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An Ecological Assessment of a Juvenile Estuarine Sportfish, Common Snook (*Centropomus undecimalis*), in a Tidal Tributary of Tampa Bay, Florida

By

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A thesis submitted in partial fulfillment
of the requirements for the degree of
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ABSTRACT

The common snook, *Centropomus undecimalis*, is an estuarine dependent sport fish that relies upon subtidal wetlands as nursery habitat. Despite the economic and recreational significance of this species, there are portions of its life history and biology that are poorly understood, particularly its early life history. Understanding juvenile snook use of wetland habitats is crucial given the rapid loss and degradation of these areas to anthropogenic impacts. Young-of-the-year snook were collected in pond and creek habitats of a single wetland system to assess early life ecology and habitat use. Proxies of habitat quality were used to determine which habitats within a small spatial scale were optimal for young-of-the-year snook recruitment. Results indicated that even on a very small spatial scale, differences in habitat use were apparent, whereby smaller snook initially recruited to pond habitats and dedicated all energy into growth. Upon reaching a size of at least 40 mm SL snook began an ontogenetic habitat shift and moved to the tidal creek habitat. There, snook began to store energy, thus becoming more robust. Stable carbon and nitrogen isotopic analyses confirmed the ontogenetic habitat shift and revealed that snook have high site fidelity within the pond and creek habitats. Stable isotopic analysis also indicated that YOY snook appear to feed at the third trophic level consuming neonatal poecilliids and shrimp, and ultimately rely on benthic microalgae and particulate organic matter as basal resources. Results of this study advance the knowledge of juvenile snook ecology and will likely have implications for resource managers who are responsible for preserving and restoring wetland habitats upon which juvenile snook rely.

INTRODUCTION

Subtropical estuarine environments are comprised of a variety of different habitats including seagrass beds, mangrove shorelines, and tidal rivers and creeks. Unfortunately, coastal development has rapidly altered the natural landscape of estuarine shorelines, perhaps threatening stocks of fish and invertebrates that rely on these environments. Therefore, in 1996 the Magnuson-Stevens Fishery Conservation and Management Act was amended to include provisions for fish habitat. This act defined essential fish habitat (EFH) as "those waters and substrates necessary to fish for spawning, breeding, feeding or growth to maturity" and took action to identify, conserve and enhance these habitats for all managed fishery species (NOAA 1996). While large efforts have been made to study, conserve and restore the more prominent habitats within estuaries, little emphasis has been placed on preserving the smaller subtidal creek habitats (Rosenfeld et al. 2002; Mallin and Lewitus 2004) that are vital for several species including the common snook, *Centropomus undecimalis* (Greenwood et al. 2008).

The common snook, *Centropomus undecimalis*, is an economically important sportfish locally abundant from the Florida peninsula through the southern Gulf of Mexico and Caribbean to Brazil. Within this general range, this species is particularly known for its close association with mangrove-dominated estuarine shorelines, yet it also frequents a diversity of non-mangrove habitats in freshwater, estuarine, and marine settings. Due to the exceptionally complex life history strategy of this species, there are still unknown aspects of its biology and ecology.

The common snook is a protandrous hermaphrodite that appears to adjust local sex ratios according to social feedback encountered during first spawning (Taylor et al. 2000). During the spring and summer spawning season, adults can be found aggregating in freshwater, estuarine, and fully marine waters despite the fact that most spawning is believed to be restricted to shallow coastal waters with polyhaline salinities (>18 psu, Ager et al. 1976). Following spawning larvae spend about 2.5 weeks as plankton (Lau and Shafland 1982) and are advected by the currents into estuaries before settling out as juveniles in shallow quiescent habitats near the border between mangrove-dominated wetlands and dry land (McMichael et al. 1989, Peters et al. 1998, Stevens et al. 2007). Such habitats are often inaccessible by power boat, causing them to be strongly under-represented in fisheries-independent monitoring data. The ecology of juvenile snook within these obscure nursery habitats has therefore remained understudied and is the present topic of investigation. It is believed that snook leave these nurseries as mature or maturing males <200 mm fork length (~180 mm standard length) near the end on their first year (Taylor et al. 2000).

The present study was conducted within a known, high-density snook nursery in lower Tampa Bay, Florida. Specific objectives were to obtain data that could be used to suggest processes that cause variation in vital parameters (growth and condition) and thus nursery performance from the perspective of recruitment and population dynamics. This type of information is crucial for resource managers who are tasked with preserving and restoring wetland habitats for the benefit of a variety of estuarine species. I hope that results from this study will aid resource managers in prioritizing the optimal common snook nursery habitats for conservation actions.

DESCRIPTION OF THE HABITAT

The present study was conducted in a tidal tributary of southeastern Tampa Bay, Florida known as Frog Creek. This tidal tributary is a relatively large coastal creek (11.3 km long) that originates near Parrish, Florida (27.5890°N, 82.3341°W) and drains into Terra Ceia Bay (27.5785°N, 82.5631°W, Fig. 1, DEP 2009). The immediate catchment of the creek is about 12.6 km^2, although Cabbage Slough and Buffalo Creek catchments also drain into Frog Creek, creating a total catchment size of about 52.2 km^2 (Southwest Florida Water Management District [SWFWMD] and National Hydrography Dataset GIS data layers). Direct anthropogenic impacts to the tidal portion of this creek system have been minimal, as downstream creek banks are undeveloped and occur within the state-managed Terra Ceia Aquatic Preserve. However, residential development and agricultural uses in the upper reaches and catchment have resulted in increased nutrient loads to the system (TBRPC 1986). In relation to other Tampa Bay creeks however, Frog Creek is among the least impacted (TBRPC 1986).

There are a variety of habitats within the Frog Creek wetland complex as dictated by tidal influence and geomorphology. Tides in Tampa Bay are a mixture of diurnal and mixed semidiurnal tides (Goodwin and Michaelis 1976) that range from -0.15 m on the lowest tides to about 1.0 m in amplitude on the highest tides, although the average tidal range is 0.67 m (Lewis and Estevez 1988). Based on streamside vegetation, there is a fairly distinct region of the creek just upstream of the northern-most pond where there is a change from more brackish tidal waters to relatively non-tidal fresh waters (TBRPC 1986). This freshwater portion is narrow, deep, sinuous, and its shorelines are dominated by freshwater vegetation including live oaks, cattails, sabal palms, leather ferns, and various grasses. In contrast, the 3.2 km-long downstream tidal portion is more geomorphologically variable as it alternates between wide shallow areas and deep narrow runs, is overwhelmingly dominated by mangroves, and becomes bayou-like as it widens towards the mouth. In this portion of the creek, there are several small karst ponds (approximately 1800 - 7500 m^2) directly connected to the main-stem creek providing nekton a slightly different habitat option (Fig. 1).

CHAPTER ONE – GENERAL ECOLOGY

Introduction

The common snook is a highly prized gamefish found in the coastal waters of Florida and the Caribbean that is carefully managed to insure sustainable healthy populations. The snook fishery has been monitored since the 1940's when the species was commercially fished and sold as a food source (Marshall 1958). Since that time, the commercial fishery has closed, but the recreational fishery has grown exponentially as snook have become recognized as one of the premier sport-fishes of Florida (Marshall 1958, Fore and Schmidt 1973, Taylor et al. 2000). The common snook life-history has been well described (Marshall 1958, Volpe 1959, Fore and Schmidt 1973, Gilmore 1983, McMichael et al. 1989, Peters et al. 1998) though to date, much of the research has focused on adults that are routinely collected by anglers and the State of Florida's Fisheries-Independent Monitoring program (http://research.myfwc.com/). Stock assessments for management decisions are made using information from the collection of these adult snook, although recent studies have stressed the importance of determining and conserving juvenile fish habitat, often termed nursery areas, as a means for managing adult fish populations (Beck et al 2001).

Common snook have a complex life-history strategy. This complex life-history strategy allows a single species to occupy several different habitats at different life stages, spreading out the short-term risk of loss due to the destruction of a specific habitat (Rice 2005). In theory if this were to happen, other life history stages could continue to support the species' stock. However, Rice (2005) also pointed out that this may result in one habitat type for certain individual life stages becoming more valuable, as seems to be the case with nursery habitat for common snook.

Early research on juvenile snook concluded that snook recruit to low-energy wetland creeks, ponds, canals and lagoons (Marshall 1958), with soft muddy bottoms and dense shoreline vegetation (Fore and Schmidt 1973). However, these backwater habitats can be hard for researchers to reach and even more difficult to sample, so to date there is a paucity of data on juvenile snook and their nursery habitats. Gilmore et al. (1983) and McMichael et al. (1989) addressed this data gap with studies throughout the 1970's and 1980's that made strides in determining nursery habitat, defining growth rates, and describing diet. The work by Gilmore et al. (1983) indicated YOY snook preferentially recruit to low salinity or freshwater areas which are often located farther upstream in tidal tributaries. These freshwater habitats are often anthropogenically altered through the construction of flood gates, salinity barriers, and dredge and fill projects, thus reducing the amount of freshwater habitat available to recruiting snook. This correlation with low salinity was not observed in two juvenile snook studies conducted along coastal Florida (Fore and Schmidt 1973, McMichael et al. 1989), and may be more of a case of snook recruiting as far upstream as possible as opposed to a preference for a specific salinity regime.

Unfortunately relatively little work has been published since, while the natural, backwater wetland habitats along the Florida coasts continue to be degraded or diminished due to development and other anthropogenic impacts. More recently, Stevens et al. (2007) reported densities of juvenile snook collected from tidal wetland creeks and ponds in the Charlotte Harbor estuary and indicated that increased sampling of remote creeks and ponds in Tampa Bay is needed to determine more accurate juvenile snook density estimates for that estuary. As part of a 3-year (December 2003 – November 2006) wetland nekton survey in Tampa Bay that compared nekton assemblages of natural (creeks and ponds) and anthropogenically altered habitats (mosquito control and storm-water drainage ditches), US Geological Survey researchers found that YOY snook were more abundant in natural habitats (USGS unpublished data). Additionally, the southern portion of the Bay, that included Frog Creek and the directly connected ponds, contained the highest density of YOY snook among the three locations (upper bay, middle bay and lower bay). Due to the large quantities of snook captured in Frog Creek and the variety of habitats available there, an opportunity to conduct a more rigorous small-scale habitat quality study became apparent.

Levin (1992) stated that there is no single spatial scale with which to describe a system, that different scales can reveal different patterns. Furthermore, he also said that in order to fully understand and describe a system, one must integrate data from different spatial and temporal scales. To date, much research on common snook has been completed on a large-scale, population level. For example, the State of Florida’s Fisheries Independent Monitoring program data are used to compare snook abundances among and within different estuaries of the state. However, this data generally lacks the YOY snook that reside in habitats not regularly sampled. Stevens et al. (2007) sampled YOY and juvenile snook on a smaller spatial scale in a portion of Charlotte Harbor, comparing abundances between different tidal creek and pond habitats, and then comparing that to data from Tampa Bay to get a better understanding of differences by estuary. That study reduced the spatial scale and integrated data with larger spatial scales. While that project addressed the questions it was designed around, it only reduced the spatial scale to an intermediate level. To date, no studies have reduced the spatial scale of a project to examine the ecology of YOY snook within a single tidal creek system. This fine-scale approach may bring specific habitat details to light that could prove useful in the determination of primary nursery habitats for common snook. These high resolution details of YOY snook habitat use may then be integrated with data from large-scale projects to better understand snook habitat use and ecology.

Objectives

Despite the economic and recreational significance of this species, there are still portions of its life history, biology, and overall ecology that are poorly understood. This project focused on addressing some of the data gaps in the biology and ecology of juvenile snook in a relatively undisturbed tidal tributary of Tampa Bay. I specifically targeted young-of-the-year (YOY) snook, those defined as age 0 and measuring up to 180 mm standard length or 200 mm total length (Taylor et al. 2000), that are known to utilize subtidal creek habitats. To determine the importance of each habitat to YOY snook, I used several variables as proxies for habitat quality to determine the most important recruitment grounds. I reapplied methods from previous snook studies to a much smaller spatial scale in the attempt to better define juvenile snook habitat use within a single Tampa Bay wetland system. I believed this small-scale approach could benefit resource managers providing them the detailed information they need to more appropriately conserve what appear to be the most important nursery grounds for snook in Tampa Bay. The objectives of the study were: 1) to determine if there were differences in snook abundance and length by location within the creek (upstream vs. downstream), by habitat type (creek vs. pond), and between years; 2) to determine whether any small scale movements were occurring between habitats and; 3) to calculate condition indices (Fulton condition and hepatosomatic index) as a proxies for growth and general health of juvenile snook to compare among habitats, locations, and to previous studies. My null hypotheses were that there would be no differences in abundance, size, or health metrics of young of the year snook by habitat type, location or between years.

Methods

General sampling methods

For the purpose of the study, only the 3.2 km-long tidal section of Frog Creek was sampled. This section was somewhat arbitrarily designated into upstream and downstream components where the creek narrows (Fig. 1). I sampled two estuarine ponds and the mainstem creek in both the upstream and downstream portions of this tidal tributary. Six pond samples (three per pond) and six mainstem creek samples were collected in both the upstream and downstream sections each month (24 total samples/month). During the first year I sampled each month September 2006 through February 2007 collecting 144 total samples. Two additional months of sampling were conducted in November 2007 and February 2008 in the same format for an abbreviated inter-annual comparison. All collections were made at random shoreline sites, generated for both creek and pond habitats. Habitat metrics were taken at the site of each seine haul and included composition of shoreline vegetation, water depth along the stretched net (inshore, middle and offshore), shoreline inundation, substrate type (qualitative), water clarity (Secchi depth), current velocity, and standard physicochemical parameters (salinity, temperature, pH, and dissolved oxygen) using a YSI 556 MPS.

Fish and selected macro-invertebrates were captured using a 9.14 m, 3.2 mm delta mesh center-bag haul seine pulled immediately adjacent to the shoreline vegetation. Each haul was pulled parallel to shore, a distance of 9.14 m (30 ft), sampling an area of approximately 60.9 square meters. Upon collection, fish and macro-invertebrates were identified and enumerated. Large snook (>180 mm standard length) and other recreationally important species were measured to the nearest mm SL and released. Young of the year snook, defined as those less than 180 mm SL (Taylor et al. 2000), were retained for further analysis, immediately iced in the field and then frozen upon return to the laboratory.

Laboratory processing

Each YOY snook was individually processed in the laboratory where several variables were measured or collected. Standard, fork, and total lengths were measured to the nearest mm using a standard ruler. Blotted-wet weight and blotted-wet liver weight were measured to the nearest tenth of a milligram using a Mettler Toledo top-loading balance. Snook muscle tissues were then filleted from the skeleton, skinned, rinsed with deionized water, dried in an oven at 55ºC for 48 hours, and pulverized to a powder for isotopic analyses. Length and weight measurements were used for length weight regression analysis and to calculate both Fulton-type condition factor (K) and hepatosomatic index (HSI) for each individual snook (Anderson and Gutreuter 1983). Growth was calculated using modal length frequency analysis.

$K = (W/SL^3) \times 10^4$ where: W = fish weight in grams;

SL = standard length in mm

$HSI = (W_l/W)x100$, where: W_l = liver weight in grams;

W = fish weight in grams

Statistical analysis

A two-way crossed parametric ANOVA run using the general linear model in SAS version 9.1 (SAS institute 2003) was used for all analyses. Location (upstream, downstream) and habitat type (creek, pond) served as the independent variables for examining differences in the dependent variables (snook density, standard length, condition (K), and hepatosomatic index). The raw data did not always meet assumptions of normality; therefore, I used the Box-Cox method to determine and apply the most appropriate transformation for normalizing the data.

Because condition indices such as Fulton's K are subject to misinterpretation caused by allometric variation in weight-at-length relationships during growth, care was taken to remove the allometric trends prior to comparison. To do so, I removed the influence of standard length on condition by fitting a non-linear regression model to the data and then analyzing the residuals.

Results

Habitat/physiochemical results

Physicochemical parameters and habitat metrics were recorded at each net set. Generally, ponds were shallow with slow moving water and soft, muddy substrates (Table 1). The two upstream ponds contained a variety of shoreline vegetation including *Typha* spp. (cattails), *Rhizophora mangle* (red mangrove) and *Laguncularia racemosa* (white mangrove). Floating *Eichhornia crassipes* (water hyacinth) was also seasonally abundant. The two downstream pond shorelines were dominated by red and white mangroves. In contrast, creek sites were characterized by more variable water depths, moving water (currents), firmer substrates (sand), and fringing mangroves (Table 1). Preserve managers eradicated cattails from the two upstream ponds between the two recruitment years. Thus in year two upstream pond shorelines contained only scattered mangroves, decaying cattail rhizomes, and dead vegetation.

Of the four physiochemical variables measured (Fig. 2), only salinity demonstrated clear patterns related to location or habitat. Although salinity differed by location (mean = 6.0-6.4 psu upstream vs. 12.3-13.0 psu downstream, Table 1) there was no correlation between snook abundance and salinity (linear regression $r^2 = 0.002$).

General – all snook

Four hundred eighty snook were collected over the two years of the project (Table 2). The overwhelming majority of snook were collected during the first year: 432 snook were captured in 84 of the 144 seine hauls (58%) at a mean density of 4.9 ± 0.8 fish/100m^2. In comparison only 48 snook were captured in 24 of the 48 seine hauls during the second year (1.6 ± 0.2 fish/100m^2). Of the 480 snook captured, 436 were designated as young of the year (YOY), measuring less than 180 mm standard length (Taylor et al. 2000), and retained for further analyses. As with the overall abundance, the first year yielded a higher percentage of young of the year snook (97%) relative to the second year (35%; Table 2). YOY snook were also collected at a higher frequency during the first year (54%) compared to the second year (27%). Since so few YOY snook were collected during the second year, further statistical analyses will be restricted to snook collected during the first year.

YOY snook by habitat type and location

Samples were evenly distributed between two habitat types (pond and creek) and two locations (upstream and downstream) each month. When collapsed across month and habitat type, snook were more abundant and more frequently captured in ponds (6.8 ± 1.4 fish/100m^2, 68%) than the creek (2.8 ± 0.6, 49%, Table 3). Similarly when collapsed across month and location, YOY snook were collected in higher abundance and more frequently upstream (7.0 ± 1.4 fish /100m^2, 57%) relative to downstream (2.6 ± 0.4 fish /100m^2, 51%). A two-way crossed ANOVA revealed statistical differences in YOY snook density by habitat type (pond vs. creek; p = 0.008, Table 3). Although the analysis did not reveal a significant interaction variable, Figure 3 suggests the strong effects of habitat type are likely influenced by the location of that habitat type within the estuarine gradient, as upstream ponds had the highest density of YOY snook.

YOY snook length analysis

Standard length of each YOY snook was measured to assess differences by month, location, and habitat type. Due to the low numbers of snook captured in the downstream creek and ponds in routine sampling, additional samples were collected to supplement the number of YOY snook available for length analysis. YOY snook ranged in standard length from 16 mm to 177 mm. Although the literature suggests a size cutoff of 180 mm SL for YOY snook, length frequency analysis indicated 6 YOY snook between 150 – 180 mm SL were part of the previous cohort and thus were omitted from length analyses (data not shown). The snook year class was followed throughout the six month sampling period permitting the measure of cohort growth over time. Average snook length increased from 30 ± 2.10 mm SL in September to 67 ± 2.63 mm SL in January before declining slightly in February (66 ± 1.50 mm SL; Fig. 4). The February decline is the result of a small influx of new recruits that were first seen in January and continued through February. Growth rates estimated from modal length frequency analysis ranged from 0.17 to 0.90 mm/day and averaged 0.36 mm/day over the 2006-2007 recruitment period. Highest growth rates were observed in September when the juveniles were smallest and the weather was warmest. It must be noted that length frequency distributions reflect the interaction of recruitment, growth, mortality, and emigration (Anderson and Gutreuter 1983). Therefore, our calculation of growth rate may be strongly affected by the rates of mortality and emigration that were not determined for YOY snook during this study. There were too few individuals collected from the downstream creek and pond habitats to accurately analyze growth by habitat type or location.

Young-of-the-year snook lengths were tested for differences by habitat type and location. Snook collected from ponds were statistically smaller than those collected in the creek (Two way crossed ANOVA, $p < 0.001$; Table 4, Fig. 5). In contrast, there were no differences in length by the interaction between location and habitat type or by location along the estuarine gradient (Table 4).

Condition Factor and Hepatosomatic Index

As a measure of energy storage and thus robustness, Fulton condition factor (K) was calculated for individual YOY snook (n=394). Mean condition factor among all YOY snook was 1.48 ± 0.01 and ranged from a low of 0.94 to a high of 2.06. Fish with higher conditions were assumed to be healthier as they weighed more per unit of length. As a general trend, smaller snook had higher conditions than larger snook (Figure 6), which is likely attributed to allometric growth. This type of growth invalidates assumptions of the equation for calculating K; therefore, the trend of length was removed from the data before analyzing K by habitat type and location. To do this all K data were plotted by standard length and a curve was modeled to the distribution of the data (Figure 6). Then I analyzed the residuals of the data in relation to the modeled curve. Results indicated a statistical difference in K by habitat type ($p=0.03$), whereby snook from the creek habitat had higher condition.

Hepatosomatic index varied in individual snook from 0.17 to 1.74 and averaged 0.91 ± 0.01 (n=376). Snook in ponds had a lower average HSI (0.87 ± 0.01) than those collected in the creek (0.98 ± 0.02; Figure 7), whereas snook from the upstream portion of the creek had a lower average HSI (0.89 ± 0.01) than those from the downstream section of the creek (0.94 ± 0.02). Results of a two-way crossed ANOVA indicated statistical differences in HSI by both habitat type ($p<0.001$) and location ($p=0.018$). The interaction variable was also marginally significant ($p=0.062$) suggesting that the patterns I observed in both habitat type and location were affected by one another. This would suggest snook from the downstream creek had the highest HSI while snook from the upstream ponds had the lowest HSI value.

Discussion

Juvenile snook have been collected in a variety of tidally-influenced habitats and environmental conditions across the southern half of Florida, including rivers, tidal creeks, canals, lagoons, ponds, impoundments, and mosquito-control ditches (Fore and Schmidt 1973, Gilmore et al. 1983, McMichael et al. 1989, Stevens et al. 2007, Greenwood et al. 2008, Stevens et al. 2010). It seems juvenile snook can occupy a wide variety of habitat types and conditions; however, some of these habitats may be more optimal for growth and survival than others. Early juvenile snook have been collected in higher abundance in tidal tributaries and backwaters (lagoons, oxbows, and embayments) compared to adjacent bay shorelines or tidal rivers (Stevens et al. 2007, Greenwood et al. 2008, Stevens et al. 2010). However what is more significant is that there are substantial differences in snook abundance among these backwater habitats. In the current study, wetland ponds in the estuarine floodplain had much higher abundances of YOY snook in comparison to a tidal creek to which the ponds were directly connected. Seemingly preferential use of a pond habitat was also observed in the 2007 study by Stevens et al., where densities of small juvenile snook were an order of magnitude higher in a single pond (Bokelia pond) than in other habitats. Similarly, Peters et al. (1998) noted that early juvenile snook (those 15-45 mm SL), were in highest abundance in shallow protected basins with restricted openings. More notable in the current study however, was that snook were 2.5 times more abundant in the upstream ponds than any other habitat, location combination (including the downstream ponds). This may suggest that either upstream ponds are providing a more favorable set of environmental conditions for YOY snook, or that snook seek to move upstream as far as possible before settling out in the most advantageous environment available. Given this affinity by YOY snook, especially the smaller size class, for the upstream ponds, researchers and resource managers may need to prioritize specific habitats and locations for future research and conservation.

While I am unsure of the exact mechanism leading to higher snook densities in pond habitats, greater recruitment and higher survival rates are primary possibilities. Several factors could influence survival including reduced predation, higher density of food, and energetics (Major 1978). Although the present study was not designed to collect larger predatory fish, I was able to quantify prey fishes and larger invertebrates. Poeciliids, a primary prey item for developing snook (Harrington and Harrington 1961; Fore and Schmidt 1973; Gilmore et al. 1983; McMichael et al. 1989), were 6 times more abundant in ponds than the creek (data not shown), perhaps influencing the distribution of YOY snook. Equally important was the lack of visible current in the ponds, a factor which likely led to a conservation of energy, as juvenile snook were not forced to swim against currents. Stevens et al. (2010) listed both the availability of prey resources and current velocity as possible factors contributing to the differences of fish assemblage structure between mainstem and backwater habitats in the tidal Caloosahatchee River in southwest Florida. Lower energetic costs in ponds would allow these snook to appropriate more energy into growth, perhaps leading to a higher survival rate.

In addition to differences in snook abundance by habitat, I also noticed significant differences in the size of snook between the two habitat types. Snook collected in ponds were on average smaller than those collected from the adjacent creek. The smallest size classes of YOY snook (<40 mm SL) were noticeably absent from the creek collections indicating that the smallest snook recruit directly to the ponds. Ponds had lotic conditions and a high abundance of prey which created environments conducive for early snook growth. The smallest YOY snook resided in pond habitats until reaching a size of approximately 40 mm SL, at which time they began an ontogenetic habitat shift by moving into the mainstem creek. The smaller size class of YOY snook that occupied the ponds coincided with the early juvenile stage (<45 mm SL) described by Peters el al. (1998), where these smaller juveniles loosely schooled along shoreline structure. Although I have no visual observations of schooling due to high turbidity, a tendency to aggregate may account for the higher densities of snook collected from the ponds (particularly the upstream ponds). Gilmore et al. (1983) reported that snook move out of the creeks towards mangrove shorelines and seagrass beds in the larger estuary at about 150 mm SL, but did not document an ontogenetic habitat shift within the backwater nursery habitat. The very low abundance of snook greater than 150 mm SL in the present study supports this earlier observation.

The ontogenetic habitat shift I observed in this study may be explained by younger fish being more tolerant of specific environmental conditions (Major 1978). Salinity, temperature, and the concentration of dissolved oxygen may influence estuarine fishes at both the assemblage (Gelwick et al. 2001) and species levels (i.e.: tarpon, *Megalops atlanticus*, Wade 1962; striped mullet, *Mugil cephalus*, Major 1978; and common snook, Gilmore et al. 1983, Peterson and Gilmore 1991). Juvenile snook are more tolerant of low oxygen levels which allow them access to habitats where these conditions exist, likely giving them the opportunity to grow with a lower risk of predation (Peterson and Gilmore 1991). Typically, shallow, poorly-flushed pond habitats can experience a potentially stressful dissolved oxygen (DO) low coinciding with daybreak. Such depressed DO values result from community respiration exceeding primary production during nighttime hours (Hopkinson et al. 1985). However, in this present study in which field measurements were taken between mid-morning and mid-afternoon, dissolved oxygen levels in ponds equaled or exceeded those of the creek habitat, indicating high levels of primary production from benthic microalgae. I postulate that high levels of overall production within the ponds created a more energetically favorable environment for the smallest YOY snook.

To date there has been a dearth of published data describing interannual differences in YOY snook recruitment at a given location. This project observed dramatic differences in YOY snook abundance between representative months in two consecutive years (Table 2), leading to several questions related to interannual recruitment success. Given equal sample effort, the 2006-2007 YOY recruitment yielded much higher densities of snook in November and February than the 2007-2008 recruitment year during those same months (Table 2). It was beyond the scope of the present study to determine what factors may have produced this difference but I consider several possibilities. Interannual variability of either spawning or recruitment success could explain the difference in YOY snook density, as high variability has been described in a number of species and ecosystems (Able 1999, Shulman 1985).

Another possibility could be attributed to a greater number of larger snook from the previous cohort still occupying the habitat and competing with the new recruits for resources. Larger year 1 snook were considerably more abundant during November and February of the second year (n=31) compared to those two months during the first year (n=2) of the study (Table 2). Cannibalism may occur among snook where larger individuals occupy the same habitats as early juveniles (Peters et al. 1998; Adams and Wolfe 2006) and this behavior could depress YOY snook densities. However, it seems unlikely that this could have affected abundance to the degree that was observed in the present study.

