65 | 4 | 100 |
| *Prionospio perkinsi* | Ann | Poly | 39 | 1.03 | 84.67 | 3 | 75 |
| *Nassarius acutus* | Mol | Gast | 39 | 1.03 | 85.70 | 4 | 100 |
| Spionidae (LPIL) | Ann | Poly | 35 | 0.92 | 86.63 | 4 | 100 |
| Tellinidae (LPIL) | Mol | Biva | 33 | 0.87 | 87.50 | 3 | 75 |
| Rhynchocoela (LPIL) | Rhy | – | 32 | 0.84 | 88.34 | 4 | 100 |
| *Mulinia lateralis* | Mol | Biva | 27 | 0.71 | 89.05 | 4 | 100 |
| Nuculanidae (LPIL) | Mol | Biva | 23 | 0.61 | 89.66 | 3 | 75 |
| *Diopatra cuprea* | Ann | Poly | 22 | 0.58 | 90.24 | 3 | 75 |
| Turbellaria (LPIL) | Pla | Turb | 20 | 0.53 | 90.77 | 2 | 50 |
| *Abra aequalis* | Mol | Biva | 16 | 0.42 | 91.19 | 3 | 75 |
| *Sthenelais* sp. A | Ann | Poly | 15 | 0.40 | 91.59 | 4 | 100 |
| *Pagurus* (LPIL) | Art | Mala | 15 | 0.40 | 91.98 | 2 | 50 |
| *Anachis obesa* | Mol | Gast | 14 | 0.37 | 92.35 | 2 | 50 |
| *Dipolydora socialis* | Ann | Poly | 11 | 0.29 | 92.64 | 1 | 25 |
| *Podarkeopsis levifuscina* | Ann | Poly | 11 | 0.29 | 92.93 | 4 | 100 |
| *Chione cancellata* | Mol | Biva | 11 | 0.29 | 93.22 | 3 | 75 |
| *Vitrinella helicoidea* | Mol | Gast | 11 | 0.29 | 93.51 | 4 | 100 |
| Semelidae (LPIL) | Mol | Biva | 10 | 0.26 | 93.77 | 1 | 25 |
| *Tectonatica pusilla* | Mol | Gast | 10 | 0.26 | 94.04 | 4 | 100 |
| *Prionospio* (LPIL) | Ann | Poly | 8 | 0.21 | 94.25 | 2 | 50 |
| *Tellina versicolor* | Mol | Biva | 8 | 0.21 | 94.46 | 3 | 75 |
| *Acteocina bidentata* | Mol | Gast | 8 | 0.21 | 94.67 | 4 | 100 |
| Arcidae (LPIL) | Mol | Biva | 7 | 0.18 | 94.86 | 2 | 50 |
| *Chaetozone* sp. D | Ann | Poly | 6 | 0.16 | 95.01 | 2 | 50 |
| *Nereis micromma* | Ann | Poly | 6 | 0.16 | 95.17 | 3 | 75 |
| *Pinnixa* (LPIL) | Art | Mala | 6 | 0.16 | 95.33 | 2 | 50 |
| *Anadara ovalis* | Mol | Biva | 6 | 0.16 | 95.49 | 1 | 25 |
| *Cossura delta* | Ann | Poly | 5 | 0.13 | 95.62 | 3 | 75 |
| *Sigambra wassi* | Ann | Poly | 5 | 0.13 | 95.75 | 3 | 75 |
| Xanthidae (LPIL) | Art | Mala | 5 | 0.13 | 95.88 | 1 | 25 |
| Actiniaria (LPIL) | Cni | Anth | 5 | 0.13 | 96.02 | 3 | 75 |
| *Odostomia gibbosa* | Mol | Gast | 5 | 0.13 | 96.15 | 2 | 50 |
| Cirratulidae (LPIL) | Ann | Poly | 4 | 0.11 | 96.25 | 2 | 50 |
| *Clymenella torquata* | Ann | Poly | 4 | 0.11 | 96.36 | 1 | 25 |
| *Mediomastus ambiseta* | Ann | Poly | 4 | 0.11 | 96.47 | 2 | 50 |
| Onuphidae (LPIL) | Ann | Poly | 4 | 0.11 | 96.57 | 2 | 50 |
| *Polydora cornuta* | Ann | Poly | 4 | 0.11 | 96.68 | 1 | 25 |
| Terebellidae (LPIL) | Ann | Poly | 4 | 0.11 | 96.78 | 2 | 50 |
| *Balanoglossus* (LPIL) | Hem | Ente | 4 | 0.11 | 96.89 | 1 | 25 |
| *Macoma tenta* | Mol | Biva | 4 | 0.11 | 96.99 | 1 | 25 |
| *Turbonilla conradi* | Mol | Gast | 4 | 0.11 | 97.10 | 2 | 50 |
| *Phascolion strombi* | Sip | – | 4 | 0.11 | 97.20 | 3 | 75 |
| *Chaetozone* (LPIL) | Ann | Poly | 3 | 0.08 | 97.28 | 2 | 50 |
| *Cossura soyeri* | Ann | Poly | 3 | 0.08 | 97.36 | 1 | 25 |
| Lumbrineridae (LPIL) | Ann | Poly | 3 | 0.08 | 97.44 | 2 | 50 |
| *Nephtys* (LPIL) | Ann | Poly | 3 | 0.08 | 97.52 | 1 | 25 |
| *Notomastus daueri* | Ann | Poly | 3 | 0.08 | 97.60 | 1 | 25 |
| *Sigambra* (LPIL) | Ann | Poly | 3 | 0.08 | 97.68 | 2 | 50 |

Table 98 continued:

| Taxon Name | Phylum | Class | No. of Individuals | % of Total | Cumulative % | Station Occurrence | % Station Occurrence |
|---|---|---|---|---|---|---|---|
| *Sigambra pettiboneae* | Ann | Poly | 3 | 0.08 | 97.76 | 2 | 50 |
| *Americamysis* (LPIL) | Art | Mala | 3 | 0.08 | 97.84 | 1 | 25 |
| *Microprotopus raneyi* | Art | Mala | 3 | 0.08 | 97.92 | 1 | 25 |
| *Oxyurostylis lecroyae* | Art | Mala | 3 | 0.08 | 98.00 | 2 | 50 |
| Sergestidae (LPIL) | Art | Mala | 3 | 0.08 | 98.07 | 1 | 25 |
| Mactridae (LPIL) | Mol | Biva | 3 | 0.08 | 98.15 | 2 | 50 |
| *Mitrella lunata* | Mol | Gast | 3 | 0.08 | 98.23 | 1 | 25 |
| *Odostomia* (LPIL) | Mol | Gast | 3 | 0.08 | 98.31 | 2 | 50 |
| *Odostomia weberi* | Mol | Gast | 3 | 0.08 | 98.39 | 2 | 50 |
| *Teinostoma biscaynense* | Mol | Gast | 3 | 0.08 | 98.47 | 1 | 25 |
| *Terebra* sp. A | Mol | Gast | 3 | 0.08 | 98.55 | 1 | 25 |
| *Fimbriosthenelais* (LPIL) | Ann | Poly | 2 | 0.05 | 98.60 | 1 | 25 |
| *Lepidasthenia varia* | Ann | Poly | 2 | 0.05 | 98.65 | 1 | 25 |
| *Magelona* (LPIL) | Ann | Poly | 2 | 0.05 | 98.71 | 1 | 25 |
| Nereididae (LPIL) | Ann | Poly | 2 | 0.05 | 98.76 | 2 | 50 |
| *Owenia fusiformis* | Ann | Poly | 2 | 0.05 | 98.81 | 1 | 25 |
| *Phyllodoce* (LPIL) | Ann | Poly | 2 | 0.05 | 98.87 | 2 | 50 |
| *Phyllodoce arenae* | Ann | Poly | 2 | 0.05 | 98.92 | 2 | 50 |
| *Scoletoma verrilli* | Ann | Poly | 2 | 0.05 | 98.97 | 2 | 50 |
| Paguridae (LPIL) | Art | Mala | 2 | 0.05 | 99.02 | 1 | 25 |
| *Corbula contracta* | Mol | Biva | 2 | 0.05 | 99.08 | 1 | 25 |
| *Tellina* (LPIL) | Mol | Biva | 2 | 0.05 | 99.13 | 2 | 50 |
| Columbellidae (LPIL) | Mol | Gast | 2 | 0.05 | 99.18 | 2 | 50 |
| *Turbonilla* (LPIL) | Mol | Gast | 2 | 0.05 | 99.24 | 2 | 50 |
| *Phoronis* (LPIL) | Pho | – | 2 | 0.05 | 99.29 | 2 | 50 |
| *Ancistrosyllis hartmanae* | Ann | Poly | 1 | 0.03 | 99.31 | 1 | 25 |
| *Armandia maculata* | Ann | Poly | 1 | 0.03 | 99.34 | 1 | 25 |
| Hesionidae (LPIL) | Ann | Poly | 1 | 0.03 | 99.37 | 1 | 25 |
| *Kinbergonuphis* (LPIL) | Ann | Poly | 1 | 0.03 | 99.39 | 1 | 25 |
| *Lepidonotus* sp. A | Ann | Poly | 1 | 0.03 | 99.42 | 1 | 25 |
| Maldanidae (LPIL) | Ann | Poly | 1 | 0.03 | 99.45 | 1 | 25 |
| *Malmgreniella maccraryae* | Ann | Poly | 1 | 0.03 | 99.47 | 1 | 25 |
| *Nereis* (LPIL) | Ann | Poly | 1 | 0.03 | 99.50 | 1 | 25 |
| *Nereis succinea* | Ann | Poly | 1 | 0.03 | 99.53 | 1 | 25 |
| *Sigambra bassi* | Ann | Poly | 1 | 0.03 | 99.55 | 1 | 25 |
| *Sigambra grubii* | Ann | Poly | 1 | 0.03 | 99.58 | 1 | 25 |
| *Spiochaetopterus oculatus* | Ann | Poly | 1 | 0.03 | 99.60 | 1 | 25 |
| *Streblospio benedicti* | Ann | Poly | 1 | 0.03 | 99.63 | 1 | 25 |
| *Listriella barnardi* | Art | Mala | 1 | 0.03 | 99.66 | 1 | 25 |
| Portunidae (LPIL) | Art | Mala | 1 | 0.03 | 99.68 | 1 | 25 |
| *Portunus gibbesii* | Art | Mala | 1 | 0.03 | 99.71 | 1 | 25 |
| *Eusarsiella texana* | Art | Ostr | 1 | 0.03 | 99.74 | 1 | 25 |
| Amphiuridae (LPIL) | Ech | Ophi | 1 | 0.03 | 99.76 | 1 | 25 |
| Ophiuroidea (LPIL) | Ech | Ophi | 1 | 0.03 | 99.79 | 1 | 25 |
| *Chione* (LPIL) | Mol | Biva | 1 | 0.03 | 99.82 | 1 | 25 |
| Corbulidae (LPIL) | Mol | Biva | 1 | 0.03 | 99.84 | 1 | 25 |
| Veneridae (LPIL) | Mol | Biva | 1 | 0.03 | 99.87 | 1 | 25 |
| *Cryoturris cerinella* | Mol | Gast | 1 | 0.03 | 99.89 | 1 | 25 |
| *Epitonium* (LPIL) | Mol | Gast | 1 | 0.03 | 99.92 | 1 | 25 |
| Gastropoda (LPIL) | Mol | Gast | 1 | 0.03 | 99.95 | 1 | 25 |
| *Terebra dislocata* | Mol | Gast | 1 | 0.03 | 99.97 | 1 | 25 |
| Vitrinellidae (LPIL) | Mol | Gast | 1 | 0.03 | 100.00 | 1 | 25 |

**Taxa Key**

Ann = Annelida
  Poly = Polychaeta
Art = Arthropoda
  Mala = Malacostraca
  Ostr = Ostracoda
Cni = Cnidaria
  Anth = Anthozoa
Ech = Echinodermata
  Ophi = Ophiuroidea
Hem = Hemichordata
  Ente = Enteropneusta
Mol = Mollusca
  Biva = Bivalvia
  Gast = Gastropoda
Pho = Phoronida
Pla = Platyhelminthes
  Turb = Turbellaria
Rhy = Rhynchocoela
  Anop = Anopla
Sip = Sipuncula

Table 99. Percentage abundance of dominant taxa (>10% of the total) for the LOOP - Brine stations, June 2002.

| **Taxa** | **435** | **473** | **474** | **475** |
|---|---|---|---|---|
| **Annelida** | | | | |
| Polychaeta | | | | |
| *Magelona* sp. H | | | 10.4 | |
| *Mediomastus* (LPIL) | | 18.3 | 44.9 | 40.3 |
| *Paraprionospio pinnata* | | 40.9 | | |
| **Mollusca** | | | | |
| Bivalvia | | | | |
| *Petricola pholadiformis* | 28.0 | | | |

Table 100. Summary of benthic macroinfaunal data for the LOOP - Brine stations, June 2002.

| Station | Rep | Taxa | Indvs | Density | Mean No. Taxa | Taxa (SD) | Mean Density | Density (SD) | Total No. Taxa | Total No. Individuals | H' Diversity | J' Evenness |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **435** | A | 34 | 141 | 1410 | 32.2 | 7.3 | 2001.7 | 1095.8 | 76 | 1201 | 3.07 | 0.71 |
| | B | 33 | 305 | 3050 | | | | | | | | |
| | C | 38 | 216 | 2160 | | | | | | | | |
| | D | 41 | 351 | 3510 | | | | | | | | |
| | E | 24 | 93 | 930 | | | | | | | | |
| | F | 23 | 95 | 950 | | | | | | | | |
| **473** | A | 15 | 153 | 1530 | 15.5 | 4.0 | 938.3 | 302.7 | 43 | 563 | 2.23 | 0.59 |
| | B | 14 | 77 | 770 | | | | | | | | |
| | C | 11 | 93 | 930 | | | | | | | | |
| | D | 14 | 70 | 700 | | | | | | | | |
| | E | 16 | 79 | 790 | | | | | | | | |
| | F | 23 | 91 | 910 | | | | | | | | |
| **474** | A | 20 | 151 | 1510 | 22.0 | 8.0 | 1965.0 | 1650.7 | 60 | 1179 | 2.32 | 0.57 |
| | B | 31 | 329 | 3290 | | | | | | | | |
| | C | 33 | 457 | 4570 | | | | | | | | |
| | D | 18 | 33 | 330 | | | | | | | | |
| | E | 16 | 155 | 1550 | | | | | | | | |
| | F | 14 | 54 | 540 | | | | | | | | |
| **475** | A | 25 | 162 | 1620 | 21.3 | 2.7 | 1413.3 | 485.3 | 53 | 848 | 2.37 | 0.60 |
| | B | 20 | 107 | 1070 | | | | | | | | |
| | C | 23 | 105 | 1050 | | | | | | | | |
| | D | 17 | 125 | 1250 | | | | | | | | |
| | E | 21 | 231 | 2310 | | | | | | | | |
| | F | 22 | 118 | 1180 | | | | | | | | |

Table 101. Station location and sediment composition data for the LOOP - Offshore stations, August 2001.

| Station | Latitude | Longitude | % Gravel | % Sand | % Silt | % Clay | USACE Description | Median Particle Size (phi) | Interstitial pH |
|---|---|---|---|---|---|---|---|---|---|
| **481** | N28.88520 | W90.02573 | 0 | 17.35 | 15.46 | 67.19 | clay | 9.884 | 6.46 |
| **482** | N28.92177 | W89.99613 | 0 | 7.01 | 38.21 | 54.78 | clay | 8.690 | 8.36 |
| **484** | N28.87378 | W90.03487 | 0 | 18.29 | 27.24 | 54.47 | clay | 8.481 | 8.21 |

Table 102. Station location and sediment composition data for the LOOP - Offshore stations, November 2001.

| Station | Latitude | Longitude | % Gravel | % Sand | % Silt | % Clay | USACE Description | Median Particle Size (phi) | Sorting Coefficient | Interstitial pH |
|---|---|---|---|---|---|---|---|---|---|---|
| **481** | N28.88520 | W90.02573 | 0 | 22.27 | 48.97 | 28.76 | clayey silt | 6.615 | 2.91 | 7.72 |
| **482** | N28.92177 | W89.99613 | 0 | 0.52 | 37.79 | 61.69 | clay | 8.061 | 2.709 | 8.16 |
| **484** | N28.87378 | W90.03487 | 0 | 17.6 | 51.50 | 30.9 | silty clay | 6.729 | 2.835 | 7.41 |

Table 103. Station location and sediment composition data for the LOOP - Offshore stations, June 2002.

| Station | Latitude | Longitude | % Gravel | % Sand | % Silt | % Clay | USACE Description | Median Particle Size (phi) | Interstitial pH |
|---|---|---|---|---|---|---|---|---|---|
| **481** | N28.88520 | W90.02573 | 0.00 | 13.57 | 32.65 | 53.77 | clay | 8.422 | 7.91 |
| **482** | N28.92177 | W89.99613 | 0.00 | 0.69 | 45.76 | 53.55 | clay | 8.696 | 7.3 |
| **484** | N28.87378 | W90.03487 | 0.00 | 11.68 | 46.80 | 41.52 | silty clay | 6.454 | 7.45 |

Table 104. Environmental data for the LOOP-Offshore stations, August 2001.

| Station | Barometric Pressure (mm of Hg) | Air Temperature (°C) | Wind Speed (kts) | Wind Direction | Cloud Cover % | Wave Height (m) | Secchi Depth (m) |
|---|---|---|---|---|---|---|---|
| **481** | -- | 23 | 6 | S | 20 | 0.75 | >4.0 |
| **482** | -- | 30 | 5 | S | 10 | 0.75 | >4.0 |
| **484** | 30.01 | 23 | 6 | S | 20 | 0.75 | >4.0 |

Table 105. Water quality data for the LOOP-Offshore Station 481, August 2001.

| Depth (m) | Temp (°C) | Sal (ppt) | Conductivity µS/cm | DO (mg/l) | % DO | pH |
|---|---|---|---|---|---|---|
| 15.0 | 29.1 | 36.8 | 55.4 | 4.81 | 68.6 | 5.98 |
| 17.2 | 29.0 | 37.8 | 56.6 | 4.29 | 69.5 | 5.60 |
| 19.6 | 28.0 | 38.1 | 57.1 | 4.04 | 64.8 | 5.48 |
| 21.3 | 27.3 | 38.3 | 57.4 | 4.33 | 68.3 | 5.44 |
| 24.0 | 26.9 | 38.4 | 57.5 | 4.21 | 66.2 | 5.29 |
| 27.2 | 26.4 | 38.4 | 57.5 | 3.73 | 58.2 | 5.12 |
| 30.1 | 24.2 | 38.6 | 57.8 | 1.55 | 23.9 | 5.14 |
| 32.7 | 24.2 | 38.6 | 57.8 | 1.60 | 24.0 | 5.45 |

Table 106. Water quality data for the LOOP-Offshore Station 482, August 2001.

| Depth (m) | Temp (°C) | Sal (ppt) | Conductivity µS/cm | DO (mg/l) | % DO | pH |
|---|---|---|---|---|---|---|
| 0.4 | 29.9 | 25.1 | 39.3 | 6.43 | 98.9 | 8.36 |
| 1.7 | 29.9 | 25.9 | 39.6 | 6.45 | 99.0 | 8.36 |
| 3.3 | 30.0 | 25.5 | 39.2 | 6.44 | 99.0 | 8.36 |
| 4.9 | 30.1 | 25.1 | 40.6 | 6.45 | 99.0 | 8.36 |
| 5.6 | 30.1 | 25.0 | 40.2 | 6.45 | 99.4 | 8.36 |
| 6.4 | 30.2 | 25.4 | 40.3 | 6.46 | 100.0 | 8.35 |
| 7.3 | 30.2 | 26.3 | 41.7 | 6.46 | 100.2 | 8.34 |
| 7.4 | 30.2 | 26.1 | 40.8 | 6.47 | 100.2 | 8.34 |
| 7.8 | 30.1 | 26.6 | 41.3 | 6.32 | 99.4 | 8.33 |
| 8.4 | 30.1 | 27.1 | 41.4 | 6.23 | 99.5 | 8.33 |
| 9.1 | 30.1 | 27.2 | 42.5 | 5.97 | 93.8 | 8.29 |
| 13.4 | 29.0 | 32.3 | 50.1 | 3.97 | 51.2 | 8.03 |
| 15.0 | 28.8 | 32.4 | 51.1 | 3.75 | 57.9 | 8.05 |

Table 107. Water quality data for the LOOP-Offshore Station 484, August 2001.

| Depth (m) | Temp (°C) | Sal (ppt) | Conductivity µS/cm | DO (mg/l) | % DO | pH |
|---|---|---|---|---|---|---|
| 0.4 | 29.64 | 28.4 | 43.8 | 5.87 | 90.9 | 8.26 |
| 1.9 | 29.63 | 28.3 | 43.8 | 5.94 | 91.9 | 8.23 |
| 4.2 | 29.64 | 28.4 | 43.9 | 5.97 | 92.4 | 8.11 |
| 5.3 | 28.6 | 28.4 | 43.9 | 5.90 | 91.4 | 4.75 |
| 7.3 | 29.8 | 28.5 | 44.1 | 5.69 | 88.4 | 7.08 |
| 10.3 | 29.6 | 30.85 | 47.0 | 5.97 | 85.9 | 4.58 |
| 13.0 | 29.3 | 33.3 | 50.6 | 3.25 | 51.6 | 4.53 |
| 15.8 | 29.1 | 35.8 | 54.1 | 2.98 | 47.2 | 4.59 |
| 17.9 | 28.9 | 37.1 | 55.8 | 3.29 | 51.8 | 4.28 |
| 20.1 | 28.7 | 38.1 | 56.9 | 4.53 | 73.3 | 4.19 |
| 22.0 | 28.0 | 38.2 | 57.2 | 4.14 | 65.9 | 4.11 |
| 23.2 | 27.4 | 38.1 | 57.1 | 3.67 | 57.3 | 4.05 |
| 25.2 | 26.6 | 38.4 | 57.5 | 4.27 | 66.5 | 3.92 |
| 26.2 | 26.1 | 38.4 | 57.6 | 4.08 | 53.1 | 3.87 |
| 28.9 | 24.6 | 38.5 | 58.4 | 3.23 | 57.0 | 3.61 |
| 32.7 | 24.0 | 38.61 | 57.8 | 1.88 | 27.9 | 3.36 |

Table 108. Environmental data for the LOOP-Offshore stations, November 2001.

| Station | Barometric Pressure (mm of Hg) | Air Temperature (°C) | Wind Speed (kts) | Wind Direction | Cloud Cover % | Wave Height (m) | Secchi Depth (m) |
|---|---|---|---|---|---|---|---|
| **481** | 30.15 | 23 | 7 | ESE | 10 | 1 | 5.00 |
| **482** | 30.17 | 21 | 16 | SE | 25 | 1.5 | 5.00 |
| **484** | 30.15 | 22 | 8 | ESE | 10 | 1 | 4.50 |

Table 109. Water quality data for the LOOP-Offshore Station 481, November 2001.

| Depth (m) | Temp (deg C) | Sal (ppt) | Conductivity µS/cm | DO (mg/l) | % DO | pH |
|---|---|---|---|---|---|---|
| 0.3 | 22.7 | 32.53 | 49.60 | 6.5 | 91.6 | 8.39 |
| 1.5 | 22.7 | 32.53 | 49.61 | 7.2 | 100.8 | 8.39 |
| 3.0 | 22.7 | 32.53 | 49.60 | 7.3 | 101.6 | 8.39 |
| 5.2 | 22.7 | 32.54 | 49.61 | 6.9 | 96.3 | 8.39 |
| 7.3 | 22.7 | 32.52 | 49.59 | 8.7 | 121.6 | 8.39 |
| 9.3 | 22.9 | 32.69 | 49.82 | 6.9 | 97.1 | 8.39 |
| 10.9 | 23.0 | 32.99 | 50.23 | 6.6 | 93.5 | 8.38 |
| 13.1 | 23.2 | 33.67 | 51.15 | 6.5 | 92.9 | 8.36 |
| 14.6 | 23.5 | 34.61 | 52.43 | 6.4 | 92.2 | 8.33 |
| 16.8 | 23.9 | 35.05 | 53.02 | 6.7 | 96.6 | 8.31 |
| 19.1 | 24.1 | 35.13 | 53.13 | 7.1 | 103.1 | 8.28 |
| 21.6 | 24.3 | 35.37 | 53.45 | 6.1 | 90.2 | 8.21 |
| 21.7 | 24.3 | 35.33 | 53.40 | 6.0 | 87.9 | 8.24 |
| 23.4 | 24.4 | 35.65 | 53.82 | 6.3 | 93.4 | 8.14 |
| 25.6 | 24.4 | 35.71 | 53.91 | 5.9 | 86.9 | 8.04 |
| 27.2 | 24.4 | 35.69 | 53.88 | 6.0 | 87.8 | 8.00 |
| 28.2 | 24.3 | 35.69 | 53.88 | 6.0 | 87.5 | 7.93 |
| 28.5 | 24.3 | 35.69 | 53.88 | 5.9 | 87.4 | 7.93 |
| 30.1 | 24.3 | 35.69 | 53.88 | 5.6 | 82.3 | 7.86 |
| 32.1 | 24.3 | 35.66 | 53.85 | 3.3 | 64.6 | 7.36 |
| 33.2 | 24.3 | 35.60 | 53.76 | 2.8 | 41.7 | 7.44 |

Table 110. Water quality data for the LOOP-Offshore Station 482, November 2001.

| Depth (m) | Temp (deg C) | Sal (ppt) | Conductivity µS/cm | DO (mg/l) | % DO | pH |
|---|---|---|---|---|---|---|
| 0.4 | 22.1 | 29.77 | 45.83 | 8.3 | 113.3 | 8.43 |
| 0.4 | 22.1 | 29.74 | 45.78 | 7.8 | 106.3 | 8.43 |
| 1.4 | 22.1 | 29.79 | 45.85 | 8.2 | 111.9 | 8.42 |
| 3.0 | 22.1 | 29.81 | 45.89 | 8.8 | 120.0 | 8.42 |
| 4.6 | 22.1 | 29.75 | 45.80 | 9.3 | 127.5 | 8.40 |
| 5.5 | 22.2 | 30.55 | 46.90 | 9.4 | 128.2 | 8.38 |
| 5.8 | 22.2 | 30.60 | 46.97 | 9.0 | 123.3 | 8.37 |
| 6.3 | 22.5 | 31.61 | 48.35 | 12.8 | 177.5 | 8.35 |
| 7.0 | 22.6 | 31.79 | 48.56 | 8.5 | 118.5 | 8.34 |
| 8.3 | 22.7 | 31.81 | 48.63 | 10.6 | 147.4 | 8.33 |
| 9.3 | 22.7 | 31.90 | 48.74 | 10.7 | 148.8 | 8.33 |
| 10.5 | 22.8 | 32.34 | 49.34 | 8.7 | 122.8 | 8.31 |
| 11.9 | 23.2 | 33.12 | 50.41 | 8.6 | 122.4 | 8.28 |
| 13.3 | 23.3 | 33.39 | 50.77 | 8.2 | 116.1 | 8.26 |
| 13.9 | 23.5 | 33.38 | 50.76 | 8.3 | 118.8 | 8.24 |
| 14.7 | 23.6 | 34.12 | 51.76 | 7.6 | 108.9 | 8.22 |
| 15.2 | 23.7 | 34.25 | 51.93 | 7.7 | 110.7 | 8.20 |
| 16.4 | 23.8 | 34.54 | 52.34 | 7.9 | 114.2 | 8.18 |
| 17.7 | 23.9 | 34.66 | 52.49 | 8.6 | 124.6 | 8.13 |
| 19.1 | 24.1 | 34.97 | 52.91 | 7.9 | 115.6 | 8.04 |
| 21.0 | 24.3 | 35.32 | 53.39 | 7.2 | 105.6 | 7.98 |
| 24.1 | 24.6 | 35.63 | 53.79 | 6.7 | 98.5 | 7.94 |
| 25.9 | 24.6 | 35.67 | 53.86 | 6.8 | 100.1 | 7.88 |
| 28.3 | 24.6 | 35.68 | 53.87 | 6.6 | 97.3 | 7.71 |
| 30.2 | 24.5 | 35.70 | 53.90 | 7.5 | 110.0 | 7.70 |
| 31.8 | 24.5 | 35.67 | 53.86 | 8.1 | 118.9 | 7.63 |

Table 111. Water quality data for the LOOP-Offshore Station 484, November 2001.

