

**Point Reyes National Seashore**  
**Drakes Estero Assessment of Oyster Farming Final Completion Report**  
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**Project Title: Assessment of Oyster Farming in Drakes Estero, Point Reyes National Seashore**

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**Project Logistics and Summary**

Over a four-year period (Fall 2000-Fall 2004), with funding provided for the latter two years of this project by the National Park Service, UC Davis scientists working in cooperation with staff scientists from Pt. Reyes National Seashore conducted a preliminary inventory and assessment of the marine biota in Drakes Estero, a coastal embayment and saline estuary at Pt. Reyes National Seashore. An objective of this assessment was to provide information on impacts of the oyster farm (operated by Johnson's) on the biota and ecological conditions in the estero, as well as provide baseline information on marine organisms that had not been previously inventoried here, in particular, fish and marine benthic and epibenthic invertebrates. This estero has a history of oyster farming since 1934 which occurred prior to the designation of the National Seashore in 1964. Part of the estero (and in particular, the eastern most "arm," Estero de Limantour) is also within a designated Wilderness Area. The research was field based in sampling and as needed the collecting of fish, invertebrates, and sediment and water quality samples for subsequent laboratory analyses. The fieldwork and laboratory work was conducted primarily by UC Davis master's students Angie Harbin

(benthic invertebrates), David Press (benthic and epibenthic invertebrates, including fouling community organisms), and Jesse Wechsler (fish). Press and Wechsler are former scientific employees of Pt. Reyes National Seashore as well, with Press currently employed by the Golden Gate National Recreation Area. Harbin and Wechsler produced master's theses from their research (Harbin 2004, Wechsler 2005). The UC Davis scientists were assisted by both park scientists and volunteers in the field sampling (as a minimum of two persons were always needed for safety in the field), as well as by the marine rangers. Three undergraduate assistants helped in our laboratory work on campus, and professional staff of the campus Division of Agriculture and Natural Resources Analytical Laboratory processes and analyzed all sediment and water samples. Angie Harbin, David Press and Jesse Wechsler worked on the mapping (using GPS technology) of all field sampling sites, as well as on the oyster racks themselves. David Press added database and GIS information to the park's PC Microsoft Access database and ARC/GIS projects, working with David Schirokauer as the park's GIS expert. Ben Becker played a key role in logistical planning and support.

The oyster farming operation was found to have an impact on the ecological communities of Drakes Estero. Invasive organisms as a fouling community were found on the hard substrates provided by the oyster racks in Schooner Bay. These organisms were not present in Limantour Estero. Further biosystematic work should be done by taxonomic specialists on the epibenthic fouling taxa, as it appears that one species, *Didemnum lahillei* is a non-native, aggressive, invasive species. The overall richness of benthic infaunal taxa was not influenced by the oyster aquaculture in Schooner Bay, however, the relative abundance of various benthic taxa may be influenced by the oyster operation, as the relative abundance of ostracods and bivalves approximately doubles between the racks and 50 meters away. This may be due to decreased predation by fish and decapods away from the racks. The oyster racks did provide unique, hard substrate habitat and shelter for marine organisms, both for fouling community invertebrates and as shelter and habitat for some of the smaller marine fish, increasing the diversity and richness of fish assemblages. These fish and decapods through predation may decrease the abundance of benthic ostracods and bivalves beneath the oyster racks. There were no negative water quality impacts detected.

Although pseudofeces from the suspended oysters may contribute to the amount of organic matter below the racks, adding to the system, the amount of organic matter resulting from eelgrass decomposition is likely far greater considering how expansive and dense the beds are within the estuary, making any significant organic inputs from the oysters undetectable in this study (Harbin 2004). The decrease in silt content values beneath the oyster racks in this study may indicate some sediment erosion is taking place due to the presence of the rack structures, shifting the abundance of various species in the invertebrate communities (both benthic infauna and epibenthics), but not changing the species assemblage.

This inventory and initial assessment provides a baseline for future research, for monitoring impacts of the oyster farming operation on the estero, and for examining environmental change in the estero into the future.

## **Project Purpose and Objectives**

A comprehensive inventory of marine biota and their environments has never been conducted for Drakes Estero (Pt. Reyes National Seashore), one of the most pristine estuaries on the west coast of the USA (Figure 1 from Wechsler, 2005). The park has had good information on marine mammals and shorebirds as species targeted for management, and also of the most interest to scientists at the park and nearby Pt. Reyes Bird Observatory. The large sheltered expanses of mudflats and extensive eelgrass beds in Drakes Estero are home to numerous invertebrates and serve as foraging grounds for many birds, fish, and pinnipeds. Seagrass beds are probably the most widespread habitat type in the estuary as they are expansive in all arms of the estero during spring and summer. They are absent only from the very deep portion of the estero near the mouth and fringing intertidal areas.

Drakes Estero was created by the drowning of an ancient river valley on a small block of granitic-based crust of the Pacific Plate on the western side of the San Andreas Fault zone. The most recent sea level rise following the Late Pleistocene glacial during the Flandrian transgression formed the contemporary estuary by 6,000 years before present (Elliott-Fisk unpublished, Harbin 2004). The geology of the surrounding watershed is characterized by the late Cenozoic Drakes Bay Formation, which consists mainly of fine-grained siltstone interbedded with silty mudstone, as well as basal glauconitic greensand over the granitic basement (Galloway 1977). The sediments of the lower portion of Drakes Estero near its mouth consist of sand, due to strong longshore transport in Drakes Bay along the continental shelf, while muddy sediments characterize the rest of the estuary due to runoff and associated processes. A small section of the seaward portion of the estuary (e.g. near its mouth) is characterized by a rock bottom and kelp beds, with adjacent sand bars that create important habitat for pinnipeds, such as harbour seals. Northern elephant seals are also seen near the mouth of the estero but more frequently haul out on Drakes Beach proper. Steep cliffs interface in places with the waters edge, but more commonly narrow to wide intertidal silty sand tidal flats occur alongshore, providing important saltmarsh and macroalgal covered tidal flats, providing important habitat for shorebirds. The location and abundance of intertidal vegetation communities such as salt marsh are greatly influenced by this topography (Harbin 2004, Elliott-Fisk unpublished).

Drakes Estero's only hydrological connection to the ocean is via the mouth to Drakes Bay. Tidal heights have an approximate eight-foot range and the tidal regime corresponds to mixed semi-diurnal. Freshwater inputs are largely from the small watersheds surrounding the estuary which encompass an area of 7,847 acres. Several unnamed intermittent drainages and perennial creeks flow from sources in the surrounding hills into the five arms of the estuary. Surface water temperatures range from 10° C in the winter to 17° C in the summer. Salinity has been found to be as low as 31 ppt in the upper reaches of the estuary in winter and as high as 41 ppt in early fall (Harbin 2004). As such, the species that occur here are properly termed marine, and this might be viewed as more of a coastal embayment than an estuary based on the near-ocean salinity levels.

Drakes Estero has been commercially farmed for oysters since 1936, with the leasee Johnson's Oyster Farm. The Park has oversight of this lease, and has expressed concern over whether exotic organisms may have been introduced by the oyster culture into the estero from non-native oyster "seed or spat" and associate packing materials. As the

National Park Service is charged with preserving and protecting the resources, it was deemed wise to do an initial assessment of the biota and general ecological conditions of the estero.

Since 1934, six companies have held mariculture leases (from the California Dept. of Fish and Game) in Drakes Estero that allowed them to farm Pacific oysters. Johnson's Oyster Farm has held state mariculture lease allotments since 1954, which entitles the company to farm oysters in approximately 648 hectares (1,600 acres) of the estero (California Department of Health Services 1991; see Wechsler 2005 and Harbin 2004). In 1972, the federal government purchased the five-acre parcel of land and shoreline dwellings held by Johnson's located at the northern end of Schooner Bay, the base of the operation in Drakes Estero. Since then, the oyster company has leased the facilities from National Park Service, and has the option to do so until 2012, assuming they uphold their lease conditions (Marin County Community Development Agency 1998). Because a management objective for the park is to preserve aspects of cultural significance, park staff has attempted to include oyster farming in its General Management Plan (National Park Service 1980).

The protected and largely undeveloped lands of the Drakes Estero watershed provide a water quality that is optimal for the culture of oysters (California Department of Health Services 1991). State, federal, and county agencies monitor the shellfish harvest to ensure that Johnson's mariculture practices comply with the appropriate California environmental health standards for the production of shellfish (Wechsler, 2005). Because approximately 2,000 cattle graze in the watershed (personal communication, Mark Homringhausen, NPS Range Specialist), Johnson's oyster company is required to conduct a monthly fecal coliform self-monitoring program (California Department of Health Services 1996). However, it has also been demonstrated elsewhere that oyster cultivation may alter sedimentation processes and characteristics in estuaries. Previous studies have shown that the rack method of oyster cultivation can lead to local erosion resulting in a decrease in sediment carbon content, proportional weight of silt to clay, and eelgrass cover in areas beneath racks (Everett et. al. 1995). Large-scale sediment erosion has been shown to cause extensive reduction of plant and animal populations in estuaries (Patriquin 1975, Zieman 1976). Localized changes in sediment composition and stability may also significantly affect both species diversity and abundance of benthic infauna (Harbin 2004).

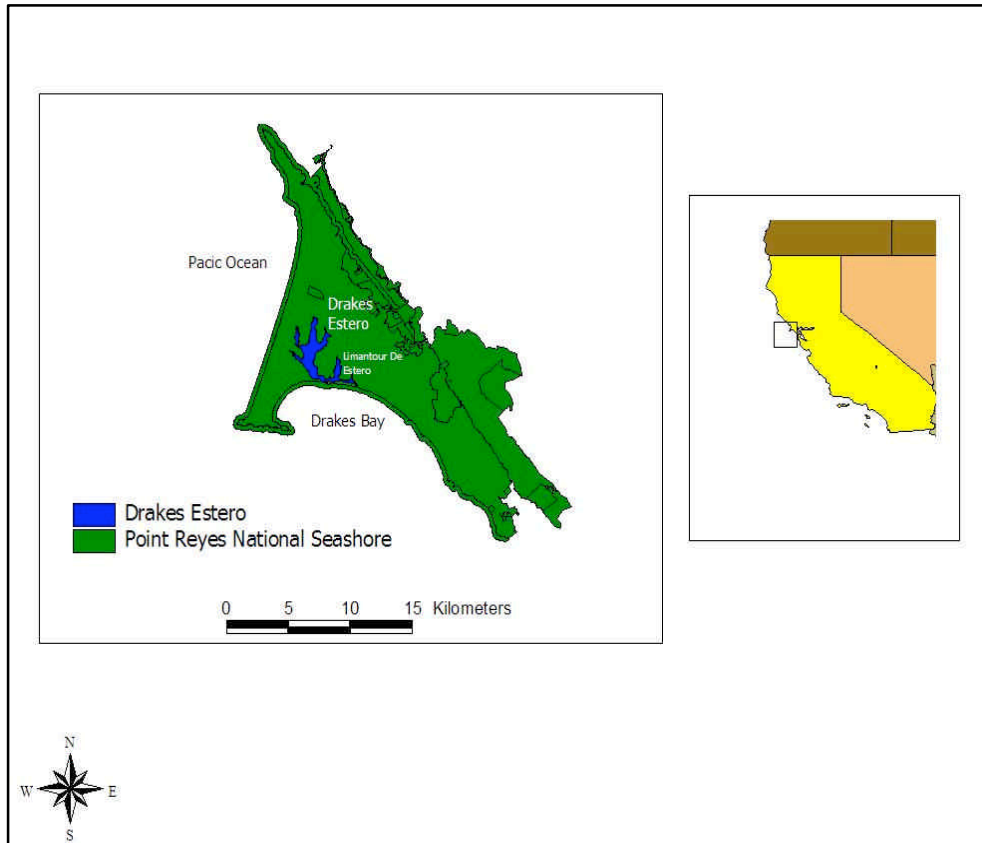


Figure 1. Location of the Drakes Estero Ichthyofauna - Oyster Mariculture study, Point Reyes National Seashore (Wechsler, 2005).

To detect whether direct and indirect impacts had occurred from the oyster culture, sampling of the biota, sediments, and water was done for this research project both immediately at and some distance away from the farming operation in Schooner Bay (and at a few other sites), as well as in the arm of the estero most remote from the oyster farm: Estero de Limantour in the designated Wilderness Area. Initial sampling focused on the soft-sediment (benthic or infaunal) macro-invertebrates, which are routinely used for assessment of pollution and other anthropogenic disturbances in marine environments. However, focusing on a single species and trying to extrapolate its response to other components of the ecosystem ignores the importance of community structure, interactions and trophic relationships (Soule 1988, Harbin 2004). As such, our focus was at the community level, and we also used this approach in assessing the fish community (Wechsler 2005) and associated epibenthic invertebrates. A series of secondary objectives were also identified and addressed, including mapping of the existing oyster racks.

## Methods Employed by the Project

The research was primarily field based in Drakes Estero to inventory the fish, epibenthic and benthic invertebrates, and any associated organisms, as well as to collect a limited set of sediment and water quality samples. Most of the fish and many of the invertebrates were able to be positively identified as to genus or species in the field, but a few specimens as well as all sediment cores with benthic invertebrates were brought back to the laboratory at UC Davis for subsequent analyses, as were sediment and water quality samples for physical and chemical analyses.

The research design was by Professor Elliott-Fisk and Dr. Sarah Allen, in collaboration with UC Davis master's degree students Angie Harbin, David Press and Jesse Wechsler, and Park staff scientists Ben Becker and David Schirokauer. The fieldwork and laboratory work was conducted primarily by UC Davis master's students Angie Harbin (benthic invertebrates), David Press (benthic and epibenthic invertebrates, including fouling community organisms), and Jesse Wechsler (fish). Press and Wechsler are former employees of Pt. Reyes National Seashore, with Press currently employed by the Golden Gate National Recreation Area. Harbin and Wechsler produced master's theses from their research (Harbin 2004, Wechsler 2005). The UC Davis scientists were assisted by both park scientists and volunteers in the field sampling (as a minimum of two persons were always needed for safety in the field), as well as by the marine rangers. Three undergraduate assistants helped in our laboratory work on campus, and professional staff of the campus Division of Agriculture and Natural Resources Analytical Laboratory processes and analyzed all sediment and water samples following the strictest protocols. Angie Harbin, David Press and Jesse Wechsler worked on the mapping (using GPS technology) of all field sampling sites, as well as on the oyster racks themselves. David Press added database and GIS information to the park's PC Microsoft Access database and ArcGIS projects, working with David Schirokauer as the park's GIS expert. Ben Becker played a key role in logistical planning and support, and useful input as the park's marine ecologist.

Initial reconnaissance field sampling for the project began in the fall of 2000 to test sampling methods around the racks. In 2003 when intensive sampling for this project began, there were 85 oyster racks in the estero, most of which were located in Schooner Bay, Home Bay, and main body of Drakes Bay. Thirty-eight racks (45%) were either fully or partially active (Figure 2) (Wechsler, 2005). These wooden racks (Figure 3) are approximately 3 m wide and 50-150 m long. Additionally, a small number of oysters are grown in floating or hanging mesh bags attached to racks or suspended in the water column (Wechsler, 2005).

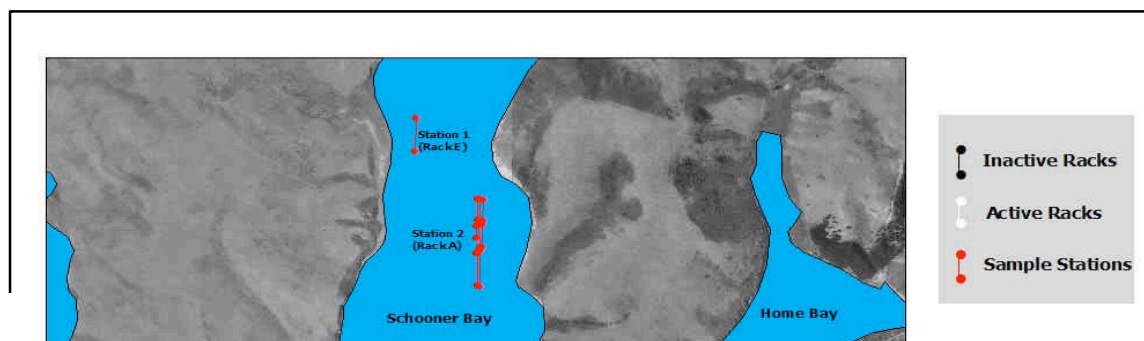




Figure 3. The oyster racks of Johnson's Oyster Company in Drakes Estero, Point Reyes National Seashore (photo courtesy of David Press).



Figure 4. Wooden racks and oyster harvest technique. Johnson's Oyster Company. Drakes

The leasee uses a hanging-line technique to grow oysters in the subtidal portion of Drakes Estero (see Figure 4 from Wechsler, 2005). As the oysters are held above the bottom substrate, predation by benthos is reduced and the oysters are submerged throughout the entire tidal cycle, enhancing their growth rate (Matthieson 2001). Because the water temperature in Drakes Estero is too low for Pacific oysters to successfully reproduce (Fred Conte, University of California, personal communication to Jesse Wechsler), Johnson's imports larval spat from several international oyster stocks. Juveniles are incubated on shore for several weeks until they have settled onto old adult oyster shells (clutch), which are then spaced evenly on inverted-U strings, which are draped over the wooden racks and cultured for approximately eighteen months. Harvests are done manually and oysters are brought by flat-bottomed barge to a small processing plant at the head of Schooner Bay. At peak production, Johnson's harvests up to 80,000 bivalves per day, which workers sort, shuck, clean, and sell on premises by the pint, quart, or on the half-shell (Mark Johnson, Johnson's Oyster Company, personal communication to Jesse Wechsler – see Wechsler, 2005).

### **Quality Control and Quality Assurance**

In order to collect the best data under the constraints of inclement weather, hazards and safety, budget limitations, and time constraints, our study design was focused on sampling organisms and their environments in (1) the most heavily farmed arm of Drakes Estero where the oyster operation is based (Schooner Bay), and at (2) the least impacted arm of the



estero where oysters have not been cultivated (Estero de Limantour in the Wilderness Area). Three duplicates (i.e., replicates) of all samples were taken to assess differences between samples, and sampling was done through the year temporally to pick up any seasonal changes. Personnel were all well trained in the sampling methodologies, organism identification, and laboratory techniques. The analysis of sediment and water samples was done by the professional, certified staff of the University of California's DANR Analytical Laboratory at UC Davis. Review of sampling methodologies, data sets, data analyses, and findings was done by the professional statisticians in the UC Davis Statistics Consulting Laboratory, by Professor Peter Moyle (UC Davis) for the benthic invertebrates and the fish, by Dr. Sharon Kramer (Stillwater Consultants) for the fish, and by Dr. Ted Grosholz (UC Davis) for the invertebrates through work with the three graduate student researchers, PI Professor Elliott-Fisk, and thesis reviews.

### **Field Sampling Locations**

Four primary study locations were selected for Schooner Bay and then for Estero de Limantour. Schooner Bay is the main arm of Drakes Estero for the Johnson's oyster farming operation. Oyster racks were randomly selected as Racks 5, 8, 11, and 14 and a coin tossed to decide which side of the rack to place the 5, 10, 50, or 75 m "away" sites along. Sampling was done at or adjacent to the racks and then a set distance from them.

Estero de Limantour is the "quasi-control site for oyster farming impacts" as no oyster racks occur in this most remote arm of Drakes Estero from the mariculture sites. With no racks here, four grid sites were randomly selected for sampling from the Point Reyes National Seashore reference grid system as:

- Grid 55 – UTME 507970, UTMN 4210107
- Grid 97 – UTME 508170, UTMN 4210507
- Grid 116 – UTME 508070, UTMN 4210707
- Grid 136 – UTME 508070, UTMN 4210907.

### **Fish Community Sampling**

UC Davis Graduate Student Researcher Jesse Wechsler conducted the fish sampling and data analysis. This information is taken from his master's thesis (Wechsler, 2005), as supervised by Professor Elliott-Fisk and also reviewed and approved by Professor Peter Moyle and Dr. Sharon Kramer. Wechsler sampled the fish community both adjacent to (Schooner Adjacent) and at a distance of approximately seventy-five meters (Schooner Away) from three randomly selected oyster racks in the subtidal portion of Schooner Bay. For comparison, three randomly selected sites were sampled in Estero de Limantour, a marine reserve located approximately three nautical miles away from the oyster farm and a "quasi or pseudo-control" for the mariculture impacts as the arm of the estero most remote from the oyster cultivation. All sampling events took place during the day at high or slack tide, and lasted for three to five days (Table 1). A 4.3-meter aluminum Klamath skiff with a Mercury 10 HP engine owned by UC Davis was used for all fish sampling efforts. The shallow draw of the

skiff allowed access to most areas of the estero during high or slack tides. Average water depth at the time of sampling was between one and two meters. With safety concerns (poor weather and operating difficulties for the boat), Wechsler was not able to complete the surveys in December 2002 and April 2003; that portion of the data was used to report on species presence and absence only. Since the majority of oyster racks were located in eelgrass (*Zostera marina*) beds, all sampling was conducted primarily within this habitat type. Surveys were conducted seasonally from December 2002 to January 2004 to gather additional information about the temporal use of Drakes Estero by marine fishes.

At each station, Wechsler took three replicate otter-trawl samples that lasted three to five minutes each depending on the dimensions of the oyster rack. When adjacent to an oyster rack, he navigated the boat and trawl as close to the structure as possible without endangering the net, a distance of approximately 1 – 2 m. Trawl direction was alternated to coincide with both incoming and outgoing tides. Because water depth was generally less than 2 m, the trawl effectively captured benthic and pelagic fish simultaneously. In October, trawling was ineffective because eelgrass approached peak density. During these samples, the trawl immediately filled with eelgrass, restricting both the ability to catch fish and the ability to navigate. As a result, we replaced the trawl with a thirty-meter boat seine for the October sampling events.

A 1.8-meter X 60-meter monofilament experimental gill net with eight panels (1.27-cm to 10.16-cm) was fished repeatedly at all sites for 0.5 to 1.5 hours, depending on the initial catch rate of the first set. The high density of fish, sharks, and rays in the estero mandated short gill sets to reduce the likelihood of incidental mortality. Three sets were made per site per sampling episode. Adjacent to the racks, the gill net was attached directly to the wooden supports. At sites away from the racks, the gill net was set parallel to the rack orientation at a distance of approximately 75 m. In Estero de Limantour, the gill net was set as close to the trawl sites as possible where water depth allowed.

**Table 1. Sample dates for the Drakes Estero Ichthyofauna – Oyster Mariculture study, Point Reyes National Seashore.**

Sample Number	Sample Period
1*	December 3 - December 4, 2002
2*	April 3 - April 4, 2003
3	June 28 - July 2, 2003
4	July 24 - July 28, 2003
5	August 25 - September 6, 2003
6	October 4 - October 6, 2003
7	October 17 - October 19, 2003
8	November 12 - November 15, 2003
9	January 10 - January 12, 2004

\* sample not used for analysis

To catch small benthic and crevice dwelling fish, we set four to six minnow traps at each sampling station for eighteen to twenty-four hours. All traps were attached to fluorescent buoys to allow for relocation and retrieval. Adjacent to the oyster racks, minnow traps were tied directly to the wooden supports. Away from the racks and in Estero de Limantour, traps were set approximately 10 m apart. We used several baits to experiment with fishing effectiveness including stink bait, cat food, squid, herring, and anchovies.

Rectangular collapsible mesh fish traps were used experimentally, but because they were regularly destroyed by benthic decapods, this method was discarded. Hoop nets and fyke nets were also used on an experimental basis, but were not particularly successful; both of these methods were discarded.

Miller and Lea's *Guide to the Coastal Marine Fishes of California* (1972) was used for all fish identifications made in the field. Fish not identified in the field were collected and brought to our University of California, Davis laboratory and museum for identification. Total length for all individual fish and biomass per species were recorded unless measurements increased the likelihood of fish mortality. Recorded fish length was used as an indication of life-stage to assess the nursery function of the estero (Wechsler, 2005).

### **Benthic Invertebrate Community Sampling**

Sediment cores were also taken in replicates of 3 at each sampling site to a depth of 10 centimeters to sample benthic invertebrates both at and away from the racks in Schooner Bay (by Harbin and Press) and in the pseudo-control arm of Estero de Limantour (by Press). Duplicate sediment cores (also, replicates of 3) were collected for physical (texture, particle size) and chemical analyses. In her research begun before the funded project started, Harbin (2004) chose two sets of oyster racks within Schooner Bay for sampling in order to ensure that all samples were taken from areas with comparable hydrology and sediments. Six different locations were sampled beneath and adjacent to the oyster racks for invertebrate and sediment analyses. All sampling locations overlapped with the location of eelgrass beds, however, samples were taken in fall and winter after the eelgrass had died back. All samples were taken in subtidal portions of the bay. Water depths ranged between one and two meters at the time of sampling. For winter sampling, on January 20, 2001, core samples were taken at one sample point beneath each rack (R1 & R2) and at four successive distances - 1, 5, 10, and 50 m - from each oyster rack to evaluate invertebrate diversity and abundance beneath oyster racks and adjacent areas (1, 5, 10, and 50 m away). Three core samples were taken at each sampling point (n=30). For fall sampling, on October 21, 2001, core samples were taken at four sample points (R3, R4, R5, and R6) beneath the westernmost rack within Schooner Bay and at four sample points in adjacent areas (10 m away). Two core samples were taken at each sample point (n=16). All samples were taken from a kayak using a large bore sediment corer (10 cm diameter x 10 cm deep) on an aluminum extension rod (Aquatic Research Instruments, Idaho) (Harbin 2004).

Sediment samples were kept on ice, taken back to the laboratory and sieved through a mesh of 0.5 mm, fixed in 4% buffered formalin for 48 hours, resieved through a 0.5 mm mesh, and transferred to 70% ethanol for later identification. All individual organisms in each core were

counted and identified to the lowest taxonomic level possible using taxonomic keys (Smith and Carlton 1974, Kozloff 1996) and a dissecting microscope – Leica GZ7 70X. In some cases this was only to order or family as many marine invertebrate groups are not well described, i.e. ostracods, or their taxonomy is in flux, i.e. amphipods, and available taxonomic keys are considered obsolete (Harbin 2004).

Sediment cores for sediment particle size and organic content analyses were taken in the same manner and at the same time as those for macrobenthos. Samples were frozen in the laboratory until analyzed. Samples analyzed for organic content were thawed then dried at 100 °C for 24 hours, ground to powder with a mortar and pestle, and combusted at 450 °C for 2 hours in a muffle furnace to determine their ash-free dry weight. Particle size analysis of sand, silt, and clay in soil suspension by hydrometer was carried out following the methods of Gee and Bauder (1979) by the DANR Analytical Laboratory at University of California, Davis. A time series of hydrometer readings were taken to estimate sand, silt, and clay percentages in a soil suspended solution. Hydrometer readings were taken over a time period of 0.5 minute to 24 hours and Na hexametaphosphate was used as a dispersant (Harbin 2004).

Sites and locations for these 10 cm sediment cores as collected in 2003 and 2004 by David Press were taken at the rack vs. 50 m away (based on Harbin's earlier findings and recommendations) for Schooner Bay 4/28/03 – Rack 11 Away only, 4/30/03 – Rack 14, Rack 11, Rack 5, Rack 5 Away, Rack 14 Away, 5/2/03 – Rack 8, Rack 8 Away, 10/14/03 – Rack 14, Rack 14 Away, Rack 5, Rack 5 Away, and 10/16/03 – Rack 11, Rack 11 Away, Rack 8, Rack 8 Away, and for Estero de Limantour, 5/28/03 – all four grid points and 10/15/03 – all four grid points. Sites and locations for the sediment samples for physico-chemical analyses as sampled by David Press were Schooner Bay 7/15/04 – all 8 sites at and away from oyster racks, and Estero de Limantour 7/23/04 – all four grid points. All infaunal sediment cores were processed using the same techniques Harbin (2004) used, but due to time and budget constraints, were only able to separate all the organisms from the sediment and preserve them, not identify them. All 79 samples or preserved organisms remaining to be identified are at UC Davis.

### **Epibenthic Invertebrate Community Sampling**

Epibenthic invertebrates were sampled as both mobile and sessile organisms in the eelgrass beds and as the fouling community at the oyster racks. “By-catch” epibenthic invertebrates were also noted with fish sampling, especially that using the trawls over eelgrass beds. This work is very much incomplete due to adverse weather and other logistic problems that limited time on the water.

We used a stratified random sampling scheme to select sampling sites in the subtidal, since we are interested in the organisms and physical processes at and away from oyster racks in Schooner Bay and in the control area of Estero de Limantour. Oyster racks in Schooner Bay were numbered from digital photographs and randomly selected for sampling using a random numbers table. In order to select random sampling sites in the Estero de Limantour, a geo-referenced grid was generated using ArcInfo GIS software that may be placed over a digital aerial photo of the estuary. The grid cells measured 100 x 100 m and covered the total area

of Estero de Limantour. With each grid cell numbered, cells were then randomly selected for field sampling such that no cell extends into the intertidal zone of the estuary and no two cells lie adjacent to one another. UTM coordinates for the center of each cell were generated, allowing field teams to navigate to the center of each sampling cell, with an accuracy of +/- 2 m using a handheld GPS.

Our research design was to use throw traps to estimate densities of epibenthic invertebrates and invertebrates associated with the eelgrass (*Zostera marina*) community (Rozas and Minello 1997, Raposa and Oviatt 2000). A one meter square trap was constructed that stands one meter tall, fitted with 3 mm wire mesh around the sides (Chick et. al 1992, Raposa and Oviatt 2000). Eelgrass enclosed within the trap was clipped at the base and put into a bucket containing seawater on board the boat. Once clear of eelgrass, the throw trap was swept with a large dip net of 1 mm mesh size (Chick et. al 1992, Raposa and Oviatt 2000). All fish and invertebrates collected in the dip net were retained. Net sweeps were made until three consecutive sweeps come up empty. Eelgrass retained in the collecting bucket was also washed and cleared of all invertebrates by hand. By-catch fish collected from the throw trap with the dip net were identified and enumerated in the field. Invertebrates collected were identified in the field, enumerated, and returned to the water. The remaining contents of each bucket were passed through a 0.5 mm sieve to collect all other small invertebrates, which were fixed in 4% buffered formalin for 48 hours, transferred to 70% ethanol, and identified to the lowest taxonomic level in the laboratory using standard taxonomic keys (Light 1975, Morris et. al 1980). At least three replicate samples were taken with the throw trap at each site (Press unpublished). This work is incomplete and not reported on herein.

Due to the presence of the oyster rack structures, and the potential introduction of non-native organisms by the oyster farm practices, we put our highest priority on determination of what species of invertebrates composed the fouling community (sponges, tunicates, hydroids, bryozoans, barnacles, bivalve molluscs, etc.) at the oyster racks. Without having to snorkel or SCUBA to sample or disturb the oyster cultivation, we installed 20 x 20 cm settling (fouling) plates on fixed rods suspended 1.5 feet (45 cm) above the bottom at and away from the oyster racks. These were installed as replicates of three plates per site. These were collected at intervals to see what organisms were resident at the racks and had colonized the plates. The first set of settlement plates was deployed in Schooner Bay and Estero de Limantour on April 14, 2003. Sites and locations for the settlement plates as collected (retrieved) by David Press were 7/23/03 – all 12 sample sites in Schooner Bay and Estero de Limantour, and 8/11/04 to 8/17/04 – scheduled to pull and read all settlement plates. Percent cover estimates of organisms were made in the field by a point-sampling technique. Using a 20 x 20 cm grid placed over the plate, the species present were recorded at 25 randomly selected grid coordinates (Sutherland 1974). The plates were also quickly inventoried for rare species not found in the percent cover estimate. Mobile invertebrates collected on the settlement plates were not enumerated or identified.

## **Water and Sediment Sampling and Analyses**

To see if differences in the characteristics of sediment and water samples at the racks existed to those away from the mariculture oyster racks, samples were collected periodically and analyzed for total suspended solids (TSS), ammonia, and nitrate; dissolved oxygen, water clarity, salinity, and water temperature were also recorded with sample collection. Ammonia, nitrate, and TSS samples were taken at a depth of thirty centimeters with a bottle-mounted pole sampler and brought to our DANR Analytical Laboratory at the University of California, Davis for processing. Water clarity was measured in the field with a Secchi disc; salinity, temperature, and dissolved oxygen were measured in the field with a YSI 85 meter. Results from the physico-chemical and nutrient samples are listed in Appendix B and Appendix C.

### **Results and Discussion: Accomplishments and Failures of the Project (including actions not successfully accomplished and why)**

**Fish community (condensed from Wechsler 2005):** We captured 3,128 fish, which represented 20 families and 35 species (see Appendix A). The surfperches (Embiotocidae) were the predominant family (8 species), followed by the sculpins (Cottidae) with 4 species. All other families consisted of 2 or fewer species. [Because of sampling difficulties encountered during the December 2002 and April 2003 sampling efforts, only the data from the seven sampling periods from June 2003 through January 2004 were used for the statistical tests and descriptive accounts of the fish communities; this data incorporated 2,816 fish and twenty-nine species. Of this total, 44% of the fish were captured in Estero de Limantour, 30% away from the racks in Schooner Bay, and 26% percent adjacent to the racks in Schooner Bay. Five species, topsmelt (*Atherinopsis affinis*), three-spined stickleback (*Gasterosteus aculeatus*), staghorn sculpin (*Leptocottus armatus*), Bay pipefish (*Sygnathus leptorhynchus*), and kelp surfperch (*Brachyistius frenatus*) dominated the fish assemblage and accounted for eighty-nine percent of the total catch (Table 3). It is likely that these five species are permanent residents of Drakes Estero, as they were collected during all sampling episodes. Six species were intermediate in abundance, represented by greater than 10 but fewer than 100 individuals. The remaining 18 species were captured in lower frequencies with total catch per species consisting of 10 individuals or fewer. The Shannon-Weiner Function of Diversity Index indicated that the fish community associated with the oyster racks was the most diverse. Species richness was similar among all three sites (Table 3).

**Table 3. Relative abundance of the fish species captured during the Drakes Estero Ichthyofauna – Oyster Mariculture study, Point Reyes National Seashore, December 2002 - January 2004.**

Scientific Name	Common Name	Estero de Limantour	Schooner Adjacent	Schooner Away	Grand Total	Relative % of Total
<i>Atherinopsis affinis</i> *	topsmelt	487	83	306	876	31.11%
<i>Gasterosteus aculeatus</i> *	three-spined stickleback	317	54	80	451	16.02%
<i>Leptocottus armatus</i> *	staghorn sculpin	226	97	108	431	15.31%
<i>Sygnathus leptorhynchus</i> *	Bay pipefish	102	180	132	414	14.70%
<i>Brachyistius frenatus</i> *	kelp surfperch	41	195	105	341	12.11%
<i>Cymatogaster aggregata</i>	shiner surfperch	14	39	41	94	3.34%
<i>Triakis semifasciata</i>	leopard shark	15	31	25	71	2.52%
<i>Citharichthys stigmaeus</i>	speckled sanddab	1	20	10	31	1.10%
<i>Atherinopsis californiensis</i>	jacksmelt	8	5	12	25	0.89%
<i>Gibbonsia metzi</i>	striped kelpfish	8	3	3	14	0.50%
<i>Embiotoca jacksoni</i>	black surfperch	7	3	3	13	0.46%
<i>Micrometrus minimus</i>	dwarf surfperch	3	5	0	8	0.28%
<i>Aulorhynchus flavidus</i>	tubesnout	1	1	6	8	0.28%
<i>Clinocottus analis</i>	wooly sculpin	0	6	1	7	0.25%
<i>Sebastes sp.</i>	unid. rockfish	0	3	2	5	0.18%
<i>Hyperprosopon argenteum</i>	walleye surfperch	2	2	0	4	0.14%
<i>Pholis ornata</i>	saddleback gunnel	2	2	0	4	0.14%
<i>Platichthys stellatus</i>	starry flounder	2	0	1	3	0.11%
<i>Lepidogobius lepidus</i>	Bay goby	0	0	3	3	0.11%
<i>Damalichthys vacca</i>	pile surfperch	2	0	0	2	0.07%
<i>Isopsetta isolepis</i>	butter sole	2	0	0	2	0.07%
<i>Microgadus proximus</i>	Pacific tomcod	0	2	0	2	0.07%
<i>Clupea harengus</i>	Pacific herring	1	0	0	1	0.04%
<i>Hypsopsetta guttulata</i>	diamond turbot	1	0	0	1	0.04%
<i>Cebidichthys violaceus</i>	monkey-faced eel	0	1	0	1	0.04%
<i>Hemilepidotus spinosus</i>	brown Irish Lord	0	0	1	1	0.04%
<i>Hypomesus pretiosus</i>	surf smelt	0	1	0	1	0.04%
<i>Porichthys notatus</i>	plainfin midshipman	0	1	0	1	0.04%
<i>Scorpaenichthys marmoratus</i>	cabezon	0	0	1	1	0.04%
Total Number of Individuals		1,242	734	840	2,816	-
Percent of Total		44.11	26.07	29.83	-	100.00%
Species Diversity		1.63	2.05	1.91	-	-
Species Richness		20	21	18	29	-

Calculated ANOVA

\* Likely permanent residents

values indicated that there were no significant differences in the abundance of fish over time ( $F=0.55$ ,  $p=0.01$ ) or among sites ( $F=0.23$ ,  $p=0.01$ ) between Schooner Adjacent, Schooner Away, and Estero de Limantour. There were also no significant differences in the number of species captured ( $F=1.07$ ,  $p=0.01$ ) or number of species among sites ( $F=0.16$ ,  $p=0.01$ ) during this study (Table 4). Confidence levels were all set at  $p=0.01$  (as listed in Table 4), and these  $p$  values were not met.

**Table 4. Two-way analysis of variance for abundance of fish and number of species, Drakes Estero Ichthyofauna – Oyster Mariculture study, Point Reyes National Seashore, December 2002 – January 2004.**

ANOVA results for tests of significance for abundance of fish captured ( $p=0.01$ )					
Source of Variation	Sum Squares	Degrees of Freedom	Variance	Calculated F-values	p
SS between	2.27	20	0.11	variable A (date) =	0.55 <b>0.01*</b>
SS variable A (date)	0.82	6	0.14	variable B (site) =	0.23 <b>0.01*</b>
SS variable B (site)	0.11	2	0.06	interaction =	0.45 <b>0.01*</b>
SS interaction	1.33	12	0.11		

SS within	9.22	37	0.25			
<i>ANOVA results for tests of significance for number of species captured (p=0.01)</i>						
Source of Variation	Sum Squares	Degrees of Freedom	Variance	Calculated F-values		p
SS between	0.926	20	0.04	variable A (date) =	1.07	<b>0.01*</b>
SS variable A (date)	0.351	6	0.05	variable B (site) =	0.16	<b>0.01*</b>
SS variable B (site)	0.017	2	0.009	interaction =	0.85	<b>0.01*</b>
SS interaction	0.557	12	0.04			
SS within	2.026	37	0.05			

\*significant at the p=0.01 level.

Four of the five similarity tests run on the fish community assemblages (Renkonen Percent Similarity, Euclidian Distance, Bray-Curtis Index, Morista Index; see Wechsler, 2005 for additional information) showed that the fish communities adjacent to the oyster racks and in Estero de Limantour were the most compositionally different or divergent. Two of the three calculated similarity coefficients indicated a similar trend. The Morista Index, reportedly the most appropriate for use in ecology, showed the most pronounced difference in the fish assemblages. In contrast, the Canberra Index indicated that all three communities were compositionally similar. The number of species per guild was not greatly altered by the presence of the oyster racks, but changes in fish abundance within each guild were observed (Table 6). Fewer pelagic planktivorous and more structure feeding fish (e.g., Embiotocidae) fish were found associated with the oyster racks. Although more species of the Embiotocidae family were captured in Estero de Limantour, kelp surfperch and shiner surfperch were found in higher densities in Schooner Bay adjacent to the racks. Nearly twice as many benthic fish were captured in Estero de Limantour, although ninety-one percent were staghorn sculpin. Of the predominant benthic species, speckled sanddab, woolly sculpin, and leopard sharks were captured more frequently adjacent to the oyster racks. The frequency of crevice-dwelling was highest in Estero de Limantour, however, the chosen sample gear was not successful in capturing many individuals (Table 6). Anecdotaly, numerous crevice-dwelling fish (e.g., monkey-faced eels, striped kelpfish) were observed on the flat-bottomed barges used to harvest oysters, suggesting that these fish use the oyster shell matrix as habitat. A similar number of eelgrass dependent fish was captured in all sites.