Climatic events have also been cited as factors influencing snook spawning and YOY recruitment. Tropical storms and hurricanes may reduce spawning during storms and possibly increase spawning and recruitment following storm passage (Gilmore et al.

1983, Peters et al. 1998). Florida was affected by several relatively severe tropical storms in 2004 and 2005 (Franklin et al. 2006, Beven et al. 2008) perhaps limiting spawning success those years and leading to higher success and recruitment in 2006. The state of Florida's Fisheries Independent Monitoring (FIM) program collected higher densities of YOY snook in Tampa Bay rivers during the fall of 2006 than previous or following years (Tim MacDonald, FWRI, St Petersburg FL, unpublished data).

The amount and timing of rainfall has been discussed as a mechanism affecting estuarine fish spawning success and subsequent juvenile recruitment. Several studies in Australia have described a relationship between rainfall (and thus freshwater flow) and the success of barramundi, *Lates calcarifer,* a species closely related to the common snook (i.e. Staunton-Smith et al. 2004, Meynecke et al. 2006; Balston 2009). These studies indicated a positive correlation between high rainfall and both spawning success and juvenile survival. Similarly, there is a positive correlation between high rainfall and spawning success in common snook (Gilmore et al. 1983; Ron Taylor, FWRI, St. Petersburg, FL pers. comm.), in which strong wet seasons equate to a stronger spawn. Our results support this pattern as elevated rainfall totals were observed during the first year of the study, especially during the peak of the spawn July through September (data courtesy of SWFWMD http://www.swfwmd.state.fl.us/data/wmdbweb/rainfall_data_summaries.php, Fig. 8). The correlation between rainfall and reproductive success of common snook is a concept that needs further study to understand the implications future climate changes could have on the populations of this species.

I hypothesized that condition, measured as Fulton condition factor K, would vary by habitat type whereby the most optimal habitats would contain snook with higher condition. Before comparing K by habitat type, K was plotted by SL to insure that the assumption of isometric growth necessary for the equation was being met by the data.

This plot revealed a difference in condition by size, whereby smaller snook had higher conditions than larger snook (>60 mm SL, Fig. 6). It is likely this difference can be attributed to allometric growth, whereby smaller snook had not fully metamorphosed into their final fusiform body shape. This modest difference in body morphology as smaller snook develop would alter an assumption for use of the equation. Allometric growth was not considered in previous studies of juvenile snook condition (see below). Fulton condition factor of YOY snook in the present study (n=394, mean K using FL = 0.98 ± 0.005) did not differ from those of other studies in Florida (Fore and Schmidt 1973, n=193, mean K using FL=1.05; Gilmore et al. 1983, n=194, mean K using FL =0.93).

After removing the trend of allometric growth from the condition data, significant differences were observed in the conditions of snook between the habitats. Conditions of YOY snook collected from the creek habitat had statistically higher conditions than those from the ponds. Following our original hypothesis, this higher K for snook from creeks would indicate that the creek habitat is of higher quality. However, based on density data, the ponds seemed to be the preferred habitat for the smallest snook. This conflict in conclusions likely indicates a naivety in my hypothesis as it appears the smallest snook within ponds are dedicating more energy to growth as opposed to storage. This would cause the smaller snook to have lower conditions regardless of habitat.

Hepatosomatic index, a ratio of liver weight to body weight, was calculated as a proxy for determining energy storage. I hypothesized higher liver weights would equate to greater lipid storage and thus greater health. I found that HSI varied with habitat type and location. Additionally, a marginally significant trend in the interaction variable indicated that snook from the upstream ponds had the lowest HSI and snook from the downstream creek had the highest. Since pond snook were also generally smaller it was possible that these snook were dedicating more energy to growth, rather than storage. Such a strategy would account for the lower HSI values. Lower HSI values do not necessarily mean that these fish were less healthy, but rather that our generalizations about the interpretation of HSI values were naive. It seems hepatosomatic indices are more suited for adult fish that are not changing as rapidly as early juvenile fish. That said, HSI data do show that as YOY snook grow and move into the downstream creek habitat they begin to store more energy. This occurs as these snook are preparing to move from the nursery habitat and into the spawning population, suggesting the nursery habitat is serving its purpose of delivering healthy fish to the spawning population.

To summarize, differences in YOY snook densities can be detected on a relatively small spatial scale (0.5 - 2.0 km). YOY snook densities were higher in wetland ponds compared to adjacent creek reaches suggesting there may be ecological or physiological advantages. However, interannual variability of YOY snook abundance was large in two representative months between two consecutive years, as densities varied by a factor of 12 to 1. Snook length was also correlated with habitat type as pond habitats contained smaller individuals in relation to the adjacent creek. Based on this study and that by Peters et al. (1998) there are two nursery habitats. The primary nursery habitat includes the lagoons and ponds used by early young-of-the-year snook (<40 mm SL). As snook finish metamorphosing into their final fusiform shape, they undergo an ontogenetic habitat shift in which at least a portion of snook begin to migrate out of the primary habitat to secondary nursery habitat which involves a much broader range of habitats including tidal creeks, rivers, canals, and ditches. It is the primary nursery habitats that require further detection and preservation as they are in short supply due to anthropogenic impacts. The morphological measurements used to create two health indices, suggested that the smallest snook utilizing the primary nursery habitats are dedicating all available energy into growth as opposed to storage, and that this trend reverses as fish move into the creek habitat. Hepatosomatic index may be a very useful measurement in determining whether a nursery habitat is serving its purpose of delivering healthy juveniles into the adult population, as HSI increases with the movement of snook from the ponds and into the downstream section of the creek.

CHAPTER TWO – STABLE ISOTOPIC ANALYSIS

Introduction

Stable isotopic analysis has become a powerful tool in assessing ecological data. Scientists have found that underlying biogeochemical and physical processes affect the isotopic compositions of biotic and abiotic entities within an environment. Therefore, stable isotopes can be used to infer a larger number of ecological concepts, especially when used in combination with more traditional ecological data.

While past studies described the diet of juvenile snook, advances in stable isotope technology have provided an opportunity to re-examine the diet of this species using a different technique. Scientists have used stable isotopes to determine trophic interactions associated with energy being passed between predator and prey (i.e. Peterson and Fry 1987). Differences in carbon and nitrogen isotopic compositions can be observed between basal resources and various trophic levels. Generally, carbon isotopes are used to trace the flow of different energy sources (primary producers) through a system while nitrogen is used to resolve trophic level (Vander Zanden and Rasmussen 2001). The isotopic composition of consumers is based on their respective diets, with a small associated fractionation (Peterson and Fry 1987). Fractionations connected with carbon range from 0‰-1‰ (Fry and Sherr 1984), while nitrogen fractionations generally range from about 3‰ to 5‰ (Peterson and Fry 1987; Vander Zanden and Rasmussen 2001, Post 2002). Stable isotopes can provide a more detailed approach to analyzing trophic interactions, by inferring not just what predators consume, but also the primary producers which constitute the base of a food web, which food items are most important for tissue growth (Vander Zanden et al. 1997), and whether food sources change with time or life history stage (Bouillon et al. 2012).

Prior to the use of stable isotope ratios to elucidate trophic structure, gut content analyses were used to determine diets of consumer organisms. The studies by William Odum and Eric Heald in south Florida are classic examples of gut content analyses to determine estuarine food webs (Odum 1971, Heald 1971, Odum and Heald 1972, 1975). Through the examination of nekton stomachs, Odum and Heald determined that detritus played a significant role as a basal resource in mangrove dominated estuaries (Odum and Heald 1972, 1975), because it was often found in the stomachs of certain species. However, while these studies have been important in determining what fish were ingesting there are many shortcomings, including the facts that a large number of fish stomachs are typically empty, contents only reveal short term feeding habits, and gut contents do not reveal what prey items are actually assimilated into tissue. Further complicating the issue is the fact that food web studies involving fish can be extremely difficult to resolve due to the dynamic environments in which fish live, the dietary shifts they undergo, and their mobility.

Past dietary analyses involving common snook, *Centropomus undecimalis*, have relied solely on gut-contents to determine trophic interactions. Snook diets have been examined by a number of researchers, starting with the work done by Marshall (1958) on larger sub-adults and adults. Analyses of juvenile diets suggest that juvenile snook consume a variety of prey including copepods, mysids, palaemonids, and neonatal fish before becoming more dependent on larger fish as they grow (Harrington and Harrington 1961, McMichael et al 1989; Gilmore 1983). While these studies have been important in determining what snook were ingesting, they can only use the stomach contents to infer what the most important prey items for growth may be. Additionally, these studies were unable to determine which basal resources are critical for snook growth and survival.

Mangrove ecosystems are widely considered a primary habitat for snook; however, it is unknown whether mangroves play a significant role in the snook food web, or whether they solely provide structure for snook and their prey to reside.

Dietary studies conducted by Odum and Heald (1972) indicated that mangroves were the primary source of carbon for estuarine food webs of the tropics and subtropics based on large quantities of mangrove detritus found in the stomachs of fish. More recently however, stable isotope analyses have concluded otherwise, suggesting that although nekton were consuming mangrove detritus, they were not assimilating this material into tissue and as such detritus was providing little nutrition. Fry and Ewel (2003) suggested that that mangrove detritus was too refractive to be assimilated into tissue, and therefore is probably not as important as a basal resource as other available primary producers. Mangroves are generally depleted in carbon (averaging -27‰) compared to marine benthic micro-algae (averaging about -17‰; France 1995), seagrasses (-10.5‰; Kieckbusch et al. 2004) or phytoplankton (approximately -18 to -22‰; France 1995, Kieckbusch et al. 2004), so consumers that utilize mangrove carbon are also expected to be depleted in carbon. Several studies have concluded that organic matter from micro-algae or phytoplankton is incorporated to a greater extent than mangrove carbon in most mangrove-associated fish species (Bouillon et al. 2002; Kieckbusch et al. 2004).

Stable isotopes can be used to infer habitat utilization of nekton species over a variety of spatial scales. Different geochemical processes dictate available nutrients and isotopic compositions of those species that reside and feed in a particular environment (Peterson and Fry 1987, Fry et al. 2003). Isotopic ratios of carbon can be used to distinguish between habitats dominated by specific basal resources (i.e. seagrass communities vs. reef environments or mangrove communities, Layman 2007). In contrast, nitrogen ratios can be used to differentiate habitat related differences based on anthropogenic inputs (Hansson et al. 1997, Layman 2007), or differences in nutrient cycling (i.e. organic matter decomposition). Most habitat-based isotope studies operate on large spatial scales, focusing on differences in isotopic composition of organisms between estuaries, watersheds, rivers, or creeks. Few have focused on very small scales such as differences within a single tidal creek complex, probably because of the difficulty associated with teasing apart differences in isotopic composition versus general ecological noise caused by dynamic environmental conditions. In this study, I will attempt to resolve isotopic compositions of young-of-the-year snook over a relatively small spatial scale (a 3.2 km portion of a tidal creek measuring 11.4 km in total), focusing on habitat utilization patterns within the creek ecosystem.

Methods

Isotopic collections

A variety of methods were used to collect an assortment of samples from Frog Creek and the adjacent ponds for isotopic analysis. Common snook and other nekton were collected monthly using 9.1 m haul seines as described above in “Chapter one”. Primary producers, filter feeders and other prey species collected for isotopic analysis were gathered by hand in February 2008. Amphipods were collected using mesh bags full of mangrove leaf litter which were placed in subtidal areas during February and collected in March 2008.

Water was pumped and filtered from the water column to collect particulate organic matter and water samples for baseline inorganic carbon levels within the creek in June 2009. Particulate organic matter (POM) is a mixture of phytoplankton, fine detritus, and zooplankton that occur suspended in the water column. POM was collected on 47 mm diameter glass fiber filters (1.2 µm) using a peristaltic pump to force water through silicone tubing and a 47 mm diameter filter housing. Filters were precombusted at 550ºC to eliminate any organic carbon particles prior to use. Water samples were collected in each pond and at six locations within the creek. A replicate water sample was collected at one of the upstream and downstream ponds for a total of 6 water samples from the pond habitat type. Approximately one liter of water was filtered at each site from a depth of about 0.3 meters. Filtered water was collected in 125 ml glass bottles, poisoned with mercuric chloride to kill any biological activity, and capped to be used for the determination of dissolved inorganic carbon (DIC) isotopic ratios within the waters of the creek and ponds. DIC generally varies with temperature, salinitiy, and location (Fogel et al. 1992, Chanton and Lewis 1999). Riverine DIC is typically isotopically lighter (-12‰ to -15‰) than seawater (-0.6‰ to -0.8‰) because it is derived from the remineralization of upland organics as opposed to the atmosphere (Mook and Tan 1991, Bouillon et al. 2008).

Benthic microalgae were cultured in situ from February to March 2008. Two 30 cm by 30 cm plates were sandwiched together separated by a 1.7 mm gap and placed in the mud at a 45º angle. This permitted the colonization of the plate by algae between the two plates, while the 1.7 mm gap prevented grazing by herbivores and the colonization of calcium carbonate generating organisms such as barnacles or oysters. Algae grew on both the interior and exterior of the plates. Upon retrieval, the plates were rinsed with deionized water, viewed under a microscope to determine algal composition, and scraped with a glass microscope slide. Areas of the plate containing high densities of diatoms were targeted. Scrapings were collected from both the interior and exterior of the plates and retained separately for analysis. Exterior algal scrapings were acidified if any calcareous organisms were observed, in order to eliminate any inorganic carbon.

Sample processing

Although a large variety of fish were collected and could be used for this analysis, only the most abundant species that were of a size small enough to allow for YOY snook predation were analyzed. These species included the mosquitofish, *Gambusia holbrooki*, a small omnivore; sailfin molly, *Poecilia latipinna*, an herbivore/detritivore; mojarra, *Eucinostomus* spp., a benthivore; the clown goby, *Microgobius gulosus*, a benthic omnivore; the bay anchovy, *Anchoa mitchilli*, a planktivore; and grass shrimp, *Palaemonetes* spp., a benthic omnivore (Odum 1971). These species utilize a range of foraging techniques and were all small enough to be consumed by young-of-the-year snook. Since I conducted multiple collections of snook and nekton I categorized nekton by the period in which they were caught. The months of September and October were classified as “period 1”; nekton collected in November and December were classified as “period 2” and those nekton collected in January and February were classified as “period 3”. Period 1 coincided with the wet season while period 3 represents the dry season. Period 2 is an intermediate between the two seasons.

Most samples were frozen for a period of time (up to 18 months) prior to being prepared for isotopic analysis. To prepare samples for analysis all samples were rinsed with deionized water, either dried in an oven at 55ºC for 48 hours or lyophilized (see appendix A), ground to a powder using either a mortar and pestle or pulverized using a wig-L-bug™, and stored in a sealed glass vial. Individual samples were later weighed on a microbalance and placed in tin capsules for the process of analyzing samples in the Paleo Laboratory at the University of South in St. Petersburg, Florida. I used a Carlo Erba 2500 Series I elemental analyzer to combust the samples at 1050ºC and the isotopic ratios of the gas products were measured using a continuous-flow inlet system on a Finnigan Mat Delta Plus XL stable-isotope ratio mass spectrometer. All samples were run in duplicate or triplicate and compared to both internal and international standards (Pee Dee Belemnite for carbon and air for nitrogen). Results are displayed in delta (δ) notation as calculated by the equation:

$$\delta = ((R_{sample} - R_{standard}) / R_{standard})*1000$$

where R is the ratio of the heavy to light isotope, and expressed as parts per mil (‰).

Statistical Analysis

Since each individual organism (sample) was run in duplicate or triplicate to ensure consistency of the mass spectrometer, these samples were averaged to provide a single data point for each sample. In instances where an outlier occurred, I omitted the replicate outlier from the averaging process or I reanalyzed the sample. Because assumptions of normality could not be met; I used the Box-Cox method to find the most appropriate transformation of the data to reach normality. I then used the GLM model in SAS version 9.1 to compute a two-way crossed ANOVA to analyze isotopic carbon and nitrogen snook data by habitat type and location (SAS Institute 2003). Standard bi-plots depicting isotopic ratios of carbon on the x-axis and nitrogen on the y-axis were also used to visualize and interpret the data.

Results

General

Overall I analyzed 716 various samples for isotopic composition of carbon and nitrogen; 309 YOY snook ranging in size from 16 mm SL to 119 mm SL, 301 primary consumers or potential prey taxa, and 126 primary producer samples. I also analyzed 12 water samples for baseline dissolved inorganic carbon.

Isotopic composition of YOY snook

Values of $\delta^{13}C$ for YOY snook ranged from -28.05 to -21.33 and averaged -25.23 (± 0.06 standard error). Values for $\delta^{15}N$ ranged from 8.02 to 14.23 and averaged 11.94 (± 0.08 SE). Statistical differences were observed in both carbon and nitrogen isotopic compositions of snook when analyzed by habitat type ($p<0.01$; Table 5). Snook collected from ponds were more enriched in nitrogen and depleted in carbon in comparison to those snook captured in the creek (Figure 9). I observed no statistical differences in the isotopic composition of snook when examined by location along the estuarine gradient or by the interaction of habitat type and location.

The isotopic compositions of YOY snook appeared to be generally similar between recruitment years; however, because so few YOY snook were collected during the second year (n=15) I did not complete any statistical analyses. Snook collected in the months of November and February were collapsed to average isotopic compositions by year. Average snook $\delta^{13}C$ values were extremely similar between years (year 1 $\delta^{13}C$ = -25.43 ± 0.09 S.E., year 2 $\delta^{13}C$ = -25.45 ± 0.33 S.E). Average snook $\delta^{15}N$ showed slightly more variation between years, but were generally similar (year 1 $\delta^{15}N$ = 12.45 ± 0.09 S.E, year 2 $\delta^{15}N$ = 12.09 ± 0.29 S.E). I did observe some variability in the isotopic compositions of snook collected in the ponds between the two years (Figure 10), which may be related to changes in the environment between the two years of sampling. Due to the low number of samples no YOY snook collected from the second year of sampling were used in any additional analyses.

The stable carbon and nitrogen isotopic ratios of YOY snook were also analyzed by length of each fish to determine if isotopes could be used to observe ontogenetic dietary shifts in YOY snook. No distinct differences were observed in the isotopic values of snook when examined at 10 mm size increments with all factors collapsed, though variability was quite high (Figure 11). This same type of analysis was done adding habitat type as an additional factor. The smallest size classes (those fish 20-39 mm SL) of snook collected from ponds, had isotopic compositions more similar to those snook collected from the creeks (i.e. these small snook were more enriched in carbon and depleted in N compared to larger snook from the ponds, Figure 12). Similarly, the isotopic compositions of the smallest size class of snook collected from the creeks (those fish 40-49 mm SL) were most similar to the isotopic compositions of snook from the ponds (i.e. depleted in carbon and enriched in nitrogen). These differences in the isotopic compositions of snook from the smallest size classes supports the conclusion of an ontogenetic habitat shift beginning at a size of approximately 40 mm SL that was described in Chapter One. The strong separation in isotopic composition of snook by habitat type at most size classes also supports the concept of site fidelity, suggesting snook are not regularly moving between habitats.

Primary producers

I analyzed one hundred and twenty-six primary producer samples as listed in Table 6. Isotopic carbon values of most non-algal plant samples were generally similar, with at most a 4‰ difference among species. Floating vascular plants had isotopic compositions of nitrogen that greatly differed from all other basal resources suggesting a much different nitrogen source or biogeochemical process. Based on the distribution of primary producers in relation to the average isotopic composition of snook (Figure 13), no single primary producer seems to serve a dominant role as a basal resource for this species. Filamentous green algae was considerably more enriched in carbon relative to YOY snook and can thus be ruled out as a possible basal resource. The three species of mangroves that dominate the shoreline vegetation within Frog Creek are generally similar in isotopic composition and are not much different than leather fern (*Acrostichum danaeifolium*) a mangrove associate in low to mid-salinity forests (Medina et al. 1990).

Despite the dominance of mangroves along the shorelines of the creek and ponds, it appears that mangrove carbon is generally too depleted in comparison to YOY snook to be serving as a basal resource for this species. Instead it appears that POM and BMA are the more likely primary sources of carbon in the snook food web (Figure 13). By comparing the isotopic composition of snook to that of the primary producers, it appears snook are feeding two trophic levels above these trophic level one producers. Therefore, YOY snook are feeding at the third trophic level.

POM and DIC data collected in June 2009 showed a distinct gradient by creek kilometer (Figure 14). POM from the upstream samples were more enriched in nitrogen and depleted in carbon in relation to downstream samples (Figure 15), though the farthest upstream and downstream samples were collected well outside the bounds of the study. The isotopic composition of the POM data is likely directly linked to the isotopic composition of the dissolved inorganic carbon pool which also fluctuates with river (creek) kilometer, though not as noticeably. A large temporal delay in the collection of POM data resulted in the isotopic compositions of this variable being quite dissimilar to POM values collected within the creek during 2006 by a colleague. Therefore, when comparing YOY snook to the pool of primary producers the temporally isolated samples of POM that I collected were not considered.

Primary consumers and potential prey

Primary consumers and potential prey taxa varied greatly in their isotopic compositions (Figure 16, Table 7). Filter-feeding mussels and oysters were quite similar in isotopic composition as expected. Filter-feeding barnacles and Rangia clams were enriched in both carbon and nitrogen compared to other filter feeders. Amphipods collected from bags of mangrove leaf litter, and thought to consume detritus, bacteria, and algae (Poovachiranon et al. 1986, Odum 1971), appeared to feed on the same trophic level as mussels and oysters, though they had a very large range in their isotopic carbon values. Coffee bean snails which feed on detritus (Mook 1986, Proffitt et al. 1993) had the most enriched carbon and most depleted nitrogen values of the sampled invertebrates, which is surprising given the assumption that they would be feeding on mangrove detritus.

A few of the potential prey species such as the bay anchovy, and clown goby appear to feed on a similar trophic level as YOY common snook, suggesting they are not serving as a source prey for these juveniles (Figure 16). Grass shrimp and the poecilliids, mosquitofish and sailfin mollies, appear to feed one trophic level lower than snook, making them likely snook prey. The poecilliids and grass shrimp also seemed to feed a bit higher trophically than expected, likely an indication that they are omnivorous and feeding on both the primary producers and other available prey. The pattern of nitrogen enrichment in those YOY snook collected in ponds was also observed in a number of the prey fish (mosquitofish and mojarras) and invertebrates (grass shrimp, coffee bean snails, mussels, barnacles, and Rangia clams). Similarly, the pattern of carbon depletion in YOY snook collected from ponds was also apparent in all of the other fish and invertebrates with the exception of coffee bean snails and grass shrimp.

Discussion

Young-of-the-year snook collected from the ponds along Frog Creek had significantly different isotopic carbon and nitrogen values compared to those YOY snook collected in the creek. I believe this difference is caused by the residence time of organic matter in the two systems as well as the site fidelity of YOY snook. In this study, the creek consisted of flowing waters that were influenced by a variety of factors including rainwater runoff and tides. This led to stronger currents that flushed the system more regularly. In contrast, the ponds were generally lentic with relatively little water movement. This resulted in the accumulation of organic matter that was utilized by decomposers and bacteria. Aspetsberger et al. (2002) noted that poorly connected floodplains along an Austrian river generally had high levels of bacteria that utilized excess organic material, leading to enriched isotopic values of nitrogen and depleted values of carbon in POM samples. Nitrogen from floodplains was affected over longer-time frames as organic matter was progressively broken down through denitrification and ammonification processes (Aspetsberger et al. 2002, Vander Zanden and Rasmussen 1999). The process of denitrification leads to the production of isotopically lighter ^{14}N which is exported to the atmosphere as nitrogen gas (N_2) while isotopically heavy ^{15}N remains as waste. This leads to resources in lentic environments becoming isotopically heavier (enriched) with longer residence times.

The mineralization of carbon, as organic matter is broken down, leads to the depletion of $\delta^{13}C$ due to the availability of isotopically depleted CO_2 in the water column (Bouillon et al. 2008). In low energy environments such as lagoons or ponds, organic materials tend to accumulate providing a large pool of material for respiration. Longer residence time of water (Aspetesberger et al. 2002) and more respiration of organics (Bouillon et al. 2012) results in depleted DIC levels that are then transferred to the food web. This pattern of depleted carbon levels in organisms from more lentic environments was observed by Roach et al. (2009) in lagoons of a tropical floodplain river. They observed depleted carbon values in seston and benthic algae from lagoonal habitats in comparison to the mainstem river. However, fish collected from the lagoonal habitats in their study did not have depleted $\delta^{13}C$ levels, which the researchers attributed to extensive movements and feeding between the two habitats. In contrast, YOY snook collected in my study showed depleted $\delta^{13}C$ values, suggesting that these fish had fairly high site fidelity and were not moving between the two habitat types (pond and creek). This is quite surprising given the close proximity and the direct connection of the ponds to Frog Creek. High site fidelity of juvenile snook described by the results of this isotopic analysis is supported by the observations of passive telemetry studies in Charlotte Harbor, FL, where juvenile snook home ranges and emigration rates increased with snook size (Barbour and Adams in prep).

Isotopic analyses of size classes of snook by habitat type revealed a pattern whereby the smallest snook collected in ponds (20-39 mm SL) were most similar in isotopic composition to those snook collected in the creek (Figure 12). This likely indicates that the smallest size classes of snook had just recently settled in the ponds and still contained the isotopic signature gained from the creek environment while moving upstream to the ponds. Similarly, the smallest size class of snook collected in the creek (40-49 mm SL) had isotopic signatures most similar to snook residing in ponds. This likely reflects snook that recently shifted from the pond habitat to that of the creek and had yet to assimilate an isotopic composition indicative of the creek. These results support the previous assertion that snook undergo an ontogenetic habitat shift beginning at a size of approximately 40 mm SL, whereby YOY snook begin moving from the ponds into the creek environment. This ontogenetic habitat shift within the backwater nursery habitat was not previously described in the literature, but is an important finding as it appears the smallest (youngest) snook preferentially choose to recruit to the lentic environments of ponds or lagoons as primary nursery habitat before moving to the more lotic environments such as creeks. This finding may have important implications for resource managers in prioritizing preservation of land and restoration of impacted habitats.

Given that past literature described an ontogenetic dietary shift in juvenile common snook, I was surprised that isotopic analyses did not reveal these shifts in the current study. A number of factors may be cited, including: too few samples of the smallest size class of snook; tissue turnover rates associated with the growth of these juveniles; general omnivory of the species; and unselective feeding strategies. A dietary study of YOY snook in Puerto Rico indicated that YOY snook are non-selective feeders that will consume the most abundant food source within their habitats, and attributed ontogenetic changes in diet to differences in food availability within their habitats (Aliume et al. 1997). This concept seems to correspond with the results of the present study as gut contents indicate that YOY snook fed heavily on poeciliids, the most abundant prey source within the Frog Creek wetland complex (data not shown). Since there was an abundance of this prey source, there was no need to switch to other prey.

Results delineating the most important basal resources comprising the base of the snook food web were relatively successful, though temporal variability could be influencing the results. In general primary producers were collected in February 2008, 12 months after the conclusion of the year 1 nekton sampling, introducing a large amount of temporal variability. Originally, I had planned on using primary producers collected in Frog Creek (creek only) by a colleague as part of an independent project co-occuring in time; however, significant differences in the isotopic composition of snook by habitat type (pond vs. creek) led me to believe that similar differences in the basal resources may likely be driving the pattern. Therefore, I opted to collect and analyze primary producer samples from both habitats after the conclusion of snook sampling. This temporal delay in collecting primary producers relative to nekton may have contributed to the variability seen in the data. It should also be noted that all primary producer samples were collected during the dry season whereas snook were collected during both the wet and dry seasons. Past studies have shown high variability in isotopic data by season (wet vs. dry; i.e. Greenwood et al. 2008), so this should be considered as a source of potential error in interpretation.