| Depth (m) | Temp (deg C) | Sal (ppt) | Conductivity µS/cm | DO (mg/l) | % DO | pH |
|---|---|---|---|---|---|---|
| 0.6 | 22.7 | 32.53 | 49.60 | 7.2 | 100.8 | 8.08 |
| 2.5 | 22.7 | 32.52 | 49.59 | 11.7 | 163.4 | 8.05 |
| 3.9 | 22.7 | 32.53 | 49.61 | 8.0 | 112.1 | 8.00 |
| 5.4 | 22.7 | 32.55 | 49.63 | 8.5 | 119.4 | 7.97 |
| 7.3 | 22.9 | 32.75 | 49.90 | 11.9 | 167.3 | 7.74 |
| 9.4 | 23.0 | 32.99 | 50.23 | 7.2 | 101.6 | 7.74 |
| 11.9 | 23.3 | 33.86 | 51.42 | 6.7 | 95.1 | 7.69 |
| 14.4 | 23.6 | 34.60 | 52.41 | 6.5 | 93.0 | 7.66 |
| 16.9 | 23.9 | 34.97 | 52.91 | 6.3 | 91.5 | 7.63 |
| 18.8 | 24.2 | 35.38 | 53.47 | 6.2 | 90.8 | 7.61 |
| 20.9 | 24.3 | 35.51 | 53.64 | 6.2 | 91.6 | 7.59 |
| 22.8 | 24.3 | 35.66 | 53.84 | 6.2 | 91.4 | 7.56 |
| 24.9 | 24.3 | 35.67 | 53.85 | 6.2 | 90.7 | 7.55 |
| 26.6 | 24.3 | 35.66 | 53.85 | 6.9 | 101.0 | 7.54 |
| 27.0 | 24.3 | 35.66 | 53.84 | 6.7 | 98.5 | 7.52 |
| 30.4 | 24.3 | 35.66 | 53.85 | 5.9 | 86.7 | 7.41 |
| 32.1 | 24.3 | 35.65 | 53.83 | 4.0 | 59.0 | 7.25 |
| 33.0 | 24.3 | 35.47 | 53.59 | 4.1 | 60.7 | 7.47 |

Table 112. Environmental data for the LOOP-Offshore stations, June 2002.

| Station | Barometric Pressure (mm of Hg) | Air Temperature (°C) | Wind Speed (kts) | Wind Direction | Cloud Cover % | Wave Height (m) | Secchi Depth (m) |
|---|---|---|---|---|---|---|---|
| **481** | 29.94 | 31 | 5 | E | 10 | 0.25 | >12 |
| **482** | 29.95 | 33 | 5 | E | 10 | 0.25 | >12 |
| **484** | 29.93 | 28 | 5 | E | 10 | 0.25 | >12 |

Table 113. Water quality data for the LOOP-Offshore Station 481, June 2002.

| Depth (m) | Temp (deg C) | Sal (ppt) | Conductivity µS/cm | DO (mg/l) | % DO | pH |
|---|---|---|---|---|---|---|
| 0.4 | 27.4 | 35.84 | 54.08 | 6.1 | 95.4 | 8.10 |
| 1.2 | 27.4 | 35.85 | 54.10 | 6.1 | 95.1 | 8.10 |
| 2.7 | 27.3 | 35.84 | 54.09 | 6.1 | 95.8 | 8.10 |
| 4.4 | 27.2 | 35.86 | 54.12 | 6.1 | 95.3 | 8.10 |
| 6.9 | 26.9 | 35.81 | 54.04 | 6.3 | 97.2 | 8.10 |
| 9.0 | 26.6 | 35.81 | 54.05 | 6.1 | 94.8 | 8.10 |
| 10.7 | 26.5 | 35.80 | 54.03 | 6.2 | 95.8 | 8.10 |
| 12.3 | 26.4 | 35.80 | 54.04 | 6.2 | 96.1 | 8.10 |
| 14.3 | 26.4 | 35.83 | 54.04 | 6.3 | 96.6 | 8.09 |
| 16.0 | 26.3 | 35.79 | 54.02 | 6.3 | 96.7 | 8.08 |
| 17.4 | 26.1 | 35.79 | 54.02 | 6.3 | 96.7 | 8.07 |
| 18.9 | 26.0 | 35.77 | 54.00 | 6.3 | 96.4 | 8.06 |
| 20.3 | 25.8 | 35.74 | 53.96 | 6.4 | 97.2 | 8.06 |
| 21.8 | 25.7 | 35.76 | 53.98 | 6.4 | 97.0 | 8.06 |
| 23.2 | 25.7 | 35.76 | 53.98 | 6.4 | 97.6 | 8.06 |
| 25.1 | 25.6 | 35.75 | 53.99 | 6.6 | 99.5 | 8.06 |
| 26.9 | 25.6 | 35.76 | 53.98 | 6.6 | 100.4 | 8.06 |
| 28.5 | 25.6 | 35.77 | 53.99 | 6.6 | 100.5 | 8.06 |
| 30.1 | 25.6 | 35.77 | 53.99 | 6.7 | 101.3 | 8.06 |
| 31.7 | 25.6 | 35.76 | 53.98 | 6.6 | 100.9 | 8.06 |
| 33.0 | 25.6 | 35.77 | 53.98 | 6.6 | 99.9 | 8.06 |

Table 114. Water quality data for the LOOP-Offshore Station 482, June 2002.

| Depth (m) | Temp (deg C) | Sal (ppt) | Conductivity µS/cm | DO (mg/l) | % DO | pH |
|---|---|---|---|---|---|---|
| 0.5 | 27.6 | 33.62 | 51.08 | 6.0 | 93.7 | 8.18 |
| 1.0 | 27.6 | 33.61 | 51.06 | 6.0 | 93.3 | 8.16 |
| 1.6 | 27.6 | 35.33 | 53.40 | 5.9 | 92.9 | 8.14 |
| 4.2 | 27.3 | 35.82 | 54.05 | 5.9 | 92.9 | 8.11 |
| 5.7 | 26.8 | 35.82 | 54.06 | 6.0 | 93.6 | 8.11 |
| 7.6 | 26.7 | 35.81 | 54.04 | 6.0 | 93.6 | 8.11 |
| 9.2 | 26.6 | 35.82 | 54.06 | 6.0 | 92.4 | 8.11 |
| 10.4 | 26.6 | 35.82 | 54.06 | 6.0 | 92.1 | 8.11 |
| 11.7 | 26.5 | 35.80 | 54.03 | 6.1 | 93.6 | 8.11 |
| 14.0 | 26.1 | 35.77 | 54.00 | 5.9 | 90.5 | 8.11 |
| 14.8 | 25.9 | 35.76 | 53.98 | 6.0 | 91.2 | 8.11 |
| 16.7 | 25.9 | 35.77 | 53.99 | 6.3 | 96.3 | 8.10 |
| 18.2 | 25.8 | 35.77 | 54.00 | 6.3 | 96.6 | 8.10 |
| 19.8 | 25.8 | 35.77 | 53.99 | 6.4 | 96.7 | 8.10 |
| 21.1 | 25.7 | 35.75 | 53.99 | 6.4 | 97.8 | 8.06 |
| 22.9 | 25.7 | 35.76 | 53.98 | 6.6 | 99.6 | 8.06 |
| 24.2 | 25.7 | 35.75 | 53.97 | 6.6 | 101.0 | 8.06 |
| 25.9 | 25.7 | 35.77 | 53.99 | 6.7 | 101.4 | 8.03 |
| 27.7 | 25.7 | 35.79 | 53.96 | 6.6 | 100.6 | 8.02 |
| 28.7 | 25.7 | 35.79 | 54.02 | 6.2 | 94.4 | 8.02 |
| 30.1 | 25.6 | 35.77 | 53.99 | 6.0 | 90.5 | 8.00 |
| 31.6 | 25.4 | 35.75 | 53.96 | 6.0 | 90.4 | 7.91 |

Table 115. Water quality data for the LOOP-Offshore Station 484, June 2002.

| Depth (m) | Temp (deg C) | Sal (ppt) | Conductivity µS/cm | DO (mg/l) | % DO | pH |
|---|---|---|---|---|---|---|
| 0.3 | 27.2 | 35.85 | 54.10 | 6.2 | 96.5 | 8.06 |
| 1.3 | 27.2 | 35.84 | 54.08 | 6.1 | 95.8 | 8.06 |
| 2.5 | 27.3 | 35.84 | 54.09 | 6.3 | 97.9 | 8.06 |
| 4.0 | 27.2 | 35.85 | 54.09 | 6.2 | 97.2 | 8.06 |
| 5.9 | 26.8 | 35.81 | 54.05 | 6.2 | 96.0 | 8.05 |
| 8.1 | 26.6 | 35.84 | 54.08 | 6.3 | 97.9 | 8.06 |
| 10.1 | 26.5 | 35.82 | 54.06 | 6.3 | 96.9 | 8.06 |
| 12.1 | 26.4 | 35.81 | 54.04 | 6.3 | 97.6 | 8.05 |
| 14.2 | 26.4 | 35.82 | 54.05 | 6.4 | 98.2 | 8.05 |
| 15.1 | 26.3 | 35.79 | 54.02 | 6.4 | 98.0 | 8.05 |
| 17.6 | 26.0 | 35.78 | 54.01 | 6.5 | 99.6 | 8.06 |
| 19.4 | 25.9 | 35.76 | 53.98 | 6.5 | 99.8 | 8.05 |
| 20.9 | 25.8 | 35.75 | 53.97 | 6.6 | 100.7 | 8.06 |
| 22.5 | 25.7 | 35.78 | 54.00 | 6.7 | 101.2 | 8.06 |
| 23.8 | 25.6 | 35.76 | 53.98 | 6.8 | 102.5 | 8.06 |
| 25.3 | 25.6 | 35.78 | 54.00 | 6.8 | 103.7 | 8.09 |
| 26.8 | 25.6 | 35.78 | 54.00 | 6.8 | 103.0 | 8.06 |
| 28.0 | 25.6 | 35.77 | 53.99 | 6.8 | 103.4 | 8.05 |
| 29.2 | 25.6 | 35.78 | 54.00 | 6.8 | 103.3 | 8.05 |
| 31.0 | 25.6 | 35.78 | 54.01 | 6.8 | 103.4 | 8.05 |
| 32.7 | 25.6 | 35.77 | 53.99 | 6.9 | 105.1 | 8.05 |

Table 116. Summary of overall abundance of major benthic macroinfauna taxonomic groups for the LOOP - Offshore stations, August 2001.

| Taxa | Total No. Taxa | % Total | Total No. Individuals | % Total |
|---|---|---|---|---|
| **Annelida** | | | | |
| Polychaeta | 55 | 63.2 | 370 | 75.5 |
| **Mollusca** | | | | |
| Bivalvia | 9 | 10.3 | 42 | 8.6 |
| Gastropoda | 7 | 8.0 | 31 | 6.3 |
| **Arthropoda** | | | | |
| Malacostraca | 10 | 11.5 | 26 | 5.3 |
| **Echinodermata** | | | | |
| Ophiuroidea | 1 | 1.1 | 1 | 0.2 |
| **Other Taxa** | 5 | 5.7 | 20 | 4.1 |
| **Total** | **87** | | **490** | |

Table 117. Summary of abundance of major benthic macroinfauna taxonomic groups by station for the LOOP - Offshore stations, August 2001.

| Station | Phylum | Taxa | % of Total | No. of Individuals | % of Total |
|---|---|---|---|---|---|
| **481** | Annelida | 42 | 65.6 | 177 | 74.1 |
| | Mollusca | 10 | 15.6 | 38 | 15.9 |
| | Arthropoda | 7 | 10.9 | 10 | 4.2 |
| | Echinodermata | 1 | 1.6 | 1 | 0.4 |
| | Other Taxa | 4 | 6.3 | 13 | 5.4 |
| | **Total** | **64** | | **239** | |
| **482** | Annelida | 19 | 73.1 | 134 | 88.2 |
| | Mollusca | 1 | 3.8 | 1 | 0.7 |
| | Arthropoda | 5 | 19.2 | 14 | 9.2 |
| | Echinodermata | 0 | 0.0 | 0 | 0.0 |
| | Other Taxa | 1 | 3.8 | 3 | 2.0 |
| | **Total** | **26** | | **152** | |
| **484** | Annelida | 23 | 60.5 | 59 | 59.6 |
| | Mollusca | 10 | 26.3 | 34 | 34.3 |
| | Arthropoda | 2 | 5.3 | 2 | 2.0 |
| | Echinodermata | 0 | 0.0 | 0 | 0.0 |
| | Other Taxa | 3 | 7.9 | 4 | 4.0 |
| | **Total** | **38** | | **99** | |

Table 118. Distribution and abundance of families for the LOOP - Offshore stations, August 2001.

| Taxa | Phylum | Class | Individuals | % of Total | Cumulative % | Station Occurrence | Station % Occurrence |
|---|---|---|---|---|---|---|---|
| Spionidae | Ann | Poly | 108 | 22.04 | 22.04 | 3 | 100 |
| Nereidae | Ann | Poly | 67 | 13.67 | 35.71 | 2 | 67 |
| Lumbrineridae | Ann | Poly | 37 | 7.55 | 43.27 | 3 | 100 |
| Amphinomidae | Ann | Poly | 21 | 4.29 | 47.55 | 1 | 33 |
| Nephtyidae | Ann | Poly | 20 | 4.08 | 51.63 | 2 | 67 |
| Cirratulidae | Ann | Poly | 18 | 3.67 | 55.31 | 3 | 100 |
| Opheliidae | Ann | Poly | 18 | 3.67 | 58.98 | 3 | 100 |
| Other Taxa | – | – | 18 | 3.67 | 62.65 | 3 | 100 |
| Nuculidae | Mol | Biva | 15 | 3.06 | 65.71 | 2 | 67 |
| Cossuridae | Ann | Poly | 14 | 2.86 | 68.57 | 3 | 100 |
| Vitrinellidae | Mol | Gast | 14 | 2.86 | 71.43 | 2 | 67 |
| Corbulidae | Mol | Biva | 13 | 2.65 | 74.08 | 2 | 67 |
| Capitellidae | Ann | Poly | 12 | 2.45 | 76.53 | 3 | 100 |
| Naticidae | Mol | Gast | 11 | 2.24 | 78.78 | 2 | 67 |
| Pinnotheridae | Art | Mala | 11 | 2.24 | 81.02 | 3 | 100 |
| Magelonidae | Ann | Poly | 9 | 1.84 | 82.86 | 3 | 100 |
| Nuculanidae | Mol | Biva | 9 | 1.84 | 84.69 | 2 | 67 |
| Maldanidae | Ann | Poly | 7 | 1.43 | 86.12 | 2 | 67 |
| Onuphidae | Ann | Poly | 7 | 1.43 | 87.55 | 3 | 100 |
| Goniadidae | Ann | Poly | 6 | 1.22 | 88.78 | 2 | 67 |
| Paraonidae | Ann | Poly | 6 | 1.22 | 90.00 | 1 | 33 |
| Pilargiidae | Ann | Poly | 6 | 1.22 | 91.22 | 2 | 67 |
| Glyceridae | Ann | Poly | 5 | 1.02 | 92.24 | 1 | 33 |
| Goneplacidae | Art | Mala | 5 | 1.02 | 93.27 | 1 | 33 |
| Lineidae | Rhy | Anop | 4 | 0.82 | 94.08 | 1 | 33 |
| Polynoidae | Ann | Poly | 4 | 0.82 | 94.90 | 2 | 67 |
| Pyramidellidae | Mol | Gast | 3 | 0.61 | 95.51 | 1 | 33 |
| Portunidae | Art | Mala | 2 | 0.41 | 95.92 | 1 | 33 |
| Tellinidae | Mol | Biva | 2 | 0.41 | 96.33 | 1 | 33 |
| Tubulanidae | Rhy | Anop | 2 | 0.41 | 96.73 | 2 | 67 |
| Veneridae | Mol | Biva | 2 | 0.41 | 97.14 | 1 | 33 |
| Columbellidae | Mol | Gast | 1 | 0.20 | 97.35 | 1 | 33 |
| Dreissenidae | Mol | Biva | 1 | 0.20 | 97.55 | 1 | 33 |
| Golfingiidae | Sip | – | 1 | 0.20 | 97.76 | 1 | 33 |
| Hesionidae | Ann | Poly | 1 | 0.20 | 97.96 | 1 | 33 |
| Leucosiidae | Art | Mala | 1 | 0.20 | 98.16 | 1 | 33 |
| Liljeborgiidae | Art | Mala | 1 | 0.20 | 98.37 | 1 | 33 |
| Orbiniidae | Ann | Poly | 1 | 0.20 | 98.57 | 1 | 33 |
| Phyllodocidae | Ann | Poly | 1 | 0.20 | 98.78 | 1 | 33 |
| Retusidae | Mol | Gast | 1 | 0.20 | 98.98 | 1 | 33 |
| Sigalionidae | Ann | Poly | 1 | 0.20 | 99.18 | 1 | 33 |
| Squillidae | Art | Mala | 1 | 0.20 | 99.39 | 1 | 33 |
| Syllidae | Ann | Poly | 1 | 0.20 | 99.59 | 1 | 33 |
| Turridae | Mol | Gast | 1 | 0.20 | 99.80 | 1 | 33 |
| Xanthidae | Art | Mala | 1 | 0.20 | 100.00 | 1 | 33 |

**Taxa Key**

Ann = Annelida
Poly = Polychaeta
Art = Arthropoda
Mala = Malacostraca
Mol = Mollusca
Biva = Bivalvia
Gast = Gastropoda
Rhy = Rhynchocoela
Anop = Anopla
Sip = Sipuncula

Table 119. Percentage abundance of dominant families (>10% of the total) for the LOOP - Offshore stations, August 2001.

| Taxa | 481 | 482 | 484 |
|---|---|---|---|
| Annelida | | | |
| Polychaeta | | | |
| Nereidae | 26.4 | | |
| Spionidae | | 57.2 | |

Table 120. Distribution and abundance of taxa for the LOOP - Offshore stations, August 2001.

| Taxon Name | Phylum | Class | Individuals | % of Total | Cumulative % | Station Occurrence | Station % Occurrence |
|---|---|---|---|---|---|---|---|
| *Paraprionospio pinnata* | Ann | Poly | 78 | 15.92 | 15.92 | 3 | 100 |
| Nereididae (LPIL) | Ann | Poly | 49 | 10.00 | 25.92 | 2 | 67 |
| Spionidae (LPIL) | Ann | Poly | 22 | 4.49 | 30.41 | 3 | 100 |
| *Paramphinome* sp. B | Ann | Poly | 20 | 4.08 | 34.49 | 1 | 33 |
| *Nephtys incisa* | Ann | Poly | 19 | 3.88 | 38.37 | 2 | 67 |
| *Ninoe nigripes* | Ann | Poly | 17 | 3.47 | 41.84 | 2 | 67 |
| Vitrinellidae (LPIL) | Mol | Gast | 14 | 2.86 | 44.69 | 2 | 67 |
| *Monticellina dorsobranchialis* | Ann | Poly | 12 | 2.45 | 47.14 | 3 | 100 |
| Rhynchocoela (LPIL) | Rhy | – | 12 | 2.45 | 49.59 | 3 | 100 |
| *Scoletoma verrilli* | Ann | Poly | 10 | 2.04 | 51.63 | 2 | 67 |
| *Cossura soyeri* | Ann | Poly | 9 | 1.84 | 53.47 | 3 | 100 |
| Naticidae (LPIL) | Mol | Gast | 9 | 1.84 | 55.31 | 2 | 67 |
| *Nuculana concentrica* | Mol | Biva | 9 | 1.84 | 57.14 | 2 | 67 |
| Opheliidae (LPIL) | Ann | Poly | 9 | 1.84 | 58.98 | 2 | 67 |
| *Nucula proxima* | Mol | Biva | 8 | 1.63 | 60.61 | 2 | 67 |
| *Ceratonereis irritabilis* | Ann | Poly | 7 | 1.43 | 62.04 | 1 | 33 |
| Lumbrineridae (LPIL) | Ann | Poly | 7 | 1.43 | 63.47 | 1 | 33 |
| *Nereis succinea* | Ann | Poly | 7 | 1.43 | 64.90 | 1 | 33 |
| *Notomastus daueri* | Ann | Poly | 7 | 1.43 | 66.33 | 2 | 67 |
| *Nucula aegeenis* | Mol | Biva | 7 | 1.43 | 67.76 | 1 | 33 |
| Cirratulidae (LPIL) | Ann | Poly | 6 | 1.22 | 68.98 | 2 | 67 |
| *Corbula barrattiana* | Mol | Biva | 6 | 1.22 | 70.20 | 2 | 67 |
| *Corbula swiftiana* | Mol | Biva | 6 | 1.22 | 71.43 | 1 | 33 |
| *Diopatra cuprea* | Ann | Poly | 6 | 1.22 | 72.65 | 3 | 100 |
| *Sabaco americanus* | Ann | Poly | 6 | 1.22 | 73.88 | 2 | 67 |
| *Armandia* (LPIL) | Ann | Poly | 5 | 1.02 | 74.90 | 3 | 100 |
| *Chasmocarcinus mississippiensis* | Art | Mala | 5 | 1.02 | 75.92 | 1 | 33 |
| *Pinnixa* (LPIL) | Art | Mala | 5 | 1.02 | 76.94 | 3 | 100 |
| *Pinnixa* sp. A | Art | Mala | 5 | 1.02 | 77.96 | 1 | 33 |
| *Prionospio* (LPIL) | Ann | Poly | 5 | 1.02 | 78.98 | 2 | 67 |
| *Armandia maculata* | Ann | Poly | 4 | 0.82 | 79.80 | 1 | 33 |
| Decapoda (LPIL) | Art | Mala | 4 | 0.82 | 80.61 | 3 | 100 |
| Lineidae (LPIL) | Rhy | Anop | 4 | 0.82 | 81.43 | 1 | 33 |
| *Magelona* sp. I | Ann | Poly | 4 | 0.82 | 82.24 | 3 | 100 |
| *Nereis micromma* | Ann | Poly | 4 | 0.82 | 83.06 | 1 | 33 |
| Polynoidae (LPIL) | Ann | Poly | 4 | 0.82 | 83.88 | 2 | 67 |
| *Ancistrosyllis jonesi* | Ann | Poly | 3 | 0.61 | 84.49 | 2 | 67 |
| Cossuridae (LPIL) | Ann | Poly | 3 | 0.61 | 85.10 | 1 | 33 |
| *Glycera americana* | Ann | Poly | 3 | 0.61 | 85.71 | 1 | 33 |
| *Levinsenia gracilis* | Ann | Poly | 3 | 0.61 | 86.33 | 1 | 33 |
| *Magelona* (LPIL) | Ann | Poly | 3 | 0.61 | 86.94 | 2 | 67 |
| *Mediomastus* (LPIL) | Ann | Poly | 3 | 0.61 | 87.55 | 1 | 33 |
| *Ophioglycera* sp. A | Ann | Poly | 3 | 0.61 | 88.16 | 2 | 67 |
| Pyramidellidae (LPIL) | Mol | Gast | 3 | 0.61 | 88.78 | 1 | 33 |
| *Scoletoma impatiens* | Ann | Poly | 3 | 0.61 | 89.39 | 1 | 33 |
| *Sigambra tentaculata* | Ann | Poly | 3 | 0.61 | 90.00 | 2 | 67 |
| *Agriopoma texasianum* | Mol | Biva | 2 | 0.41 | 90.41 | 1 | 33 |
| *Cossura* (LPIL) | Ann | Poly | 2 | 0.41 | 90.82 | 1 | 33 |
| *Magelona* sp. F | Ann | Poly | 2 | 0.41 | 91.22 | 2 | 67 |
| Portunidae (LPIL) | Art | Mala | 2 | 0.41 | 91.63 | 1 | 33 |
| *Prionospio lighti* | Ann | Poly | 2 | 0.41 | 92.04 | 1 | 33 |
| *Tectonatica pusilla* | Mol | Gast | 2 | 0.41 | 92.45 | 1 | 33 |
| *Tellina versicolor* | Mol | Biva | 2 | 0.41 | 92.86 | 1 | 33 |
| *Tubulanus* (LPIL) | Rhy | Anop | 2 | 0.41 | 93.27 | 2 | 67 |
| Amphinomidae (LPIL) | Ann | Poly | 1 | 0.20 | 93.47 | 1 | 33 |
| *Aricidea* (LPIL) | Ann | Poly | 1 | 0.20 | 93.67 | 1 | 33 |
| Capitellidae (LPIL) | Ann | Poly | 1 | 0.20 | 93.88 | 1 | 33 |
| *Cirrophorus* (LPIL) | Ann | Poly | 1 | 0.20 | 94.08 | 1 | 33 |
| *Corbula contracta* | Mol | Biva | 1 | 0.20 | 94.29 | 1 | 33 |

Table 120 continued:

| Taxon Name | Phylum | Class | Individuals | % of Total | Cumulative % | Station Occurrence | Station % Occurrence |
|---|---|---|---|---|---|---|---|
| *Cosmioconcha calliglypta* | Mol | Gast | 1 | 0.20 | 94.49 | 1 | 33 |
| *Dipolydora socialis* | Ann | Poly | 1 | 0.20 | 94.69 | 1 | 33 |
| *Glycera* sp. E | Ann | Poly | 1 | 0.20 | 94.90 | 1 | 33 |
| Glyceridae (LPIL) | Ann | Poly | 1 | 0.20 | 95.10 | 1 | 33 |
| *Glycinde solitaria* | Ann | Poly | 1 | 0.20 | 95.31 | 1 | 33 |
| *Goniada maculata* | Ann | Poly | 1 | 0.20 | 95.51 | 1 | 33 |
| Goniadidae (LPIL) | Ann | Poly | 1 | 0.20 | 95.71 | 1 | 33 |
| *Leitoscoloplos* (LPIL) | Ann | Poly | 1 | 0.20 | 95.92 | 1 | 33 |
| Leucosiidae (LPIL) | Art | Mala | 1 | 0.20 | 96.12 | 1 | 33 |
| Liljeborgiidae (LPIL) | Art | Mala | 1 | 0.20 | 96.33 | 1 | 33 |
| Maldanidae (LPIL) | Ann | Poly | 1 | 0.20 | 96.53 | 1 | 33 |
| *Mytilopsis leucophaeata* | Mol | Biva | 1 | 0.20 | 96.73 | 1 | 33 |
| *Nephtys* (LPIL) | Ann | Poly | 1 | 0.20 | 96.94 | 1 | 33 |
| *Notomastus hemipodus* | Ann | Poly | 1 | 0.20 | 97.14 | 1 | 33 |
| Onuphidae (LPIL) | Ann | Poly | 1 | 0.20 | 97.35 | 1 | 33 |
| Ophiuroidea (LPIL) | Ech | Ophi | 1 | 0.20 | 97.55 | 1 | 33 |
| Paraonidae (LPIL) | Ann | Poly | 1 | 0.20 | 97.76 | 1 | 33 |
| *Phascolion strombi* | Sip | – | 1 | 0.20 | 97.96 | 1 | 33 |
| *Phyllodoce* (LPIL) | Ann | Poly | 1 | 0.20 | 98.16 | 1 | 33 |
| Pinnotheridae (LPIL) | Art | Mala | 1 | 0.20 | 98.37 | 1 | 33 |
| *Podarkeopsis levifuscina* | Ann | Poly | 1 | 0.20 | 98.57 | 1 | 33 |
| Sigalionidae (LPIL) | Ann | Poly | 1 | 0.20 | 98.78 | 1 | 33 |
| Sipuncula (LPIL) | Sip | – | 1 | 0.20 | 98.98 | 1 | 33 |
| Squillidae (LPIL) | Art | Mala | 1 | 0.20 | 99.18 | 1 | 33 |
| *Syllis danieli* | Ann | Poly | 1 | 0.20 | 99.39 | 1 | 33 |
| Turridae (LPIL) | Mol | Gast | 1 | 0.20 | 99.59 | 1 | 33 |
| *Volvulella* (LPIL) | Mol | Gast | 1 | 0.20 | 99.80 | 1 | 33 |
| Xanthidae (LPIL) | Art | Mala | 1 | 0.20 | 100.00 | 1 | 33 |

**Taxa Key**

Ann = Annelida
Poly = Polychaeta
Art = Arthropoda
Mala = Malacostraca
Ech = Echinodermata
Ophi = Ophiuroidea
Mol = Mollusca
Biva = Bivalvia
Gast = Gastropoda
Rhy = Rhynchocoela
Anop = Anopla
Sip = Sipuncula

Table 121. Percentage abundance of dominant taxa (>10% of the total) for the LOOP - Offshore stations, August 2001.

| **Taxa** | **481** | **482** | **484** |
|---|---|---|---|
| **Annelida** | | | |
| Polychaeta | | | |
| Nereididae (LPIL) | 18.8 | | |
| *Paraprionospio pinnata* | | 47.4 | |

Table 122. Summary of benthic macroinfaunal data for the LOOP - Offshore stations, August 2001.