**Table 6. Number of fish per ecological guild captured during the Drakes Estero Ichthyofauna – Oyster Mariculture study, Point Reyes National Seashore, December 2002 - January 2004.**

<b>Schooling Plantivores</b>	<b>Common Name</b>	<b>Estero de Limantour</b>	<b>Schooner Adjacent</b>	<b>Schooner Away</b>
<i>Atherinopsis affinis</i>	topsmelt	487	83	306
<i>Atherinopsis californiensis</i>	jacksmelt	8	5	12
<i>Clupea harengus</i>	Pacific herring	1	0	0
Total		<b>496</b>	<b>88</b>	<b>318</b>
<b>Structure Feeders</b>	<b>Common Name</b>	<b>Estero de Limantour</b>	<b>Schooner Adjacent</b>	<b>Schooner Away</b>
<i>Brachyistius frenatus</i>	kelp surfperch	41	195	105
<i>Cymatogaster aggregata</i>	shiner surfperch	14	39	41
<i>Embiotoca jacksoni</i>	black surfperch	7	3	3
<i>Damalichthys vacca</i>	pile surfperch	2	0	0
<i>Hyperprosopon argenteum</i>	walleye surfperch	2	2	0
<i>Micrometrus minimus</i>	dwarf surfperch	3	5	0
Total		<b>69</b>	<b>244</b>	<b>149</b>
<b>Benthic Oriented</b>	<b>Common Name</b>	<b>Estero de Limantour</b>	<b>Schooner Adjacent</b>	<b>Schooner Away</b>
<i>Leptocottus armatus</i>	staghorn sculpin	226	97	108
<i>Triakis semifasciata</i>	leopard shark	15	31	25
<i>Citharichthys stigmaeus</i>	speckled sanddab	1	20	10
<i>Lepidogobius lepidus</i>	bay goby	0	0	3
<i>Clinocottus analis</i>	wooly sculpin	0	6	1
<i>Hemilepidotus spinosus</i>	brown Irish Lord	0	0	1
<i>Platichthys stellatus</i>	starry flounder	2	0	1
<i>Scorpaenichthys marmoratus</i>	cabezon	0	0	1
<i>Isopsetta isolepis</i>	butter sole	2	0	0
<i>Porichthys notatus</i>	plainfin midshipman	0	1	0
<i>Hypsopsetta guttulata</i>	diamond turbot	1	0	0
<i>Microgadus proximus</i>	Pacific tomcod	0	2	0
Total		<b>247</b>	<b>157</b>	<b>150</b>
<b>Crevice Dwellers</b>	<b>Common Name</b>	<b>Estero de Limantour</b>	<b>Schooner Adjacent</b>	<b>Schooner Away</b>
<i>Gibbonsia metzi</i>	striped kelpfish	8	3	3
<i>Cebidichthys violaceus</i>	monkey-faced eel	0	1	0
<i>Pholis ornata</i>	saddleback gunnel	2	2	0
Total		<b>10</b>	<b>6</b>	<b>3</b>
<b>Eelgrass Dependent</b>	<b>Common Name</b>	<b>Estero de Limantour</b>	<b>Schooner Adjacent</b>	<b>Schooner Away</b>
<i>Sygnathus leptorhynchus</i>	bay pipefish	102	180	132
<i>Aulorhynchus flavidus</i>	tubesnout	1	1	6
Total		<b>103</b>	<b>181</b>	<b>138</b>

In comparing Estero de Limantour and Schooner Adjacent, the relative abundance and rank order of the 5 dominant species was nearly reversed, while a more equitable pattern of abundance for these 5 species was noted at Schooner Away (Table 7). These trends show (1) shifts in the fish assemblage to a group of species capable of taking advantage of the rack structure in the water in Schooner Bay (Schooner Adjacent), and (2) differences in the physical environment, and possibly in predators and competitors, between Estero de Limantour (where oyster racks are not present) and Schooner Bay (where intense oyster farming is occurring).

**Table 7. Dominant species of fish captured during the Drakes Estero Ichthyofauna – Oyster Mariculture study, Point Reyes National Seashore, December 2002 - January 2004.**

Scientific Name	Common Name	Estero de Limantour	Schooner Adjacent	Schooner Away
<i>Atherinopsis affinis</i>	topsmelt	487	83	306
<i>Gasterosteus aculeatus</i>	three-spined stickleback	317	54	80
<i>Leptocottus armatus</i>	staghorn sculpin	226	97	108
<i>Sygnathus leptorhynchus</i>	Bay pipefish	102	180	132
<i>Brachyistius frenatus</i>	kelp surfperch	41	195	105
Total		<b>1173</b>	<b>609</b>	<b>731</b>

Juvenile fish were present in the estero throughout this study, which indicated that the estero fulfills a substantial nursery habitat function (Table 8, from Wechsler 2005). Young-of-year fish were identified in forty percent of the species captured, which indicated that reproduction of these species likely occurs within the estero (see Wechsler, 2005 for more information).

**Table 8. Lifestages of the fish captured during the Drakes Estero Ichthyofauna - Oyster Mariculture study, Point Reyes National Seashore.**

Scientific Name	Common Name	Size Range Captured (mm)	Maximum length for Adult Fish (mm)*	Life Stage
<i>Amphistichus argenteus</i>	barred surfperch	282 - 313	425	A, SA
<i>Atherinopsis affinis</i>	topsmelt	47 - 245	360	J, SA, YOY
<i>Atherinopsis californiensis</i>	jacksmelt	305 - 425	437.5	A, SA
<i>Aulorhynchus flavidus</i>	tubesnout	125 - 169	175	A, SA
<i>Brachyistius frenatus</i>	kelp surfperch	30 - 155	212.5	J, SA, YOY
<i>Cebidichthys violaceus</i>	monkey-faced eel	93	750	J
<i>Citharichthys stigmaeus</i>	speckled sanddab	40 - 125	167.5	J, SA, YOY
<i>Clinocottus analis</i>	wooly sculpin	51 - 99	150	J, SA, YOY
<i>Clupea harengus</i>	Pacific herring	85	450	J
<i>Cymatogaster aggregata</i>	shiner surfperch	45 - 138	175	J, SA, YOY
<i>Damalichthys vacca</i>	pile surfperch	316 - 342	435	A, SA
<i>Embiotoca jacksoni</i>	black surfperch	85 - 382	383.75	J, A
<i>Engraulis mordax</i>	northern anchovy	58	175-225	YOY
<i>Gasterosteus aculeatus</i>	three-spined stickleback	25 - 86	100	J, SA, A, YOY
<i>Gibbonsia metzi</i>	striped kelpfish	39 - 120	231.25	J, SA, YOY
<i>Hemilepidotus spinosus</i>	brown Irish Lord	155	250	SA
<i>Hyperprosopon argenteum</i>	walleye surfperch	71 - 170	300	J, SA
<i>Hypsopsetta guttulata</i>	diamond turbot	49 - 180	450	J, SA, YOY
<i>Isopsetta isolepis</i>	butter sole	50 - 69	543.75	J, YOY
<i>Lepidogobius lepidus</i>	Bay goby	84 - 104	100	A, SA
<i>Leptocottus armatus</i>	staghorn sculpin	34 - 195	300	J, SA, YOY
<i>Microgadus proximus</i>	Pacific tomcod	85 - 110	300	J, SA
<i>Micrometrus minimus</i>	dwarf surfperch	52 - 123	156.25	J, SA, YOY
<i>Ophiodon elongates</i>	lingcod	100	1125	J
<i>Hypomesus pretiosus</i>	surf smelt	168	300	SA
<i>Phanerodon atripes</i>	white surfperch	75	310	J
<i>Pholis ornate</i>	saddleback gunnel	98 - 158	300	SA
<i>Platichthys stellatus</i>	starry flounder	130 - 204	900	J
<i>Porichthys notatus</i>	plainfin midshipman	149	375	SA
<i>Scorpaenichthys marmoratus</i>	cabezon	180	975	J, SA
<i>Sebastes sp.</i>	unid. rockfish	70 - 86		
<i>Sygnathus leptorhynchus</i>	Bay pipefish	05 - 317	325	J, SA, A, YOY

\* data from Guide to the Coastal Marine Fishes of California, Miller and Lea (1972)  
A = adult

SA = sub-adult  
J = juvenile  
YOY = young-of-year

The abundance of fish captured in the estero was relatively steady except during the August through September survey in which the maximum number of fish were observed. This peak in abundance was largely due to several large gill net hauls of schooling topsmelt. The number of species captured per sampling episode ranged from a minimum of 9 in October to a maximum of 16 in November (Table 8). Species composition also varied seasonally as different species entered the estuary at different times of the year. The nine most dominant fish were captured in the estero during all sampling events, indicating that at least one lifestage may be in the estero at any point during any given year. These nine species did exhibit a seasonal pattern with regard to the use of the system (see Wechsler 2005 for additional information).

This preliminary investigation into the relationship between oyster mariculture and the Drakes Estero ichthyofauna suggests that species dominance in the fish community has shifted at the oyster racks to favor structure-oriented feeders. However, analysis of variance tests showed no significant difference in species abundance or species richness among the three fish communities sampled. Because fish species richness and fish diversity were greatest in the samples taken adjacent to the oyster racks, it is likely that the physical structure associated with the oyster mariculture facility enhances habitat complexity, thereby providing additional resources (e.g., cover and feeding opportunities) for fish. The results of this study indicate that a localized shift in species composition, distribution, and population dynamics of certain fish species has occurred. Alterations to the relative percentage of species captured both within and amongst ecological guilds indicate that the resource base (i.e., prey items, shelter) may have shifted to favor several structure-oriented feeders (e.g., kelp surfperch). Four of the five indices used to assess the similarity of the fish assemblages showed the greatest compositional divergence was between Estero de Limantour and Schooner Adjacent. This again suggests that the use of the artificial habitat derived from mariculture facilities may attract opportunistic fish species to the racks if they provide resources not otherwise available, or supplement preexisting conditions.

### **Benthic Invertebrate Community (condensed from Harbin 2004):**

The most frequently encountered species in core samples included the tanaid *Leptocheilia dubia*, the cumacean *Cumella vulgaris*, amphipods, polychaetes, and ostracods. Of the 46 samples taken and analyzed from beneath racks and adjacent areas *L. dubia* were found in all but 6 samples, *C. vulgaris* were found in all but 10 samples, ostracods were found in all but 2 samples, and polychaetes and amphipods were found in all but 1 sample. For a full list of invertebrate species and taxa found in core samples see Appendix H (from Harbin 2004). It

should also be noted that we have an additional 79 benthic infauna core samples from Schooner Bay and Estero de Limantour where we were able to sort, extract and preserve the organisms present, but did not have funds or time to identify these suites of species. Waste from these samples is also preserved.

The number of distinct taxonomic groups found in core samples at each distance ranged between 11 and 15. From the pooled samples collected on October 20, 2001, 12 taxonomic groups were found beneath racks and 12 taxonomic groups were found 10 meters away. The number of taxonomic groups found in samples collected from 0 to 50 meters from racks on January 21, 2001, is as follows: 0 meters – 14; 1 meter – 15; 5 meters – 11; 10 meters – 13; 50 meters – 14 (Harbin 2004).

Shannon-Weiner indices calculated for each distance and sampling location ranged from 1.5-2.5, showing nearly uniform diversity at all sampling locations and distances. For each sample location, Jaccard's similarity index values calculated for percentage of overlap in taxa diversity for 0 and 10 meter samples ranged between 43% and 60%. An ANOVA conducted separately for January and October samples did not reveal a significant difference in taxa richness between samples collected in areas beneath oyster racks and areas adjacent to oyster racks (Table 9). A significant difference in the number of taxa was not found when data were compared for the same distance at different sample locations (Table 9). Samples collected beneath oyster racks and ten meters away were also compared for both sample dates concurrently with no finding of significance (Table 9) (Harbin 2004). Our statistical consultants at UC Davis did not recommend a two-way ANOVA for distance by month as no significance was found in any of the single-factor tests. Probability values ( $p$  values) given in Table 9 are all values calculated by the ANOVA software, and all but one (see discussion below) well exceeded the specified confidence level of 0.05.

**Table 9. Single-Factor ANOVA Comparing Number of Individuals and Taxa Richness Below Oyster Racks and in Adjacent Areas and Single-Factor ANOVA Comparing Results Within Distances, with Calculated P-Values (probability of occurrence) (Harbin 2004)**

Analysis	d.f.	F	P-Value calculated
January Taxa All Racks	4,25	0.23902	0.91357
January Taxa 0m & 1m Racks	1,10	0.04425	0.83762
January Taxa 0m & 5m Racks	1,10	0.04425	0.83762
January Taxa 0m & 10m Racks	1,10	0.00000	1.00000
January Taxa 0m & 50m Racks	1,10	0.47059	0.50831
January Individuals All Racks	4,25	1.59459	0.20677
January Individuals 0m & 1m Racks	1,10	1.63946	0.22930
January Individuals 0m & 5m Racks	1,10	1.44026	0.25776
January Individuals 0m & 10m Racks	1,10	3.38607	0.09558
<i>January Individuals 0m &amp; 50m Racks</i>	<b>1,10</b>	<b>7.04666</b>	<b>0.02412</b>
January Taxa 0m Distances	1,4	0.05000	0.83402
January Taxa 1m Distances	1,4	0.00000	1.00000
January Taxa 5m Distances	1,4	4.00000	0.11612
January Taxa 10m Distances	1,4	0.02632	0.87900
January Taxa 50m Distances	1,4	0.45000	0.53908
January Individuals 0m Distances	1,4	0.93556	0.38820
January Individuals 1m Distances	1,4	0.27131	0.62996
January Individuals 5m Distances	1,4	0.00067	0.98063
January Individuals 10m Distances	1,4	2.32690	0.20185
January Individuals 50m Distances	1,4	3.04765	0.15579
October Taxa All Racks	1,14	0.18156	0.67652
October Individuals All Racks	1,14	0.19930	0.66211
October Taxa 0m Distances	3,4	0.66667	0.61510
October Taxa 10m Distances	3,4	0.34503	0.79572
October Individuals 0m Distances	3,4	1.09385	0.44817
October Individuals 10m Distances	3,4	0.43700	0.73881
Both Dates Taxa 0m & 10m Racks	1,26	0.09249	0.76346
Both Dates Individuals 0m & 10m Racks	1,26	0.42258	0.52135
Both Dates Taxa 0m Distances	5,8	0.70026	0.63878
Both Dates Taxa 10m Distances	5,8	0.30217	0.89838
Both Dates Individuals 0m Distances	5,8	1.36607	0.33035
Both Dates Individuals 10m Distances	5,8	0.98064	0.48410

*Bold Italics = Statistical Significance*

The relative abundance of dominant taxonomic groups was calculated for each distance and sampling date as a percentage of the total number of individuals found in the pooled samples. For January 21, 2001 zero to 50 meter samples the percentages ranged as follows: polychaetes 6-21%; amphipods 16-35 %; ostracods 11-34%; tanaids 3-38%; cumaceans 2-9%; and bivalves 11-29% (Table 9). For October 20, 2001 zero and 10 meter samples the percentages ranged as follows: polychaetes 16-19 %; amphipods 15-33 %; ostracods 27-28 %; tanaids 11-29 %; cumaceans 7-8 %; and bivalves 3-4 %. Similar patterns are observed in the January and October samples for both amphipods and tanaids. The percentage of amphipods decreases by half between 0 and 10 meters for both sampling dates (January - 35 % at 0 m vs. 17% at 10 m; October - 33% at 0 m vs. 15% at 10 m ). The percentage of tanaids more than doubles between 0 and 10 meters for both sampling dates (January - 18 % at 0 m vs. 38% at 10 m; October - 11% at 0 m vs. 29% at 10 m). The percentage of polychaetes, ostracods, cumaceans, and bivalves was found to be similar below racks and 10 meters away in samples collected during October 2001. Those groups demonstrated more variation in percentages found in the January 2001 samples. The percentage of ostracods and bivalves showed a marked increase at 50 meters away from the racks.

In January 2001, invertebrate abundance compared via single-factor ANOVA was found to be significantly higher in samples collected 50 meters away from racks (mean = 91) than beneath racks (mean = 39) (p-value = 0.02412) (Table 9). This pattern was not observed for any of the other pairwise comparisons of invertebrate abundance for the January or October sampling dates.

A significant increase in the abundance of infaunal invertebrates was observed in areas 50 meters away from oyster racks as compared to areas beneath oyster racks in January 2001. An increase in macroinfaunal abundance in areas adjacent to oyster racks was documented by Nugues et al. (1996) and Castel et al. (1989) in their research in other region. Possible explanations for decreased abundance below oyster racks include increased predation by fish and decapods attracted to oyster cultivation sites by the high densities of oysters (Castel et al. 1989), in addition to the potential inhibition of predatory efficiency in areas of dense eelgrass cover (i.e., control areas) due to the presence of blades and roots which inhibit foraging epibenthos (Reise 1985). In addition, some studies provide evidence that dense assemblages of filter feeders (oysters in this case) may reduce recruitment of other species with a planktonic larval stage (Woodin 1976, Best 1978, Williams 1980).

Significantly higher Shannon-Weiner diversity index values were reported by Nugues et al. (1996) for areas within 15 meters of oyster trestles than beneath them. Such a pattern was not detected in this Drakes Estero study, as Shannon-Weiner index values were relatively similar for both cultivated and adjacent areas. Samples taken from adjacent areas and areas beneath racks were characterized by a similar taxonomic composition as evidenced by the Jaccard's similarity indices. At all but one sampling location, more than half of the taxa were found in both samples. In addition, taxa richness was relatively similar across distances and between distances for the two sample dates.

A significant difference in the number of taxa was not found in any of the single-factor ANOVA analyses. Overall taxa richness was not influenced by oyster aquaculture in Schooner Bay. However, the relative abundance of various taxa may be influenced by the oyster operation. The descriptive data presented here hints at this pattern. However, more collection of data will be necessary to draw more meaningful conclusions. The relative abundance of ostracods and bivalves approximately doubles between zero and 50 meters. This may be due to decreased predation as previously discussed as a possible explanation for an increase in invertebrate abundance 50 meters from the racks. Ostracods and bivalves likely rely on the same food source as oysters given that they are many of them are filter feeders. The filtering of phytoplankton from the water column by oysters may be limiting the amount available to other organisms in the vicinity that rely directly on this food source. Previous studies have shown that the Eastern oyster can significantly reduce the abundance of phytoplankton in the water column, in some cases by half (Ulanowicz and Tuttle 1992), and alter the structure of the microbial community (Wetz et al. 2002). The relative abundance of amphipods was found to be higher below racks than in adjacent areas for both sampling dates. The amphipods living in soft sediment habitat such as this are likely to be detritus feeders. Although percent organic matter was not found to be increase significantly beneath racks, perhaps a preferred or more easily accessible food source was available below racks than in adjacent areas. Eelgrass detritus was observed to collect beneath racks. Most of the polychaetes found in the samples belong to the Nereid family. Their relative abundance was for the most part unchanged in areas beneath and adjacent to oyster racks. These polychaetes are predatory and are likely to be unaffected by taxonomic shifts of other infaunal groups as long as prey items remain abundant.

### **Marine Invertebrate Fouling Community:**

The marine invertebrate fouling community of sessile organisms could be properly characterized as “introduced” and “invasive” due to lack of hard, shallow water substrate in Drakes Estero (Table 10). This community is present and associated with the oyster farming operation in Schooner Bay, but non-existent in Estero de Limantour (where no fouling organisms settled or grew on the plates other than one *Balanus* species on one plate). Very little research has been done on non-native, invasive species in this community type on the West Coast, but we believe that the non-native *Didemnum lahillei* may properly be called an invasive species (see <http://woodshole.er.usgs.gov/project-pages/stellwagen/didemnum/> for more information). It is unlikely that the *Balanus* spp., *Botrylloides* spp., *Botryllus* spp., *Obelia* spp., or *Spirorbis* spp. are introduced, since there are common, native species in these genera. However, as there are also some introduced species in these genera, David Press erred on the side of caution and simply listed them as UNKNOWN in regard to their invasive status. Some of the fouling plates set in Schooner Bay became completely covered by *Didemnum lahillei*, and it grew over all the other organisms on many of those plates as an aggressive species of tunicate. The full data set is a PC Access database that has been provided to Pt. Reyes National Seashore and is attached here as a text file in Appendices E, F, and G, showing species by point location, by station and percent cover, and showing other species not listed below. More research is recommended on the systematics (taxonomy) of the fouling organisms in Drakes Estero.



**Table 10 Invertebrate Fouling Community and Invasive Status**

SpCode	Species	Phylum	SubGroup	CommonGroup	Invasive_
BOTROI	Botrylloides sp.	Chordata	Asciacea	Tunicate	UNK
BOTRUS	Botryllus sp.	Chordata	Asciacea	Tunicate	UNK
DIAL	Didemnum albidum	Chordata	Asciacea	Tunicate	UNK
DILA	Didemnum lahilei	Chordata	Asciacea	Tunicate	YES
DIOC	Distalpia occidentalis	Chordata	Asciacea	Tunicate	NO
BUNE	Bugula neritina	Ectoprocta	Cheilostomata	Bryozoan	NO
SCUN	Schizoporella unicornis	Ectoprocta	Cheilostomata	Bryozoan	Introduced
WASU	Watersipora subtorquata	Ectoprocta	Cheilostomata	Bryozoan	Introduced
BALA	Balanus sp.	Arthropoda	Cirripedia	Barnacle	UNK
SPIR	Spirorbis sp.	Annelida	Polychaete	Tube Worm	UNK
BARE	Bare	NA	NA	NA	NA
OBEL	Obelia sp.	Cnidaria	Hydrozoa	Hydroid	UNK
HABO	Halichondria bowerbanki	Porifera	NA	Sponge	Introduced
TUN1	unknown tunicate 1 - black and yellow	Chordata	Asciacea	Tunicate	UNK
TUN2	unknown tunicate 2 - dark gray	Chordata	Asciacea	Tunicate	UNK

**Marine Invertebrate Eelgrass, Epibenthic Community:**

The suite of species typical of our central California subtidal, shallow water marine communities, especially those organisms associated with eelgrass beds, were found in Drakes Estero. This work is very much incomplete as David Press's time on the boat with Jesse Wechsler was very limited by weather, boat and other logistical problems. Fishing data sheets note that kelp crab were frequently collected, and that rock crab, Dungeness crab, various nudibranchs, shrimp, and starfish were collected, along with select amphipods and nematodes. There is not enough data nor species level identifications of organisms to warrant any analysis.

**Physical Environment:**

The hydrologic conditions of coastal embayments, such as Drakes Estero, including water circulation patterns, precipitation, and tidal flushing, play an important role in determining the fate of materials are deposited there (Hayakawa et al. 2001; Wechsler, 2005). The relatively small scale of the Johnson's oyster farming operation combined with the hydrologic conditions in Drakes Estero likely dissipate the accumulation of biodeposits (e.g., oyster feces) that other studies have been shown to effect benthic ecology and water quality. In Drakes Estero, the tidal prism is high and a large volume of water drains twice daily with the mixed, semi-diurnal tidal regime. Our analyses of a limited set of water and sediment samples suggest that no major deterioration in water quality exists adjacent to the oyster racks (see Appendices B and C). We did not have access to data reportedly collected by the California Department of Health Services on fecal contamination (coliform bacteria) or phytoplankton blooms that may be associated with shellfish food safety concerns. In regard

to the physical environment, we did map (using GPS technology) the oyster racks, sand bars, eelgrass beds, and any other obvious physical features in Drakes Estero. This information was provided to the park as a series of GIS-layers.

From Harbin's research (2004), she found that all sediments appeared oxygenated as evidenced by light to medium brown coloration of the uppermost portion of the sediments. Mean percent organic matter of core samples was 5.25% below racks and 5.27% in adjacent areas 10 meters away and ranged from 3.17-9.8%. The amount of organic matter in sediment from adjacent areas was not found to be significantly different from that beneath racks ( $t=0.04$ ;  $t\text{-critical}=2.45$ ). Mean sediment composition of samples taken beneath racks was 43% silt, 28% clay, and 30% sand. Mean sediment composition of samples taken 10 meters away from racks was 49% silt, 26% clay, and 25% sand. A significant increase in the percentage of silt ( $t=8.75$ ;  $t\text{-critical}=2.07$ ) and a significant decrease in the percentage of sand ( $t=4.96$ ;  $t\text{-critical}=2.07$ ) were found 10 meters away from racks. Average percent silt-clay values for each sample are shown in Table 11.

**Table 11. Sediment Characteristics**

		Avg. % Organic Content		Avg. % Silt Clay	
Location	Date	10 meters	0 meters	10 meters	0 meters
R1	1/21/2001	7.71	9.18	80.5	76.5
R2	1/21/2001	9.01	7.48	74.5	76
R3	10/20/2001	3.68	3.97	70.5	70
R4	10/20/2001	3.84	3.54	73	68
R5	10/20/2001	3.33	3.52	70	71.5
R6	10/20/2001	4.07	3.83	73.5	73.5

A significant difference in the percent organic matter in areas below and adjacent to the oyster racks was not detected and all sediments appeared oxygenated to at least a depth of 10 cm (Harbin 2004). Nugues et al. (1996) detected a decrease in the depth of the oxygenated layer and an increase in organic content of the sediment beneath oyster cultivation structures elsewhere. However, such patterns were not observed in Drakes Estero. The organic matter input into the estuary with the breakdown of the vegetative material from the eelgrass in the fall and winter likely accounts for the relatively high percent organic matter found in all sediment cores. Although pseudofeces from the suspended oysters may contribute to the amount of organic matter below the racks, adding to the system, the amount of organic matter resulting from eelgrass decomposition is likely far greater considering how expansive and dense the beds are within the estuary, making any significant organic inputs from the oysters undetectable in this study (Harbin 2004). Tidal action, eelgrass root zone oxidation, and currents continuously mixing water through the estuary likely maintain oxygenated surface sediments. The expansive eel grass beds attest to this as *Zostera* prefers sediments in which the surface is oxidized (Wood et al. 1969).

The decrease in silt content values beneath the oyster racks in this study may indicate some sediment erosion is taking place due to the presence of the rack structures, however the difference, 43% below racks as compared to 49% in control areas 10 meters away, is not likely great enough to alter benthic invertebrate community composition, as the silt-clay fractions beneath the racks are still quite high (up to 9.80%) and the majority of the organisms found are deposit feeders (i.e. amphipods) (see Harbin 2004). However, erosion may be a factor in reduced invertebrate abundance beneath the racks. Further study addressing the explanation for these patterns is needed.

A more intensive study of water quality, nutrient budgets, and sedimentation rates, along with the hydrodynamics of the estuary, is advised.

### **Conclusions and Lessons Learned**

The oyster mariculture has had an impact on the marine fish and invertebrates of Drakes Estero. Invasive organisms as a fouling community, and in particular, the non-native species of tunicate *Didemnum lahillei*, have recruited into the estero. This fouling community is not present in Estero de Limantour where oyster farming is absent. The relative abundance of various benthic invertebrate and fish species has changed at and around the oyster racks in Schooner Bay with the oyster cultivation. The physical structure of the racks provides a different set of habitats for marine species, influencing the penetration of light, sedimentation and erosion, and providing a hard substrate. Overall richness (e.g. species diversity) of benthic infaunal taxa was not influenced by oyster aquaculture in Schooner Bay. However, the relative abundance of various benthic taxa may be influenced by the oyster operation, as the relative abundance of ostracods and bivalves approximately doubles between the racks and 50 meters away. The oyster racks did provide unique, hard substrate habitat and shelter for marine organisms, both for fouling community and epibenthic invertebrates and as shelter and habitat for some of the smaller marine fish, increasing the diversity and richness of fish assemblages. These fish and decapods through predation may decrease the abundance of benthic ostracods and bivalves beneath the oyster racks, shifting species dominance (e.g., relative abundance) in the community, but not effecting diversity. However, the invasion of a non-native tunicate and possibly other fouling community organisms identified only to genus level is of concern.

Although pseudofeces from the suspended oysters may contribute to the amount of organic matter below the racks, adding to the system, the amount of organic matter resulting from eelgrass decomposition is likely far greater considering how expansive and dense the beds are within the estuary, making any significant organic inputs from the oysters undetectable in this study (Harbin 2004). The decrease in silt content values beneath the oyster racks in this study may indicate some sediment erosion is taking place due to the presence of the rack structures.

This inventory and initial assessment provides a baseline for future research, for monitoring impacts of the oyster farming operation on the estero, for examining environmental change in

the estero into the future, and for recommendations concerning habitat restoration. Much further research remains to be done.

Major lessons were learned in starting a project before the funds are actually available (the start of the funded work was delayed by more than two years, with a key graduate student researcher lost to the main part of the project, with Professor Elliott-Fisk's status also changed during that period with no summer salary support from the University nor salary support from this project). Logistics to work on the water in this shallow, windy, and very large coastal embayment were daunting, especially as the University researchers ended up having to provide their own boat and kayaks. Using even modified fishing methods for trawling in shallow waters with the prolific eelgrass beds in Drakes Estero was also challenging, and fishing techniques had to be modified several times. However, we very much enjoyed working with the NPS scientists and staff on this project and together we have learned a great deal about the ecology of Drakes Estero.

### **Financial Report and Final Budget**

The final financial report has been prepared and submitted by the Accounting Office of the Extramural Funds Division (UC Davis, contact Diana Wiggins, phone (530)757-8689) and submitted to the NPS, Pt. Reyes National Seashore (to Contracting Officer Kristi Swofford). UC Davis Account/Fund No. 3-AWFRJ42, Federal Cooperative Agreement. Expenditures were for part-time salary for Graduate Student Researchers Angie Harbin, Jesse Wechsler, David Press, small work study stipends for 3 undergraduate assistants in the laboratory, minor supplies and expenses, travel to Pt. Reyes and on the water in our boat and a boat rented from the UCD Bodega Marine Laboratory, employee benefits and fees for graduate student researchers, and indirect costs from the University accounted for all expenditures.

### **Evaluation of Project**

Our assessment of the marine biota of Drakes Estero and the impacts of the oyster mariculture operation on the ecosystem was a "first look" at the estero's ecology due to time and financial limitations. However, we are confident that our data tell the "right story" of a shift in marine community composition and especially the relative abundances of species with the current Johnson's oyster farm operation. As noted, the physical structure and hard-substrate of the rack structures adds a new habitat type up-estuary, providing a refuge for small fish and crevice dwelling and hard-substrate invertebrates (including the fouling community). If the racks provide unique habitat for non-native invasive species, this is a problem, and we did find one such aggressive tunicate species. We found the oyster racks to have no pronounced impacts on the eelgrass beds, which existed both under and away from the racks as an incredibly rich habitat type.

The project was an extensive endeavor in planning, fieldwork, laboratory analyses, and data management. Obtaining the proper boats and sampling devices was challenging due to the shallow waters, thick eelgrass beds, and marine weather conditions, and the persistence of the graduate student researchers working with Dr. Ben Becker at the park paid off in eventually overcoming these challenges to successfully navigate the estuary and sample the

biota. The three graduate students, with their training in the systematics and ecology of the organisms, as well as in field, laboratory and data protocols, were key to making the project a success. However, more funding to allow researchers to be employed for more time in the laboratory doing systematic identification of organisms is needed. Separating the infauna from the sediments is also very time consuming and needs to be budgeted for. Having David Press employed part-time as both a graduate student researcher on the project and a parkbiological technician helped immensely with data management (Access DBMS and GIS) and logistics. This was truly a cooperative project in every sense of our UC-NPS cooperative agreement.

### **Current Status of Project**

The project has been completed and as noted herein is preliminary in scope due to limitations of both the objectives and the funding. Funding over two years provided part-time salary for three graduate student researchers and no additional salary for the University principal investigator or any park staff. Partial field logistical and travel support was supplied by the funding agreement, as well as by the University. Seventy-nine samples of separated, sorted, and preserved marine benthic invertebrates remain to be identified, as with the very time consuming nature of separating microscopic organisms from the muds and sorting them into functional/taxonomic categories, then identifying them, was not sufficiently budgeted for in the project. All samples are preserved and being held in storage for future analyses.

### **Future Recommendations**

This study found evidence that oyster mariculture has had an impact on the marine fish and invertebrates of Drakes Estero. Invasive organisms as a fouling community, and in particular, the non-native species of tunicate *Didemnum lahillei*, have recruited into this marine ecosystem and possibly also been introduced by the non-native oyster spat and cultivation practices. The relative abundance of various benthic invertebrate and fish species has changed at and around the oyster racks in Schooner Bay with the oyster cultivation. The physical structure of the racks provides a different set of habitats for marine species, influencing the penetration of light, sedimentation and erosion, and providing a hard substrate. Thus, the oyster racks are like habitat islands in the larger sea of Drakes Estero. These changes are largely at the community level.

One of several management directives could be implemented that may enhance the overall ecological structure and productivity of the system. To completely restore the Drakes Estero ecosystem, the oyster racks (both active and abandoned) would have to be removed. It would be useful to do a hydrodynamic model and tidal prism for the estero before removing the racks, such that hydrologic and geomorphic dynamics could be studied pre- and post-rack removal. Removal of the racks may have a short-term (one to five year), somewhat localized impact on the eelgrass bed communities and on some of the juvenile fish associated with the racks, but should not have a long-term impact, as strong tidal ebb and flood in the shallow waters should allow the eelgrass to rapidly reestablish, and along with it,

the native community associates. Removal of the racks would result in a loss of hard-substrate for the fouling community organisms which do not naturally exist in the estero. Monitoring of marine species should occur at select sites before, during, and after rack removal, with a minimum of 3 years of monitoring recommended post-rack.

From a cultural-historical resource perspective, other long-time oyster farms occur in Tomales Bay, as part of the Pt. Reyes National Seashore and Golden Gate National Recreation Area. As Tomales Bay does not carry Wilderness Area designation, it seems more appropriate to continue oyster farming in that estuary versus Drakes Estero. With the Park working to protect Estero de Limantour and restore Horseshoe Pond (a tidal lagoon immediately west of Drakes Estero), it only seems appropriate to restore Drakes Estero under the guidelines of the Wilderness Act.

An alternative management option involves the Olympia oyster (*Ostreola conchaphila*). Historically, Olympia oysters, the native reef oysters of the Pacific coast, were found from Baja, California to Alaska (Cook et al. 2000). This bivalve was important in the Pacific Northwest for Native Americans, and was an important commodity for settlers in the early-twentieth century (Cook et al. 2000). Baker (1995) reported these oysters to have been common in Drakes Estero, although it is unknown if a remnant population still exists (we did not encounter any in our sampling). Our colleagues at UC Davis (Dr. Ted Grosholz and graduate students) are examining the utility of remnant and introduced populations of native oysters in Tomales Bay as a key species important for the restoration of historical ecological conditions. As suggested by Wechsler (2005) in his thesis research for this project, the culture of the small Olympia oyster would likely provide additional habitat for aquatic species in Drakes Estero. Olympia oysters would reproduce naturally in the cold waters, creating more consolidated reef habitat for fish and invertebrates. A well-conceived oyster harvest plan would need to be designed to allow harvest to take place in a manner that would leave a sufficient portion of the structure for the associated aquatic biota to persist. It is interesting to note that Costa-Pierce (2002) termed the evolution of aquaculture towards a more sustainable system of practices as the “greening-up of the blue revolution.” As such, this might be an alternative oyster fishery, but it would function best with the removal of the artificial oyster rack structures.

## REFERENCES CITED

Baker, P. 1995. Review of ecology and fishery of the Olympia oyster (*Ostrea lurida*) with annotated bibliography. *Journal of Shellfish Research*. 14(2): 501-518.

California Department of Health Services. 1991. Management plan for commercial shellfishing in Drakes Estero, California. 17 pp.

California Department of Health Services. 1996. Re-evaluation of shellfish growing area classifications for Drakes Estero, California. 7 pp.

Castel J, Labourg P, Escaravage V, Auby I, Garcia ME. 1989. Influence of seagrass beds and oyster parks on the abundance and biomass patterns of meio- and macrobenthos in tidal flats. *Estuarine, Coastal, and Shelf Science*, 28:71-85.

- Chick, J. H., F. Jordan, J. P. Smith, and C. C. McIvor. 1992. A comparison of four enclosure traps and methods used to sample fishes in aquatic macrophytes. *Journal of Freshwater Ecology*, 7: 353-361.
- Cook, A.E., Shaffer, J.A., Dumbauld, B.R., and Kauffman, B.E. 2000. A plan for rebuilding stocks of Olympia oysters (*Ostreola conchaphila*) in Washington State. *Journal of Shellfish Research*, 19(1): 409-412.
- Costa-Pierce, B.A. 2000. *Ecological Aquaculture*. Blackwell Publishing, Oxford, UK. 382 pp.
- Everett RA, Ruiz GM, Carlton JT. 1995. Effect of oyster mariculture on submersed aquatic vegetation: An experimental test in a Pacific Northwest estuary. *Marine Ecology Progress Series*, 125: 205-217.
- Galloway RJ. 1977. *Geology of the Point Reyes Peninsula*. California Division of Mines and Geology, Bulletin 202, Sacramento.
- Gee, GW, Bauder JW. 1979. Particle size analysis by hydrometer: a simplified method for textural analysis and a sensitivity test of measurement parameters. *Soil Sci. Soc. Amer. Jour.*, 43:1004-1007.
- Harbin-Ireland, Angelique C. 2004. Effects of Oyster Mariculture on the Benthic Invertebrate Community in Drakes Estero, Pt. Reyes Peninsula, California. Master's thesis, University of California, Davis.
- Hayakawa, Y., Kobayashi, M., and Izawa, M. 2001. Sedimentation flux from mariculture of oyster (*Crassostrea gigas*) in Ofunato estuary, Japan. *ICES Journal of Marine Science*, 58:435-444.
- Light, S. F. 1975. Intertidal invertebrates of the central California coast. University of California Press, Berkeley, CA.
- Kozloff, EN. 1996. *Marine Invertebrates of the Pacific Northwest*. University of Washington Press.
- Matthieson, G.C. 2001. *Oyster Culture*. Fishing News Book. Blackwell Sciences, Ltd. 162 pp.
- Miller and Lea. 1972. *Guide to the Coastal Marine Fishes of California*. California Department of Fish and Game, Sacramento.
- Morris, R. H., D. P. Abbott, and E. C. Haderlie. 1980. *Intertidal invertebrates of California*. Stanford University Press, Stanford, Calif.
- National Park Service. 1980. *General Management Plan for Point Reyes National Seashore*.

- Nugues MM, Kaiser MJ, Spencer BE, Edwards DB. 1996. Benthic community changes associated with intertidal oyster cultivation. *Aquaculture Research*, 27: 913-924.
- Patriquin DG . 1975. 'Migration' of blowouts in seagrass beds at Barbados and Carriacou, West Indies, and its ecological and geological implications. *Aquatic Botany*, 1: 163-189.
- Raposa, K. B., and C. A. Oviatt. 2000. The influence of contiguous shoreline type, distance from shore, and vegetation biomass on nekton community structure in eelgrass beds. *Estuaries*, 23: 46-55.
- Reise K. 1985. *Tidal flat ecology. An experimental approach to species interactions*. Ecological Studies 54, Springer-Verlag, Berlin. 191 pp.
- Rozas, L. P., and T. J. Minello. 1997. Estimating densities of small fishes and decapod crustaceans in shallow estuarine habitats: a review of sampling design with a focus on gear selection. *Estuaries*, 20: 199-213.
- Smith RI, Carlton JT. 1974. *Light's Manual: Intertidal Invertebrates of the Central California Coast* (3<sup>rd</sup> Edition). Univ. of California Press, Berkeley.
- Soule DF. 1988. Marine organisms as indicators: reality or wishful thinking? p. 1-11 In: *Marine organisms as indicators* (D.F. Soule and G.S. Keppel, eds.). Springer-Verlag, New York.
- Sutherland, J. P. 1974. Multiple stable points in natural communities. *American Naturalist* ,108: 859-873.
- Ulanowicz RE, Tuttle JH. 1992. The trophic consequences of oyster stock rehabilitation in Chesapeake Bay. *Estuaries*, 15:298-306.
- Wechsler, Jesse F. 2005. Assessing the Relationship between the Ichthyofauna and Oyster Mariculture in a Shallow Coastal Embayment, Drakes Estero, Point Reyes National Seashore. Master's thesis, University of California, Davis.
- Wetz MS, Lewitus AJ, Koepfler ET, Hayes KC. 2002. Impact of the Eastern oyster *Crassostrea virginica* on microbial community structure in a salt marsh estuary. *Aquatic Microbial Ecology*, 28:87-97.
- Williams SL, Heck KL Jr. 2001. In: *Marine community ecology*, pp. 317-337. Sinauer Assoc., Inc. Massachusetts.
- Wood EJJ, Odum WE, Zimmerman JC. 1969. Influence of sea grasses on the productivity of coastal lagoons. pp. 495-502. In: *Laguna Costeras, un Simposio* (eds. Ayala-Castanares AA, Phlenger FB.) Mexico: UNAM.
- Zieman JC. 1976. The ecological effects of physical damage from motor boats on turtle grass beds in southern Florida. *Aquatic Botany*, 2: 127-139.





## APPENDICES

### Appendix A. List of all species captured during fish - oyster mariculture study, Drakes Estero, Point Reyes National Seashore.