I observed the largest variation in POM data, which was collected in both creek and pond habitats at the very end of the dry season in June 2009. This data differed greatly from the POM data collected by a colleague within Frog Creek during the fall of 2006 when snook were recruiting (Figure 13). Comparing data on a more similar temporal scale (POM and BMA data from E. Malkin) resolves the trophic linkages between snook and the primary producers and should be considered in future studies. As stated previously, despite the dominance of mangroves along the shorelines of the creek and ponds, based on Malkin's data it appears that POM and BMA are the primary sources of carbon in the snook food web.

Due to the large number of primary producers and prey available within the Frog Creek ecosystem, a number of different basal resources and prey items beyond what I collected may contribute to the overall signature of YOY snook. I had hoped that a mixing model such as Isosource (Phillips and Gregg 2003) would have been able to tease apart the signatures of different sources, thus refining my interpretation; however, the isotopic signatures of many of the basal resources were so similar that analysis was inconclusive. The addition of a third element such as sulfur could have added another dimension to the study, permitting a larger input to the Isosource model and resulting in more conclusive results. When carbon and nitrogen cannot discern basal resources alone, the addition of sulfur isotope analyses have been used to determine the role of different basal resources in estuarine trophic studies (Peterson et al. 1985, Loneragan et al. 1997, Connolly et al. 2004). Sulfur isotopes can be more discriminatory than the other elements because there are large variations in the isotopic ratios of sulfur due to the four general sources (sedimentary sulfides, marine sulfates, porewater sulfates, and rainwater sulfates) and the fact that isotopic differences among primary resources is more likely an indicator of source rather than fractionation (Fry et al. 1982, Peterson and Fry 1987). The use of sulfur isotopes may have also provided a better understanding of YOY snook movements between upstream and downstream habitats (Layman 2007), as downstream resources could be influenced by either marine sulfate or sedimentary sulfides while upstream resources are more likely influenced by rainwater sulfate (Peterson et al. 1985). In the current study, I would have expected sulfur to be isotopically enriched in the downstream reaches of the creek where marine waters have a larger influence. However, it has been shown that plants growing in anaerobic soils incorporate isotopically depleted sulfides and thus can have very low isotopic ratios of sulfur (Peterson et al. 1985).

A final source of error affecting the results of YOY snook trophic dynamics was the failure to collect and analyze common food sources in estuarine waters. Micro-invertebrates and insect larvae were not collected for isotopic analysis during this study. Based on gut content analyses performed by McMichael et al. (1989) and Gilmore et al. (1983), these food groups comprised a large part of the diet for the smallest snook (i.e. those <50 mm SL) and therefore this omission could limit the interpretation of the snook trophic dynamics. However, individual snook stomachs were collected and preserved as part of this study, so these could be dissected and analyzed in the future to determine just how much of these food sources snook were utilizing within this system.

In summary, the technique of stable isotopic analysis has proven to be a very powerful tool in assessing the ecology of YOY snook. Stable isotopes were used to resolve small scale differences in habitat use within a single tidal tributary based on different biogeochemical and physical processes governing the different habitat types. This led to the detection of high site fidelity of YOY snook within these backwater habitats and an ontogenetic habitat shift of snook moving from the ponds to the creek at a size of approximately 40 mm SL. Stable isotopes also revealed that YOY snook feed on the third trophic level (2 levels above the primary producers), rely on benthic microalgae and POM as basal resources, and prey upon poecilliids and grass shrimp. This has resolved our understanding of juvenile snook trophic dynamics by illustrating the important materials (prey and primary producers) necessary for snook growth and development.

CONCLUSIONS

Although past studies have described juvenile snook nursery habitat, none have shown small scale differences in habitat use within these areas. Results of this study indicate that there are differences in juvenile snook habitat use which affect the ecology of individuals within the backwater environments. Data reveal a level of habitat partitioning whereby the smallest and likely the youngest snook, are recruiting directly to the ponds within the Frog Creek watershed. There, these small snook dedicate all their energy into growth resulting in low condition (K) and HSI. Upon reaching a size of approximately 40 mm SL snook begin an ontogenetic habitat shift by moving from the ponds to the creek. This habitat shift was supported by isotopic data which illustrate that the smallest size class of snook collected in the creek, those 40-49 mm SL, had isotopic signatures more similar to snook collected from the ponds. This suggests that these small snook just recently moved from the pond to the creek and had yet to assimilate the isotopic signature more representative of the creek environment. Results of stable isotopic analysis also indicate high site fidelity as large differences in $\delta^{13}C$ and $\delta^{15}N$ were observed between snook of different habitats. Once residing in the creek, snook began to store energy becoming more robust with higher K and HSI values. This is important in showing that the nursery habitat is functioning as intended, developing and later delivering healthy (robust) snook to the breeding population. The accumulation of data from this study alters the existing paradigm of juvenile snook habitat use and has major implications for resource managers that are tasked with preserving productive wetland habitats, and restoring less than optimal wetland habitats. This study reveals that the nursery habitat may actually consist of two separate habitats within these backwater areas, with each serving an important role in the development of juvenile snook.

Table 1. Summary of environmental and physiochemical variables collected by location and habitat type. Results are presented as means ± standard error. N=36 samples per habitat type and location for year 1. N=12 samples per habitat type and location for year 2.

	Upstream		**Downstream**	
Habitat variable	Pond	Creek	Pond	Creek
Year 1 (September 2006 - February 2007)				
Dominant shoreline veg	Cattails	White mangroves	White mangroves	Red mangroves
Secondary shoreline veg	White mangroves	Red mangroves	Red mangroves	White mangroves
Dominant substrate type	Mud	Sand	Mud/Sand	Sand
Mean substrate depth (m)	0.24 ± 0.01	0.04 ± 0.01	0.14 ± 0.01	0.04 ± 0
Current velocity (m/s)[1]	NA	0.09 ± 0.01	NA	0.14 ± 0.02
Mean water depth (m)	0.43 ± 0.02	0.63 ± 0.04	0.40 ± 0.02	0.46 ± 0.03
Inundation[2]	3.84 ± 0.42	2.75 ± 0.38	3.34 ± 0.31	2.87 ± 0.38
Slope[3]	0.02 ± 0	0.04 ± 0.01	0.02 ± 0	0.02 ± 0
Mean temperature	21.1 ± 0.7	22.0 ± 0.7	23.4 ± 0.7	21.8 ± 0.7
Mean salinity	6.4 ± 0.8	6.0 ± 0.9	12.3 ± 1.1	13 ± 1.2
Mean pH	8.0 ± 0.1	7.8 ± 0.1	7.9 ± 0.1	7.6 ± 0.1
Mean dissolved oxygen	7.8 ± 0.6	7.2 ± 0.7	7.7 ± 0.4	6.8 ± 0.4
Year 2 (November 2007 and February 2008)				
Dominant shoreline veg	No Vegetation[3]	White mangroves	White mangroves	Red mangroves
Secondary shoreline veg	White mangroves	Red mangroves	Red mangroves	White mangroves
Dominant substrate type	Mud	Sand	Mud	Sand
Mean substrate depth (m)	0.28 ± 0.01	0.07 ± 0.01	0.13 ± 0.02	0.09 ± 0.02
Current velocity (m/s)	NA	0.08 ± 0.01	NA	0.09 ± 0.02
Mean water depth (m)	0.34 ± 0.02	0.63 ± 0.05	0.36 ± 0.02	0.41 ± 0.02
Inundation	3.37 ± 0.77	2.39 ± 0.5	3.98 ± 0.39	2.33 ± 0.38
Slope	0.02 ± 0.01	0.07 ± 0.01	0.02 ± 0	0.02 ± 0.01
Mean temperature	23.6 ± 0.4	22.8 ± 0.2	23.3 ± 0.2	22.2 ± 0.3
Mean salinity	11.6 ± 0.7	13.2 ± 1.5	18.2 ± 0.2	18.9 ± 0.5
Mean pH	8.3 ± 0	8.1 ± 0	8.1 ± 0	7.9 ± 0
Mean dissolved oxygen	8.6 ± 0.4	6.1 ± 0.6	6.7 ± 0.6	4.7 ± 0.4

[1] calculated by timing floating debris over a distance of 1 meter

[2] the distance between the end of the seine and the water line

[3] calculated as rise/run (change in depth between the two poles divided by the distance between the poles)

[4] Cattail eradication took place between the two years leaving the upstream pond shorelines devoid of vegetatic

Table 2. Abundance of common snook (*Centropomus undecimalis*) collected with a 9.1 m center-bag haul seine by month and year.

		All snook			YOY snook only (<180 mm SL)		
	# samples	count	density (/100 m^2)	% frequency	count	density (/100 m^2)	% frequency
Year 1 (2006-2007)							
September	24	24	1.6 ± 0.6	41.7	19	1.3 ± 0.5	29.2
October	24	71	4.9 ± 1.5	62.5	69	4.7 ± 1.5	62.5
November	24	115	7.9 ± 2.9	54.2	115	7.9 ± 2.9	54.2
December	24	72	4.9 ± 1.6	66.7	68	4.7 ± 1.6	62.5
January[1]	24	48	3.3 ± 1.1	50.0	48	3.3 ± 1.1	50.0
February	24	102	7 ± 2.4	75.0	100	6.8 ± 2.4	66.7
Mean/month	**24**	**72**	**4.9 ± 0.8**	**58.3**	**69.8**	**4.8 ± 0.8**	**54.2**
Total	**144**	**432**			**419**		
Year 2 (2007-2008)							
November	24	26	1.8 ± 0.5	50.0	9	0.6 ± 0.2	29.2
February	24	22	1.5 ± 0.4	50.0	8	0.5 ± 0.2	25.0
Mean/month	**24**	**24**	**1.6 ± 0.3**	**50.0**	**8.5**	**0.6 ± 0.2**	**27.1**
Total	**48**	**48**			**17**		

[1] A strong cold front may have affected the number of snook captured during this month.

Table 3. (A) Density (#/100 m²) of YOY snook < 150 mm SL along mangrove shorelines in Frog Creek September 2006 - February 2007. N = number of samples. (B) Analysis of variance table for results of two-way crossed design.

(A)	Treatment group		*N*	Mean ± 1 SE
	Habitat type			
	Pond		72	6.8 ± 1.4
	Creek		72	2.8 ± 0.6
	Location			
	Upstream		72	7.0 ± 1.4
	Downstream		72	2.6 ± 0.4
(B)	**Effect**	**df**	***F***	***P***
	Habitat type	1,2	11.65	0.008
	Location	1,2	2.99	0.086
	Interaction	1	3.6	0.06

Table 4. (A) Standard length of YOY snook <150 mm along mangrove shorelines in Frog Creek September 2006 - February 2007. N = number of fish. (B) Analysis of variance table for results of two-way crossed design.

(A)	Treatment group		*N*	Mean ± 1 SE
	Habitat type			
	Pond		295	53.4 ± 1.4
	Creek		133	64.5 ± 0.9
	Location			
	Upstream		298	55.8 ± 1.4
	Downstream		130	59.1 ± 1.0
(B)	**Effect**	**df**	***F***	***P***
	Habitat type	1,2	33.86	<0.0001
	Location	1,2	0.77	0.382
	Interaction	1	2.32	0.129

Table 5. (A) Mean carbon and nitrogen isotopic composition of YOY snook <150 mm along mangrove shorelines in Frog Creek September 2006 - February 2007 by habitat type and location. N = number of fish. (B) Analysis of variance table for results of two-way crossed design for both carbon and nitrogen.

(A) Treatment (Habitat)	***N***	**Mean C ± 1 SE**	**Mean N ± 1 SE**
Pond	172	-25.47 ± 0.07	12.33 ± 0.09
Creek	122	-24.91 ± 0.10	11.38 ± 0.13
Treatment (Location)			
Upstream	181	-25.28 ± 0.07	12.02 ± 0.10
Downstream	113	-25.17 ± 0.11	11.81 ± 0.13

(B) Effect (Carbon)	**df**	***F***	***P***
Habitat type	1,2	19.56	<0.001
Location	1,2	1.32	0.252
Interaction	1	1.05	0.307
Effect (Nitrogen)			
Habitat type	1,2	41.96	<0.001
Location	1,2	2.48	0.116
Interaction	1	1.37	0.243

Table 6. Isotopic composition (carbon and nitrogen) of primary producer samples collected by location and habitat type. Values are reported as means ± standard error.

	Pond						Creek					
	Upstream			Downstream			Upstream			Downstream		
	$\delta^{13}C$	$\delta^{15}N$	n	$\delta^{13}C$	$\delta^{15}N$	n	$\delta^{13}C$	$\delta^{15}N$	n	$\delta^{13}C$	$\delta^{15}N$	n
Mangroves												
Black mangrove (green)	-29.28 ± 0.22	5.52 ± 0.53	8	-27.72 ± 0.14	5.45 ± 0.3	5	-28.61 ± 0.31	6.53 ± 0.42	5	-29.72 ± 0.5	1.77 ± 0.29	3
Red mangroves (brown)							-28.22 ± 0.71	4.88 ± 0.23	3	-29.66 ± 0.21	3.87 ± 0.07	3
Red mangroves (green)	-28.94 ± 0.42	3.84 ± 0.33	5	-29.31 ± 0.26	5.54 ± 0.49	5	-28.42 ± 0.22	3.01 ± 0.42	4	-27.61 ± 0.48	7.37 ± 0.49	6
White mangroves (brown)				-29.08 ± 0.46	5.88 ± 0.21	5	-29.13 ± 0.36	6.54 ± 0.17	4	-28.65 ± 0.3	6.13 ± 0.3	3
White mangroves (green)	-27.04 ± 0.7	5.54 ± 0.28	5	-29.52 ± 0.52	5.88 ± 0.47	4	-27.89 ± 0.34	6.26 ± 0.26	5	-27.57 ± 0.56	6.84 ± 0.22	5
Buttonwood	-28.64 ± 0.07	3.14 ± 0.14	5				-26.59 ± 0.12	3.11 ± 0.19	5			
Algae												
Benthic microalgae (in)	-26.87 ± 0.55	6.12 ± 0.28	2	-28.11 ± 0.81	5.6 ± 0.51	2	-29.16 ± 1.22	6.8 ± 1.03	2	-27.33 ± 1.19	5.46 ± 1.06	3
Benthic microalgae (out)	-27.34 ± 3.88	6.57 ± 0.45	2	-27.93 ± 1.24	6.88 ± 0.06	2	-28.4 ± 3.12	6.87 ± 1.07	2	-29.81 ± 0.55	7.07 ± 1.31	2
Filamentous algae	-22.87 ± 0.3	5.01 ± 0.04	3	-22.71 ± 0	10.05 ± 0	1	-24.01 ± 0	9.78 ± 0	1	-27.64 ± 0.06	4.01 ± 0.17	2
POM*	-30.47 ± 0.05	5.76 ± 0.44	3	-30.1 ± 0.36	5.77 ± 0.05	3	-31.7 ± 1.1	6.44 ± 0.65	3	-26.71 ± 1.73	3.96 ± 0.7	3
Other vascular plants - rooted												
Brazilian pepper										-28.24 ± 0.52	0.93 ± 0.11	4
Cattails	-27.98 ± 0.89	7.73 ± 0.03	2									
Leather fern	-27.77 ± 0.48	5.21 ± 0.87	3									
Other vascular plants - floating												
Water hyacinth	-30.43 ± 0.09	11.96 ± 0.27	3									
Water lettuce	-29.57 ± 0.18	11.99 ± 0.19	3									
Dissolved Inorganic carbon												
DIC	-7.72 ± 0.04		3	-7.45 ± 0.18		3	-8.49 ± 0.27		3	-7.82 ± 0.08		3

* POM is typically a mixture of phytoplankton (algae), zooplankton, and detritus from the water column, but these samples were comprised primarily of diatoms (algae)

Table 7. Isotopic composition (carbon and nitrogen) of fish and invertebrates averaged by location and habitat type. Values are reported as means ± standard error.

	Pond						**Creek**					
	Upstream			**Downstream**			**Upstream**			**Downstream**		
	$\delta^{13}C$	**$\delta^{15}N$**	**n**	**$\delta^{13}C$**	**$\delta^{15}N$**	**n**	**$\delta^{13}C$**	**$\delta^{15}N$**	**n**	**$\delta^{13}C$**	**$\delta^{15}N$**	**n**
Invertebrates												
Filter-feeders												
barnacles	-30.49 ± 0.1	10.62 ± 0.14	3	-27.74 ± 0.12	10.14 ± 0.07	4	-27.92 ± 0.26	9.32 ± 0.08	5	-27.52 ± 0.17	9.6 ± 0.05	3
rangia clams				-27.73 ± 0.13	10.69 ± 0.12	6				-28.32 ± 0	9.99 ± 0	1
large mussels				-31.18 ± 0	6.48 ± 0	1				-30.47 ± 0	7.16 ± 0	1
small mussels	-31.99 ± 0.01	7.79 ± 0.07	2	-30.9 ± 0.19	7.43 ± 0.2	2	-31.46 ± 0	7.05 ± 0	1	-30.14 ± 0	6.82 ± 0	1
Detritivores												
amphipods	-32.46 ± 0	9.99 ± 0	1	-27.27 ± 0.47	6.8 ± 0.17	2	-26.2 ± 0	7.8 ± 0	1	-25.22 ± 0.73	7.4 ± 0.1	5
coffee bean snails	-24.61 ± 0.19	4.01 ± 0.17	3	-23.44 ± 0.17	4.93 ± 0.22	3				-24.96 ± 0.03	2.66 ± 0.06	4
Micro-omnivores												
grass shrimp	-24.9 ± 0.23	10.73 ± 0.14	5	-25.35 ± 0.6	10.84 ± 0.11	9	-25.55 ± 0.35	10.35 ± 0.19	6	-25.86 ± 0.25	10.16 ± 0.25	9
Fish												
Herbivores												
sailfin mollies	-26.64 ± 0.43	10.5 ± 0.24	12	-27.06 ± 0.72	9.53 ± 0.36	11	-26.14 ± 0.56	10.56 ± 0.49	12	-26.38 ± 0.7	8.74 ± 0.37	5
Planktivores												
bay anchovies	-26.55 ± 1.78	11.56 ± 0.25	12	-25.3 ± 0.52	12.24 ± 0.18	12	-25.27 ± 0.59	11.95 ± 0.08	12	-24.44 ± 0.63	11.62 ± 0.23	12
Omnivores												
mojarras	-24.9 ± 0.64	11.29 ± 0.46	10	-24.03 ± 0.32	11.79 ± 0.33	8	-23.86 ± 0.8	10.87 ± 0.46	11	-23.67 ± 0.44	10.88 ± 0.36	11
mosquitofish	-26.17 ± 0.34	11.28 ± 0.44	12	-26.89 ± 0.35	11.97 ± 0.13	12	-26.52 ± 0.53	9.68 ± 0.45	12	-25.96 ± 0.31	9.83 ± 0.33	12
Microcarnivores												
clown gobies	-28.14 ± 0.33	11.94 ± 0.28	12	-28.33 ± 0.51	12.15 ± 0.19	12	-27.58 ± 0.67	11.93 ± 0.2	10	-27.09 ± 0.37	11.5 ± 0.11	12

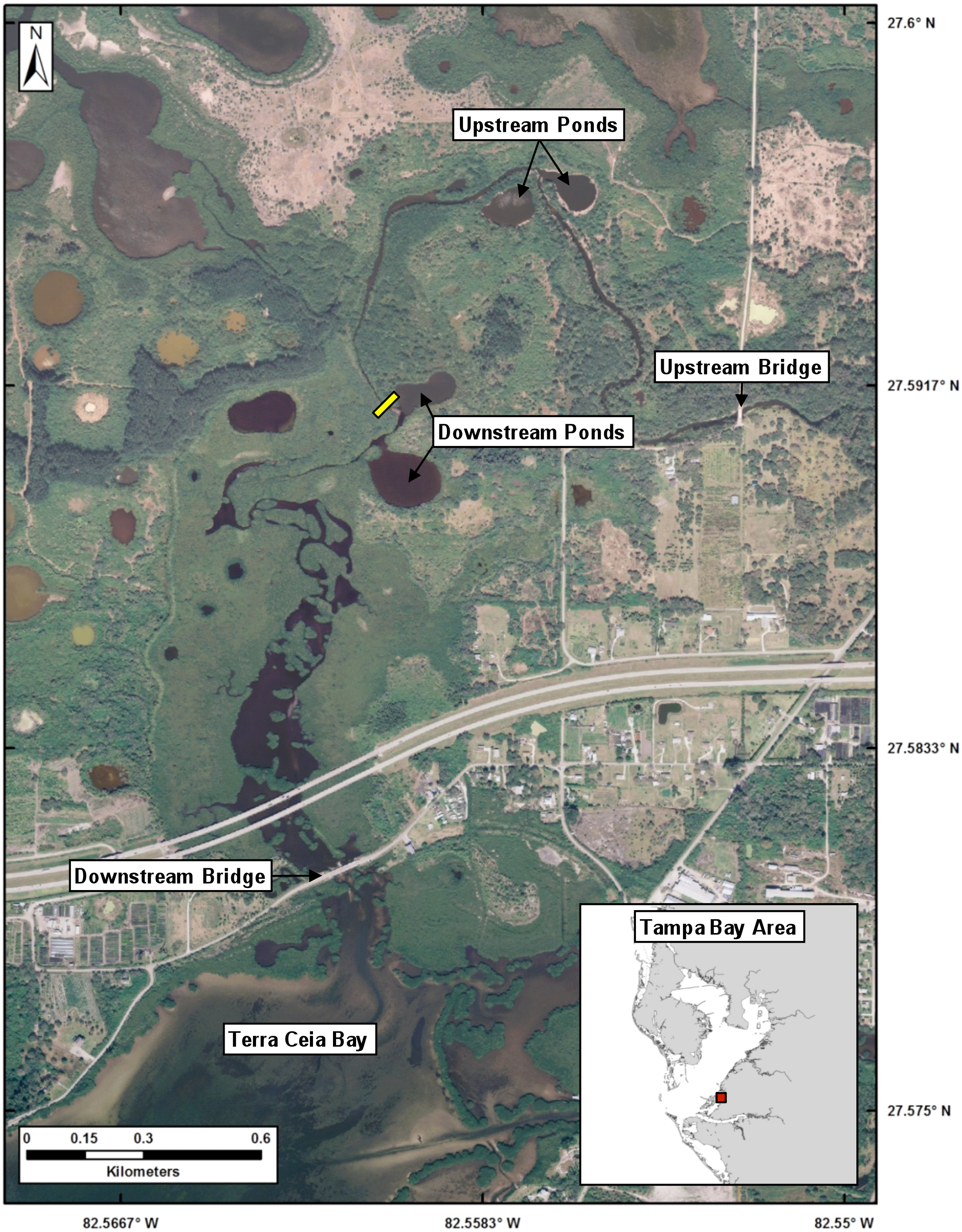

Figure 1. 2006 aerial photograph of Frog Creek. The yellow line intersecting the creek indicates the point separating the upstream and downstream portions of the creek for the purpose of this study. The inset is a map showing the location of Frog Creek within Tampa Bay, FL.

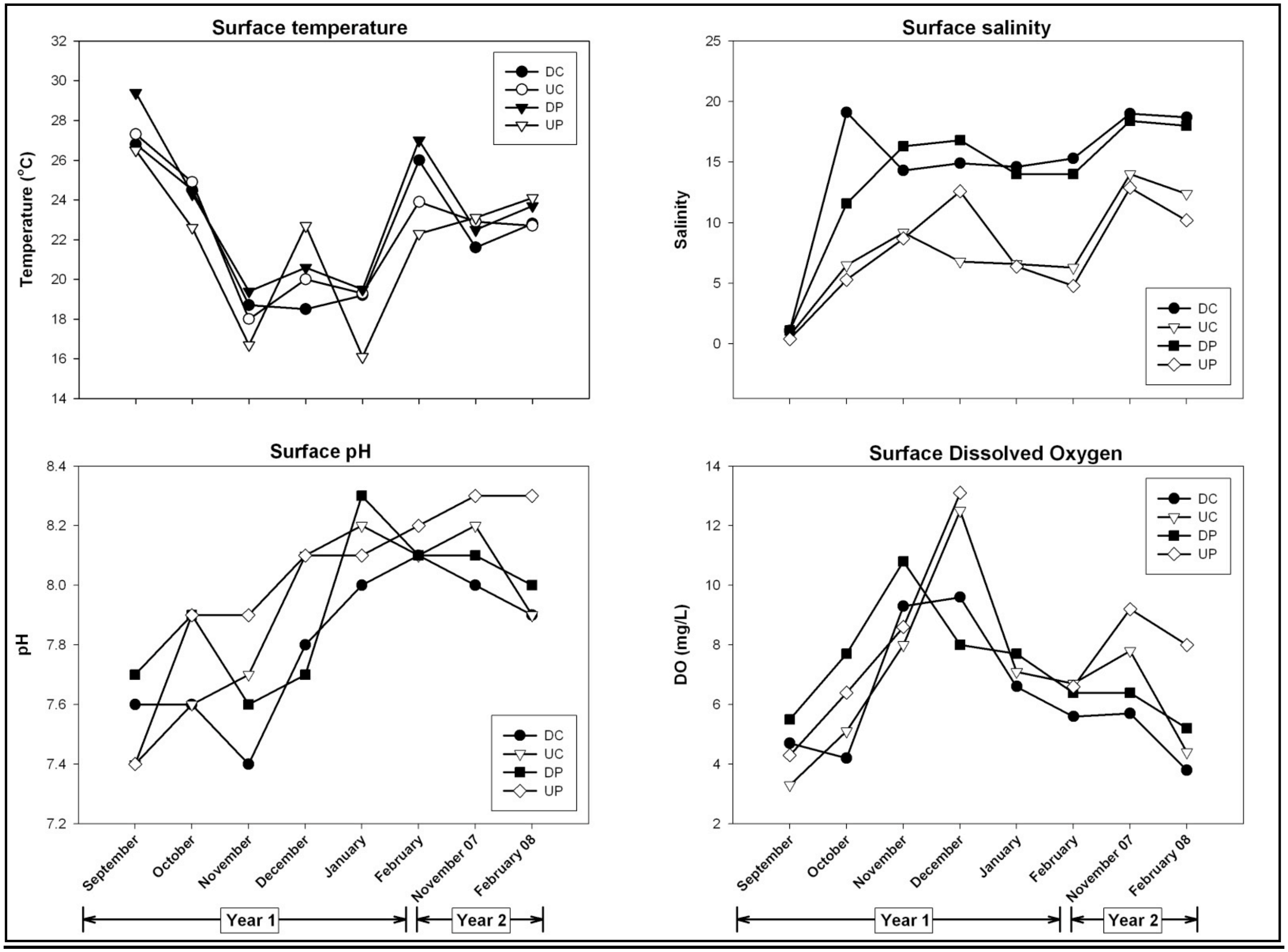

Figure 2. Mean physiochemical data by month, habitat type and location. DC = downstream creek, UC = upstream creek, DP = downstream pond, UP = upstream pond. Each point represents the mean of 3 - 6 measurements.