| Station | Rep | Taxa | Indvs | Density | Mean No. Taxa | Taxa (SD) | Mean Density | Density (SD) | Total No. Taxa | Total No. Individuals | H' Diversity | J' Evenness |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **481** | A | 15 | 43 | 430 | 17.3 | 6.0 | 341.4 | 204.0 | 64 | 239 | 3.55 | 0.85 |
| | B | 19 | 27 | 270 | | | | | | | | |
| | C | 15 | 18 | 180 | | | | | | | | |
| | D | 15 | 17 | 170 | | | | | | | | |
| | E | 12 | 27 | 270 | | | | | | | | |
| | F | 15 | 31 | 310 | | | | | | | | |
| | G | 30 | 76 | 760 | | | | | | | | |
| **482** | A | 6 | 13 | 130 | 8.4 | 1.5 | 217.1 | 71.6 | 26 | 152 | 2.15 | 0.66 |
| | B | 10 | 17 | 170 | | | | | | | | |
| | C | 10 | 29 | 290 | | | | | | | | |
| | D | 9 | 27 | 270 | | | | | | | | |
| | E | 9 | 30 | 300 | | | | | | | | |
| | F | 8 | 22 | 220 | | | | | | | | |
| | G | 7 | 14 | 140 | | | | | | | | |
| **484** | A | 12 | 16 | 160 | 10.1 | 5.9 | 141.4 | 91.0 | 38 | 99 | 3.40 | 0.93 |
| | B | 14 | 18 | 180 | | | | | | | | |
| | C | 9 | 14 | 140 | | | | | | | | |
| | D | 13 | 18 | 180 | | | | | | | | |
| | E | 18 | 28 | 280 | | | | | | | | |
| | F | 2 | 2 | 20 | | | | | | | | |
| | G | 3 | 3 | 30 | | | | | | | | |

Table 123. Summary of overall abundance of major benthic macroinfauna taxonomic groups for the LOOP - Offshore stations, November 2001.

| Taxa | Total No. Taxa | % Total | Total No. Individuals | % Total |
|---|---|---|---|---|
| **Annelida** | | | | |
| Polychaeta | 51 | 57.3 | 305 | 57.9 |
| **Mollusca** | | | | |
| Bivalvia | 10 | 11.2 | 27 | 5.1 |
| Gastropoda | 11 | 12.4 | 79 | 15.0 |
| **Arthropoda** | | | | |
| Malacostraca | 9 | 10.1 | 23 | 4.4 |
| **Echinodermata** | | | | |
| Holothuroidea | 1 | 1.1 | 1 | 0.2 |
| **Rhynchocoela** | | | | |
| Anopla | 2 | 2.2 | 54 | 10.2 |
| Rhynchocoela (LPIL) | 1 | 1.1 | 29 | 5.5 |
| **Other Taxa** | 4 | 4.5 | 9 | 1.7 |
| **Total** | **89** | | **527** | |

Table 124. Summary of abundance of major benthic macroinfaunal taxonomic groups by station for the LOOP - Offshore stations, November 2001.

| Station | Taxa | No. of Taxa | % of Total | No. of Individuals | % of Total |
|---|---|---|---|---|---|
| **481** | Annelida | 44 | 61.1 | 174 | 57.2 |
| | Mollusca | 16 | 22.2 | 66 | 21.7 |
| | Arthropoda | 6 | 8.3 | 10 | 3.3 |
| | Echinodermata | 0 | 0.0 | 0 | 0.0 |
| | Rhynchocoela | 3 | 4.2 | 48 | 15.8 |
| | Other Taxa | 3 | 4.2 | 6 | 2.0 |
| | **Total** | **72** | | **304** | |
| **482** | Annelida | 23 | 69.7 | 47 | 70.1 |
| | Mollusca | 1 | 3.0 | 1 | 1.5 |
| | Arthropoda | 4 | 12.1 | 8 | 11.9 |
| | Echinodermata | 0 | 0.0 | 0 | 0.0 |
| | Rhynchocoela | 3 | 9.1 | 9 | 13.4 |
| | Other Taxa | 2 | 6.1 | 2 | 3.0 |
| | **Total** | **33** | | **67** | |
| **484** | Annelida | 29 | 56.9 | 84 | 53.8 |
| | Mollusca | 14 | 27.5 | 39 | 25.0 |
| | Arthropoda | 3 | 5.9 | 5 | 3.2 |
| | Echinodermata | 1 | 2.0 | 1 | 0.6 |
| | Rhynchocoela | 3 | 5.9 | 26 | 16.7 |
| | Other Taxa | 1 | 2.0 | 1 | 0.6 |
| | **Total** | **51** | | **156** | |

Table 125. Distribution and abundance of families for the LOOP - Offshore stations, November 2001.

| Family | Phylum | Class | No. of Individuals | % of Total | Cumulative % | Station Occurrence | % Station Occurrence |
|---|---|---|---|---|---|---|---|
| Spionidae | Ann | Poly | 52 | 9.87 | 9.87 | 3 | 100 |
| Vitrinellidae | Mol | Gast | 44 | 8.35 | 18.22 | 2 | 67 |
| Other Taxa | Mol | Gast | 43 | 8.16 | 26.38 | 3 | 100 |
| Capitellidae | Ann | Poly | 35 | 6.64 | 33.02 | 3 | 100 |
| Lineidae | Rhy | Anop | 33 | 6.26 | 39.28 | 3 | 100 |
| Nereidae | Ann | Poly | 32 | 6.07 | 45.35 | 2 | 67 |
| Lumbrineridae | Ann | Poly | 22 | 4.17 | 49.53 | 3 | 100 |
| Tubulanidae | Rhy | Anop | 21 | 3.98 | 53.51 | 3 | 100 |
| Cirratulidae | Ann | Poly | 19 | 3.61 | 57.12 | 3 | 100 |
| Pilargiidae | Ann | Poly | 19 | 3.61 | 60.72 | 3 | 100 |
| Maldanidae | Ann | Poly | 17 | 3.23 | 63.95 | 3 | 100 |
| Opheliidae | Ann | Poly | 15 | 2.85 | 66.79 | 3 | 100 |
| Nephtyidae | Ann | Poly | 14 | 2.66 | 69.45 | 3 | 100 |
| Paraonidae | Ann | Poly | 14 | 2.66 | 72.11 | 3 | 100 |
| Pinnotheridae | Art | Mala | 13 | 2.47 | 74.57 | 3 | 100 |
| Cossuridae | Ann | Poly | 11 | 2.09 | 76.66 | 3 | 100 |
| Magelonidae | Ann | Poly | 11 | 2.09 | 78.75 | 3 | 100 |
| Terebridae | Mol | Gast | 10 | 1.90 | 80.65 | 1 | 33 |
| Naticidae | Mol | Gast | 8 | 1.52 | 82.16 | 2 | 67 |
| Nuculidae | Mol | Biva | 8 | 1.52 | 83.68 | 2 | 67 |
| Sigalionidae | Ann | Poly | 8 | 1.52 | 85.20 | 3 | 100 |
| Terebellidae | Ann | Poly | 7 | 1.33 | 86.53 | 2 | 67 |
| Phyllodocidae | Ann | Poly | 6 | 1.14 | 87.67 | 2 | 67 |
| Alpheidae | Art | Mala | 5 | 0.95 | 88.61 | 2 | 67 |
| Columbellidae | Mol | Gast | 5 | 0.95 | 89.56 | 2 | 67 |
| Corbulidae | Mol | Biva | 5 | 0.95 | 90.51 | 2 | 67 |
| Goniadidae | Ann | Poly | 5 | 0.95 | 91.46 | 2 | 67 |
| Nuculanidae | Mol | Biva | 5 | 0.95 | 92.41 | 2 | 67 |
| Onuphidae | Ann | Poly | 5 | 0.95 | 93.36 | 3 | 100 |
| Hesionidae | Ann | Poly | 4 | 0.76 | 94.12 | 2 | 67 |
| Pyramidellidae | Mol | Gast | 4 | 0.76 | 94.88 | 3 | 100 |
| Retusidae | Mol | Gast | 3 | 0.57 | 95.45 | 2 | 67 |
| Tellinidae | Mol | Biva | 3 | 0.57 | 96.02 | 2 | 67 |
| Flabelligeridae | Ann | Poly | 2 | 0.38 | 96.39 | 1 | 33 |
| Glyceridae | Ann | Poly | 2 | 0.38 | 96.77 | 1 | 33 |
| Golfingiidae | Sip | - | 2 | 0.38 | 97.15 | 2 | 67 |
| Polynoidae | Ann | Poly | 2 | 0.38 | 97.53 | 2 | 67 |
| Acoetidae | Ann | Poly | 1 | 0.19 | 97.72 | 1 | 33 |
| Ampeliscidae | Art | Mala | 1 | 0.19 | 97.91 | 1 | 33 |
| Amphinomidae | Ann | Poly | 1 | 0.19 | 98.10 | 1 | 33 |
| Arcidae | Mol | Biva | 1 | 0.19 | 98.29 | 1 | 33 |
| Dorvilleidae | Ann | Poly | 1 | 0.19 | 98.48 | 1 | 33 |
| Goneplacidae | Art | Mala | 1 | 0.19 | 98.67 | 1 | 33 |
| Leuconidae | Art | Mala | 1 | 0.19 | 98.86 | 1 | 33 |
| Liljeborgiidae | Art | Mala | 1 | 0.19 | 99.05 | 1 | 33 |
| Ptychoderidae | Hem | Ente | 1 | 0.19 | 99.24 | 1 | 33 |
| Rissoidae | Mol | Gast | 1 | 0.19 | 99.43 | 1 | 33 |
| Synaptidae | Ech | Holo | 1 | 0.19 | 99.62 | 1 | 33 |
| Turridae | Mol | Gast | 1 | 0.19 | 99.81 | 1 | 33 |
| Xanthidae | Art | Mala | 1 | 0.19 | 100.00 | 1 | 33 |

**Taxa Key**

Ann = Annelida
Poly = Polychaeta

Art = Arthropoda
Mala = Malacostraca

Ech = Echinodermata
Holo = Holothuroidea

Hem = Hemichordata
Ente = Enteropneusta

Mol = Mollusca
Biva = Bivalvia
Gast = Gastropoda

Rhy = Rhynchocoela
Anop = Anopla

Sip = Sipuncula

Table 126. Percentage abundance of dominant families (>10% of the total) for the LOOP - Offshore stations, November 2001.

| Taxa | 481 | 482 | 484 |
|---|---|---|---|
| **Annelida** | | | |
| Polychaeta | | | |
| Capitellidae | | | 10.3 |
| Nephtyidae | | 11.9 | |
| Spionidae | | 13.4 | 10.9 |
| **Mollusca** | | | |
| Gastropoda | | | |
| Vitrinellidae | 12.8 | | |
| **Rhynchocoela** | | | |
| Anopla | | | |
| Lineidae | | 10.4 | |

Table 127. Distribution and abundance of taxa for the LOOP - Offshore stations, November 2001.

| Taxon Name | Phylum | Class | No. of Individuals | % of Total | Cumulative % | Station Occurrence | % Station Occurrence |
|---|---|---|---|---|---|---|---|
| *Vitrinella helicoidea* | Mol | Gast | 44 | 8.35 | 8.35 | 2 | 67 |
| Lineidae (LPIL) | Rhy | Anop | 33 | 6.26 | 14.61 | 3 | 100 |
| *Paraprionospio pinnata* | Ann | Poly | 32 | 6.07 | 20.68 | 3 | 100 |
| *Mediomastus* (LPIL) | Ann | Poly | 29 | 5.50 | 26.19 | 3 | 100 |
| Rhynchocoela (LPIL) | Rhy | - | 29 | 5.50 | 31.69 | 3 | 100 |
| *Nereis micromma* | Ann | Poly | 22 | 4.17 | 35.86 | 2 | 67 |
| *Tubulanus* (LPIL) | Rhy | Anop | 21 | 3.98 | 39.85 | 3 | 100 |
| *Ninoe nigripes* | Ann | Poly | 18 | 3.42 | 43.26 | 3 | 100 |
| Spionidae (LPIL) | Ann | Poly | 16 | 3.04 | 46.30 | 3 | 100 |
| *Armandia maculata* | Ann | Poly | 14 | 2.66 | 48.96 | 3 | 100 |
| *Nephtys incisa* | Ann | Poly | 14 | 2.66 | 51.61 | 3 | 100 |
| *Sigambra tentaculata* | Ann | Poly | 14 | 2.66 | 54.27 | 3 | 100 |
| Cirratulidae (LPIL) | Ann | Poly | 10 | 1.90 | 56.17 | 3 | 100 |
| *Terebra* sp. A | Mol | Gast | 10 | 1.90 | 58.06 | 1 | 33 |
| *Monticellina dorsobranchialis* | Ann | Poly | 9 | 1.71 | 59.77 | 3 | 100 |
| *Nucula proxima* | Mol | Biva | 8 | 1.52 | 61.29 | 2 | 67 |
| *Pinnixa cristata* | Art | Mala | 8 | 1.52 | 62.81 | 2 | 67 |
| *Sthenelais* sp. A | Ann | Poly | 8 | 1.52 | 64.33 | 3 | 100 |
| *Tectonatica pusilla* | Mol | Gast | 8 | 1.52 | 65.84 | 2 | 67 |
| *Lysilla* sp. B | Ann | Poly | 7 | 1.33 | 67.17 | 2 | 67 |
| *Sabaco americanus* | Ann | Poly | 7 | 1.33 | 68.50 | 2 | 67 |
| *Cossura delta* | Ann | Poly | 6 | 1.14 | 69.64 | 2 | 67 |
| *Ancistrosyllis jonesi* | Ann | Poly | 5 | 0.95 | 70.59 | 3 | 100 |
| Bivalvia (LPIL) | Mol | Biva | 5 | 0.95 | 71.54 | 2 | 67 |
| *Clymenella torquata* | Ann | Poly | 5 | 0.95 | 72.49 | 1 | 33 |
| *Cosmioconcha calliglypta* | Mol | Gast | 5 | 0.95 | 73.43 | 2 | 67 |
| *Cossura soyeri* | Ann | Poly | 5 | 0.95 | 74.38 | 3 | 100 |
| *Magelona* sp. H | Ann | Poly | 5 | 0.95 | 75.33 | 2 | 67 |
| Maldanidae (LPIL) | Ann | Poly | 5 | 0.95 | 76.28 | 1 | 33 |
| Nereididae (LPIL) | Ann | Poly | 5 | 0.95 | 77.23 | 2 | 67 |
| *Ophioglycera* sp. A | Ann | Poly | 5 | 0.95 | 78.18 | 2 | 67 |
| *Pinnixa* (LPIL) | Art | Mala | 5 | 0.95 | 79.13 | 3 | 100 |
| *Ceratonereis* (LPIL) | Ann | Poly | 4 | 0.76 | 79.89 | 1 | 33 |
| *Cirrophorus* (LPIL) | Ann | Poly | 4 | 0.76 | 80.65 | 2 | 67 |
| *Levinsenia gracilis* | Ann | Poly | 4 | 0.76 | 81.40 | 2 | 67 |
| *Notomastus latericeus* | Ann | Poly | 4 | 0.76 | 82.16 | 3 | 100 |
| *Nuculana concentrica* | Mol | Biva | 4 | 0.76 | 82.92 | 1 | 33 |
| *Podarkeopsis levifuscina* | Ann | Poly | 4 | 0.76 | 83.68 | 2 | 67 |
| *Prionospio* (LPIL) | Ann | Poly | 4 | 0.76 | 84.44 | 3 | 100 |
| Actiniaria (LPIL) | Cni | Anth | 3 | 0.57 | 85.01 | 2 | 67 |
| *Alpheus* sp. D | Art | Mala | 3 | 0.57 | 85.58 | 2 | 67 |
| *Aricidea catherinae* | Ann | Poly | 3 | 0.57 | 86.15 | 1 | 33 |
| *Diopatra cuprea* | Ann | Poly | 3 | 0.57 | 86.72 | 3 | 100 |
| Gastropoda (LPIL) | Mol | Gast | 3 | 0.57 | 87.29 | 2 | 67 |
| Lumbrineridae (LPIL) | Ann | Poly | 3 | 0.57 | 87.86 | 1 | 33 |
| *Magelona* (LPIL) | Ann | Poly | 3 | 0.57 | 88.43 | 3 | 100 |
| *Magelona* sp. I | Ann | Poly | 3 | 0.57 | 88.99 | 3 | 100 |
| Paraonidae (LPIL) | Ann | Poly | 3 | 0.57 | 89.56 | 2 | 67 |
| *Phyllodoce* (LPIL) | Ann | Poly | 3 | 0.57 | 90.13 | 1 | 33 |
| Sipuncula (LPIL) | Sip | - | 3 | 0.57 | 90.70 | 1 | 33 |
| *Volvulella texasiana* | Mol | Gast | 3 | 0.57 | 91.27 | 2 | 67 |
| *Alpheus* (LPIL) | Art | Mala | 2 | 0.38 | 91.65 | 1 | 33 |
| *Brada villosa* | Ann | Poly | 2 | 0.38 | 92.03 | 1 | 33 |
| *Corbula swiftiana* | Mol | Biva | 2 | 0.38 | 92.41 | 1 | 33 |
| *Phascolion strombi* | Sip | - | 2 | 0.38 | 92.79 | 2 | 67 |
| *Phyllodoce mucosa* | Ann | Poly | 2 | 0.38 | 93.17 | 1 | 33 |

Table 127 continued:

| Taxon Name | Phylum | Class | No. of Individuals | % of Total | Cumulative % | Station Occurrence | % Station Occurrence |
|---|---|---|---|---|---|---|---|
| *Tellina* (LPIL) | Mol | Biva | 2 | 0.38 | 93.55 | 2 | 67 |
| *Turbonilla* (LPIL) | Mol | Gast | 2 | 0.38 | 93.93 | 2 | 67 |
| *Varicorbula operculata* | Mol | Biva | 2 | 0.38 | 94.31 | 2 | 67 |
| Acoetidae (LPIL) | Ann | Poly | 1 | 0.19 | 94.50 | 1 | 33 |
| *Ampelisca* (LPIL) | Art | Mala | 1 | 0.19 | 94.69 | 1 | 33 |
| Arcidae (LPIL) | Mol | Biva | 1 | 0.19 | 94.88 | 1 | 33 |
| *Balanoglossus* (LPIL) | Hemi | Ente | 1 | 0.19 | 95.07 | 1 | 33 |
| *Capitella capitata* | Ann | Poly | 1 | 0.19 | 95.26 | 1 | 33 |
| *Chasmocarcinus mississippiensis* | Art | Mala | 1 | 0.19 | 95.45 | 1 | 33 |
| *Corbula contracta* | Mol | Biva | 1 | 0.19 | 95.64 | 1 | 33 |
| *Glycera* (LPIL) | Ann | Poly | 1 | 0.19 | 95.83 | 1 | 33 |
| *Glycera americana* | Ann | Poly | 1 | 0.19 | 96.02 | 1 | 33 |
| *Kinbergonuphis* (LPIL) | Ann | Poly | 1 | 0.19 | 96.20 | 1 | 33 |
| *Lepidasthenia varia* | Ann | Poly | 1 | 0.19 | 96.39 | 1 | 33 |
| *Leptosynapta* (LPIL) | Ech | Holo | 1 | 0.19 | 96.58 | 1 | 33 |
| *Leucon americanus* | Art | Mala | 1 | 0.19 | 96.77 | 1 | 33 |
| Liljeborgiidae (LPIL) | Art | Mala | 1 | 0.19 | 96.96 | 1 | 33 |
| *Macoma tageliformis* | Mol | Biva | 1 | 0.19 | 97.15 | 1 | 33 |
| *Nereis succinea* | Ann | Poly | 1 | 0.19 | 97.34 | 1 | 33 |
| *Notomastus* (LPIL) | Ann | Poly | 1 | 0.19 | 97.53 | 1 | 33 |
| Nuculanidae (LPIL) | Mol | Biva | 1 | 0.19 | 97.72 | 1 | 33 |
| *Odostomia* (LPIL) | Mol | Gast | 1 | 0.19 | 97.91 | 1 | 33 |
| Onuphidae (LPIL) | Ann | Poly | 1 | 0.19 | 98.10 | 1 | 33 |
| Opheliidae (LPIL) | Ann | Poly | 1 | 0.19 | 98.29 | 1 | 33 |
| *Paramphinome* sp. B | Ann | Poly | 1 | 0.19 | 98.48 | 1 | 33 |
| *Phyllodoce arenae* | Ann | Poly | 1 | 0.19 | 98.67 | 1 | 33 |
| Polynoidae (LPIL) | Ann | Poly | 1 | 0.19 | 98.86 | 1 | 33 |
| Rissoidae Genus A | Mol | Gast | 1 | 0.19 | 99.05 | 1 | 33 |
| *Schistomeringos rudolphi* | Ann | Poly | 1 | 0.19 | 99.24 | 1 | 33 |
| *Scoletoma verrilli* | Ann | Poly | 1 | 0.19 | 99.43 | 1 | 33 |
| *Turbonilla conradi* | Mol | Gast | 1 | 0.19 | 99.62 | 1 | 33 |
| Turridae (LPIL) | Mol | Gast | 1 | 0.19 | 99.81 | 1 | 33 |
| Xanthidae (LPIL) | Art | Mala | 1 | 0.19 | 100.00 | 1 | 33 |

**Taxa Key**

Ann = Annelida
Poly = Polychaeta

Cni = Cnidaria
Anth = Anthozoa

Hem = Hemichordata
Ente = Enteropneusta

Rhy = Rhynchocoela
Anop = Anopla

Art = Arthropoda
Mala = Malacostraca

Ech = Echinodermata
Holo = Holothuroidea

Mol = Mollusca
Biva = Bivalvia
Gast = Gastropoda

Sip = Sipuncula

Table 128. Percentage abundance of dominant taxa (>10% of the total) for the LOOP - Offshore stations, November 2001.

| Taxa | 481 | 482 | 484 |
|---|---|---|---|
| **Annelida** | | | |
| Polychaeta | | | |
| *Nephtys incisa* | | 11.9 | |
| **Mollusca** | | | |
| Gastropoda | | | |
| *Vitrinella helicoidea* | 12.8 | | |
| **Rhynchocoela** | | | |
| Anopla | | | |
| Lineidae (LPIL) | | 10.4 | |

Table 129. Summary of benthic macroinfaunal data for the LOOP - Offshore stations, November 2001.

| Station | Rep | Taxa | Indvs | Density | Mean No. Taxa | Taxa (SD) | Mean Density | Density (SD) | Total No. Taxa | Total No. Individuals | H' Diversity | J' Evenness |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **481** | A | 27 | 43 | 430 | 23.1 | 6.7 | 434.3 | 140.1 | 72 | 304 | 3.70 | 0.87 |
| | B | 22 | 43 | 430 | | | | | | | | |
| | C | 20 | 37 | 370 | | | | | | | | |
| | D | 16 | 41 | 410 | | | | | | | | |
| | E | 31 | 64 | 640 | | | | | | | | |
| | F | 15 | 20 | 200 | | | | | | | | |
| | G | 31 | 56 | 560 | | | | | | | | |
| **482** | A | 10 | 12 | 120 | 10.0 | 1.4 | 95.7 | 68.0 | 33 | 67 | 3.18 | 0.91 |
| | B | 12 | 17 | 170 | | | | | | | | |
| | C | 0 | 0 | 0 | | | | | | | | |
| | D | 8 | 11 | 110 | | | | | | | | |
| | E | 10 | 14 | 140 | | | | | | | | |
| | F | 10 | 13 | 130 | | | | | | | | |
| | G | 0 | 0 | 0 | | | | | | | | |
| **484** | A | 0 | 0 | 0 | 16.5 | 2.9 | 222.9 | 123.7 | 51 | 156 | 3.53 | 0.90 |
| | B | 15 | 23 | 230 | | | | | | | | |
| | C | 19 | 30 | 300 | | | | | | | | |
| | D | 16 | 25 | 250 | | | | | | | | |
| | E | 14 | 16 | 160 | | | | | | | | |
| | F | 14 | 22 | 220 | | | | | | | | |
| | G | 21 | 40 | 400 | | | | | | | | |

Table 130. Summary of overall abundance of major benthic macroinfaunal taxonomic groups for the LOOP - Offshore stations, June 2002.

| Taxa | Total No. Taxa | % of Total | Total No. Individuals | % of Total |
|---|---|---|---|---|
| **Annelida** | | | | |
| Oligochaeta | 1 | 1.0 | 2 | 0.2 |
| Polychaeta | 53 | 54.1 | 552 | 65.4 |
| **Mollusca** | | | | |
| Bivalvia | 8 | 8.2 | 130 | 15.4 |
| Gastropoda | 14 | 14.3 | 70 | 8.3 |
| **Arthropoda** | | | | |
| Malacostraca | 15 | 15.3 | 44 | 5.2 |
| **Echinodermata** | | | | |
| Ophiuroidea | 1 | 1.0 | 1 | 0.1 |
| **Other Taxa** | 6 | 6.1 | 45 | 5.3 |
| **Total** | **98** | | **844** | |

Table 131. Summary of abundance of major benthic macroinfaunal taxonomic groups by station for the LOOP - Offshore stations, June 2002.

| Station | Taxa | No. of Taxa | % of Total | No. of Individuals | % of Total |
|---|---|---|---|---|---|
| **481** | Annelida | 39 | 57.4 | 199 | 63.0 |
| | Mollusca | 15 | 22.1 | 67 | 21.2 |
| | Arthropoda | 7 | 10.3 | 21 | 6.6 |
| | Echinodermata | 1 | 1.5 | 1 | 0.3 |
| | Other Taxa | 6 | 8.8 | 28 | 8.9 |
| | **Total** | **68** | | **316** | |
| **482** | Annelida | 28 | 53.8 | 183 | 68.8 |
| | Mollusca | 11 | 21.2 | 62 | 23.3 |
| | Arthropoda | 10 | 19.2 | 13 | 4.9 |
| | Echinodermata | 0 | 0.0 | 0 | 0.0 |
| | Other Taxa | 3 | 5.8 | 8 | 3.0 |
| | **Total** | **52** | | **266** | |
| **484** | Annelida | 37 | 60.7 | 172 | 65.6 |
| | Mollusca | 13 | 21.3 | 71 | 27.1 |
| | Arthropoda | 7 | 11.5 | 10 | 3.8 |
| | Echinodermata | 0 | 0.0 | 0 | 0.0 |
| | Other Taxa | 4 | 6.6 | 9 | 3.4 |
| | **Total** | **61** | | **262** | |

Table 132. Distribution and abundance of families forthe LOOP - Offshore stations, June 2002.

| Family | Phylum | Class | No. of Individuals | % of Total | Cumulative % | Station Occurrence | % Station Occurrence |
|---|---|---|---|---|---|---|---|
| Spionidae | Ann | Poly | 137 | 16.23 | 16.23 | 3 | 100 |
| Capitellidae | Ann | Poly | 126 | 14.93 | 31.16 | 3 | 100 |
| Nuculanidae | Mol | Biva | 103 | 12.20 | 43.36 | 3 | 100 |
| Nephtyidae | Ann | Poly | 70 | 8.29 | 51.66 | 3 | 100 |
| Other Taxa | Rhy | – | 40 | 4.74 | 56.40 | 3 | 100 |
| Lumbrineridae | Ann | Poly | 29 | 3.44 | 59.83 | 3 | 100 |
| Magelonidae | Ann | Poly | 29 | 3.44 | 63.27 | 3 | 100 |
| Opheliidae | Ann | Poly | 28 | 3.32 | 66.59 | 3 | 100 |
| Cirratulidae | Ann | Poly | 25 | 2.96 | 69.55 | 3 | 100 |
| Onuphidae | Ann | Poly | 25 | 2.96 | 72.51 | 3 | 100 |
| Columbellidae | Mol | Gast | 22 | 2.61 | 75.12 | 3 | 100 |
| Vitrinellidae | Mol | Gast | 21 | 2.49 | 77.61 | 3 | 100 |
| Maldanidae | Ann | Poly | 18 | 2.13 | 79.74 | 2 | 67 |
| Pinnotheridae | Art | Mala | 15 | 1.78 | 81.52 | 2 | 67 |
| Paraonidae | Ann | Poly | 14 | 1.66 | 83.18 | 3 | 100 |
| Tubulanidae | Rhy | Anop | 14 | 1.66 | 84.83 | 3 | 100 |
| Goniadidae | Ann | Poly | 12 | 1.42 | 86.26 | 2 | 67 |
| Pilargiidae | Ann | Poly | 12 | 1.42 | 87.68 | 2 | 67 |
| Pyramidellidae | Mol | Gast | 12 | 1.42 | 89.10 | 3 | 100 |
| Lineidae | Rhy | Anop | 11 | 1.30 | 90.40 | 3 | 100 |
| Nereidae | Ann | Poly | 9 | 1.07 | 91.47 | 3 | 100 |
| Goneplacidae | Art | Mala | 9 | 1.07 | 92.54 | 3 | 100 |
| Cossuridae | Ann | Poly | 8 | 0.95 | 93.48 | 2 | 67 |
| Retusidae | Mol | Gast | 7 | 0.83 | 94.31 | 3 | 100 |
| Alpheidae | Art | Mala | 5 | 0.59 | 94.91 | 2 | 67 |
| Nuculidae | Mol | Biva | 4 | 0.47 | 95.38 | 2 | 67 |
| Hesionidae | Ann | Poly | 3 | 0.36 | 95.73 | 2 | 67 |
| Ampeliscidae | Art | Mala | 3 | 0.36 | 96.09 | 3 | 100 |
| Naticidae | Mol | Gast | 3 | 0.36 | 96.45 | 1 | 33 |
| Golfingiidae | Sip | – | 3 | 0.36 | 96.80 | 2 | 67 |
| Tubificidae | Ann | Olig | 2 | 0.24 | 97.04 | 2 | 67 |
| Phyllodocidae | Ann | Poly | 2 | 0.24 | 97.27 | 2 | 67 |
| Terebellidae | Ann | Poly | 2 | 0.24 | 97.51 | 2 | 67 |
| Liljeborgiidae | Art | Mala | 2 | 0.24 | 97.75 | 2 | 67 |
| Corbulidae | Mol | Biva | 2 | 0.24 | 97.99 | 2 | 67 |
| Tellinidae | Mol | Biva | 2 | 0.24 | 98.22 | 1 | 33 |
| Phoronidae | Pho | – | 2 | 0.24 | 98.46 | 1 | 33 |
| Ampharetidae | Ann | Poly | 1 | 0.12 | 98.58 | 1 | 33 |
| Orbiniidae | Ann | Poly | 1 | 0.12 | 98.70 | 1 | 33 |
| Polynoidae | Ann | Poly | 1 | 0.12 | 98.82 | 1 | 33 |
| Isaeidae | Art | Mala | 1 | 0.12 | 98.93 | 1 | 33 |
| Leuconidae | Art | Mala | 1 | 0.12 | 99.05 | 1 | 33 |
| Oedicerotidae | Art | Mala | 1 | 0.12 | 99.17 | 1 | 33 |
| Processidae | Art | Mala | 1 | 0.12 | 99.29 | 1 | 33 |
| Mactridae | Mol | Biva | 1 | 0.12 | 99.41 | 1 | 33 |
| Semelidae | Mol | Biva | 1 | 0.12 | 99.53 | 1 | 33 |
| Nassariidae | Mol | Gast | 1 | 0.12 | 99.64 | 1 | 33 |
| Rissoidae | Mol | Gast | 1 | 0.12 | 99.76 | 1 | 33 |
| Scaphandridae | Mol | Gast | 1 | 0.12 | 99.88 | 1 | 33 |
| Aspidosiphonidae | Sip | – | 1 | 0.12 | 100.00 | 1 | 33 |