Species #	Scientific Name	Common Name	Number Captured	Percent of Total
1	<i>Atherinopsis affinis</i>	topsmelt	977	31.23%
2	<i>Sygnathus leptorhynchus</i>	Bay pipefish	519	16.59%
3	<i>Gasterosteus aculeatus</i>	three-spined stickleback	472	15.09%
4	<i>Leptocottus armatus</i>	staghorn sculpin	435	13.91%
5	<i>Brachyistius frenatus</i>	kelp surfperch	375	11.99%
6	<i>Cymatogaster aggregata</i>	shiner surfperch	96	3.07%
7	<i>Triakis semifasciata</i>	leopard shark	81	2.59%
8	<i>Citharichthys stigmaeus</i>	speckled sanddab	49	1.57%
9	<i>Atherinopsis californiensis</i>	jacksmelt	27	0.86%
10	<i>Gibbonsia metzi</i>	striped kelpfish	16	0.51%
11	<i>Embiotoca jacksoni</i>	black surfperch	14	0.45%
12	<i>Aulorhynchus flavidus</i>	tubesnout	8	0.26%
13	<i>Micrometrus minimus</i>	dwarf surfperch	8	0.26%
14	<i>Clinocottus analis</i>	wooly sculpin	7	0.22%
15	<i>Hyperprosopon argenteum</i>	walleye surfperch	7	0.22%
16	<i>Sebastes sp.</i>	unid. rockfish	5	0.16%
17	<i>Pholis ornata</i>	saddleback gunnel	4	0.13%
18	<i>Isopsetta isolepis</i>	butter sole	3	0.10%
19	<i>Lepidogobius lepidus</i>	Bay goby	3	0.10%
20	<i>Platichthys stellatus</i>	starry flounder	3	0.10%
21	<i>Amphistichus argenteus</i> *	barred surfperch	2	0.06%
22	<i>Damalichthys vacca</i>	pile surfperch	2	0.06%
23	<i>Hypsopsetta guttulata</i>	diamond turbot	2	0.06%
24	<i>Microgadus proximus</i>	Pacific tomcod	2	0.06%
25	<i>Cebidichthys violaceus</i>	monkey-faced eel	1	0.03%
26	<i>Clupea harengus</i>	Pacific herring	1	0.03%
27	<i>Engraulis mordax</i> *	northern anchovy	1	0.03%
28	<i>Hemilepidotus spinosus</i>	brown Irish Lord	1	0.03%
29	<i>Hypomesus pretiosus</i>	surf smelt	1	0.03%
30	<i>Mustelus californicus</i> *	brown smoothhound	1	0.03%
31	<i>Myliobatis californica</i> *	bat ray	1	0.03%
32	<i>Ophiodon elongatus</i> *	lingcod	1	0.03%
33	<i>Phanerodon atripes</i> *	white surfperch	1	0.03%
34	<i>Porichthys notatus</i>	plainfin midshipman	1	0.03%
35	<i>Scorpaenichthys marmoratus</i>	cabezon	1	0.03%
Grand Total			3128	100.00%

\* not included in statistical analysis

**Appendix B. Environmental characteristics measured in Estero de Limantour and Schooner Bay, Drakes Estero, Point Reyes National Seashore, 2002 - 2004.**

Date	Location	Depth (m)	Salinity (ppt)	Temp (C)	Clarity (m)	DO (mg/l)	DO (%)
12/4/02	Limantour	2.10	32.7	13.3	2.10	7.33	85.0
12/4/02	Limantour	1.67	32.7	12.5	1.67	6.35	74.6
4/14/03	Limantour	1.55	32.2	13.5	1.55	7.79	89.4
4/14/03	Limantour	0.65	32.5	13.9	0.65	9.01	106.2
4/14/03	Limantour	1.50	32.0	14.7	1.50	7.23	86.5
4/14/03	Limantour	1.10	32.7	12.8	1.10	8.94	103.4
7/1/03	Limantour	0.97	32.6	19.5	0.61	13.27	176.0
7/1/03	Limantour	1.73	32.3	15.0	1.28	10.43	125.3
7/27/03	Limantour	2.00	33.0	18.7	2.00	9.50	124.5
10/17/03	Limantour	2.07	33.7	11.7	2.07	7.80	88.0
10/17/03	Limantour	1.46	33.9	13.5	1.46	9.71	115.3
10/17/03	Limantour	2.59	33.9	12.7	2.59	8.16	96.5
11/14/03	Limantour	*	32.5	12.2	*	6.82	77.8
11/14/03	Limantour	2.10	32.7	12.5	2.01	7.68	88.5
11/14/03	Limantour	1.34	32.4	12.5	1.34	8.02	92.4
1/12/04	Limantour	1.44	29.8	12.0	1.44	8.45	93.2
1/12/04	Limantour	1.30	28.7	12.1	1.30	8.47	94.4
	<b>Mean</b>	<b>1.60</b>	<b>32.37</b>	<b>13.71</b>	<b>1.54</b>	<b>8.53</b>	<b>101.00</b>
12/3/02	Adjacent	2.30	32.8	12.0	2.30	9.50	*
4/11/03	Adjacent	2.10	34.0	15.7	1.75	8.44	104.0
4/14/03	Adjacent	*	32.8	13.2	*	7.36	86.4
4/14/03	Adjacent	1.45	32.7	14.3	1.45	8.44	100.8
6/28/03	Adjacent	1.60	32.3	18.9	1.07	10.75	140.5
7/24/03	Adjacent	1.60	34.6	19.4	6.70	6.70	89.5
7/25/03	Adjacent	1.65	34.3	20.6	1.65	10.31	140.0
10/18/03	Adjacent	1.25	33.9	13.4	1.25	8.07	95.5
11/12/03	Adjacent	1.92	31.6	12.8	1.92	7.88	91.1
11/12/03	Adjacent	1.86	31.8	12.8	1.86	8.51	98.3
11/12/03	Adjacent	2.01	31.7	12.3	1.71	7.43	84.7
1/10/04	Adjacent	1.98	28.9	12.2	1.14	7.71	86.2
1/10/04	Adjacent	1.52	29.3	13.1	0.83	8.67	98.2
	<b>Mean</b>	<b>1.68</b>	<b>32.00</b>	<b>14.18</b>	<b>1.83</b>	<b>8.43</b>	<b>99.76</b>
4/11/03	Away	1.05	33.5	18.1	1.05	11.08	143.0
4/14/03	Away	1.45	32.4	12.5	1.45	7.33	84.4
6/29/03	Away	1.58	32.8	20.6	0.97	8.75	117.5
7/24/03	Away	1.50	31.5	15.7	1.50	11.31	139.0
10/18/03	Away	1.58	34.2	15.4	1.58	7.84	96.0
10/18/03	Away	1.83	33.8	14.6	1.83	9.80	118.3
11/12/03	Away	1.52	31.6	12.8	1.52	7.98	92.0
11/12/03	Away	1.55	31.8	12.8	1.55	8.90	102.8
11/12/03	Away	2.07	31.4	12.5	1.46	7.31	82.5
1/10/04	Away	2.38	27.9	12.4	0.91	8.66	93.8
1/10/04	Away	1.88	23.5	12.3	0.45	8.74	92.0
	<b>Mean</b>	<b>1.73</b>	<b>31.16</b>	<b>13.95</b>	<b>1.39</b>	<b>8.61</b>	<b>101.15</b>

\* not recorded



**Appendix C. Water column variables measured during Drakes Estero Ichthyofauna – Oyster Mariculture study, Point Reyes National Seashore, December 2002 – January 2004.**

<b>Date</b>	<b>Location</b>	<b>Ammonia (NH4-N)</b>	<b>Nitrate (NO3-N)</b>	<b>Total Suspended Solids</b>
April	Limantour	0.13	0.050	112.00
April	Limantour	0.11	0.170	84.00
April	Limantour	0.12	0.050	86.00
April	Limantour	0.16	0.050	110.00
July	Limantour	0.18	0.050	62.00
July	Limantour	0.21	0.050	56.00
July	Limantour	0.21	0.050	94.00
	<b>Mean</b>	<b>0.16</b>	<b>0.07</b>	<b>86.29</b>
April	Schooner Adjacent	0.13	0.060	104.00
April	Schooner Adjacent	0.14	0.080	98.00
April	Schooner Adjacent	0.12	0.050	108.00
July	Schooner Adjacent	0.20	0.050	96.00
July	Schooner Adjacent	0.14	0.050	94.00
July	Schooner Adjacent	0.38	0.050	72.00
	<b>Mean</b>	<b>0.19</b>	<b>0.06</b>	<b>95.33</b>
April	Schooner Away	0.12	0.050	112.00
April	Schooner Away	0.12	0.050	82.00
April	Schooner Away	0.21	0.050	116.00
July	Schooner Away	0.25	0.050	58.00
July	Schooner Away	0.21	0.050	72.00
July	Schooner Away	0.12	0.050	70.00
	<b>Mean</b>	<b>0.17</b>	<b>0.05</b>	<b>85.00</b>

**Appendix D. Invertebrate Taxonomic Groups and Species Found In Core Samples (from Harbin 2004).**

Phylum Annelida

Class Polychaete

Family Ampheritidae

Family Glyceridae

Family Nereidae

*Platynereis bicanaliculata*

*Cheilonereis cyclurus*

Family Oweniidae

Family Opheliidae

Family Terebellidae

Family Spionidae

Family Phyllodocidae

Family Polynoidae

Phylum Mollusca

Class Bivalvia

*Nutricula confusa*

*Nutricula tantilla*

Class Gastropoda

Phylum Arthropoda - Subphylum Crustacea

Class Maxillopoda

Subclass Ostracoda

Class Malacostraca

Subclass Phyllocarida

Order Leptostraca

*Nebalia pugettensis*

Subclass Eumalacostraca

Superorder Pericarida

Order Cumacea

*Cumella vulgaris*

Order Tanaidacea

*Leptochelia dubia*

Order Amphipoda

Suborder Gammaridea

**Appendix E – Description of fouling plate samples as point data/locations; this is a PC Access database file entered in the main database at Pt. Reyes National Seashore (see attached file on CD).**

"ID"	"Location"	"Grid_Rack_"	"Rack_Away"	"Plate_"	"Date"	"Comments"	"Point"
	"PtNo"	"SpCode"	"Species"				
1	"Drakes Estero"	5.00	"Away"	1.00	8/13/2004	"bushy growth of Bugula and Obelia covering about 50% of plate, but not surface cover; Obelia on other side of plate"	
	1	1.00	"SCUN"	"Schizoporella unicornis"			
1	"Drakes Estero"	5.00	"Away"	1.00	8/13/2004	"bushy growth of Bugula and Obelia covering about 50% of plate, but not surface cover; Obelia on other side of plate"	
	2	2.00	"SCUN"	"Schizoporella unicornis"			
1	"Drakes Estero"	5.00	"Away"	1.00	8/13/2004	"bushy growth of Bugula and Obelia covering about 50% of plate, but not surface cover; Obelia on other side of plate"	
	3	3.00	"WASU"	"Watersipora subtorquata"			
1	"Drakes Estero"	5.00	"Away"	1.00	8/13/2004	"bushy growth of Bugula and Obelia covering about 50% of plate, but not surface cover; Obelia on other side of plate"	
	4	4.00	"BARE"	"Bare"			
1	"Drakes Estero"	5.00	"Away"	1.00	8/13/2004	"bushy growth of Bugula and Obelia covering about 50% of plate, but not surface cover; Obelia on other side of plate"	
	5	5.00	"WASU"	"Watersipora subtorquata"			
1	"Drakes Estero"	5.00	"Away"	1.00	8/13/2004	"bushy growth of Bugula and Obelia covering about 50% of plate, but not surface cover; Obelia on other side of plate"	
	6	6.00	"WASU"	"Watersipora subtorquata"			
1	"Drakes Estero"	5.00	"Away"	1.00	8/13/2004	"bushy growth of Bugula and Obelia covering about 50% of plate, but not surface cover; Obelia on other side of plate"	
	7	7.00	"BUNE"	"Bugula neritina"			
1	"Drakes Estero"	5.00	"Away"	1.00	8/13/2004	"bushy growth of Bugula and Obelia covering about 50% of plate, but not surface cover; Obelia on other side of plate"	
	8	8.00	"SCUN"	"Schizoporella unicornis"			
1	"Drakes Estero"	5.00	"Away"	1.00	8/13/2004	"bushy growth of Bugula and Obelia covering about 50% of plate, but not surface cover; Obelia on other side of plate"	
	9	9.00	"SCUN"	"Schizoporella unicornis"			
1	"Drakes Estero"	5.00	"Away"	1.00	8/13/2004	"bushy growth of Bugula and Obelia covering about 50% of plate, but not surface cover; Obelia on other side of plate"	
	10	10.00	"SCUN"	"Schizoporella unicornis"			
1	"Drakes Estero"	5.00	"Away"	1.00	8/13/2004	"bushy growth of Bugula and Obelia covering about 50% of plate, but not surface cover; Obelia on other side of plate"	
	11	11.00	"SCUN"	"Schizoporella unicornis"			
1	"Drakes Estero"	5.00	"Away"	1.00	8/13/2004	"bushy growth of Bugula and Obelia covering about 50% of plate, but not surface cover; Obelia on other side of plate"	
	12	12.00	"BARE"	"Bare"			

1	"Drakes Estero"	5.00	"Away"	1.00	8/13/2004	"bushy growth of Bugula and Obelia covering about 50% of plate, but not surface cover; Obelia on other side of plate"
13	13.00	"BARE"	"Bare"			
1	"Drakes Estero"	5.00	"Away"	1.00	8/13/2004	"bushy growth of Bugula and Obelia covering about 50% of plate, but not surface cover; Obelia on other side of plate"
14	14.00	"BARE"	"Bare"			
1	"Drakes Estero"	5.00	"Away"	1.00	8/13/2004	"bushy growth of Bugula and Obelia covering about 50% of plate, but not surface cover; Obelia on other side of plate"
15	15.00	"WASU"	"Watersipora subtorquata"			
1	"Drakes Estero"	5.00	"Away"	1.00	8/13/2004	"bushy growth of Bugula and Obelia covering about 50% of plate, but not surface cover; Obelia on other side of plate"
16	16.00	"SCUN"	"Schizoporella unicornis"			
1	"Drakes Estero"	5.00	"Away"	1.00	8/13/2004	"bushy growth of Bugula and Obelia covering about 50% of plate, but not surface cover; Obelia on other side of plate"
17	17.00	"SCUN"	"Schizoporella unicornis"			
1	"Drakes Estero"	5.00	"Away"	1.00	8/13/2004	"bushy growth of Bugula and Obelia covering about 50% of plate, but not surface cover; Obelia on other side of plate"
18	18.00	"SCUN"	"Schizoporella unicornis"			
1	"Drakes Estero"	5.00	"Away"	1.00	8/13/2004	"bushy growth of Bugula and Obelia covering about 50% of plate, but not surface cover; Obelia on other side of plate"
19	19.00	"BARE"	"Bare"			
1	"Drakes Estero"	5.00	"Away"	1.00	8/13/2004	"bushy growth of Bugula and Obelia covering about 50% of plate, but not surface cover; Obelia on other side of plate"
20	20.00	"BARE"	"Bare"			
1	"Drakes Estero"	5.00	"Away"	1.00	8/13/2004	"bushy growth of Bugula and Obelia covering about 50% of plate, but not surface cover; Obelia on other side of plate"
21	21.00	"BUNE"	"Bugula neritina"			
1	"Drakes Estero"	5.00	"Away"	1.00	8/13/2004	"bushy growth of Bugula and Obelia covering about 50% of plate, but not surface cover; Obelia on other side of plate"
22	22.00	"WASU"	"Watersipora subtorquata"			
1	"Drakes Estero"	5.00	"Away"	1.00	8/13/2004	"bushy growth of Bugula and Obelia covering about 50% of plate, but not surface cover; Obelia on other side of plate"
23	23.00	"WASU"	"Watersipora subtorquata"			
1	"Drakes Estero"	5.00	"Away"	1.00	8/13/2004	"bushy growth of Bugula and Obelia covering about 50% of plate, but not surface cover; Obelia on other side of plate"
24	24.00	"WASU"	"Watersipora subtorquata"			
1	"Drakes Estero"	5.00	"Away"	1.00	8/13/2004	"bushy growth of Bugula and Obelia covering about 50% of plate, but not surface cover; Obelia on other side of plate"
25	25.00	"BARE"	"Bare"			
1	"Drakes Estero"	5.00	"Away"	1.00	8/13/2004	"bushy growth of Bugula and Obelia covering about 50% of plate, but not surface cover; Obelia on other side of plate"
26	26.00	"BARE"	"Bare"			
1	"Drakes Estero"	5.00	"Away"	1.00	8/13/2004	"bushy growth of Bugula and Obelia covering about 50% of plate, but not surface cover; Obelia on other side of plate"
27	27.00	"BARE"	"Bare"			



1	"Drakes Estero"	5.00	"Away"	1.00	8/13/2004	"bushy growth of Bugula and Obelia covering about 50% of plate, but not surface cover; Obelia on other side of plate"
28	28.00	"BARE"	"Bare"			
1	"Drakes Estero"	5.00	"Away"	1.00	8/13/2004	"bushy growth of Bugula and Obelia covering about 50% of plate, but not surface cover; Obelia on other side of plate"
29	29.00	"WASU"	"Watersipora subtorquata"			
1	"Drakes Estero"	5.00	"Away"	1.00	8/13/2004	"bushy growth of Bugula and Obelia covering about 50% of plate, but not surface cover; Obelia on other side of plate"
30	30.00	"WASU"	"Watersipora subtorquata"			
1	"Drakes Estero"	5.00	"Away"	1.00	8/13/2004	"bushy growth of Bugula and Obelia covering about 50% of plate, but not surface cover; Obelia on other side of plate"
31	31.00	"BARE"	"Bare"			
1	"Drakes Estero"	5.00	"Away"	1.00	8/13/2004	"bushy growth of Bugula and Obelia covering about 50% of plate, but not surface cover; Obelia on other side of plate"
32	32.00	"BARE"	"Bare"			
1	"Drakes Estero"	5.00	"Away"	1.00	8/13/2004	"bushy growth of Bugula and Obelia covering about 50% of plate, but not surface cover; Obelia on other side of plate"
33	33.00	"BARE"	"Bare"			
1	"Drakes Estero"	5.00	"Away"	1.00	8/13/2004	"bushy growth of Bugula and Obelia covering about 50% of plate, but not surface cover; Obelia on other side of plate"
34	34.00	"BARE"	"Bare"			
1	"Drakes Estero"	5.00	"Away"	1.00	8/13/2004	"bushy growth of Bugula and Obelia covering about 50% of plate, but not surface cover; Obelia on other side of plate"
35	35.00	"BARE"	"Bare"			
1	"Drakes Estero"	5.00	"Away"	1.00	8/13/2004	"bushy growth of Bugula and Obelia covering about 50% of plate, but not surface cover; Obelia on other side of plate"
36	36.00	"WASU"	"Watersipora subtorquata"			
1	"Drakes Estero"	5.00	"Away"	1.00	8/13/2004	"bushy growth of Bugula and Obelia covering about 50% of plate, but not surface cover; Obelia on other side of plate"
37	37.00	"WASU"	"Watersipora subtorquata"			
1	"Drakes Estero"	5.00	"Away"	1.00	8/13/2004	"bushy growth of Bugula and Obelia covering about 50% of plate, but not surface cover; Obelia on other side of plate"
38	38.00	"BARE"	"Bare"			
1	"Drakes Estero"	5.00	"Away"	1.00	8/13/2004	"bushy growth of Bugula and Obelia covering about 50% of plate, but not surface cover; Obelia on other side of plate"
39	39.00	"BARE"	"Bare"			
1	"Drakes Estero"	5.00	"Away"	1.00	8/13/2004	"bushy growth of Bugula and Obelia covering about 50% of plate, but not surface cover; Obelia on other side of plate"
40	40.00	"WASU"	"Watersipora subtorquata"			
1	"Drakes Estero"	5.00	"Away"	1.00	8/13/2004	"bushy growth of Bugula and Obelia covering about 50% of plate, but not surface cover; Obelia on other side of plate"
41	41.00	"SCUN"	"Schizoporella unicornis"			
1	"Drakes Estero"	5.00	"Away"	1.00	8/13/2004	"bushy growth of Bugula and Obelia covering about 50% of plate, but not surface cover; Obelia on other side of plate"
42	42.00	"SCUN"	"Schizoporella unicornis"			

1	"Drakes Estero"	5.00	"Away"	1.00	8/13/2004	"bushy growth of Bugula and Obelia covering about 50% of plate, but not surface cover; Obelia on other side of plate"
43	43.00	"BUNE"	"Bugula neritina"			
1	"Drakes Estero"	5.00	"Away"	1.00	8/13/2004	"bushy growth of Bugula and Obelia covering about 50% of plate, but not surface cover; Obelia on other side of plate"
44	44.00	"WASU"	"Watersipora subtorquata"			
1	"Drakes Estero"	5.00	"Away"	1.00	8/13/2004	"bushy growth of Bugula and Obelia covering about 50% of plate, but not surface cover; Obelia on other side of plate"
45	45.00	"WASU"	"Watersipora subtorquata"			
1	"Drakes Estero"	5.00	"Away"	1.00	8/13/2004	"bushy growth of Bugula and Obelia covering about 50% of plate, but not surface cover; Obelia on other side of plate"
46	46.00	"WASU"	"Watersipora subtorquata"			
1	"Drakes Estero"	5.00	"Away"	1.00	8/13/2004	"bushy growth of Bugula and Obelia covering about 50% of plate, but not surface cover; Obelia on other side of plate"
47	47.00	"SCUN"	"Schizoporella unicornis"			
1	"Drakes Estero"	5.00	"Away"	1.00	8/13/2004	"bushy growth of Bugula and Obelia covering about 50% of plate, but not surface cover; Obelia on other side of plate"
48	48.00	"SCUN"	"Schizoporella unicornis"			
1	"Drakes Estero"	5.00	"Away"	1.00	8/13/2004	"bushy growth of Bugula and Obelia covering about 50% of plate, but not surface cover; Obelia on other side of plate"
49	49.00	"SCUN"	"Schizoporella unicornis"			
2	"Drakes Estero"	5.00	"Away"	2.00	8/13/2004	"substantial growth of Bugula and Obelia"
50	1.00	"SCUN"	"Schizoporella unicornis"			
2	"Drakes Estero"	5.00	"Away"	2.00	8/13/2004	"substantial growth of Bugula and Obelia"
51	2.00	"BOTROI"	"Botrylloides sp."			
2	"Drakes Estero"	5.00	"Away"	2.00	8/13/2004	"substantial growth of Bugula and Obelia"
52	3.00	"BOTROI"	"Botrylloides sp."			
2	"Drakes Estero"	5.00	"Away"	2.00	8/13/2004	"substantial growth of Bugula and Obelia"
53	4.00	"OBEL"	"Obelia sp."			
2	"Drakes Estero"	5.00	"Away"	2.00	8/13/2004	"substantial growth of Bugula and Obelia"
54	5.00	"BARE"	"Bare"			
2	"Drakes Estero"	5.00	"Away"	2.00	8/13/2004	"substantial growth of Bugula and Obelia"
55	6.00	"WASU"	"Watersipora subtorquata"			
2	"Drakes Estero"	5.00	"Away"	2.00	8/13/2004	"substantial growth of Bugula and Obelia"
56	7.00	"WASU"	"Watersipora subtorquata"			
2	"Drakes Estero"	5.00	"Away"	2.00	8/13/2004	"substantial growth of Bugula and Obelia"
57	8.00	"BOTROI"	"Botrylloides sp."			
2	"Drakes Estero"	5.00	"Away"	2.00	8/13/2004	"substantial growth of Bugula and Obelia"
58	9.00	"BARE"	"Bare"			
2	"Drakes Estero"	5.00	"Away"	2.00	8/13/2004	"substantial growth of Bugula and Obelia"
59	10.00	"WASU"	"Watersipora subtorquata"			
2	"Drakes Estero"	5.00	"Away"	2.00	8/13/2004	"substantial growth of Bugula and Obelia"
60	11.00	"WASU"	"Watersipora subtorquata"			
2	"Drakes Estero"	5.00	"Away"	2.00	8/13/2004	"substantial growth of Bugula and Obelia"
61	12.00	"WASU"	"Watersipora subtorquata"			

2	"Drakes Estero Bugula and Obelia" 62	5.00	"Away"	2.00	8/13/2004	"substantial growth of Watersipora subtorquata"
2	"Drakes Estero Bugula and Obelia" 63	13.00	"WASU"	2.00	8/13/2004	"substantial growth of Watersipora subtorquata"
2	"Drakes Estero Bugula and Obelia" 64	5.00	"Away"	2.00	8/13/2004	"substantial growth of Bare"
2	"Drakes Estero Bugula and Obelia" 65	15.00	"BARE"	2.00	8/13/2004	"substantial growth of Schizoporella unicornis"
2	"Drakes Estero Bugula and Obelia" 66	5.00	"Away"	2.00	8/13/2004	"substantial growth of Schizoporella unicornis"
2	"Drakes Estero Bugula and Obelia" 67	16.00	"SCUN"	2.00	8/13/2004	"substantial growth of Schizoporella unicornis"
2	"Drakes Estero Bugula and Obelia" 68	5.00	"Away"	2.00	8/13/2004	"substantial growth of Bare"
2	"Drakes Estero Bugula and Obelia" 69	18.00	"BARE"	2.00	8/13/2004	"substantial growth of Watersipora subtorquata"
2	"Drakes Estero Bugula and Obelia" 70	5.00	"Away"	2.00	8/13/2004	"substantial growth of Watersipora subtorquata"
2	"Drakes Estero Bugula and Obelia" 71	19.00	"WASU"	2.00	8/13/2004	"substantial growth of Watersipora subtorquata"
2	"Drakes Estero Bugula and Obelia" 72	5.00	"Away"	2.00	8/13/2004	"substantial growth of Schizoporella unicornis"
2	"Drakes Estero Bugula and Obelia" 73	20.00	"WASU"	2.00	8/13/2004	"substantial growth of Schizoporella unicornis"
2	"Drakes Estero Bugula and Obelia" 74	5.00	"Away"	2.00	8/13/2004	"substantial growth of Schizoporella unicornis"
2	"Drakes Estero Bugula and Obelia" 75	21.00	"WASU"	2.00	8/13/2004	"substantial growth of Bare"
2	"Drakes Estero Bugula and Obelia" 76	5.00	"Away"	2.00	8/13/2004	"substantial growth of Bare"
2	"Drakes Estero Bugula and Obelia" 77	22.00	"BARE"	2.00	8/13/2004	"substantial growth of Bare"
2	"Drakes Estero Bugula and Obelia" 78	5.00	"Away"	2.00	8/13/2004	"substantial growth of Bare"
2	"Drakes Estero Bugula and Obelia" 79	23.00	"SCUN"	2.00	8/13/2004	"substantial growth of Schizoporella unicornis"
2	"Drakes Estero Bugula and Obelia" 80	5.00	"Away"	2.00	8/13/2004	"substantial growth of Schizoporella unicornis"
2	"Drakes Estero Bugula and Obelia" 81	24.00	"SCUN"	2.00	8/13/2004	"substantial growth of Schizoporella unicornis"
2	"Drakes Estero Bugula and Obelia" 82	5.00	"Away"	2.00	8/13/2004	"substantial growth of Bugula neritina"
2	"Drakes Estero Bugula and Obelia" 83	32.00	"SCUN"	2.00	8/13/2004	"substantial growth of Bare"
2	"Drakes Estero Bugula and Obelia" 84	5.00	"Away"	2.00	8/13/2004	"substantial growth of Bare"
		35.00	"BARE"			

2	"Drakes Estero"	5.00	"Away"	2.00	8/13/2004	"substantial growth of Bugula and Obelia"
85		36.00	"BARE"	"Bare"		
2	"Drakes Estero"	5.00	"Away"	2.00	8/13/2004	"substantial growth of Bugula and Obelia"
86		37.00	"BARE"	"Bare"		
2	"Drakes Estero"	5.00	"Away"	2.00	8/13/2004	"substantial growth of Bugula and Obelia"
87		38.00	"WASU"	"Watersipora subtorquata"		
2	"Drakes Estero"	5.00	"Away"	2.00	8/13/2004	"substantial growth of Bugula and Obelia"
88		39.00	"SCUN"	"Schizoporella unicornis"		
2	"Drakes Estero"	5.00	"Away"	2.00	8/13/2004	"substantial growth of Bugula and Obelia"
89		40.00	"BARE"	"Bare"		
2	"Drakes Estero"	5.00	"Away"	2.00	8/13/2004	"substantial growth of Bugula and Obelia"
90		41.00	"BARE"	"Bare"		
2	"Drakes Estero"	5.00	"Away"	2.00	8/13/2004	"substantial growth of Bugula and Obelia"
91		42.00	"BARE"	"Bare"		
2	"Drakes Estero"	5.00	"Away"	2.00	8/13/2004	"substantial growth of Bugula and Obelia"
92		43.00	"BARE"	"Bare"		
2	"Drakes Estero"	5.00	"Away"	2.00	8/13/2004	"substantial growth of Bugula and Obelia"
93		44.00	"BARE"	"Bare"		
2	"Drakes Estero"	5.00	"Away"	2.00	8/13/2004	"substantial growth of Bugula and Obelia"
94		45.00	"BARE"	"Bare"		
2	"Drakes Estero"	5.00	"Away"	2.00	8/13/2004	"substantial growth of Bugula and Obelia"
95		46.00	"SCUN"	"Schizoporella unicornis"		
2	"Drakes Estero"	5.00	"Away"	2.00	8/13/2004	"substantial growth of Bugula and Obelia"
96		47.00	"BARE"	"Bare"		
2	"Drakes Estero"	5.00	"Away"	2.00	8/13/2004	"substantial growth of Bugula and Obelia"
97		48.00	"BARE"	"Bare"		
2	"Drakes Estero"	5.00	"Away"	2.00	8/13/2004	"substantial growth of Bugula and Obelia"
98		49.00	"BARE"	"Bare"		
3	"Drakes Estero"	5.00	"Away"	3.00	8/13/2004	"Didemnum lahilea lost on removal from water, but covered entire surface of plate; other species listed were underlying Didemnum growth"
100		1.00	"DILA"	"Didemnum lahilei"		
3	"Drakes Estero"	5.00	"Away"	3.00	8/13/2004	"Didemnum lahilea lost on removal from water, but covered entire surface of plate; other species listed were underlying Didemnum growth"
101		2.00	"DILA"	"Didemnum lahilei"		
3	"Drakes Estero"	5.00	"Away"	3.00	8/13/2004	"Didemnum lahilea lost on removal from water, but covered entire surface of plate; other species listed were underlying Didemnum growth"
102		3.00	"DILA"	"Didemnum lahilei"		
3	"Drakes Estero"	5.00	"Away"	3.00	8/13/2004	"Didemnum lahilea lost on removal from water, but covered entire surface of plate; other species listed were underlying Didemnum growth"
103		4.00	"DILA"	"Didemnum lahilei"		
3	"Drakes Estero"	5.00	"Away"	3.00	8/13/2004	"Didemnum lahilea lost on removal from water, but covered entire surface of plate; other species listed were underlying Didemnum growth"
104		5.00	"DILA"	"Didemnum lahilei"		
3	"Drakes Estero"	5.00	"Away"	3.00	8/13/2004	"Didemnum lahilea lost on removal from water, but covered entire surface of plate; other species listed were underlying Didemnum growth"
105		6.00	"DILA"	"Didemnum lahilei"		





3	"Drakes Estero"	5.00	"Away"	3.00	8/13/2004	"Didemnum lahilea lost on removal from water, but covered entire surface of plate; other species listed were underlying Didemnum growth"	136	37.00	"DILA""Didemnum lahilei"
3	"Drakes Estero"	5.00	"Away"	3.00	8/13/2004	"Didemnum lahilea lost on removal from water, but covered entire surface of plate; other species listed were underlying Didemnum growth"	137	38.00	"DILA""Didemnum lahilei"
3	"Drakes Estero"	5.00	"Away"	3.00	8/13/2004	"Didemnum lahilea lost on removal from water, but covered entire surface of plate; other species listed were underlying Didemnum growth"	138	39.00	"DILA""Didemnum lahilei"
3	"Drakes Estero"	5.00	"Away"	3.00	8/13/2004	"Didemnum lahilea lost on removal from water, but covered entire surface of plate; other species listed were underlying Didemnum growth"	139	40.00	"DILA""Didemnum lahilei"
3	"Drakes Estero"	5.00	"Away"	3.00	8/13/2004	"Didemnum lahilea lost on removal from water, but covered entire surface of plate; other species listed were underlying Didemnum growth"	140	41.00	"DILA""Didemnum lahilei"
3	"Drakes Estero"	5.00	"Away"	3.00	8/13/2004	"Didemnum lahilea lost on removal from water, but covered entire surface of plate; other species listed were underlying Didemnum growth"	141	42.00	"DILA""Didemnum lahilei"
3	"Drakes Estero"	5.00	"Away"	3.00	8/13/2004	"Didemnum lahilea lost on removal from water, but covered entire surface of plate; other species listed were underlying Didemnum growth"	142	43.00	"DILA""Didemnum lahilei"
3	"Drakes Estero"	5.00	"Away"	3.00	8/13/2004	"Didemnum lahilea lost on removal from water, but covered entire surface of plate; other species listed were underlying Didemnum growth"	143	44.00	"DILA""Didemnum lahilei"
3	"Drakes Estero"	5.00	"Away"	3.00	8/13/2004	"Didemnum lahilea lost on removal from water, but covered entire surface of plate; other species listed were underlying Didemnum growth"	144	45.00	"DILA""Didemnum lahilei"
3	"Drakes Estero"	5.00	"Away"	3.00	8/13/2004	"Didemnum lahilea lost on removal from water, but covered entire surface of plate; other species listed were underlying Didemnum growth"	145	46.00	"DILA""Didemnum lahilei"
3	"Drakes Estero"	5.00	"Away"	3.00	8/13/2004	"Didemnum lahilea lost on removal from water, but covered entire surface of plate; other species listed were underlying Didemnum growth"	146	47.00	"DILA""Didemnum lahilei"
3	"Drakes Estero"	5.00	"Away"	3.00	8/13/2004	"Didemnum lahilea lost on removal from water, but covered entire surface of plate; other species listed were underlying Didemnum growth"	147	48.00	"DILA""Didemnum lahilei"
3	"Drakes Estero"	5.00	"Away"	3.00	8/13/2004	"Didemnum lahilea lost on removal from water, but covered entire surface of plate; other species listed were underlying Didemnum growth"	148	49.00	"DILA""Didemnum lahilei"
4	"Drakes Estero"	14.00	"Rack"	1.00	8/13/2004	"massive growth of Didemnum lahillei; small Cancer crab taking refuge under fold of Didemnum"	149	1.00	"DILA" "Didemnum lahilei"
4	"Drakes Estero"	14.00	"Rack"	1.00	8/13/2004	"massive growth of Didemnum lahillei; small Cancer crab taking refuge under fold of Didemnum"	150	2.00	"DILA" "Didemnum lahilei"

4	"Drakes Estero"	14.00	"Rack"1.00	8/13/2004	"massive growth of Didemnum lahillei; small Cancer crab taking refuge under fold of Didemnum"	151	3.00	"DILA"
	"Didemnum lahilei"							
4	"Drakes Estero"	14.00	"Rack"1.00	8/13/2004	"massive growth of Didemnum lahillei; small Cancer crab taking refuge under fold of Didemnum"	152	4.00	"DILA"
	"Didemnum lahilei"							
4	"Drakes Estero"	14.00	"Rack"1.00	8/13/2004	"massive growth of Didemnum lahillei; small Cancer crab taking refuge under fold of Didemnum"	153	5.00	"DILA"
	"Didemnum lahilei"							
4	"Drakes Estero"	14.00	"Rack"1.00	8/13/2004	"massive growth of Didemnum lahillei; small Cancer crab taking refuge under fold of Didemnum"	154	6.00	"DILA"
	"Didemnum lahilei"							
4	"Drakes Estero"	14.00	"Rack"1.00	8/13/2004	"massive growth of Didemnum lahillei; small Cancer crab taking refuge under fold of Didemnum"	155	7.00	"DILA"
	"Didemnum lahilei"							
4	"Drakes Estero"	14.00	"Rack"1.00	8/13/2004	"massive growth of Didemnum lahillei; small Cancer crab taking refuge under fold of Didemnum"	156	8.00	"DILA"
	"Didemnum lahilei"							
4	"Drakes Estero"	14.00	"Rack"1.00	8/13/2004	"massive growth of Didemnum lahillei; small Cancer crab taking refuge under fold of Didemnum"	157	9.00	"DILA"
	"Didemnum lahilei"							
4	"Drakes Estero"	14.00	"Rack"1.00	8/13/2004	"massive growth of Didemnum lahillei; small Cancer crab taking refuge under fold of Didemnum"	158	10.00	"DILA"
	"Didemnum lahilei"							
4	"Drakes Estero"	14.00	"Rack"1.00	8/13/2004	"massive growth of Didemnum lahillei; small Cancer crab taking refuge under fold of Didemnum"	159	11.00	"DILA"
	"Didemnum lahilei"							
4	"Drakes Estero"	14.00	"Rack"1.00	8/13/2004	"massive growth of Didemnum lahillei; small Cancer crab taking refuge under fold of Didemnum"	160	12.00	"DILA"
	"Didemnum lahilei"							
4	"Drakes Estero"	14.00	"Rack"1.00	8/13/2004	"massive growth of Didemnum lahillei; small Cancer crab taking refuge under fold of Didemnum"	161	13.00	"DILA"
	"Didemnum lahilei"							
4	"Drakes Estero"	14.00	"Rack"1.00	8/13/2004	"massive growth of Didemnum lahillei; small Cancer crab taking refuge under fold of Didemnum"	162	14.00	"DILA"
	"Didemnum lahilei"							
4	"Drakes Estero"	14.00	"Rack"1.00	8/13/2004	"massive growth of Didemnum lahillei; small Cancer crab taking refuge under fold of Didemnum"	163	15.00	"DILA"
	"Didemnum lahilei"							
4	"Drakes Estero"	14.00	"Rack"1.00	8/13/2004	"massive growth of Didemnum lahillei; small Cancer crab taking refuge under fold of Didemnum"	164	16.00	"DILA"
	"Didemnum lahilei"							
4	"Drakes Estero"	14.00	"Rack"1.00	8/13/2004	"massive growth of Didemnum lahillei; small Cancer crab taking refuge under fold of Didemnum"	165	17.00	"DILA"
	"Didemnum lahilei"							



4 "Drakes Estero" 14.00 "Rack"1.00 8/13/2004 "massive growth of Didemnum lahillei; small Cancer crab taking refuge under fold of Didemnum" 166 18.00 "DILA" "Didemnum lahilei"

4 "Drakes Estero" 14.00 "Rack"1.00 8/13/2004 "massive growth of Didemnum lahillei; small Cancer crab taking refuge under fold of Didemnum" 167 19.00 "DILA" "Didemnum lahilei"

4 "Drakes Estero" 14.00 "Rack"1.00 8/13/2004 "massive growth of Didemnum lahillei; small Cancer crab taking refuge under fold of Didemnum" 168 20.00 "DILA" "Didemnum lahilei"

4 "Drakes Estero" 14.00 "Rack"1.00 8/13/2004 "massive growth of Didemnum lahillei; small Cancer crab taking refuge under fold of Didemnum" 169 21.00 "DILA" "Didemnum lahilei"

4 "Drakes Estero" 14.00 "Rack"1.00 8/13/2004 "massive growth of Didemnum lahillei; small Cancer crab taking refuge under fold of Didemnum" 170 22.00 "DILA" "Didemnum lahilei"

4 "Drakes Estero" 14.00 "Rack"1.00 8/13/2004 "massive growth of Didemnum lahillei; small Cancer crab taking refuge under fold of Didemnum" 171 23.00 "DILA" "Didemnum lahilei"

4 "Drakes Estero" 14.00 "Rack"1.00 8/13/2004 "massive growth of Didemnum lahillei; small Cancer crab taking refuge under fold of Didemnum" 172 24.00 "DILA" "Didemnum lahilei"

4 "Drakes Estero" 14.00 "Rack"1.00 8/13/2004 "massive growth of Didemnum lahillei; small Cancer crab taking refuge under fold of Didemnum" 173 25.00 "DILA" "Didemnum lahilei"

4 "Drakes Estero" 14.00 "Rack"1.00 8/13/2004 "massive growth of Didemnum lahillei; small Cancer crab taking refuge under fold of Didemnum" 174 26.00 "DILA" "Didemnum lahilei"

4 "Drakes Estero" 14.00 "Rack"1.00 8/13/2004 "massive growth of Didemnum lahillei; small Cancer crab taking refuge under fold of Didemnum" 175 27.00 "DILA" "Didemnum lahilei"

4 "Drakes Estero" 14.00 "Rack"1.00 8/13/2004 "massive growth of Didemnum lahillei; small Cancer crab taking refuge under fold of Didemnum" 176 28.00 "DILA" "Didemnum lahilei"

4 "Drakes Estero" 14.00 "Rack"1.00 8/13/2004 "massive growth of Didemnum lahillei; small Cancer crab taking refuge under fold of Didemnum" 177 29.00 "DILA" "Didemnum lahilei"

4 "Drakes Estero" 14.00 "Rack"1.00 8/13/2004 "massive growth of Didemnum lahillei; small Cancer crab taking refuge under fold of Didemnum" 178 30.00 "DILA" "Didemnum lahilei"