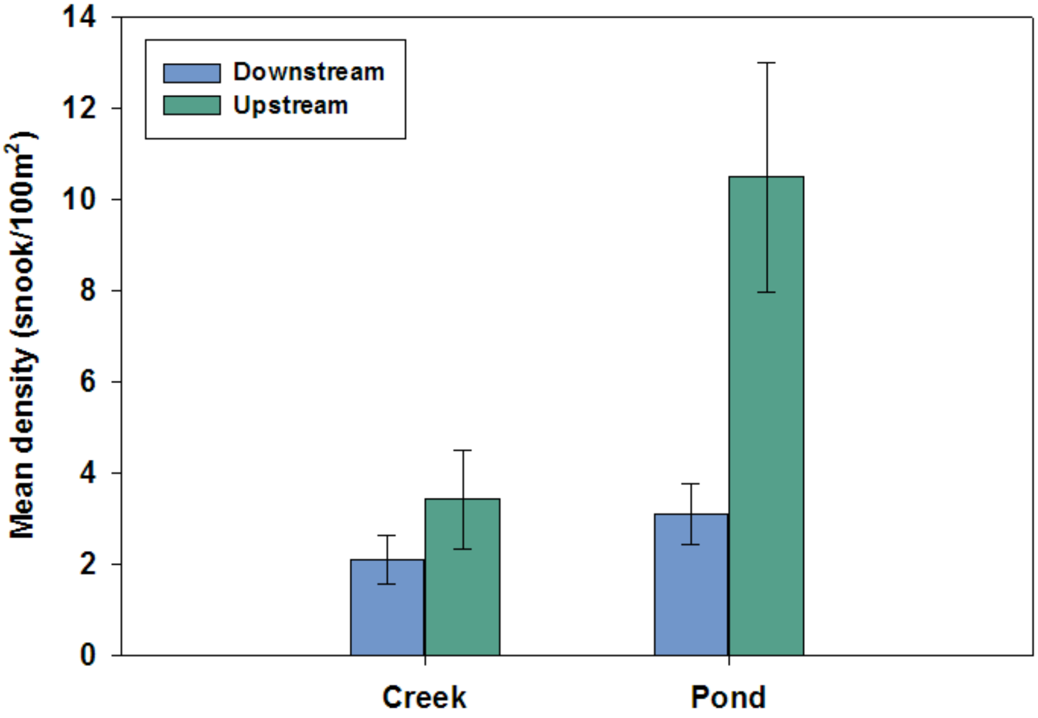

Figure 3. Mean snook density (± standard error) by habitat type and location in the tidal portion of Frog Creek, September 2006 – February 2007.

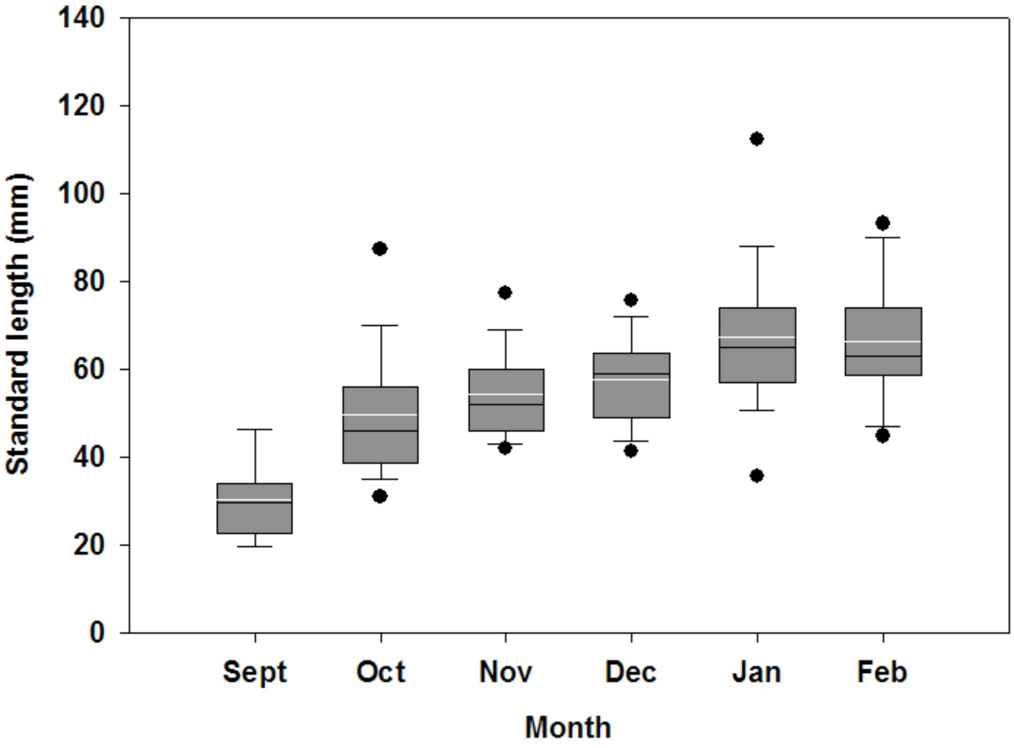

Figure 4. Box and whisker plots showing both mean (white line) and median (black line) standard lengths of YOY snook by month in the tidal portion of Frog Creek, September 2006 – February 2007.

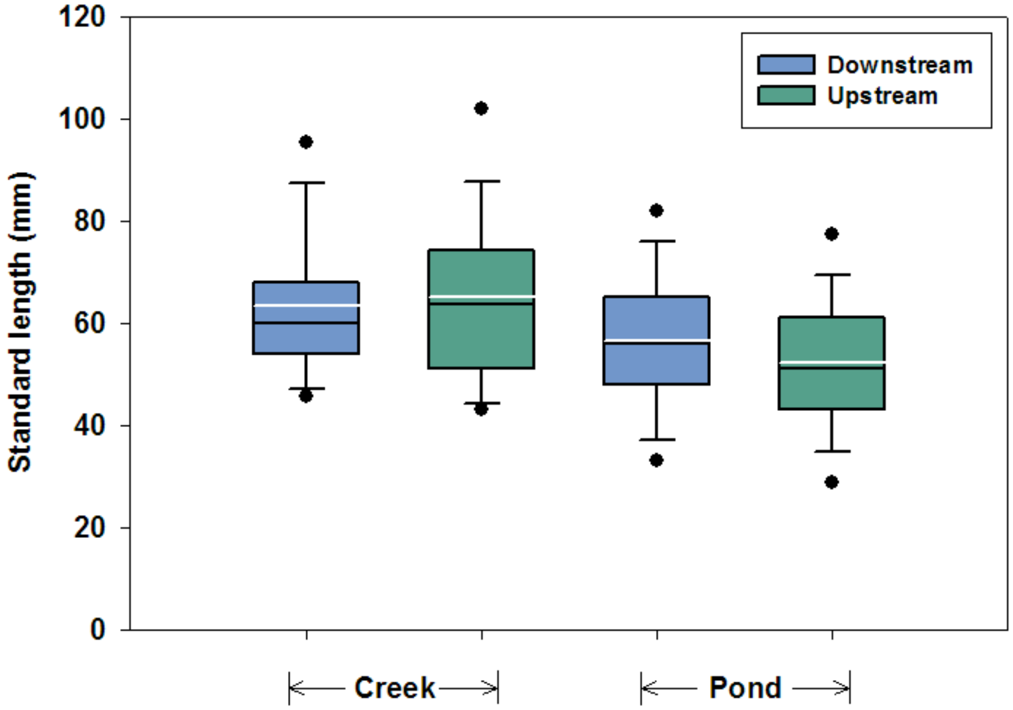

Figure 5. Mean standard length of YOY snook (<150 mm) by habitat type and location in the tidal portion of Frog Creek, September 2006 – February 2007. The white lines indicate the mean, while the black lines represent the median. Points outside the error bars represent the outliers falling within the 5th and 95th percentiles.

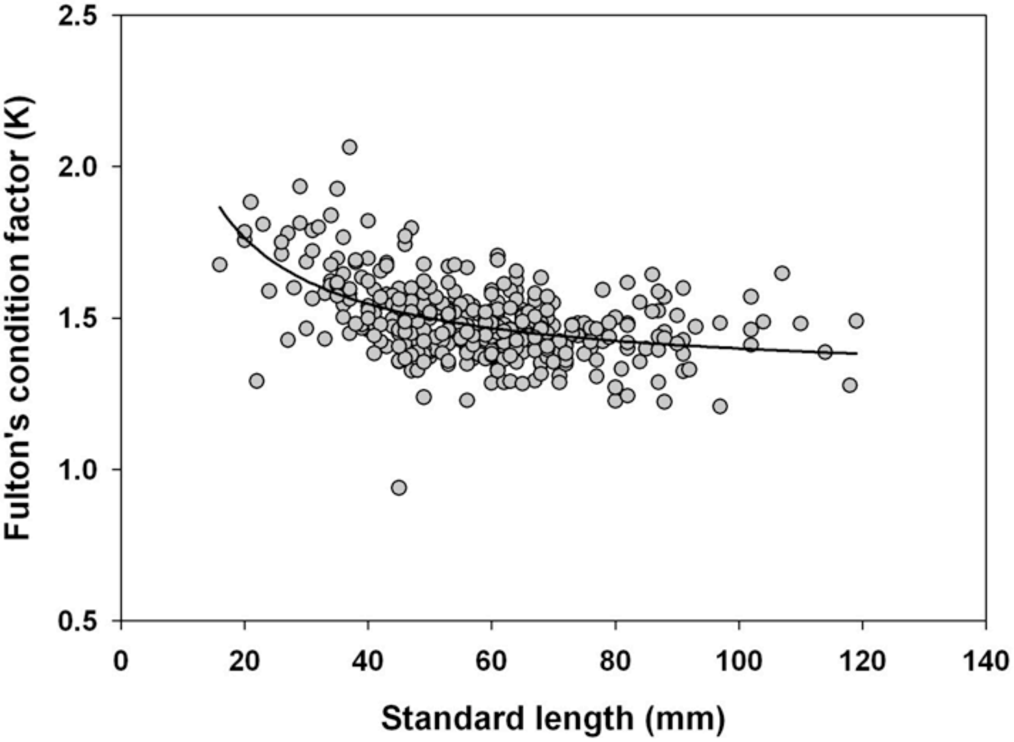

Figure 6. Comparison of Fulton's condition factor by standard length, for each snook collected in the tidal portion of Frog Creek, September 2006 – February 2007. The curve was modeled to the data to remove the trend of allometric growth from the data for further analysis.

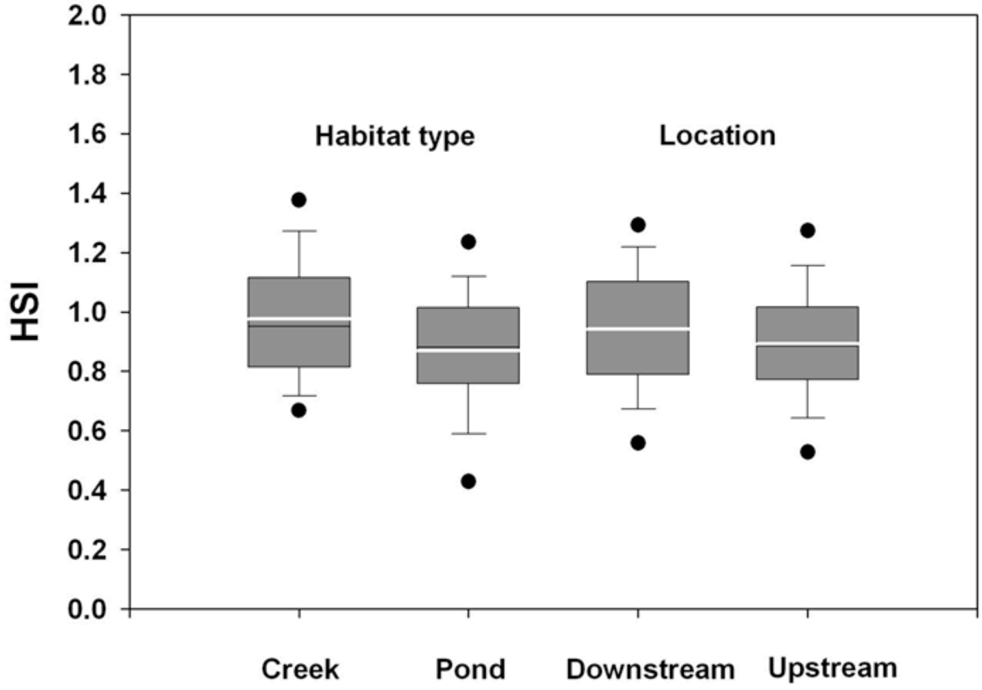

Figure 7. Box and whisker plot portraying the hepatosomatic indices (HSI) of YOY snook by habitat type and location in the tidal portion of Frog Creek, September 2006 – February 2007.

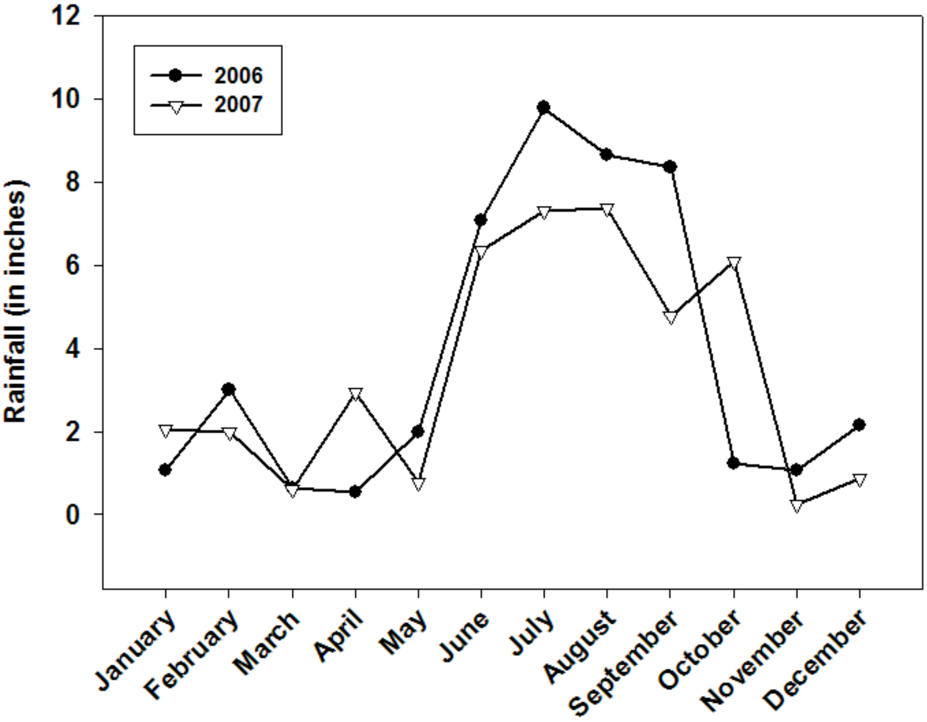

Figure 8. Graph of rainfall by month and year in Manatee county Florida. Data courtesy of Southwest Florida Water Management District (SWFWMD).

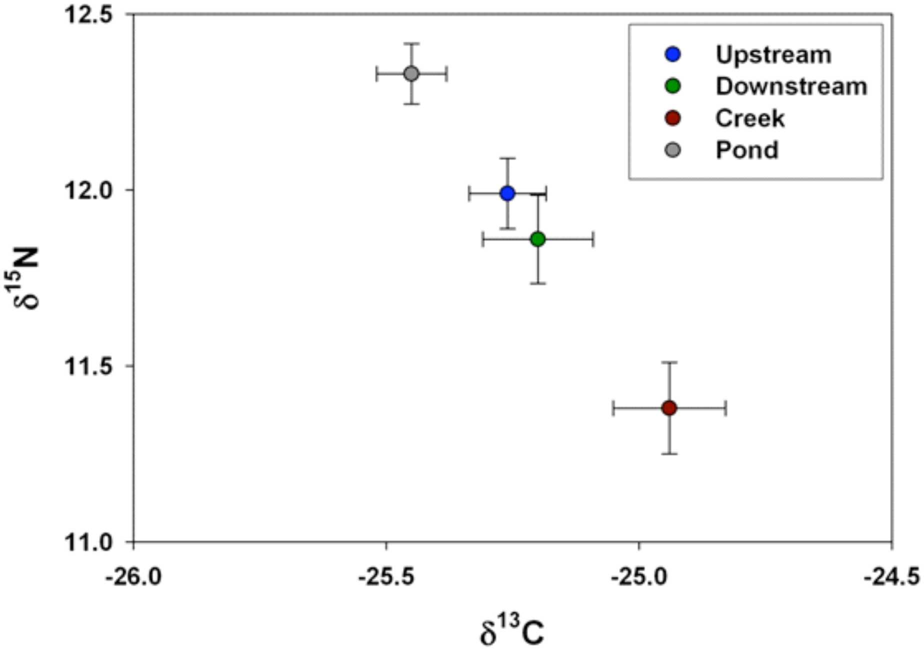

Figure 9. Isotopic compostions of YOY snook by location (upstream vs. downstream) and habitat type (pond vs. creek).

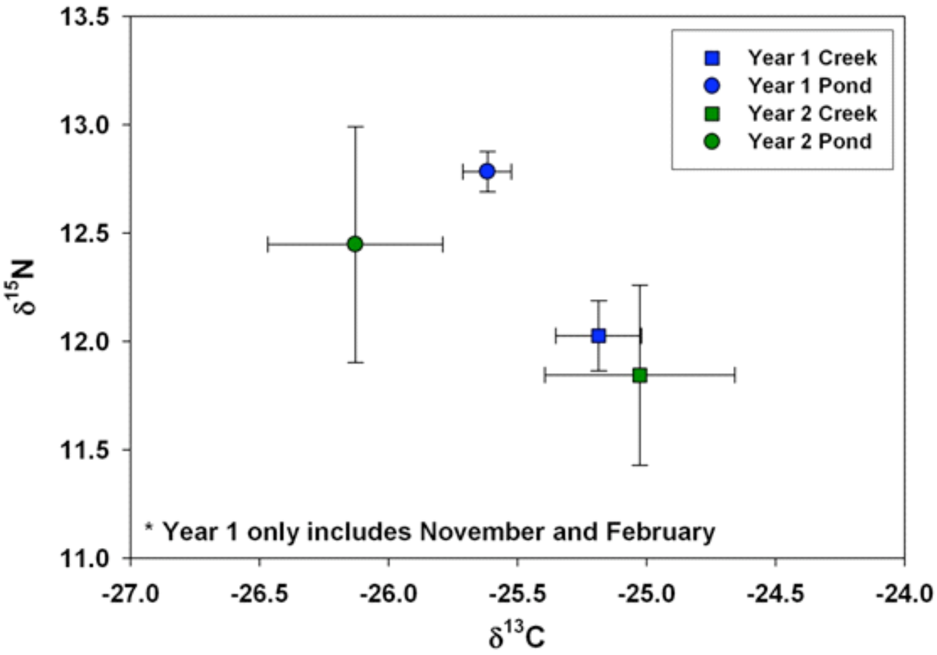

Figure 10. Isotopic composition of young-of-the-year snook by year and habitat type.

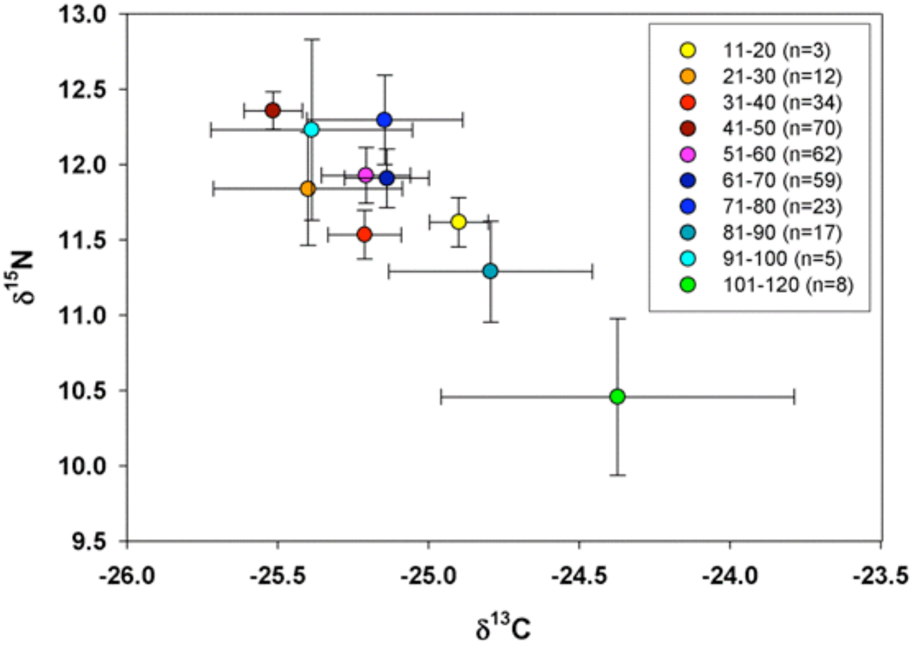

Figure 11. Average isotopic composition of snook by size classes. Data are collapsed by habitat type and location.

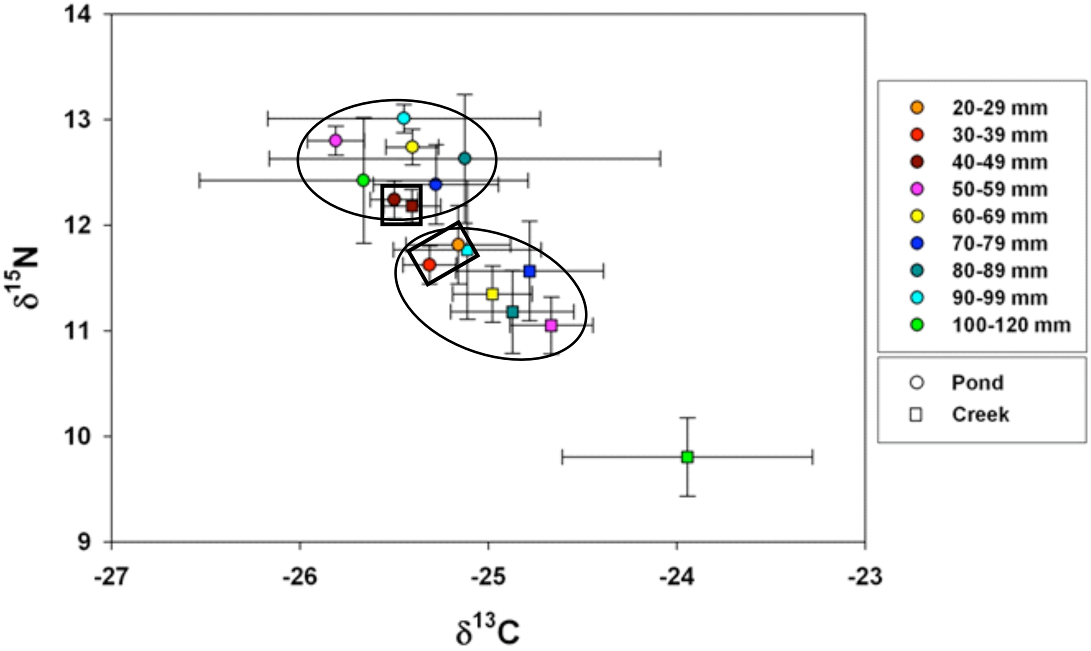

Figure 12. Average isotopic composition of YOY snook by size class and habitat type. The large circles illustrate the general groupings by habitat type. The small dark boxes highlight the smallest size classes of snook from each habitat type that are dissimilar to the general pattern of isotopic composition by habitat type.

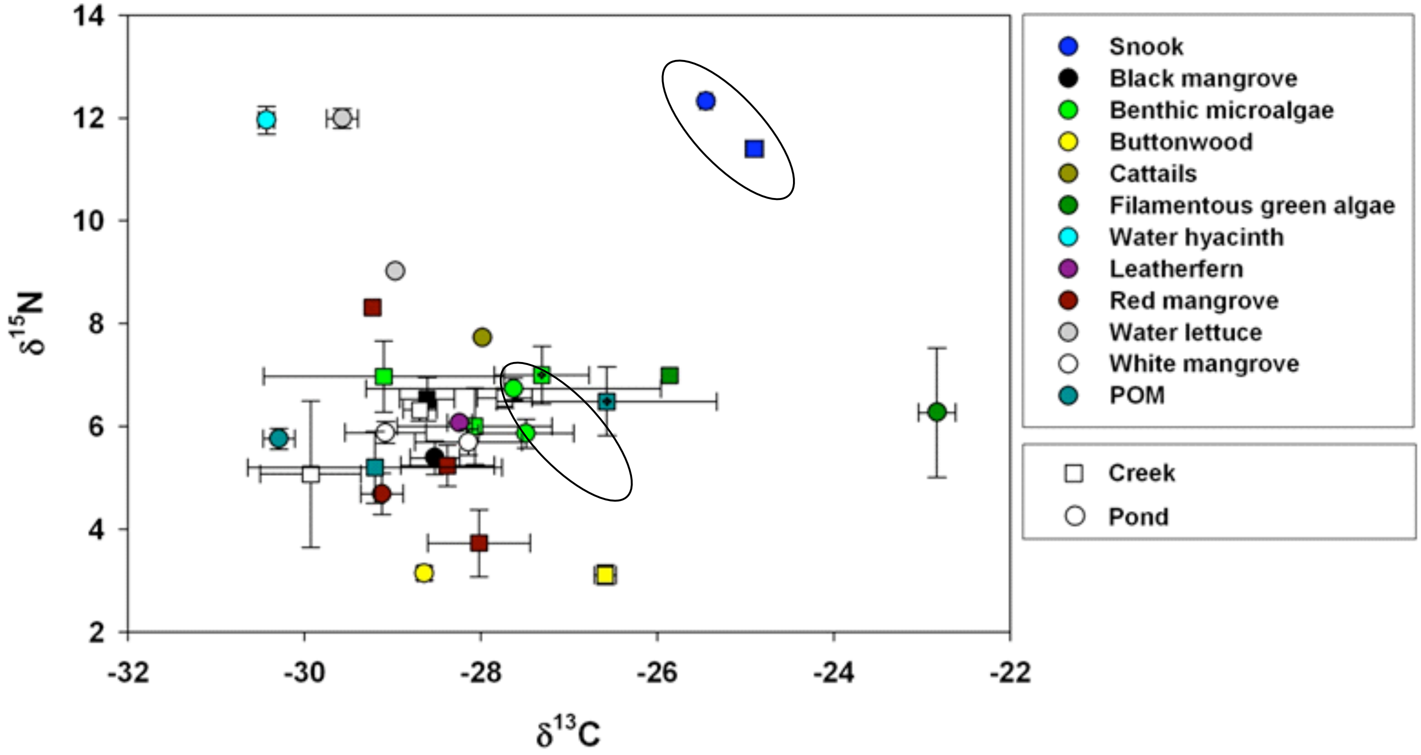

Figure 13. Average isotopic composition of YOY snook and primary producers collected from both pond and creek habitat types. Benthic microalgae and POM creek samples with marks within the square symbol represent data collected concurrently in time by a colleague researcher, Elon Malkin. Circle around the blue points indicates the snook, while the bottom circle represents the most likely basal resources supplying energy to YOY snook given a difference in fractionation associated with two trophic levels.

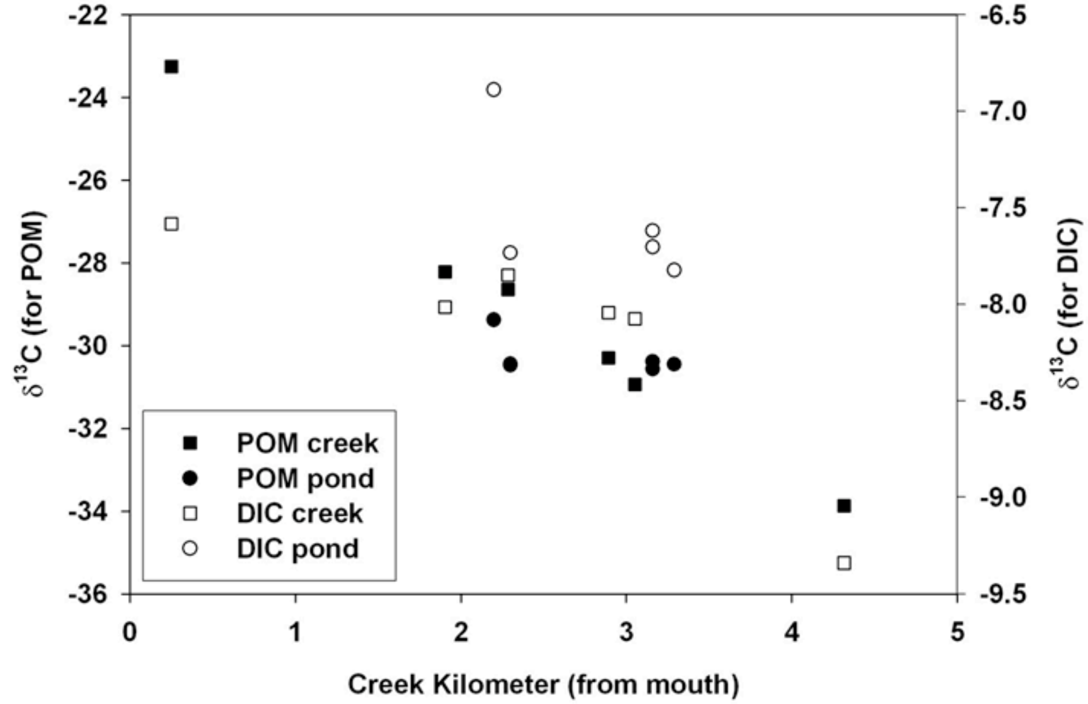

Figure 14. Isotopic carbon values of particulate organic material (POM) and dissolved inorganic carbon (DIC) as collected by creek kilometer and plotted by habitat type.