**Taxa Key**

Ann = Annelida
- Olig = Oligochaeta
- Poly = Polychaeta

Art = Arthropoda
- Mala = Malacostraca

Mol = Mollusca
- Biva = Bivalvia
- Gast = Gastropoda

Pho = Phoronida

Rhy = Rhynchocoela
- Anop = Anopla

Sip = Sipuncula

Table 133. Percentage abundance of families (>10% of the total) for the LOOP - Offshore stations, June 2002.

| Taxa | 481 | 482 | 484 |
|---|---|---|---|
| **Annelida** | | | |
| Polychaeta | | | |
| Capitellidae | 17.4 | 12.0 | 14.9 |
| Nephtyidae | | 18.0 | |
| Spionidae | 12.7 | 17.7 | 19.1 |
| **Mollusca** | | | |
| Bivalvia | | | |
| Nuculanidae | 10.4 | 11.7 | 14.9 |

Table 134. Distribution and abundance of taxa for the LOOP - Offshore stations, June 2002.

| Taxon Name | Phylum | Class | No. of Individuals | % of Total | Cumulative % | Station Occurrence | % Station Occurrence |
|---|---|---|---|---|---|---|---|
| *Paraprionospio pinnata* | Ann | Poly | 114 | 13.51 | 13.51 | 3 | 100 |
| *Mediomastus* (LPIL) | Ann | Poly | 87 | 10.31 | 23.82 | 3 | 100 |
| *Nephtys incisa* | Ann | Poly | 67 | 7.94 | 31.75 | 3 | 100 |
| Nuculanidae (LPIL) | Mol | Biva | 55 | 6.52 | 38.27 | 3 | 100 |
| *Nuculana concentrica* | Mol | Biva | 48 | 5.69 | 43.96 | 2 | 67 |
| *Armandia maculata* | Ann | Poly | 28 | 3.32 | 47.27 | 3 | 100 |
| *Vitrinella helicoidea* | Mol | Gast | 20 | 2.37 | 49.64 | 3 | 100 |
| *Ninoe nigripes* | Ann | Poly | 19 | 2.25 | 51.90 | 3 | 100 |
| *Notomastus daueri* | Ann | Poly | 19 | 2.25 | 54.15 | 3 | 100 |
| *Magelona* sp. H | Ann | Poly | 18 | 2.13 | 56.28 | 2 | 67 |
| Bivalvia (LPIL) | Mol | Biva | 17 | 2.01 | 58.29 | 3 | 100 |
| Cirratulidae (LPIL) | Ann | Poly | 15 | 1.78 | 60.07 | 3 | 100 |
| *Diopatra cuprea* | Ann | Poly | 15 | 1.78 | 61.85 | 3 | 100 |
| *Pinnixa* sp. A | Art | Mala | 15 | 1.78 | 63.63 | 2 | 67 |
| *Tubulanus* (LPIL) | Rhy | Anop | 14 | 1.66 | 65.28 | 3 | 100 |
| Rhynchocoela (LPIL) | Rhy | – | 14 | 1.66 | 66.94 | 3 | 100 |
| *Notomastus* (LPIL) | Ann | Poly | 13 | 1.54 | 68.48 | 2 | 67 |
| Columbellidae (LPIL) | Mol | Gast | 12 | 1.42 | 69.91 | 3 | 100 |
| Lineidae (LPIL) | Rhy | Anop | 11 | 1.30 | 71.21 | 3 | 100 |
| *Sabaco americanus* | Ann | Poly | 10 | 1.18 | 72.39 | 2 | 67 |
| *Glycinde solitaria* | Ann | Poly | 9 | 1.07 | 73.46 | 1 | 33 |
| *Monticellina dorsobranchialis* | Ann | Poly | 9 | 1.07 | 74.53 | 2 | 67 |
| Spionidae (LPIL) | Ann | Poly | 9 | 1.07 | 75.59 | 3 | 100 |
| *Turbonilla* (LPIL) | Mol | Gast | 9 | 1.07 | 76.66 | 3 | 100 |
| *Nereis micromma* | Ann | Poly | 8 | 0.95 | 77.61 | 3 | 100 |
| *Prionospio lighti* | Ann | Poly | 8 | 0.95 | 78.55 | 2 | 67 |
| *Speocarcinus lobatus* | Art | Mala | 8 | 0.95 | 79.50 | 3 | 100 |
| *Cossura soyeri* | Ann | Poly | 7 | 0.83 | 80.33 | 2 | 67 |
| Lumbrineridae (LPIL) | Ann | Poly | 7 | 0.83 | 81.16 | 3 | 100 |
| Maldanidae (LPIL) | Ann | Poly | 7 | 0.83 | 81.99 | 2 | 67 |
| Onuphidae (LPIL) | Ann | Poly | 7 | 0.83 | 82.82 | 3 | 100 |
| *Sigambra tentaculata* | Ann | Poly | 6 | 0.71 | 83.53 | 2 | 67 |
| *Anachis* (LPIL) | Mol | Gast | 6 | 0.71 | 84.24 | 2 | 67 |
| *Volvulella texasiana* | Mol | Gast | 6 | 0.71 | 84.95 | 3 | 100 |
| *Ancistrosyllis jonesi* | Ann | Poly | 5 | 0.59 | 85.55 | 1 | 33 |
| *Aricidea* (LPIL) | Ann | Poly | 5 | 0.59 | 86.14 | 2 | 67 |
| *Magelona* sp. I | Ann | Poly | 5 | 0.59 | 86.73 | 3 | 100 |
| *Prionospio* (LPIL) | Ann | Poly | 5 | 0.59 | 87.32 | 2 | 67 |
| Decapoda (LPIL) | Art | Mala | 5 | 0.59 | 87.91 | 3 | 100 |
| Capitellidae (LPIL) | Ann | Poly | 4 | 0.47 | 88.39 | 3 | 100 |
| *Magelona* (LPIL) | Ann | Poly | 4 | 0.47 | 88.86 | 3 | 100 |
| *Nucula aegeenis* | Mol | Biva | 4 | 0.47 | 89.34 | 2 | 67 |
| *Cosmioconcha calliglypta* | Mol | Gast | 4 | 0.47 | 89.81 | 1 | 33 |
| *Aricidea* sp. AK | Ann | Poly | 3 | 0.36 | 90.17 | 2 | 67 |
| *Nephtys* (LPIL) | Ann | Poly | 3 | 0.36 | 90.52 | 2 | 67 |
| *Notomastus latericeus* | Ann | Poly | 3 | 0.36 | 90.88 | 2 | 67 |
| *Podarkeopsis levifuscina* | Ann | Poly | 3 | 0.36 | 91.23 | 2 | 67 |
| *Scoletoma verrilli* | Ann | Poly | 3 | 0.36 | 91.59 | 2 | 67 |
| *Ampelisca* (LPIL) | Art | Mala | 3 | 0.36 | 91.94 | 3 | 100 |
| *Tectonatica pusilla* | Mol | Gast | 3 | 0.36 | 92.30 | 1 | 33 |
| *Turbonilla conradi* | Mol | Gast | 3 | 0.36 | 92.65 | 2 | 67 |
| *Phascolion strombi* | Sip | – | 3 | 0.36 | 93.01 | 2 | 67 |
| Tubificidae (LPIL) | Ann | Olig | 2 | 0.24 | 93.25 | 2 | 67 |
| *Kinbergonuphis* (LPIL) | Ann | Poly | 2 | 0.24 | 93.48 | 2 | 67 |

Table 134 continued:

| Taxon Name | Phylum | Class | No. of Individuals | % of Total | Cumulative % | Station Occurrence | % Station Occurrence |
|---|---|---|---|---|---|---|---|
| *Levinsenia gracilis* | Ann | Poly | 2 | 0.24 | 93.72 | 2 | 67 |
| *Lysilla* sp. B | Ann | Poly | 2 | 0.24 | 93.96 | 2 | 67 |
| *Magelona* sp. L | Ann | Poly | 2 | 0.24 | 94.19 | 2 | 67 |
| *Ophioglycera* sp. A | Ann | Poly | 2 | 0.24 | 94.43 | 1 | 33 |
| Paraonidae (LPIL) | Ann | Poly | 2 | 0.24 | 94.67 | 1 | 33 |
| *Alpheus* (LPIL) | Art | Mala | 2 | 0.24 | 94.91 | 2 | 67 |
| *Alpheus* sp. D | Art | Mala | 2 | 0.24 | 95.14 | 2 | 67 |
| *Corbula swiftiana* | Mol | Biva | 2 | 0.24 | 95.38 | 2 | 67 |
| Tellinidae (LPIL) | Mol | Biva | 2 | 0.24 | 95.62 | 1 | 33 |
| Gastropoda (LPIL) | Mol | Gast | 2 | 0.24 | 95.85 | 1 | 33 |
| *Phoronis* (LPIL) | Pho | – | 2 | 0.24 | 96.09 | 1 | 33 |
| Ampharetidae (LPIL) | Ann | Poly | 1 | 0.12 | 96.21 | 1 | 33 |
| *Ancistrosyllis hartmanae* | Ann | Poly | 1 | 0.12 | 96.33 | 1 | 33 |
| *Aricidea catherinae* | Ann | Poly | 1 | 0.12 | 96.45 | 1 | 33 |
| *Chaetozone* sp. D | Ann | Poly | 1 | 0.12 | 96.56 | 1 | 33 |
| *Clymenella torquata* | Ann | Poly | 1 | 0.12 | 96.68 | 1 | 33 |
| *Cossura delta* | Ann | Poly | 1 | 0.12 | 96.80 | 1 | 33 |
| Goniadidae (LPIL) | Ann | Poly | 1 | 0.12 | 96.92 | 1 | 33 |
| *Kinbergonuphis* sp. A | Ann | Poly | 1 | 0.12 | 97.04 | 1 | 33 |
| *Lepidasthenia varia* | Ann | Poly | 1 | 0.12 | 97.16 | 1 | 33 |
| *Levinsenia* (LPIL) | Ann | Poly | 1 | 0.12 | 97.27 | 1 | 33 |
| Nereididae (LPIL) | Ann | Poly | 1 | 0.12 | 97.39 | 1 | 33 |
| Orbiniidae (LPIL) | Ann | Poly | 1 | 0.12 | 97.51 | 1 | 33 |
| *Phyllodoce* (LPIL) | Ann | Poly | 1 | 0.12 | 97.63 | 1 | 33 |
| Phyllodocidae (LPIL) | Ann | Poly | 1 | 0.12 | 97.75 | 1 | 33 |
| *Prionospio perkinsi* | Ann | Poly | 1 | 0.12 | 97.87 | 1 | 33 |
| *Automate* (LPIL) | Art | Mala | 1 | 0.12 | 97.99 | 1 | 33 |
| *Chasmocarcinus mississippiensis* | Art | Mala | 1 | 0.12 | 98.10 | 1 | 33 |
| *Hartmanodes nyei* | Art | Mala | 1 | 0.12 | 98.22 | 1 | 33 |
| *Leucon americanus* | Art | Mala | 1 | 0.12 | 98.34 | 1 | 33 |
| Liljeborgiidae (LPIL) | Art | Mala | 1 | 0.12 | 98.46 | 1 | 33 |
| *Listriella* sp. A | Art | Mala | 1 | 0.12 | 98.58 | 1 | 33 |
| *Photis* (LPIL) | Art | Mala | 1 | 0.12 | 98.70 | 1 | 33 |
| *Processa* (LPIL) | Art | Mala | 1 | 0.12 | 98.82 | 1 | 33 |
| Stomatopoda (LPIL) | Art | Mala | 1 | 0.12 | 98.93 | 1 | 33 |
| Ophiuroidea (LPIL) | Ech | Ophi | 1 | 0.12 | 99.05 | 1 | 33 |
| *Abra aequalis* | Mol | Biva | 1 | 0.12 | 99.17 | 1 | 33 |
| *Mulinia lateralis* | Mol | Biva | 1 | 0.12 | 99.29 | 1 | 33 |
| *Acteocina bidentata* | Mol | Gast | 1 | 0.12 | 99.41 | 1 | 33 |
| *Cyclostremiscus pentagonus* | Mol | Gast | 1 | 0.12 | 99.53 | 1 | 33 |
| *Nassarius acutus* | Mol | Gast | 1 | 0.12 | 99.64 | 1 | 33 |
| Rissoidae Genus A | Mol | Gast | 1 | 0.12 | 99.76 | 1 | 33 |
| *Volvulella* (LPIL) | Mol | Gast | 1 | 0.12 | 99.88 | 1 | 33 |
| *Aspidosiphon* (LPIL) | Sip | – | 1 | 0.12 | 100.00 | 1 | 33 |

**Taxa Key**

Ann = Annelida
- Olig = Oligochaeta
- Poly = Polychaeta

Art = Arthropoda
- Mala = Malacostraca

Ech = Echinodermata
- Ophi = Ophiuroidea

Mol = Mollusca
- Biva = Bivalvia
- Gast = Gastropoda

Pho = Phoronida

Rhy = Rhynchocoela
- Anop = Anopla

Sip = Sipuncula

Table 135 Percentage abundance of dominant taxa (>10% of the total) for the LOOP - Offshore stations, June 2002.

| **Taxa** | **481** | **482** | **484** |
|---|---|---|---|
| **Annelida** | | | |
| Polychaeta | | | |
| *Mediomastus* (LPIL) | 12.0 | | 10.3 |
| *Nephtys incisa* | | 18.0 | |
| *Paraprionospio pinnata* | 11.1 | 14.7 | 15.3 |
| **Mollusca** | | | |
| Bivalvia | | | |
| Nuculanidae (LPIL) | | 11.7 | |

Table 136. Summary of benthic macroinfaunal data for the LOOP - Offshore stations, June 2002.

| Station | Rep | Taxa | Indvs | Density | Mean No. Taxa | Taxa (SD) | Mean Density | Density (SD) | Total No. Taxa | Total No. Individuals | H' Diversity | J' Evenness |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **481** | A | 7 | 9 | 90 | 19.7 | 7.5 | 451.4 | 284.1 | 68 | 316 | 3.53 | 0.84 |
| | B | 27 | 53 | 530 | | | | | | | | |
| | C | 20 | 36 | 360 | | | | | | | | |
| | D | 20 | 98 | 980 | | | | | | | | |
| | E | 29 | 58 | 580 | | | | | | | | |
| | F | 21 | 35 | 350 | | | | | | | | |
| | G | 14 | 27 | 270 | | | | | | | | |
| **482** | A | 22 | 65 | 650 | 14.9 | 5.6 | 380.0 | 182.2 | 52 | 266 | 3.03 | 0.77 |
| | B | 16 | 34 | 340 | | | | | | | | |
| | C | 12 | 28 | 280 | | | | | | | | |
| | D | 11 | 37 | 370 | | | | | | | | |
| | E | 23 | 61 | 610 | | | | | | | | |
| | F | 11 | 22 | 220 | | | | | | | | |
| | G | 9 | 19 | 190 | | | | | | | | |
| **484** | A | 24 | 74 | 740 | 17.9 | 8.2 | 374.3 | 245.2 | 61 | 262 | 3.41 | 0.83 |
| | B | 24 | 33 | 330 | | | | | | | | |
| | C | 5 | 10 | 100 | | | | | | | | |
| | D | 24 | 54 | 540 | | | | | | | | |
| | E | 15 | 24 | 240 | | | | | | | | |
| | F | 24 | 56 | 560 | | | | | | | | |
| | G | 9 | 11 | 110 | | | | | | | | |

Figure 1. Location of the LOOP monitoring stations, 2001-2002.

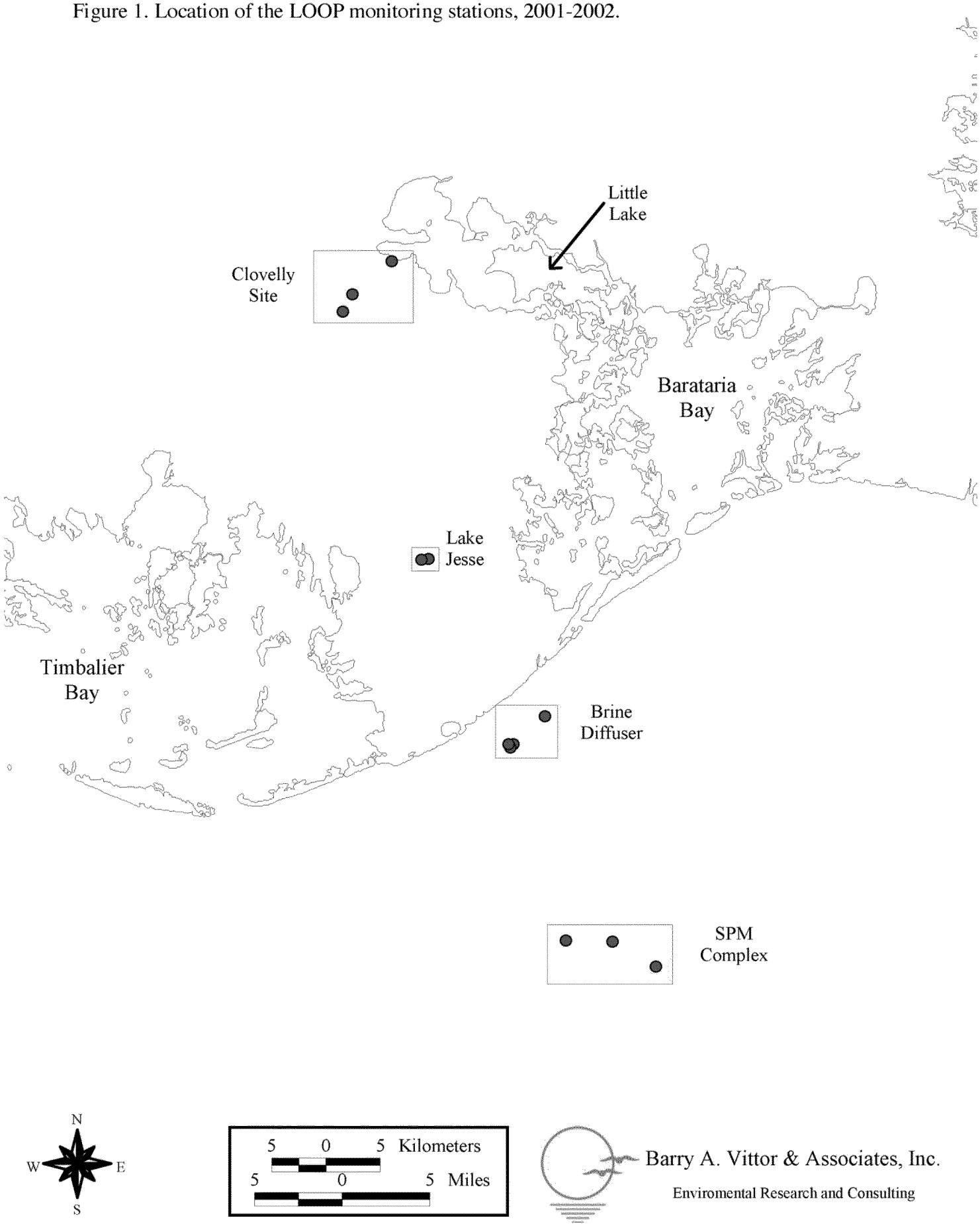
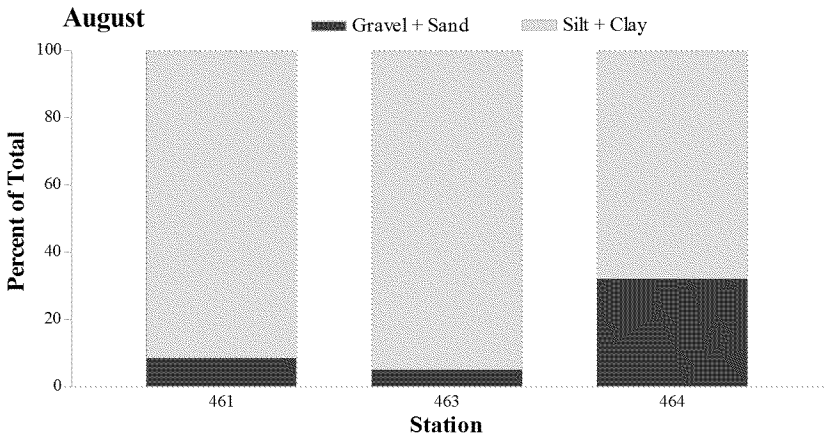
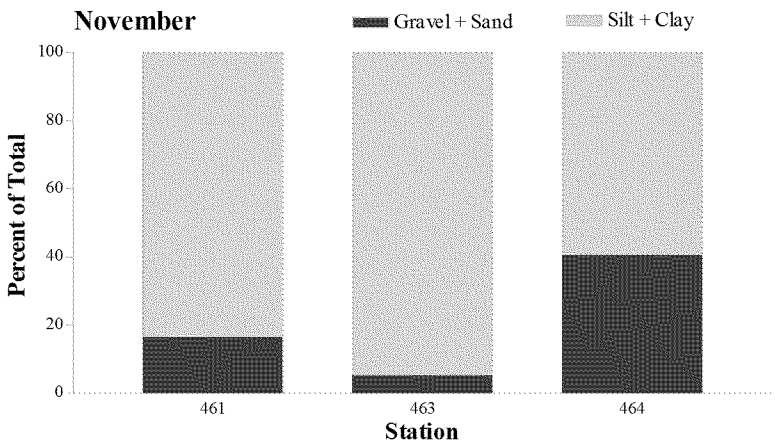


Figure 2. Sediment composition for the LOOP - Clovelly stations, 2000-2001.



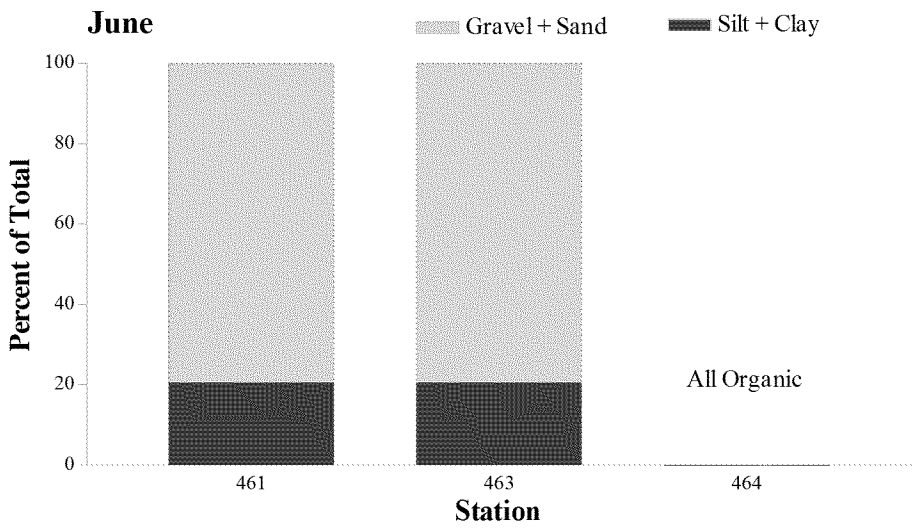



Figure 3. Percent abundance of major taxonomic groups for the LOOP - Clovelly stations, 2001-2002.

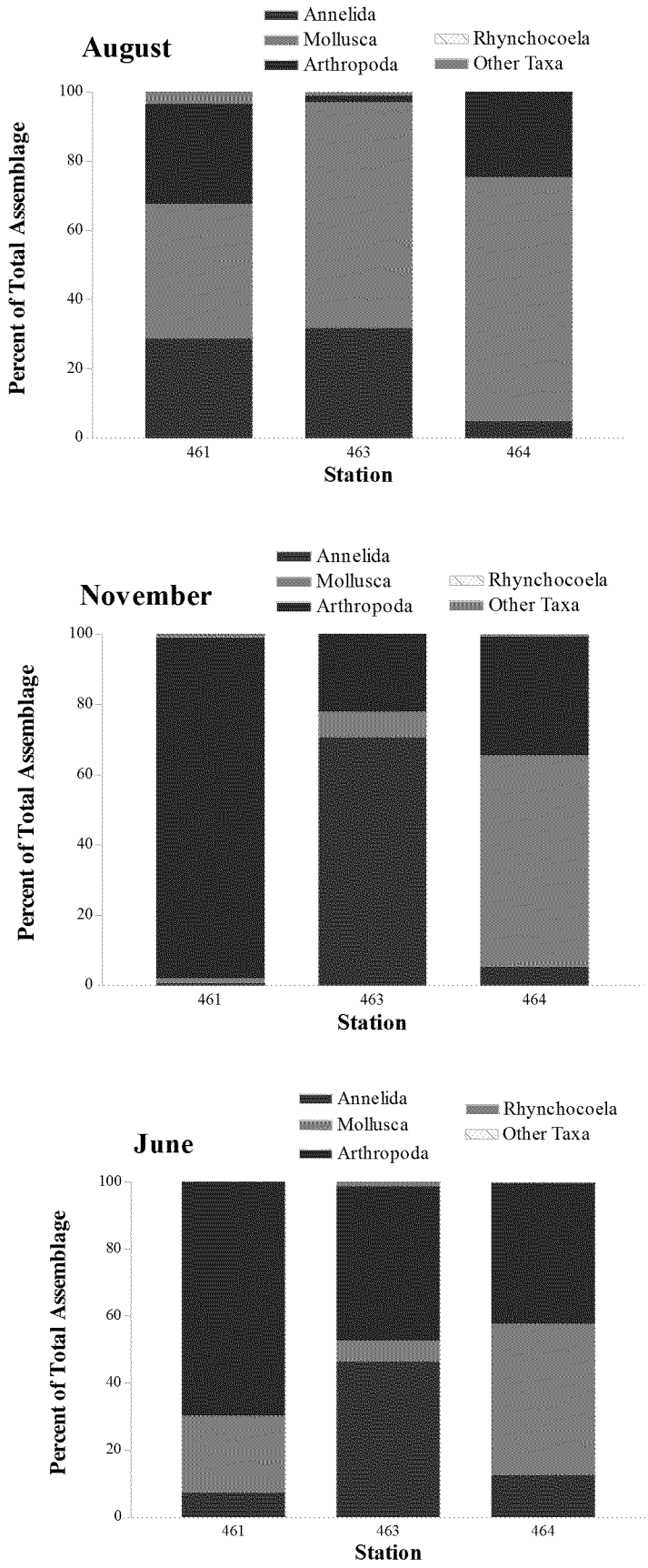
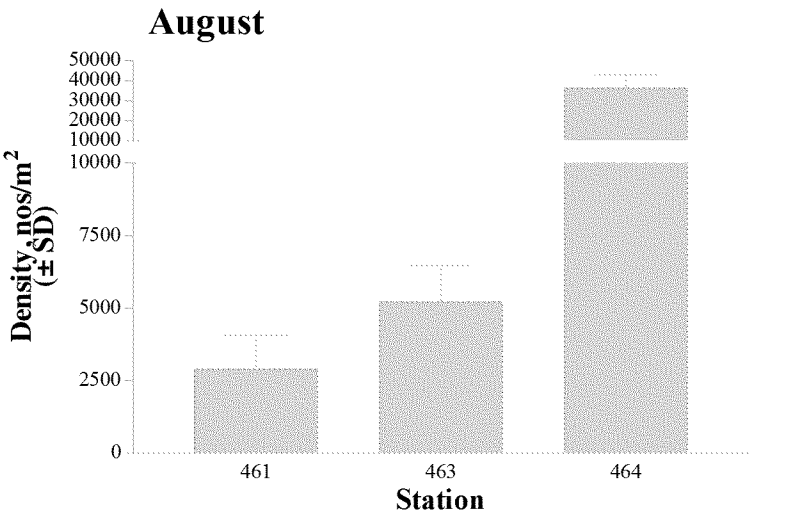
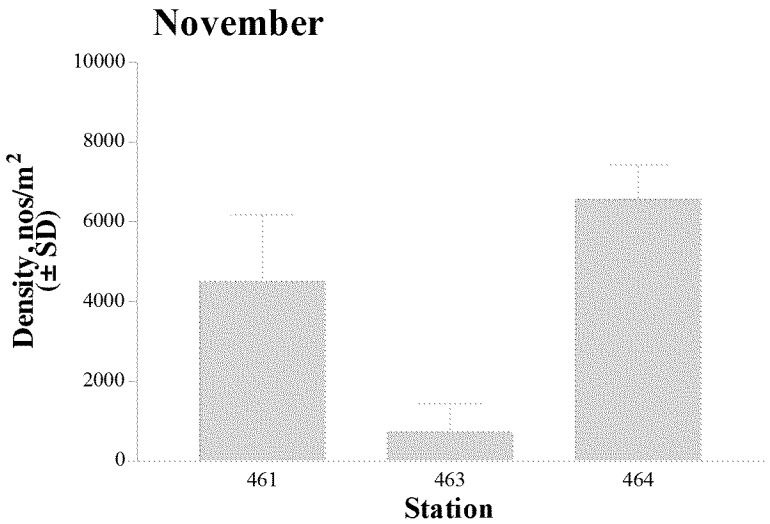


Figure 4. Macroinvertebrate density data for the LOOP - Clovelly stations, 2001-2002.