4 "Drakes Estero" 14.00 "Rack"1.00 8/13/2004 "massive growth of Didemnum lahillei; small Cancer crab taking refuge under fold of Didemnum" 179 31.00 "DILA" "Didemnum lahilei"

4 "Drakes Estero" 14.00 "Rack"1.00 8/13/2004 "massive growth of Didemnum lahillei; small Cancer crab taking refuge under fold of Didemnum" 180 32.00 "DILA" "Didemnum lahilei"



4	"Drakes Estero"	14.00	"Rack"1.00	8/13/2004	"massive growth of Didemnum lahillei; small Cancer crab taking refuge under fold of Didemnum"	196	48.00	"DILA"	"Didemnum lahilei"
4	"Drakes Estero"	14.00	"Rack"1.00	8/13/2004	"massive growth of Didemnum lahillei; small Cancer crab taking refuge under fold of Didemnum"	197	49.00	"DILA"	"Didemnum lahilei"
5	"Drakes Estero"	14.00	"Rack"2.00	8/13/2004	"lots of tunicate growth - colonial pendant lobes which were difficult to identify"	198	1.00	"TUN1"	"unknown tunicate 1 - black and yellow"
5	"Drakes Estero"	14.00	"Rack"2.00	8/13/2004	"lots of tunicate growth - colonial pendant lobes which were difficult to identify"	199	2.00	"TUN1"	"unknown tunicate 1 - black and yellow"
5	"Drakes Estero"	14.00	"Rack"2.00	8/13/2004	"lots of tunicate growth - colonial pendant lobes which were difficult to identify"	200	3.00	"BARE"	"Bare"
5	"Drakes Estero"	14.00	"Rack"2.00	8/13/2004	"lots of tunicate growth - colonial pendant lobes which were difficult to identify"	201	4.00	"BOTROI"	"Botrylloides sp."
5	"Drakes Estero"	14.00	"Rack"2.00	8/13/2004	"lots of tunicate growth - colonial pendant lobes which were difficult to identify"	202	5.00	"TUN1"	"unknown tunicate 1 - black and yellow"
5	"Drakes Estero"	14.00	"Rack"2.00	8/13/2004	"lots of tunicate growth - colonial pendant lobes which were difficult to identify"	203	6.00	"BOTROI"	"Botrylloides sp."
5	"Drakes Estero"	14.00	"Rack"2.00	8/13/2004	"lots of tunicate growth - colonial pendant lobes which were difficult to identify"	204	7.00	"TUN2"	"unknown tunicate 2 - dark gray"
5	"Drakes Estero"	14.00	"Rack"2.00	8/13/2004	"lots of tunicate growth - colonial pendant lobes which were difficult to identify"	205	8.00	"TUN1"	"unknown tunicate 1 - black and yellow"
5	"Drakes Estero"	14.00	"Rack"2.00	8/13/2004	"lots of tunicate growth - colonial pendant lobes which were difficult to identify"	206	9.00	"BOTROI"	"Botrylloides sp."
5	"Drakes Estero"	14.00	"Rack"2.00	8/13/2004	"lots of tunicate growth - colonial pendant lobes which were difficult to identify"	207	10.00	"BOTROI"	"Botrylloides sp."
5	"Drakes Estero"	14.00	"Rack"2.00	8/13/2004	"lots of tunicate growth - colonial pendant lobes which were difficult to identify"	208	11.00	"TUN1"	"unknown tunicate 1 - black and yellow"
5	"Drakes Estero"	14.00	"Rack"2.00	8/13/2004	"lots of tunicate growth - colonial pendant lobes which were difficult to identify"	209	12.00	"BOTROI"	"Botrylloides sp."
5	"Drakes Estero"	14.00	"Rack"2.00	8/13/2004	"lots of tunicate growth - colonial pendant lobes which were difficult to identify"	210	13.00	"BARE"	"Bare"
5	"Drakes Estero"	14.00	"Rack"2.00	8/13/2004	"lots of tunicate growth - colonial pendant lobes which were difficult to identify"	211	14.00	"BOTROI"	"Botrylloides sp."
5	"Drakes Estero"	14.00	"Rack"2.00	8/13/2004	"lots of tunicate growth - colonial pendant lobes which were difficult to identify"	212	15.00	"SCUN"	"Schizoporella unicornis"
5	"Drakes Estero"	14.00	"Rack"2.00	8/13/2004	"lots of tunicate growth - colonial pendant lobes which were difficult to identify"	213	16.00	"TUN1"	"unknown tunicate 1 - black and yellow"

5	"Drakes Estero"	14.00	"Rack"2.00	8/13/2004	"lots of tunicate growth - colonial
	pendant lobes which were difficult to identify"			214	17.00 "BOTROI" "Botrylloides sp."
5	"Drakes Estero"	14.00	"Rack"2.00	8/13/2004	"lots of tunicate growth - colonial
	pendant lobes which were difficult to identify"			215	18.00 "BOTROI" "Botrylloides sp."
5	"Drakes Estero"	14.00	"Rack"2.00	8/13/2004	"lots of tunicate growth - colonial
	pendant lobes which were difficult to identify"			216	19.00 "TUN1" "unknown tunicate
	1 - black and yellow"				
5	"Drakes Estero"	14.00	"Rack"2.00	8/13/2004	"lots of tunicate growth - colonial
	pendant lobes which were difficult to identify"			217	20.00 "TUN1" "unknown tunicate
	1 - black and yellow"				
5	"Drakes Estero"	14.00	"Rack"2.00	8/13/2004	"lots of tunicate growth - colonial
	pendant lobes which were difficult to identify"			218	21.00 "BOTROI" "Botrylloides sp."
5	"Drakes Estero"	14.00	"Rack"2.00	8/13/2004	"lots of tunicate growth - colonial
	pendant lobes which were difficult to identify"			219	22.00 "SCUN" "Schizoporella
	unicornis"				
5	"Drakes Estero"	14.00	"Rack"2.00	8/13/2004	"lots of tunicate growth - colonial
	pendant lobes which were difficult to identify"			220	23.00 "BOTROI" "Botrylloides sp."
5	"Drakes Estero"	14.00	"Rack"2.00	8/13/2004	"lots of tunicate growth - colonial
	pendant lobes which were difficult to identify"			221	24.00 "BOTROI" "Botrylloides sp."
5	"Drakes Estero"	14.00	"Rack"2.00	8/13/2004	"lots of tunicate growth - colonial
	pendant lobes which were difficult to identify"			222	25.00 "BOTROI" "Botrylloides sp."
5	"Drakes Estero"	14.00	"Rack"2.00	8/13/2004	"lots of tunicate growth - colonial
	pendant lobes which were difficult to identify"			223	26.00 "BOTROI" "Botrylloides sp."
5	"Drakes Estero"	14.00	"Rack"2.00	8/13/2004	"lots of tunicate growth - colonial
	pendant lobes which were difficult to identify"			224	27.00 "BARE" "Bare"
5	"Drakes Estero"	14.00	"Rack"2.00	8/13/2004	"lots of tunicate growth - colonial
	pendant lobes which were difficult to identify"			225	28.00 "BOTROI" "Botrylloides sp."
5	"Drakes Estero"	14.00	"Rack"2.00	8/13/2004	"lots of tunicate growth - colonial
	pendant lobes which were difficult to identify"			226	29.00 "SCUN" "Schizoporella
	unicornis"				
5	"Drakes Estero"	14.00	"Rack"2.00	8/13/2004	"lots of tunicate growth - colonial
	pendant lobes which were difficult to identify"			227	30.00 "BOTROI" "Botrylloides sp."
5	"Drakes Estero"	14.00	"Rack"2.00	8/13/2004	"lots of tunicate growth - colonial
	pendant lobes which were difficult to identify"			228	31.00 "BOTROI" "Botrylloides sp."
5	"Drakes Estero"	14.00	"Rack"2.00	8/13/2004	"lots of tunicate growth - colonial
	pendant lobes which were difficult to identify"			229	32.00 "BOTROI" "Botrylloides sp."
5	"Drakes Estero"	14.00	"Rack"2.00	8/13/2004	"lots of tunicate growth - colonial
	pendant lobes which were difficult to identify"			230	33.00 "BOTROI" "Botrylloides sp."
5	"Drakes Estero"	14.00	"Rack"2.00	8/13/2004	"lots of tunicate growth - colonial
	pendant lobes which were difficult to identify"			231	34.00 "BOTROI" "Botrylloides sp."
5	"Drakes Estero"	14.00	"Rack"2.00	8/13/2004	"lots of tunicate growth - colonial
	pendant lobes which were difficult to identify"			232	35.00 "BOTROI" "Botrylloides sp."
5	"Drakes Estero"	14.00	"Rack"2.00	8/13/2004	"lots of tunicate growth - colonial
	pendant lobes which were difficult to identify"			233	36.00 "BARE" "Bare"
5	"Drakes Estero"	14.00	"Rack"2.00	8/13/2004	"lots of tunicate growth - colonial
	pendant lobes which were difficult to identify"			234	37.00 "BOTROI" "Botrylloides sp."

5	"Drakes Estero"	14.00	"Rack"2.00	8/13/2004	"lots of tunicate growth - colonial pendant lobes which were difficult to identify"	235	38.00	"BOTROI"	"Botrylloides sp."
5	"Drakes Estero"	14.00	"Rack"2.00	8/13/2004	"lots of tunicate growth - colonial pendant lobes which were difficult to identify"	236	39.00	"BOTROI"	"Botrylloides sp."
5	"Drakes Estero"	14.00	"Rack"2.00	8/13/2004	"lots of tunicate growth - colonial pendant lobes which were difficult to identify"	237	40.00	"BOTROI"	"Botrylloides sp."
5	"Drakes Estero"	14.00	"Rack"2.00	8/13/2004	"lots of tunicate growth - colonial pendant lobes which were difficult to identify"	238	41.00	"BOTROI"	"Botrylloides sp."
5	"Drakes Estero"	14.00	"Rack"2.00	8/13/2004	"lots of tunicate growth - colonial pendant lobes which were difficult to identify"	239	42.00	"BOTROI"	"Botrylloides sp."
5	"Drakes Estero"	14.00	"Rack"2.00	8/13/2004	"lots of tunicate growth - colonial pendant lobes which were difficult to identify"	240	43.00	"BARE"	"Bare"
5	"Drakes Estero"	14.00	"Rack"2.00	8/13/2004	"lots of tunicate growth - colonial pendant lobes which were difficult to identify"	241	44.00	"BOTROI"	"Botrylloides sp."
5	"Drakes Estero"	14.00	"Rack"2.00	8/13/2004	"lots of tunicate growth - colonial pendant lobes which were difficult to identify"	242	45.00	"TUN1"	"unknown tunicate 1 - black and yellow"
5	"Drakes Estero"	14.00	"Rack"2.00	8/13/2004	"lots of tunicate growth - colonial pendant lobes which were difficult to identify"	243	46.00	"TUN1"	"unknown tunicate 1 - black and yellow"
5	"Drakes Estero"	14.00	"Rack"2.00	8/13/2004	"lots of tunicate growth - colonial pendant lobes which were difficult to identify"	244	47.00	"BOTROI"	"Botrylloides sp."
5	"Drakes Estero"	14.00	"Rack"2.00	8/13/2004	"lots of tunicate growth - colonial pendant lobes which were difficult to identify"	245	48.00	"BOTROI"	"Botrylloides sp."
5	"Drakes Estero"	14.00	"Rack"2.00	8/13/2004	"lots of tunicate growth - colonial pendant lobes which were difficult to identify"	246	49.00	"BOTROI"	"Botrylloides sp."
6	"Drakes Estero"	14.00	"Rack"3.00	8/13/2004	"more small colonial pendant lobes which were difficult to identify; big Botrylloides colony"	247	1.00	"TUN1"	"unknown tunicate 1 - black and yellow"
6	"Drakes Estero"	14.00	"Rack"3.00	8/13/2004	"more small colonial pendant lobes which were difficult to identify; big Botrylloides colony"	248	2.00	"BARE"	"Bare"
6	"Drakes Estero"	14.00	"Rack"3.00	8/13/2004	"more small colonial pendant lobes which were difficult to identify; big Botrylloides colony"	249	3.00	"SCUN"	"Schizoporella unicornis"
6	"Drakes Estero"	14.00	"Rack"3.00	8/13/2004	"more small colonial pendant lobes which were difficult to identify; big Botrylloides colony"	250	4.00	"BOTROI"	"Botrylloides sp."
6	"Drakes Estero"	14.00	"Rack"3.00	8/13/2004	"more small colonial pendant lobes which were difficult to identify; big Botrylloides colony"	251	5.00	"BOTROI"	"Botrylloides sp."
6	"Drakes Estero"	14.00	"Rack"3.00	8/13/2004	"more small colonial pendant lobes which were difficult to identify; big Botrylloides colony"	252	6.00	"BOTROI"	"Botrylloides sp."

6	"Drakes Estero"	14.00	"Rack"3.00	8/13/2004	"more small colonial pendant lobes which were difficult to identify; big Botrylloides colony"	253	7.00	"TUN1"
	"unknown tunicate 1 - black and yellow"							
6	"Drakes Estero"	14.00	"Rack"3.00	8/13/2004	"more small colonial pendant lobes which were difficult to identify; big Botrylloides colony"	254	8.00	"BARE"
	"Bare"							
6	"Drakes Estero"	14.00	"Rack"3.00	8/13/2004	"more small colonial pendant lobes which were difficult to identify; big Botrylloides colony"	255	9.00	"BARE"
	"Bare"							
6	"Drakes Estero"	14.00	"Rack"3.00	8/13/2004	"more small colonial pendant lobes which were difficult to identify; big Botrylloides colony"	256	10.00	"BARE"
	"Bare"							
6	"Drakes Estero"	14.00	"Rack"3.00	8/13/2004	"more small colonial pendant lobes which were difficult to identify; big Botrylloides colony"	257	11.00	"BARE"
	"Bare"							
6	"Drakes Estero"	14.00	"Rack"3.00	8/13/2004	"more small colonial pendant lobes which were difficult to identify; big Botrylloides colony"	258	12.00	"BOTROI"
	"Botrylloides sp."							
6	"Drakes Estero"	14.00	"Rack"3.00	8/13/2004	"more small colonial pendant lobes which were difficult to identify; big Botrylloides colony"	259	13.00	"BOTROI"
	"Botrylloides sp."							
6	"Drakes Estero"	14.00	"Rack"3.00	8/13/2004	"more small colonial pendant lobes which were difficult to identify; big Botrylloides colony"	260	14.00	"TUN1"
	"unknown tunicate 1 - black and yellow"							
6	"Drakes Estero"	14.00	"Rack"3.00	8/13/2004	"more small colonial pendant lobes which were difficult to identify; big Botrylloides colony"	261	15.00	"SCUN"
	"Schizoporella unicornis"							
6	"Drakes Estero"	14.00	"Rack"3.00	8/13/2004	"more small colonial pendant lobes which were difficult to identify; big Botrylloides colony"	262	16.00	"BARE"
	"Bare"							
6	"Drakes Estero"	14.00	"Rack"3.00	8/13/2004	"more small colonial pendant lobes which were difficult to identify; big Botrylloides colony"	263	17.00	"BARE"
	"Bare"							
6	"Drakes Estero"	14.00	"Rack"3.00	8/13/2004	"more small colonial pendant lobes which were difficult to identify; big Botrylloides colony"	264	18.00	"BARE"
	"Bare"							
6	"Drakes Estero"	14.00	"Rack"3.00	8/13/2004	"more small colonial pendant lobes which were difficult to identify; big Botrylloides colony"	265	19.00	"SCUN"
	"Schizoporella unicornis"							
6	"Drakes Estero"	14.00	"Rack"3.00	8/13/2004	"more small colonial pendant lobes which were difficult to identify; big Botrylloides colony"	266	20.00	"BOTROI"
	"Botrylloides sp."							
6	"Drakes Estero"	14.00	"Rack"3.00	8/13/2004	"more small colonial pendant lobes which were difficult to identify; big Botrylloides colony"	267	21.00	"TUN1"
	"unknown tunicate 1 - black and yellow"							

6	"Drakes Estero"	14.00	"Rack"3.00	8/13/2004	"more small colonial pendant lobes which were difficult to identify; big Botrylloides colony"	268	22.00	"SCUN"
	"Schizoporella unicornis"							
6	"Drakes Estero"	14.00	"Rack"3.00	8/13/2004	"more small colonial pendant lobes which were difficult to identify; big Botrylloides colony"	269	23.00	"BARE"
	"Bare"							
6	"Drakes Estero"	14.00	"Rack"3.00	8/13/2004	"more small colonial pendant lobes which were difficult to identify; big Botrylloides colony"	270	24.00	"BARE"
	"Bare"							
6	"Drakes Estero"	14.00	"Rack"3.00	8/13/2004	"more small colonial pendant lobes which were difficult to identify; big Botrylloides colony"	271	25.00	"BARE"
	"Bare"							
6	"Drakes Estero"	14.00	"Rack"3.00	8/13/2004	"more small colonial pendant lobes which were difficult to identify; big Botrylloides colony"	272	26.00	"SCUN"
	"Schizoporella unicornis"							
6	"Drakes Estero"	14.00	"Rack"3.00	8/13/2004	"more small colonial pendant lobes which were difficult to identify; big Botrylloides colony"	273	27.00	"SCUN"
	"Schizoporella unicornis"							
6	"Drakes Estero"	14.00	"Rack"3.00	8/13/2004	"more small colonial pendant lobes which were difficult to identify; big Botrylloides colony"	274	28.00	"TUN1"
	"unknown tunicate 1 - black and yellow"							
6	"Drakes Estero"	14.00	"Rack"3.00	8/13/2004	"more small colonial pendant lobes which were difficult to identify; big Botrylloides colony"	275	29.00	"BARE"
	"Bare"							
6	"Drakes Estero"	14.00	"Rack"3.00	8/13/2004	"more small colonial pendant lobes which were difficult to identify; big Botrylloides colony"	276	30.00	"BARE"
	"Bare"							
6	"Drakes Estero"	14.00	"Rack"3.00	8/13/2004	"more small colonial pendant lobes which were difficult to identify; big Botrylloides colony"	277	31.00	"TUN1"
	"unknown tunicate 1 - black and yellow"							
6	"Drakes Estero"	14.00	"Rack"3.00	8/13/2004	"more small colonial pendant lobes which were difficult to identify; big Botrylloides colony"	278	32.00	"TUN1"
	"unknown tunicate 1 - black and yellow"							
6	"Drakes Estero"	14.00	"Rack"3.00	8/13/2004	"more small colonial pendant lobes which were difficult to identify; big Botrylloides colony"	279	33.00	"BARE"
	"Bare"							
6	"Drakes Estero"	14.00	"Rack"3.00	8/13/2004	"more small colonial pendant lobes which were difficult to identify; big Botrylloides colony"	280	34.00	"TUN1"
	"unknown tunicate 1 - black and yellow"							
6	"Drakes Estero"	14.00	"Rack"3.00	8/13/2004	"more small colonial pendant lobes which were difficult to identify; big Botrylloides colony"	281	35.00	"TUN1"
	"unknown tunicate 1 - black and yellow"							
6	"Drakes Estero"	14.00	"Rack"3.00	8/13/2004	"more small colonial pendant lobes which were difficult to identify; big Botrylloides colony"	282	36.00	"TUN1"
	"unknown tunicate 1 - black and yellow"							

6	"Drakes Estero"	14.00	"Rack"3.00	8/13/2004	"more small colonial pendant lobes which were difficult to identify; big Botrylloides colony"	283	37.00	"BARE"
	"Bare"							
6	"Drakes Estero"	14.00	"Rack"3.00	8/13/2004	"more small colonial pendant lobes which were difficult to identify; big Botrylloides colony"	284	38.00	"TUN1"
	"unknown tunicate 1 - black and yellow"							
6	"Drakes Estero"	14.00	"Rack"3.00	8/13/2004	"more small colonial pendant lobes which were difficult to identify; big Botrylloides colony"	285	39.00	"TUN1"
	"unknown tunicate 1 - black and yellow"							
6	"Drakes Estero"	14.00	"Rack"3.00	8/13/2004	"more small colonial pendant lobes which were difficult to identify; big Botrylloides colony"	286	40.00	"BARE"
	"Bare"							
6	"Drakes Estero"	14.00	"Rack"3.00	8/13/2004	"more small colonial pendant lobes which were difficult to identify; big Botrylloides colony"	287	41.00	"BARE"
	"Bare"							
6	"Drakes Estero"	14.00	"Rack"3.00	8/13/2004	"more small colonial pendant lobes which were difficult to identify; big Botrylloides colony"	288	42.00	"TUN1"
	"unknown tunicate 1 - black and yellow"							
6	"Drakes Estero"	14.00	"Rack"3.00	8/13/2004	"more small colonial pendant lobes which were difficult to identify; big Botrylloides colony"	289	43.00	"TUN1"
	"unknown tunicate 1 - black and yellow"							
6	"Drakes Estero"	14.00	"Rack"3.00	8/13/2004	"more small colonial pendant lobes which were difficult to identify; big Botrylloides colony"	290	44.00	"TUN1"
	"unknown tunicate 1 - black and yellow"							
6	"Drakes Estero"	14.00	"Rack"3.00	8/13/2004	"more small colonial pendant lobes which were difficult to identify; big Botrylloides colony"	291	45.00	"TUN1"
	"unknown tunicate 1 - black and yellow"							
6	"Drakes Estero"	14.00	"Rack"3.00	8/13/2004	"more small colonial pendant lobes which were difficult to identify; big Botrylloides colony"	292	46.00	"SCUN"
	"Schizoporella unicornis"							
6	"Drakes Estero"	14.00	"Rack"3.00	8/13/2004	"more small colonial pendant lobes which were difficult to identify; big Botrylloides colony"	293	47.00	"BARE"
	"Bare"							
6	"Drakes Estero"	14.00	"Rack"3.00	8/13/2004	"more small colonial pendant lobes which were difficult to identify; big Botrylloides colony"	294	48.00	"TUN1"
	"unknown tunicate 1 - black and yellow"							
6	"Drakes Estero"	14.00	"Rack"3.00	8/13/2004	"more small colonial pendant lobes which were difficult to identify; big Botrylloides colony"	295	49.00	"BOTROI"
	"Botrylloides sp."							
7	"Drakes Estero"	14.00	"Away"	1.00	8/13/2004	"very little invert growth"		
	314 1.00 "BARE"		"Bare"					
7	"Drakes Estero"	14.00	"Away"	1.00	8/13/2004	"very little invert growth"		
	315 2.00 "BARE"		"Bare"					
7	"Drakes Estero"	14.00	"Away"	1.00	8/13/2004	"very little invert growth"		
	316 3.00 "BARE"		"Bare"					



7	"Drakes Estero"	14.00	"Away"	1.00	8/13/2004	"very little invert growth"
	317	4.00	"BARE"	"Bare"		
7	"Drakes Estero"	14.00	"Away"	1.00	8/13/2004	"very little invert growth"
	318	5.00	"BARE"	"Bare"		
7	"Drakes Estero"	14.00	"Away"	1.00	8/13/2004	"very little invert growth"
	319	6.00	"BARE"	"Bare"		
7	"Drakes Estero"	14.00	"Away"	1.00	8/13/2004	"very little invert growth"
	320	7.00	"BARE"	"Bare"		
7	"Drakes Estero"	14.00	"Away"	1.00	8/13/2004	"very little invert growth"
	321	8.00	"BARE"	"Bare"		
7	"Drakes Estero"	14.00	"Away"	1.00	8/13/2004	"very little invert growth"
	322	9.00	"BARE"	"Bare"		
7	"Drakes Estero"	14.00	"Away"	1.00	8/13/2004	"very little invert growth"
	323	10.00	"BARE"	"Bare"		
7	"Drakes Estero"	14.00	"Away"	1.00	8/13/2004	"very little invert growth"
	324	11.00	"BARE"	"Bare"		
7	"Drakes Estero"	14.00	"Away"	1.00	8/13/2004	"very little invert growth"
	325	12.00	"BARE"	"Bare"		
7	"Drakes Estero"	14.00	"Away"	1.00	8/13/2004	"very little invert growth"
	326	13.00	"BARE"	"Bare"		
7	"Drakes Estero"	14.00	"Away"	1.00	8/13/2004	"very little invert growth"
	327	14.00	"BARE"	"Bare"		
7	"Drakes Estero"	14.00	"Away"	1.00	8/13/2004	"very little invert growth"
	328	15.00	"BARE"	"Bare"		
7	"Drakes Estero"	14.00	"Away"	1.00	8/13/2004	"very little invert growth"
	329	16.00	"BARE"	"Bare"		
7	"Drakes Estero"	14.00	"Away"	1.00	8/13/2004	"very little invert growth"
	330	17.00	"BARE"	"Bare"		
7	"Drakes Estero"	14.00	"Away"	1.00	8/13/2004	"very little invert growth"
	331	18.00	"BARE"	"Bare"		
7	"Drakes Estero"	14.00	"Away"	1.00	8/13/2004	"very little invert growth"
	332	19.00	"BARE"	"Bare"		
7	"Drakes Estero"	14.00	"Away"	1.00	8/13/2004	"very little invert growth"
	333	20.00	"BARE"	"Bare"		
7	"Drakes Estero"	14.00	"Away"	1.00	8/13/2004	"very little invert growth"
	334	21.00	"BARE"	"Bare"		
7	"Drakes Estero"	14.00	"Away"	1.00	8/13/2004	"very little invert growth"
	335	22.00	"BARE"	"Bare"		
7	"Drakes Estero"	14.00	"Away"	1.00	8/13/2004	"very little invert growth"
	336	23.00	"BARE"	"Bare"		
7	"Drakes Estero"	14.00	"Away"	1.00	8/13/2004	"very little invert growth"
	337	24.00	"BARE"	"Bare"		
7	"Drakes Estero"	14.00	"Away"	1.00	8/13/2004	"very little invert growth"
	338	25.00	"BARE"	"Bare"		
7	"Drakes Estero"	14.00	"Away"	1.00	8/13/2004	"very little invert growth"
	339	26.00	"BARE"	"Bare"		

7	"Drakes Estero"	14.00	"Away"	1.00	8/13/2004	"very little invert growth"
	340	27.00	"BARE"	"Bare"		
7	"Drakes Estero"	14.00	"Away"	1.00	8/13/2004	"very little invert growth"
	341	28.00	"BARE"	"Bare"		
7	"Drakes Estero"	14.00	"Away"	1.00	8/13/2004	"very little invert growth"
	342	29.00	"BARE"	"Bare"		
7	"Drakes Estero"	14.00	"Away"	1.00	8/13/2004	"very little invert growth"
	343	30.00	"BARE"	"Bare"		
7	"Drakes Estero"	14.00	"Away"	1.00	8/13/2004	"very little invert growth"
	296	32.00	"SCUN"	"Schizoporella unicornis"		
7	"Drakes Estero"	14.00	"Away"	1.00	8/13/2004	"very little invert growth"
	297	33.00	"BARE"	"Bare"		
7	"Drakes Estero"	14.00	"Away"	1.00	8/13/2004	"very little invert growth"
	298	34.00	"BARE"	"Bare"		
7	"Drakes Estero"	14.00	"Away"	1.00	8/13/2004	"very little invert growth"
	299	35.00	"BARE"	"Bare"		
7	"Drakes Estero"	14.00	"Away"	1.00	8/13/2004	"very little invert growth"
	300	36.00	"BARE"	"Bare"		
7	"Drakes Estero"	14.00	"Away"	1.00	8/13/2004	"very little invert growth"
	301	37.00	"BARE"	"Bare"		
7	"Drakes Estero"	14.00	"Away"	1.00	8/13/2004	"very little invert growth"
	302	38.00	"BARE"	"Bare"		
7	"Drakes Estero"	14.00	"Away"	1.00	8/13/2004	"very little invert growth"
	303	39.00	"BARE"	"Bare"		
7	"Drakes Estero"	14.00	"Away"	1.00	8/13/2004	"very little invert growth"
	304	40.00	"BARE"	"Bare"		
7	"Drakes Estero"	14.00	"Away"	1.00	8/13/2004	"very little invert growth"
	305	41.00	"BARE"	"Bare"		
7	"Drakes Estero"	14.00	"Away"	1.00	8/13/2004	"very little invert growth"
	306	42.00	"BARE"	"Bare"		
7	"Drakes Estero"	14.00	"Away"	1.00	8/13/2004	"very little invert growth"
	307	43.00	"BARE"	"Bare"		
7	"Drakes Estero"	14.00	"Away"	1.00	8/13/2004	"very little invert growth"
	308	44.00	"BARE"	"Bare"		
7	"Drakes Estero"	14.00	"Away"	1.00	8/13/2004	"very little invert growth"
	309	45.00	"BARE"	"Bare"		
7	"Drakes Estero"	14.00	"Away"	1.00	8/13/2004	"very little invert growth"
	310	46.00	"BARE"	"Bare"		
7	"Drakes Estero"	14.00	"Away"	1.00	8/13/2004	"very little invert growth"
	311	47.00	"SCUN"	"Schizoporella unicornis"		
7	"Drakes Estero"	14.00	"Away"	1.00	8/13/2004	"very little invert growth"
	312	48.00	"BARE"	"Bare"		
7	"Drakes Estero"	14.00	"Away"	1.00	8/13/2004	"very little invert growth"
	313	49.00	"BARE"	"Bare"		

8	"Drakes Estero"	14.00	"Away"	2.00	8/13/2004	"very little invert growth"
	345	1.00	"BARE"	"Bare"		
8	"Drakes Estero"	14.00	"Away"	2.00	8/13/2004	"very little invert growth"
	346	2.00	"BARE"	"Bare"		
8	"Drakes Estero"	14.00	"Away"	2.00	8/13/2004	"very little invert growth"
	347	3.00	"BARE"	"Bare"		
8	"Drakes Estero"	14.00	"Away"	2.00	8/13/2004	"very little invert growth"
	348	4.00	"BARE"	"Bare"		
8	"Drakes Estero"	14.00	"Away"	2.00	8/13/2004	"very little invert growth"
	349	5.00	"SCUN"	"Schizoporella unicornis"		
8	"Drakes Estero"	14.00	"Away"	2.00	8/13/2004	"very little invert growth"
	350	6.00	"BARE"	"Bare"		
8	"Drakes Estero"	14.00	"Away"	2.00	8/13/2004	"very little invert growth"
	351	7.00	"BARE"	"Bare"		
8	"Drakes Estero"	14.00	"Away"	2.00	8/13/2004	"very little invert growth"
	352	8.00	"BARE"	"Bare"		
8	"Drakes Estero"	14.00	"Away"	2.00	8/13/2004	"very little invert growth"
	353	9.00	"BARE"	"Bare"		
8	"Drakes Estero"	14.00	"Away"	2.00	8/13/2004	"very little invert growth"
	354	10.00	"BARE"	"Bare"		
8	"Drakes Estero"	14.00	"Away"	2.00	8/13/2004	"very little invert growth"
	355	11.00	"BARE"	"Bare"		
8	"Drakes Estero"	14.00	"Away"	2.00	8/13/2004	"very little invert growth"
	356	12.00	"BARE"	"Bare"		
8	"Drakes Estero"	14.00	"Away"	2.00	8/13/2004	"very little invert growth"
	357	13.00	"BARE"	"Bare"		
8	"Drakes Estero"	14.00	"Away"	2.00	8/13/2004	"very little invert growth"
	358	14.00	"BARE"	"Bare"		
8	"Drakes Estero"	14.00	"Away"	2.00	8/13/2004	"very little invert growth"
	359	15.00	"SCUN"	"Schizoporella unicornis"		
8	"Drakes Estero"	14.00	"Away"	2.00	8/13/2004	"very little invert growth"
	360	16.00	"BARE"	"Bare"		
8	"Drakes Estero"	14.00	"Away"	2.00	8/13/2004	"very little invert growth"
	361	17.00	"BARE"	"Bare"		
8	"Drakes Estero"	14.00	"Away"	2.00	8/13/2004	"very little invert growth"
	362	18.00	"BARE"	"Bare"		
8	"Drakes Estero"	14.00	"Away"	2.00	8/13/2004	"very little invert growth"
	363	19.00	"BARE"	"Bare"		
8	"Drakes Estero"	14.00	"Away"	2.00	8/13/2004	"very little invert growth"
	364	20.00	"BARE"	"Bare"		
8	"Drakes Estero"	14.00	"Away"	2.00	8/13/2004	"very little invert growth"
	365	21.00	"BARE"	"Bare"		
8	"Drakes Estero"	14.00	"Away"	2.00	8/13/2004	"very little invert growth"
	366	22.00	"BARE"	"Bare"		
8	"Drakes Estero"	14.00	"Away"	2.00	8/13/2004	"very little invert growth"
	367	23.00	"BARE"	"Bare"		

8	"Drakes Estero"	14.00	"Away"	2.00	8/13/2004	"very little invert growth"
	368	24.00	"BARE"	"Bare"		
8	"Drakes Estero"	14.00	"Away"	2.00	8/13/2004	"very little invert growth"
	369	25.00	"BARE"	"Bare"		
8	"Drakes Estero"	14.00	"Away"	2.00	8/13/2004	"very little invert growth"
	370	26.00	"BARE"	"Bare"		
8	"Drakes Estero"	14.00	"Away"	2.00	8/13/2004	"very little invert growth"
	371	27.00	"BARE"	"Bare"		
8	"Drakes Estero"	14.00	"Away"	2.00	8/13/2004	"very little invert growth"
	372	28.00	"BARE"	"Bare"		
8	"Drakes Estero"	14.00	"Away"	2.00	8/13/2004	"very little invert growth"
	373	29.00	"BARE"	"Bare"		
8	"Drakes Estero"	14.00	"Away"	2.00	8/13/2004	"very little invert growth"
	374	30.00	"BARE"	"Bare"		
8	"Drakes Estero"	14.00	"Away"	2.00	8/13/2004	"very little invert growth"
	375	31.00	"BARE"	"Bare"		
8	"Drakes Estero"	14.00	"Away"	2.00	8/13/2004	"very little invert growth"
	376	32.00	"BARE"	"Bare"		
8	"Drakes Estero"	14.00	"Away"	2.00	8/13/2004	"very little invert growth"
	377	33.00	"BARE"	"Bare"		
8	"Drakes Estero"	14.00	"Away"	2.00	8/13/2004	"very little invert growth"
	378	34.00	"BARE"	"Bare"		
8	"Drakes Estero"	14.00	"Away"	2.00	8/13/2004	"very little invert growth"
	379	35.00	"BARE"	"Bare"		
8	"Drakes Estero"	14.00	"Away"	2.00	8/13/2004	"very little invert growth"
	380	36.00	"BARE"	"Bare"		
8	"Drakes Estero"	14.00	"Away"	2.00	8/13/2004	"very little invert growth"
	381	37.00	"BARE"	"Bare"		
8	"Drakes Estero"	14.00	"Away"	2.00	8/13/2004	"very little invert growth"
	382	38.00	"BARE"	"Bare"		
8	"Drakes Estero"	14.00	"Away"	2.00	8/13/2004	"very little invert growth"
	383	39.00	"BARE"	"Bare"		
8	"Drakes Estero"	14.00	"Away"	2.00	8/13/2004	"very little invert growth"
	384	40.00	"BARE"	"Bare"		
8	"Drakes Estero"	14.00	"Away"	2.00	8/13/2004	"very little invert growth"
	385	41.00	"BARE"	"Bare"		
8	"Drakes Estero"	14.00	"Away"	2.00	8/13/2004	"very little invert growth"
	386	42.00	"BARE"	"Bare"		
8	"Drakes Estero"	14.00	"Away"	2.00	8/13/2004	"very little invert growth"
	387	43.00	"BARE"	"Bare"		
8	"Drakes Estero"	14.00	"Away"	2.00	8/13/2004	"very little invert growth"
	388	44.00	"BARE"	"Bare"		
8	"Drakes Estero"	14.00	"Away"	2.00	8/13/2004	"very little invert growth"
	389	45.00	"BARE"	"Bare"		
8	"Drakes Estero"	14.00	"Away"	2.00	8/13/2004	"very little invert growth"
	390	46.00	"BARE"	"Bare"		

8	"Drakes Estero"	14.00	"Away"	2.00	8/13/2004	"very little invert growth"
	391 47.00 "BARE"		"Bare"			
8	"Drakes Estero"	14.00	"Away"	2.00	8/13/2004	"very little invert growth"
	392 48.00 "BARE"		"Bare"			
8	"Drakes Estero"	14.00	"Away"	2.00	8/13/2004	"very little invert growth"
	393 49.00 "BARE"		"Bare"			
9	"Drakes Estero"	14.00	"Away"	3.00	8/13/2004	"very little invert growth"
	394 1.00 "BARE"		"Bare"			
9	"Drakes Estero"	14.00	"Away"	3.00	8/13/2004	"very little invert growth"
	395 2.00 "BARE"		"Bare"			
9	"Drakes Estero"	14.00	"Away"	3.00	8/13/2004	"very little invert growth"
	396 3.00 "BARE"		"Bare"			
9	"Drakes Estero"	14.00	"Away"	3.00	8/13/2004	"very little invert growth"
	397 4.00 "BARE"		"Bare"			
9	"Drakes Estero"	14.00	"Away"	3.00	8/13/2004	"very little invert growth"
	398 5.00 "BARE"		"Bare"			
9	"Drakes Estero"	14.00	"Away"	3.00	8/13/2004	"very little invert growth"
	399 6.00 "BARE"		"Bare"			
9	"Drakes Estero"	14.00	"Away"	3.00	8/13/2004	"very little invert growth"
	400 7.00 "BARE"		"Bare"			
9	"Drakes Estero"	14.00	"Away"	3.00	8/13/2004	"very little invert growth"
	401 8.00 "BARE"		"Bare"			
9	"Drakes Estero"	14.00	"Away"	3.00	8/13/2004	"very little invert growth"
	402 9.00 "BARE"		"Bare"			
9	"Drakes Estero"	14.00	"Away"	3.00	8/13/2004	"very little invert growth"
	403 10.00 "BARE"		"Bare"			
9	"Drakes Estero"	14.00	"Away"	3.00	8/13/2004	"very little invert growth"
	404 11.00 "BARE"		"Bare"			
9	"Drakes Estero"	14.00	"Away"	3.00	8/13/2004	"very little invert growth"
	405 12.00 "BARE"		"Bare"			
9	"Drakes Estero"	14.00	"Away"	3.00	8/13/2004	"very little invert growth"
	406 13.00 "BARE"		"Bare"			
9	"Drakes Estero"	14.00	"Away"	3.00	8/13/2004	"very little invert growth"
	407 14.00 "BARE"		"Bare"			
9	"Drakes Estero"	14.00	"Away"	3.00	8/13/2004	"very little invert growth"
	408 15.00 "BARE"		"Bare"			
9	"Drakes Estero"	14.00	"Away"	3.00	8/13/2004	"very little invert growth"
	409 16.00 "BARE"		"Bare"			
9	"Drakes Estero"	14.00	"Away"	3.00	8/13/2004	"very little invert growth"
	410 17.00 "BARE"		"Bare"			
9	"Drakes Estero"	14.00	"Away"	3.00	8/13/2004	"very little invert growth"
	411 18.00 "BARE"		"Bare"			
9	"Drakes Estero"	14.00	"Away"	3.00	8/13/2004	"very little invert growth"
	412 19.00 "BARE"		"Bare"			
9	"Drakes Estero"	14.00	"Away"	3.00	8/13/2004	"very little invert growth"
	413 20.00 "BARE"		"Bare"			

9	"Drakes Estero"	14.00	"Away"	3.00	8/13/2004	"very little invert growth"
	414	21.00	"BARE"	"Bare"		
9	"Drakes Estero"	14.00	"Away"	3.00	8/13/2004	"very little invert growth"
	415	22.00	"BARE"	"Bare"		
9	"Drakes Estero"	14.00	"Away"	3.00	8/13/2004	"very little invert growth"
	416	23.00	"BARE"	"Bare"		
9	"Drakes Estero"	14.00	"Away"	3.00	8/13/2004	"very little invert growth"
	417	24.00	"BARE"	"Bare"		
9	"Drakes Estero"	14.00	"Away"	3.00	8/13/2004	"very little invert growth"
	418	25.00	"BARE"	"Bare"		
9	"Drakes Estero"	14.00	"Away"	3.00	8/13/2004	"very little invert growth"
	419	26.00	"BARE"	"Bare"		
9	"Drakes Estero"	14.00	"Away"	3.00	8/13/2004	"very little invert growth"
	420	27.00	"BARE"	"Bare"		
9	"Drakes Estero"	14.00	"Away"	3.00	8/13/2004	"very little invert growth"
	421	28.00	"BARE"	"Bare"		
9	"Drakes Estero"	14.00	"Away"	3.00	8/13/2004	"very little invert growth"
	422	29.00	"BARE"	"Bare"		
9	"Drakes Estero"	14.00	"Away"	3.00	8/13/2004	"very little invert growth"
	423	30.00	"BARE"	"Bare"		
9	"Drakes Estero"	14.00	"Away"	3.00	8/13/2004	"very little invert growth"
	424	31.00	"BARE"	"Bare"		
9	"Drakes Estero"	14.00	"Away"	3.00	8/13/2004	"very little invert growth"
	425	32.00	"BARE"	"Bare"		
9	"Drakes Estero"	14.00	"Away"	3.00	8/13/2004	"very little invert growth"
	426	33.00	"BARE"	"Bare"		
9	"Drakes Estero"	14.00	"Away"	3.00	8/13/2004	"very little invert growth"
	427	34.00	"BARE"	"Bare"		
9	"Drakes Estero"	14.00	"Away"	3.00	8/13/2004	"very little invert growth"
	428	35.00	"BARE"	"Bare"		
9	"Drakes Estero"	14.00	"Away"	3.00	8/13/2004	"very little invert growth"
	429	36.00	"BARE"	"Bare"		
9	"Drakes Estero"	14.00	"Away"	3.00	8/13/2004	"very little invert growth"
	430	37.00	"BARE"	"Bare"		
9	"Drakes Estero"	14.00	"Away"	3.00	8/13/2004	"very little invert growth"
	431	38.00	"BARE"	"Bare"		
9	"Drakes Estero"	14.00	"Away"	3.00	8/13/2004	"very little invert growth"
	432	39.00	"BARE"	"Bare"		
9	"Drakes Estero"	14.00	"Away"	3.00	8/13/2004	"very little invert growth"
	433	40.00	"BARE"	"Bare"		
9	"Drakes Estero"	14.00	"Away"	3.00	8/13/2004	"very little invert growth"
	434	41.00	"BARE"	"Bare"		
9	"Drakes Estero"	14.00	"Away"	3.00	8/13/2004	"very little invert growth"
	435	42.00	"BARE"	"Bare"		
9	"Drakes Estero"	14.00	"Away"	3.00	8/13/2004	"very little invert growth"
	436	43.00	"BARE"	"Bare"		

9	"Drakes Estero"	14.00	"Away"	3.00	8/13/2004	"very little invert growth"
	437 44.00 "SCUN"		"Schizoporella unicornis"			
9	"Drakes Estero"	14.00	"Away"	3.00	8/13/2004	"very little invert growth"
	438 45.00 "BARE"		"Bare"			
9	"Drakes Estero"	14.00	"Away"	3.00	8/13/2004	"very little invert growth"
	439 46.00 "BARE"		"Bare"			
9	"Drakes Estero"	14.00	"Away"	3.00	8/13/2004	"very little invert growth"
	440 47.00 "BARE"		"Bare"			
9	"Drakes Estero"	14.00	"Away"	3.00	8/13/2004	"very little invert growth"
	441 48.00 "BARE"		"Bare"			
9	"Drakes Estero"	14.00	"Away"	3.00	8/13/2004	"very little invert growth"
	442 49.00 "BARE"		"Bare"			
10	"Drakes Estero"	11.00	"Away"	1.00	8/13/2004	"lots of Barnacle growth;
	three Hermi. Nudibranchs present"	443	1.00	"BARE"		"Bare"
10	"Drakes Estero"	11.00	"Away"	1.00	8/13/2004	"lots of Barnacle growth;
	three Hermi. Nudibranchs present"	444	2.00	"BALA"		"Balanus sp."
10	"Drakes Estero"	11.00	"Away"	1.00	8/13/2004	"lots of Barnacle growth;
	three Hermi. Nudibranchs present"	445	3.00	"BALA"		"Balanus sp."
10	"Drakes Estero"	11.00	"Away"	1.00	8/13/2004	"lots of Barnacle growth;
	three Hermi. Nudibranchs present"	446	4.00	"BARE"		"Bare"
10	"Drakes Estero"	11.00	"Away"	1.00	8/13/2004	"lots of Barnacle growth;
	three Hermi. Nudibranchs present"	447	5.00	"BARE"		"Bare"
10	"Drakes Estero"	11.00	"Away"	1.00	8/13/2004	"lots of Barnacle growth;
	three Hermi. Nudibranchs present"	448	6.00	"BARE"		"Bare"
10	"Drakes Estero"	11.00	"Away"	1.00	8/13/2004	"lots of Barnacle growth;
	three Hermi. Nudibranchs present"	449	7.00	"BALA"		"Balanus sp."
10	"Drakes Estero"	11.00	"Away"	1.00	8/13/2004	"lots of Barnacle growth;
	three Hermi. Nudibranchs present"	450	8.00	"BALA"		"Balanus sp."
10	"Drakes Estero"	11.00	"Away"	1.00	8/13/2004	"lots of Barnacle growth;
	three Hermi. Nudibranchs present"	451	9.00	"BALA"		"Balanus sp."
10	"Drakes Estero"	11.00	"Away"	1.00	8/13/2004	"lots of Barnacle growth;
	three Hermi. Nudibranchs present"	452	10.00	"BALA"		"Balanus sp."
10	"Drakes Estero"	11.00	"Away"	1.00	8/13/2004	"lots of Barnacle growth;
	three Hermi. Nudibranchs present"	453	11.00	"BALA"		"Balanus sp."
10	"Drakes Estero"	11.00	"Away"	1.00	8/13/2004	"lots of Barnacle growth;
	three Hermi. Nudibranchs present"	454	12.00	"BALA"		"Balanus sp."
10	"Drakes Estero"	11.00	"Away"	1.00	8/13/2004	"lots of Barnacle growth;
	three Hermi. Nudibranchs present"	455	13.00	"BARE"		"Bare"
10	"Drakes Estero"	11.00	"Away"	1.00	8/13/2004	"lots of Barnacle growth;
	three Hermi. Nudibranchs present"	456	14.00	"BALA"		"Balanus sp."
10	"Drakes Estero"	11.00	"Away"	1.00	8/13/2004	"lots of Barnacle growth;
	three Hermi. Nudibranchs present"	457	15.00	"BALA"		"Balanus sp."
10	"Drakes Estero"	11.00	"Away"	1.00	8/13/2004	"lots of Barnacle growth;
	three Hermi. Nudibranchs present"	458	16.00	"BALA"		"Balanus sp."
10	"Drakes Estero"	11.00	"Away"	1.00	8/13/2004	"lots of Barnacle growth;
	three Hermi. Nudibranchs present"	459	17.00	"BALA"		"Balanus sp."