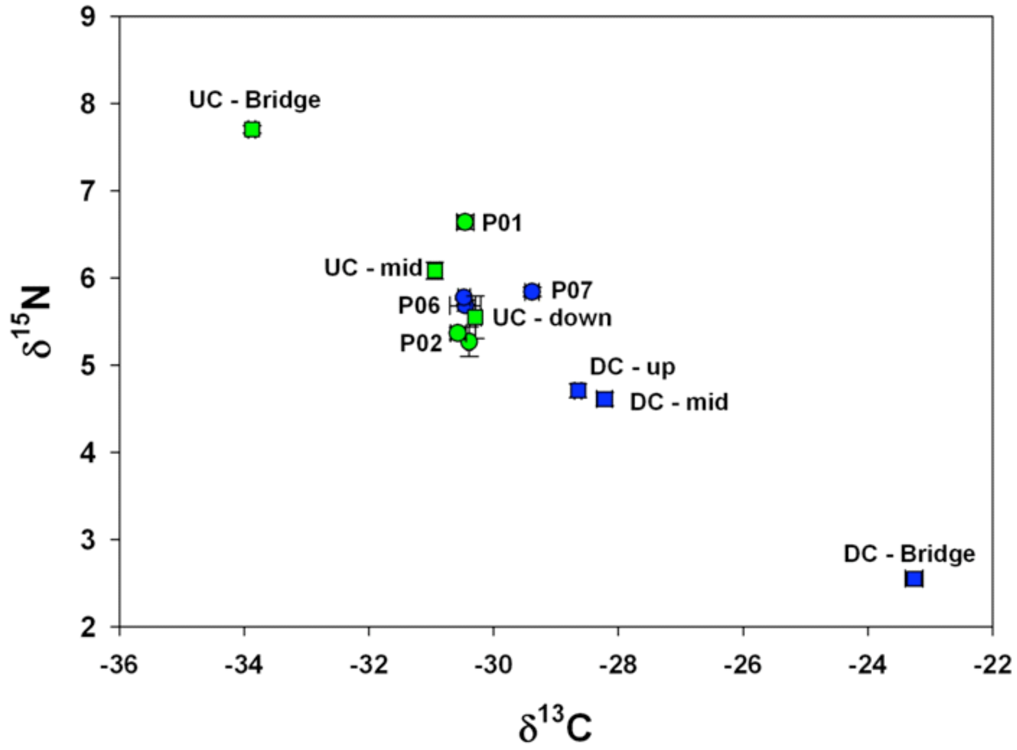

Figure 15. Isotopic composition of particulate organic matter (POM) filtered from Frog Creek and the adjacent ponds. Data are organized by both habitat type and location.

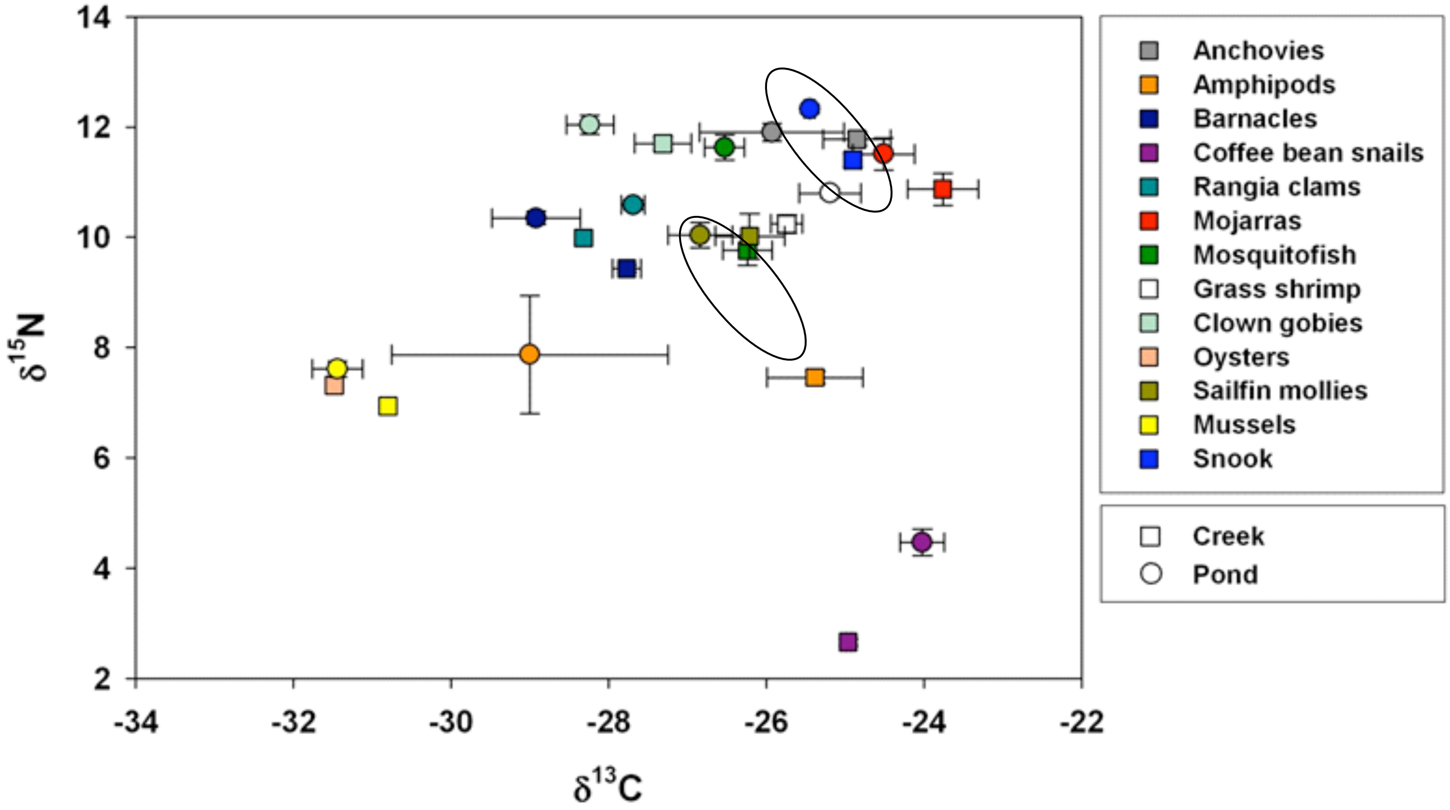

Figure 16. Average isotopic composition of YOY snook and a variety of consumers collected from Frog Creek, organized by habitat type. The top circle highlights the isotopic compostion of YOY snook, while the bottom circle represents the most likely prey that snook are consuming based on a fractionation associated with one trophic level.

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APPENDIX A – FREEZE DRYING PROCEDURE

1) Fish were removed from the freezer rinsed with deionized water, placed in individual glass vials, and returned to the freezer to await freeze drying.
2) Shelves and their thermistors were plugged into the appropriate slots in the bulk dryer. Probe-end of the thermistors were left in the bottom of the shelf.
3) The freezer unit was turned on and allowed to reach -55°C (green light on the display) at which point fish (in their respective individual vials) were placed onto shelves in the bulk dryer.
4) After closing the door, the pressure valve and the drain hose, the pressure was set to 0.016mb and the vacuum pump was turned on.
5) At this point, the shelf heaters should be on STOP ('S' on the bulk dryer display).
6) After 72 hours, the shelf temperature was set to -20°C and set to RUN ('R' on the bulk dryer display). Samples were allowed to run at -20°C for 12 hours after which the temperature was raised every 12 hours to -10°C, then to 0°C, and finally to 25°C. Total drying time was 120 hours (5 days).
7) After drying, the freeze dryer was turned OFF and the samples (fish and pan) were removed and immediately placed into a desiccators to await grinding.

Appendix B – Metadata

Table A1. Habitat metadata.

Variable	Description	Details
SampleID	Sample identification number.	AB - Adam Brame First 4 numbers - month and year sample was collected Last 4 characters - sample number for that event
Habitat type		Pond or creek
Location		Upstream or downstream
Date	Date sample was collected	Month/Day/Year
Start time	Time sample was collected	Measured as Eastern Standard Time
Latitude	North/South location of site	Measured in decimal degrees using a Garmin GPSmap 188
Longitude	East/West location of site	Measured in decimal degrees using a Garmin GPSmap 188
Substrate 1	Primary substrate type	DT - Detritus MU - Mud PT - Peat SA - Sand SH - Shell hash
Substrate 2	Secondary substrate type	Same as Substrate 1
Substrate 3	Tertiary substrate type	Same as Substrate 1

Table A1 continued.

Sub. Depth	Estimated substrate depth	Measured in meters; <0.1 was less than 1/10 meter and later coded 0.05
Bycatch 1	Primary bycatch type	CT - Ctenophores DT - Detritus (decomposing leaves and sticks) FG - Filamentous green algae HY - Water Hyacinth LL - Leaf litter LO - Log MM - Man made debris (trash) MS - Mangrove seeds MU - Mud OY - Oysters NO - No bycatch SA - Sand SH - Shells ST - Sticks WD - Woody debris (More coarse and woody than detritus)
%	% of total bycatch comprised by bycatch type 1	
Bycatch 2	Secondary bycatch type	Same variables as Bycatch 1
%	% of total bycatch comprised by bycatch type 2	
Bycatch 3	Tertiary bycatch type	Same variables as Bycatch 1
%	% of total bycatch comprised by bycatch type 3	
Bycatch Vol	Total volume of bycatch	Measured in gallons
Bottom Veg	Type of bottom vegetation	If no SAV was found the code N was used for "no SAV present"

Table A1 continued.

Shore veg 1	Primary shoreline vegetation	BM - Black mangrove
Shore veg 1 (cont)		BP - Brazilian Pepper
		BW - Buttonwood
		CS - Cattails
		HY - Water hyacinth
		JU - Juncus
		LF - Leather fern
		NO - No shore veg.
		PN - Pneumatophores
		RM - Red mangrove
		SN - Spartina
		TD - Dead trees
		TO - Oak trees
		TV - Unknown terrestrial vegetation
		WL - Water lettuce
		WM - White mangrove
cover 1	Qualitative % composition estimation	Measured as %; X=100%
Shore veg 2	Secondary shoreline vegetation	Same variables as Shore veg 1
cover 2	Qualitative % composition estimation	Measured as %; X=100%
Shore veg 3	Tertiary shoreline vegetation	Same variables as Shore veg 1
cover 3	Qualitative % composition estimation	Measured as %; X=100%
Bank	Side of bank (when looking upstream) that was sampled	L or R
Shore depth	Water depth measured at the seine pole closest to shore	Measured in meters

Table A1 continued.

Mid depth	Water depth at the bag	Measured in meters
Offshore depth	Water depth at the offshore seine pole	Measured in meters
Inundation	Measure of water from the shoreward seine pole to the waterline	Measured in meters
Current	A measure of water movement (timed floating debris)	Measured in meters per second (less than 0.1 was designated as 0.05)
Tide	Estimated tidal stage during sampling	HF - High falling
Tide (cont)		HR - High rising
		HS - Slack high
		MF - Mid falling
		MR - Mid rising
		LF - Low falling
		LR - Low rising
		LS - Slack low
Area	The area sampled by the seine net	All sample areas were 60.9 square meters.

Table A2. Water quality metadata.

Variable	Description	Details
Sample ID	Sample identification number.	AB - Adam Brame First 4 numbers - month and year sample was collected Last 4 characters - sample number for that event
Date	Date sample was collected	Month/Day/Year
Top Temp	Surface salinity measured hy YSI 556MPS	Measured in °C
Bottom Temp	Bottom Salinity measured by YSI 556 MPS	Measured in °C
Top Salinity	Surface salinity measured by YSI 556 MPS	Unitless
Bottom Salinity	Bottom salinity measured by YSI 556 MPS	Unitless
Top pH	Surface pH measured by a YSI 556 MPS	Measured relative to the standard pH scale of 0-14
Bottom pH	Bottom pH measured by a YSI 556 MPS	Measured relative to the standard pH scale of 0-14
Top DO	Surface dissolved oxygen measured by YSI 556 MPS	Measured in mg/L
Bottom DO	Bottom dissolved oxygen measured by YSI 556 MPS	Measured in mg/L
BP	Barometric Pressure measured by YSI 556 MPS	mmHg
Clarity	Could the bottom be seen?	Yes or No

Table A3. Nekton metadata.

Variable	Description	Details
Sample ID	Sample identification number.	AB - Adam Brame First 4 numbers - month and year sample was collected Last 4 characters - sample number for that event
Species	Scientific name of nekton collected	
Total number	Total number of individuals (of each species) collected	
Approximation?	Was the total number an exact count or an approximation	0 - no, exact count 1 - yes, approximation
L1 - L20	Length measurements for individual nekton L1-L20	Fish measured as standard length Crabs measured as carpace width Penaeid shrimp measured as post-orbital head length All measured in mm

Table A4. Snook work-up metadata.

Variable	Description	Details
Sample ID	Sample identification number.	AB - Adam Brame First 4 numbers - month and year sample was collected Last 4 characters - sample number for that event
Species	Scientific name of nekton collected	
Location		Upstream or downstream
Habitat type		Pond or creek
Date	Date sample was collected	Month/Day/Year
Snook sample	Sample number assigned to each individual snook	Sequentially numbered by when the sample was processed in the lab
Field SL	Standard length of each individual as measured in the field	Measure to the nearest mm
SL	Standard length of each individual as measured in the lab	Measure to the nearest mm
Final_SL	Standard length used for all analyses	Measure to the nearest mm
FL	Fork length of each individual as measured in the lab	Measure to the nearest mm
TL	Total length of each individual as measured in the lab	Measure to the nearest mm
Weight	Blotted wet-weight of each individual snook	Measured to the nearest ten thousandths of a gram
liver_weight	Blotted wet-weight of each individual snook liver	Measured to the nearest ten thousandths of a gram
Condition_TL	Fulton's condition factor (K) calculated using TL	
Condition_SL	Fulton's condition factor (K) calculated using SL	
Hep_coefficient	Hepatosomal coefficient calculated using weight and liver weight	
Hep_index	Hepatsomatic index calculated using weight and liver weight	
Avg dN	Average isotopic value of nitrogen for each individual snook	Reported in parts per mil (‰)
Avg dC	Average isotopic value of carbon for each individual snook	Reported in parts per mil (‰)

Table A5. Consumer isotopic metadata.

Variable	Description	Details
Species ID	Type of organism and replicate number	Some are duplicated by period, location, and habitat type
Avg N	Average isotopic value of nitrogen for each individual	Reported in parts per mil (‰)
Avg C	Average isotopic value of carbon for each individual	Reported in parts per mil (‰)
SL	Standard length of each individual as measured in the lab	Only reported for fish
Period	Time of year when captured	Period 1 - September and October Period 2 - November and December Period 3 - January and February
Location		Upstream or downstream
Habitat type		Pond or creek

Table A6. Primary producer isotopic metadata.

Variable	Description	Details
Sample type	Type of primary producer sampled	BM - Black mangrove leaves BMA - Benthic microalgae (sampled from inside or outside of glass plates) BP - Brazilian pepper leaves BW - Buttonwood leaves CS - Cattails DIC - Dissolved inorganic carbon in the water FG - Filamentous green algae HY - Water hyacinth LF - Leather fern leaves POM - Particulate organic matter filtered from the water column RM - Red mangrove leaves (green or dead) WL - Water lettuce leaves WM - White mangrove leaves (green or dead)
Location		Upstream or downstream
Habitat type		Pond or creek
Avg N	Average isotopic value of nitrogen for each individual	Reported in parts per mil (‰)
Avg C	Average isotopic value of carbon for each individual	Reported in parts per mil (‰)

APPENDIX C – HABITAT DATA

Table A7. Raw habitat data. This table is three pages wide by six pages long. Data from the first column of pages are labeled “A”, the middle column of pages are labeled “B” and the third column of pages are labeled “C”.

SampleID	Habitat Type	Location	Date	Start time	Latitude	Longitude	Substrate 1	Substrate 2	Substrate 3	Sub. Depth
AB0906P01-2	POND	UP	9/29/06	936	27.59620	-82.55663	M	.	.	0.3
AB0906P01-1	POND	UP	9/29/06	1010	27.59587	-82.55631	M	.	.	0.3
AB0906P01-3	POND	UP	9/29/06	1055	27.59579	-82.55590	M	D	.	0.2
AB09063190	CREEK	UP	9/29/06	1218	27.59663	-82.55740	S	.	.	0
AB09062740	CREEK	UP	9/29/06	1254	27.59403	-82.56084	S	M	.	0.05
AB09062170	CREEK	DOWN	9/29/06	1324	27.59047	-82.56063	H	S	M	0.05
AB09062110	CREEK	DOWN	9/29/06	1352	27.59006	-82.56116	S	M	.	0.05
AB09061650	CREEK	DOWN	9/29/06	1419	27.58944	-82.56411	S	M	H	0.05
AB09061530	CREEK	DOWN	9/29/06	1444	27.58852	-82.56405	H	S	M	0
AB09061270	CREEK	DOWN	9/29/06	1518	27.58806	-82.56236	S	.	.	0.05
AB09061080	CREEK	DOWN	9/29/06	1541	27.58694	-82.56199	S	M	.	0.05
AB0906P07-1	POND	DOWN	9/29/06	1615	27.58982	-82.56096	S	.	.	0.2
AB0906P07-3	POND	DOWN	9/29/06	1647	27.58928	-82.56066	M	S	.	0.1
AB0906P07-2	POND	DOWN	9/29/06	1706	27.59012	-82.55999	M	S	.	0.1
AB09063210	CREEK	UP	9/19/06	1000	27.59668	-82.55762	S	H	.	0
AB0906P02-1	POND	UP	9/19/06	1033	27.59583	-82.55727	M	.	.	0.2
AB0906P02-2	POND	UP	9/19/06	1100	27.59556	-82.55720	M	.	.	0.2
AB0906P02-3	POND	UP	9/19/06	1130	27.59574	-82.55830	M	.	.	0.3
AB09062950	CREEK	UP	9/19/06	1216	27.59596	-82.55937	S	M	.	0.05
AB09062590	CREEK	UP	9/19/06	1254	27.59361	-82.55101	S	M	.	0.05
AB09062330	CREEK	UP	9/19/06	1341	27.59107	-82.56041	S	.	.	0.05
AB0906P06-1	POND	DOWN	9/19/06	1403	27.59140	-82.56023	M	S	.	0.1
AB0906P06-2	POND	DOWN	9/19/06	1425	27.59173	-82.55989	M	S	.	0
AB0906P06-3	POND	DOWN	9/19/06	1444	27.59156	-82.55899	M	S	.	0.1

Table A7 continued. Page column A.

AB10063190	CREEK	UP	10/6/06	929	27.59663	-82.55745	S	M	.	0.05
AB1006P02-1	POND	UP	10/6/06	952	27.59594	-82.55797	M	.	.	0.3
AB1006P02-2	POND	UP	10/6/06	1026	27.59622	-82.55771	M	.	.	0.2
AB1006P02-3	POND	UP	10/6/06	1040	27.59602	-82.55723	M	.	.	0.2
AB10062880	CREEK	UP	10/6/06	1124	27.59593	-82.55998	S	M	.	0.1
AB10062600	CREEK	UP	10/6/06	1150	27.59370	-82.56103	S	M	.	0.05
AB10062320	CREEK	UP	10/6/06	1218	27.59139	-82.56079	S	.	.	0.05
AB1006P06-1	POND	DOWN	10/6/06	1254	27.59133	-82.55958	S	M	.	0.05
AB1006P06-3	POND	DOWN	10/6/06	1318	27.59141	-82.55913	S	M	.	0.1
AB1006P06-2	POND	DOWN	10/6/06	1340	27.59153	-82.56034	S	M	.	0.1
AB10062110	CREEK	DOWN	10/6/06	1408	27.59006	-82.56116	S	.	.	0
AB10061710	CREEK	DOWN	10/6/06	1433	27.58990	-82.55379	S	.	.	0
AB1006P01-3	POND	UP	10/24/06	932	27.59639	-82.55667	M	.	.	0.2
AB1006P01-1	POND	UP	10/24/06	1005	27.59604	-82.55654	M	.	.	0.3
AB1006P01-2	POND	UP	10/24/06	1046	27.59624	-82.55582	M	.	.	0.2
AB10063030	CREEK	UP	10/24/06	1208	27.59598	-82.55865	S	M	.	0.05
AB10062850	CREEK	UP	10/24/06	1241	27.59575	-82.56022	S	.	.	0
AB1006P07-1	POND	DOWN	10/24/06	1317	27.58904	-82.56058	M	.	.	0.3
AB1006P07-2	POND	DOWN	10/24/06	1344	27.58911	-82.55965	M	.	.	0.3
AB1006P07-3	POND	DOWN	10/24/06	1417	27.58995	-82.55948	M	S	.	0.2
AB10061480	CREEK	DOWN	10/31/06	1003	27.58841	-82.56381	H	.	.	0
AB10061310	CREEK	DOWN	10/31/06	1036	27.58809	-82.56242	S	M	.	0.05
AB10061100	CREEK	DOWN	10/31/06	1057	27.58711	-82.56201	O	H	M	0.05
AB10061040	CREEK	DOWN	10/31/06	1124	27.58666	-82.56181	M	S	.	0.05
AB1106P01-3	POND	UP	11/21/06	1002	27.59652	-82.55644	M	.	.	0.2
AB1106P01-1	POND	UP	11/21/06	1037	27.59636	-82.55578	M	D	.	0.2
AB1106P01-2	POND	UP	11/21/06	1115	27.59589	-82.55644	M	.	.	0.3
AB11063110	CREEK	UP	11/21/06	1150	27.59639	-82.55806	S	.	.	0
AB11062910	CREEK	UP	11/21/06	1214	27.59590	-82.55971	S	.	.	0
AB11062620	CREEK	UP	11/21/06	1247	27.59387	-82.56099	S	.	.	0
AB1106P06-1	POND	DOWN	11/21/06	1317	27.59157	-82.55896	M	S	.	0.1
AB1106P06-3	POND	DOWN	11/21/06	1333	27.59165	-82.55997	M	.	.	0.1
AB1106P06-2	POND	DOWN	11/21/06	1409	27.59124	-82.56026	S	.	.	0.05

Table A7 continued. Page column A.

AB11061550	CREEK	DOWN	11/21/06	1445	27.58867	-82.56454	M	S	.	0.1
AB11061800	CREEK	DOWN	11/21/06	1517	27.58983	-82.56379	S	M	.	0.05
AB11062110	CREEK	DOWN	11/21/06	1540	27.59006	-82.56116	S	M	.	0.05
AB1106P02-2	POND	UP	11/25/06	936	27.59584	-82.55818	M	.	.	0.4
AB1106P02-1	POND	UP	11/25/06	1013	27.59545	-82.55756	M	S	.	0.3
AB1106P02-3	POND	UP	11/25/06	1055	27.59584	-82.55719	M	S	.	0.3
AB11063020	CREEK	UP	11/25/06	1135	27.59594	-82.55873	S	.	.	0.05
AB11062820	CREEK	UP	11/25/06	1219	27.59558	-82.56043	S	.	.	0.05
AB11062550	CREEK	UP	11/25/06	1245	27.59336	-82.56118	S	M	.	0.05
AB11062210	CREEK	DOWN	11/25/06	1315	27.59045	-82.56065	H	M	.	0.05
AB1106P07-3	POND	DOWN	11/25/06	1343	27.58890	-82.55996	M	S	.	0.2
AB1106P07-2	POND	DOWN	11/25/06	1413	27.58918	-82.55936	M	S	.	0.1
AB1106P07-1	POND	DOWN	11/25/06	1440	27.59012	-82.56017	M	S	.	0.2
AB11062040	CREEK	DOWN	11/25/06	1510	27.58982	-82.56206	S	.	.	0
AB11061720	CREEK	DOWN	11/25/06	1546	27.58841	-82.56380	H	S	M	0
AB12061150	CREEK	DOWN	12/28/06	1003	27.58744	-82.56218	S	M	.	0.05
AB12061470	CREEK	DOWN	12/28/06	1037	27.58857	-82.56362	H	S	.	0
AB12062050	CREEK	DOWN	12/28/06	1105	27.58985	-82.56200	S	M	.	0.05
AB1206P07-3	POND	DOWN	12/28/06	1127	27.59007	-82.55989	M	.	.	0.3
AB1206P07-1	POND	DOWN	12/28/06	1157	27.58989	-82.55948	M	S	.	0.2
AB1206P07-2	POND	DOWN	12/28/06	1236	27.58996	-82.56100	S	M	.	0.1
AB12062620	CREEK	UP	12/28/06	1302	27.59387	-82.56099	M	S	.	0.2
AB12062920	CREEK	UP	12/28/06	1329	27.59598	-82.55962	S	.	.	0.05
AB12063100	CREEK	UP	12/28/06	1403	27.59633	-82.55813	S	M	.	0.1
AB1206P02-2	POND	UP	12/28/06	1432	27.59607	-82.55779	M	.	.	0.2
AB1206P02-1	POND	UP	12/28/06	1457	27.59548	-82.55789	M	.	.	0.2
AB1206P02-3	POND	UP	12/28/06	1523	27.59542	-82.55754	M	S	.	0.2
AB1206P06-1	POND	DOWN	12/21/06	929	27.59127	-82.55984	M	.	.	0.2
AB1206P06-2	POND	DOWN	12/21/06	957	27.59192	-82.55942	M	.	.	0.2
AB1206P06-3	POND	DOWN	12/21/06	1019	27.59168	-82.56024	M	S	.	0.1
AB12062190	CREEK	DOWN	12/21/06	1053	27.59046	-82.56060	S	H	M	0.05
AB12061940	CREEK	DOWN	12/21/06	1119	27.58990	-82.56320	S	.	.	0
AB12061730	CREEK	DOWN	12/21/06	1146	27.58986	-82.56362	S	M	.	0.05

Table A7 continued. Page column A.