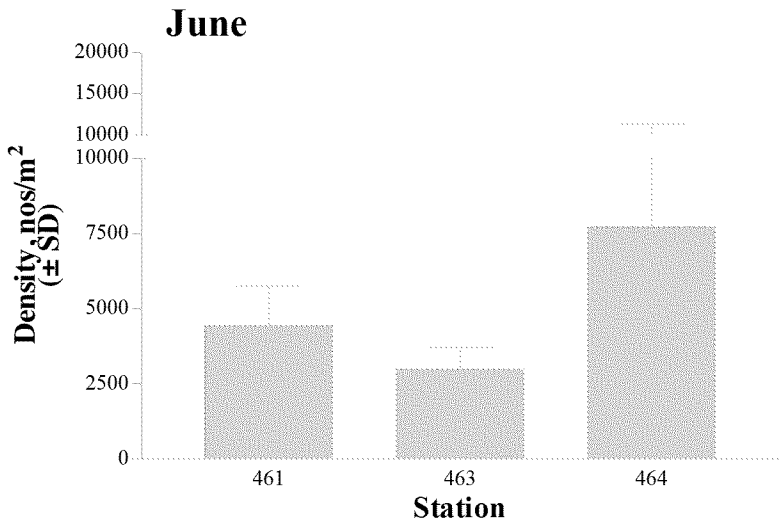
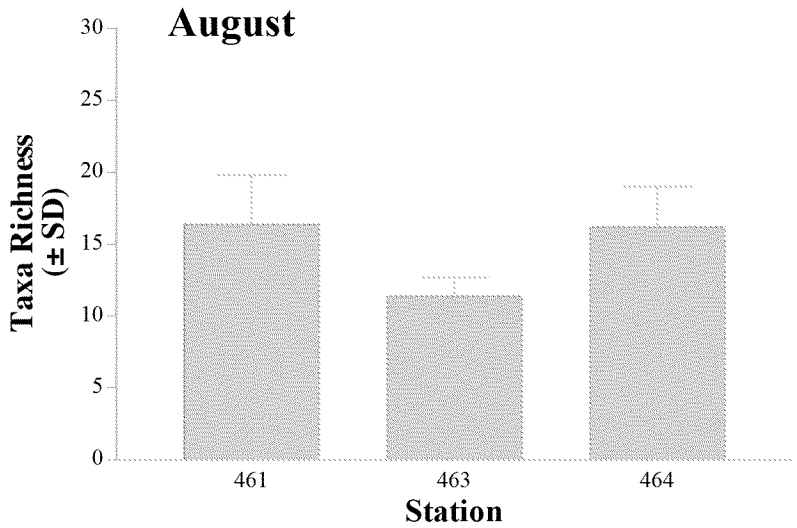
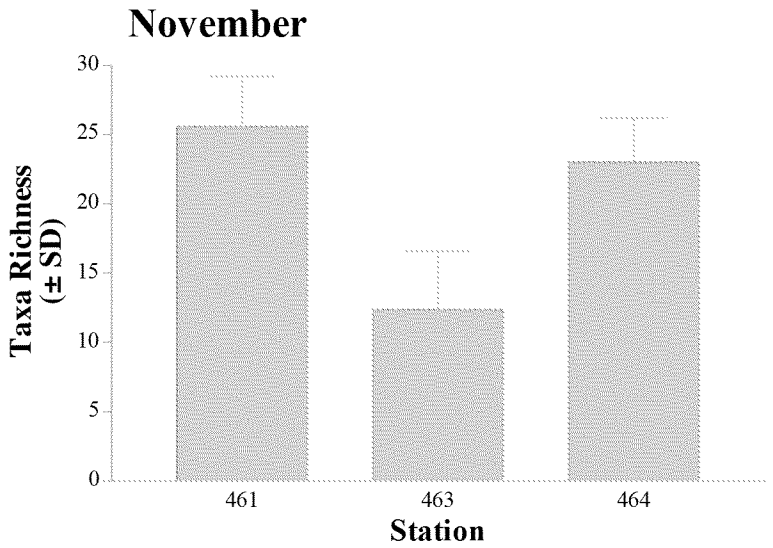



Figure 5. Taxa richness for the LOOP - Clovelly stations, 2001-2002.



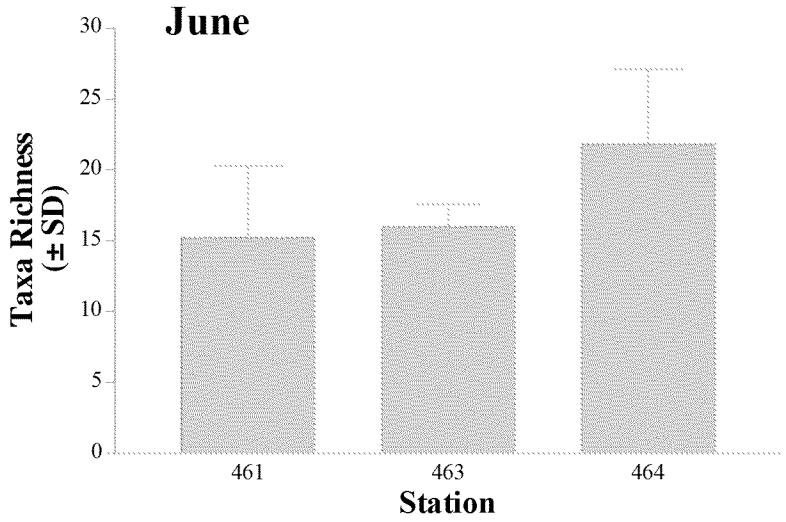



Figure 6. Taxa diversity (H') for the LOOP - Clovelly stations, 2001-2002.

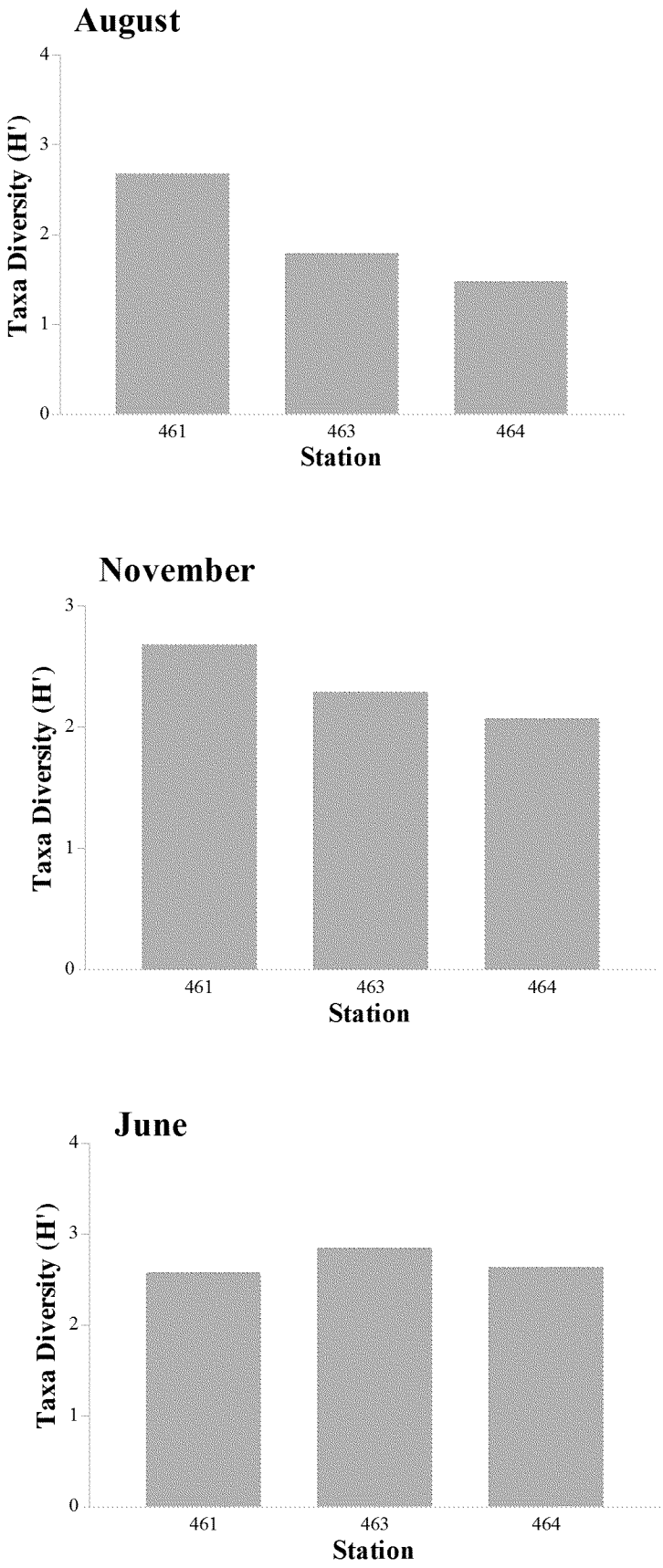
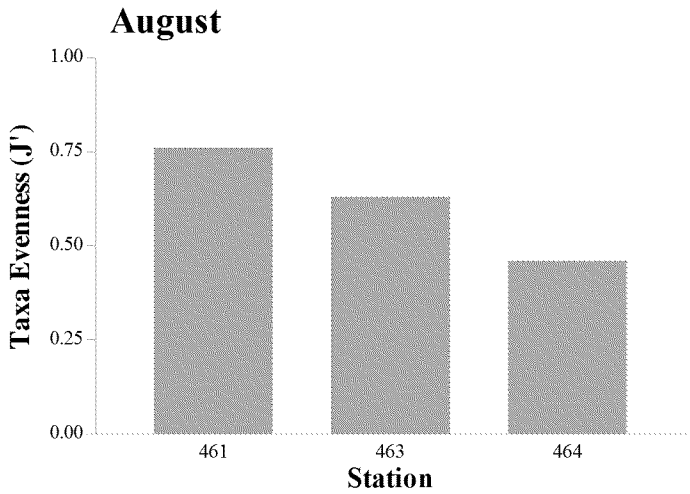
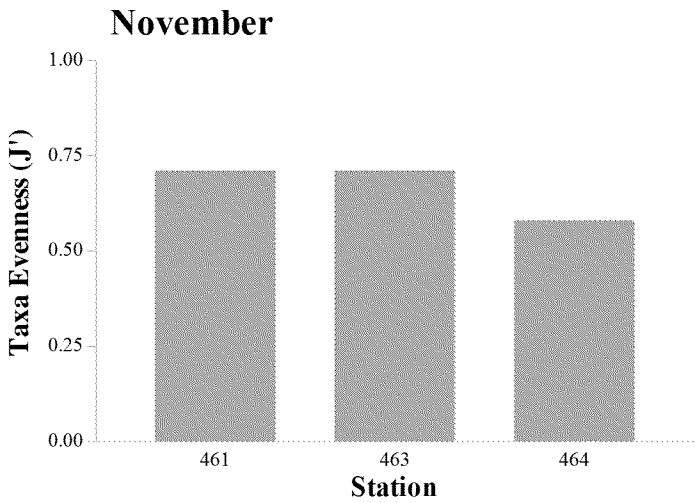


Figure 7. Taxa evenness (J') for the LOOP - Clovelly stations, 2001-2002.



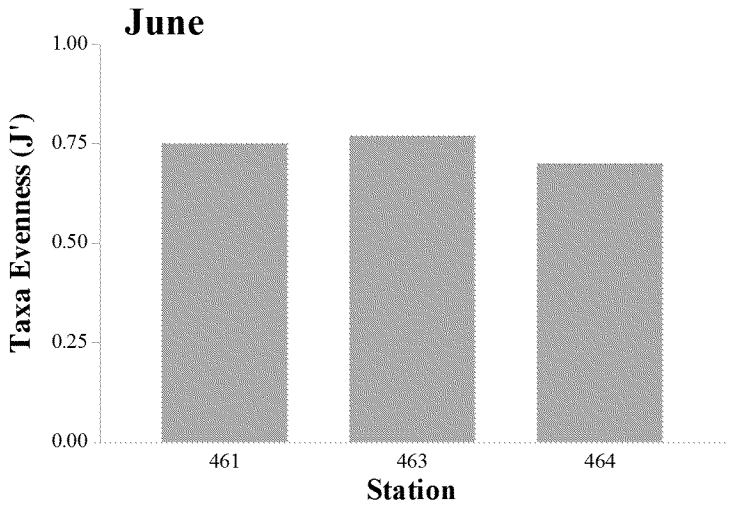
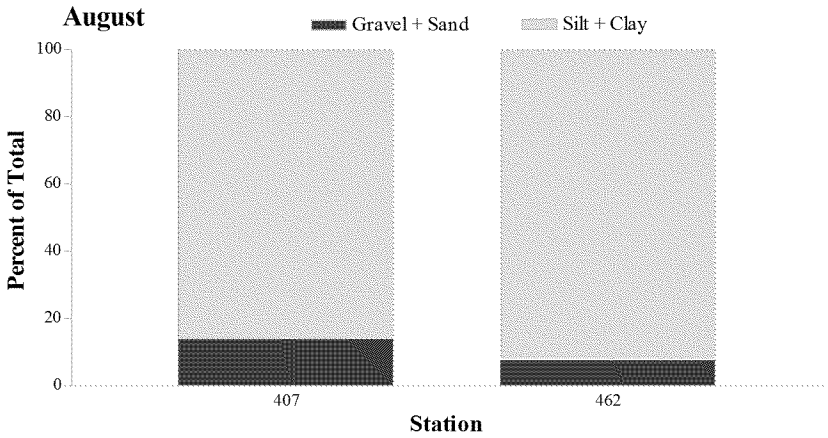
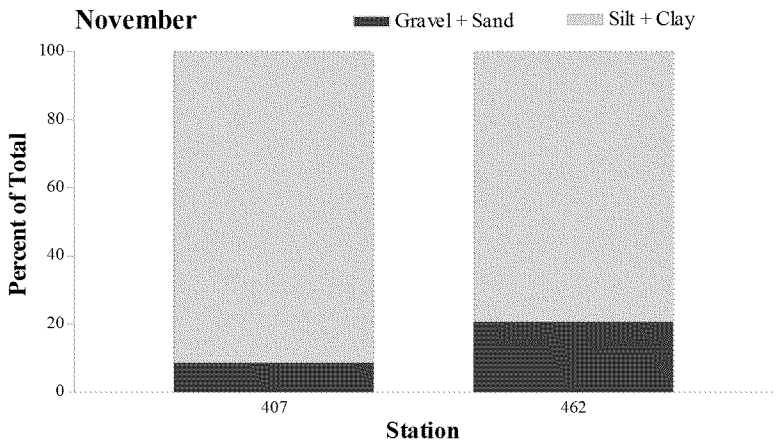



Figure 8. Sediment composition for the LOOP - Lake Jesse stations, 2000-2001.



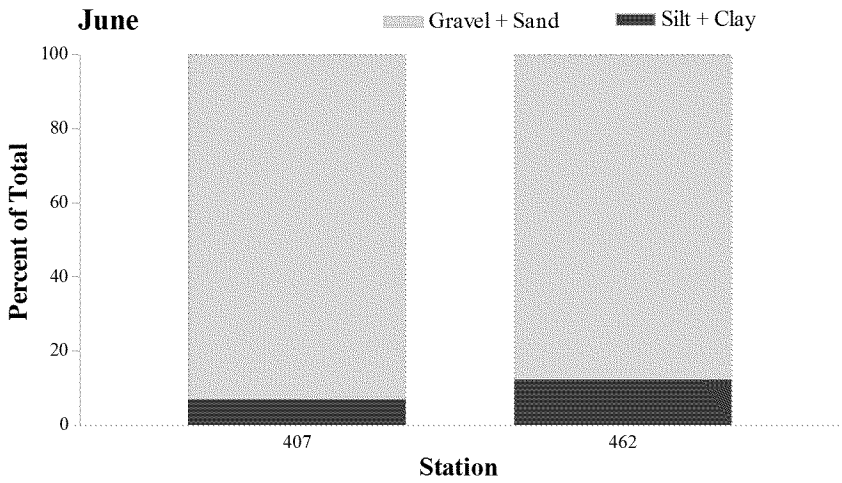
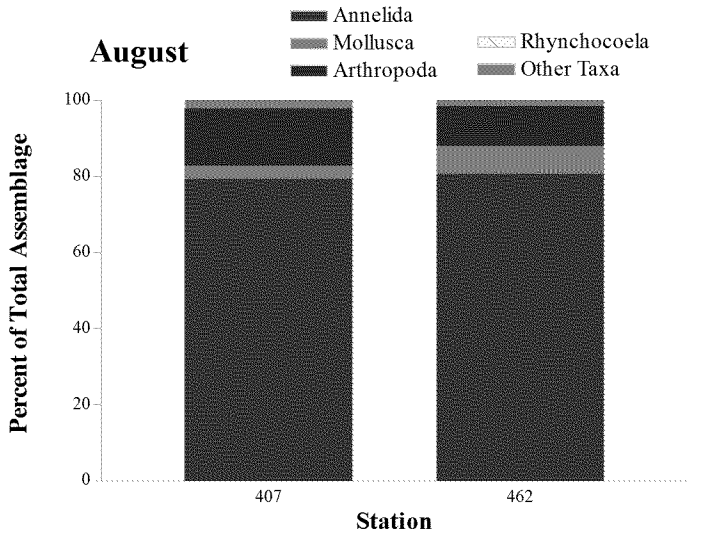
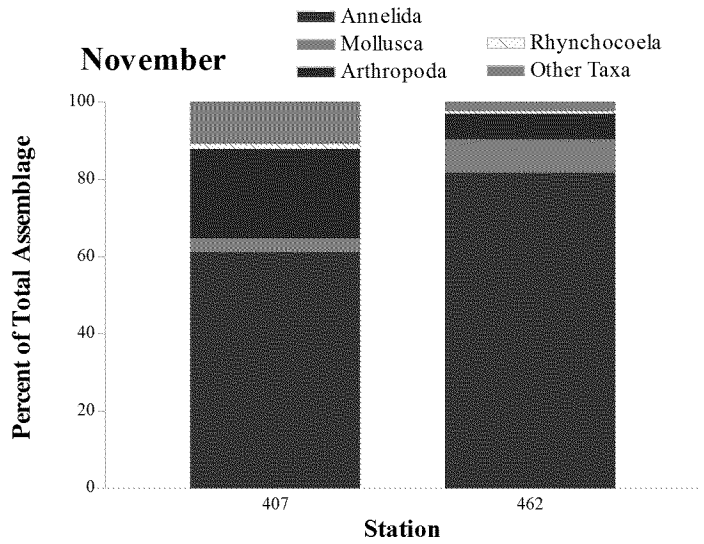



Figure 9. Percent abundance of major taxonomic groups for the LOOP - Lake Jesse stations, 2001-2002.



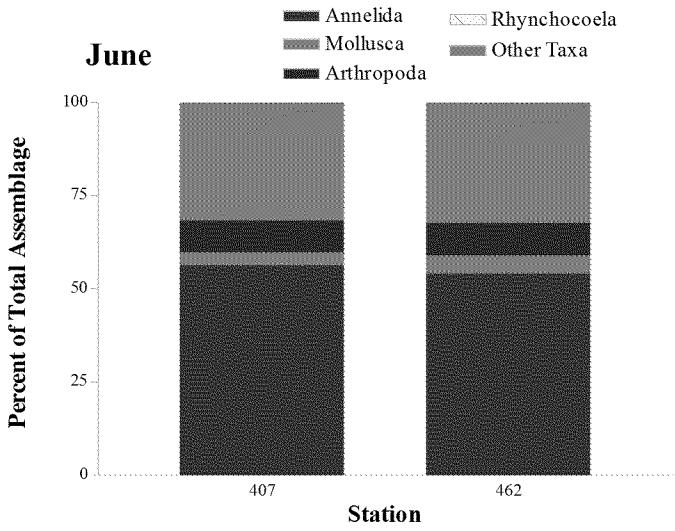
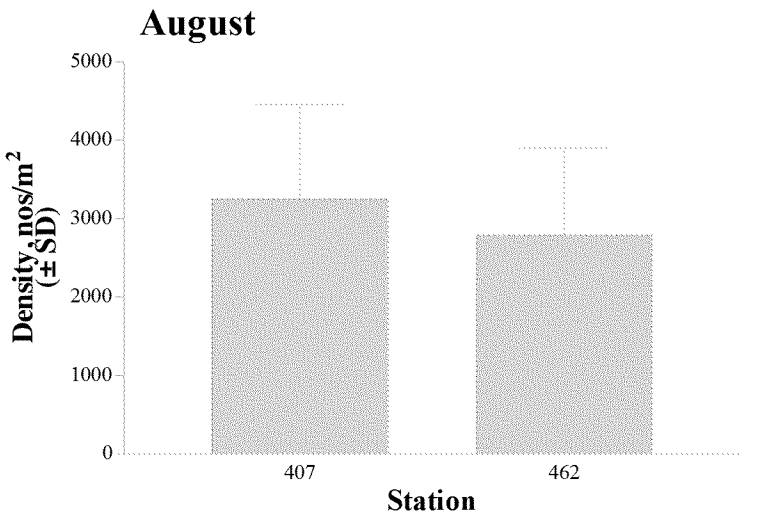
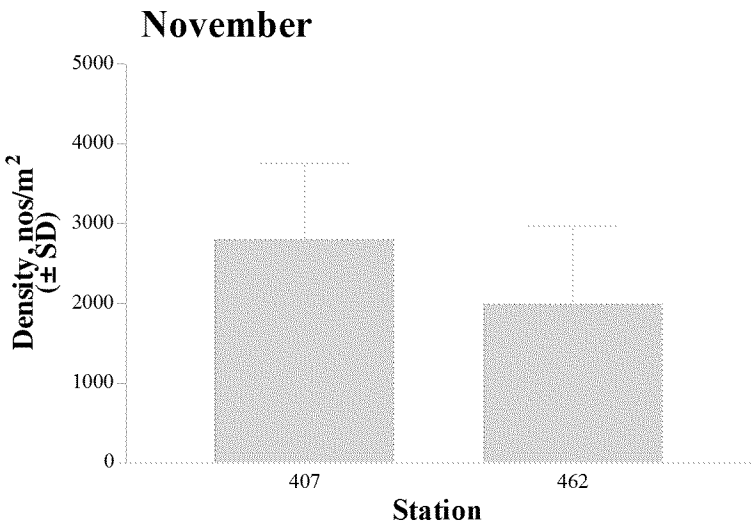



Figure 10. Macroinvertebrate density data for the LOOP – Lake Jesse stations, 2001-2002.



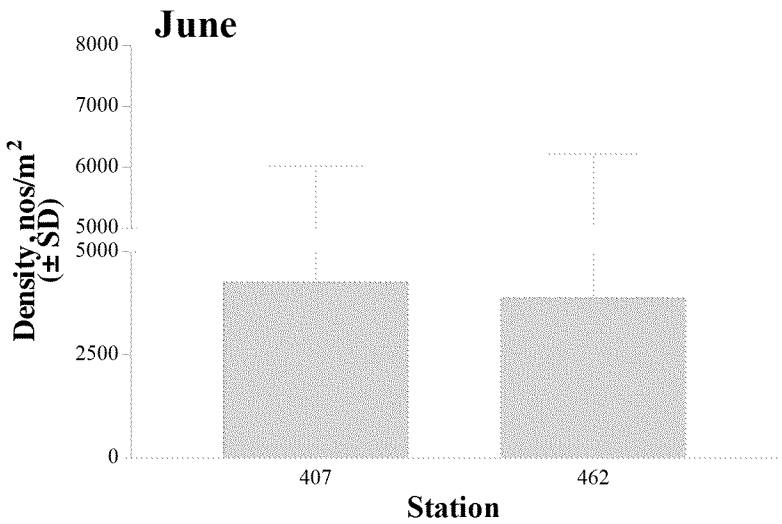
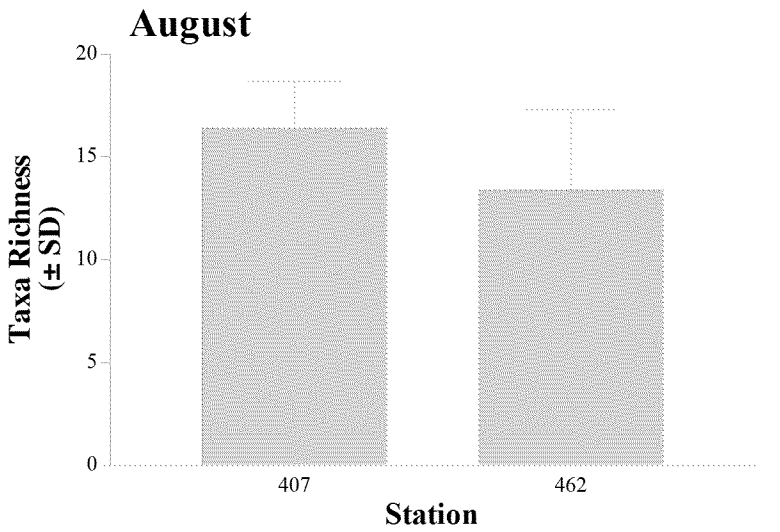
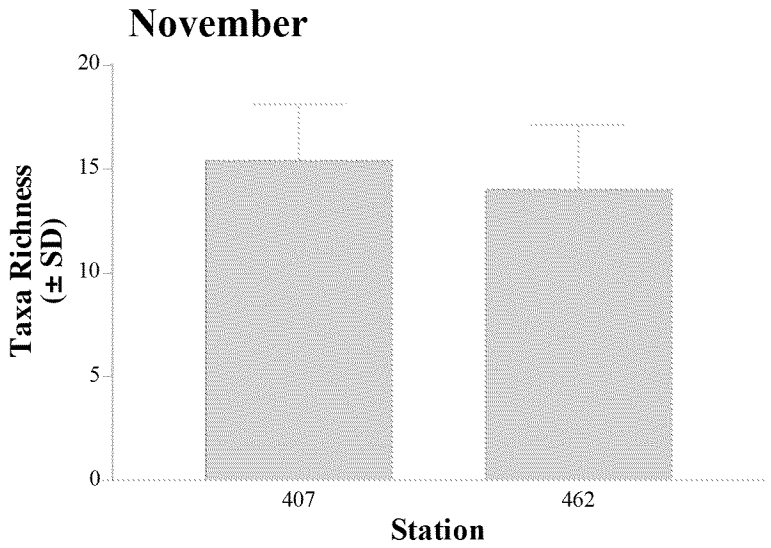



Figure 11. Taxa richness for the LOOP - Clovelly stations, 2001-2002.