10	"Drakes Estero"	11.00	"Away"	1.00	8/13/2004	"lots of Barnacle growth;
three	Hermi. Nudibranchs present"	483		41.00	"BALA"	"Balanus sp."
10	"Drakes Estero"	11.00	"Away"	1.00	8/13/2004	"lots of Barnacle growth;
three	Hermi. Nudibranchs present"	484		42.00	"BALA"	"Balanus sp."
10	"Drakes Estero"	11.00	"Away"	1.00	8/13/2004	"lots of Barnacle growth;
three	Hermi. Nudibranchs present"	485		43.00	"BARE"	"Bare"
10	"Drakes Estero"	11.00	"Away"	1.00	8/13/2004	"lots of Barnacle growth;
three	Hermi. Nudibranchs present"	486		44.00	"BALA"	"Balanus sp."
10	"Drakes Estero"	11.00	"Away"	1.00	8/13/2004	"lots of Barnacle growth;
three	Hermi. Nudibranchs present"	487		45.00	"BALA"	"Balanus sp."
10	"Drakes Estero"	11.00	"Away"	1.00	8/13/2004	"lots of Barnacle growth;
three	Hermi. Nudibranchs present"	488		46.00	"BALA"	"Balanus sp."
10	"Drakes Estero"	11.00	"Away"	1.00	8/13/2004	"lots of Barnacle growth;
three	Hermi. Nudibranchs present"	489		47.00	"BALA"	"Balanus sp."
10	"Drakes Estero"	11.00	"Away"	1.00	8/13/2004	"lots of Barnacle growth;
three	Hermi. Nudibranchs present"	490		48.00	"BALA"	"Balanus sp."
10	"Drakes Estero"	11.00	"Away"	1.00	8/13/2004	"lots of Barnacle growth;
three	Hermi. Nudibranchs present"	491		49.00	"BALA"	"Balanus sp."
11	"Drakes Estero"	11.00	"Away"	2.00	8/13/2004	"lots of barnacle growth"
	492	1.00	"BARE"			"Bare"
11	"Drakes Estero"	11.00	"Away"	2.00	8/13/2004	"lots of barnacle growth"
	493	2.00	"BALA"			"Balanus sp."
11	"Drakes Estero"	11.00	"Away"	2.00	8/13/2004	"lots of barnacle growth"
	494	3.00	"BALA"			"Balanus sp."
11	"Drakes Estero"	11.00	"Away"	2.00	8/13/2004	"lots of barnacle growth"
	495	4.00	"BALA"			"Balanus sp."
11	"Drakes Estero"	11.00	"Away"	2.00	8/13/2004	"lots of barnacle growth"
	496	5.00	"BALA"			"Balanus sp."
11	"Drakes Estero"	11.00	"Away"	2.00	8/13/2004	"lots of barnacle growth"
	497	6.00	"BARE"			"Bare"
11	"Drakes Estero"	11.00	"Away"	2.00	8/13/2004	"lots of barnacle growth"
	498	7.00	"BALA"			"Balanus sp."
11	"Drakes Estero"	11.00	"Away"	2.00	8/13/2004	"lots of barnacle growth"
	499	8.00	"BALA"			"Balanus sp."
11	"Drakes Estero"	11.00	"Away"	2.00	8/13/2004	"lots of barnacle growth"
	500	9.00	"BARE"			"Bare"
11	"Drakes Estero"	11.00	"Away"	2.00	8/13/2004	"lots of barnacle growth"
	501	10.00	"BALA"			"Balanus sp."
11	"Drakes Estero"	11.00	"Away"	2.00	8/13/2004	"lots of barnacle growth"
	502	11.00	"BALA"			"Balanus sp."
11	"Drakes Estero"	11.00	"Away"	2.00	8/13/2004	"lots of barnacle growth"
	503	12.00	"BALA"			"Balanus sp."
11	"Drakes Estero"	11.00	"Away"	2.00	8/13/2004	"lots of barnacle growth"
	504	13.00	"BARE"			"Bare"
11	"Drakes Estero"	11.00	"Away"	2.00	8/13/2004	"lots of barnacle growth"
	505	14.00	"BARE"			"Bare"

11	"Drakes Estero"	11.00	"Away"	2.00	8/13/2004	"lots of barnacle growth"
	506 15.00 "BALA"		"Balanus sp."			
11	"Drakes Estero"	11.00	"Away"	2.00	8/13/2004	"lots of barnacle growth"
	507 16.00 "BALA"		"Balanus sp."			
11	"Drakes Estero"	11.00	"Away"	2.00	8/13/2004	"lots of barnacle growth"
	508 17.00 "BALA"		"Balanus sp."			
11	"Drakes Estero"	11.00	"Away"	2.00	8/13/2004	"lots of barnacle growth"
	509 18.00 "BALA"		"Balanus sp."			
11	"Drakes Estero"	11.00	"Away"	2.00	8/13/2004	"lots of barnacle growth"
	510 19.00 "BALA"		"Balanus sp."			
11	"Drakes Estero"	11.00	"Away"	2.00	8/13/2004	"lots of barnacle growth"
	511 20.00 "BARE"		"Bare"			
11	"Drakes Estero"	11.00	"Away"	2.00	8/13/2004	"lots of barnacle growth"
	512 21.00 "BARE"		"Bare"			
11	"Drakes Estero"	11.00	"Away"	2.00	8/13/2004	"lots of barnacle growth"
	513 22.00 "SCUN"		"Schizoporella unicornis"			
11	"Drakes Estero"	11.00	"Away"	2.00	8/13/2004	"lots of barnacle growth"
	514 23.00 "BALA"		"Balanus sp."			
11	"Drakes Estero"	11.00	"Away"	2.00	8/13/2004	"lots of barnacle growth"
	515 24.00 "SCUN"		"Schizoporella unicornis"			
11	"Drakes Estero"	11.00	"Away"	2.00	8/13/2004	"lots of barnacle growth"
	516 25.00 "SCUN"		"Schizoporella unicornis"			
11	"Drakes Estero"	11.00	"Away"	2.00	8/13/2004	"lots of barnacle growth"
	517 26.00 "BALA"		"Balanus sp."			
11	"Drakes Estero"	11.00	"Away"	2.00	8/13/2004	"lots of barnacle growth"
	518 27.00 "BARE"		"Bare"			
11	"Drakes Estero"	11.00	"Away"	2.00	8/13/2004	"lots of barnacle growth"
	519 28.00 "BARE"		"Bare"			
11	"Drakes Estero"	11.00	"Away"	2.00	8/13/2004	"lots of barnacle growth"
	520 29.00 "SCUN"		"Schizoporella unicornis"			
11	"Drakes Estero"	11.00	"Away"	2.00	8/13/2004	"lots of barnacle growth"
	521 30.00 "SCUN"		"Schizoporella unicornis"			
11	"Drakes Estero"	11.00	"Away"	2.00	8/13/2004	"lots of barnacle growth"
	522 31.00 "SCUN"		"Schizoporella unicornis"			
11	"Drakes Estero"	11.00	"Away"	2.00	8/13/2004	"lots of barnacle growth"
	523 32.00 "SCUN"		"Schizoporella unicornis"			
11	"Drakes Estero"	11.00	"Away"	2.00	8/13/2004	"lots of barnacle growth"
	524 33.00 "BARE"		"Bare"			
11	"Drakes Estero"	11.00	"Away"	2.00	8/13/2004	"lots of barnacle growth"
	525 34.00 "BARE"		"Bare"			
11	"Drakes Estero"	11.00	"Away"	2.00	8/13/2004	"lots of barnacle growth"
	526 35.00 "BARE"		"Bare"			
11	"Drakes Estero"	11.00	"Away"	2.00	8/13/2004	"lots of barnacle growth"
	527 36.00 "BALA"		"Balanus sp."			
11	"Drakes Estero"	11.00	"Away"	2.00	8/13/2004	"lots of barnacle growth"
	528 37.00 "BARE"		"Bare"			

11	"Drakes Estero"	11.00	"Away"	2.00	8/13/2004	"lots of barnacle growth"
	529 38.00 "SCUN"		"Schizoporella unicornis"			
11	"Drakes Estero"	11.00	"Away"	2.00	8/13/2004	"lots of barnacle growth"
	530 39.00 "SCUN"		"Schizoporella unicornis"			
11	"Drakes Estero"	11.00	"Away"	2.00	8/13/2004	"lots of barnacle growth"
	531 40.00 "BARE"		"Bare"			
11	"Drakes Estero"	11.00	"Away"	2.00	8/13/2004	"lots of barnacle growth"
	532 41.00 "BARE"		"Bare"			
11	"Drakes Estero"	11.00	"Away"	2.00	8/13/2004	"lots of barnacle growth"
	533 42.00 "BARE"		"Bare"			
11	"Drakes Estero"	11.00	"Away"	2.00	8/13/2004	"lots of barnacle growth"
	534 43.00 "SCUN"		"Schizoporella unicornis"			
11	"Drakes Estero"	11.00	"Away"	2.00	8/13/2004	"lots of barnacle growth"
	535 44.00 "SCUN"		"Schizoporella unicornis"			
11	"Drakes Estero"	11.00	"Away"	2.00	8/13/2004	"lots of barnacle growth"
	536 45.00 "SCUN"		"Schizoporella unicornis"			
11	"Drakes Estero"	11.00	"Away"	2.00	8/13/2004	"lots of barnacle growth"
	537 46.00 "SCUN"		"Schizoporella unicornis"			
11	"Drakes Estero"	11.00	"Away"	2.00	8/13/2004	"lots of barnacle growth"
	538 47.00 "BALA"		"Balanus sp."			
11	"Drakes Estero"	11.00	"Away"	2.00	8/13/2004	"lots of barnacle growth"
	539 48.00 "BALA"		"Balanus sp."			
11	"Drakes Estero"	11.00	"Away"	2.00	8/13/2004	"lots of barnacle growth"
	540 49.00 "BALA"		"Balanus sp."			
12	"Drakes Estero"	11.00	"Away"	3.00	8/13/2004	"moderate barnacle
growth"	541 1.00 "BARE"		"Bare"			
12	"Drakes Estero"	11.00	"Away"	3.00	8/13/2004	"moderate barnacle
growth"	542 2.00 "BARE"		"Bare"			
12	"Drakes Estero"	11.00	"Away"	3.00	8/13/2004	"moderate barnacle
growth"	543 3.00 "BALA"		"Balanus sp."			
12	"Drakes Estero"	11.00	"Away"	3.00	8/13/2004	"moderate barnacle
growth"	544 4.00 "BALA"		"Balanus sp."			
12	"Drakes Estero"	11.00	"Away"	3.00	8/13/2004	"moderate barnacle
growth"	545 5.00 "BARE"		"Bare"			
12	"Drakes Estero"	11.00	"Away"	3.00	8/13/2004	"moderate barnacle
growth"	546 6.00 "BALA"		"Balanus sp."			
12	"Drakes Estero"	11.00	"Away"	3.00	8/13/2004	"moderate barnacle
growth"	547 7.00 "BARE"		"Bare"			
12	"Drakes Estero"	11.00	"Away"	3.00	8/13/2004	"moderate barnacle
growth"	548 8.00 "BARE"		"Bare"			
12	"Drakes Estero"	11.00	"Away"	3.00	8/13/2004	"moderate barnacle
growth"	549 9.00 "BARE"		"Bare"			
12	"Drakes Estero"	11.00	"Away"	3.00	8/13/2004	"moderate barnacle
growth"	550 10.00 "BARE"		"Bare"			
12	"Drakes Estero"	11.00	"Away"	3.00	8/13/2004	"moderate barnacle
growth"	551 11.00 "BALA"		"Balanus sp."			

12	"Drakes Estero"	11.00	"Away"	3.00	8/13/2004	"moderate barnacle growth"
	552	12.00	"BARE"	"Bare"		
12	"Drakes Estero"	11.00	"Away"	3.00	8/13/2004	"moderate barnacle growth"
	553	13.00	"BARE"	"Bare"		
12	"Drakes Estero"	11.00	"Away"	3.00	8/13/2004	"moderate barnacle growth"
	554	14.00	"BALA"	"Balanus sp."		
12	"Drakes Estero"	11.00	"Away"	3.00	8/13/2004	"moderate barnacle growth"
	555	15.00	"BARE"	"Bare"		
12	"Drakes Estero"	11.00	"Away"	3.00	8/13/2004	"moderate barnacle growth"
	556	16.00	"BARE"	"Bare"		
12	"Drakes Estero"	11.00	"Away"	3.00	8/13/2004	"moderate barnacle growth"
	557	17.00	"BARE"	"Bare"		
12	"Drakes Estero"	11.00	"Away"	3.00	8/13/2004	"moderate barnacle growth"
	558	18.00	"BALA"	"Balanus sp."		
12	"Drakes Estero"	11.00	"Away"	3.00	8/13/2004	"moderate barnacle growth"
	559	19.00	"BALA"	"Balanus sp."		
12	"Drakes Estero"	11.00	"Away"	3.00	8/13/2004	"moderate barnacle growth"
	560	20.00	"BARE"	"Bare"		
12	"Drakes Estero"	11.00	"Away"	3.00	8/13/2004	"moderate barnacle growth"
	561	21.00	"BARE"	"Bare"		
12	"Drakes Estero"	11.00	"Away"	3.00	8/13/2004	"moderate barnacle growth"
	562	22.00	"BARE"	"Bare"		
12	"Drakes Estero"	11.00	"Away"	3.00	8/13/2004	"moderate barnacle growth"
	563	23.00	"BARE"	"Bare"		
12	"Drakes Estero"	11.00	"Away"	3.00	8/13/2004	"moderate barnacle growth"
	564	24.00	"BARE"	"Bare"		
12	"Drakes Estero"	11.00	"Away"	3.00	8/13/2004	"moderate barnacle growth"
	565	25.00	"BALA"	"Balanus sp."		
12	"Drakes Estero"	11.00	"Away"	3.00	8/13/2004	"moderate barnacle growth"
	566	26.00	"BALA"	"Balanus sp."		
12	"Drakes Estero"	11.00	"Away"	3.00	8/13/2004	"moderate barnacle growth"
	567	27.00	"BARE"	"Bare"		
12	"Drakes Estero"	11.00	"Away"	3.00	8/13/2004	"moderate barnacle growth"
	568	28.00	"BARE"	"Bare"		
12	"Drakes Estero"	11.00	"Away"	3.00	8/13/2004	"moderate barnacle growth"
	569	29.00	"BALA"	"Balanus sp."		
12	"Drakes Estero"	11.00	"Away"	3.00	8/13/2004	"moderate barnacle growth"
	570	30.00	"BARE"	"Bare"		
12	"Drakes Estero"	11.00	"Away"	3.00	8/13/2004	"moderate barnacle growth"
	571	31.00	"BALA"	"Balanus sp."		
12	"Drakes Estero"	11.00	"Away"	3.00	8/13/2004	"moderate barnacle growth"
	572	32.00	"BARE"	"Bare"		
12	"Drakes Estero"	11.00	"Away"	3.00	8/13/2004	"moderate barnacle growth"
	573	33.00	"BALA"	"Balanus sp."		
12	"Drakes Estero"	11.00	"Away"	3.00	8/13/2004	"moderate barnacle growth"
	574	34.00	"BALA"	"Balanus sp."		

12	"Drakes Estero"	11.00	"Away"	3.00	8/13/2004	"moderate barnacle growth"
	575	35.00	"BARE"	"Bare"		
12	"Drakes Estero"	11.00	"Away"	3.00	8/13/2004	"moderate barnacle growth"
	576	36.00	"BARE"	"Bare"		
12	"Drakes Estero"	11.00	"Away"	3.00	8/13/2004	"moderate barnacle growth"
	577	37.00	"BALA"	"Balanus sp."		
12	"Drakes Estero"	11.00	"Away"	3.00	8/13/2004	"moderate barnacle growth"
	578	38.00	"BALA"	"Balanus sp."		
12	"Drakes Estero"	11.00	"Away"	3.00	8/13/2004	"moderate barnacle growth"
	579	39.00	"BALA"	"Balanus sp."		
12	"Drakes Estero"	11.00	"Away"	3.00	8/13/2004	"moderate barnacle growth"
	580	40.00	"BALA"	"Balanus sp."		
12	"Drakes Estero"	11.00	"Away"	3.00	8/13/2004	"moderate barnacle growth"
	581	41.00	"BARE"	"Bare"		
12	"Drakes Estero"	11.00	"Away"	3.00	8/13/2004	"moderate barnacle growth"
	582	42.00	"BARE"	"Bare"		
12	"Drakes Estero"	11.00	"Away"	3.00	8/13/2004	"moderate barnacle growth"
	583	43.00	"BALA"	"Balanus sp."		
12	"Drakes Estero"	11.00	"Away"	3.00	8/13/2004	"moderate barnacle growth"
	584	44.00	"BALA"	"Balanus sp."		
12	"Drakes Estero"	11.00	"Away"	3.00	8/13/2004	"moderate barnacle growth"
	585	45.00	"BALA"	"Balanus sp."		
12	"Drakes Estero"	11.00	"Away"	3.00	8/13/2004	"moderate barnacle growth"
	586	46.00	"BALA"	"Balanus sp."		
12	"Drakes Estero"	11.00	"Away"	3.00	8/13/2004	"moderate barnacle growth"
	587	47.00	"BARE"	"Bare"		
12	"Drakes Estero"	11.00	"Away"	3.00	8/13/2004	"moderate barnacle growth"
	588	48.00	"BARE"	"Bare"		
12	"Drakes Estero"	11.00	"Away"	3.00	8/13/2004	"moderate barnacle growth"
	589	49.00	"BARE"	"Bare"		
13	"Drakes Estero"	11.00	"Rack"1.00	8/13/2004	"completely encrusted with bryozoans except for sponge in one corner"	
	590	1.00	"SCUN"	"Schizoporella unicornis"		
13	"Drakes Estero"	11.00	"Rack"1.00	8/13/2004	"completely encrusted with bryozoans except for sponge in one corner"	
	591	2.00	"SCUN"	"Schizoporella unicornis"		
13	"Drakes Estero"	11.00	"Rack"1.00	8/13/2004	"completely encrusted with bryozoans except for sponge in one corner"	
	592	3.00	"SCUN"	"Schizoporella unicornis"		
13	"Drakes Estero"	11.00	"Rack"1.00	8/13/2004	"completely encrusted with bryozoans except for sponge in one corner"	
	593	4.00	"SCUN"	"Schizoporella unicornis"		
13	"Drakes Estero"	11.00	"Rack"1.00	8/13/2004	"completely encrusted with bryozoans except for sponge in one corner"	
	594	5.00	"WASU"	"Watersipora subtorquata"		

13	"Drakes Estero"	11.00	"Rack"1.00	8/13/2004	"completely encrusted with bryozoans except for sponge in one corner"	595	6.00	"WASU"	"Watersipora subtorquata"
13	"Drakes Estero"	11.00	"Rack"1.00	8/13/2004	"completely encrusted with bryozoans except for sponge in one corner"	596	7.00	"WASU"	"Watersipora subtorquata"
13	"Drakes Estero"	11.00	"Rack"1.00	8/13/2004	"completely encrusted with bryozoans except for sponge in one corner"	597	8.00	"SCUN"	"Schizoporella unicornis"
13	"Drakes Estero"	11.00	"Rack"1.00	8/13/2004	"completely encrusted with bryozoans except for sponge in one corner"	598	9.00	"BARE"	"Bare"
13	"Drakes Estero"	11.00	"Rack"1.00	8/13/2004	"completely encrusted with bryozoans except for sponge in one corner"	599	10.00	"WASU"	"Watersipora subtorquata"
13	"Drakes Estero"	11.00	"Rack"1.00	8/13/2004	"completely encrusted with bryozoans except for sponge in one corner"	600	11.00	"SCUN"	"Schizoporella unicornis"
13	"Drakes Estero"	11.00	"Rack"1.00	8/13/2004	"completely encrusted with bryozoans except for sponge in one corner"	601	12.00	"WASU"	"Watersipora subtorquata"
13	"Drakes Estero"	11.00	"Rack"1.00	8/13/2004	"completely encrusted with bryozoans except for sponge in one corner"	602	13.00	"WASU"	"Watersipora subtorquata"
13	"Drakes Estero"	11.00	"Rack"1.00	8/13/2004	"completely encrusted with bryozoans except for sponge in one corner"	603	14.00	"WASU"	"Watersipora subtorquata"
13	"Drakes Estero"	11.00	"Rack"1.00	8/13/2004	"completely encrusted with bryozoans except for sponge in one corner"	604	15.00	"SCUN"	"Schizoporella unicornis"
13	"Drakes Estero"	11.00	"Rack"1.00	8/13/2004	"completely encrusted with bryozoans except for sponge in one corner"	605	16.00	"WASU"	"Watersipora subtorquata"
13	"Drakes Estero"	11.00	"Rack"1.00	8/13/2004	"completely encrusted with bryozoans except for sponge in one corner"	606	17.00	"WASU"	"Watersipora subtorquata"
13	"Drakes Estero"	11.00	"Rack"1.00	8/13/2004	"completely encrusted with bryozoans except for sponge in one corner"	607	18.00	"WASU"	"Watersipora subtorquata"
13	"Drakes Estero"	11.00	"Rack"1.00	8/13/2004	"completely encrusted with bryozoans except for sponge in one corner"	608	19.00	"WASU"	"Watersipora subtorquata"
13	"Drakes Estero"	11.00	"Rack"1.00	8/13/2004	"completely encrusted with bryozoans except for sponge in one corner"	609	20.00	"WASU"	"Watersipora subtorquata"

13	"Drakes Estero"	11.00	"Rack"1.00	8/13/2004	"completely encrusted with bryozoans except for sponge in one corner"	610	21.00	"WASU"	"Watersipora subtorquata"
13	"Drakes Estero"	11.00	"Rack"1.00	8/13/2004	"completely encrusted with bryozoans except for sponge in one corner"	611	22.00	"SCUN"	"Schizoporella unicornis"
13	"Drakes Estero"	11.00	"Rack"1.00	8/13/2004	"completely encrusted with bryozoans except for sponge in one corner"	612	23.00	"WASU"	"Watersipora subtorquata"
13	"Drakes Estero"	11.00	"Rack"1.00	8/13/2004	"completely encrusted with bryozoans except for sponge in one corner"	613	24.00	"WASU"	"Watersipora subtorquata"
13	"Drakes Estero"	11.00	"Rack"1.00	8/13/2004	"completely encrusted with bryozoans except for sponge in one corner"	614	25.00	"SCUN"	"Schizoporella unicornis"
13	"Drakes Estero"	11.00	"Rack"1.00	8/13/2004	"completely encrusted with bryozoans except for sponge in one corner"	615	26.00	"WASU"	"Watersipora subtorquata"
13	"Drakes Estero"	11.00	"Rack"1.00	8/13/2004	"completely encrusted with bryozoans except for sponge in one corner"	616	27.00	"WASU"	"Watersipora subtorquata"
13	"Drakes Estero"	11.00	"Rack"1.00	8/13/2004	"completely encrusted with bryozoans except for sponge in one corner"	617	28.00	"SCUN"	"Schizoporella unicornis"
13	"Drakes Estero"	11.00	"Rack"1.00	8/13/2004	"completely encrusted with bryozoans except for sponge in one corner"	618	29.00	"HABO"	"Halichondria bowerbanki"
13	"Drakes Estero"	11.00	"Rack"1.00	8/13/2004	"completely encrusted with bryozoans except for sponge in one corner"	619	30.00	"HABO"	"Halichondria bowerbanki"
13	"Drakes Estero"	11.00	"Rack"1.00	8/13/2004	"completely encrusted with bryozoans except for sponge in one corner"	620	31.00	"WASU"	"Watersipora subtorquata"
13	"Drakes Estero"	11.00	"Rack"1.00	8/13/2004	"completely encrusted with bryozoans except for sponge in one corner"	621	32.00	"WASU"	"Watersipora subtorquata"
13	"Drakes Estero"	11.00	"Rack"1.00	8/13/2004	"completely encrusted with bryozoans except for sponge in one corner"	622	33.00	"WASU"	"Watersipora subtorquata"
13	"Drakes Estero"	11.00	"Rack"1.00	8/13/2004	"completely encrusted with bryozoans except for sponge in one corner"	623	34.00	"WASU"	"Watersipora subtorquata"
13	"Drakes Estero"	11.00	"Rack"1.00	8/13/2004	"completely encrusted with bryozoans except for sponge in one corner"	624	35.00	"SCUN"	"Schizoporella unicornis"

13	"Drakes Estero"	11.00	"Rack"1.00	8/13/2004	"completely encrusted with bryozoans except for sponge in one corner"	625	36.00	"HABO"	"Halichondria bowerbanki"
13	"Drakes Estero"	11.00	"Rack"1.00	8/13/2004	"completely encrusted with bryozoans except for sponge in one corner"	626	37.00	"HABO"	"Halichondria bowerbanki"
13	"Drakes Estero"	11.00	"Rack"1.00	8/13/2004	"completely encrusted with bryozoans except for sponge in one corner"	627	38.00	"HABO"	"Halichondria bowerbanki"
13	"Drakes Estero"	11.00	"Rack"1.00	8/13/2004	"completely encrusted with bryozoans except for sponge in one corner"	628	39.00	"SCUN"	"Schizoporella unicornis"
13	"Drakes Estero"	11.00	"Rack"1.00	8/13/2004	"completely encrusted with bryozoans except for sponge in one corner"	629	40.00	"SCUN"	"Schizoporella unicornis"
13	"Drakes Estero"	11.00	"Rack"1.00	8/13/2004	"completely encrusted with bryozoans except for sponge in one corner"	630	41.00	"WASU"	"Watersipora subtorquata"
13	"Drakes Estero"	11.00	"Rack"1.00	8/13/2004	"completely encrusted with bryozoans except for sponge in one corner"	631	42.00	"SCUN"	"Schizoporella unicornis"
13	"Drakes Estero"	11.00	"Rack"1.00	8/13/2004	"completely encrusted with bryozoans except for sponge in one corner"	632	43.00	"HABO"	"Halichondria bowerbanki"
13	"Drakes Estero"	11.00	"Rack"1.00	8/13/2004	"completely encrusted with bryozoans except for sponge in one corner"	633	44.00	"HABO"	"Halichondria bowerbanki"
13	"Drakes Estero"	11.00	"Rack"1.00	8/13/2004	"completely encrusted with bryozoans except for sponge in one corner"	634	45.00	"HABO"	"Halichondria bowerbanki"
13	"Drakes Estero"	11.00	"Rack"1.00	8/13/2004	"completely encrusted with bryozoans except for sponge in one corner"	635	46.00	"SCUN"	"Schizoporella unicornis"
13	"Drakes Estero"	11.00	"Rack"1.00	8/13/2004	"completely encrusted with bryozoans except for sponge in one corner"	636	47.00	"SCUN"	"Schizoporella unicornis"
13	"Drakes Estero"	11.00	"Rack"1.00	8/13/2004	"completely encrusted with bryozoans except for sponge in one corner"	637	48.00	"SCUN"	"Schizoporella unicornis"
13	"Drakes Estero"	11.00	"Rack"1.00	8/13/2004	"completely encrusted with bryozoans except for sponge in one corner"	638	49.00	"SCUN"	"Schizoporella unicornis"
14	"Drakes Estero"	11.00	"Rack"2.00	8/13/2004	"completely encrusted with bryozoans"	639	1.00	"WASU"	"Watersipora subtorquata"
14	"Drakes Estero"	11.00	"Rack"2.00	8/13/2004	"completely encrusted with bryozoans"	640	2.00	"WASU"	"Watersipora subtorquata"



14	"Drakes Estero"	11.00	"Rack"	2.00	8/13/2004	"completely encrusted with bryozoans"
641	3.00	"WASU"	"Watersipora subtorquata"			
14	"Drakes Estero"	11.00	"Rack"	2.00	8/13/2004	"completely encrusted with bryozoans"
642	4.00	"SCUN"	"Schizoporella unicornis"			
14	"Drakes Estero"	11.00	"Rack"	2.00	8/13/2004	"completely encrusted with bryozoans"
643	5.00	"WASU"	"Watersipora subtorquata"			
14	"Drakes Estero"	11.00	"Rack"	2.00	8/13/2004	"completely encrusted with bryozoans"
644	6.00	"WASU"	"Watersipora subtorquata"			
14	"Drakes Estero"	11.00	"Rack"	2.00	8/13/2004	"completely encrusted with bryozoans"
645	7.00	"WASU"	"Watersipora subtorquata"			
14	"Drakes Estero"	11.00	"Rack"	2.00	8/13/2004	"completely encrusted with bryozoans"
646	8.00	"WASU"	"Watersipora subtorquata"			
14	"Drakes Estero"	11.00	"Rack"	2.00	8/13/2004	"completely encrusted with bryozoans"
647	9.00	"WASU"	"Watersipora subtorquata"			
14	"Drakes Estero"	11.00	"Rack"	2.00	8/13/2004	"completely encrusted with bryozoans"
648	10.00	"SCUN"	"Schizoporella unicornis"			
14	"Drakes Estero"	11.00	"Rack"	2.00	8/13/2004	"completely encrusted with bryozoans"
649	11.00	"SCUN"	"Schizoporella unicornis"			
14	"Drakes Estero"	11.00	"Rack"	2.00	8/13/2004	"completely encrusted with bryozoans"
650	12.00	"SCUN"	"Schizoporella unicornis"			
14	"Drakes Estero"	11.00	"Rack"	2.00	8/13/2004	"completely encrusted with bryozoans"
651	13.00	"SCUN"	"Schizoporella unicornis"			
14	"Drakes Estero"	11.00	"Rack"	2.00	8/13/2004	"completely encrusted with bryozoans"
652	14.00	"SCUN"	"Schizoporella unicornis"			
14	"Drakes Estero"	11.00	"Rack"	2.00	8/13/2004	"completely encrusted with bryozoans"
653	15.00	"SCUN"	"Schizoporella unicornis"			
14	"Drakes Estero"	11.00	"Rack"	2.00	8/13/2004	"completely encrusted with bryozoans"
654	16.00	"WASU"	"Watersipora subtorquata"			
14	"Drakes Estero"	11.00	"Rack"	2.00	8/13/2004	"completely encrusted with bryozoans"
655	17.00	"SCUN"	"Schizoporella unicornis"			
14	"Drakes Estero"	11.00	"Rack"	2.00	8/13/2004	"completely encrusted with bryozoans"
656	18.00	"WASU"	"Watersipora subtorquata"			
14	"Drakes Estero"	11.00	"Rack"	2.00	8/13/2004	"completely encrusted with bryozoans"
657	19.00	"SCUN"	"Schizoporella unicornis"			
14	"Drakes Estero"	11.00	"Rack"	2.00	8/13/2004	"completely encrusted with bryozoans"
658	20.00	"SCUN"	"Schizoporella unicornis"			
14	"Drakes Estero"	11.00	"Rack"	2.00	8/13/2004	"completely encrusted with bryozoans"
659	21.00	"SCUN"	"Schizoporella unicornis"			
14	"Drakes Estero"	11.00	"Rack"	2.00	8/13/2004	"completely encrusted with bryozoans"
660	22.00	"WASU"	"Watersipora subtorquata"			
14	"Drakes Estero"	11.00	"Rack"	2.00	8/13/2004	"completely encrusted with bryozoans"
661	23.00	"WASU"	"Watersipora subtorquata"			
14	"Drakes Estero"	11.00	"Rack"	2.00	8/13/2004	"completely encrusted with bryozoans"
662	24.00	"SCUN"	"Schizoporella unicornis"			
14	"Drakes Estero"	11.00	"Rack"	2.00	8/13/2004	"completely encrusted with bryozoans"
663	25.00	"SCUN"	"Schizoporella unicornis"			

14	"Drakes Estero"	11.00	"Rack"2.00	8/13/2004	"completely encrusted with bryozoans"
664	26.00	"WASU"	"Watersipora subtorquata"		
14	"Drakes Estero"	11.00	"Rack"2.00	8/13/2004	"completely encrusted with bryozoans"
665	27.00	"SCUN"	"Schizoporella unicornis"		
14	"Drakes Estero"	11.00	"Rack"2.00	8/13/2004	"completely encrusted with bryozoans"
666	28.00	"SCUN"	"Schizoporella unicornis"		
14	"Drakes Estero"	11.00	"Rack"2.00	8/13/2004	"completely encrusted with bryozoans"
667	29.00	"WASU"	"Watersipora subtorquata"		
14	"Drakes Estero"	11.00	"Rack"2.00	8/13/2004	"completely encrusted with bryozoans"
668	30.00	"WASU"	"Watersipora subtorquata"		
14	"Drakes Estero"	11.00	"Rack"2.00	8/13/2004	"completely encrusted with bryozoans"
669	31.00	"WASU"	"Watersipora subtorquata"		
14	"Drakes Estero"	11.00	"Rack"2.00	8/13/2004	"completely encrusted with bryozoans"
670	32.00	"SCUN"	"Schizoporella unicornis"		
14	"Drakes Estero"	11.00	"Rack"2.00	8/13/2004	"completely encrusted with bryozoans"
671	33.00	"WASU"	"Watersipora subtorquata"		
14	"Drakes Estero"	11.00	"Rack"2.00	8/13/2004	"completely encrusted with bryozoans"
672	34.00	"SCUN"	"Schizoporella unicornis"		
14	"Drakes Estero"	11.00	"Rack"2.00	8/13/2004	"completely encrusted with bryozoans"
673	35.00	"WASU"	"Watersipora subtorquata"		
14	"Drakes Estero"	11.00	"Rack"2.00	8/13/2004	"completely encrusted with bryozoans"
674	36.00	"SCUN"	"Schizoporella unicornis"		
14	"Drakes Estero"	11.00	"Rack"2.00	8/13/2004	"completely encrusted with bryozoans"
675	37.00	"SCUN"	"Schizoporella unicornis"		
14	"Drakes Estero"	11.00	"Rack"2.00	8/13/2004	"completely encrusted with bryozoans"
676	38.00	"WASU"	"Watersipora subtorquata"		
14	"Drakes Estero"	11.00	"Rack"2.00	8/13/2004	"completely encrusted with bryozoans"
677	39.00	"WASU"	"Watersipora subtorquata"		
14	"Drakes Estero"	11.00	"Rack"2.00	8/13/2004	"completely encrusted with bryozoans"
678	40.00	"SCUN"	"Schizoporella unicornis"		
14	"Drakes Estero"	11.00	"Rack"2.00	8/13/2004	"completely encrusted with bryozoans"
679	41.00	"WASU"	"Watersipora subtorquata"		
14	"Drakes Estero"	11.00	"Rack"2.00	8/13/2004	"completely encrusted with bryozoans"
680	42.00	"SCUN"	"Schizoporella unicornis"		
14	"Drakes Estero"	11.00	"Rack"2.00	8/13/2004	"completely encrusted with bryozoans"
681	43.00	"SCUN"	"Schizoporella unicornis"		
14	"Drakes Estero"	11.00	"Rack"2.00	8/13/2004	"completely encrusted with bryozoans"
682	44.00	"SCUN"	"Schizoporella unicornis"		
14	"Drakes Estero"	11.00	"Rack"2.00	8/13/2004	"completely encrusted with bryozoans"
683	45.00	"WASU"	"Watersipora subtorquata"		
14	"Drakes Estero"	11.00	"Rack"2.00	8/13/2004	"completely encrusted with bryozoans"
684	46.00	"WASU"	"Watersipora subtorquata"		
14	"Drakes Estero"	11.00	"Rack"2.00	8/13/2004	"completely encrusted with bryozoans"
685	47.00	"WASU"	"Watersipora subtorquata"		
14	"Drakes Estero"	11.00	"Rack"2.00	8/13/2004	"completely encrusted with bryozoans"
686	48.00	"WASU"	"Watersipora subtorquata"		

14	"Drakes Estero"	11.00	"Rack"	2.00	8/13/2004	"completely encrusted with bryozoans"
	687	49.00	"SCUN"			"Schizoporella unicornis"
15	"Drakes Estero"	11.00	"Rack"	3.00	8/13/2004	"large red Botrylloides sp.
	colony covering most of plate"	692	1.00	"BOTROI"		"Botrylloides sp."
15	"Drakes Estero"	11.00	"Rack"	3.00	8/13/2004	"large red Botrylloides sp.
	colony covering most of plate"	693	2.00	"BOTROI"		"Botrylloides sp."
15	"Drakes Estero"	11.00	"Rack"	3.00	8/13/2004	"large red Botrylloides sp.
	colony covering most of plate"	694	3.00	"BOTROI"		"Botrylloides sp."
15	"Drakes Estero"	11.00	"Rack"	3.00	8/13/2004	"large red Botrylloides sp.
	colony covering most of plate"	695	4.00	"BOTROI"		"Botrylloides sp."
15	"Drakes Estero"	11.00	"Rack"	3.00	8/13/2004	"large red Botrylloides sp.
	colony covering most of plate"	696	5.00	"BOTROI"		"Botrylloides sp."
15	"Drakes Estero"	11.00	"Rack"	3.00	8/13/2004	"large red Botrylloides sp.
	colony covering most of plate"	697	6.00	"BOTROI"		"Botrylloides sp."
15	"Drakes Estero"	11.00	"Rack"	3.00	8/13/2004	"large red Botrylloides sp.
	colony covering most of plate"	698	7.00	"BOTROI"		"Botrylloides sp."
15	"Drakes Estero"	11.00	"Rack"	3.00	8/13/2004	"large red Botrylloides sp.
	colony covering most of plate"	699	8.00	"BOTROI"		"Botrylloides sp."
15	"Drakes Estero"	11.00	"Rack"	3.00	8/13/2004	"large red Botrylloides sp.
	colony covering most of plate"	700	9.00	"BOTROI"		"Botrylloides sp."
15	"Drakes Estero"	11.00	"Rack"	3.00	8/13/2004	"large red Botrylloides sp.
	colony covering most of plate"	701	10.00	"BOTROI"		"Botrylloides sp."
15	"Drakes Estero"	11.00	"Rack"	3.00	8/13/2004	"large red Botrylloides sp.
	colony covering most of plate"	702	11.00	"BOTROI"		"Botrylloides sp."
15	"Drakes Estero"	11.00	"Rack"	3.00	8/13/2004	"large red Botrylloides sp.
	colony covering most of plate"	703	12.00	"BOTROI"		"Botrylloides sp."
15	"Drakes Estero"	11.00	"Rack"	3.00	8/13/2004	"large red Botrylloides sp.
	colony covering most of plate"	704	13.00	"BOTROI"		"Botrylloides sp."
15	"Drakes Estero"	11.00	"Rack"	3.00	8/13/2004	"large red Botrylloides sp.
	colony covering most of plate"	705	14.00	"BOTROI"		"Botrylloides sp."
15	"Drakes Estero"	11.00	"Rack"	3.00	8/13/2004	"large red Botrylloides sp.
	colony covering most of plate"	706	15.00	"BOTROI"		"Botrylloides sp."
15	"Drakes Estero"	11.00	"Rack"	3.00	8/13/2004	"large red Botrylloides sp.
	colony covering most of plate"	707	16.00	"BOTROI"		"Botrylloides sp."
15	"Drakes Estero"	11.00	"Rack"	3.00	8/13/2004	"large red Botrylloides sp.
	colony covering most of plate"	708	17.00	"BOTROI"		"Botrylloides sp."
15	"Drakes Estero"	11.00	"Rack"	3.00	8/13/2004	"large red Botrylloides sp.
	colony covering most of plate"	709	18.00	"BOTROI"		"Botrylloides sp."
15	"Drakes Estero"	11.00	"Rack"	3.00	8/13/2004	"large red Botrylloides sp.
	colony covering most of plate"	710	19.00	"BOTROI"		"Botrylloides sp."
15	"Drakes Estero"	11.00	"Rack"	3.00	8/13/2004	"large red Botrylloides sp.
	colony covering most of plate"	711	20.00	"BOTROI"		"Botrylloides sp."
15	"Drakes Estero"	11.00	"Rack"	3.00	8/13/2004	"large red Botrylloides sp.
	colony covering most of plate"	712	21.00	"BOTROI"		"Botrylloides sp."
15	"Drakes Estero"	11.00	"Rack"	3.00	8/13/2004	"large red Botrylloides sp.
	colony covering most of plate"	713	22.00	"BOTROI"		"Botrylloides sp."