AB12062590	CREEK	UP	12/21/06	1223	27.59361	-82.56106	S	M	.	0.1
AB12062800	CREEK	UP	12/21/06	1250	27.59541	-82.56050	C	R	.	0
AB12062980	CREEK	UP	12/21/06	1322	27.59591	-82.55909	S	M	.	0.1
AB1206P01-2	POND	UP	12/21/06	1352	27.59658	-82.55678	M	.	.	0.2
AB1206P01-1	POND	UP	12/21/06	1408	27.59652	-82.55645	M	.	.	0.1
AB1206P01-3	POND	UP	12/21/06	1432	27.59578	-82.55624	M	.	.	0.3
AB01071360	CREEK	DOWN	1/24/07	1016	27.58847	-82.56264	M	.	.	0.1
AB01071730	CREEK	DOWN	1/24/07	1048	27.58986	-82.56362	M	S	.	0.1
AB01072030	CREEK	DOWN	1/24/07	1246	27.58983	-82.56194	S	.	.	0
AB0107P06-2	POND	DOWN	1/24/07	1315	27.59140	-82.55934	M	S	.	0.1
AB0107P06-1	POND	DOWN	1/24/07	1405	27.59182	-82.55899	M	.	.	0.2
AB0107P06-3	POND	DOWN	1/24/07	1433	27.59143	-82.56035	M	.	.	0.2
AB01072340	CREEK	UP	1/24/07	1505	27.59280	-82.56130	S	.	.	0
AB01072780	CREEK	UP	1/24/07	1538	27.59543	-82.56057	S	.	.	0
AB01073060	CREEK	UP	1/24/07	1557	27.59612	-82.55842	S	.	.	0
AB0107P01-2	POND	UP	1/26/07	1015	27.59621	-82.55657	M	.	.	0.3
AB0107P01-3	POND	UP	1/26/07	1057	27.59575	-82.55622	M	.	.	0.3
AB0107P01-1	POND	UP	1/26/07	1142	27.59642	-82.55602	M	.	.	0.2
AB0107P02-1	POND	UP	1/26/07	1229	27.59587	-82.55784	M	.	.	0.3
AB0107P02-3	POND	UP	1/26/07	1331	27.59540	-82.55784	M	.	.	0.2
AB0107P02-2	POND	UP	1/26/07	1408	27.59622	-82.55720	M	.	.	0.3
AB01073150	CREEK	UP	1/26/07	1435	27.59657	-82.55775	S	.	.	0
AB01072840	CREEK	UP	1/26/07	1515	27.59570	-82.56030	S	.	.	0
AB01072640	CREEK	UP	1/26/07	1538	27.59405	-82.56095	S	M	.	0.05
AB0107P07-2	POND	DOWN	1/31/07	1323	27.58893	-82.56007	M	S	.	0.1
AB0107P07-3	POND	DOWN	1/31/07	1348	27.58978	-82.55930	M	S	.	0.1
AB0107P07-1	POND	DOWN	1/31/07	1414	27.58941	-82.55928	S	M	.	0.1
AB01072050	CREEK	DOWN	1/31/07	1445	27.58982	-82.56197	S	.	.	0
AB01071880	CREEK	DOWN	1/31/07	1505	27.58974	-82.56226	S	.	.	0
AB01071550	CREEK	DOWN	1/31/07	1531	27.58867	-82.56415	S	M	.	0.05
AB02073170	CREEK	UP	2/26/07	928	27.59661	82.55758	S	M	.	0
AB02072820	CREEK	UP	2/26/07	953	27.59558	-82.56043	S	M	.	0.05
AB02072350	CREEK	UP	2/26/07	1026	27.59275	-82.56131	M	S	.	0.1

Table A7 continued. Page column A.

AB02071980	CREEK	DOWN	2/26/07	1057	27.58977	-82.56223	S	.	.	0
AB02071580	CREEK	DOWN	2/26/07	1122	27.58893	-82.56420	M	S	.	0.05
AB02071220	CREEK	DOWN	2/26/07	1139	27.58794	-82.56246	M	O	S	0.05
AB02071700	CREEK	DOWN	2/26/07	1202	27.58976	-82.56388	M	S	.	0.05
AB02073070	CREEK	UP	2/26/07	1230	27.59617	-82.55834	M	S	.	0.1
AB0207P01-3	POND	UP	2/28/07	840	27.59660	-82.55669	M	S	.	0.1
AB0207P01-1	POND	UP	2/28/07	908	27.59612	-82.55659	M	.	.	0.3
AB0207P01-2	POND	UP	2/28/07	934	27.59576	-82.55625	M	.	.	0.2
AB0207P02-1	POND	UP	2/28/07	1014	27.59621	-82.55773	M	.	.	0.3
AB0207P02-3	POND	UP	2/28/07	1049	27.59627	-82.55729	M	.	.	0.2
AB0207P02-2	POND	UP	2/28/07	1121	27.59539	-82.55787	M	S	.	0.2
AB02072770	CREEK	UP	2/28/07	1213	27.59536	-82.56061	S	H	C	0
AB02072520	CREEK	UP	2/28/07	1247	27.59134	-82.56068	S	.	.	0
AB0207P06-1	POND	DOWN	2/28/07	1312	27.59167	-82.56039	M	S	.	0.1
AB0207P06-2	POND	DOWN	2/28/07	1349	27.59175	-82.55962	M	S	.	0.2
AB0207P06-3	POND	DOWN	2/28/07	1428	27.59130	-82.55980	M	S	.	0.1
AB0207P07-1	POND	DOWN	2/28/07	1505	27.58987	-82.56093	S	M	.	0.05
AB0207P07-3	POND	DOWN	2/28/07	1533	27.58901	-82.55961	S	M	.	0.1
AB0207P07-2	POND	DOWN	2/28/07	16.9	27.58955	-82.55934	S	M	.	0.1
AB02072160	CREEK	DOWN	2/28/07	1637	27.59036	-82.56082	S	M	.	0.1
AB02071900	CREEK	DOWN	2/28/07	1711	27.58982	-82.56355	S	M	.	0.05
AB11071420	CREEK	DOWN	11/20/07	1029	27.58881	-82.56355	M	S	.	0.1
AB11071860	CREEK	DOWN	11/20/07	1056	27.58952	-82.56411	M	.	.	0.2
AB11072000	CREEK	DOWN	11/20/07	1118	27.58972	-82.56206	S	.	.	0
AB1107P07-1	POND	DOWN	11/20/07	1135	27.58948	-82.56077	M	S	.	0.2
AB1107P07-2	POND	DOWN	11/20/07	1149	27.58923	-82.56054	M	S	.	0.2
AB1107P07-3	POND	DOWN	11/20/07	1205	27.59008	-82.56031	M	S	.	0.2
AB1107P06-1	POND	DOWN	11/20/07	1222	27.59139	-82.5603	S	.	.	0.05
AB1107P06-2	POND	DOWN	11/20/07	1248	27.59171	-82.55981	M	S	.	0.1
AB1107P06-3	POND	DOWN	11/20/07	1305	27.59201	-82.5592	M	S	.	0.1
AB11072680	CREEK	UP	11/20/07	1333	27.59438	-82.56078	M	S	.	0.05
AB11072870	CREEK	UP	11/20/07	1357	27.59583	-82.56006	S	.	.	0.05
AB11073080	CREEK	UP	11/20/07	1430	27.59622	-82.55826	M	S	.	0.1

Table A7 continued. Page column A.

AB11072970	CREEK	UP	11/20/07	1504	27.59592	-82.55925	S	M	.	0.05
AB11072760	CREEK	UP	11/20/07	1535	27.59548	-82.56048	S	.	.	0.05
AB1107P01-3	POND	UP	11/21/07	936	27.59601	-82.55659	M	.	.	0.3
AB1107P01-2	POND	UP	11/21/07	1006	27.59592	-82.55645	M	.	.	0.3
AB1107P01-1	POND	UP	11/21/07	1038	27.59574	-82.55598	M	.	.	0.3
AB11072530	CREEK	UP	11/21/07	1128	27.59334	-82.5611	S	M	.	0.05
AB11071380	CREEK	DOWN	11/21/07	1215	27.58906	-82.56308	S	M	.	0
AB11071890	CREEK	DOWN	11/21/07	1240	27.58995	-82.56351	S	M	.	0.05
AB11072280	CREEK	DOWN	11/21/07	1440	27.59081	-82.56026	S	M	.	0.05
AB1107P02-1	POND	UP	11/21/07	1522	27.5959	-82.55824	M	.	.	0.3
AB1107P02-3	POND	UP	11/21/07	1546	27.59545	-82.55806	M	.	.	0.3
AB1107P02-2	POND	UP	11/21/07	1606	27.59618	-82.55746	M	.	.	0.3
AB02082640	CREEK	UP	2/5/08	941	27.59405	-82.56098	M	S	.	0.1
AB02082900	CREEK	UP	2/5/08	1012	27.5959	-82.56023	S	M	.	0.05
AB02083050	CREEK	UP	2/5/08	1032	27.59607	-82.55849	M	S	.	0.1
AB0208P01-1	POND	UP	2/5/08	1108	27.59594	-82.55651	M	.	.	0.3
AB0208P01-3	POND	UP	2/5/08	1137	27.59635	-82.55585	M	.	.	0.3
AB0208P01-2	POND	UP	2/5/08	1218	27.59651	-82.55606	M	.	.	0.2
AB0208P06-3	POND	DOWN	2/5/08	1255	27.59127	-82.55959	S	M	.	0.05
AB0208P06-1	POND	DOWN	2/5/08	1319	27.59183	-82.55895	M	S	.	0.1
AB0208P06-2	POND	DOWN	2/5/08	1342	27.5916	-82.56024	S	M	.	0.1
AB02082090	CREEK	DOWN	2/5/08	1403	27.58994	-82.56129	S	.	.	0
AB02081790	CREEK	DOWN	2/5/08	1432	27.58989	-82.56337	S	M	.	0.1
AB02081280	CREEK	DOWN	2/6/08	952	27.58891	-82.5624	M	S	.	0.2
AB02081590	CREEK	DOWN	2/6/08	1015	27.58902	-82.5642	M	S	H	0.1
AB02081670	CREEK	DOWN	2/6/08	1036	27.5896	-82.56409	M	.	.	0.2
AB02081930	CREEK	DOWN	2/6/08	1058	27.58975	-82.56226	S	.	.	0.05
AB0208P07-2	POND	DOWN	2/6/08	1117	27.58998	-82.5606	S	M	.	0.1
AB0208P07-3	POND	DOWN	2/6/08	1145	27.58899	-82.56033	M	.	.	0.2
AB0208P07-1	POND	DOWN	2/6/08	1210	27.58891	-82.56007	M	S	.	0.2
AB02082410	CREEK	UP	2/6/08	1236	27.59333	-82.56113	S	M	.	0.05
AB02082730	CREEK	UP	2/6/08	1302	27.59402	-82.5609	M	S	.	0.1
AB02083000	CREEK	UP	2/6/08	1321	27.59587	-82.55881	S	M	.	0.05

Table A7 continued. Page column A.

AB0208P02-3	POND	UP	2/6/08	1352	27.59592	-82.55809	M	.	.	0.3
AB0208P02-1	POND	UP	2/6/08	1421	27.59552	-82.55814	M	.	.	0.2
AB0208P02-2	POND	UP	2/6/08	1443	27.59596	-82.55727	M	.	.	0.3

Table A7 continued. Page column B.

SampleID	Bycatch 1	%	Bycatch 2	%	Bycatch 3	%	Bycatch Vol	Bottom Veg	Shore veg 1	cover	Shore veg 2	cover
AB0906P01-2	MU	95	DT	5	.	.	35	N	HY	100	CS	50
AB0906P01-1	MU	95	DT	5	.	.	30	N	CS	100	WL	20
AB0906P01-3	MU	80	DT	20	.	.	5	N	CS	98	HY	2
AB09063190	NO	0	.	.	.	.	0	N	BM	.	RM	.
AB09062740	ST	100	.	.	.	.	0.1	N	BW	.	WM	.
AB09062170	ST	40	SH	35	LL	25	0.6	N	WM	.	BM	.
AB09062110	ST	60	LL	25	MS	15	0.5	N	RM	.	BM	.
AB09061650	MS	50	LL	50	.	.	0.2	N	WM	.	RM	.
AB09061530	LL	60	SH	40	.	.	0.2	N	RM	.	.	.
AB09061270	LL	35	ST	35	MS	30	0.3	N	RM	.	.	.
AB09061080	MS	70	LL	30	.	.	0.2	N	RM	.	.	.
AB0906P07-1	SA	99	SH	1	.	.	5	N	RM	.	WM	.
AB0906P07-3	SA	70	LL	30	.	.	0.2	N	RM	.	WM	.
AB0906P07-2	SA	100	.	.	.	.	3.5	N	RM	.	WM	.
AB09063210	LL	70	HY	20	SH	10	0.3	N	RM	100	WM	10
AB0906P02-1	LL	50	MU	50	.	.	0.2	N	WM	80	BW	30
AB0906P02-2	DT	80	LL	20	.	.	0.3	N	CS	90	BW	10
AB0906P02-3	DT	70	LL	20	ST	10	0.8	N	CS	40	BP	40
AB09062950	MS	75	LL	25	.	.	0.3	N	WM	100	.	.
AB09062590	ST	90	LL	10	.	.	0.8	N	WM	100	.	.
AB09062330	LL	35	MS	35	ST	30	0.7	N	RM	50	WM	50
AB0906P06-1	MS	60	LL	40	.	.	0.5	N	WM	60	RM	40
AB0906P06-2	LL	50	SH	50	.	.	0.1	N	WM	100	.	.
AB0906P06-3	MU	75	WD	25	.	.	0.4	N	WM	100	.	.
AB10063190	ST	80	LL	20	.	.	0.1	N	BW	70	WM	25
AB1006P02-1	MU	85	RM	10	DT	5	10	N	CS	.	RM	.
AB1006P02-2	MU	100	.	.	.	.	5	N	WM	75	RM	25
AB1006P02-3	MU	98	LL	2	.	.	4	N	RM	.	.	.
AB10062880	ST	65	LL	35	.	.	0.6	N	WM	80	RM	20
AB10062600	ST	50	LL	40	MS	10	0.8	N	WM	100	.	.
AB10062320	ST	40	LL	30	MS	30	2	N	RM	100	.	.

Table A7 continued. Page column B.

AB1006P06-1	SA	100	.	.	.	.	5	N	WM	100	.	.
AB1006P06-3	SA	95	WD	5	.	.	4	N	WM	100	.	.
AB1006P06-2	MU	90	LL	10	.	.	0.3	N	WM	50	BM	50
AB10062110	ST	50	LL	50	.	.	0.2	N	RM	90	BM	10
AB10061710	LL	99	CT	1	.	.	0.5	N	WM	75	RM	15
AB1006P01-3	HY	60	MU	40	.	.	1.2	N	RM	80	HY	10
AB1006P01-1	MU	90	DT	5	LL	5	0.7	N	CS	90	HY	10
AB1006P01-2	HY	95	DT	5	.	.	20	N	HY	100	.	.
AB10063030	LL	50	ST	50	.	.	0.1	N	BP	90	LF	10
AB10062850	NO	0	.	.	.	.	0	N	BW	60	WM	40
AB1006P07-1	MU	100	.	.	.	.	0.5	N	BP	70	RM	30
AB1006P07-2	MU	50	LL	50	.	.	0.1	N	RM	.	WM	.
AB1006P07-3	CT	60	LL	20	MS	20	0.1	N	RM	90	WM	10
AB10061480	LL	60	MS	40	.	.	0.5	N	WM	80	RM	20
AB10061310	LL	80	MS	20	.	.	0.3	N	RM	50	WM	50
AB10061100	LL	100	.	.	.	.	0.1	N	RM	100	.	.
AB10061040	NO	0	.	.	.	.	0	N	RM	95	WM	5
AB1106P01-3	DT	50	MU	40	LL	10	0.3	N	CS	100	.	.
AB1106P01-1	HY	80	MU	20	.	.	2.5	N	HY	100	CS	100
AB1106P01-2	DT	90	HY	10	.	.	0.3	N	CS	100	.	.
AB11063110	DT	100	.	.	.	.	0.1	N	RM	60	WM	40
AB11062910	LL	100	.	.	.	.	0.1	N	WM	95	RM	5
AB11062620	ST	50	HY	30	CT	20	0.5	N	WM	.	BM	.
AB1106P06-1	DT	35	MU	35	LL	30	0.3	N	WM	95	RM	5
AB1106P06-3	MU	65	LL	25	DT	10	0.4	N	WM	100	.	.
AB1106P06-2	LL	100	.	.	.	.	0.1	N	RM	50	WM	50
AB11061550	LL	100	.	.	.	.	0.2	N	WM	95	RM	5
AB11061800	LL	70	ST	25	CT	5	0.1	N	NO	0	.	.
AB11062110	ST	90	CT	10	.	.	0.2	N	RM	100	.	.
AB1106P02-2	MU	99	DT	1	.	.	5	N	CS	50	WM	50
AB1106P02-1	NO	0	.	.	.	.	0	N	CS	65	WM	25
AB1106P02-3	MU	75	LL	25	.	.	0.5	N	RM	85	WM	15
AB11063020	ST	100	.	.	.	.	0.5	N	BW	75	WM	25

Table A7 continued. Page column B.

AB11062820	WD	50	HY	35	ST	15	0.6	N	WM	35	BP	35
AB11062550	HY	90	ST	5	LL	5	0.4	N	WM	100	.	.
AB11062210	MS	80	LL	10	ST	10	0.2	N	WM	50	BM	30
AB1106P07-3	MU	50	SA	50	.	.	2	N	RM	80	WM	10
AB1106P07-2	NO	0	.	.	.	.	0	N	RM	100	WM	100
AB1106P07-1	SA	100	.	.	.	.	0.5	N	TO	70	WM	30
AB11062040	LL	50	ST	50	.	.	0.1	N	RM	100	.	.
AB11061720	ST	60	OY	40	.	.	0.8	N	BP	50	RM	50
AB12061150	LL	75	ST	25	.	.	0.3	N	RM	100	.	.
AB12061470	SH	80	LL	20	.	.	0.2	N	RM	75	WM	25
AB12062050	LO	100	.	.	.	.	0.8	N	RM	100	.	.
AB1206P07-3	MU	90	LL	8	ST	2	3	N	RM	60	WM	40
AB1206P07-1	MU	90	DT	10	.	.	2	N	RM	85	WM	15
AB1206P07-2	SA	70	LL	20	ST	10	0.8	N	RM	90	WM	10
AB12062620	ST	40	CT	35	MS	25	0.2	N	RM	40	WM	40
AB12062920	WD	35	MM	65	.	.	0.2	N	WM	100	.	.
AB12063100	ST	85	LL	15	.	.	0.3	N	BW	20	TD	60
AB1206P02-2	MU	60	DT	30	LL	10	1.5	N	CS	70	.	.
AB1206P02-1	MU	80	LL	10	DT	10	1	N	CS	20	BM	20
AB1206P02-3	MU	60	ST	30	LL	10	1.3	N	CS	80	.	.
AB1206P06-1	MU	65	CT	10	DT	25	0.2	N	WM	70	JU	30
AB1206P06-2	MU	65	DT	35	.	.	1.5	N	WM	100	.	.
AB1206P06-3	MU	70	DT	20	CT	10	0.6	N	WM	100	.	.
AB12062190	ST	50	SH	50	.	.	0.5	N	WM	100	.	.
AB12061940	LL	70	ST	30	.	.	0.3	N	WM	60	RM	40
AB12061730	DT	50	ST	25	LL	25	0.8	N	RM	100	.	.
AB12062590	LL	40	CT	40	ST	20	0.4	N	WM	100	.	.
AB12062800	LL	60	ST	40	.	.	0.3	N	WM	40	RM	60
AB12062980	MU	40	LL	30	CT	30	0.3	N	WM	70	BW	30
AB1206P01-2	HY	60	DT	40	.	.	0.5	N	CS	100	.	.
AB1206P01-1	MU	40	LL	30	DT	30	1.5	N	CS	100	.	.
AB1206P01-3	MU	35	LO	35	DT	30	4	N	CS	100	.	.
AB01071360	MU	60	LL	30	ST	10	0.7	N	WM	10	RM	90

Table A7 continued. Page column B.

AB01071730	FG	60	LL	40	.	.	0.1	N	NO	0	.	.
AB01072030	CT	100	.	.	.	.	0.1	N	WM	70	RM	30
AB0107P06-2	WD	95	LL	5	.	.	0.2	N	WM	85	RM	15
AB0107P06-1	DT	45	WD	45	LL	10	0.3	N	WM	100	.	.
AB0107P06-3	FG	100	.	.	.	.	0.1	N	WM	55	BM	45
AB01072340	LL	35	ST	35	FG	30	0.2	N	WM	.	RM	.
AB01072780	NO	0	.	.	.	.	0	N	WM	50	RM	50
AB01073060	NO	0	.	.	.	.	0	N	CS	.	WM	.
AB0107P01-2	MU	85	LL	15	.	.	4	N	RM	10	BW	40
AB0107P01-3	MU	85	LL	5	DT	10	5	N	CS	100	.	.
AB0107P01-1	MU	80	LL	10	DT	10	5	N	CS	.	WM	.
AB0107P02-1	MU	95	LL	5	.	.	3	N	CS	70	RM	30
AB0107P02-3	ST	80	LL	20	.	.	0.3	N	PN	.	WM	.
AB0107P02-2	MU	50	LL	50	.	.	1	N	WM	20	RM	45
AB01073150	ST	100	.	.	.	.	1.5	N	PN	100	BM	80
AB01072840	ST	70	WD	30	.	.	1.3	N	WM	30	RM	30
AB01072640	ST	60	WD	20	LL	20	0.7	N	WM	40	BW	60
AB0107P07-2	SA	60	CT	40	.	.	0.6	N	BP	20	RM	20
AB0107P07-3	MU	80	SH	20	.	.	0.5	N	WM	65	RM	35
AB0107P07-1	MU	80	FG	20	.	.	0.7	N	WM	90	RM	10
AB01072050	LL	100	.	.	.	.	0.1	N	RM	100	.	.
AB01071880	LL	70	CT	30	.	.	0.1	N	RM	100	.	.
AB01071550	LL	30	MS	35	FG	35	0.2	N	RM	95	WM	5
AB02073170	LO	80	LL	10	ST	10	1	N	PN	80	BW	20
AB02072820	LL	60	ST	40	.	.	0.2	N	WM	65	RM	35
AB02072350	MU	40	DT	40	LL	20	0.5	N	PN	35	WM	35
AB02071980	LL	50	DT	50	.	.	0.2	N	RM	90	WM	10
AB02071580	ST	100	.	.	.	.	0.4	N	RM	95	WM	5
AB02071220	ST	100	.	.	.	.	0.2	N	RM	95	WM	5
AB02071700	LL	60	ST	40	.	.	0.1	N	WM	100	.	.
AB02073070	ST	40	LL	20	DT	40	0.8	N	TD	40	WM	30
AB0207P01-3	LL	35	DT	35	SA	30	0.7	N	CS	100	.	.
AB0207P01-1	MU	85	DT	10	ST	5	6	N	CS	100	.	.

Table A7 continued. Page column B.

AB0207P01-2	.	.	.	.	.	.	.	N	CS	100	WM	100
AB0207P02-1	MU	50	DT	35	LL	15	2	N	WM	95	RM	5
AB0207P02-3	MU	55	DT	35	LL	10	2	N	WM	90	BW	10
AB0207P02-2	MU	100	.	.	.	.	0.5	N	BW	60	BP	40
AB02072770	LL	100	.	.	.	.	0.1	N	RM	.	WM	.
AB02072520	ST	65	LL	35	.	.	0.8	N	RM	100	.	.
AB0207P06-1	MU	.	DT	.	LL	.	.	N	WM	70	BM	30
AB0207P06-2	MU	80	DT	20	.	.	1	N	WM	65	BW	30
AB0207P06-3	MU	50	DT	50	.	.	1.5	N	JU	40	WM	60
AB0207P07-1	SA	60	FG	35	DT	5	0.7	N	RM	95	WM	5
AB0207P07-3	SA	65	FG	30	LL	5	2.3	N	TO	50	SN	40
AB0207P07-2	MU	90	FG	10	.	.	1.5	N	WM	80	RM	20
AB02072160	ST	50	LL	50	.	.	0.4	N	WM	100	.	.
AB02071900	DT	100	.	.	.	.	1.2	N	RM	40	WM	60
AB11071420	LL	90	DT	10	.	.	0.3	N	RM	100	WM	10
AB11071860	MU	90	DT	10	.	.	10	N	RM	90	WM	10
AB11072000	NO	0	.	.	.	.	0	N	RM	100	WM	10
AB1107P07-1	NO	0	.	.	.	.	0	N	WM	65	RM	35
AB1107P07-2	MU	100	.	.	.	.	0.5	N	RM	50	WM	50
AB1107P07-3	NO	0	.	.	.	.	0	N	RM	35	WM	35
AB1107P06-1	LL	60	CT	40	.	.	0.2	N	WM	95	RM	5
AB1107P06-2	MU	100	.	.	.	.	0.1	N	WM	100	.	.
AB1107P06-3	MU	80	DT	20	.	.	1	N	WM	90	RM	10
AB11072680	LO	80	DT	15	LL	5	2.5	N	BW	50	TD	25
AB11072870	LL	60	ST	40	.	.	0.3	N	BW	60	WM	40
AB11073080	ST	50	DT	35	LL	15	0.5	N	LF	50	TD	25
AB11072970	ST	35	LL	35	DT	30	0.2	N	WM	45	TD	35
AB11072760	ST	35	WD	35	LL	30	0.3	N	WM	90	BW	10
AB1107P01-3	MU	90	DT	8	ST	2	10	N	NO	0	.	.
AB1107P01-2	MU	90	ST	5	DT	5	7	N	NO	0	.	.
AB1107P01-1	MU	90	DT	7	ST	3	10	N	NO	0	.	.
AB11072530	DT	100	.	.	.	.	0.5	N	WM	70	RM	30
AB11071380	NO	0	.	.	.	.	0	N	RM	100	.	.

Table A7 continued. Page column B.

AB11071890	LL	90	MS	10	.	.	0.1	N	RM	80	WM	20
AB11072280	NO	0	.	.	.	.	0	N	RM	80	BW	20
AB1107P02-1	MU	95	LL	3	DT	2	4	N	WM	60	RM	40
AB1107P02-3	MU	99	LL	1	.	.	1	N	WM	70	BM	30
AB1107P02-2	MU	80	LL	20	.	.	1	N	WM	100	.	.
AB02082640	DT	65	LL	35	.	.	0.8	N	RM	60	WM	40
AB02082900	LL	60	DT	40	.	.	0.1	N	WM	90	BW	10
AB02083050	ST	80	WD	20	.	.	2	N	LF	60	TD	25
AB0208P01-1	MU	95	DT	5	.	.	75	N	NO	0	.	.
AB0208P01-3	MU	97	DT	3	.	.	100	N	CS	40	.	.
AB0208P01-2	MU	95	DT	5	.	.	18	N	WM	15	.	.
AB0208P06-3	FG	100	.	.	.	.	0.1	N	WM	99	SN	1
AB0208P06-1	DT	100	.	.	.	.	0.3	N	WM	100	.	.
AB0208P06-2	FG	50	DT	50	.	.	0.1	N	BM	90	WM	10
AB02082090	LL	65	ST	35	.	.	0.1	N	RM	100	.	.
AB02081790	NO	0	.	.	.	.	0	N	WM	70	RM	30
AB02081280	LL	70	DT	30	.	.	0.4	N	RM	100	.	.
AB02081590	LL	40	ST	40	DT	20	0.8	N	WM	80	RM	20
AB02081670	LL	35	DT	35	FG	30	0.4	N	RM	80	WM	20
AB02081930	LL	50	ST	50	.	.	0.3	N	RM	100	.	.
AB0208P07-2	LL	50	ST	50	.	.	0.1	N	RM	100	.	.
AB0208P07-3	MU	80	LL	15	FG	5	3	N	WM	60	TD	30
AB0208P07-1	MU	100	.	.	.	.	1	N	RM	65	WM	35
AB02082410	LL	50	DT	50	.	.	0.3	N	WM	60	RM	40
AB02082730	LL	80	DT	20	.	.	0.2	N	TD	40	RM	30
AB02083000	ST	100	.	.	.	.	0.3	N	TD	100	.	.
AB0208P02-3	MU	85	DT	10	LL	5	3	N	RM	80	WM	20
AB0208P02-1	MU	80	DT	10	LL	10	4	N	BW	100	.	.
AB0208P02-2	MU	90	LL	10	.	.	1.5	N	RM	85	WM	15

Table A7 continued. Page column C.