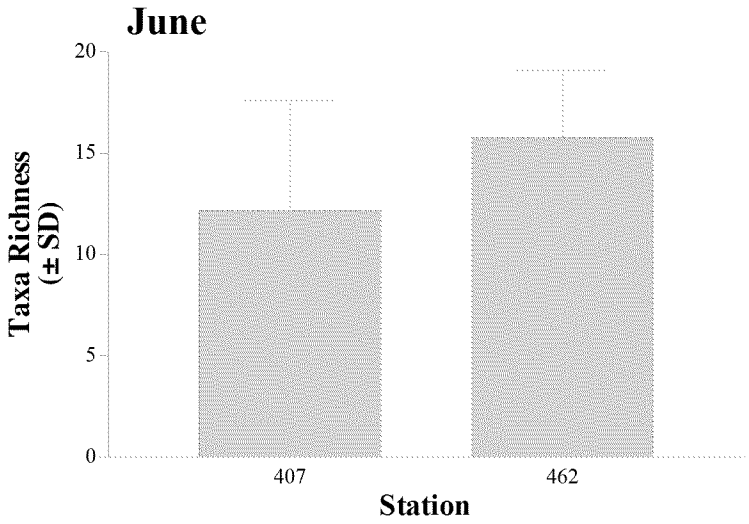
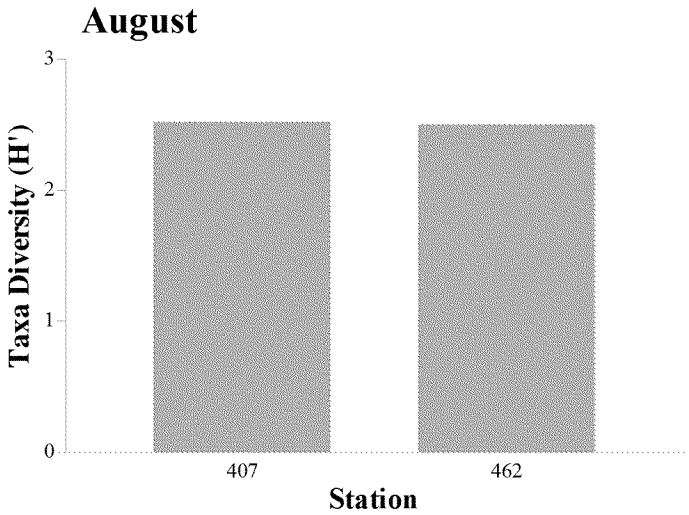
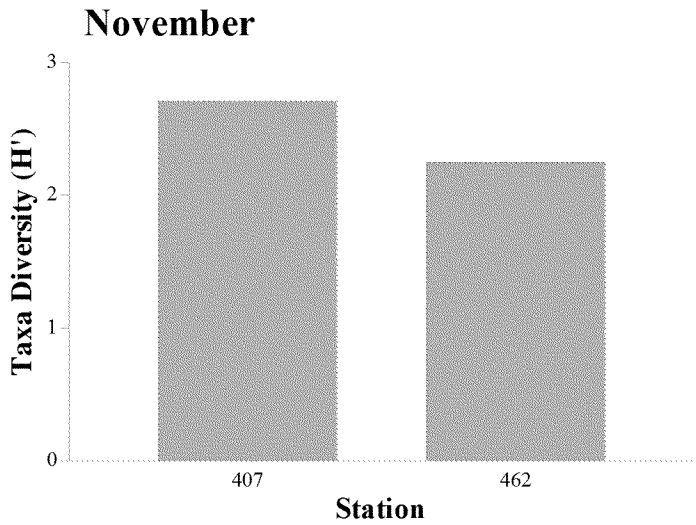



Figure 12. Taxa diversity (H') for the LOOP - Lake Jesse stations, 2001- 2002.



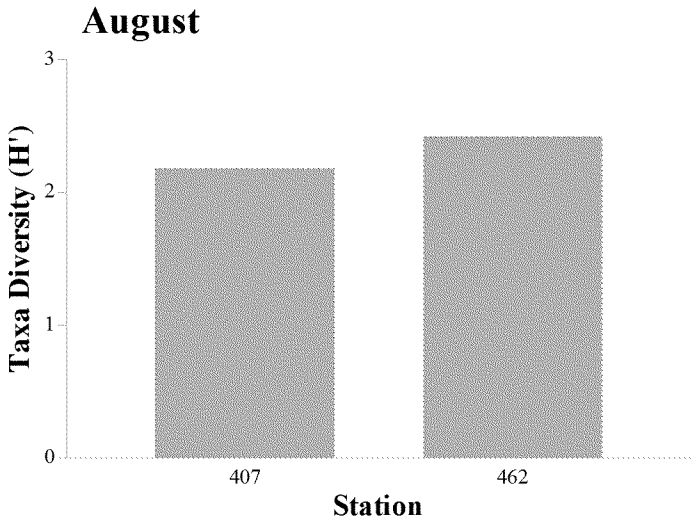
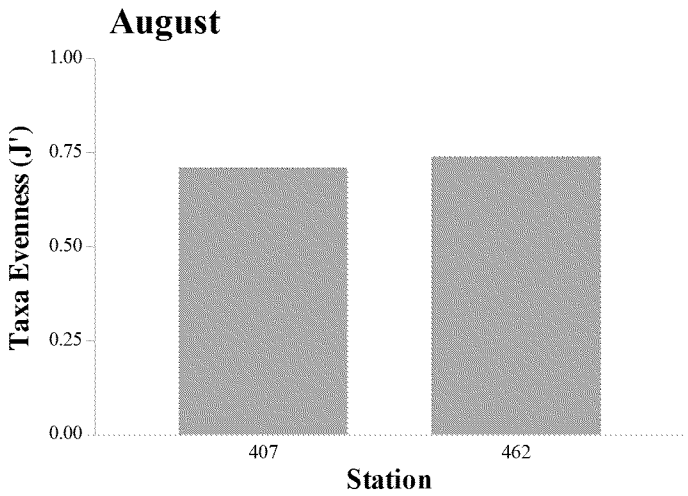
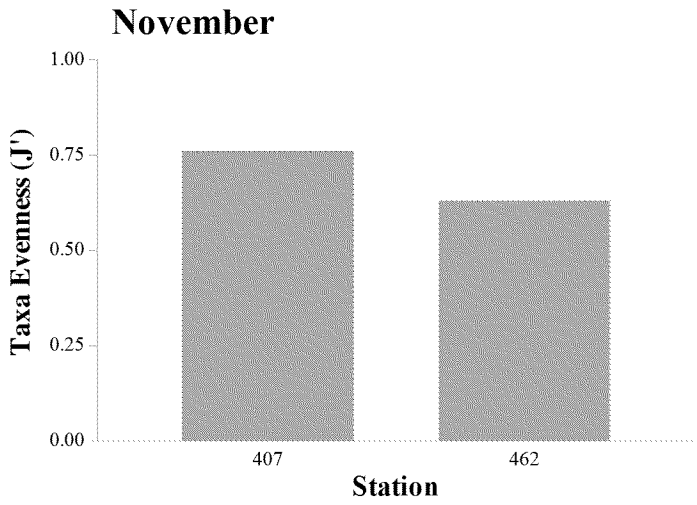



Figure 13. Taxa evenness (J') for the LOOP - Lake Jesse Stations, 2001- 2002.



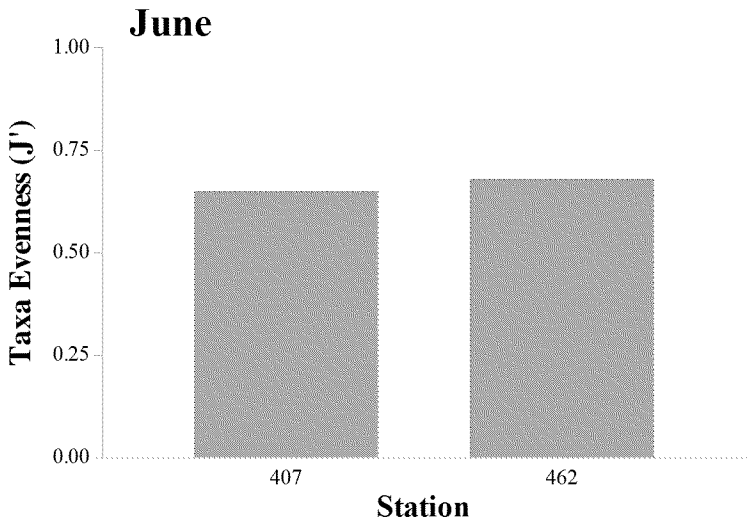
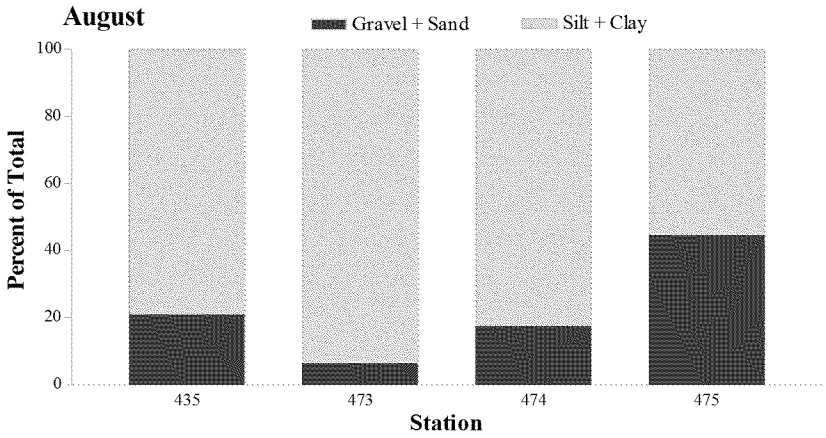
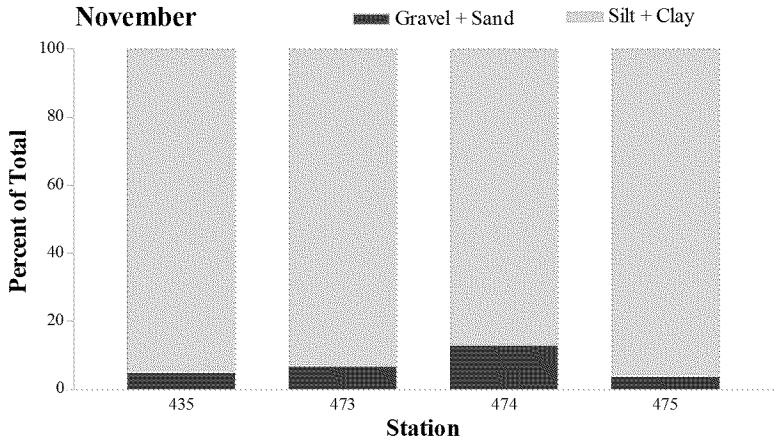



Figure 14. Sediment composition for the LOOP - Brine stations, 2000-2001.



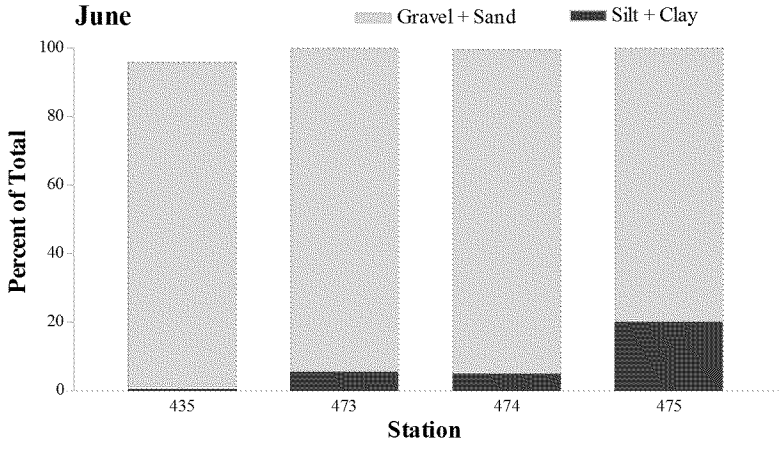
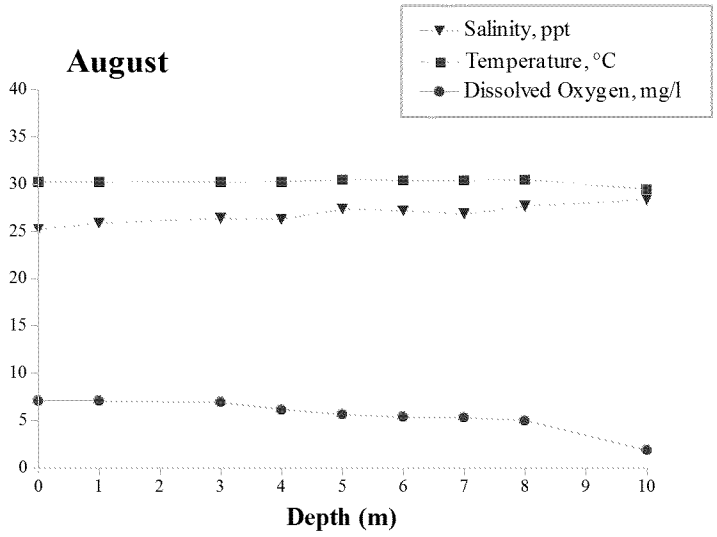
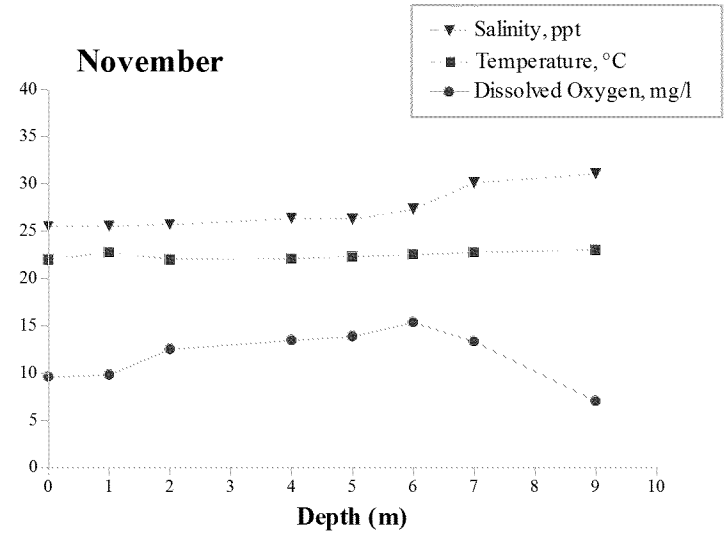



Figure 15. Water quality data for the LOOP-Brine Station 435, 2001-2002.



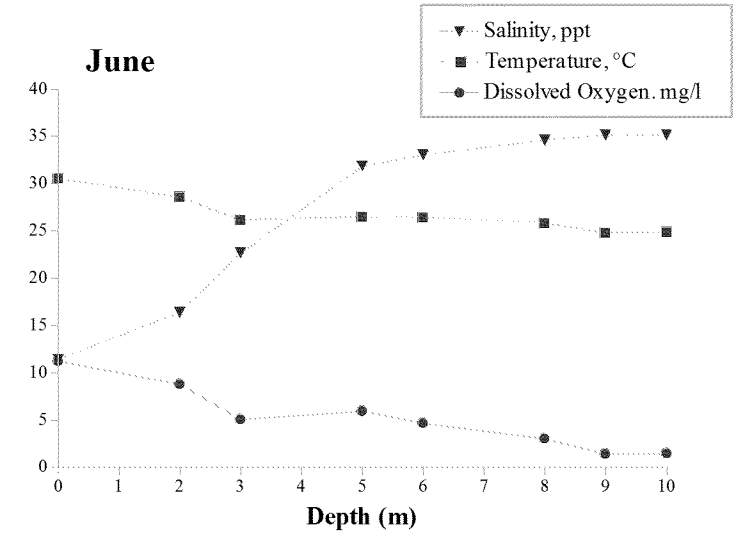
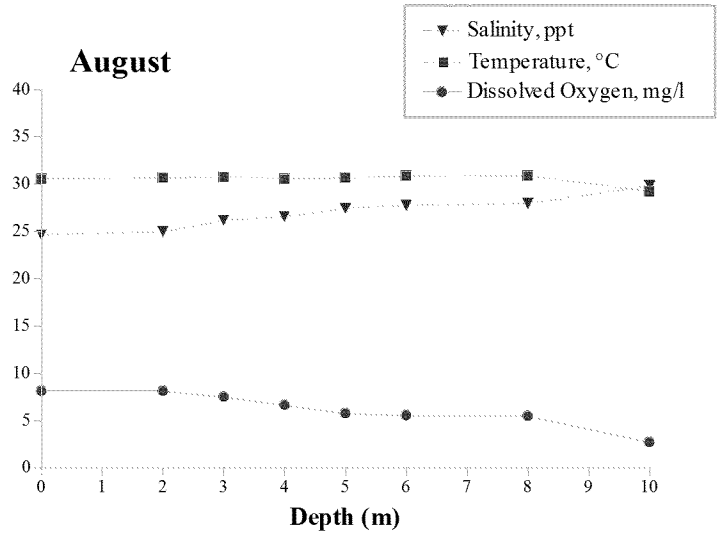
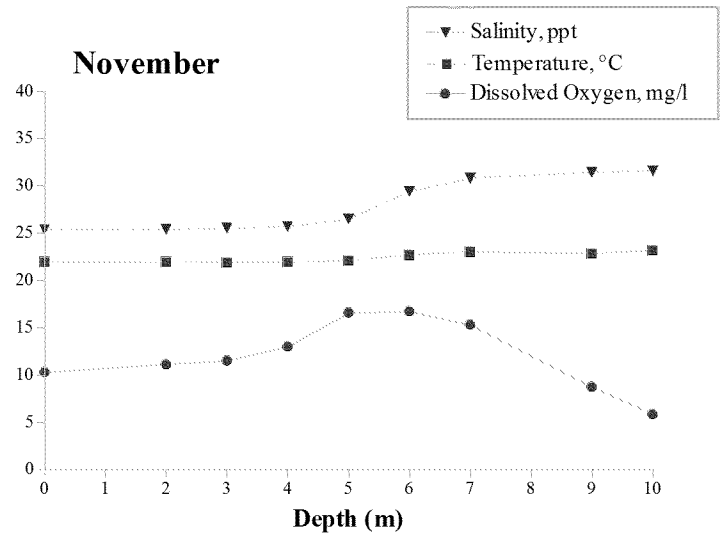



Figure 16. Water quality data for the LOOP-Brine Station 473, 2001-2002.



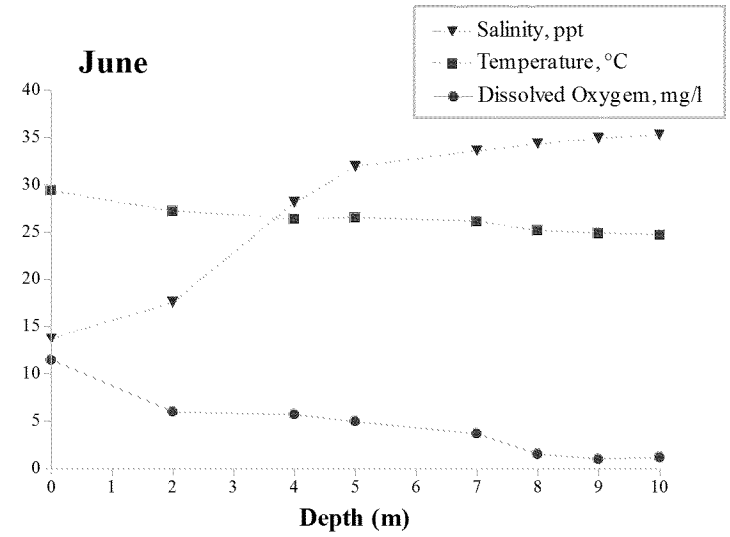
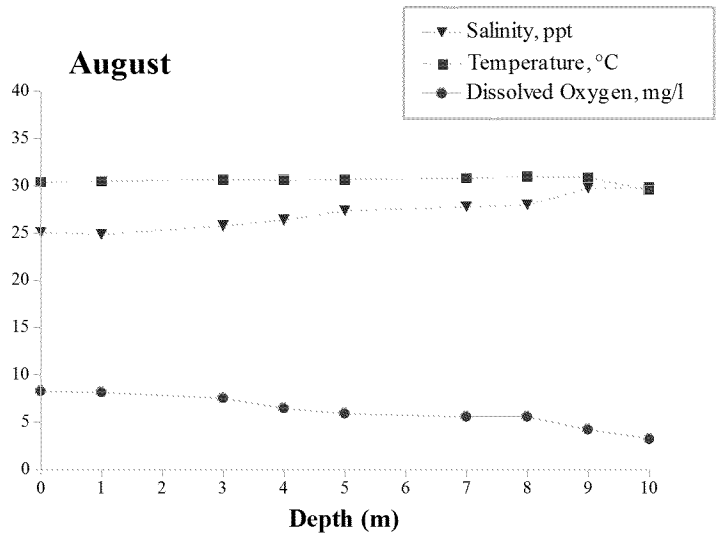
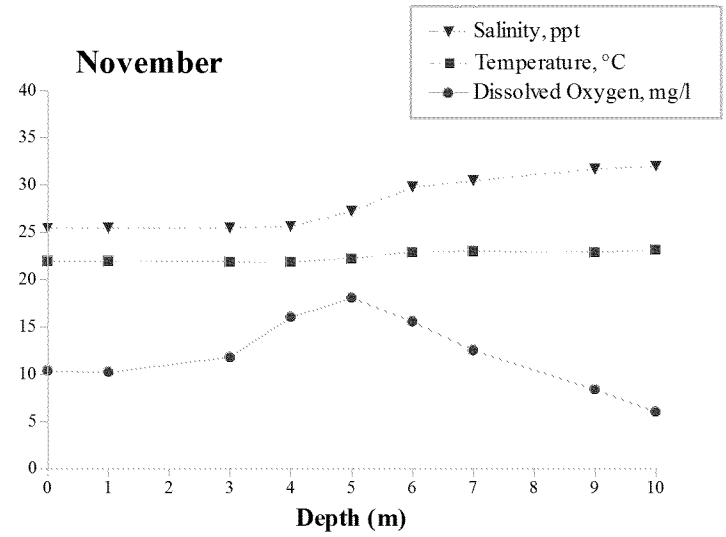



Figure 17. Water quality data for the LOOP-Brine Station 474, 2001-2002.



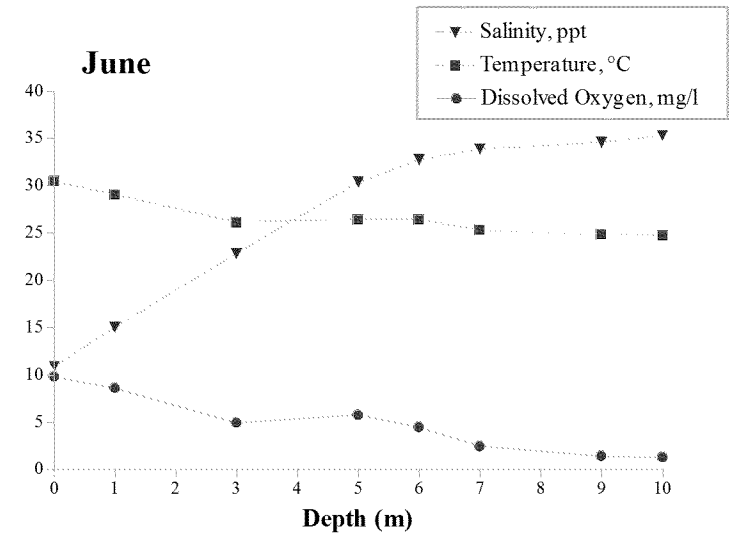
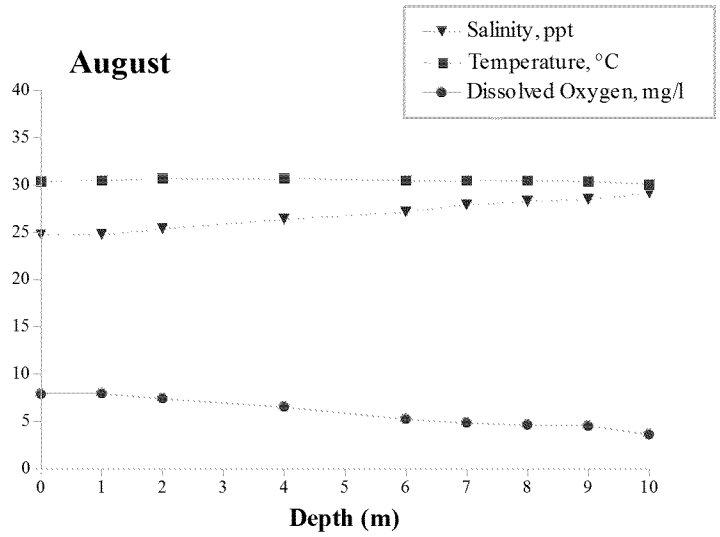
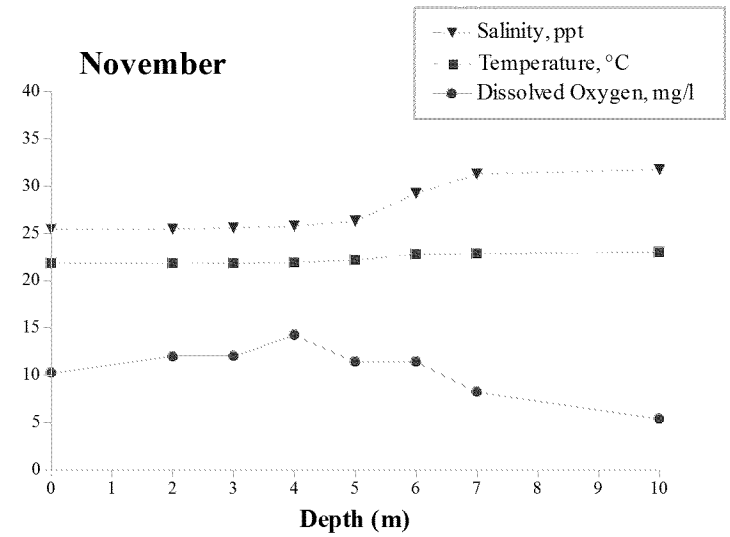



Figure 18. Water quality data for the LOOP-Brine Station 475, 2001-2002.



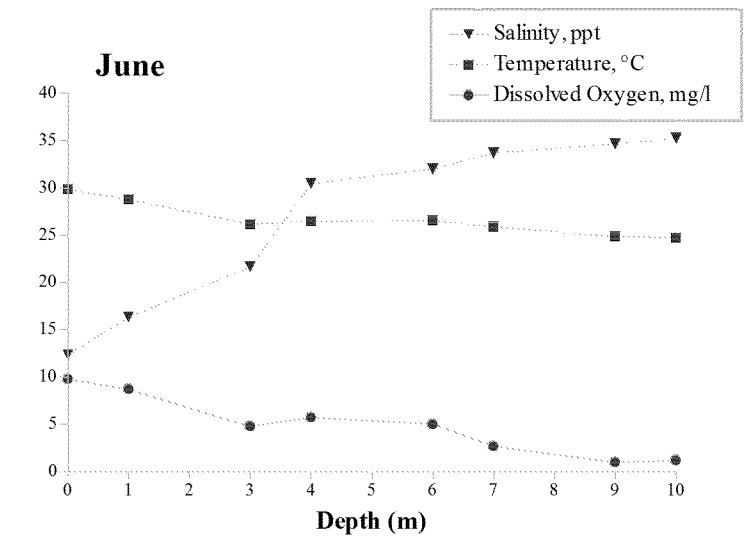
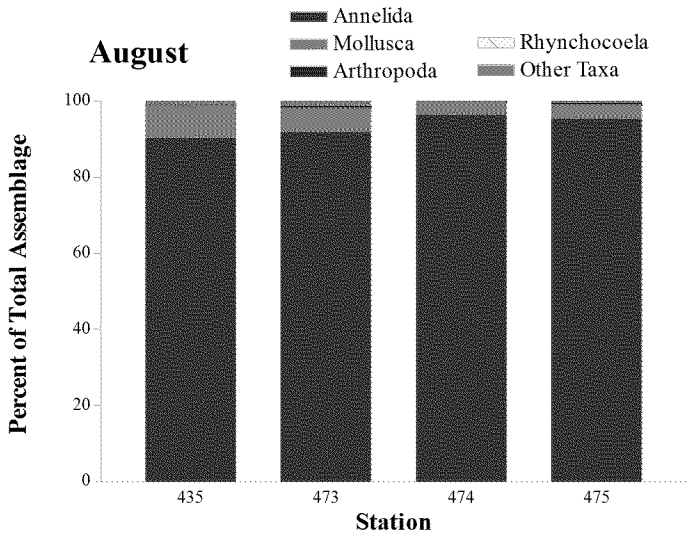
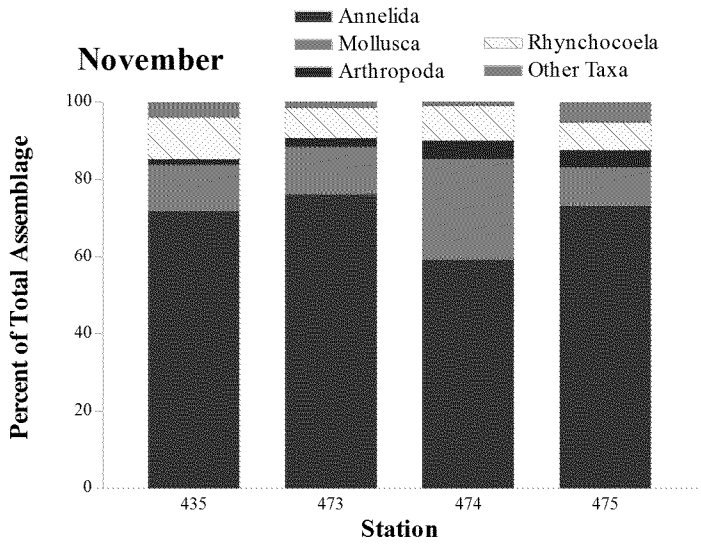



Figure 19. Percent abundance of major taxonomic groups for the LOOP - Brine stations, 2001-2002.