15	"Drakes Estero"	11.00	"Rack"	3.00	8/13/2004	"large red Botrylloides sp.	
	colony covering most of plate"		736	45.00	"BOTROI"	"Botrylloides sp."	
15	"Drakes Estero"	11.00	"Rack"	3.00	8/13/2004	"large red Botrylloides sp.	
	colony covering most of plate"		688	46.00	"SCUN"	"Schizoporella unicornis"	
15	"Drakes Estero"	11.00	"Rack"	3.00	8/13/2004	"large red Botrylloides sp.	
	colony covering most of plate"		689	47.00	"SCUN"	"Schizoporella unicornis"	
15	"Drakes Estero"	11.00	"Rack"	3.00	8/13/2004	"large red Botrylloides sp.	
	colony covering most of plate"		690	48.00	"SCUN"	"Schizoporella unicornis"	
15	"Drakes Estero"	11.00	"Rack"	3.00	8/13/2004	"large red Botrylloides sp.	
	colony covering most of plate"		691	49.00	"BOTROI"	"Botrylloides sp."	
16	"Drakes Estero"	8.00	"Away"		1.00	8/16/2004	"sparse invert growth"
	737	1.00	"BARE"	"Bare"			
16	"Drakes Estero"	8.00	"Away"		1.00	8/16/2004	"sparse invert growth"
	738	2.00	"BARE"	"Bare"			
16	"Drakes Estero"	8.00	"Away"		1.00	8/16/2004	"sparse invert growth"
	739	3.00	"BARE"	"Bare"			
16	"Drakes Estero"	8.00	"Away"		1.00	8/16/2004	"sparse invert growth"
	740	4.00	"BARE"	"Bare"			
16	"Drakes Estero"	8.00	"Away"		1.00	8/16/2004	"sparse invert growth"
	741	5.00	"BARE"	"Bare"			
16	"Drakes Estero"	8.00	"Away"		1.00	8/16/2004	"sparse invert growth"
	742	6.00	"BARE"	"Bare"			
16	"Drakes Estero"	8.00	"Away"		1.00	8/16/2004	"sparse invert growth"
	743	7.00	"BARE"	"Bare"			
16	"Drakes Estero"	8.00	"Away"		1.00	8/16/2004	"sparse invert growth"
	744	8.00	"BARE"	"Bare"			
16	"Drakes Estero"	8.00	"Away"		1.00	8/16/2004	"sparse invert growth"
	745	9.00	"BARE"	"Bare"			
16	"Drakes Estero"	8.00	"Away"		1.00	8/16/2004	"sparse invert growth"
	746	10.00	"BARE"	"Bare"			
16	"Drakes Estero"	8.00	"Away"		1.00	8/16/2004	"sparse invert growth"
	747	11.00	"SPIR"	"Spirorbis sp."			
16	"Drakes Estero"	8.00	"Away"		1.00	8/16/2004	"sparse invert growth"
	748	12.00	"BARE"	"Bare"			
16	"Drakes Estero"	8.00	"Away"		1.00	8/16/2004	"sparse invert growth"
	749	13.00	"BARE"	"Bare"			
16	"Drakes Estero"	8.00	"Away"		1.00	8/16/2004	"sparse invert growth"
	750	14.00	"BARE"	"Bare"			
16	"Drakes Estero"	8.00	"Away"		1.00	8/16/2004	"sparse invert growth"
	751	15.00	"BARE"	"Bare"			
16	"Drakes Estero"	8.00	"Away"		1.00	8/16/2004	"sparse invert growth"
	752	16.00	"BARE"	"Bare"			
16	"Drakes Estero"	8.00	"Away"		1.00	8/16/2004	"sparse invert growth"
	753	17.00	"BARE"	"Bare"			
16	"Drakes Estero"	8.00	"Away"		1.00	8/16/2004	"sparse invert growth"
	754	18.00	"BARE"	"Bare"			

16	"Drakes Estero"	8.00	"Away"	1.00	8/16/2004	"sparse invert growth"
	755 19.00 "BARE"		"Bare"			
16	"Drakes Estero"	8.00	"Away"	1.00	8/16/2004	"sparse invert growth"
	756 20.00 "BARE"		"Bare"			
16	"Drakes Estero"	8.00	"Away"	1.00	8/16/2004	"sparse invert growth"
	757 21.00 "SPIR"		"Spirorbis sp."			
16	"Drakes Estero"	8.00	"Away"	1.00	8/16/2004	"sparse invert growth"
	758 22.00 "BARE"		"Bare"			
16	"Drakes Estero"	8.00	"Away"	1.00	8/16/2004	"sparse invert growth"
	759 23.00 "BARE"		"Bare"			
16	"Drakes Estero"	8.00	"Away"	1.00	8/16/2004	"sparse invert growth"
	760 24.00 "BARE"		"Bare"			
16	"Drakes Estero"	8.00	"Away"	1.00	8/16/2004	"sparse invert growth"
	761 25.00 "BARE"		"Bare"			
16	"Drakes Estero"	8.00	"Away"	1.00	8/16/2004	"sparse invert growth"
	762 26.00 "BARE"		"Bare"			
16	"Drakes Estero"	8.00	"Away"	1.00	8/16/2004	"sparse invert growth"
	763 27.00 "SCUN"		"Schizoporella unicornis"			
16	"Drakes Estero"	8.00	"Away"	1.00	8/16/2004	"sparse invert growth"
	764 28.00 "BARE"		"Bare"			
16	"Drakes Estero"	8.00	"Away"	1.00	8/16/2004	"sparse invert growth"
	765 29.00 "BARE"		"Bare"			
16	"Drakes Estero"	8.00	"Away"	1.00	8/16/2004	"sparse invert growth"
	766 30.00 "BARE"		"Bare"			
16	"Drakes Estero"	8.00	"Away"	1.00	8/16/2004	"sparse invert growth"
	767 31.00 "BARE"		"Bare"			
16	"Drakes Estero"	8.00	"Away"	1.00	8/16/2004	"sparse invert growth"
	768 32.00 "BARE"		"Bare"			
16	"Drakes Estero"	8.00	"Away"	1.00	8/16/2004	"sparse invert growth"
	769 33.00 "SPIR"		"Spirorbis sp."			
16	"Drakes Estero"	8.00	"Away"	1.00	8/16/2004	"sparse invert growth"
	770 34.00 "SCUN"		"Schizoporella unicornis"			
16	"Drakes Estero"	8.00	"Away"	1.00	8/16/2004	"sparse invert growth"
	771 35.00 "SCUN"		"Schizoporella unicornis"			
16	"Drakes Estero"	8.00	"Away"	1.00	8/16/2004	"sparse invert growth"
	772 36.00 "BARE"		"Bare"			
16	"Drakes Estero"	8.00	"Away"	1.00	8/16/2004	"sparse invert growth"
	773 37.00 "BARE"		"Bare"			
16	"Drakes Estero"	8.00	"Away"	1.00	8/16/2004	"sparse invert growth"
	774 38.00 "BARE"		"Bare"			
16	"Drakes Estero"	8.00	"Away"	1.00	8/16/2004	"sparse invert growth"
	775 39.00 "BARE"		"Bare"			
16	"Drakes Estero"	8.00	"Away"	1.00	8/16/2004	"sparse invert growth"
	776 40.00 "SCUN"		"Schizoporella unicornis"			
16	"Drakes Estero"	8.00	"Away"	1.00	8/16/2004	"sparse invert growth"
	777 41.00 "SCUN"		"Schizoporella unicornis"			

16	"Drakes Estero"	8.00	"Away"	1.00	8/16/2004	"sparse invert growth"
	778	42.00	"SCUN"	"Schizoporella unicornis"		
16	"Drakes Estero"	8.00	"Away"	1.00	8/16/2004	"sparse invert growth"
	779	43.00	"WASU"	"Watersipora subtorquata"		
16	"Drakes Estero"	8.00	"Away"	1.00	8/16/2004	"sparse invert growth"
	780	44.00	"WASU"	"Watersipora subtorquata"		
16	"Drakes Estero"	8.00	"Away"	1.00	8/16/2004	"sparse invert growth"
	781	45.00	"BARE"	"Bare"		
16	"Drakes Estero"	8.00	"Away"	1.00	8/16/2004	"sparse invert growth"
	782	46.00	"WASU"	"Watersipora subtorquata"		
16	"Drakes Estero"	8.00	"Away"	1.00	8/16/2004	"sparse invert growth"
	783	47.00	"WASU"	"Watersipora subtorquata"		
16	"Drakes Estero"	8.00	"Away"	1.00	8/16/2004	"sparse invert growth"
	784	48.00	"BUNE"	"Bugula neritina"		
16	"Drakes Estero"	8.00	"Away"	1.00	8/16/2004	"sparse invert growth"
	785	49.00	"SCUN"	"Schizoporella unicornis"		
17	"Drakes Estero"	8.00	"Away"	2.00	8/16/2004	"sparse invert growth"
	786	1.00	"SCUN"	"Schizoporella unicornis"		
17	"Drakes Estero"	8.00	"Away"	2.00	8/16/2004	"sparse invert growth"
	787	2.00	"SCUN"	"Schizoporella unicornis"		
17	"Drakes Estero"	8.00	"Away"	2.00	8/16/2004	"sparse invert growth"
	788	3.00	"SCUN"	"Schizoporella unicornis"		
17	"Drakes Estero"	8.00	"Away"	2.00	8/16/2004	"sparse invert growth"
	789	4.00	"BUNE"	"Bugula neritina"		
17	"Drakes Estero"	8.00	"Away"	2.00	8/16/2004	"sparse invert growth"
	790	5.00	"SCUN"	"Schizoporella unicornis"		
17	"Drakes Estero"	8.00	"Away"	2.00	8/16/2004	"sparse invert growth"
	791	6.00	"SCUN"	"Schizoporella unicornis"		
17	"Drakes Estero"	8.00	"Away"	2.00	8/16/2004	"sparse invert growth"
	792	7.00	"SCUN"	"Schizoporella unicornis"		
17	"Drakes Estero"	8.00	"Away"	2.00	8/16/2004	"sparse invert growth"
	793	8.00	"SCUN"	"Schizoporella unicornis"		
17	"Drakes Estero"	8.00	"Away"	2.00	8/16/2004	"sparse invert growth"
	794	9.00	"SCUN"	"Schizoporella unicornis"		
17	"Drakes Estero"	8.00	"Away"	2.00	8/16/2004	"sparse invert growth"
	795	10.00	"SCUN"	"Schizoporella unicornis"		
17	"Drakes Estero"	8.00	"Away"	2.00	8/16/2004	"sparse invert growth"
	796	11.00	"BARE"	"Bare"		
17	"Drakes Estero"	8.00	"Away"	2.00	8/16/2004	"sparse invert growth"
	797	12.00	"BARE"	"Bare"		
17	"Drakes Estero"	8.00	"Away"	2.00	8/16/2004	"sparse invert growth"
	798	13.00	"SCUN"	"Schizoporella unicornis"		
17	"Drakes Estero"	8.00	"Away"	2.00	8/16/2004	"sparse invert growth"
	799	14.00	"BOTROI"	"Botrylloides sp."		
17	"Drakes Estero"	8.00	"Away"	2.00	8/16/2004	"sparse invert growth"
	800	15.00	"BARE"	"Bare"		

17	"Drakes Estero"	8.00	"Away"	2.00	8/16/2004	"sparse invert growth"
	801 16.00 "BARE"		"Bare"			
17	"Drakes Estero"	8.00	"Away"	2.00	8/16/2004	"sparse invert growth"
	802 17.00 "BARE"		"Bare"			
17	"Drakes Estero"	8.00	"Away"	2.00	8/16/2004	"sparse invert growth"
	803 18.00 "BARE"		"Bare"			
17	"Drakes Estero"	8.00	"Away"	2.00	8/16/2004	"sparse invert growth"
	804 19.00 "SPIR"		"Spirorbis sp."			
17	"Drakes Estero"	8.00	"Away"	2.00	8/16/2004	"sparse invert growth"
	805 20.00 "SPIR"		"Spirorbis sp."			
17	"Drakes Estero"	8.00	"Away"	2.00	8/16/2004	"sparse invert growth"
	806 21.00 "BARE"		"Bare"			
17	"Drakes Estero"	8.00	"Away"	2.00	8/16/2004	"sparse invert growth"
	807 22.00 "BARE"		"Bare"			
17	"Drakes Estero"	8.00	"Away"	2.00	8/16/2004	"sparse invert growth"
	808 23.00 "BARE"		"Bare"			
17	"Drakes Estero"	8.00	"Away"	2.00	8/16/2004	"sparse invert growth"
	809 24.00 "BARE"		"Bare"			
17	"Drakes Estero"	8.00	"Away"	2.00	8/16/2004	"sparse invert growth"
	810 25.00 "BARE"		"Bare"			
17	"Drakes Estero"	8.00	"Away"	2.00	8/16/2004	"sparse invert growth"
	811 26.00 "BARE"		"Bare"			
17	"Drakes Estero"	8.00	"Away"	2.00	8/16/2004	"sparse invert growth"
	812 27.00 "BARE"		"Bare"			
17	"Drakes Estero"	8.00	"Away"	2.00	8/16/2004	"sparse invert growth"
	813 28.00 "BARE"		"Bare"			
17	"Drakes Estero"	8.00	"Away"	2.00	8/16/2004	"sparse invert growth"
	814 29.00 "BARE"		"Bare"			
17	"Drakes Estero"	8.00	"Away"	2.00	8/16/2004	"sparse invert growth"
	815 30.00 "BARE"		"Bare"			
17	"Drakes Estero"	8.00	"Away"	2.00	8/16/2004	"sparse invert growth"
	816 31.00 "BARE"		"Bare"			
17	"Drakes Estero"	8.00	"Away"	2.00	8/16/2004	"sparse invert growth"
	817 32.00 "BARE"		"Bare"			
17	"Drakes Estero"	8.00	"Away"	2.00	8/16/2004	"sparse invert growth"
	818 33.00 "BARE"		"Bare"			
17	"Drakes Estero"	8.00	"Away"	2.00	8/16/2004	"sparse invert growth"
	819 34.00 "SCUN"		"Schizoporella unicornis"			
17	"Drakes Estero"	8.00	"Away"	2.00	8/16/2004	"sparse invert growth"
	820 35.00 "BARE"		"Bare"			
17	"Drakes Estero"	8.00	"Away"	2.00	8/16/2004	"sparse invert growth"
	821 36.00 "BARE"		"Bare"			
17	"Drakes Estero"	8.00	"Away"	2.00	8/16/2004	"sparse invert growth"
	822 37.00 "BARE"		"Bare"			
17	"Drakes Estero"	8.00	"Away"	2.00	8/16/2004	"sparse invert growth"
	823 38.00 "BARE"		"Bare"			



17	"Drakes Estero"	8.00	"Away"	2.00	8/16/2004	"sparse invert growth"
	824 39.00 "BARE"		"Bare"			
17	"Drakes Estero"	8.00	"Away"	2.00	8/16/2004	"sparse invert growth"
	825 40.00 "SCUN"		"Schizoporella unicornis"			
17	"Drakes Estero"	8.00	"Away"	2.00	8/16/2004	"sparse invert growth"
	826 41.00 "SCUN"		"Schizoporella unicornis"			
17	"Drakes Estero"	8.00	"Away"	2.00	8/16/2004	"sparse invert growth"
	827 42.00 "BARE"		"Bare"			
17	"Drakes Estero"	8.00	"Away"	2.00	8/16/2004	"sparse invert growth"
	828 43.00 "SCUN"		"Schizoporella unicornis"			
17	"Drakes Estero"	8.00	"Away"	2.00	8/16/2004	"sparse invert growth"
	829 44.00 "BARE"		"Bare"			
17	"Drakes Estero"	8.00	"Away"	2.00	8/16/2004	"sparse invert growth"
	830 45.00 "SPIR"		"Spirorbis sp."			
17	"Drakes Estero"	8.00	"Away"	2.00	8/16/2004	"sparse invert growth"
	831 46.00 "BARE"		"Bare"			
17	"Drakes Estero"	8.00	"Away"	2.00	8/16/2004	"sparse invert growth"
	832 47.00 "BARE"		"Bare"			
17	"Drakes Estero"	8.00	"Away"	2.00	8/16/2004	"sparse invert growth"
	833 48.00 "BARE"		"Bare"			
17	"Drakes Estero"	8.00	"Away"	2.00	8/16/2004	"sparse invert growth"
	834 49.00 "BARE"		"Bare"			
18	"Drakes Estero"	8.00	"Away"	3.00	8/13/2004	"sparse invert growth"
	835 1.00 "BARE"		"Bare"			
18	"Drakes Estero"	8.00	"Away"	3.00	8/13/2004	"sparse invert growth"
	836 2.00 "BARE"		"Bare"			
18	"Drakes Estero"	8.00	"Away"	3.00	8/13/2004	"sparse invert growth"
	837 3.00 "SPIR"		"Spirorbis sp."			
18	"Drakes Estero"	8.00	"Away"	3.00	8/13/2004	"sparse invert growth"
	838 4.00 "BUNE"		"Bugula neritina"			
18	"Drakes Estero"	8.00	"Away"	3.00	8/13/2004	"sparse invert growth"
	839 5.00 "SCUN"		"Schizoporella unicornis"			
18	"Drakes Estero"	8.00	"Away"	3.00	8/13/2004	"sparse invert growth"
	840 6.00 "SCUN"		"Schizoporella unicornis"			
18	"Drakes Estero"	8.00	"Away"	3.00	8/13/2004	"sparse invert growth"
	841 7.00 "BARE"		"Bare"			
18	"Drakes Estero"	8.00	"Away"	3.00	8/13/2004	"sparse invert growth"
	842 8.00 "BARE"		"Bare"			
18	"Drakes Estero"	8.00	"Away"	3.00	8/13/2004	"sparse invert growth"
	843 9.00 "BARE"		"Bare"			
18	"Drakes Estero"	8.00	"Away"	3.00	8/13/2004	"sparse invert growth"
	844 10.00 "BARE"		"Bare"			
18	"Drakes Estero"	8.00	"Away"	3.00	8/13/2004	"sparse invert growth"
	845 11.00 "BUNE"		"Bugula neritina"			
18	"Drakes Estero"	8.00	"Away"	3.00	8/13/2004	"sparse invert growth"
	846 12.00 "BUNE"		"Bugula neritina"			

18	"Drakes Estero"	8.00	"Away"	3.00	8/13/2004	"sparse invert growth"
	847 13.00 "BARE"		"Bare"			
18	"Drakes Estero"	8.00	"Away"	3.00	8/13/2004	"sparse invert growth"
	848 14.00 "BARE"		"Bare"			
18	"Drakes Estero"	8.00	"Away"	3.00	8/13/2004	"sparse invert growth"
	849 15.00 "BARE"		"Bare"			
18	"Drakes Estero"	8.00	"Away"	3.00	8/13/2004	"sparse invert growth"
	850 16.00 "BARE"		"Bare"			
18	"Drakes Estero"	8.00	"Away"	3.00	8/13/2004	"sparse invert growth"
	851 17.00 "SPIR"		"Spirorbis sp."			
18	"Drakes Estero"	8.00	"Away"	3.00	8/13/2004	"sparse invert growth"
	852 18.00 "SPIR"		"Spirorbis sp."			
18	"Drakes Estero"	8.00	"Away"	3.00	8/13/2004	"sparse invert growth"
	853 19.00 "BARE"		"Bare"			
18	"Drakes Estero"	8.00	"Away"	3.00	8/13/2004	"sparse invert growth"
	854 20.00 "BARE"		"Bare"			
18	"Drakes Estero"	8.00	"Away"	3.00	8/13/2004	"sparse invert growth"
	855 21.00 "BARE"		"Bare"			
18	"Drakes Estero"	8.00	"Away"	3.00	8/13/2004	"sparse invert growth"
	856 22.00 "BARE"		"Bare"			
18	"Drakes Estero"	8.00	"Away"	3.00	8/13/2004	"sparse invert growth"
	857 23.00 "BARE"		"Bare"			
18	"Drakes Estero"	8.00	"Away"	3.00	8/13/2004	"sparse invert growth"
	858 24.00 "BARE"		"Bare"			
18	"Drakes Estero"	8.00	"Away"	3.00	8/13/2004	"sparse invert growth"
	859 25.00 "BUNE"		"Bugula neritina"			
18	"Drakes Estero"	8.00	"Away"	3.00	8/13/2004	"sparse invert growth"
	860 26.00 "BARE"		"Bare"			
18	"Drakes Estero"	8.00	"Away"	3.00	8/13/2004	"sparse invert growth"
	861 27.00 "BARE"		"Bare"			
18	"Drakes Estero"	8.00	"Away"	3.00	8/13/2004	"sparse invert growth"
	862 28.00 "BARE"		"Bare"			
18	"Drakes Estero"	8.00	"Away"	3.00	8/13/2004	"sparse invert growth"
	863 29.00 "BARE"		"Bare"			
18	"Drakes Estero"	8.00	"Away"	3.00	8/13/2004	"sparse invert growth"
	864 30.00 "BARE"		"Bare"			
18	"Drakes Estero"	8.00	"Away"	3.00	8/13/2004	"sparse invert growth"
	865 31.00 "BARE"		"Bare"			
18	"Drakes Estero"	8.00	"Away"	3.00	8/13/2004	"sparse invert growth"
	866 32.00 "BARE"		"Bare"			
18	"Drakes Estero"	8.00	"Away"	3.00	8/13/2004	"sparse invert growth"
	867 33.00 "BARE"		"Bare"			
18	"Drakes Estero"	8.00	"Away"	3.00	8/13/2004	"sparse invert growth"
	868 34.00 "SPIR"		"Spirorbis sp."			
18	"Drakes Estero"	8.00	"Away"	3.00	8/13/2004	"sparse invert growth"
	869 35.00 "BUNE"		"Bugula neritina"			

18	"Drakes Estero"	8.00	"Away"	3.00	8/13/2004	"sparse invert growth"
	870 36.00 "BARE"		"Bare"			
18	"Drakes Estero"	8.00	"Away"	3.00	8/13/2004	"sparse invert growth"
	871 37.00 "BARE"		"Bare"			
18	"Drakes Estero"	8.00	"Away"	3.00	8/13/2004	"sparse invert growth"
	872 38.00 "BARE"		"Bare"			
18	"Drakes Estero"	8.00	"Away"	3.00	8/13/2004	"sparse invert growth"
	873 39.00 "BARE"		"Bare"			
18	"Drakes Estero"	8.00	"Away"	3.00	8/13/2004	"sparse invert growth"
	874 40.00 "BARE"		"Bare"			
18	"Drakes Estero"	8.00	"Away"	3.00	8/13/2004	"sparse invert growth"
	875 41.00 "BARE"		"Bare"			
18	"Drakes Estero"	8.00	"Away"	3.00	8/13/2004	"sparse invert growth"
	876 42.00 "BUNE"		"Bugula neritina"			
18	"Drakes Estero"	8.00	"Away"	3.00	8/13/2004	"sparse invert growth"
	877 43.00 "BARE"		"Bare"			
18	"Drakes Estero"	8.00	"Away"	3.00	8/13/2004	"sparse invert growth"
	878 44.00 "BARE"		"Bare"			
18	"Drakes Estero"	8.00	"Away"	3.00	8/13/2004	"sparse invert growth"
	879 45.00 "BARE"		"Bare"			
18	"Drakes Estero"	8.00	"Away"	3.00	8/13/2004	"sparse invert growth"
	880 46.00 "BARE"		"Bare"			
18	"Drakes Estero"	8.00	"Away"	3.00	8/13/2004	"sparse invert growth"
	881 47.00 "BARE"		"Bare"			
18	"Drakes Estero"	8.00	"Away"	3.00	8/13/2004	"sparse invert growth"
	882 48.00 "BARE"		"Bare"			
18	"Drakes Estero"	8.00	"Away"	3.00	8/13/2004	"sparse invert growth"
	883 49.00 "BARE"		"Bare"			
22	"Estero de Limantour"	97.00		1.00	8/16/2004	"only 2 Balanus and a few specks of what appears to be Ralfsia sp."
				884	1.00	"BARE" "Bare"
22	"Estero de Limantour"	97.00		1.00	8/16/2004	"only 2 Balanus and a few specks of what appears to be Ralfsia sp."
				885	2.00	"BARE" "Bare"
22	"Estero de Limantour"	97.00		1.00	8/16/2004	"only 2 Balanus and a few specks of what appears to be Ralfsia sp."
				886	3.00	"BARE" "Bare"
22	"Estero de Limantour"	97.00		1.00	8/16/2004	"only 2 Balanus and a few specks of what appears to be Ralfsia sp."
				887	4.00	"BARE" "Bare"
22	"Estero de Limantour"	97.00		1.00	8/16/2004	"only 2 Balanus and a few specks of what appears to be Ralfsia sp."
				888	5.00	"BARE" "Bare"
22	"Estero de Limantour"	97.00		1.00	8/16/2004	"only 2 Balanus and a few specks of what appears to be Ralfsia sp."
				889	6.00	"BARE" "Bare"
22	"Estero de Limantour"	97.00		1.00	8/16/2004	"only 2 Balanus and a few specks of what appears to be Ralfsia sp."
				890	7.00	"BARE" "Bare"
22	"Estero de Limantour"	97.00		1.00	8/16/2004	"only 2 Balanus and a few specks of what appears to be Ralfsia sp."
				891	8.00	"BARE" "Bare"
22	"Estero de Limantour"	97.00		1.00	8/16/2004	"only 2 Balanus and a few specks of what appears to be Ralfsia sp."
				892	9.00	"BARE" "Bare"



























27	"Estero de Limantour"	116.00	3.00	8/16/2004	"only 4 Balanus
	and a few specks of what appears to be Ralfsia sp."		1168	40.00	"BARE" "Bare"
27	"Estero de Limantour"	116.00	3.00	8/16/2004	"only 4 Balanus
	and a few specks of what appears to be Ralfsia sp."		1169	41.00	"BARE" "Bare"
27	"Estero de Limantour"	116.00	3.00	8/16/2004	"only 4 Balanus
	and a few specks of what appears to be Ralfsia sp."		1170	42.00	"BARE" "Bare"
27	"Estero de Limantour"	116.00	3.00	8/16/2004	"only 4 Balanus
	and a few specks of what appears to be Ralfsia sp."		1171	43.00	"BARE" "Bare"
27	"Estero de Limantour"	116.00	3.00	8/16/2004	"only 4 Balanus
	and a few specks of what appears to be Ralfsia sp."		1172	44.00	"BARE" "Bare"
27	"Estero de Limantour"	116.00	3.00	8/16/2004	"only 4 Balanus
	and a few specks of what appears to be Ralfsia sp."		1173	45.00	"BARE" "Bare"
27	"Estero de Limantour"	116.00	3.00	8/16/2004	"only 4 Balanus
	and a few specks of what appears to be Ralfsia sp."		1174	46.00	"BARE" "Bare"
27	"Estero de Limantour"	116.00	3.00	8/16/2004	"only 4 Balanus
	and a few specks of what appears to be Ralfsia sp."		1175	47.00	"BARE" "Bare"
27	"Estero de Limantour"	116.00	3.00	8/16/2004	"only 4 Balanus
	and a few specks of what appears to be Ralfsia sp."		1176	48.00	"BARE" "Bare"
27	"Estero de Limantour"	116.00	3.00	8/16/2004	"only 4 Balanus
	and a few specks of what appears to be Ralfsia sp."		1177	49.00	"BARE" "Bare"
28	"Estero de Limantour"	136.00	1.00	8/16/2004	"no invert growth
	at all" 1178	1.00	"BARE"	"Bare"	
28	"Estero de Limantour"	136.00	1.00	8/16/2004	"no invert growth
	at all" 1179	2.00	"BARE"	"Bare"	
28	"Estero de Limantour"	136.00	1.00	8/16/2004	"no invert growth
	at all" 1180	3.00	"BARE"	"Bare"	
28	"Estero de Limantour"	136.00	1.00	8/16/2004	"no invert growth
	at all" 1181	4.00	"BARE"	"Bare"	
28	"Estero de Limantour"	136.00	1.00	8/16/2004	"no invert growth
	at all" 1182	5.00	"BARE"	"Bare"	
28	"Estero de Limantour"	136.00	1.00	8/16/2004	"no invert growth
	at all" 1183	6.00	"BALA"	"Balanus sp."	
28	"Estero de Limantour"	136.00	1.00	8/16/2004	"no invert growth
	at all" 1184	7.00	"BARE"	"Bare"	
28	"Estero de Limantour"	136.00	1.00	8/16/2004	"no invert growth
	at all" 1185	8.00	"BARE"	"Bare"	
28	"Estero de Limantour"	136.00	1.00	8/16/2004	"no invert growth
	at all" 1186	9.00	"BARE"	"Bare"	
28	"Estero de Limantour"	136.00	1.00	8/16/2004	"no invert growth
	at all" 1187	10.00	"BARE"	"Bare"	
28	"Estero de Limantour"	136.00	1.00	8/16/2004	"no invert growth
	at all" 1188	11.00	"BARE"	"Bare"	
28	"Estero de Limantour"	136.00	1.00	8/16/2004	"no invert growth
	at all" 1189	12.00	"BARE"	"Bare"	
28	"Estero de Limantour"	136.00	1.00	8/16/2004	"no invert growth
	at all" 1190	13.00	"BARE"	"Bare"	



28	"Estero de Limantour"	136.00	1.00	8/16/2004	"no invert growth
at all"	1191 14.00 "BARE"	"Bare"			
28	"Estero de Limantour"	136.00	1.00	8/16/2004	"no invert growth
at all"	1192 15.00 "BARE"	"Bare"			
28	"Estero de Limantour"	136.00	1.00	8/16/2004	"no invert growth
at all"	1193 16.00 "BARE"	"Bare"			
28	"Estero de Limantour"	136.00	1.00	8/16/2004	"no invert growth
at all"	1194 17.00 "BARE"	"Bare"			
28	"Estero de Limantour"	136.00	1.00	8/16/2004	"no invert growth
at all"	1195 18.00 "BARE"	"Bare"			
28	"Estero de Limantour"	136.00	1.00	8/16/2004	"no invert growth
at all"	1196 19.00 "BARE"	"Bare"			
28	"Estero de Limantour"	136.00	1.00	8/16/2004	"no invert growth
at all"	1197 20.00 "BARE"	"Bare"			
28	"Estero de Limantour"	136.00	1.00	8/16/2004	"no invert growth
at all"	1198 21.00 "BARE"	"Bare"			
28	"Estero de Limantour"	136.00	1.00	8/16/2004	"no invert growth
at all"	1199 22.00 "BARE"	"Bare"			
28	"Estero de Limantour"	136.00	1.00	8/16/2004	"no invert growth
at all"	1200 23.00 "BARE"	"Bare"			
28	"Estero de Limantour"	136.00	1.00	8/16/2004	"no invert growth
at all"	1201 24.00 "BARE"	"Bare"			
28	"Estero de Limantour"	136.00	1.00	8/16/2004	"no invert growth
at all"	1202 25.00 "BARE"	"Bare"			
28	"Estero de Limantour"	136.00	1.00	8/16/2004	"no invert growth
at all"	1203 26.00 "BARE"	"Bare"			
28	"Estero de Limantour"	136.00	1.00	8/16/2004	"no invert growth
at all"	1204 27.00 "BARE"	"Bare"			
28	"Estero de Limantour"	136.00	1.00	8/16/2004	"no invert growth
at all"	1205 28.00 "BARE"	"Bare"			
28	"Estero de Limantour"	136.00	1.00	8/16/2004	"no invert growth
at all"	1206 29.00 "BARE"	"Bare"			
28	"Estero de Limantour"	136.00	1.00	8/16/2004	"no invert growth
at all"	1207 30.00 "BARE"	"Bare"			
28	"Estero de Limantour"	136.00	1.00	8/16/2004	"no invert growth
at all"	1208 31.00 "BARE"	"Bare"			
28	"Estero de Limantour"	136.00	1.00	8/16/2004	"no invert growth
at all"	1209 32.00 "BARE"	"Bare"			
28	"Estero de Limantour"	136.00	1.00	8/16/2004	"no invert growth
at all"	1210 33.00 "BARE"	"Bare"			
28	"Estero de Limantour"	136.00	1.00	8/16/2004	"no invert growth
at all"	1211 34.00 "BARE"	"Bare"			
28	"Estero de Limantour"	136.00	1.00	8/16/2004	"no invert growth
at all"	1212 35.00 "BARE"	"Bare"			
28	"Estero de Limantour"	136.00	1.00	8/16/2004	"no invert growth
at all"	1213 36.00 "BARE"	"Bare"			

28	"Estero de Limantour"	136.00	1.00	8/16/2004	"no invert growth
at all"	1214 37.00 "BARE"	"Bare"			
28	"Estero de Limantour"	136.00	1.00	8/16/2004	"no invert growth
at all"	1215 38.00 "BARE"	"Bare"			
28	"Estero de Limantour"	136.00	1.00	8/16/2004	"no invert growth
at all"	1216 39.00 "BARE"	"Bare"			
28	"Estero de Limantour"	136.00	1.00	8/16/2004	"no invert growth
at all"	1217 40.00 "BARE"	"Bare"			
28	"Estero de Limantour"	136.00	1.00	8/16/2004	"no invert growth
at all"	1218 41.00 "BARE"	"Bare"			
28	"Estero de Limantour"	136.00	1.00	8/16/2004	"no invert growth
at all"	1219 42.00 "BARE"	"Bare"			
28	"Estero de Limantour"	136.00	1.00	8/16/2004	"no invert growth
at all"	1220 43.00 "BARE"	"Bare"			
28	"Estero de Limantour"	136.00	1.00	8/16/2004	"no invert growth
at all"	1221 44.00 "BARE"	"Bare"			
28	"Estero de Limantour"	136.00	1.00	8/16/2004	"no invert growth
at all"	1222 45.00 "BARE"	"Bare"			
28	"Estero de Limantour"	136.00	1.00	8/16/2004	"no invert growth
at all"	1223 46.00 "BARE"	"Bare"			
28	"Estero de Limantour"	136.00	1.00	8/16/2004	"no invert growth
at all"	1224 47.00 "BARE"	"Bare"			
28	"Estero de Limantour"	136.00	1.00	8/16/2004	"no invert growth
at all"	1225 48.00 "BARE"	"Bare"			
28	"Estero de Limantour"	136.00	1.00	8/16/2004	"no invert growth
at all"	1226 49.00 "BARE"	"Bare"			
29	"Estero de Limantour"	136.00	2.00	8/16/2004	"no invert growth
at all"	1227 1.00 "BARE"	"Bare"			
29	"Estero de Limantour"	136.00	2.00	8/16/2004	"no invert growth
at all"	1228 2.00 "BARE"	"Bare"			
29	"Estero de Limantour"	136.00	2.00	8/16/2004	"no invert growth
at all"	1229 3.00 "BARE"	"Bare"			
29	"Estero de Limantour"	136.00	2.00	8/16/2004	"no invert growth
at all"	1230 4.00 "BARE"	"Bare"			
29	"Estero de Limantour"	136.00	2.00	8/16/2004	"no invert growth
at all"	1231 5.00 "BARE"	"Bare"			
29	"Estero de Limantour"	136.00	2.00	8/16/2004	"no invert growth
at all"	1232 6.00 "BALA"	"Balanus sp."			
29	"Estero de Limantour"	136.00	2.00	8/16/2004	"no invert growth
at all"	1233 7.00 "BARE"	"Bare"			
29	"Estero de Limantour"	136.00	2.00	8/16/2004	"no invert growth
at all"	1234 8.00 "BARE"	"Bare"			
29	"Estero de Limantour"	136.00	2.00	8/16/2004	"no invert growth
at all"	1235 9.00 "BARE"	"Bare"			
29	"Estero de Limantour"	136.00	2.00	8/16/2004	"no invert growth
at all"	1236 10.00 "BARE"	"Bare"			