SampleID	Shore veg 3	cover	BANK	Shore depth	Mid depth	Offshore depth	Inundation	Current	Tide	Area
AB0906P01-2	.	.	R	0.6	0.6	0.7	8	.	HF	60.9
AB0906P01-1	.	.	R	0.5	0.6	0.7	8	.	HF	60.9
AB0906P01-3	.	.	R	0.5	0.7	0.7	8	.	MF	60.9
AB09063190	PN	.	R	0.6	1.1	1.1	1.6	.	MF	60.9
AB09062740	LF	.	R	0.8	0.8	0.8	2.4	.	MF	60.9
AB09062170	RM	.	R	0.5	0.6	0.6	3.5	.	MF	60.9
AB09062110	.	.	R	0.5	0.6	0.7	7	.	LF	60.9
AB09061650	.	.	L	0.4	0.5	0.6	4	.	LF	60.9
AB09061530	.	.	L	0.5	0.5	0.6	2	.	LF	60.9
AB09061270	.	.	R	0.4	0.6	0.7	2	.	LF	60.9
AB09061080	.	.	L	0.5	0.6	1	3.5	.	LF	60.9
AB0906P07-1	.	.	R	0.4	0.4	0.4	3	.	LF	60.9
AB0906P07-3	.	.	R	0.4	0.4	0.5	4	.	LF	60.9
AB0906P07-2	.	.	L	0.4	0.4	0.5	4	.	LF	60.9
AB09063210	BP	10	L	1.2	1	0.9	6	.	LR	60.9
AB0906P02-1	BM	10	L	0.7	0.7	0.8	5	.	LR	60.9
AB0906P02-2	BP	100	L	0.5	0.5	0.6	5	.	LR	60.9
AB0906P02-3	RM	20	L	0.6	0.7	0.7	8	.	LR	60.9
AB09062950	.	.	L	0.7	0.9	1.2	99	.	MR	60.9
AB09062590	.	.	R	0.9	1.2	1.2	4	.	HR	60.9
AB09062330	.	.	L	0.9	0.5	0.4	99	.	HF	60.9
AB0906P06-1	.	.	L	0.7	0.7	0.7	99	.	HF	60.9
AB0906P06-2	.	.	L	0.8	0.8	0.8	.	.	HF	60.9
AB0906P06-3	.	.	L	0.7	0.8	0.8	4	.	HF	60.9
AB10063190	RM	5	R	0.1	0.5	0.8	0.4	0.05	LF	60.9
AB1006P02-1	.	.	R	0.3	0.4	0.5	6	.	.	60.9
AB1006P02-2	.	.	L	0.5	0.5	0.5	4	.	.	60.9
AB1006P02-3	.	.	L	0.4	0.4	0.5	4	.	.	60.9
AB10062880	.	.	R	0.5	0.6	0.5	1.5	0.05	LR	60.9
AB10062600	.	.	R	0.4	0.8	1.1	1.5	0.05	LR	60.9
AB10062320	.	.	R	0.2	0.6	0.8	1.4	.	MR	60.9

Table A7 continued. Page column C.

AB1006P06-1	.	.	R	0.4	0.5	0.6	1.5	.	.	60.9
AB1006P06-3	.	.	R	0.4	0.6	0.6	2	.	.	60.9
AB1006P06-2	.	.	L	0.6	0.6	0.7	5	.	.	60.9
AB10062110	.	.	R	0.6	0.7	0.8	4.5	.	HR	60.9
AB10061710	BM	10	L	0.9	0.9	0.9	99	.	HR	60.9
AB1006P01-3	CS	10	R	0.5	0.6	0.6	5	.	LF	60.9
AB1006P01-1	.	.	R	0.4	0.5	0.5	1.5	.	.	60.9
AB1006P01-2	.	.	L	0.5	0.5	0.6	8	.	.	60.9
AB10063030	.	.	R	0.3	0.6	1	2	.	.	60.9
AB10062850	.	.	R	0.2	0.3	0.4	2.5	.	.	60.9
AB1006P07-1	.	.	R	0.3	0.4	0.4	4	.	.	60.9
AB1006P07-2	BM	.	R	0.3	0.4	0.4	3	.	.	60.9
AB1006P07-3	.	.	L	0.3	0.4	0.5	3.5	.	.	60.9
AB10061480	.	.	R	0.5	0.4	0.5	4.5	0.05	HF	60.9
AB10061310	.	.	L	0.6	0.7	0.8	4	0.05	HF	60.9
AB10061100	.	.	R	0.5	0.7	0.8	99	0.05	MF	60.9
AB10061040	.	.	L	0.4	0.5	0.5	2.5	0.05	MF	60.9
AB1106P01-3	.	.	L	0.4	0.5	0.5	0.9	.	LF	60.9
AB1106P01-1	.	.	L	0.4	0.4	0.5	1	.	LS	60.9
AB1106P01-2	.	.	L	0.3	0.4	0.5	1.5	.	LR	60.9
AB11063110	.	.	L	0.6	0.7	0.8	1.5	.	LR	60.9
AB11062910	.	.	L	0.3	0.3	0.3	2	0.05	LR	60.9
AB11062620	BW	.	L	0.8	0.5	0.5	3.5	0.11	LR	60.9
AB1106P06-1	.	.	L	0.1	0.3	0.3	1	.	MR	60.9
AB1106P06-3	.	.	L	0.3	0.3	0.4	3	.	MR	60.9
AB1106P06-2	.	.	L	0.3	0.3	0.3	2.5	.	.	60.9
AB11061550	.	.	L	0.2	0.2	0.3	2	0.05	HR	60.9
AB11061800	.	.	R	0.1	0.3	0.3	0	0.05	HR	60.9
AB11062110	.	.	R	0.4	0.5	0.4	1.2	0.05	HR	60.9
AB1106P02-2	.	.	R	0.2	0.4	0.4	2	.	LF	60.9
AB1106P02-1	LF	10	R	0.3	0.3	0.3	2.5	.	LF	60.9
AB1106P02-3	.	.	L	0.2	0.3	0.4	6	.	LF	60.9
AB11063020	.	.	R	0.5	1	0.8	4	0.17	LF	60.9

Table A7 continued. Page column C.

AB11062820	RM	30	R	0.2	0.3	0.4	2	0.05	LF	60.9
AB11062550	.	.	L	0.4	0.8	0.8	3	0.14	LF	60.9
AB11062210	RM	20	R	0.3	0.4	0.4	1.7	.	LF	60.9
AB1106P07-3	TO	10	R	0.2	0.3	0.4	1.2	.	.	60.9
AB1106P07-2	.	.	L	0.2	0.3	0.3	2.2	.	.	60.9
AB1106P07-1	.	.	L	0.2	0.3	0.3	1.5	.	.	60.9
AB11062040	.	.	R	0.1	0.1	0.2	2	0.27	LR	60.9
AB11061720	.	.	L	0	0.2	0.1	1	0.33	MR	60.9
AB12061150	.	.	R	0.3	0.5	1	1.7	0.05	HF	60.9
AB12061470	.	.	R	0.6	0.6	0.6	2.8	0.23	HF	60.9
AB12062050	.	.	R	0.2	0.2	0.2	1.5	0.3	MF	60.9
AB1206P07-3	.	.	L	0.2	0.3	0.3	2	.	.	60.9
AB1206P07-1	.	.	L	0.2	0.4	0.4	2	.	.	60.9
AB1206P07-2	.	.	R	0.2	0.3	0.3	3	.	.	60.9
AB12062620	.	.	R	0.3	0.4	0.5	1.4	0.05	LF	60.9
AB12062920	.	.	L	0.2	0.3	0.3	4.5	0.05	LF	60.9
AB12063100	.	.	R	0.3	0.8	0.8	1.5	0.12	LF	60.9
AB1206P02-2	.	.	R	0.1	0.4	0.4	1.5	.	.	60.9
AB1206P02-1	LF	60	R	0.1	0.3	0.3	2	.	.	60.9
AB1206P02-3	.	.	R	0.2	0.3	0.3	1.8	.	.	60.9
AB1206P06-1	.	.	R	0.3	0.4	0.5	2.5	.	LF	60.9
AB1206P06-2	.	.	L	0.3	0.4	0.5	5	.	LF	60.9
AB1206P06-3	.	.	L	0.4	0.5	0.5	8	.	LF	60.9
AB12062190	.	.	L	0.4	0.4	0.5	6	0.14	LR	60.9
AB12061940	.	.	L	0.3	0.3	0.1	1.4	0.3	LR	60.9
AB12061730	.	.	R	0.3	0.2	0.4	2	0.18	LR	60.9
AB12062590	.	.	R	0.3	0.7	0.8	1.3	0.12	LR	60.9
AB12062800	.	.	L	0.7	1	1.2	2.2	0.13	MR	60.9
AB12062980	.	.	L	0.5	1	1.2	6	.	MR	60.9
AB1206P01-2	.	.	L	0.4	0.5	0.6	6	.	MR	60.9
AB1206P01-1	.	.	L	0.5	0.5	0.6	8	.	.	60.9
AB1206P01-3	.	.	R	0.4	0.5	0.5	1.3	.	.	60.9
AB01071360	.	.	R	0.3	0.3	0.3	2.5	0	MF	60.9

Table A7 continued. Page column C.

AB01071730	.	.	R	0	0.4	0.5	0.2	0.16	MF	60.9
AB01072030	.	.	L	0.2	0.4	0.4	3	0.23	LF	60.9
AB0107P06-2	.	.	R	0.3	0.4	0.4	2	.	.	60.9
AB0107P06-1	.	.	R	0.3	0.4	0.4	4	.	.	60.9
AB0107P06-3	.	.	L	0.3	0.3	0.3	3.5	.	.	60.9
AB01072340	PN	.	L	0.4	0.8	0.6	0.5	.	LS	60.9
AB01072780	.	.	R	0.6	1.2	1	3.5	0.05	LS	60.9
AB01073060	BP	.	R	0.2	0.5	0.6	2.5	.	LS	60.9
AB0107P01-2	CS	50	R	0.4	0.4	0.5	0.7	.	.	60.9
AB0107P01-3	.	.	R	0.2	0.4	0.4	0.6	.	.	60.9
AB0107P01-1	.	.	L	0.4	0.4	0.5	2.2	.	.	60.9
AB0107P02-1	.	.	R	0.3	0.3	0.4	2.5	.	.	60.9
AB0107P02-3	LF	.	R	0.2	0.3	0.4	1.8	.	.	60.9
AB0107P02-2	BW	35	L	0.1	0.2	0.3	4	.	.	60.9
AB01073150	RM	20	R	0.2	0.4	0.8	1.2	0.05	LR	60.9
AB01072840	PN	40	R	0.1	0.2	0.3	0.9	0.05	LR	60.9
AB01072640	.	.	L	0.7	0.4	0.4	4	0.14	LR	60.9
AB0107P07-2	.	.	R	0.3	0.3	0.4	3.5	.	.	60.9
AB0107P07-3	.	.	L	0.4	0.4	0.5	4	.	.	60.9
AB0107P07-1	.	.	L	0.4	0.4	0.5	3	.	.	60.9
AB01072050	.	.	R	0.3	0.3	0.4	1.5	0.25	MR	60.9
AB01071880	.	.	R	0.2	0.5	0.5	0.2	0.3	MR	60.9
AB01071550	.	.	R	0.4	0.5	0.5	3	0.11	HR	60.9
AB02073170	.	.	R	0.2	0.6	0.7	0.9	0.05	LR	60.9
AB02072820	.	.	L	0.8	1	0.6	4	0.05	MR	60.9
AB02072350	RM	30	R	0.1	0.4	0.8	0.5	0.05	MR	60.9
AB02071980	.	.	R	0.05	0.4	0.6	0.4	0.05	MR	60.9
AB02071580	.	.	R	0.6	0.8	0.6	2.5	0.05	MR	60.9
AB02071220	.	.	L	0.7	0.9	0.8	2.3	0.05	MR	60.9
AB02071700	.	.	L	0.5	0.5	0.4	2.5	0.05	HR	60.9
AB02073070	RM	30	R	0.6	0.7	1	2.2	0.05	HR	60.9
AB0207P01-3	.	.	L	0.4	0.5	0.6	4	.	LR	60.9
AB0207P01-1	.	.	R	0.3	0.4	0.5	4	.	LR	60.9

Table A7 continued. Page column C.

AB0207P01-2	.	.	R	0.3	0.4	0.5	1	.	LR	60.9
AB0207P02-1	.	.	L	0.3	0.4	0.4	6	.	LR	60.9
AB0207P02-3	.	.	L	0.3	0.4	0.4	4	.	MR	60.9
AB0207P02-2	PN	100	R	0.2	0.3	0.4	2.5	.	MR	60.9
AB02072770	.	.	L	0.7	1	1.2	2	0.11	HR	60.9
AB02072520	.	.	R	0.1	0.4	0.5	0.7	0.25	HR	60.9
AB0207P06-1	.	.	L	0.3	0.4	0.4	5.5	.	HF	60.9
AB0207P06-2	CS	5	L	0.3	0.4	0.4	4	.	MF	60.9
AB0207P06-3	.	.	R	0.1	0.3	0.3	1.5	.	LF	60.9
AB0207P07-1	.	.	R	0.3	0.4	0.3	3	.	LR	60.9
AB0207P07-3	BM	10	R	0.1	0.3	0.4	1.1	.	MR	60.9
AB0207P07-2	.	.	L	0.2	0.3	0.3	4	.	MR	60.9
AB02072160	.	.	L	0.3	0.5	0.6	2	0.05	MR	60.9
AB02071900	.	.	R	0.2	0.4	0.4	2.5	0.3	MR	60.9
AB11071420	.	.	R	0.2	0.5	0.4	4	0.05	MR	60.9
AB11071860	.	.	R	0.1	0.3	0.4	0.7	0.05	MR	60.9
AB11072000	.	.	R	0.1	0.2	0.3	1.2	0.05	HR	60.9
AB1107P07-1	.	.	L	0.2	0.3	0.4	4	.	.	60.9
AB1107P07-2	.	.	R	0.3	0.3	0.4	3.5	.	.	60.9
AB1107P07-3	BW	30	L	0.2	0.3	0.4	3	.	.	60.9
AB1107P06-1	.	.	L	0.2	0.3	0.3	2.5	.	.	60.9
AB1107P06-2	.	.	L	0.4	0.4	0.4	3	.	.	60.9
AB1107P06-3	.	.	L	0.4	0.4	0.4	6	.	.	60.9
AB11072680	WM	25	L	0.9	1.1	1.1	3.5	0.05	HR	60.9
AB11072870	.	.	R	0.1	0.2	0.2	1.6	0.05	HR	60.9
AB11073080	BP	25	R	0.2	0.6	1.1	1.3	0.12	HR	60.9
AB11072970	RM	20	L	0.9	1	0.7	1.9	0.11	HR	60.9
AB11072760	.	.	R	0.2	0.7	1.1	2	0.12	HF	60.9
AB1107P01-3	.	.	R	0.2	0.3	0.3	1.4	.	LR	60.9
AB1107P01-2	.	.	R	0.3	0.4	0.4	1.4	.	LR	60.9
AB1107P01-1	.	.	R	0.2	0.4	0.4	0.6	.	LR	60.9
AB11072530	.	.	R	0.3	0.8	0.8	1	0.05	MR	60.9
AB11071380	.	.	R	0.5	0.6	0.5	4	0.17	MR	60.9

Table A7 continued. Page column C.

AB11071890	.	.	R	0.3	0.4	0.3	2.5	0.05	HR	60.9
AB11072280	.	.	R	0.4	0.5	0.5	3.5	0	HS	60.9
AB1107P02-1	.	.	R	0.1	0.2	0.4	6	.	HF	60.9
AB1107P02-3	.	.	R	0.2	0.2	0.2	3.5	.	HF	60.9
AB1107P02-2	.	.	L	0.4	0.4	0.4	3	.	HF	60.9
AB02082640	.	.	L	0.4	0.6	0.8	6	0.05	LR	60.9
AB02082900	.	.	L	0.5	0.7	0.7	5	0.05	LR	60.9
AB02083050	.	.	R	0.1	0.4	0.6	1.3	0.14	LR	60.9
AB0208P01-1	.	.	R	0.1	0.3	0.5	3	.	.	60.9
AB0208P01-3	.	.	L	0.5	0.5	0.5	0.5	.	.	60.9
AB0208P01-2	.	.	L	0.2	0.4	0.5	3	.	.	60.9
AB0208P06-3	.	.	R	0.1	0.3	0.4	1.7	.	.	60.9
AB0208P06-1	.	.	R	0.2	0.4	0.4	4	.	.	60.9
AB0208P06-2	.	.	L	0.4	0.4	0.4	5	.	.	60.9
AB02082090	.	.	R	0.6	0.7	0.6	1	0.12	HR	60.9
AB02081790	.	.	L	0.4	0.4	0.5	2.3	0.13	HF	60.9
AB02081280	.	.	L	0.3	0.4	0.5	2.5	0.05	LR	60.9
AB02081590	.	.	L	0.5	0.6	0.6	4	0.05	LR	60.9
AB02081670	.	.	R	0.3	0.4	0.4	1.8	0.05	LR	60.9
AB02081930	.	.	R	0.2	0.4	0.6	0.5	0.25	MR	60.9
AB0208P07-2	.	.	R	0.3	0.4	0.4	6	.	.	60.9
AB0208P07-3	BM	10	R	0.4	0.5	0.5	5	.	.	60.9
AB0208P07-1	.	.	R	0.4	0.4	0.5	4	.	.	60.9
AB02082410	.	.	R	0.3	0.9	0.9	0.9	.	MR	60.9
AB02082730	LF	30	R	0.2	0.8	0.9	0.7	.	MR	60.9
AB02083000	.	.	R	0.3	0.8	0.9	3.5	.	MR	60.9
AB0208P02-3	.	.	R	0.4	0.4	0.5	99	.	.	60.9
AB0208P02-1	.	.	R	0.2	0.3	0.4	3	.	.	60.9
AB0208P02-2	.	.	L	0.4	0.4	0.5	5	.	.	60.9

APPENDIX D – WATER QUALITY DATA

Table A8. Raw water quality data.

SampleID	Date	Top Temp	Bottom Temp	Top Salinity	Bottom Salinity	Top pH	Bottom pH	Top DO	Bottom DO	BP	Clarity
AB0906P01-2	9/29/06	24.5	24.3	0.4	0.4	7.45	7.43	4.40	4.00	762.7	N
AB0906P01-1	9/29/06	24.6	24.7	0.5	0.5	7.66	7.49	5.00	4.64	763.3	N
AB0906P01-3	9/29/06	24.8	24.6	0.5	0.5	7.53	7.49	5.52	4.31	764.3	N
AB09063190	9/29/06	24.7	24.6	0.4	0.4	7.38	7.38	4.04	3.87	766.9	N
AB09062740	9/29/06	25.3	24.9	1.0	2.2	7.41	7.32	4.02	2.51	765.7	N
AB09062170	9/29/06	25.7	25.7	1.0	1.0	7.53	7.44	4.43	4.27	765.2	N
AB09062110	9/29/06	26.0	26.0	1.0	1.1	7.48	7.42	4.18	4.13	765.0	N
AB09061650	9/29/06	26.8	26.8	1.2	1.2	7.53	7.48	4.71	4.60	764.1	N
AB09061530	9/29/06	27.2	27.2	1.2	1.3	7.53	7.49	4.95	4.75	763.6	N
AB09061270	9/29/06	27.6	27.6	1.2	1.2	7.67	7.53	4.91	4.81	762.7	N
AB09061080	9/29/06	27.7	27.8	1.2	1.2	7.58	7.53	4.90	4.69	763.2	N
AB0906P07-1	9/29/06	28.0	27.8	1.5	1.5	7.97	7.88	7.68	7.03	762.8	N
AB0906P07-3	9/29/06	29.3	.	1.5	.	8.10	.	7.95	.	761.7	N
AB0906P07-2	9/29/06	29.9	.	1.6	.	8.08	.	7.47	.	761.1	N
AB09063210	9/19/06	28.0	28.0	0.3	0.4	7.39	7.34	3.53	2.97	762.6	N
AB0906P02-1	9/19/06	28.0	27.4	0.4	0.6	7.27	7.19	3.58	1.95	763.7	N
AB0906P02-2	9/19/06	28.8	28.2	0.4	0.6	7.34	7.08	4.33	3.39	763.4	N
AB0906P02-3	9/19/06	28.1	27.5	0.4	1.4	7.28	7.14	3.11	1.15	762.7	N
AB09062950	9/19/06	28.9	28.1	0.3	0.3	7.32	7.29	3.52	2.60	763.1	N
AB09062590	9/19/06	27.8	27.6	0.7	0.8	7.29	7.22	2.51	2.10	763.5	N
AB09062330	9/19/06	28.9	28.4	1.6	2.2	7.34	7.19	2.25	2.07	763.4	N
AB0906P06-1	9/19/06	30.0	28.3	0.7	1.9	7.26	7.20	3.04	2.30	764.5	N
AB0906P06-2	9/19/06	29.2	28.2	0.7	1.9	7.30	7.00	3.01	2.00	764.1	N
AB0906P06-3	9/19/06	30.1	29.2	0.6	0.7	7.35	7.31	3.66	3.11	763.8	N
AB10063190	10/6/06	25.0	25.2	1.2	2.4	7.47	7.47	4.18	3.94	763.7	N

Table A8 continued.

AB1006P02-1	10/6/06	25.7	25.6	2.1	2.1	8.08	8.07	5.84	5.78	764.3	N
AB1006P02-2	10/6/06	26.1	26.1	2.1	2.1	8.18	8.19	6.78	6.14	765.2	N
AB1006P02-3	10/6/06	26.4	25.8	2.1	2.1	8.20	8.20	6.46	6.02	765.5	N
AB10062880	10/6/06	26.2	26.5	2.0	13.0	7.57	7.54	4.77	3.53	764.8	N
AB10062600	10/6/06	26.2	26.3	5.5	18.5	7.59	7.61	5.04	3.02	764.8	N
AB10062320	10/6/06	26.4	26.4	5.8	5.8	7.63	7.63	5.33	5.19	765.8	.
AB1006P06-1	10/6/06	27.9	27.3	6.4	6.6	7.92	7.91	7.96	8.27	765.4	N
AB1006P06-3	10/6/06	28.0	28.1	6.4	6.4	7.94	7.92	8.44	8.47	766.0	N
AB1006P06-2	10/6/06	27.2	27.1	6.4	7.7	7.73	7.65	6.11	5.22	763.8	N
AB10062110	10/6/06	27.1	27.1	13.5	13.7	7.54	7.54	4.60	4.49	766.5	N
AB10061710	10/6/06	27.6	27.7	17.3	17.4	7.65	7.65	5.01	4.91	764.8	N
AB1006P01-3	10/24/06	19.5	21.2	9.7	10.8	7.80	7.03	6.15	3.79	765.9	N
AB1006P01-1	10/24/06	18.9	.	7.3	.	7.73	.	6.02	.	766.2	N
AB1006P01-2	10/24/06	18.8	20.9	8.6	11.6	7.53	7.48	7.24	5.62	767.4	N
AB10063030	10/24/06	22.5	24.5	10.6	23.5	7.75	7.61	5.54	2.21	765.8	N
AB10062850	10/24/06	22.8	.	13.7	.	7.54	.	5.54	.	765.8	Y
AB1006P07-1	10/24/06	20.5	.	16.8	.	7.93	.	9.06	.	765.6	N
AB1006P07-2	10/24/06	20.5	.	16.8	.	7.80	.	7.75	.	765.0	N
AB1006P07-3	10/24/06	21.7	.	16.8	.	7.96	.	7.17	.	766.3	N
AB10061480	10/31/06	22.4	22.5	19.2	21.4	7.50	7.47	4.30	3.50	763.9	Y
AB10061310	10/31/06	22.9	22.8	20.8	23.3	7.50	7.55	3.80	3.90	764.8	N
AB10061100	10/31/06	23.0	22.9	21.4	23.1	7.54	7.54	3.84	3.55	765.1	N
AB10061040	10/31/06	23.8	23.6	22.4	23.5	7.57	7.63	3.85	4.30	764.8	Y
AB1106P01-3	11/21/06	15.6	15.7	8.3	9.3	11.31	11.24	5.55	6.10	765.9	N
AB1106P01-1	11/21/06	14.8	.	8.4	.	7.74	.	6.81	.	765.2	Y
AB1106P01-2	11/21/06	15.6	.	7.5	.	.	.	6.76	.	764.6	Y
AB11063110	11/21/06	16.8	17.2	8.8	15.6	7.19	7.24	5.28	4.90	765.6	N
AB11062910	11/21/06	18.1	.	13.5	.	7.58	.	5.15	.	766.4	Y
AB11062620	11/21/06	16.8	14.2	17.5	25.0	7.59	7.65	5.89	6.67	764.5	N
AB1106P06-1	11/21/06	16.6	.	16.4	.	7.35	.	8.60	.	761.6	Y
AB1106P06-3	11/21/06	17.8	.	17.1	.	7.03	.	10.78	.	764.6	Y
AB1106P06-2	11/21/06	17.5	.	16.6	.	7.46	.	9.80	.	763.0	Y
AB11061550	11/21/06	18.3	.	15.8	.	6.55	.	9.65	.	762.1	Y

Table A8 continued.

AB11061800	11/21/06	16.6	.	16.9	.	4.96	.	7.43	.	762.3	Y
AB11062110	11/21/06	16.6	16.6	17.4	17.4	6.96	7.00	7.50	7.50	761.3	N
AB1106P02-2	11/25/06	17.8	.	9.2	.	7.95	.	10.21	.	762.3	N
AB1106P02-1	11/25/06	17.4	.	9.3	.	7.96	.	10.59	.	760.2	N
AB1106P02-3	11/25/06	18.8	.	9.7	.	8.00	.	11.59	.	761.1	N
AB11063020	11/25/06	17.9	18.8	3.2	16.8	8.14	7.50	11.10	8.30	759.7	N
AB11062820	11/25/06	18.8	.	5.8	.	7.92	.	10.25	.	760.7	Y
AB11062550	11/25/06	19.4	18.6	6.1	18.3	7.82	7.50	10.10	8.80	759.6	N
AB11062210	11/25/06	19.5	.	11.1	.	7.67	.	10.09	.	760.9	Y
AB1106P07-3	11/25/06	21.0	.	15.7	.	7.74	.	10.34	.	759.9	N
AB1106P07-2	11/25/06	21.9	.	15.9	.	8.01	.	12.99	.	760.0	Y
AB1106P07-1	11/25/06	21.8	.	16.0	.	7.92	.	12.40	.	760.2	Y
AB11062040	11/25/06	20.3	.	12.4	.	7.79	.	10.49	.	760.0	Y
AB11061720	11/25/06	20.6	.	12.4	.	7.90	.	10.45	.	759.8	Y
AB12061150	12/28/06	15.8	.	9.3	.	7.72	.	10.86	.	761.7	Y
AB12061470	12/28/06	16.0	16.0	9.7	9.7	7.74	7.73	10.01	10.09	763.7	Y
AB12062050	12/28/06	16.0	.	9.3	.	7.87	.	9.21	.	761.5	Y
AB1206P07-3	12/28/06	19.6	.	12.2	.	7.88	.	12.27	.	763.7	N
AB1206P07-1	12/28/06	22.2	.	15.0	.	7.65	.	9.91	.	762.4	Y
AB1206P07-2	12/28/06	19.3	.	10.5	.	7.79	.	10.85	.	767.0	Y
AB12062620	12/28/06	17.7	17.1	2.0	13.2	8.06	7.40	11.60	10.42	761.6	Y
AB12062920	12/28/06	18.7	.	2.9	.	8.21	.	13.54	.	763.6	Y
AB12063100	12/28/06	17.8	18.7	1.2	20.5	8.31	7.37	14.88	10.47	762.7	N
AB1206P02-2	12/28/06	22.5	.	10.9	.	8.01	.	15.43	.	760.4	N
AB1206P02-1	12/28/06	22.7	.	10.6	.	8.06	.	15.17	.	761.2	N
AB1206P02-3	12/28/06	23.1	.	12.1	.	8.10	.	16.86	.	761.3	N
AB1206P06-1	12/21/06	20.6	.	20.6	.	7.65	.	4.12	.	761.3	Y
AB1206P06-2	12/21/06	21.0	.	21.7	.	7.64	.	5.41	.	761.5	N
AB1206P06-3	12/21/06	20.7	.	20.9	.	7.80	.	5.70	.	760.9	N
AB12062190	12/21/06	20.9	.	20.6	.	7.89	.	8.43	.	762.1	N
AB12061940	12/21/06	21.0	.	20.2	.	7.93	.	9.53	.	761.2	Y
AB12061730	12/21/06	21.1	21.1	20.4	20.4	7.92	7.91	9.45	9.30	762.2	N
AB12062590	12/21/06	21.6	21.3	10.4	28.0	8.03	7.77	11.92	9.24	760.4	N

Table A8 continued.