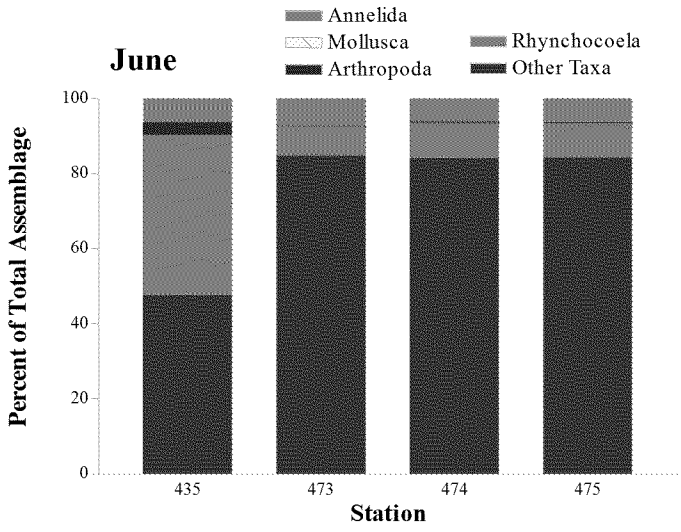



Figure 20. Macroinvertebrate density data for the LOOP - Brine stations, 2001-2002.

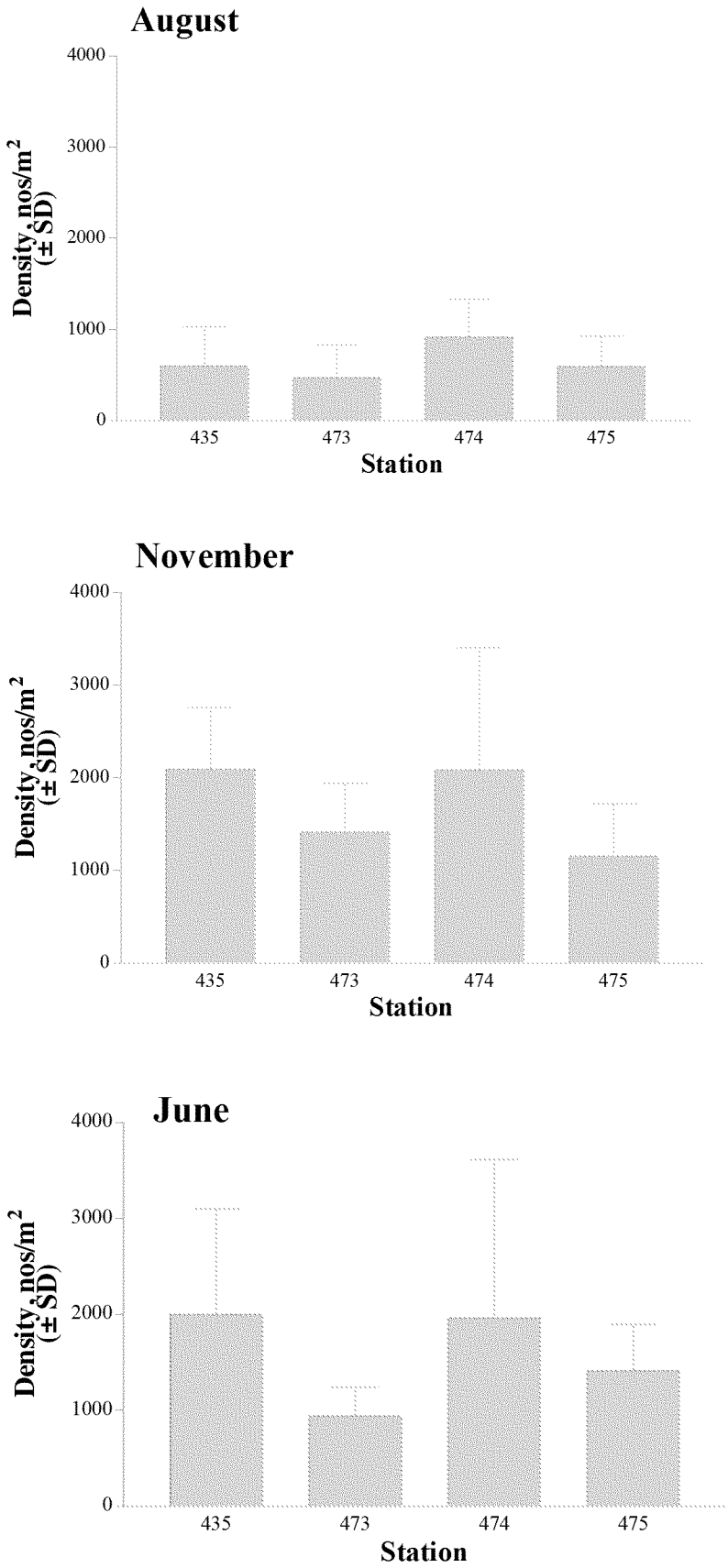
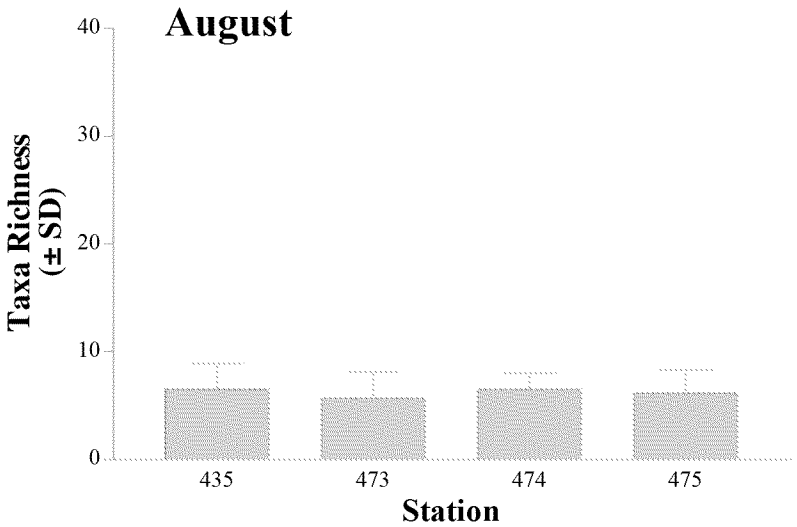
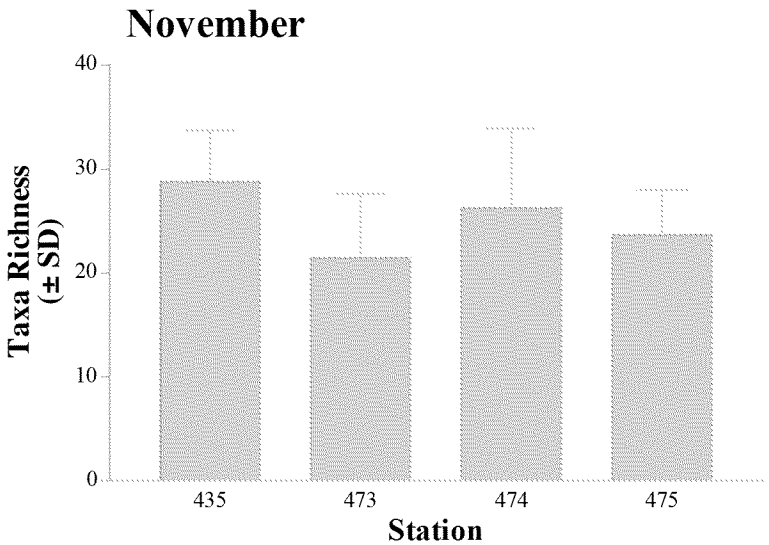


Figure 21. Taxa richness data for the LOOP - Brine stations, 2001-2002.



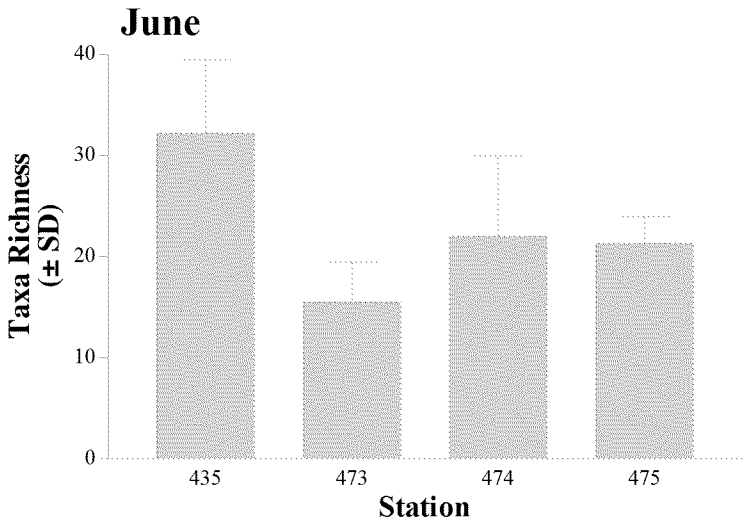
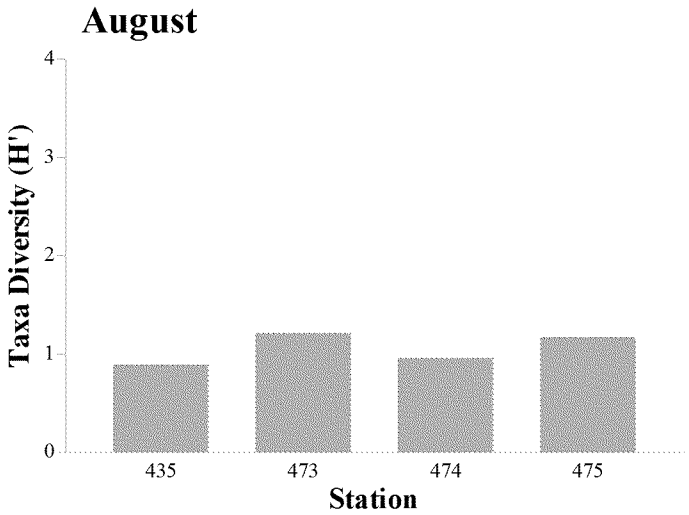
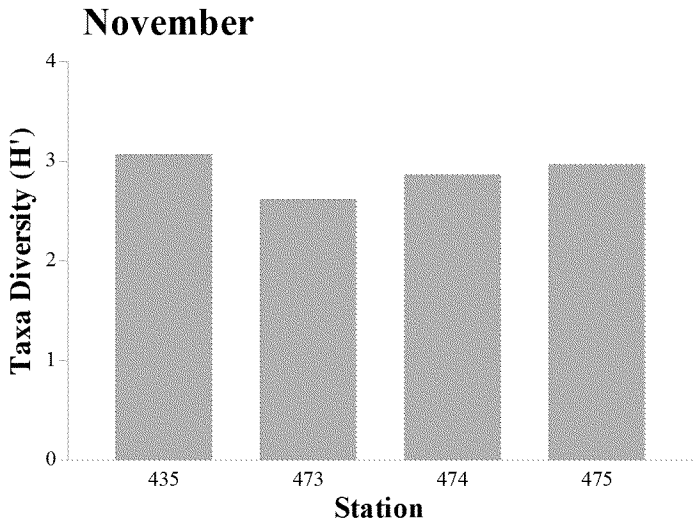



Figure 22. Taxa diversity (H') data for the LOOP - Brine stations, 2001-2002.



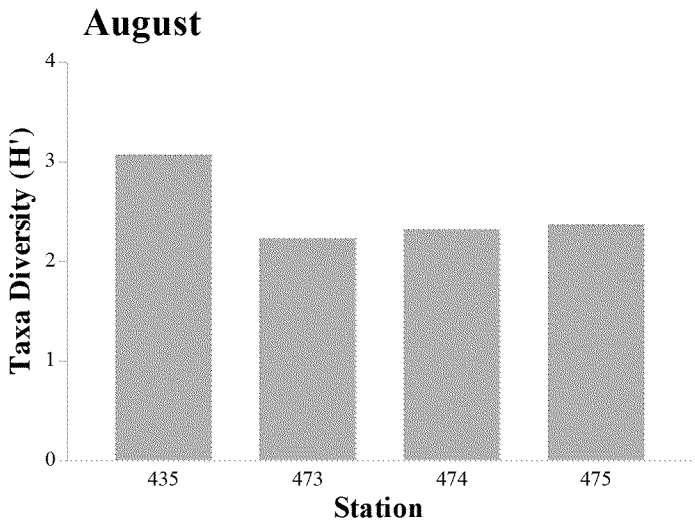
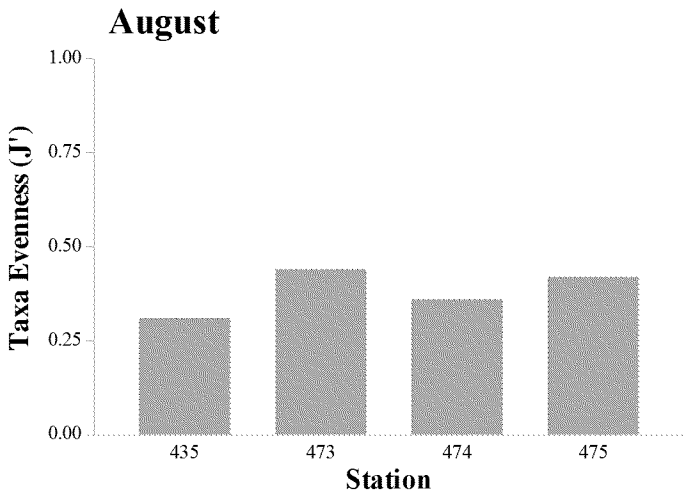
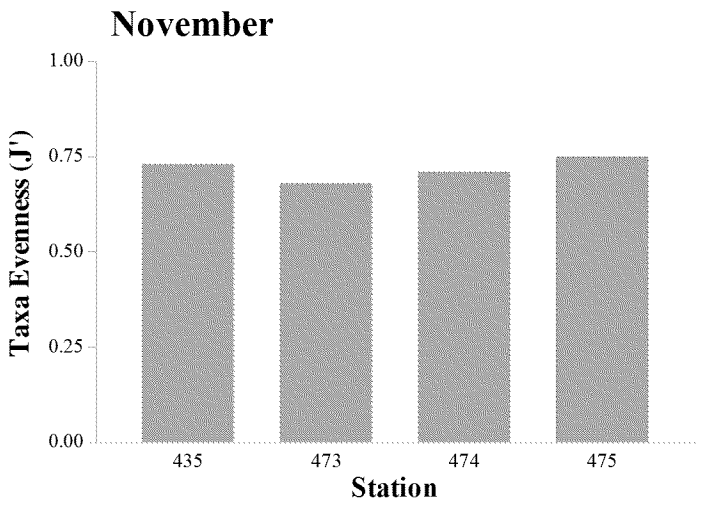



Figure 23. Taxa evenness (J') for the LOOP - Brine Stations, 2001-2002.



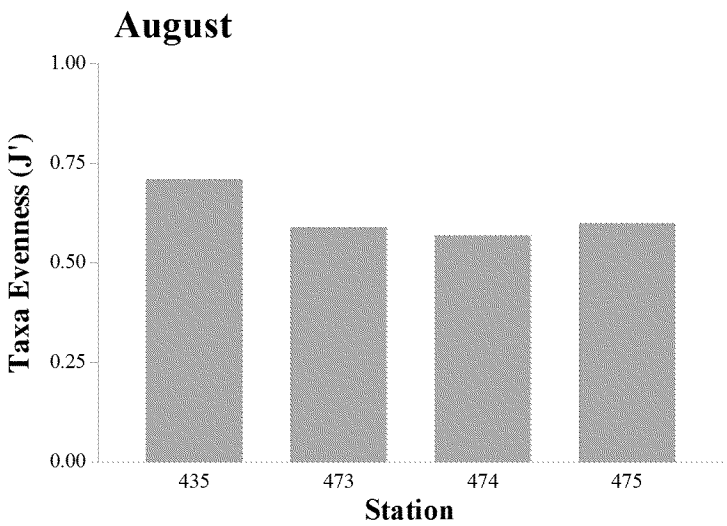
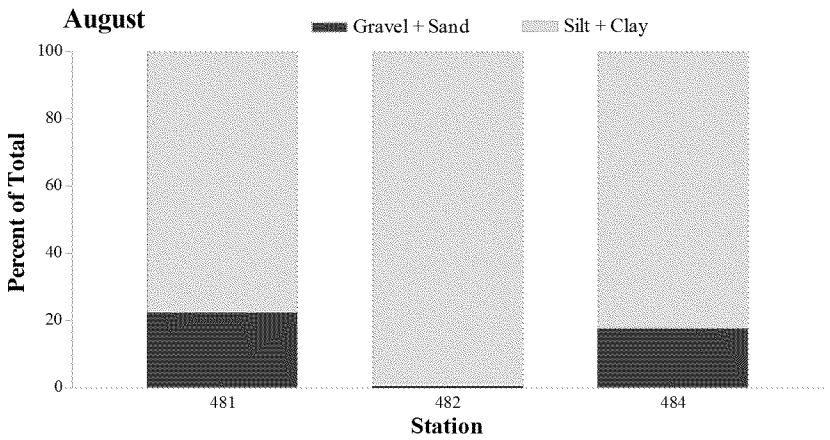
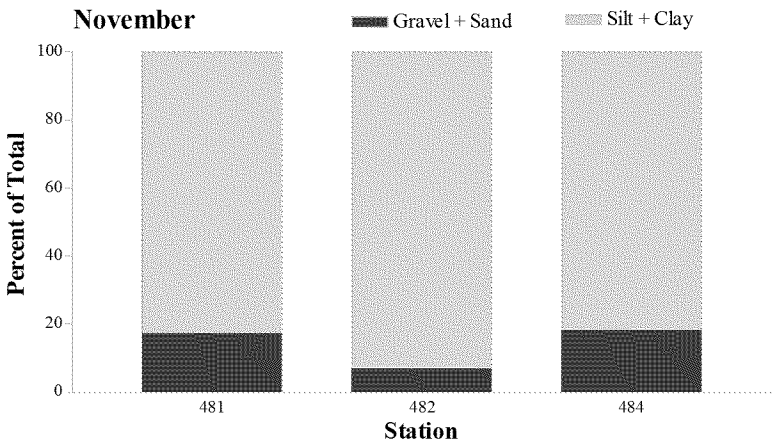



Figure 24. Sediment composition for the LOOP - Offshore stations, 2000-2001.



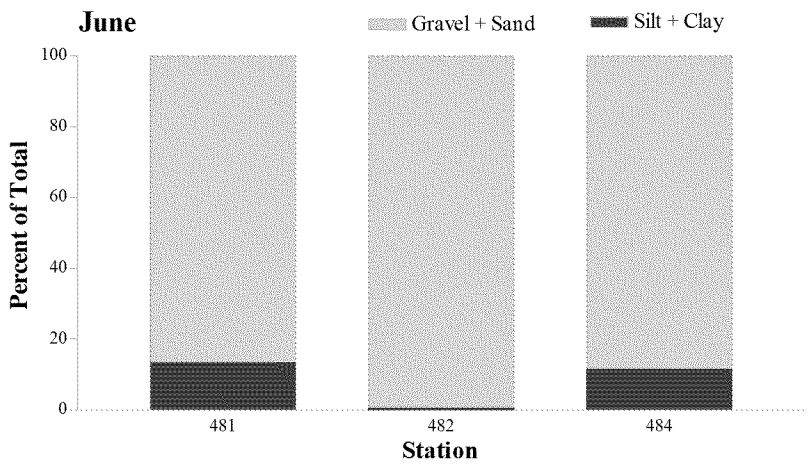



Figure 25. Water quality data for the LOOP-Offshore Station 481, 2001-2002.

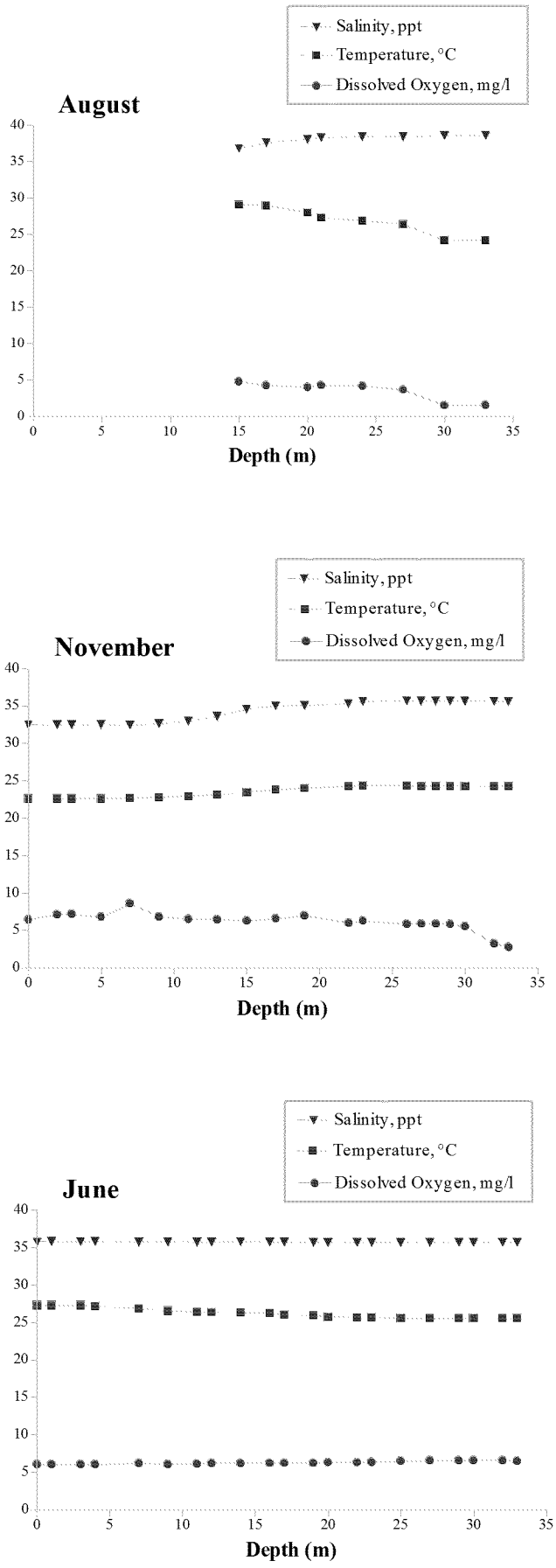


Figure 26. Water quality data for the LOOP-Offshore Station 482, 2001-2002.

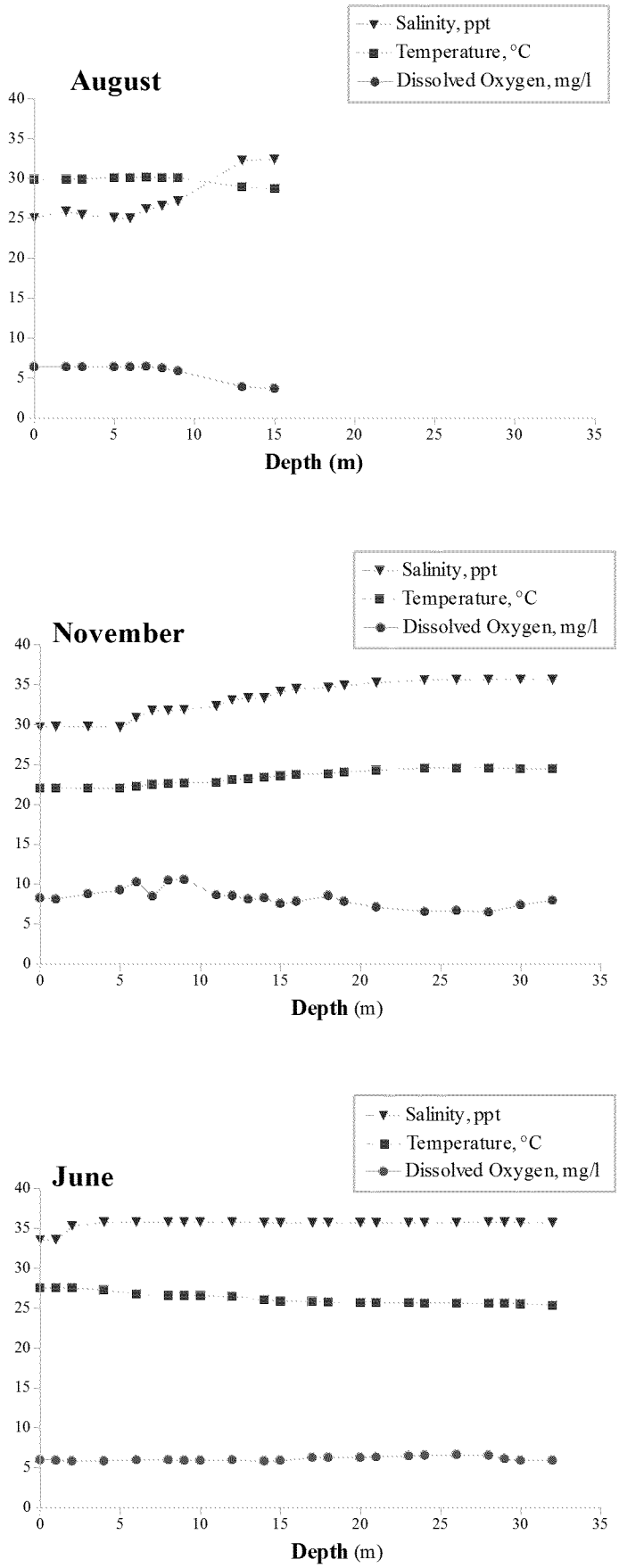


Figure 27. Water quality data for the LOOP - Offshore Station 484, 2001-2002.