29	"Estero de Limantour"	136.00	2.00	8/16/2004	"no invert growth
at all"	1237 11.00 "BARE"	"Bare"			
29	"Estero de Limantour"	136.00	2.00	8/16/2004	"no invert growth
at all"	1238 12.00 "BARE"	"Bare"			
29	"Estero de Limantour"	136.00	2.00	8/16/2004	"no invert growth
at all"	1239 13.00 "BARE"	"Bare"			
29	"Estero de Limantour"	136.00	2.00	8/16/2004	"no invert growth
at all"	1240 14.00 "BARE"	"Bare"			
29	"Estero de Limantour"	136.00	2.00	8/16/2004	"no invert growth
at all"	1241 15.00 "BARE"	"Bare"			
29	"Estero de Limantour"	136.00	2.00	8/16/2004	"no invert growth
at all"	1242 16.00 "BARE"	"Bare"			
29	"Estero de Limantour"	136.00	2.00	8/16/2004	"no invert growth
at all"	1243 17.00 "BARE"	"Bare"			
29	"Estero de Limantour"	136.00	2.00	8/16/2004	"no invert growth
at all"	1244 18.00 "BARE"	"Bare"			
29	"Estero de Limantour"	136.00	2.00	8/16/2004	"no invert growth
at all"	1245 19.00 "BARE"	"Bare"			
29	"Estero de Limantour"	136.00	2.00	8/16/2004	"no invert growth
at all"	1246 20.00 "BARE"	"Bare"			
29	"Estero de Limantour"	136.00	2.00	8/16/2004	"no invert growth
at all"	1247 21.00 "BARE"	"Bare"			
29	"Estero de Limantour"	136.00	2.00	8/16/2004	"no invert growth
at all"	1248 22.00 "BARE"	"Bare"			
29	"Estero de Limantour"	136.00	2.00	8/16/2004	"no invert growth
at all"	1249 23.00 "BARE"	"Bare"			
29	"Estero de Limantour"	136.00	2.00	8/16/2004	"no invert growth
at all"	1250 24.00 "BARE"	"Bare"			
29	"Estero de Limantour"	136.00	2.00	8/16/2004	"no invert growth
at all"	1251 25.00 "BARE"	"Bare"			
29	"Estero de Limantour"	136.00	2.00	8/16/2004	"no invert growth
at all"	1252 26.00 "BARE"	"Bare"			
29	"Estero de Limantour"	136.00	2.00	8/16/2004	"no invert growth
at all"	1253 27.00 "BARE"	"Bare"			
29	"Estero de Limantour"	136.00	2.00	8/16/2004	"no invert growth
at all"	1254 28.00 "BARE"	"Bare"			
29	"Estero de Limantour"	136.00	2.00	8/16/2004	"no invert growth
at all"	1255 29.00 "BARE"	"Bare"			
29	"Estero de Limantour"	136.00	2.00	8/16/2004	"no invert growth
at all"	1256 30.00 "BARE"	"Bare"			
29	"Estero de Limantour"	136.00	2.00	8/16/2004	"no invert growth
at all"	1257 31.00 "BARE"	"Bare"			
29	"Estero de Limantour"	136.00	2.00	8/16/2004	"no invert growth
at all"	1258 32.00 "BARE"	"Bare"			
29	"Estero de Limantour"	136.00	2.00	8/16/2004	"no invert growth
at all"	1259 33.00 "BARE"	"Bare"			

29	"Estero de Limantour"	136.00	2.00	8/16/2004	"no invert growth
at all"	1260 34.00 "BARE"	"Bare"			
29	"Estero de Limantour"	136.00	2.00	8/16/2004	"no invert growth
at all"	1261 35.00 "BARE"	"Bare"			
29	"Estero de Limantour"	136.00	2.00	8/16/2004	"no invert growth
at all"	1262 36.00 "BARE"	"Bare"			
29	"Estero de Limantour"	136.00	2.00	8/16/2004	"no invert growth
at all"	1263 37.00 "BARE"	"Bare"			
29	"Estero de Limantour"	136.00	2.00	8/16/2004	"no invert growth
at all"	1264 38.00 "BARE"	"Bare"			
29	"Estero de Limantour"	136.00	2.00	8/16/2004	"no invert growth
at all"	1265 39.00 "BARE"	"Bare"			
29	"Estero de Limantour"	136.00	2.00	8/16/2004	"no invert growth
at all"	1266 40.00 "BARE"	"Bare"			
29	"Estero de Limantour"	136.00	2.00	8/16/2004	"no invert growth
at all"	1267 41.00 "BARE"	"Bare"			
29	"Estero de Limantour"	136.00	2.00	8/16/2004	"no invert growth
at all"	1268 42.00 "BARE"	"Bare"			
29	"Estero de Limantour"	136.00	2.00	8/16/2004	"no invert growth
at all"	1269 43.00 "BARE"	"Bare"			
29	"Estero de Limantour"	136.00	2.00	8/16/2004	"no invert growth
at all"	1270 44.00 "BARE"	"Bare"			
29	"Estero de Limantour"	136.00	2.00	8/16/2004	"no invert growth
at all"	1271 45.00 "BARE"	"Bare"			
29	"Estero de Limantour"	136.00	2.00	8/16/2004	"no invert growth
at all"	1272 46.00 "BARE"	"Bare"			
29	"Estero de Limantour"	136.00	2.00	8/16/2004	"no invert growth
at all"	1273 47.00 "BARE"	"Bare"			
29	"Estero de Limantour"	136.00	2.00	8/16/2004	"no invert growth
at all"	1274 48.00 "BARE"	"Bare"			
29	"Estero de Limantour"	136.00	2.00	8/16/2004	"no invert growth
at all"	1275 49.00 "BARE"	"Bare"			
30	"Estero de Limantour"	136.00	3.00	8/16/2004	"no invert growth
at all"	1276 1.00 "BARE"	"Bare"			
30	"Estero de Limantour"	136.00	3.00	8/16/2004	"no invert growth
at all"	1277 2.00 "BARE"	"Bare"			
30	"Estero de Limantour"	136.00	3.00	8/16/2004	"no invert growth
at all"	1278 3.00 "BARE"	"Bare"			
30	"Estero de Limantour"	136.00	3.00	8/16/2004	"no invert growth
at all"	1279 4.00 "BARE"	"Bare"			
30	"Estero de Limantour"	136.00	3.00	8/16/2004	"no invert growth
at all"	1280 5.00 "BARE"	"Bare"			
30	"Estero de Limantour"	136.00	3.00	8/16/2004	"no invert growth
at all"	1281 6.00 "BALA"	"Balanus sp."			
30	"Estero de Limantour"	136.00	3.00	8/16/2004	"no invert growth
at all"	1282 7.00 "BARE"	"Bare"			

30	"Estero de Limantour"	136.00	3.00	8/16/2004	"no invert growth
at all"	1283 8.00 "BARE"	"Bare"			
30	"Estero de Limantour"	136.00	3.00	8/16/2004	"no invert growth
at all"	1284 9.00 "BARE"	"Bare"			
30	"Estero de Limantour"	136.00	3.00	8/16/2004	"no invert growth
at all"	1285 10.00 "BARE"	"Bare"			
30	"Estero de Limantour"	136.00	3.00	8/16/2004	"no invert growth
at all"	1286 11.00 "BARE"	"Bare"			
30	"Estero de Limantour"	136.00	3.00	8/16/2004	"no invert growth
at all"	1287 12.00 "BARE"	"Bare"			
30	"Estero de Limantour"	136.00	3.00	8/16/2004	"no invert growth
at all"	1288 13.00 "BARE"	"Bare"			
30	"Estero de Limantour"	136.00	3.00	8/16/2004	"no invert growth
at all"	1289 14.00 "BARE"	"Bare"			
30	"Estero de Limantour"	136.00	3.00	8/16/2004	"no invert growth
at all"	1290 15.00 "BARE"	"Bare"			
30	"Estero de Limantour"	136.00	3.00	8/16/2004	"no invert growth
at all"	1291 16.00 "BARE"	"Bare"			
30	"Estero de Limantour"	136.00	3.00	8/16/2004	"no invert growth
at all"	1292 17.00 "BARE"	"Bare"			
30	"Estero de Limantour"	136.00	3.00	8/16/2004	"no invert growth
at all"	1293 18.00 "BARE"	"Bare"			
30	"Estero de Limantour"	136.00	3.00	8/16/2004	"no invert growth
at all"	1294 19.00 "BARE"	"Bare"			
30	"Estero de Limantour"	136.00	3.00	8/16/2004	"no invert growth
at all"	1295 20.00 "BARE"	"Bare"			
30	"Estero de Limantour"	136.00	3.00	8/16/2004	"no invert growth
at all"	1296 21.00 "BARE"	"Bare"			
30	"Estero de Limantour"	136.00	3.00	8/16/2004	"no invert growth
at all"	1297 22.00 "BARE"	"Bare"			
30	"Estero de Limantour"	136.00	3.00	8/16/2004	"no invert growth
at all"	1298 23.00 "BARE"	"Bare"			
30	"Estero de Limantour"	136.00	3.00	8/16/2004	"no invert growth
at all"	1299 24.00 "BARE"	"Bare"			
30	"Estero de Limantour"	136.00	3.00	8/16/2004	"no invert growth
at all"	1300 25.00 "BARE"	"Bare"			
30	"Estero de Limantour"	136.00	3.00	8/16/2004	"no invert growth
at all"	1301 26.00 "BARE"	"Bare"			
30	"Estero de Limantour"	136.00	3.00	8/16/2004	"no invert growth
at all"	1302 27.00 "BARE"	"Bare"			
30	"Estero de Limantour"	136.00	3.00	8/16/2004	"no invert growth
at all"	1303 28.00 "BARE"	"Bare"			
30	"Estero de Limantour"	136.00	3.00	8/16/2004	"no invert growth
at all"	1304 29.00 "BARE"	"Bare"			
30	"Estero de Limantour"	136.00	3.00	8/16/2004	"no invert growth
at all"	1305 30.00 "BARE"	"Bare"			

30	"Estero de Limantour"	136.00	3.00	8/16/2004	"no invert growth
at all"	1306 31.00 "BARE"	"Bare"			
30	"Estero de Limantour"	136.00	3.00	8/16/2004	"no invert growth
at all"	1307 32.00 "BARE"	"Bare"			
30	"Estero de Limantour"	136.00	3.00	8/16/2004	"no invert growth
at all"	1308 33.00 "BARE"	"Bare"			
30	"Estero de Limantour"	136.00	3.00	8/16/2004	"no invert growth
at all"	1309 34.00 "BARE"	"Bare"			
30	"Estero de Limantour"	136.00	3.00	8/16/2004	"no invert growth
at all"	1310 35.00 "BARE"	"Bare"			
30	"Estero de Limantour"	136.00	3.00	8/16/2004	"no invert growth
at all"	1311 36.00 "BARE"	"Bare"			
30	"Estero de Limantour"	136.00	3.00	8/16/2004	"no invert growth
at all"	1312 37.00 "BARE"	"Bare"			
30	"Estero de Limantour"	136.00	3.00	8/16/2004	"no invert growth
at all"	1313 38.00 "BARE"	"Bare"			
30	"Estero de Limantour"	136.00	3.00	8/16/2004	"no invert growth
at all"	1314 39.00 "BARE"	"Bare"			
30	"Estero de Limantour"	136.00	3.00	8/16/2004	"no invert growth
at all"	1315 40.00 "BARE"	"Bare"			
30	"Estero de Limantour"	136.00	3.00	8/16/2004	"no invert growth
at all"	1316 41.00 "BARE"	"Bare"			
30	"Estero de Limantour"	136.00	3.00	8/16/2004	"no invert growth
at all"	1317 42.00 "BARE"	"Bare"			
30	"Estero de Limantour"	136.00	3.00	8/16/2004	"no invert growth
at all"	1318 43.00 "BARE"	"Bare"			
30	"Estero de Limantour"	136.00	3.00	8/16/2004	"no invert growth
at all"	1319 44.00 "BARE"	"Bare"			
30	"Estero de Limantour"	136.00	3.00	8/16/2004	"no invert growth
at all"	1320 45.00 "BARE"	"Bare"			
30	"Estero de Limantour"	136.00	3.00	8/16/2004	"no invert growth
at all"	1321 46.00 "BARE"	"Bare"			
30	"Estero de Limantour"	136.00	3.00	8/16/2004	"no invert growth
at all"	1322 47.00 "BARE"	"Bare"			
30	"Estero de Limantour"	136.00	3.00	8/16/2004	"no invert growth
at all"	1323 48.00 "BARE"	"Bare"			
30	"Estero de Limantour"	136.00	3.00	8/16/2004	"no invert growth
at all"	1324 49.00 "BARE"	"Bare"			
31	"Drakes Estero"	5.00	"Rack"1.00	8/16/2004	"bushy growth of Bugula and Obelia covering much of plate, but not surface cover"
				1325	1.00 "SCUN"
	"Schizoporella unicornis"				
31	"Drakes Estero"	5.00	"Rack"1.00	8/16/2004	"bushy growth of Bugula and Obelia covering much of plate, but not surface cover"
				1326	2.00 "SCUN"
	"Schizoporella unicornis"				

31	"Drakes Estero"	5.00	"Rack"1.00	8/16/2004	"bushy growth of Bugula and Obelia covering much of plate, but not surface cover" 1327	3.00	"WASU"	"Watersipora subtorquata"
31	"Drakes Estero"	5.00	"Rack"1.00	8/16/2004	"bushy growth of Bugula and Obelia covering much of plate, but not surface cover" 1328	4.00	"WASU"	"Watersipora subtorquata"
31	"Drakes Estero"	5.00	"Rack"1.00	8/16/2004	"bushy growth of Bugula and Obelia covering much of plate, but not surface cover" 1329	5.00	"SCUN"	"Schizoporella unicornis"
31	"Drakes Estero"	5.00	"Rack"1.00	8/16/2004	"bushy growth of Bugula and Obelia covering much of plate, but not surface cover" 1330	6.00	"SCUN"	"Schizoporella unicornis"
31	"Drakes Estero"	5.00	"Rack"1.00	8/16/2004	"bushy growth of Bugula and Obelia covering much of plate, but not surface cover" 1331	7.00	"BOTRUS"	"Botryllus sp."
31	"Drakes Estero"	5.00	"Rack"1.00	8/16/2004	"bushy growth of Bugula and Obelia covering much of plate, but not surface cover" 1332	8.00	"SCUN"	"Schizoporella unicornis"
31	"Drakes Estero"	5.00	"Rack"1.00	8/16/2004	"bushy growth of Bugula and Obelia covering much of plate, but not surface cover" 1333	9.00	"SCUN"	"Schizoporella unicornis"
31	"Drakes Estero"	5.00	"Rack"1.00	8/16/2004	"bushy growth of Bugula and Obelia covering much of plate, but not surface cover" 1334	10.00	"SCUN"	"Schizoporella unicornis"
31	"Drakes Estero"	5.00	"Rack"1.00	8/16/2004	"bushy growth of Bugula and Obelia covering much of plate, but not surface cover" 1335	11.00	"SCUN"	"Schizoporella unicornis"
31	"Drakes Estero"	5.00	"Rack"1.00	8/16/2004	"bushy growth of Bugula and Obelia covering much of plate, but not surface cover" 1336	12.00	"SCUN"	"Schizoporella unicornis"
31	"Drakes Estero"	5.00	"Rack"1.00	8/16/2004	"bushy growth of Bugula and Obelia covering much of plate, but not surface cover" 1337	13.00	"SCUN"	"Schizoporella unicornis"
31	"Drakes Estero"	5.00	"Rack"1.00	8/16/2004	"bushy growth of Bugula and Obelia covering much of plate, but not surface cover" 1338	14.00	"WASU"	"Watersipora subtorquata"
31	"Drakes Estero"	5.00	"Rack"1.00	8/16/2004	"bushy growth of Bugula and Obelia covering much of plate, but not surface cover" 1339	15.00	"BARE"	"Bare"
31	"Drakes Estero"	5.00	"Rack"1.00	8/16/2004	"bushy growth of Bugula and Obelia covering much of plate, but not surface cover" 1340	16.00	"SCUN"	"Schizoporella unicornis"
31	"Drakes Estero"	5.00	"Rack"1.00	8/16/2004	"bushy growth of Bugula and Obelia covering much of plate, but not surface cover" 1341	17.00	"BARE"	"Bare"
31	"Drakes Estero"	5.00	"Rack"1.00	8/16/2004	"bushy growth of Bugula and Obelia covering much of plate, but not surface cover" 1342	18.00	"SCUN"	"Schizoporella unicornis"

31	"Drakes Estero"	5.00	"Rack"1.00	8/16/2004	"bushy growth of Bugula and Obelia covering much of plate, but not surface cover"	1343	19.00	"SCUN"
	"Schizoporella unicornis"							
31	"Drakes Estero"	5.00	"Rack"1.00	8/16/2004	"bushy growth of Bugula and Obelia covering much of plate, but not surface cover"	1344	20.00	"SCUN"
	"Schizoporella unicornis"							
31	"Drakes Estero"	5.00	"Rack"1.00	8/16/2004	"bushy growth of Bugula and Obelia covering much of plate, but not surface cover"	1345	21.00	"SCUN"
	"Schizoporella unicornis"							
31	"Drakes Estero"	5.00	"Rack"1.00	8/16/2004	"bushy growth of Bugula and Obelia covering much of plate, but not surface cover"	1346	22.00	"BARE" "Bare"
31	"Drakes Estero"	5.00	"Rack"1.00	8/16/2004	"bushy growth of Bugula and Obelia covering much of plate, but not surface cover"	1347	23.00	"SCUN"
	"Schizoporella unicornis"							
31	"Drakes Estero"	5.00	"Rack"1.00	8/16/2004	"bushy growth of Bugula and Obelia covering much of plate, but not surface cover"	1348	24.00	"BOTRUS" "Botryllus sp."
31	"Drakes Estero"	5.00	"Rack"1.00	8/16/2004	"bushy growth of Bugula and Obelia covering much of plate, but not surface cover"	1349	25.00	"SCUN"
	"Schizoporella unicornis"							
31	"Drakes Estero"	5.00	"Rack"1.00	8/16/2004	"bushy growth of Bugula and Obelia covering much of plate, but not surface cover"	1350	26.00	"SCUN"
	"Schizoporella unicornis"							
31	"Drakes Estero"	5.00	"Rack"1.00	8/16/2004	"bushy growth of Bugula and Obelia covering much of plate, but not surface cover"	1351	27.00	"BARE" "Bare"
31	"Drakes Estero"	5.00	"Rack"1.00	8/16/2004	"bushy growth of Bugula and Obelia covering much of plate, but not surface cover"	1352	28.00	"SCUN"
	"Schizoporella unicornis"							
31	"Drakes Estero"	5.00	"Rack"1.00	8/16/2004	"bushy growth of Bugula and Obelia covering much of plate, but not surface cover"	1353	29.00	"BARE" "Bare"
31	"Drakes Estero"	5.00	"Rack"1.00	8/16/2004	"bushy growth of Bugula and Obelia covering much of plate, but not surface cover"	1354	30.00	"WASU"
	"Watersipora subtorquata"							
31	"Drakes Estero"	5.00	"Rack"1.00	8/16/2004	"bushy growth of Bugula and Obelia covering much of plate, but not surface cover"	1355	31.00	"OBEL" "Obelia sp."
31	"Drakes Estero"	5.00	"Rack"1.00	8/16/2004	"bushy growth of Bugula and Obelia covering much of plate, but not surface cover"	1356	32.00	"OBEL" "Obelia sp."
31	"Drakes Estero"	5.00	"Rack"1.00	8/16/2004	"bushy growth of Bugula and Obelia covering much of plate, but not surface cover"	1357	33.00	"SCUN"
	"Schizoporella unicornis"							
31	"Drakes Estero"	5.00	"Rack"1.00	8/16/2004	"bushy growth of Bugula and Obelia covering much of plate, but not surface cover"	1358	34.00	"SCUN"
	"Schizoporella unicornis"							
31	"Drakes Estero"	5.00	"Rack"1.00	8/16/2004	"bushy growth of Bugula and Obelia covering much of plate, but not surface cover"	1359	35.00	"WASU"
	"Watersipora subtorquata"							



31	"Drakes Estero"	5.00	"Rack"1.00	8/16/2004	"bushy growth of Bugula and Obelia covering much of plate, but not surface cover"	1360	36.00	"WASU"
	"Watersipora subtorquata"							
31	"Drakes Estero"	5.00	"Rack"1.00	8/16/2004	"bushy growth of Bugula and Obelia covering much of plate, but not surface cover"	1361	37.00	"WASU"
	"Watersipora subtorquata"							
31	"Drakes Estero"	5.00	"Rack"1.00	8/16/2004	"bushy growth of Bugula and Obelia covering much of plate, but not surface cover"	1362	38.00	"WASU"
	"Watersipora subtorquata"							
31	"Drakes Estero"	5.00	"Rack"1.00	8/16/2004	"bushy growth of Bugula and Obelia covering much of plate, but not surface cover"	1363	39.00	"WASU"
	"Watersipora subtorquata"							
31	"Drakes Estero"	5.00	"Rack"1.00	8/16/2004	"bushy growth of Bugula and Obelia covering much of plate, but not surface cover"	1364	40.00	"SCUN"
	"Schizoporella unicornis"							
31	"Drakes Estero"	5.00	"Rack"1.00	8/16/2004	"bushy growth of Bugula and Obelia covering much of plate, but not surface cover"	1365	41.00	"SCUN"
	"Schizoporella unicornis"							
31	"Drakes Estero"	5.00	"Rack"1.00	8/16/2004	"bushy growth of Bugula and Obelia covering much of plate, but not surface cover"	1366	42.00	"WASU"
	"Watersipora subtorquata"							
31	"Drakes Estero"	5.00	"Rack"1.00	8/16/2004	"bushy growth of Bugula and Obelia covering much of plate, but not surface cover"	1367	43.00	"WASU"
	"Watersipora subtorquata"							
31	"Drakes Estero"	5.00	"Rack"1.00	8/16/2004	"bushy growth of Bugula and Obelia covering much of plate, but not surface cover"	1368	44.00	"WASU"
	"Watersipora subtorquata"							
31	"Drakes Estero"	5.00	"Rack"1.00	8/16/2004	"bushy growth of Bugula and Obelia covering much of plate, but not surface cover"	1369	45.00	"WASU"
	"Watersipora subtorquata"							
31	"Drakes Estero"	5.00	"Rack"1.00	8/16/2004	"bushy growth of Bugula and Obelia covering much of plate, but not surface cover"	1370	46.00	"WASU"
	"Watersipora subtorquata"							
31	"Drakes Estero"	5.00	"Rack"1.00	8/16/2004	"bushy growth of Bugula and Obelia covering much of plate, but not surface cover"	1371	47.00	"OBEL" "Obelia sp."
31	"Drakes Estero"	5.00	"Rack"1.00	8/16/2004	"bushy growth of Bugula and Obelia covering much of plate, but not surface cover"	1372	48.00	"SCUN"
	"Schizoporella unicornis"							
31	"Drakes Estero"	5.00	"Rack"1.00	8/16/2004	"bushy growth of Bugula and Obelia covering much of plate, but not surface cover"	1373	49.00	"SCUN"
	"Schizoporella unicornis"							
32	"Drakes Estero"	5.00	"Rack"2.00	8/16/2004	"bushy growth of Bugula and Obelia covering 75% of plate, but less surface cover"	1374	1.00	"OBEL" "Obelia sp."
32	"Drakes Estero"	5.00	"Rack"2.00	8/16/2004	"bushy growth of Bugula and Obelia covering 75% of plate, but less surface cover"	1375	2.00	"OBEL" "Obelia sp."

32	"Drakes Estero"	5.00	"Rack"2.00	8/16/2004	"bushy growth of Bugula and Obelia covering 75% of plate, but less surface cover"	1376	3.00	"WASU"
	"Watersipora subtorquata"							
32	"Drakes Estero"	5.00	"Rack"2.00	8/16/2004	"bushy growth of Bugula and Obelia covering 75% of plate, but less surface cover"	1377	4.00	"SCUN"
	"Schizoporella unicornis"							
32	"Drakes Estero"	5.00	"Rack"2.00	8/16/2004	"bushy growth of Bugula and Obelia covering 75% of plate, but less surface cover"	1378	5.00	"SCUN"
	"Schizoporella unicornis"							
32	"Drakes Estero"	5.00	"Rack"2.00	8/16/2004	"bushy growth of Bugula and Obelia covering 75% of plate, but less surface cover"	1379	6.00	"WASU"
	"Watersipora subtorquata"							
32	"Drakes Estero"	5.00	"Rack"2.00	8/16/2004	"bushy growth of Bugula and Obelia covering 75% of plate, but less surface cover"	1380	7.00	"BOTROI"
	"Botrylloides sp."							
32	"Drakes Estero"	5.00	"Rack"2.00	8/16/2004	"bushy growth of Bugula and Obelia covering 75% of plate, but less surface cover"	1381	8.00	"OBEL" "Obelia sp."
32	"Drakes Estero"	5.00	"Rack"2.00	8/16/2004	"bushy growth of Bugula and Obelia covering 75% of plate, but less surface cover"	1382	9.00	"OBEL" "Obelia sp."
32	"Drakes Estero"	5.00	"Rack"2.00	8/16/2004	"bushy growth of Bugula and Obelia covering 75% of plate, but less surface cover"	1383	10.00	"SCUN"
	"Schizoporella unicornis"							
32	"Drakes Estero"	5.00	"Rack"2.00	8/16/2004	"bushy growth of Bugula and Obelia covering 75% of plate, but less surface cover"	1384	11.00	"SCUN"
	"Schizoporella unicornis"							
32	"Drakes Estero"	5.00	"Rack"2.00	8/16/2004	"bushy growth of Bugula and Obelia covering 75% of plate, but less surface cover"	1385	12.00	"SCUN"
	"Schizoporella unicornis"							
32	"Drakes Estero"	5.00	"Rack"2.00	8/16/2004	"bushy growth of Bugula and Obelia covering 75% of plate, but less surface cover"	1386	13.00	"BARE" "Bare"
32	"Drakes Estero"	5.00	"Rack"2.00	8/16/2004	"bushy growth of Bugula and Obelia covering 75% of plate, but less surface cover"	1387	14.00	"BUNE" "Bugula neritina"
32	"Drakes Estero"	5.00	"Rack"2.00	8/16/2004	"bushy growth of Bugula and Obelia covering 75% of plate, but less surface cover"	1388	15.00	"OBEL" "Obelia sp."
32	"Drakes Estero"	5.00	"Rack"2.00	8/16/2004	"bushy growth of Bugula and Obelia covering 75% of plate, but less surface cover"	1389	16.00	"WASU"
	"Watersipora subtorquata"							
32	"Drakes Estero"	5.00	"Rack"2.00	8/16/2004	"bushy growth of Bugula and Obelia covering 75% of plate, but less surface cover"	1390	17.00	"SCUN"
	"Schizoporella unicornis"							
32	"Drakes Estero"	5.00	"Rack"2.00	8/16/2004	"bushy growth of Bugula and Obelia covering 75% of plate, but less surface cover"	1391	18.00	"OBEL" "Obelia sp."
32	"Drakes Estero"	5.00	"Rack"2.00	8/16/2004	"bushy growth of Bugula and Obelia covering 75% of plate, but less surface cover"	1392	19.00	"OBEL" "Obelia sp."

32	"Drakes Estero"	5.00	"Rack"2.00	8/16/2004	"bushy growth of Bugula and Obelia covering 75% of plate, but less surface cover"	1393	20.00	"OBEL"	"Obelia sp."
32	"Drakes Estero"	5.00	"Rack"2.00	8/16/2004	"bushy growth of Bugula and Obelia covering 75% of plate, but less surface cover"	1394	21.00	"BUNE"	"Bugula neritina"
32	"Drakes Estero"	5.00	"Rack"2.00	8/16/2004	"bushy growth of Bugula and Obelia covering 75% of plate, but less surface cover"	1395	22.00	"DIAL"	"Didemnum albidum"
32	"Drakes Estero"	5.00	"Rack"2.00	8/16/2004	"bushy growth of Bugula and Obelia covering 75% of plate, but less surface cover"	1396	23.00	"WASU"	"Watersipora subtorquata"
32	"Drakes Estero"	5.00	"Rack"2.00	8/16/2004	"bushy growth of Bugula and Obelia covering 75% of plate, but less surface cover"	1397	24.00	"WASU"	"Watersipora subtorquata"
32	"Drakes Estero"	5.00	"Rack"2.00	8/16/2004	"bushy growth of Bugula and Obelia covering 75% of plate, but less surface cover"	1398	25.00	"OBEL"	"Obelia sp."
32	"Drakes Estero"	5.00	"Rack"2.00	8/16/2004	"bushy growth of Bugula and Obelia covering 75% of plate, but less surface cover"	1399	26.00	"OBEL"	"Obelia sp."
32	"Drakes Estero"	5.00	"Rack"2.00	8/16/2004	"bushy growth of Bugula and Obelia covering 75% of plate, but less surface cover"	1400	27.00	"BARE"	"Bare"
32	"Drakes Estero"	5.00	"Rack"2.00	8/16/2004	"bushy growth of Bugula and Obelia covering 75% of plate, but less surface cover"	1401	28.00	"BARE"	"Bare"
32	"Drakes Estero"	5.00	"Rack"2.00	8/16/2004	"bushy growth of Bugula and Obelia covering 75% of plate, but less surface cover"	1402	29.00	"OBEL"	"Obelia sp."
32	"Drakes Estero"	5.00	"Rack"2.00	8/16/2004	"bushy growth of Bugula and Obelia covering 75% of plate, but less surface cover"	1403	30.00	"OBEL"	"Obelia sp."
32	"Drakes Estero"	5.00	"Rack"2.00	8/16/2004	"bushy growth of Bugula and Obelia covering 75% of plate, but less surface cover"	1404	31.00	"OBEL"	"Obelia sp."
32	"Drakes Estero"	5.00	"Rack"2.00	8/16/2004	"bushy growth of Bugula and Obelia covering 75% of plate, but less surface cover"	1405	32.00	"OBEL"	"Obelia sp."
32	"Drakes Estero"	5.00	"Rack"2.00	8/16/2004	"bushy growth of Bugula and Obelia covering 75% of plate, but less surface cover"	1406	33.00	"OBEL"	"Obelia sp."
32	"Drakes Estero"	5.00	"Rack"2.00	8/16/2004	"bushy growth of Bugula and Obelia covering 75% of plate, but less surface cover"	1407	34.00	"SCUN"	"Schizoporella unicornis"
32	"Drakes Estero"	5.00	"Rack"2.00	8/16/2004	"bushy growth of Bugula and Obelia covering 75% of plate, but less surface cover"	1408	35.00	"SCUN"	"Schizoporella unicornis"
32	"Drakes Estero"	5.00	"Rack"2.00	8/16/2004	"bushy growth of Bugula and Obelia covering 75% of plate, but less surface cover"	1409	36.00	"WASU"	"Watersipora subtorquata"
32	"Drakes Estero"	5.00	"Rack"2.00	8/16/2004	"bushy growth of Bugula and Obelia covering 75% of plate, but less surface cover"	1410	37.00	"WASU"	"Watersipora subtorquata"
32	"Drakes Estero"	5.00	"Rack"2.00	8/16/2004	"bushy growth of Bugula and Obelia covering 75% of plate, but less surface cover"	1411	38.00	"OBEL"	"Obelia sp."

32	"Drakes Estero"	5.00	"Rack"2.00	8/16/2004	"bushy growth of Bugula and Obelia covering 75% of plate, but less surface cover"	1412	39.00	"SCUN"	
	"Schizoporella unicornis"								
32	"Drakes Estero"	5.00	"Rack"2.00	8/16/2004	"bushy growth of Bugula and Obelia covering 75% of plate, but less surface cover"	1413	40.00	"BARE" "Bare"	
32	"Drakes Estero"	5.00	"Rack"2.00	8/16/2004	"bushy growth of Bugula and Obelia covering 75% of plate, but less surface cover"	1414	41.00	"SCUN"	
	"Schizoporella unicornis"								
32	"Drakes Estero"	5.00	"Rack"2.00	8/16/2004	"bushy growth of Bugula and Obelia covering 75% of plate, but less surface cover"	1415	42.00	"BARE" "Bare"	
32	"Drakes Estero"	5.00	"Rack"2.00	8/16/2004	"bushy growth of Bugula and Obelia covering 75% of plate, but less surface cover"	1416	43.00	"OBEL" "Obelia sp."	
32	"Drakes Estero"	5.00	"Rack"2.00	8/16/2004	"bushy growth of Bugula and Obelia covering 75% of plate, but less surface cover"	1417	44.00	"WASU"	
	"Watersipora subtorquata"								
32	"Drakes Estero"	5.00	"Rack"2.00	8/16/2004	"bushy growth of Bugula and Obelia covering 75% of plate, but less surface cover"	1418	45.00	"WASU"	
	"Watersipora subtorquata"								
32	"Drakes Estero"	5.00	"Rack"2.00	8/16/2004	"bushy growth of Bugula and Obelia covering 75% of plate, but less surface cover"	1419	46.00	"BARE" "Bare"	
32	"Drakes Estero"	5.00	"Rack"2.00	8/16/2004	"bushy growth of Bugula and Obelia covering 75% of plate, but less surface cover"	1420	47.00	"SCUN"	
	"Schizoporella unicornis"								
32	"Drakes Estero"	5.00	"Rack"2.00	8/16/2004	"bushy growth of Bugula and Obelia covering 75% of plate, but less surface cover"	1421	48.00	"OBEL" "Obelia sp."	
32	"Drakes Estero"	5.00	"Rack"2.00	8/16/2004	"bushy growth of Bugula and Obelia covering 75% of plate, but less surface cover"	1422	49.00	"BARE" "Bare"	
33	"Drakes Estero"	5.00	"Rack"3.00	8/16/2004	"bushy growth of Bugula and Obelia covering 30% of plate, but less surface cover"	1423	1.00	"WASU"	
	"Watersipora subtorquata"								
33	"Drakes Estero"	5.00	"Rack"3.00	8/16/2004	"bushy growth of Bugula and Obelia covering 30% of plate, but less surface cover"	1424	2.00	"WASU"	
	"Watersipora subtorquata"								
33	"Drakes Estero"	5.00	"Rack"3.00	8/16/2004	"bushy growth of Bugula and Obelia covering 30% of plate, but less surface cover"	1425	3.00	"SCUN"	
	"Schizoporella unicornis"								
33	"Drakes Estero"	5.00	"Rack"3.00	8/16/2004	"bushy growth of Bugula and Obelia covering 30% of plate, but less surface cover"	1426	4.00	"SCUN"	
	"Schizoporella unicornis"								
33	"Drakes Estero"	5.00	"Rack"3.00	8/16/2004	"bushy growth of Bugula and Obelia covering 30% of plate, but less surface cover"	1427	5.00	"BARE" "Bare"	
33	"Drakes Estero"	5.00	"Rack"3.00	8/16/2004	"bushy growth of Bugula and Obelia covering 30% of plate, but less surface cover"	1428	6.00	"WASU"	
	"Watersipora subtorquata"								

33	"Drakes Estero"	5.00	"Rack"3.00	8/16/2004	"bushy growth of Bugula and Obelia covering 30% of plate, but less surface cover"	1429	7.00	"SCUN"
	"Schizoporella unicornis"							
33	"Drakes Estero"	5.00	"Rack"3.00	8/16/2004	"bushy growth of Bugula and Obelia covering 30% of plate, but less surface cover"	1430	8.00	"WASU"
	"Watersipora subtorquata"							
33	"Drakes Estero"	5.00	"Rack"3.00	8/16/2004	"bushy growth of Bugula and Obelia covering 30% of plate, but less surface cover"	1431	9.00	"WASU"
	"Watersipora subtorquata"							
33	"Drakes Estero"	5.00	"Rack"3.00	8/16/2004	"bushy growth of Bugula and Obelia covering 30% of plate, but less surface cover"	1432	10.00	"WASU"
	"Watersipora subtorquata"							
33	"Drakes Estero"	5.00	"Rack"3.00	8/16/2004	"bushy growth of Bugula and Obelia covering 30% of plate, but less surface cover"	1433	11.00	"BARE" "Bare"
33	"Drakes Estero"	5.00	"Rack"3.00	8/16/2004	"bushy growth of Bugula and Obelia covering 30% of plate, but less surface cover"	1434	12.00	"WASU"
	"Watersipora subtorquata"							
33	"Drakes Estero"	5.00	"Rack"3.00	8/16/2004	"bushy growth of Bugula and Obelia covering 30% of plate, but less surface cover"	1435	13.00	"WASU"
	"Watersipora subtorquata"							
33	"Drakes Estero"	5.00	"Rack"3.00	8/16/2004	"bushy growth of Bugula and Obelia covering 30% of plate, but less surface cover"	1436	14.00	"WASU"
	"Watersipora subtorquata"							
33	"Drakes Estero"	5.00	"Rack"3.00	8/16/2004	"bushy growth of Bugula and Obelia covering 30% of plate, but less surface cover"	1437	15.00	"WASU"
	"Watersipora subtorquata"							
33	"Drakes Estero"	5.00	"Rack"3.00	8/16/2004	"bushy growth of Bugula and Obelia covering 30% of plate, but less surface cover"	1438	16.00	"SCUN"
	"Schizoporella unicornis"							
33	"Drakes Estero"	5.00	"Rack"3.00	8/16/2004	"bushy growth of Bugula and Obelia covering 30% of plate, but less surface cover"	1439	17.00	"SCUN"
	"Schizoporella unicornis"							
33	"Drakes Estero"	5.00	"Rack"3.00	8/16/2004	"bushy growth of Bugula and Obelia covering 30% of plate, but less surface cover"	1440	18.00	"BARE" "Bare"
33	"Drakes Estero"	5.00	"Rack"3.00	8/16/2004	"bushy growth of Bugula and Obelia covering 30% of plate, but less surface cover"	1441	19.00	"BARE" "Bare"
33	"Drakes Estero"	5.00	"Rack"3.00	8/16/2004	"bushy growth of Bugula and Obelia covering 30% of plate, but less surface cover"	1442	20.00	"BOTRUS" "Botryllus sp."
33	"Drakes Estero"	5.00	"Rack"3.00	8/16/2004	"bushy growth of Bugula and Obelia covering 30% of plate, but less surface cover"	1443	21.00	"SCUN"
	"Schizoporella unicornis"							
33	"Drakes Estero"	5.00	"Rack"3.00	8/16/2004	"bushy growth of Bugula and Obelia covering 30% of plate, but less surface cover"	1444	22.00	"WASU"
	"Watersipora subtorquata"							

33	"Drakes Estero"	5.00	"Rack"3.00	8/16/2004	"bushy growth of Bugula and Obelia covering 30% of plate, but less surface cover"	1445	23.00	"WASU"
	"Watersipora subtorquata"							
33	"Drakes Estero"	5.00	"Rack"3.00	8/16/2004	"bushy growth of Bugula and Obelia covering 30% of plate, but less surface cover"	1446	24.00	"BUNE" "Bugula neritina"
33	"Drakes Estero"	5.00	"Rack"3.00	8/16/2004	"bushy growth of Bugula and Obelia covering 30% of plate, but less surface cover"	1447	25.00	"BARE" "Bare"
33	"Drakes Estero"	5.00	"Rack"3.00	8/16/2004	"bushy growth of Bugula and Obelia covering 30% of plate, but less surface cover"	1448	26.00	"SCUN"
	"Schizoporella unicornis"							
33	"Drakes Estero"	5.00	"Rack"3.00	8/16/2004	"bushy growth of Bugula and Obelia covering 30% of plate, but less surface cover"	1449	27.00	"WASU"
	"Watersipora subtorquata"							
33	"Drakes Estero"	5.00	"Rack"3.00	8/16/2004	"bushy growth of Bugula and Obelia covering 30% of plate, but less surface cover"	1450	28.00	"BUNE" "Bugula neritina"
33	"Drakes Estero"	5.00	"Rack"3.00	8/16/2004	"bushy growth of Bugula and Obelia covering 30% of plate, but less surface cover"	1451	29.00	"BOTROI"
	"Botrylloides sp."							
33	"Drakes Estero"	5.00	"Rack"3.00	8/16/2004	"bushy growth of Bugula and Obelia covering 30% of plate, but less surface cover"	1452	30.00	"WASU"
	"Watersipora subtorquata"							
33	"Drakes Estero"	5.00	"Rack"3.00	8/16/2004	"bushy growth of Bugula and Obelia covering 30% of plate, but less surface cover"	1453	31.00	"BARE" "Bare"
33	"Drakes Estero"	5.00	"Rack"3.00	8/16/2004	"bushy growth of Bugula and Obelia covering 30% of plate, but less surface cover"	1454	32.00	"BARE" "Bare"
33	"Drakes Estero"	5.00	"Rack"3.00	8/16/2004	"bushy growth of Bugula and Obelia covering 30% of plate, but less surface cover"	1455	33.00	"SCUN"
	"Schizoporella unicornis"							
33	"Drakes Estero"	5.00	"Rack"3.00	8/16/2004	"bushy growth of Bugula and Obelia covering 30% of plate, but less surface cover"	1456	34.00	"WASU"
	"Watersipora subtorquata"							
33	"Drakes Estero"	5.00	"Rack"3.00	8/16/2004	"bushy growth of Bugula and Obelia covering 30% of plate, but less surface cover"	1457	35.00	"WASU"
	"Watersipora subtorquata"							
33	"Drakes Estero"	5.00	"Rack"3.00	8/16/2004	"bushy growth of Bugula and Obelia covering 30% of plate, but less surface cover"	1458	36.00	"OBEL" "Obelia sp."
33	"Drakes Estero"	5.00	"Rack"3.00	8/16/2004	"bushy growth of Bugula and Obelia covering 30% of plate, but less surface cover"	1459	37.00	"WASU"
	"Watersipora subtorquata"							
33	"Drakes Estero"	5.00	"Rack"3.00	8/16/2004	"bushy growth of Bugula and Obelia covering 30% of plate, but less surface cover"	1460	38.00	"WASU"
	"Watersipora subtorquata"							
33	"Drakes Estero"	5.00	"Rack"3.00	8/16/2004	"bushy growth of Bugula and Obelia covering 30% of plate, but less surface cover"	1461	39.00	"BARE" "Bare"