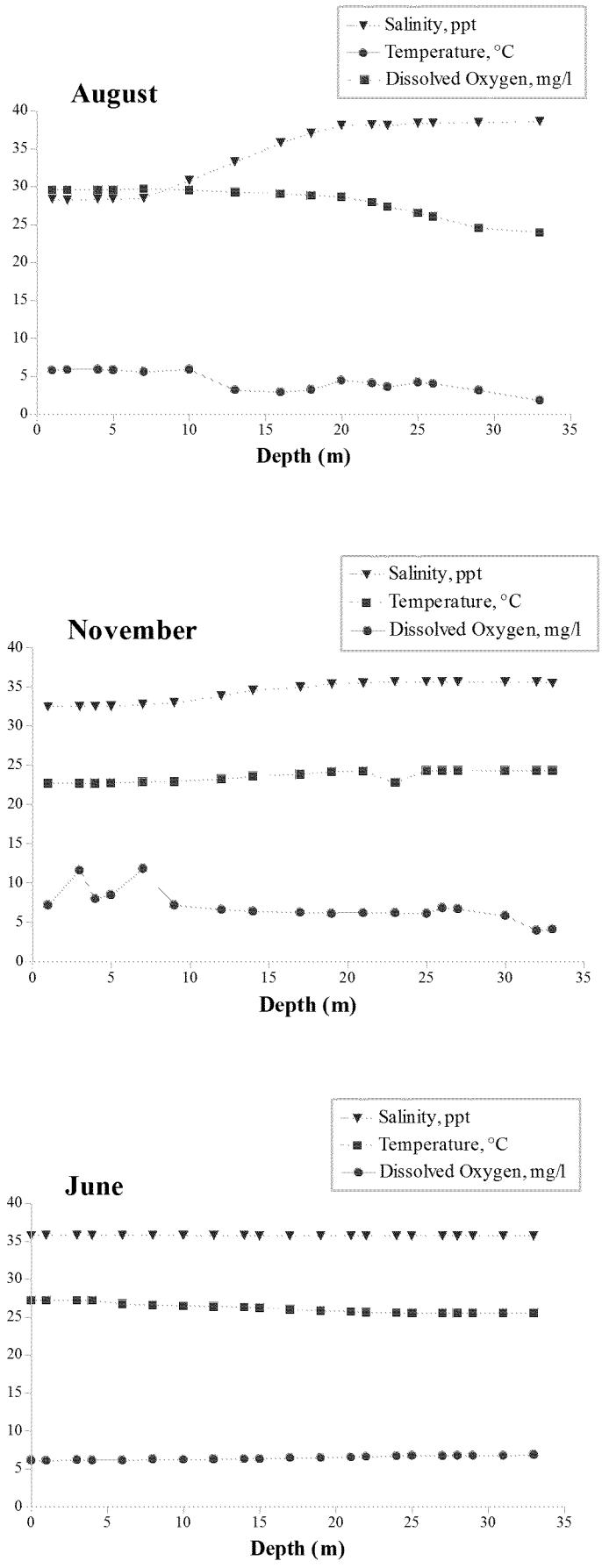
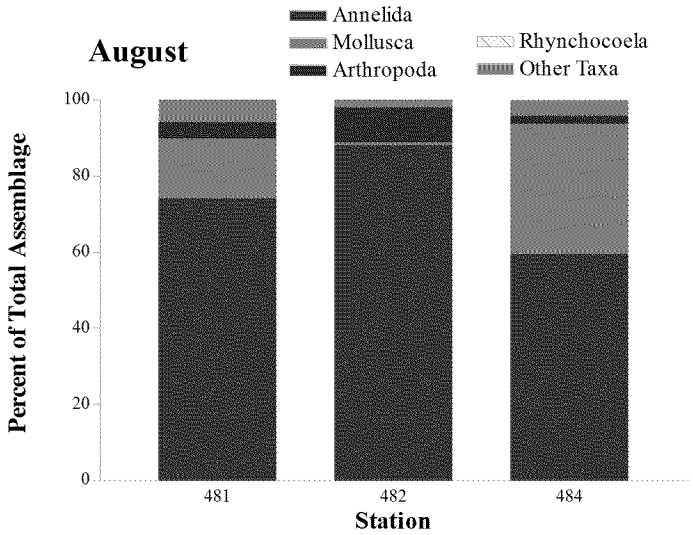
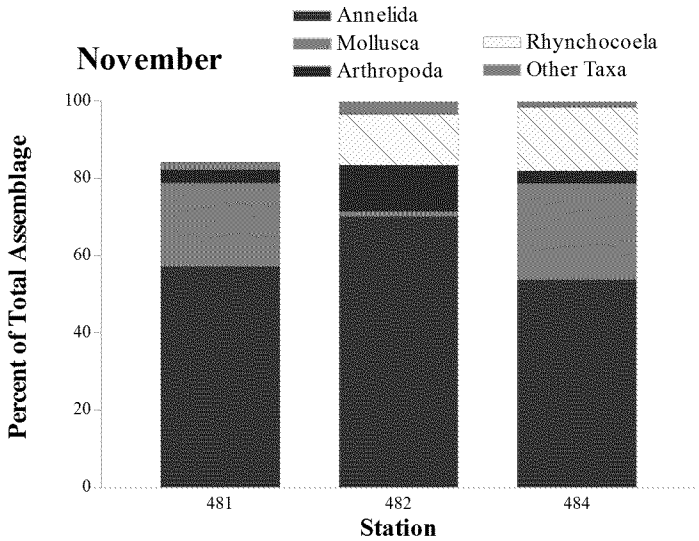


Figure 28. Percent abundance of major taxonomic groups for the LOOP - Offshore stations, 2001-2002.



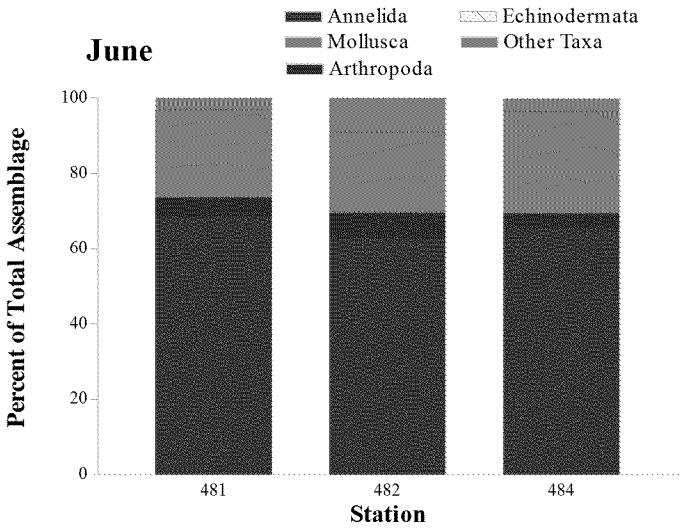



Figure 29. Macroinvertebrate density data for the LOOP - Offshore stations, 2001-2002.

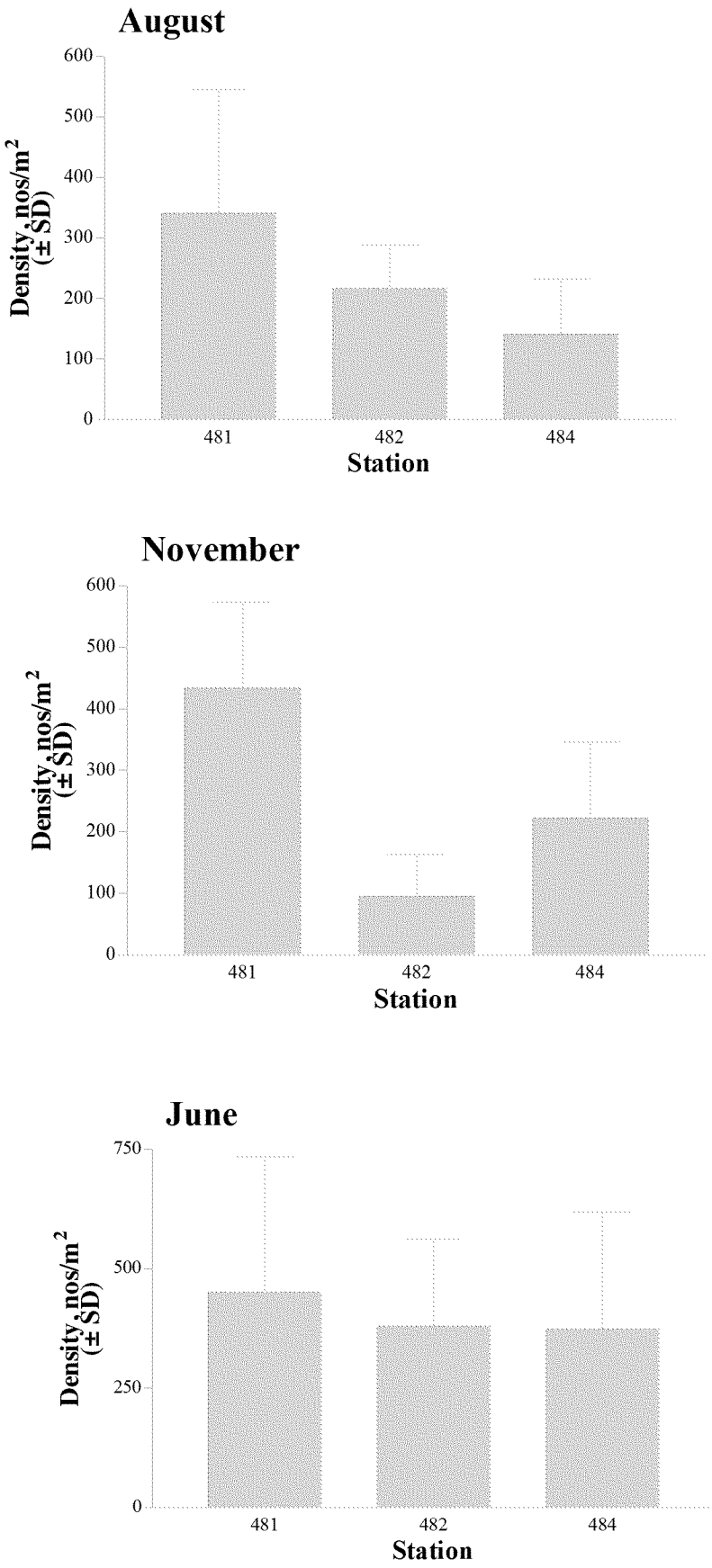


Figure 30. Taxa richness data for the LOOP - Offshore stations, 2001-2002.

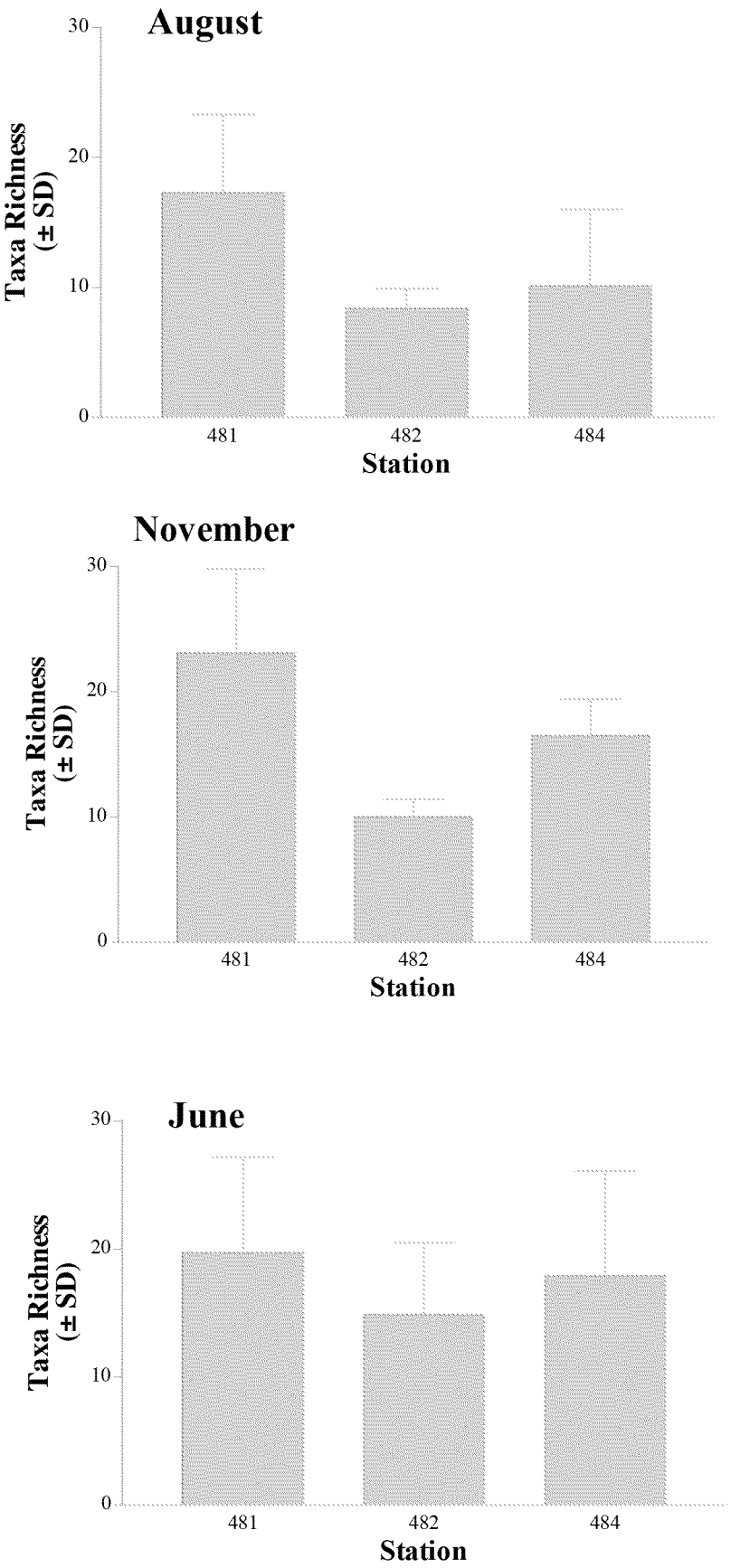
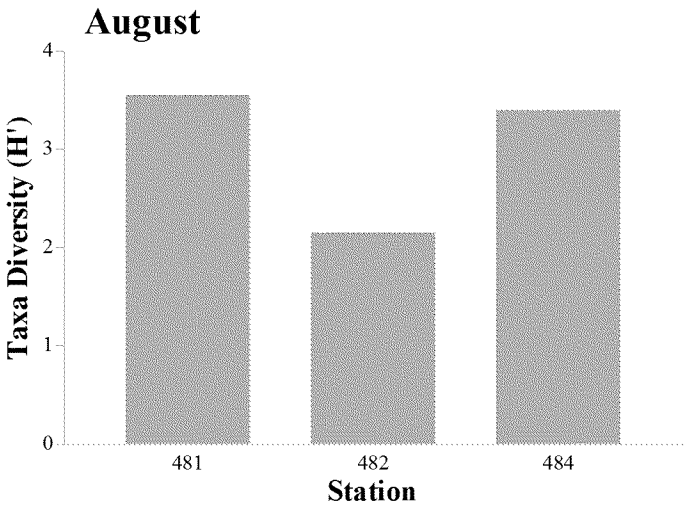
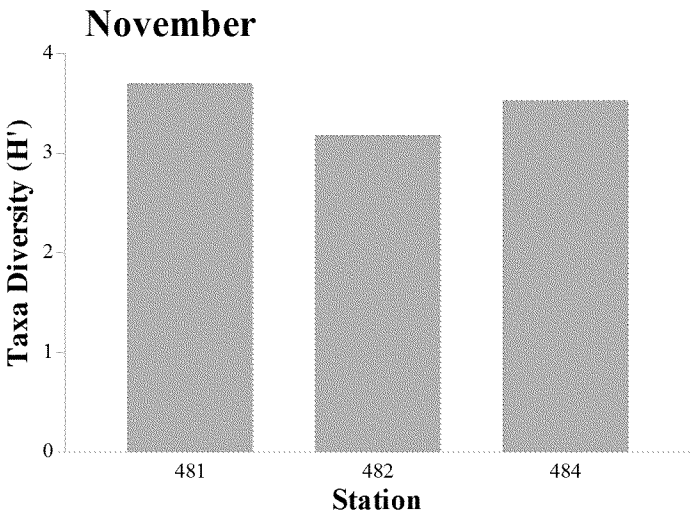


Figure 31. Taxa diversity (H') data for the LOOP - Offshore stations, 2001-2002



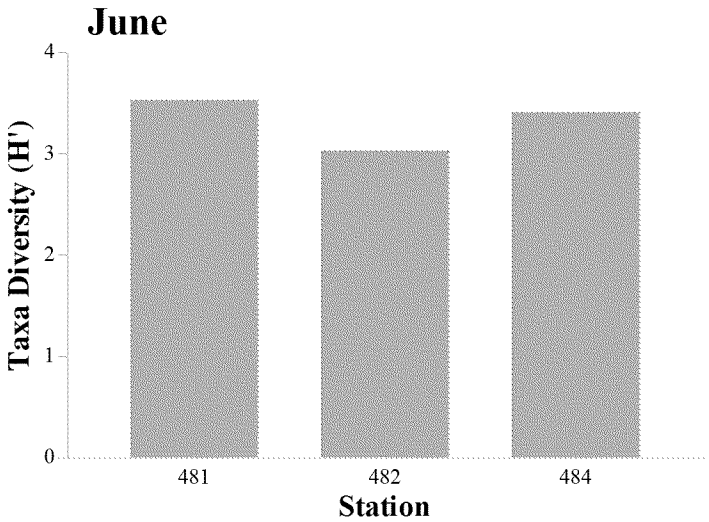
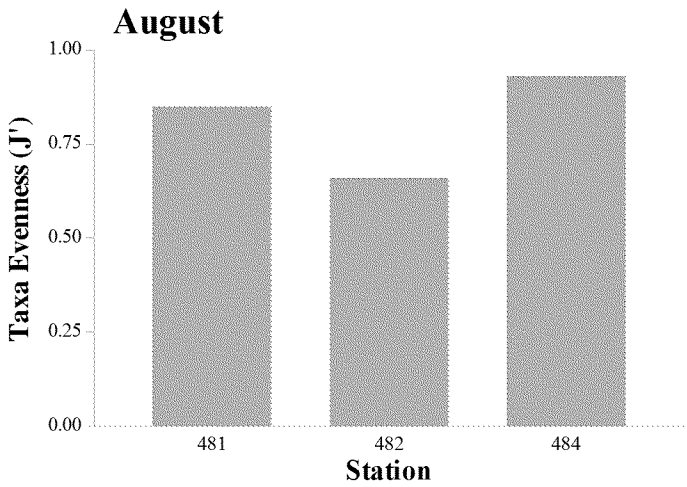
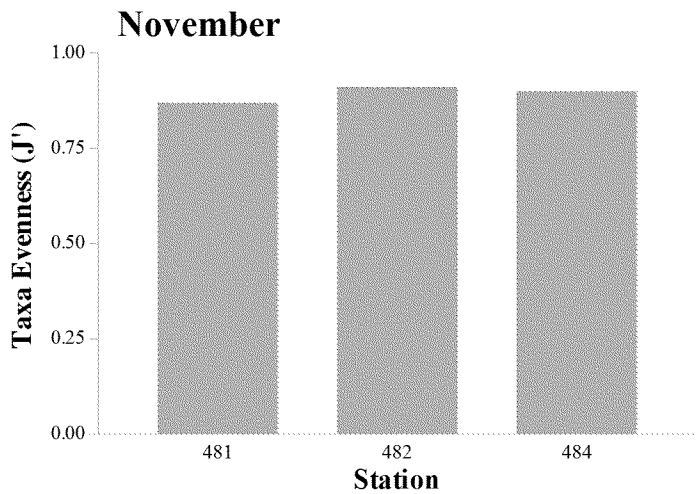
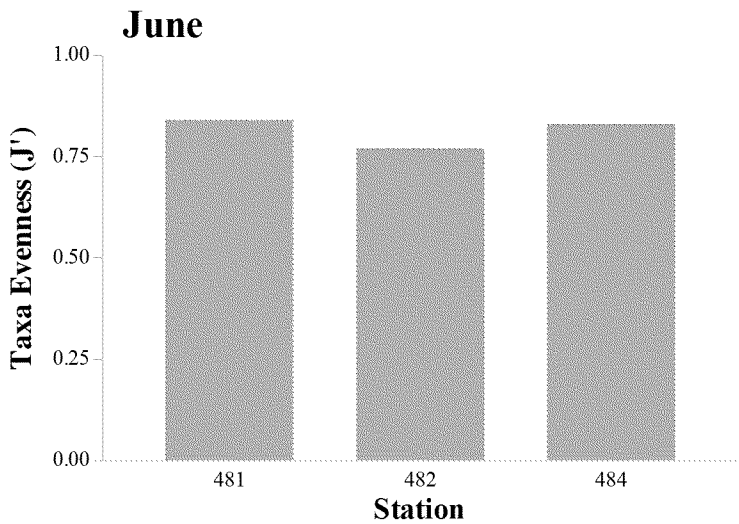



Figure 32. Taxa evenness (J') for the LOOP - Offshore Stations, 2001-2002.



Appendix I. Polyaromatic hydrocarbon (PAH) data for June 2002.

| | Clovelly | | | Lake Jesse | | | Brine Diffuser | | | Offshore | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Parameter | **461** | **463** | **464** | **407** | **462** | **435** | **473** | **474** | **475** | **481** | **482** | **484** |
| Acenaphthene, µg/kg dw | <61 | <32 | <28 | <16 | <18 | <11 | <12 | <11 | <12 | <11 | <10 | <11 |
| Acenaphthylene, µg/kg dw | <61 | <32 | <28 | <16 | <18 | <11 | <12 | <11 | <12 | <11 | <10 | <11 |
| Anthracene, µg/kg dw | <61 | <32 | <28 | <16 | <18 | <11 | <12 | <11 | <12 | <11 | <10 | <11 |
| Benzo (a) anthracene, µg/kg dw | <61 | <32 | <28 | <16 | <18 | <11 | <12 | <11 | <12 | <11 | <10 | <11 |
| Benzo (b) fluoranthene, µg/kg dw | <61 | <32 | <28 | <16 | <18 | <11 | <12 | <11 | <12 | <11 | <10 | <11 |
| Benzo (k) fluoanthene, µg/kg dw | <61 | <32 | <28 | <16 | <18 | <11 | <12 | <11 | <12 | <11 | <10 | <11 |
| Benzo (g, h, I) perylene, µg/kg dw | <61 | <32 | <28 | <16 | <18 | <11 | <12 | <11 | <12 | <11 | <10 | <11 |
| Benzo (a) pyrene, µg/kg dw | <61 | <32 | <28 | <16 | <18 | <11 | <12 | <11 | <12 | <11 | <10 | <11 |
| Chrysene, µg/kg dw | <61 | <32 | <28 | <16 | <18 | <11 | <12 | <11 | <12 | <11 | <10 | <11 |
| Dibenzo (a,h) anthracene, µg/kg dw | <61 | <32 | <28 | <16 | <18 | <11 | <12 | <11 | <12 | <11 | <10 | <11 |
| Fluoranthene, µg/kg dw | <61 | <32 | <28 | <16 | <18 | <11 | <12 | <11 | <12 | <11 | <10 | <11 |
| Fluorene, µg/kg dw | <61 | <32 | <28 | <16 | <18 | <11 | <12 | <11 | <12 | <11 | <10 | <11 |
| Indeno pyrene, µg/kg dw | <61 | <32 | <28 | <16 | <18 | <11 | <12 | <11 | <12 | <11 | <10 | <11 |
| 1-methylnaphthalene, µg/kg dw | <61 | <32 | <28 | <16 | <18 | <11 | <12 | <11 | <12 | <11 | <10 | <11 |
| 2-methylnaphthalene, µg/kg dw | <61 | <32 | <28 | <16 | <18 | <11 | <12 | <11 | <12 | <11 | <10 | <11 |
| Naphthalene, µg/kg dw | <61 | <32 | <28 | <16 | <18 | <11 | <12 | <11 | <12 | <11 | <10 | <11 |
| Phenanthrene, µg/kg dw | <61 | <32 | <28 | <16 | <18 | <11 | <12 | <11 | <12 | <11 | <10 | <11 |
| Pyrene, µg/kg dw | <61 | <32 | <28 | <16 | <18 | <11 | <12 | <11 | <12 | <11 | <10 | <11 |

Appendix II. Polyaromatic hydrocarbon (PAH) data for August 2001.

| | Clovelly | | | Lake Jesse | | Brine Diffuser | | | | Offshore | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Parameter** | **461** | **463** | **464** | **407** | **462** | **435** | **473** | **474** | **475** | **481** | **482** | **484** |
| Acenaphthene, µg/kg dw | <11 | <22 | <16 | <20 | <20 | <18 | <14 | <12 | <12 | <11 | <13 | <14 |
| Acenaphthylene, µg/kg dw | <11 | <22 | <16 | <20 | <20 | <18 | <14 | <12 | <12 | <11 | <13 | <14 |
| Anthracene, µg/kg dw | <11 | <22 | <16 | <20 | <20 | <18 | <14 | <12 | <12 | <11 | <13 | <14 |
| Benzo (a) anthracene, µg/kg dw | <11 | 26 | <16 | <20 | <20 | <18 | <14 | <12 | <12 | <11 | <13 | <14 |
| Benzo (b) fluoranthene, µg/kg dw | <11 | <22 | <16 | <20 | <20 | <18 | <14 | <12 | <12 | <11 | <13 | <14 |
| Benzo (k) fluoanthene, µg/kg dw | <11 | 34 | <16 | <20 | <20 | <18 | <14 | <12 | <12 | <11 | <13 | <14 |
| Benzo (g, h, I) perylene, µg/kg dw | <11 | <22 | <16 | <20 | <20 | <18 | <14 | <12 | <12 | <11 | <13 | <14 |
| Benzo (a) pyrene, µg/kg dw | <11 | 73 | <16 | <20 | <20 | <18 | <14 | <12 | <12 | <11 | <13 | <14 |
| Chrysene, µg/kg dw | <11 | <22 | <16 | <20 | <20 | <18 | <14 | <12 | <12 | <11 | <13 | <14 |
| Dibenzo (a,h) anthracene, µg/kg dw | <11 | 90 | <16 | <20 | <20 | <18 | <14 | <12 | <12 | <11 | <13 | <14 |
| Fluoranthene, µg/kg dw | <11 | <22 | <16 | <20 | <20 | <18 | <14 | 13 | <12 | <11 | <13 | <14 |
| Fluorene, µg/kg dw | <11 | <22 | <16 | <20 | <20 | <18 | <14 | <12 | <12 | <11 | <13 | <14 |
| Indeno pyrene, µg/kg dw | <11 | <22 | <16 | <20 | <20 | <18 | <14 | <12 | <12 | <11 | <13 | <14 |
| 1-methylnaphthalene, µg/kg dw | <11 | <22 | <16 | <20 | <20 | <18 | <14 | <12 | <12 | <11 | <13 | <14 |
| 2-methylnaphthalene, µg/kg dw | <11 | <22 | <16 | <20 | <20 | <18 | <14 | <12 | <12 | <11 | <13 | <14 |
| Naphthalene, µg/kg dw | <11 | <22 | <16 | <20 | <20 | <18 | <14 | <12 | <12 | <11 | <13 | <14 |
| Phenanthrene, µg/kg dw | <11 | 66 | <16 | <20 | <20 | <18 | <14 | <12 | <12 | <11 | <13 | <14 |
| Pyrene, µg/kg dw | <11 | 65 | <16 | <20 | <20 | <18 | <14 | 13 | <12 | <11 | <13 | <14 |

Appendix III. Polyaromatic hydrocarbon (PAH) data for November 2001.

| | Clovelly | | | Lake Jesse | | Brine Diffuser | | | | Offshore | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Parameter** | **461** | **463** | **464** | **407** | **462** | **435** | **473** | **474** | **475** | **481** | **482** | **484** |
| Acenaphthene, µg/kg dw | <19 | <26 | <18 | <20 | <15 | <12 | <16 | <12 | <13 | <11 | <16 | <13 |
| Acenaphthylene, µg/kg dw | <19 | <26 | <18 | <20 | <15 | <12 | <16 | <12 | <13 | <11 | <16 | <13 |
| Anthracene, µg/kg dw | <19 | <26 | <18 | <20 | <15 | <12 | <16 | <12 | <13 | <11 | <16 | <13 |
| Benzo (a) anthracene, µg/kg dw | <19 | <26 | <18 | <20 | 16 | <12 | <16 | <12 | <13 | <11 | <16 | <13 |
| Benzo (b) fluoranthene, µg/kg dw | <19 | <26 | <18 | <20 | <15 | <12 | <16 | <12 | <13 | <11 | <16 | <13 |
| Benzo (k) fluoanthene, µg/kg dw | <19 | <26 | <18 | <20 | 38 | <12 | <16 | <12 | <13 | <11 | <16 | <13 |
| Benzo (g, h, I) perylene, µg/kg dw | <19 | <26 | <18 | <20 | <15 | <12 | <16 | <12 | <13 | <11 | <16 | <13 |
| Benzo (a) pyrene, µg/kg dw | 120 | <26 | <18 | <20 | 28 | <12 | <16 | <12 | <13 | <11 | <16 | <13 |
| Chrysene, µg/kg dw | 26 | <26 | <18 | <20 | 23 | <12 | <16 | <12 | <13 | <11 | <16 | <13 |
| Dibenzo (a,h) anthracene, µg/kg dw | <19 | <26 | <18 | <20 | <15 | <12 | <16 | <12 | <13 | <11 | <16 | <13 |
| Fluoranthene, µg/kg dw | 70 | <26 | <18 | 22 | 35 | <12 | <16 | <12 | <13 | <11 | <16 | <13 |
| Fluorene, µg/kg dw | <19 | <26 | <18 | <20 | <15 | <12 | <16 | <12 | <13 | <11 | <16 | <13 |
| Indeno pyrene, µg/kg dw | <19 | <26 | <18 | <20 | <15 | <12 | <16 | <12 | <13 | <11 | <16 | <13 |
| 1-methylnaphthalene, µg/kg dw | <19 | <26 | <18 | <20 | <15 | <12 | <16 | <12 | <13 | <11 | <16 | <13 |
| 2-methylnaphthalene, µg/kg dw | <19 | <26 | <18 | <20 | <15 | <12 | <16 | <12 | <13 | <11 | <16 | <13 |
| Naphthalene, µg/kg dw | <19 | <26 | <18 | <20 | <15 | <12 | <16 | <12 | <13 | <11 | <16 | <13 |
| Phenanthrene, µg/kg dw | <19 | <26 | <18 | <20 | <15 | <12 | <16 | <12 | <13 | <11 | <16 | <13 |
| Pyrene, µg/kg dw | 94 | <26 | <18 | 24 | 42 | <12 | <16 | <12 | <13 | <11 | <16 | <13 |