33	"Drakes Estero"	5.00	"Rack"3.00	8/16/2004	"bushy growth of Bugula and Obelia covering 30% of plate, but less surface cover"	1462	40.00	"WASU"		
	"Watersipora subtorquata"									
33	"Drakes Estero"	5.00	"Rack"3.00	8/16/2004	"bushy growth of Bugula and Obelia covering 30% of plate, but less surface cover"	1463	41.00	"WASU"		
	"Watersipora subtorquata"									
33	"Drakes Estero"	5.00	"Rack"3.00	8/16/2004	"bushy growth of Bugula and Obelia covering 30% of plate, but less surface cover"	1464	42.00	"OBEL"	"Obelia sp."	
33	"Drakes Estero"	5.00	"Rack"3.00	8/16/2004	"bushy growth of Bugula and Obelia covering 30% of plate, but less surface cover"	1465	43.00	"BARE"	"Bare"	
33	"Drakes Estero"	5.00	"Rack"3.00	8/16/2004	"bushy growth of Bugula and Obelia covering 30% of plate, but less surface cover"	1466	44.00	"BOTRUS"	"Botryllus sp."	
33	"Drakes Estero"	5.00	"Rack"3.00	8/16/2004	"bushy growth of Bugula and Obelia covering 30% of plate, but less surface cover"	1467	45.00	"WASU"		
	"Watersipora subtorquata"									
33	"Drakes Estero"	5.00	"Rack"3.00	8/16/2004	"bushy growth of Bugula and Obelia covering 30% of plate, but less surface cover"	1468	46.00	"WASU"		
	"Watersipora subtorquata"									
33	"Drakes Estero"	5.00	"Rack"3.00	8/16/2004	"bushy growth of Bugula and Obelia covering 30% of plate, but less surface cover"	1469	47.00	"SCUN"		
	"Schizoporella unicornis"									
33	"Drakes Estero"	5.00	"Rack"3.00	8/16/2004	"bushy growth of Bugula and Obelia covering 30% of plate, but less surface cover"	1470	48.00	"WASU"		
	"Watersipora subtorquata"									
33	"Drakes Estero"	5.00	"Rack"3.00	8/16/2004	"bushy growth of Bugula and Obelia covering 30% of plate, but less surface cover"	1471	49.00	"WASU"		
	"Watersipora subtorquata"									
34	"Drakes Estero"	8.00	"Rack"1.00	8/17/2004	"no photo"	1472	1.00			
	"BUNE"	"Bugula neritina"								
34	"Drakes Estero"	8.00	"Rack"1.00	8/17/2004	"no photo"	1473	2.00			
	"BARE"	"Bare"								
34	"Drakes Estero"	8.00	"Rack"1.00	8/17/2004	"no photo"	1474	3.00			
	"BARE"	"Bare"								
34	"Drakes Estero"	8.00	"Rack"1.00	8/17/2004	"no photo"	1475	4.00			
	"BUNE"	"Bugula neritina"								
34	"Drakes Estero"	8.00	"Rack"1.00	8/17/2004	"no photo"	1476	5.00			
	"BOTROI"	"Botrylloides sp."								
34	"Drakes Estero"	8.00	"Rack"1.00	8/17/2004	"no photo"	1477	6.00			
	"BOTROI"	"Botrylloides sp."								
34	"Drakes Estero"	8.00	"Rack"1.00	8/17/2004	"no photo"	1478	7.00			
	"BUNE"	"Bugula neritina"								
34	"Drakes Estero"	8.00	"Rack"1.00	8/17/2004	"no photo"	1479	8.00			
	"BOTROI"	"Botrylloides sp."								
34	"Drakes Estero"	8.00	"Rack"1.00	8/17/2004	"no photo"	1480	9.00			
	"BUNE"	"Bugula neritina"								

34	"Drakes Estero"	8.00	"Rack"1.00	8/17/2004	"no photo"	1481	10.00
	"WASU"	"Watersipora subtorquata"					
34	"Drakes Estero"	8.00	"Rack"1.00	8/17/2004	"no photo"	1482	11.00
	"BARE"	"Bare"					
34	"Drakes Estero"	8.00	"Rack"1.00	8/17/2004	"no photo"	1483	12.00
	"BUNE"	"Bugula neritina"					
34	"Drakes Estero"	8.00	"Rack"1.00	8/17/2004	"no photo"	1484	13.00
	"BUNE"	"Bugula neritina"					
34	"Drakes Estero"	8.00	"Rack"1.00	8/17/2004	"no photo"	1485	14.00
	"BUNE"	"Bugula neritina"					
34	"Drakes Estero"	8.00	"Rack"1.00	8/17/2004	"no photo"	1486	15.00
	"BUNE"	"Bugula neritina"					
34	"Drakes Estero"	8.00	"Rack"1.00	8/17/2004	"no photo"	1487	16.00
	"BARE"	"Bare"					
34	"Drakes Estero"	8.00	"Rack"1.00	8/17/2004	"no photo"	1488	17.00
	"BOTROI"	"Botrylloides sp."					
34	"Drakes Estero"	8.00	"Rack"1.00	8/17/2004	"no photo"	1489	18.00
	"BARE"	"Bare"					
34	"Drakes Estero"	8.00	"Rack"1.00	8/17/2004	"no photo"	1490	19.00
	"BARE"	"Bare"					
34	"Drakes Estero"	8.00	"Rack"1.00	8/17/2004	"no photo"	1491	20.00
	"BARE"	"Bare"					
34	"Drakes Estero"	8.00	"Rack"1.00	8/17/2004	"no photo"	1492	21.00
	"DILA"	"Didemnum lahilei"					
34	"Drakes Estero"	8.00	"Rack"1.00	8/17/2004	"no photo"	1493	22.00
	"BUNE"	"Bugula neritina"					
34	"Drakes Estero"	8.00	"Rack"1.00	8/17/2004	"no photo"	1494	23.00
	"BUNE"	"Bugula neritina"					
34	"Drakes Estero"	8.00	"Rack"1.00	8/17/2004	"no photo"	1495	24.00
	"BOTROI"	"Botrylloides sp."					
34	"Drakes Estero"	8.00	"Rack"1.00	8/17/2004	"no photo"	1496	25.00
	"BUNE"	"Bugula neritina"					
34	"Drakes Estero"	8.00	"Rack"1.00	8/17/2004	"no photo"	1497	26.00
	"BARE"	"Bare"					
34	"Drakes Estero"	8.00	"Rack"1.00	8/17/2004	"no photo"	1498	27.00
	"DILA"	"Didemnum lahilei"					
34	"Drakes Estero"	8.00	"Rack"1.00	8/17/2004	"no photo"	1499	28.00
	"BARE"	"Bare"					
34	"Drakes Estero"	8.00	"Rack"1.00	8/17/2004	"no photo"	1500	29.00
	"BARE"	"Bare"					
34	"Drakes Estero"	8.00	"Rack"1.00	8/17/2004	"no photo"	1501	30.00
	"BUNE"	"Bugula neritina"					
34	"Drakes Estero"	8.00	"Rack"1.00	8/17/2004	"no photo"	1502	31.00
	"BARE"	"Bare"					
34	"Drakes Estero"	8.00	"Rack"1.00	8/17/2004	"no photo"	1503	32.00
	"BARE"	"Bare"					



34	"Drakes Estero"	8.00	"Rack"1.00	8/17/2004	"no photo"	1504	33.00
	"WASU"	"Watersipora subtorquata"					
34	"Drakes Estero"	8.00	"Rack"1.00	8/17/2004	"no photo"	1505	34.00
	"BOTROI"	"Botrylloides sp."					
34	"Drakes Estero"	8.00	"Rack"1.00	8/17/2004	"no photo"	1506	35.00
	"BUNE"	"Bugula neritina"					
34	"Drakes Estero"	8.00	"Rack"1.00	8/17/2004	"no photo"	1507	36.00
	"BUNE"	"Bugula neritina"					
34	"Drakes Estero"	8.00	"Rack"1.00	8/17/2004	"no photo"	1508	37.00
	"BARE"	"Bare"					
34	"Drakes Estero"	8.00	"Rack"1.00	8/17/2004	"no photo"	1509	38.00
	"BARE"	"Bare"					
34	"Drakes Estero"	8.00	"Rack"1.00	8/17/2004	"no photo"	1510	39.00
	"BARE"	"Bare"					
34	"Drakes Estero"	8.00	"Rack"1.00	8/17/2004	"no photo"	1511	40.00
	"BARE"	"Bare"					
34	"Drakes Estero"	8.00	"Rack"1.00	8/17/2004	"no photo"	1512	41.00
	"OBEL"	"Obelia sp."					
34	"Drakes Estero"	8.00	"Rack"1.00	8/17/2004	"no photo"	1513	42.00
	"BOTROI"	"Botrylloides sp."					
34	"Drakes Estero"	8.00	"Rack"1.00	8/17/2004	"no photo"	1514	43.00
	"BARE"	"Bare"					
34	"Drakes Estero"	8.00	"Rack"1.00	8/17/2004	"no photo"	1515	44.00
	"BARE"	"Bare"					
34	"Drakes Estero"	8.00	"Rack"1.00	8/17/2004	"no photo"	1516	45.00
	"BUNE"	"Bugula neritina"					
34	"Drakes Estero"	8.00	"Rack"1.00	8/17/2004	"no photo"	1517	46.00
	"BARE"	"Bare"					
34	"Drakes Estero"	8.00	"Rack"1.00	8/17/2004	"no photo"	1518	47.00
	"BARE"	"Bare"					
34	"Drakes Estero"	8.00	"Rack"1.00	8/17/2004	"no photo"	1519	48.00
	"BARE"	"Bare"					
34	"Drakes Estero"	8.00	"Rack"1.00	8/17/2004	"no photo"	1520	49.00
	"BARE"	"Bare"					
35	"Drakes Estero"	8.00	"Rack"2.00	8/17/2004	"no photo"	1521	1.00
	"SCUN"	"Schizoporella unicornis"					
35	"Drakes Estero"	8.00	"Rack"2.00	8/17/2004	"no photo"	1522	2.00
	"SCUN"	"Schizoporella unicornis"					
35	"Drakes Estero"	8.00	"Rack"2.00	8/17/2004	"no photo"	1523	3.00
	"SCUN"	"Schizoporella unicornis"					
35	"Drakes Estero"	8.00	"Rack"2.00	8/17/2004	"no photo"	1524	4.00
	"SCUN"	"Schizoporella unicornis"					
35	"Drakes Estero"	8.00	"Rack"2.00	8/17/2004	"no photo"	1525	5.00
	"BARE"	"Bare"					
35	"Drakes Estero"	8.00	"Rack"2.00	8/17/2004	"no photo"	1526	6.00
	"SPIR"	"Spirorbis sp."					

35	"Drakes Estero"	8.00	"Rack"2.00	8/17/2004	"no photo"	1527	7.00
	"BUNE"	"Bugula neritina"					
35	"Drakes Estero"	8.00	"Rack"2.00	8/17/2004	"no photo"	1528	8.00
	"SCUN"	"Schizoporella unicornis"					
35	"Drakes Estero"	8.00	"Rack"2.00	8/17/2004	"no photo"	1529	9.00
	"SCUN"	"Schizoporella unicornis"					
35	"Drakes Estero"	8.00	"Rack"2.00	8/17/2004	"no photo"	1530	10.00
	"BARE"	"Bare"					
35	"Drakes Estero"	8.00	"Rack"2.00	8/17/2004	"no photo"	1531	11.00
	"BARE"	"Bare"					
35	"Drakes Estero"	8.00	"Rack"2.00	8/17/2004	"no photo"	1532	12.00
	"BUNE"	"Bugula neritina"					
35	"Drakes Estero"	8.00	"Rack"2.00	8/17/2004	"no photo"	1533	13.00
	"BARE"	"Bare"					
35	"Drakes Estero"	8.00	"Rack"2.00	8/17/2004	"no photo"	1534	14.00
	"SPIR"	"Spirorbis sp."					
35	"Drakes Estero"	8.00	"Rack"2.00	8/17/2004	"no photo"	1535	15.00
	"SCUN"	"Schizoporella unicornis"					
35	"Drakes Estero"	8.00	"Rack"2.00	8/17/2004	"no photo"	1536	16.00
	"SCUN"	"Schizoporella unicornis"					
35	"Drakes Estero"	8.00	"Rack"2.00	8/17/2004	"no photo"	1537	17.00
	"BARE"	"Bare"					
35	"Drakes Estero"	8.00	"Rack"2.00	8/17/2004	"no photo"	1538	18.00
	"BARE"	"Bare"					
35	"Drakes Estero"	8.00	"Rack"2.00	8/17/2004	"no photo"	1539	19.00
	"BUNE"	"Bugula neritina"					
35	"Drakes Estero"	8.00	"Rack"2.00	8/17/2004	"no photo"	1540	20.00
	"BARE"	"Bare"					
35	"Drakes Estero"	8.00	"Rack"2.00	8/17/2004	"no photo"	1541	21.00
	"BOTROI"	"Botrylloides sp."					
35	"Drakes Estero"	8.00	"Rack"2.00	8/17/2004	"no photo"	1542	22.00
	"SCUN"	"Schizoporella unicornis"					
35	"Drakes Estero"	8.00	"Rack"2.00	8/17/2004	"no photo"	1543	23.00
	"BARE"	"Bare"					
35	"Drakes Estero"	8.00	"Rack"2.00	8/17/2004	"no photo"	1544	24.00
	"BUNE"	"Bugula neritina"					
35	"Drakes Estero"	8.00	"Rack"2.00	8/17/2004	"no photo"	1545	25.00
	"BARE"	"Bare"					
35	"Drakes Estero"	8.00	"Rack"2.00	8/17/2004	"no photo"	1546	26.00
	"BARE"	"Bare"					
35	"Drakes Estero"	8.00	"Rack"2.00	8/17/2004	"no photo"	1547	27.00
	"BOTROI"	"Botrylloides sp."					
35	"Drakes Estero"	8.00	"Rack"2.00	8/17/2004	"no photo"	1548	28.00
	"SPIR"	"Spirorbis sp."					
35	"Drakes Estero"	8.00	"Rack"2.00	8/17/2004	"no photo"	1549	29.00
	"SCUN"	"Schizoporella unicornis"					

35	"Drakes Estero"	8.00	"Rack"2.00	8/17/2004	"no photo"	1550	30.00
	"SCUN"	"Schizoporella unicornis"					
35	"Drakes Estero"	8.00	"Rack"2.00	8/17/2004	"no photo"	1551	31.00
	"SCUN"	"Schizoporella unicornis"					
35	"Drakes Estero"	8.00	"Rack"2.00	8/17/2004	"no photo"	1552	32.00
	"BARE"	"Bare"					
35	"Drakes Estero"	8.00	"Rack"2.00	8/17/2004	"no photo"	1553	33.00
	"BARE"	"Bare"					
35	"Drakes Estero"	8.00	"Rack"2.00	8/17/2004	"no photo"	1554	34.00
	"BARE"	"Bare"					
35	"Drakes Estero"	8.00	"Rack"2.00	8/17/2004	"no photo"	1555	35.00
	"OBEL"	"Obelia sp."					
35	"Drakes Estero"	8.00	"Rack"2.00	8/17/2004	"no photo"	1556	36.00
	"BUNE"	"Bugula neritina"					
35	"Drakes Estero"	8.00	"Rack"2.00	8/17/2004	"no photo"	1557	37.00
	"SCUN"	"Schizoporella unicornis"					
35	"Drakes Estero"	8.00	"Rack"2.00	8/17/2004	"no photo"	1558	38.00
	"SCUN"	"Schizoporella unicornis"					
35	"Drakes Estero"	8.00	"Rack"2.00	8/17/2004	"no photo"	1559	39.00
	"SCUN"	"Schizoporella unicornis"					
35	"Drakes Estero"	8.00	"Rack"2.00	8/17/2004	"no photo"	1560	40.00
	"BARE"	"Bare"					
35	"Drakes Estero"	8.00	"Rack"2.00	8/17/2004	"no photo"	1561	41.00
	"BOTROI"	"Botrylloides sp."					
35	"Drakes Estero"	8.00	"Rack"2.00	8/17/2004	"no photo"	1562	42.00
	"OBEL"	"Obelia sp."					
35	"Drakes Estero"	8.00	"Rack"2.00	8/17/2004	"no photo"	1563	43.00
	"BUNE"	"Bugula neritina"					
35	"Drakes Estero"	8.00	"Rack"2.00	8/17/2004	"no photo"	1564	44.00
	"SCUN"	"Schizoporella unicornis"					
35	"Drakes Estero"	8.00	"Rack"2.00	8/17/2004	"no photo"	1565	45.00
	"SCUN"	"Schizoporella unicornis"					
35	"Drakes Estero"	8.00	"Rack"2.00	8/17/2004	"no photo"	1566	46.00
	"SCUN"	"Schizoporella unicornis"					
35	"Drakes Estero"	8.00	"Rack"2.00	8/17/2004	"no photo"	1567	47.00
	"BARE"	"Bare"					
35	"Drakes Estero"	8.00	"Rack"2.00	8/17/2004	"no photo"	1568	48.00
	"BOTROI"	"Botrylloides sp."					
35	"Drakes Estero"	8.00	"Rack"2.00	8/17/2004	"no photo"	1569	49.00
	"OBEL"	"Obelia sp."					
36	"Drakes Estero"	8.00	"Rack"3.00	8/17/2004	"no photo"	1570	1.00
	"SCUN"	"Schizoporella unicornis"					
36	"Drakes Estero"	8.00	"Rack"3.00	8/17/2004	"no photo"	1571	2.00
	"SCUN"	"Schizoporella unicornis"					
36	"Drakes Estero"	8.00	"Rack"3.00	8/17/2004	"no photo"	1572	3.00
	"BARE"	"Bare"					

36	"Drakes Estero"	8.00	"Rack"3.00	8/17/2004	"no photo"	1573	4.00
	"BUNE"	"Bugula neritina"					
36	"Drakes Estero"	8.00	"Rack"3.00	8/17/2004	"no photo"	1574	5.00
	"BUNE"	"Bugula neritina"					
36	"Drakes Estero"	8.00	"Rack"3.00	8/17/2004	"no photo"	1575	6.00
	"BARE"	"Bare"					
36	"Drakes Estero"	8.00	"Rack"3.00	8/17/2004	"no photo"	1576	7.00
	"BARE"	"Bare"					
36	"Drakes Estero"	8.00	"Rack"3.00	8/17/2004	"no photo"	1577	8.00
	"BUNE"	"Bugula neritina"					
36	"Drakes Estero"	8.00	"Rack"3.00	8/17/2004	"no photo"	1578	9.00
	"BARE"	"Bare"					
36	"Drakes Estero"	8.00	"Rack"3.00	8/17/2004	"no photo"	1579	10.00
	"TUN1"	"unknown tunicate 1 - black and yellow"					
36	"Drakes Estero"	8.00	"Rack"3.00	8/17/2004	"no photo"	1580	11.00
	"SPIR"	"Spirorbis sp."					
36	"Drakes Estero"	8.00	"Rack"3.00	8/17/2004	"no photo"	1581	12.00
	"BARE"	"Bare"					
36	"Drakes Estero"	8.00	"Rack"3.00	8/17/2004	"no photo"	1582	13.00
	"BARE"	"Bare"					
36	"Drakes Estero"	8.00	"Rack"3.00	8/17/2004	"no photo"	1583	14.00
	"SPIR"	"Spirorbis sp."					
36	"Drakes Estero"	8.00	"Rack"3.00	8/17/2004	"no photo"	1584	15.00
	"TUN2"	"unknown tunicate 2 - dark gray"					
36	"Drakes Estero"	8.00	"Rack"3.00	8/17/2004	"no photo"	1585	16.00
	"BARE"	"Bare"					
36	"Drakes Estero"	8.00	"Rack"3.00	8/17/2004	"no photo"	1586	17.00
	"BARE"	"Bare"					
36	"Drakes Estero"	8.00	"Rack"3.00	8/17/2004	"no photo"	1587	18.00
	"BUNE"	"Bugula neritina"					
36	"Drakes Estero"	8.00	"Rack"3.00	8/17/2004	"no photo"	1588	19.00
	"SCUN"	"Schizoporella unicornis"					
36	"Drakes Estero"	8.00	"Rack"3.00	8/17/2004	"no photo"	1589	20.00
	"BARE"	"Bare"					
36	"Drakes Estero"	8.00	"Rack"3.00	8/17/2004	"no photo"	1590	21.00
	"BUNE"	"Bugula neritina"					
36	"Drakes Estero"	8.00	"Rack"3.00	8/17/2004	"no photo"	1591	22.00
	"BARE"	"Bare"					
36	"Drakes Estero"	8.00	"Rack"3.00	8/17/2004	"no photo"	1592	23.00
	"BARE"	"Bare"					
36	"Drakes Estero"	8.00	"Rack"3.00	8/17/2004	"no photo"	1593	24.00
	"BARE"	"Bare"					
36	"Drakes Estero"	8.00	"Rack"3.00	8/17/2004	"no photo"	1594	25.00
	"BARE"	"Bare"					
36	"Drakes Estero"	8.00	"Rack"3.00	8/17/2004	"no photo"	1595	26.00
	"BARE"	"Bare"					

36	"Drakes Estero" "BARE"	8.00 "Bare"	"Rack"3.00	8/17/2004	"no photo"	1596	27.00
36	"Drakes Estero" "BUNE"	8.00 "Bugula neritina"	"Rack"3.00	8/17/2004	"no photo"	1597	28.00
36	"Drakes Estero" "SCUN"	8.00 "Schizoporella unicornis"	"Rack"3.00	8/17/2004	"no photo"	1598	29.00
36	"Drakes Estero" "BARE"	8.00 "Bare"	"Rack"3.00	8/17/2004	"no photo"	1599	30.00
36	"Drakes Estero" "BARE"	8.00 "Bare"	"Rack"3.00	8/17/2004	"no photo"	1600	31.00
36	"Drakes Estero" "BARE"	8.00 "Bare"	"Rack"3.00	8/17/2004	"no photo"	1601	32.00
36	"Drakes Estero" "BARE"	8.00 "Bare"	"Rack"3.00	8/17/2004	"no photo"	1602	33.00
36	"Drakes Estero" "BARE"	8.00 "Bare"	"Rack"3.00	8/17/2004	"no photo"	1603	34.00
36	"Drakes Estero" "BARE"	8.00 "Bare"	"Rack"3.00	8/17/2004	"no photo"	1604	35.00
36	"Drakes Estero" "BUNE"	8.00 "Bugula neritina"	"Rack"3.00	8/17/2004	"no photo"	1605	36.00
36	"Drakes Estero" "BARE"	8.00 "Bare"	"Rack"3.00	8/17/2004	"no photo"	1606	37.00
36	"Drakes Estero" "BARE"	8.00 "Bare"	"Rack"3.00	8/17/2004	"no photo"	1607	38.00
36	"Drakes Estero" "BARE"	8.00 "Bare"	"Rack"3.00	8/17/2004	"no photo"	1608	39.00
36	"Drakes Estero" "BARE"	8.00 "Bare"	"Rack"3.00	8/17/2004	"no photo"	1609	40.00
36	"Drakes Estero" "BUNE"	8.00 "Bugula neritina"	"Rack"3.00	8/17/2004	"no photo"	1610	41.00
36	"Drakes Estero" "BARE"	8.00 "Bare"	"Rack"3.00	8/17/2004	"no photo"	1611	42.00
36	"Drakes Estero" "BARE"	8.00 "Bare"	"Rack"3.00	8/17/2004	"no photo"	1612	43.00
36	"Drakes Estero" "BUNE"	8.00 "Bugula neritina"	"Rack"3.00	8/17/2004	"no photo"	1613	44.00
36	"Drakes Estero" "BARE"	8.00 "Bare"	"Rack"3.00	8/17/2004	"no photo"	1614	45.00
36	"Drakes Estero" "BARE"	8.00 "Bare"	"Rack"3.00	8/17/2004	"no photo"	1615	46.00
36	"Drakes Estero" "BARE"	8.00 "Bare"	"Rack"3.00	8/17/2004	"no photo"	1616	47.00
36	"Drakes Estero" "BARE"	8.00 "Bare"	"Rack"3.00	8/17/2004	"no photo"	1617	48.00
36	"Drakes Estero" "WASU"	8.00 "Watersipora subtorquata"	"Rack"3.00	8/17/2004	"no photo"	1618	49.00

**Appendix F – Description of fouling plate samples as percent cover; this is a PC Access database file entered in the main database at Pt. Reyes National Seashore (see attached file on CD).**

"Location"	"Grid_Rack_""Rack_Away""Plate_""Expr1"	"Species"	"CountOfSpCode"
"Drakes Estero"	5.00 "Away"	1.00 "Bare" 17	34.69
"Drakes Estero"	5.00 "Away"	1.00 "Bugula neritina"	3 6.12
"Drakes Estero"	5.00 "Away"	1.00 "Schizoporella unicornis"	14 28.57
"Drakes Estero"	5.00 "Away"	1.00 "Watersipora subtorquata"	15 30.61
"Drakes Estero"	5.00 "Away"	2.00 "Bare" 23	46.93
"Drakes Estero"	5.00 "Away"	2.00 "Botrylloides sp."	3 6.12
"Drakes Estero"	5.00 "Away"	2.00 "Bugula neritina"	1 2.04
"Drakes Estero"	5.00 "Away"	2.00 "Obelia sp."	1 2.04
"Drakes Estero"	5.00 "Away"	2.00 "Schizoporella unicornis"	10 20.40
"Drakes Estero"	5.00 "Away"	2.00 "Watersipora subtorquata"	11 22.44
"Drakes Estero"	5.00 "Away"	3.00 "Didemnum lahilei"	49 100.00
"Drakes Estero"	5.00 "Rack"1.00	"Bare" 5	10.20
"Drakes Estero"	5.00 "Rack"1.00	"Botryllus sp."	2 4.08
"Drakes Estero"	5.00 "Rack"1.00	"Obelia sp."	3 6.12
"Drakes Estero"	5.00 "Rack"1.00	"Schizoporella unicornis"	25 51.02
"Drakes Estero"	5.00 "Rack"1.00	"Watersipora subtorquata"	14 28.57
"Drakes Estero"	5.00 "Rack"2.00	"Bare" 7	14.28
"Drakes Estero"	5.00 "Rack"2.00	"Botrylloides sp."	1 2.04
"Drakes Estero"	5.00 "Rack"2.00	"Bugula neritina"	2 4.08
"Drakes Estero"	5.00 "Rack"2.00	"Didemnum albidum"	1 2.04
"Drakes Estero"	5.00 "Rack"2.00	"Obelia sp."	18 36.73
"Drakes Estero"	5.00 "Rack"2.00	"Schizoporella unicornis"	11 22.44
"Drakes Estero"	5.00 "Rack"2.00	"Watersipora subtorquata"	9 18.36
"Drakes Estero"	5.00 "Rack"3.00	"Bare" 9	18.36
"Drakes Estero"	5.00 "Rack"3.00	"Botrylloides sp."	1 2.04
"Drakes Estero"	5.00 "Rack"3.00	"Botryllus sp."	2 4.08
"Drakes Estero"	5.00 "Rack"3.00	"Bugula neritina"	2 4.08
"Drakes Estero"	5.00 "Rack"3.00	"Obelia sp."	2 4.08
"Drakes Estero"	5.00 "Rack"3.00	"Schizoporella unicornis"	9 18.36
"Drakes Estero"	5.00 "Rack"3.00	"Watersipora subtorquata"	24 48.97
"Drakes Estero"	8.00 "Away"	1.00 "Bare" 34	69.38
"Drakes Estero"	8.00 "Away"	1.00 "Bugula neritina"	1 2.04
"Drakes Estero"	8.00 "Away"	1.00 "Schizoporella unicornis"	7 14.28
"Drakes Estero"	8.00 "Away"	1.00 "Spirorbis sp."	3 6.12
"Drakes Estero"	8.00 "Away"	1.00 "Watersipora subtorquata"	4 8.16
"Drakes Estero"	8.00 "Away"	2.00 "Bare" 30	61.22
"Drakes Estero"	8.00 "Away"	2.00 "Botrylloides sp."	1 2.04
"Drakes Estero"	8.00 "Away"	2.00 "Bugula neritina"	1 2.04
"Drakes Estero"	8.00 "Away"	2.00 "Schizoporella unicornis"	14 28.57

"Drakes Estero"	8.00	"Away"	2.00	"Spirorbis sp."	3	6.12	
"Drakes Estero"	8.00	"Away"	3.00	"Bare" 37	75.51		
"Drakes Estero"	8.00	"Away"	3.00	"Bugula neritina"	6	12.24	
"Drakes Estero"	8.00	"Away"	3.00	"Schizoporella unicornis"	2	4.08	
"Drakes Estero"	8.00	"Away"	3.00	"Spirorbis sp."	4	8.16	
"Drakes Estero"	8.00	"Rack"1.00		"Bare" 22	44.89		
"Drakes Estero"	8.00	"Rack"1.00		"Botrylloides sp."	7	14.28	
"Drakes Estero"	8.00	"Rack"1.00		"Bugula neritina"	15	30.61	
"Drakes Estero"	8.00	"Rack"1.00		"Didemnum lahilei"	2	4.08	
"Drakes Estero"	8.00	"Rack"1.00		"Obelia sp."	1	2.04	
"Drakes Estero"	8.00	"Rack"1.00		"Watersipora subtorquata"	2	4.08	
"Drakes Estero"	8.00	"Rack"2.00		"Bare" 15	30.61		
"Drakes Estero"	8.00	"Rack"2.00		"Botrylloides sp."	4	8.16	
"Drakes Estero"	8.00	"Rack"2.00		"Bugula neritina"	6	12.24	
"Drakes Estero"	8.00	"Rack"2.00		"Obelia sp."	3	6.12	
"Drakes Estero"	8.00	"Rack"2.00		"Schizoporella unicornis"	18	36.73	
"Drakes Estero"	8.00	"Rack"2.00		"Spirorbis sp."	3	6.12	
"Drakes Estero"	8.00	"Rack"3.00		"Bare" 31	63.26		
"Drakes Estero"	8.00	"Rack"3.00		"Bugula neritina"	9	18.36	
"Drakes Estero"	8.00	"Rack"3.00		"Schizoporella unicornis"	4	8.16	
"Drakes Estero"	8.00	"Rack"3.00		"Spirorbis sp."	2	4.08	
"Drakes Estero"	8.00	"Rack"3.00		"unknown tunicate 1 - black and yellow"	1	2.04	2.04
"Drakes Estero"	8.00	"Rack"3.00		"unknown tunicate 2 - dark gray"	1	2.04	2.04
"Drakes Estero"	8.00	"Rack"3.00		"Watersipora subtorquata"	1	2.04	
"Drakes Estero"	11.00	"Away"	1.00	"Balanus sp."38	77.55		
"Drakes Estero"	11.00	"Away"	1.00	"Bare" 11	22.44		
"Drakes Estero"	11.00	"Away"	2.00	"Balanus sp."20	40.81		
"Drakes Estero"	11.00	"Away"	2.00	"Bare" 16	32.65		
"Drakes Estero"	11.00	"Away"	2.00	"Schizoporella unicornis"	13	26.53	
"Drakes Estero"	11.00	"Away"	3.00	"Balanus sp."21	42.85		
"Drakes Estero"	11.00	"Away"	3.00	"Bare" 28	57.14		
"Drakes Estero"	11.00	"Rack"1.00		"Bare" 1	2.04		
"Drakes Estero"	11.00	"Rack"1.00		"Halichondria bowerbanki"	8	16.32	
"Drakes Estero"	11.00	"Rack"1.00		"Schizoporella unicornis"	18	36.73	
"Drakes Estero"	11.00	"Rack"1.00		"Watersipora subtorquata"	22	44.89	
"Drakes Estero"	11.00	"Rack"2.00		"Schizoporella unicornis"	24	48.97	
"Drakes Estero"	11.00	"Rack"2.00		"Watersipora subtorquata"	25	51.02	
"Drakes Estero"	11.00	"Rack"3.00		"Bare" 1	2.04		
"Drakes Estero"	11.00	"Rack"3.00		"Botrylloides sp."	38	77.55	
"Drakes Estero"	11.00	"Rack"3.00		"Schizoporella unicornis"	7	14.28	
"Drakes Estero"	11.00	"Rack"3.00		"unknown tunicate 1 - black and yellow"	2	4.08	4.08
"Drakes Estero"	11.00	"Rack"3.00		"Watersipora subtorquata"	1	2.04	
"Drakes Estero"	14.00	"Away"	1.00	"Bare" 47	95.91		
"Drakes Estero"	14.00	"Away"	1.00	"Schizoporella unicornis"	2	4.08	
"Drakes Estero"	14.00	"Away"	2.00	"Bare" 47	95.91		
"Drakes Estero"	14.00	"Away"	2.00	"Schizoporella unicornis"	2	4.08	

"Drakes Estero"	14.00	"Away"	3.00	"Bare" 48	97.95	
"Drakes Estero"	14.00	"Away"	3.00	"Schizoporella unicornis"	1	2.04
"Drakes Estero"	14.00	"Rack"1.00		"Didemnum lahilei"	49	100.00
"Drakes Estero"	14.00	"Rack"2.00		"Bare" 5	10.20	
"Drakes Estero"	14.00	"Rack"2.00		"Botrylloides sp."	30	61.22
"Drakes Estero"	14.00	"Rack"2.00		"Schizoporella unicornis"	3	6.12
"Drakes Estero"	14.00	"Rack"2.00		"unknown tunicate 1 - black and yellow"	10	20.40
"Drakes Estero"	14.00	"Rack"2.00		"unknown tunicate 2 - dark gray"	1	2.04
"Drakes Estero"	14.00	"Rack"3.00		"Bare" 18	36.73	
"Drakes Estero"	14.00	"Rack"3.00		"Botrylloides sp."	7	14.28
"Drakes Estero"	14.00	"Rack"3.00		"Schizoporella unicornis"	7	14.28
"Drakes Estero"	14.00	"Rack"3.00		"unknown tunicate 1 - black and yellow"	17	34.69
"Estero de Limantour"	97.00		1.00	"Balanus sp."1	2.04	
"Estero de Limantour"	97.00		1.00	"Bare" 48	97.95	
"Estero de Limantour"	97.00		2.00	"Bare" 49	100.00	
"Estero de Limantour"	97.00		3.00	"Bare" 49	100.00	
"Estero de Limantour"	116.00		1.00	"Bare" 49	100.00	
"Estero de Limantour"	116.00		2.00	"Bare" 49	100.00	
"Estero de Limantour"	116.00		3.00	"Balanus sp."1	2.04	
"Estero de Limantour"	116.00		3.00	"Bare" 48	97.95	
"Estero de Limantour"	136.00		1.00	"Balanus sp."1	2.04	
"Estero de Limantour"	136.00		1.00	"Bare" 48	97.95	
"Estero de Limantour"	136.00		2.00	"Balanus sp."1	2.04	
"Estero de Limantour"	136.00		2.00	"Bare" 48	97.95	
"Estero de Limantour"	136.00		3.00	"Balanus sp."1	2.04	
"Estero de Limantour"	136.00		3.00	"Bare" 48	97.95	

#### Appendix G - Other species in fouling community:

"ID"	"Location"	"Grid_Rack_""Rack_Away""Plate_"	"Date"	"Comments"	"SpCode"
8	"Drakes Estero"	14.00 "Away"	2.00	8/13/2004	"very little invert growth"
	"BOTROI"	"Botrylloides sp."			
16	"Drakes Estero"	8.00 "Away"	1.00	8/16/2004	"sparse invert growth"
	"BOTROI"	"Botrylloides sp."			
18	"Drakes Estero"	8.00 "Away"	3.00	8/13/2004	"sparse invert growth"
	"BOTROI"	"Botrylloides sp."			
31	"Drakes Estero"	5.00 "Rack"1.00	8/16/2004	"bushy growth of Bugula and Obelia covering much of plate, but not surface cover"	"BOTROI" "Botrylloides sp."
3	"Drakes Estero"	5.00 "Away"	3.00	8/13/2004	"Didemnum lahilea lost on removal from water, but covered entire surface of plate; other species listed were underlying Didemnum growth"
	"BOTRUS"	"Botryllus sp."			
32	"Drakes Estero"	5.00 "Rack"2.00	8/16/2004	"bushy growth of Bugula and Obelia covering 75% of plate, but less surface cover"	"BOTRUS" "Botryllus sp."



31	"Drakes Estero"	5.00	"Rack"1.00	8/16/2004	"bushy growth of Bugula and Obelia covering much of plate, but not surface cover"	"DIAL""Didemnum albidum"	
33	"Drakes Estero"	5.00	"Rack"3.00	8/16/2004	"bushy growth of Bugula and Obelia covering 30% of plate, but less surface cover"	"DIAL""Didemnum albidum"	
17	"Drakes Estero"	8.00	"Away"	2.00	8/16/2004	"sparse invert growth" "DILA""Didemnum lahilei"	
5	"Drakes Estero"	14.00	"Rack"2.00	8/13/2004	"lots of tunicate growth - colonial pendant lobes which were difficult to identify"	"DIOC" "Distalpia occidentalis"	
3	"Drakes Estero"	5.00	"Away"	3.00	8/13/2004	"Didemnum lahilea lost on removal from water, but covered entire surface of plate; other species listed were underlying Didemnum growth"	"SCUN" "Schizoporella unicornis"
4	"Drakes Estero"	14.00	"Rack"1.00	8/13/2004	"massive growth of Didemnum lahillei; small Cancer crab taking refuge under fold of Didemnum"	"SCUN" "Schizoporella unicornis"	
3	"Drakes Estero"	5.00	"Away"	3.00	8/13/2004	"Didemnum lahilea lost on removal from water, but covered entire surface of plate; other species listed were underlying Didemnum growth"	"WASU" "Watersipora subtorquata"
4	"Drakes Estero"	14.00	"Rack"1.00	8/13/2004	"massive growth of Didemnum lahillei; small Cancer crab taking refuge under fold of Didemnum"	"WASU" "Watersipora subtorquata"	
2	"Drakes Estero"	5.00	"Away"	2.00	8/13/2004	"substantial growth of Bugula and Obelia"	"BALA" "Balanus sp."
1	"Drakes Estero"	5.00	"Away"	1.00	8/13/2004	"bushy growth of Bugula and Obelia covering about 50% of plate, but not surface cover; Obelia on other side of plate"	"BALA" "Balanus sp."
4	"Drakes Estero"	14.00	"Rack"1.00	8/13/2004	"massive growth of Didemnum lahillei; small Cancer crab taking refuge under fold of Didemnum"	"BALA" "Balanus sp."	
5	"Drakes Estero"	14.00	"Rack"2.00	8/13/2004	"lots of tunicate growth - colonial pendant lobes which were difficult to identify"	"BALA" "Balanus sp."	
7	"Drakes Estero"	14.00	"Away"	1.00	8/13/2004	"very little invert growth"	"BALA" "Balanus sp."
8	"Drakes Estero"	14.00	"Away"	2.00	8/13/2004	"very little invert growth"	"BALA" "Balanus sp."
9	"Drakes Estero"	14.00	"Away"	3.00	8/13/2004	"very little invert growth"	"BALA" "Balanus sp."
31	"Drakes Estero"	5.00	"Rack"1.00	8/16/2004	"bushy growth of Bugula and Obelia covering much of plate, but not surface cover"	"SPIR" "Spirorbis sp."	
32	"Drakes Estero"	5.00	"Rack"2.00	8/16/2004	"bushy growth of Bugula and Obelia covering 75% of plate, but less surface cover"	"SPIR" "Spirorbis sp."	
34	"Drakes Estero"	8.00	"Rack"1.00	8/17/2004	"no photo"	"SPIR" "Spirorbis sp."	
1	"Drakes Estero"	5.00	"Away"	1.00	8/13/2004	"bushy growth of Bugula and Obelia covering about 50% of plate, but not surface cover; Obelia on other side of plate"	"OBEL" "Obelia sp."

2	"Drakes Estero"	5.00	"Away"	2.00	8/13/2004	"substantial growth of Bugula and Obelia"	"OBEL"	"Obelia sp."
3	"Drakes Estero"	5.00	"Away"	3.00	8/13/2004	"Didemnum lahilea lost on removal from water, but covered entire surface of plate; other species listed were underlying Didemnum growth"	"HABO"	"Halichondria bowerbanki"
31	"Drakes Estero"	5.00	"Rack"	1.00	8/16/2004	"bushy growth of Bugula and Obelia covering much of plate, but not surface cover"	"HABO"	"Halichondria bowerbanki"