AB12062800	12/21/06	22.0	21.0	12.2	28.2	8.01	7.69	10.65	8.13	760.1	N
AB12062980	12/21/06	22.0	22.2	11.9	24.1	8.03	7.76	12.49	10.58	759.0	N
AB1206P01-2	12/21/06	22.6	.	14.0	.	8.04	.	11.73	.	758.5	Y
AB1206P01-1	12/21/06	22.5	.	13.0	.	8.12	.	13.31	.	759.0	N
AB1206P01-3	12/21/06	22.8	.	15.0	.	7.99	.	5.89	.	758.8	Y
AB01071360	1/24/07	20.4	.	19.6	.	7.46	.	4.88	.	758.2	Y
AB01071730	1/24/07	21.1	21.1	18.2	18.2	7.73	7.75	5.94	5.03	757.4	Y
AB01072030	1/24/07	21.2	.	16.5	.	7.92	.	6.32	.	755.0	Y
AB0107P06-2	1/24/07	21.0	.	18.8	.	7.92	.	6.83	.	754.5	N
AB0107P06-1	1/24/07	21.2	.	19.6	.	7.96	.	7.21	.	754.2	N
AB0107P06-3	1/24/07	20.6	.	16.6	.	8.00	.	8.43	.	755.0	N
AB01072340	1/24/07	20.7	21.2	10.8	26.0	8.09	7.70	7.63	6.17	753.1	N
AB01072780	1/24/07	21.1	21.8	11.4	27.4	8.15	7.68	7.92	6.06	753.2	N
AB01073060	1/24/07	21.9	22.4	10.9	23.2	7.97	7.68	5.72	4.43	.	Y
AB0107P01-2	1/26/07	13.8	.	1.7	.	8.35	.	.	.	763.7	Y
AB0107P01-3	1/26/07	14.3	.	1.7	.	8.18	.	.	.	763.9	Y
AB0107P01-1	1/26/07	15.3	.	2.4	.	8.07	.	.	.	762.0	Y
AB0107P02-1	1/26/07	17.0	.	10.9	.	7.99	.	.	.	765.7	Y
AB0107P02-3	1/26/07	17.3	.	10.5	.	8.03	.	.	.	761.9	Y
AB0107P02-2	1/26/07	18.8	.	11.3	.	7.91	.	.	.	762.1	Y
AB01073150	1/26/07	17.3	17.8	1.7	7.2	8.24	7.81	.	.	762.5	Y
AB01072840	1/26/07	17.3	.	2.1	.	8.23	.	.	.	759.7	Y
AB01072640	1/26/07	17.6	16.7	2.6	8.4	8.50	7.77	.	.	757.9	Y
AB0107P07-2	1/31/07	17.2	.	9.5	.	8.52	.	7.37	.	758.8	Y
AB0107P07-3	1/31/07	18.0	.	9.8	.	8.77	.	8.23	.	757.6	Y
AB0107P07-1	1/31/07	18.8	.	9.8	.	8.77	.	7.99	.	759.1	Y
AB01072050	1/31/07	17.3	.	11.1	.	8.38	.	8.19	.	758.7	Y
AB01071880	1/31/07	17.4	.	11.1	.	8.23	.	6.93	.	758.1	Y
AB01071550	1/31/07	17.5	17.5	11.1	11.1	8.20	8.18	7.43	7.15	757.5	Y
AB02073170	2/26/07	.	.	.	.	.	.	.	.	.	.
AB02072820	2/26/07	.	.	.	.	.	.	.	.	.	.
AB02072350	2/26/07	.	.	.	.	.	.	.	.	.	.
AB02071980	2/26/07	.	.	.	.	.	.	.	.	.	.

Table A8 continued.

AB02071580	2/26/07	.	.	.	.	.	.	.	.	.	.
AB02071220	2/26/07	.	.	.	.	.	.	.	.	.	.
AB02071700	2/26/07	.	.	.	.	.	.	.	.	.	.
AB02073070	2/26/07	.	.	.	.	.	.	.	.	.	.
AB0207P01-3	2/28/07	21.1	.	2.2	.	8.22	.	7.41	.	755.7	Y
AB0207P01-1	2/28/07	20.3	.	2.8	.	8.08	.	5.95	.	755.7	Y
AB0207P01-2	2/28/07	20.3	.	3.1	.	8.17	.	6.31	.	757.1	Y
AB0207P02-1	2/28/07	23.5	.	6.9	.	8.13	.	6.47	.	757.4	N
AB0207P02-3	2/28/07	23.8	.	6.8	.	8.12	.	6.39	.	757.7	N
AB0207P02-2	2/28/07	24.5	.	6.9	.	8.24	.	7.07	.	758.0	N
AB02072770	2/28/07	23.8	23.3	3.7	24.1	8.19	7.61	7.03	4.70	758.1	N
AB02072520	2/28/07	24.0	23.8	8.8	20.7	7.94	7.78	6.41	5.20	753.4	N
AB0207P06-1	2/28/07	26.1	.	13.7	.	8.01	.	7.56	.	760.1	N
AB0207P06-2	2/28/07	26.6	.	13.7	.	8.16	.	7.22	.	754.2	N
AB0207P06-3	2/28/07	26.8	.	14.0	.	8.00	.	3.91	.	756.9	Y
AB0207P07-1	2/28/07	27.3	.	14.2	.	8.16	.	6.20	.	755.0	N
AB0207P07-3	2/28/07	27.3	.	14.2	.	8.19	.	6.75	.	757.1	N
AB0207P07-2	2/28/07	27.6	.	14.2	.	8.22	.	7.01	.	755.9	N
AB02072160	2/28/07	26.1	26.1	15.4	15.4	8.08	8.08	5.74	5.69	751.1	N
AB02071900	2/28/07	25.8	.	15.2	.	8.06	.	5.45	.	741.8	Y
AB11071420	11/20/07	20.5	.	17.5	.	7.97	.	5.19	.	768.2	Y
AB11071860	11/20/07	20.8	.	17.4	.	7.95	.	5.30	.	768.2	Y
AB11072000	11/20/07	20.9	.	17.4	.	7.95	.	5.12	.	768.0	Y
AB1107P07-1	11/20/07	22.5	.	18.4	.	8.07	.	6.35	.	768.0	Y
AB1107P07-2	11/20/07	22.8	.	18.8	.	8.10	.	7.19	.	767.8	N
AB1107P07-3	11/20/07	23.2	.	20.2	.	8.09	.	6.32	.	768.5	N
AB1107P06-1	11/20/07	22.9	.	17.3	.	8.30	.	9.77	.	766.4	Y
AB1107P06-2	11/20/07	23.2	.	17.9	.	8.30	.	10.04	.	767.2	N
AB1107P06-3	11/20/07	23.3	.	17.5	.	8.36	.	9.37	.	767.3	N
AB11072680	11/20/07	23.1	.	12.7	.	8.29	.	9.01	.	767.5	N
AB11072870	11/20/07	23.3	.	12.1	.	8.30	.	9.17	.	767.8	Y
AB11073080	11/20/07	23.3	.	15.3	.	8.22	.	7.64	.	765.9	N
AB11072970	11/20/07	23.3	.	16.2	.	8.17	.	8.40	.	765.8	N

Table A8 continued.

AB11072760	11/20/07	23.1	.	11.3	.	8.23	.	7.48	.	765.3	Y
AB1107P01-3	11/21/07	20.7	.	11.2	.	8.23	.	8.25	.	769.4	Y
AB1107P01-2	11/21/07	21.8	.	12.2	.	8.24	.	8.46	.	767.8	Y
AB1107P01-1	11/21/07	22.3	.	13.9	.	8.14	.	6.70	.	768.7	Y
AB11072530	11/21/07	21.2	21.3	16.3	21.7	8.03	7.87	5.21	2.48	769.1	N
AB11071380	11/21/07	21.9	21.9	22.6	22.8	7.84	7.84	4.85	4.90	767.2	N
AB11071890	11/21/07	22.1	.	21.1	.	7.87	.	5.44	.	767.9	Y
AB11072280	11/21/07	23.6	.	18.1	.	8.17	.	8.35	.	767.2	Y
AB1107P02-1	11/21/07	25.0	.	13.2	.	8.48	.	11.34	.	767.8	N
AB1107P02-3	11/21/07	24.3	.	13.4	.	8.45	.	10.20	.	765.4	N
AB1107P02-2	11/21/07	24.7	.	13.4	.	8.47	.	10.20	.	767.2	N
AB02082640	2/5/08	22.5	22.1	21.1	23.5	7.77	7.80	2.67	2.63	769.8	N
AB02082900	2/5/08	22.8	22.8	21.2	24.5	7.82	7.80	2.82	2.27	769.3	N
AB02083050	2/5/08	21.8	22.0	5.5	13.4	8.04	7.88	4.83	3.71	769.8	Y
AB0208P01-1	2/5/08	22.8	.	8.9	.	8.15	.	7.36	.	767.5	Y
AB0208P01-3	2/5/08	22.8	.	8.6	.	8.24	.	8.48	.	769.4	N
AB0208P01-2	2/5/08	23.7	.	6.6	.	8.24	.	8.16	.	768.9	N
AB0208P06-3	2/5/08	24.1	.	17.9	.	7.89	.	4.61	.	769.8	N
AB0208P06-1	2/5/08	24.1	.	17.9	.	7.95	.	5.15	.	768.4	N
AB0208P06-2	2/5/08	24.6	.	17.3	.	8.01	.	5.30	.	765.4	N
AB02082090	2/5/08	23.7	23.6	17.2	17.3	7.96	7.93	4.78	4.36	764.1	N
AB02081790	2/5/08	23.6	.	17.3	.	7.90	.	4.07	.	763.9	Y
AB02081280	2/6/08	22.2	22.2	19.3	19.3	7.87	7.87	3.25	3.29	764.9	N
AB02081590	2/6/08	22.6	.	19.3	.	7.85	.	3.30	.	763.8	N
AB02081670	2/6/08	22.4	.	19.4	.	7.86	.	3.59	.	764.4	N
AB02081930	2/6/08	22.4	.	19.6	.	7.90	.	3.70	.	764.8	N
AB0208P07-2	2/6/08	22.9	.	18.1	.	8.12	.	5.55	.	764.5	N
AB0208P07-3	2/6/08	23.0	23.0	18.3	19.1	8.08	7.91	5.15	4.08	763.6	N
AB0208P07-1	2/6/08	23.4	.	18.3	.	8.10	.	5.46	.	765.2	N
AB02082410	2/6/08	23.0	22.4	11.3	28.9	8.00	7.93	5.45	3.88	764.7	N
AB02082730	2/6/08	22.8	22.6	11.5	29.9	8.01	7.95	5.14	4.00	764.9	N
AB02083000	2/6/08	23.1	23.2	3.5	25.9	8.03	7.74	5.31	1.75	764.7	N
AB0208P02-3	2/6/08	24.8	.	12.6	.	8.36	.	7.85	.	763.9	N

Table A8 continued.

AB0208P02-1	2/6/08	25.5	.	12.7	.	8.36	.	8.42	.	763.7	N
AB0208P02-2	2/6/08	25.2	.	11.9	.	8.37	.	7.88	.	764.0	N

APPENDIX E – NEKTON DATA

Table A9. Raw nekton data.

SampleID	Species	Total number	Approximation	L1	L2	L3	L4	L5	L6	L7	L8	L9	L10
AB09061080	Eucinostomus spp.	5	1	.	.	.	.	.	.	.	.	.	.
AB09061080	Menidia spp.	50	1	.	.	.	.	.	.	.	.	.	.
AB09061080	L. parva	1	0	.	.	.	.	.	.	.	.	.	.
AB09061270	Eucinostomus spp.	13	1	.	.	.	.	.	.	.	.	.	.
AB09061270	Menidia spp.	25	1	.	.	.	.	.	.	.	.	.	.
AB09061270	G. holbrooki	15	1	.	.	.	.	.	.	.	.	.	.
AB09061270	M. gulosus	3	1	.	.	.	.	.	.	.	.	.	.
AB09061270	P. latipinna	1	1	.	.	.	.	.	.	.	.	.	.
AB09061530	C. undecimalis - R	2	0	268	255	.	.	.	.	.	.	.	.
AB09061530	Eucinostomus spp.	27	1	.	.	.	.	.	.	.	.	.	.
AB09061530	G. holbrooki	13	1	.	.	.	.	.	.	.	.	.	.
AB09061530	P. latipinna	1	0	.	.	.	.	.	.	.	.	.	.
AB09061530	M. gulosus	10	1	.	.	.	.	.	.	.	.	.	.
AB09061530	A. mitchilli	2	0	.	.	.	.	.	.	.	.	.	.
AB09061530	Menidia spp.	2	0	.	.	.	.	.	.	.	.	.	.
AB09061530	L. parva	4	1	.	.	.	.	.	.	.	.	.	.
AB09061530	Gobiosoma spp.	1	0	.	.	.	.	.	.	.	.	.	.
AB09061530	D. plumieri	1	0	.	.	.	.	.	.	.	.	.	.
AB09061650	C. undecimalis	1	0	.	.	.	.	.	.	.	.	.	.
AB09061650	Eucinostomus spp.	5	1	.	.	.	.	.	.	.	.	.	.
AB09061650	M. gulosus	3	0	.	.	.	.	.	.	.	.	.	.
AB09061650	Menidia spp.	3	0	.	.	.	.	.	.	.	.	.	.
AB09061650	L. parva	1	0	.	.	.	.	.	.	.	.	.	.
AB09061650	G. holbrooki	2	0	.	.	.	.	.	.	.	.	.	.
AB09061650	P. latipinna	1	0	.	.	.	.	.	.	.	.	.	.

Table A9 continued.

AB09062110	G. holbrooki	10	1	.	.	.	.	.	.	.	.	.	.
AB09062110	Menidia spp.	12	1	.	.	.	.	.	.	.	.	.	.
AB09062110	L. sicculus	1	0	.	.	.	.	.	.	.	.	.	.
AB09062110	Eucinostomus spp.	12	1	.	.	.	.	.	.	.	.	.	.
AB09062110	M. gulosus	1	0	.	.	.	.	.	.	.	.	.	.
AB09062110	P. latipinna	1	0	.	.	.	.	.	.	.	.	.	.
AB09062170	Menidia spp.	15	1	.	.	.	.	.	.	.	.	.	.
AB09062170	A. mitchilli	2	0	.	.	.	.	.	.	.	.	.	.
AB09062170	P. latipinna	1	0	.	.	.	.	.	.	.	.	.	.
AB09062170	C. sapidus - n	1	0	.	.	.	.	.	.	.	.	.	.
AB09062170	L. parva	1	0	.	.	.	.	.	.	.	.	.	.
AB09062170	M. gulosus	1	0	.	.	.	.	.	.	.	.	.	.
AB09062170	Eucinostomus spp.	15	1	.	.	.	.	.	.	.	.	.	.
AB09062330	Eucinostomus spp.	7	1	.	.	.	.	.	.	.	.	.	.
AB09062330	T. maculatus	7	1	.	.	.	.	.	.	.	.	.	.
AB09062330	Menidia spp.	50	1	.	.	.	.	.	.	.	.	.	.
AB09062330	M. gulosus	5	1	.	.	.	.	.	.	.	.	.	.
AB09062330	G. holbrooki	1	0	.	.	.	.	.	.	.	.	.	.
AB09062590	Eucinostomus spp.	5	1	.	.	.	.	.	.	.	.	.	.
AB09062590	Menidia spp.	20	1	.	.	.	.	.	.	.	.	.	.
AB09062590	M. gulosus	5	1	.	.	.	.	.	.	.	.	.	.
AB09062590	G. holbrooki	5	1	.	.	.	.	.	.	.	.	.	.
AB09062740	G. holbrooki	4	1	.	.	.	.	.	.	.	.	.	.
AB09062740	Eucinostomus spp.	7	1	.	.	.	.	.	.	.	.	.	.
AB09062740	T. maculatus	1	0	.	.	.	.	.	.	.	.	.	.
AB09062740	M. gulosus	1	1	.	.	.	.	.	.	.	.	.	.
AB09062950	C. undecimalis	1	0	196	.	.	.	.	.	.	.	.	.
AB09062950	Eucinostomus spp.	10	1	.	.	.	.	.	.	.	.	.	.
AB09062950	M. gulosus	17	1	.	.	.	.	.	.	.	.	.	.
AB09062950	T. maculatus	5	1	.	.	.	.	.	.	.	.	.	.
AB09062950	Menidia spp.	10	1	.	.	.	.	.	.	.	.	.	.
AB09063190	G. holbrooki	5	1	.	.	.	.	.	.	.	.	.	.
AB09063190	Eucinostomus spp.	4	1	.	.	.	.	.	.	.	.	.	.

Table A9 continued.

AB09063190	C. sapidus - n	1	0	.	.	.	.	.	.	.	.	.	.
AB09063190	D. plumieri	1	0	.	.	.	.	.	.	.	.	.	.
AB09063210	Eucinostomus spp.	1	0	.	.	.	.	.	.	.	.	.	.
AB09063210	Menidia spp.	7	1	.	.	.	.	.	.	.	.	.	.
AB09063210	G. holbrooki	1	0	.	.	.	.	.	.	.	.	.	.
AB0906P01-1	C. undecimalis	2	0	.	.	.	.	.	.	.	.	.	.
AB0906P01-1	G. holbrooki	50	1	.	.	.	.	.	.	.	.	.	.
AB0906P01-1	P. latipinna	12	1	.	.	.	.	.	.	.	.	.	.
AB0906P01-1	Eucinostomus spp.	8	0	.	.	.	.	.	.	.	.	.	.
AB0906P01-1	Menidia spp.	1	0	.	.	.	.	.	.	.	.	.	.
AB0906P01-1	M. gulosus	12	1	.	.	.	.	.	.	.	.	.	.
AB0906P01-1	Lepomis spp.	2	0	.	.	.	.	.	.	.	.	.	.
AB0906P01-1	T. maculatus	10	1	.	.	.	.	.	.	.	.	.	.
AB0906P01-2	G. holbrooki	50	1	.	.	.	.	.	.	.	.	.	.
AB0906P01-2	P. latipinna	8	1	.	.	.	.	.	.	.	.	.	.
AB0906P01-2	T. maculatus	25	1	.	.	.	.	.	.	.	.	.	.
AB0906P01-2	L. parva	5	1	.	.	.	.	.	.	.	.	.	.
AB0906P01-2	Lepomis spp.	15	1	.	.	.	.	.	.	.	.	.	.
AB0906P01-2	M. gulosus	35	1	.	.	.	.	.	.	.	.	.	.
AB0906P01-3	C. undecimalis	7	0								.	.	.
AB0906P01-3	G. holbrooki	37	1	.	.	.	.	.	.	.	.	.	.
AB0906P01-3	P. latipinna	7	1	.	.	.	.	.	.	.	.	.	.
AB0906P01-3	M. gulosus	20	1	.	.	.	.	.	.	.	.	.	.
AB0906P01-3	T. maculatus	10	1	.	.	.	.	.	.	.	.	.	.
AB0906P01-3	Menidia spp.	12	1	.	.	.	.	.	.	.	.	.	.
AB0906P01-3	L. sicculus	5	1	.	.	.	.	.	.	.	.	.	.
AB0906P01-3	Eucinostomus spp.	7	1	.	.	.	.	.	.	.	.	.	.
AB0906P02-1	C. undecimalis	3	0				.	.	.	.	.	.	.
AB0906P02-1	Fish spp.	1	0	.	.	.	.	.	.	.	.	.	.
AB0906P02-1	Menidia spp.	18	1	.	.	.	.	.	.	.	.	.	.
AB0906P02-1	M. gulosus	12	1	.	.	.	.	.	.	.	.	.	.
AB0906P02-1	N. chrysoleucas	1	0	.	.	.	.	.	.	.	.	.	.
AB0906P02-1	G. holbrooki	10	1	.	.	.	.	.	.	.	.	.	.

Table A9 continued.

AB0906P02-1	H. littorale	1	0	.	.	.	.	.	.	.	.	.	.
AB0906P02-2	C. undecimalis	2	0			.	.	.	.	.	.	.	.
AB0906P02-2	M. gulosus	17	1	.	.	.	.	.	.	.	.	.	.
AB0906P02-2	Menidia spp.	10	1	.	.	.	.	.	.	.	.	.	.
AB0906P02-2	Lepomis spp.	5	1	.	.	.	.	.	.	.	.	.	.
AB0906P02-2	G. holbrooki	5	1	.	.	.	.	.	.	.	.	.	.
AB0906P02-2	Eucinostomus spp.	5	1	.	.	.	.	.	.	.	.	.	.
AB0906P02-2	N. chrysoleucas	2	0	.	.	.	.	.	.	.	.	.	.
AB0906P02-2	T. maculatus	1	0	.	.	.	.	.	.	.	.	.	.
AB0906P02-3	C. undecimalis - R	1	0	530	.	.	.	.	.	.	.	.	.
AB0906P02-3	M. gulosus	50	1	.	.	.	.	.	.	.	.	.	.
AB0906P02-3	G. holbrooki	10	1	.	.	.	.	.	.	.	.	.	.
AB0906P02-3	Lepomis spp.	3	0	.	.	.	.	.	.	.	.	.	.
AB0906P02-3	T. maculatus	5	1	.	.	.	.	.	.	.	.	.	.
AB0906P06-1	M. gulosus	75	1	.	.	.	.	.	.	.	.	.	.
AB0906P06-1	Menidia spp.	50	1	.	.	.	.	.	.	.	.	.	.
AB0906P06-1	Eucinostomus spp.	10	1	.	.	.	.	.	.	.	.	.	.
AB0906P06-1	D. plumieri	1	0	.	.	.	.	.	.	.	.	.	.
AB0906P06-2	Menidia spp.	15	1	.	.	.	.	.	.	.	.	.	.
AB0906P06-2	M. gulosus	5	1	.	.	.	.	.	.	.	.	.	.
AB0906P06-2	Eucinostomus spp.	5	1	.	.	.	.	.	.	.	.	.	.
AB0906P06-3	C. undecimalis	3	0				.	.	.	.	.	.	.
AB0906P06-3	Eucinostomus spp.	5	1	.	.	.	.	.	.	.	.	.	.
AB0906P06-3	Menidia spp.	35	1	.	.	.	.	.	.	.	.	.	.
AB0906P06-3	M. gulosus	35	1	.	.	.	.	.	.	.	.	.	.
AB0906P06-3	P. latipinna	2	0	.	.	.	.	.	.	.	.	.	.
AB0906P07-1	C. undecimalis	2	0			.	.	.	.	.	.	.	.
AB0906P07-1	Eucinostomus spp.	3	0	.	.	.	.	.	.	.	.	.	.
AB0906P07-1	G. holbrooki	175	1	.	.	.	.	.	.	.	.	.	.
AB0906P07-1	M. gulosus	7	1	.	.	.	.	.	.	.	.	.	.
AB0906P07-1	P. latipinna	67	1	.	.	.	.	.	.	.	.	.	.
AB0906P07-2	S. melanotheron	1	0	.	.	.	.	.	.	.	.	.	.
AB0906P07-2	M. gulosus	35	1	.	.	.	.	.	.	.	.	.	.

Table A9 continued.

AB0906P07-2	G. holbrooki	25	1	.	.	.	.	.	.	.	.	.	.
AB0906P07-2	Eucinostomus spp.	2	0	.	.	.	.	.	.	.	.	.	.
AB0906P07-2	D. plumieri	1	0	.	.	.	.	.	.	.	.	.	.
AB0906P07-2	P. latipinna	5	1	.	.	.	.	.	.	.	.	.	.
AB0906P07-3	M. gulosus	35	1	.	.	.	.	.	.	.	.	.	.
AB0906P07-3	Menidia spp.	1	0	.	.	.	.	.	.	.	.	.	.
AB0906P07-3	Lepomis spp.	1	0	.	.	.	.	.	.	.	.	.	.
AB0906P07-3	G. holbrooki	12	1	.	.	.	.	.	.	.	.	.	.
AB0906P07-3	Eucinostomus spp.	6	0	.	.	.	.	.	.	.	.	.	.
AB0906P07-3	P. latipinna	5	1	.	.	.	.	.	.	.	.	.	.
AB10061040	C. sapidus - m	1	0	103	.	.	.	.	.	.	.	.	.
AB10061040	C. undecimalis	5	0	.	.	.	.	.	.	.	.	.	.
AB10061040	T. maculatus	23	1	.	.	.	.	.	.	.	.	.	.
AB10061040	Eucinostomus spp.	11	1	.	.	.	.	.	.	.	.	.	.
AB10061040	E. harengulus	10	1	.	.	.	.	.	.	.	.	.	.
AB10061040	M. gulosus	27	1	.	.	.	.	.	.	.	.	.	.
AB10061040	P. tribulus	1	0	.	.	.	.	.	.	.	.	.	.
AB10061040	C. sapidus - f	1	0	26	.	.	.	.	.	.	.	.	.
AB10061040	C. sapidus - u	4	0	7	7	9	9	.	.	.	.	.	.
AB10061040	L. parva	1	0	.	.	.	.	.	.	.	.	.	.
AB10061040	A. mitchilli	20	1	.	.	.	.	.	.	.	.	.	.
AB10061040	Menidia spp.	25	1	.	.	.	.	.	.	.	.	.	.
AB10061040	Palaemonetes spp.	3	1	.	.	.	.	.	.	.	.	.	.
AB10061100	C. sapidus - m	1	0	178	.	.	.	.	.	.	.	.	.
AB10061100	C. undecimalis	3	0	.	.	.	.	.	.	.	.	.	.
AB10061100	Eucinostomus spp.	10	1	.	.	.	.	.	.	.	.	.	.
AB10061100	Menidia spp.	1	0	.	.	.	.	.	.	.	.	.	.
AB10061100	G. holbrooki	10	1	.	.	.	.	.	.	.	.	.	.
AB10061100	E. harengulus	5	0	.	.	.	.	.	.	.	.	.	.
AB10061100	Palaemonetes spp.	1	0	.	.	.	.	.	.	.	.	.	.
AB10061310	M. gulosus	25	1	.	.	.	.	.	.	.	.	.	.
AB10061310	Menidia spp.	13	1	.	.	.	.	.	.	.	.	.	.
AB10061310	C. sapidus - u	1	0	10	.	.	.	.	.	.	.	.	.

Table A9 continued.

AB10061310	A. mitchilli	45	1	.	.	.	.	.	.	.	.	.	.
AB10061310	Eucinostomus spp.	3	0	.	.	.	.	.	.	.	.	.	.
AB10061310	E. harengulus	7	0	.	.	.	.	.	.	.	.	.	.
AB10061480	C. sapidus - m	1	0	89	.	.	.	.	.	.	.	.	.
AB10061480	C. undecimalis	1	0	.	.	.	.	.	.	.	.	.	.
AB10061480	A. mitchilli	50	1	.	.	.	.	.	.	.	.	.	.
AB10061480	Menidia spp.	50	1	.	.	.	.	.	.	.	.	.	.
AB10061480	E. harengulus	9	1	.	.	.	.	.	.	.	.	.	.
AB10061480	Eucinostomus spp.	12	1	.	.	.	.	.	.	.	.	.	.
AB10061480	C. sapidus - u	2	0	8	7	.	.	.	.	.	.	.	.
AB10061480	L. griseus	1	0	80	.	.	.	.	.	.	.	.	.
AB10061480	Gobiosoma spp.	3	1	.	.	.	.	.	.	.	.	.	.
AB10061480	G. holbrooki	3	1	.	.	.	.	.	.	.	.	.	.
AB10061710	Menidia spp.	10	1	.	.	.	.	.	.	.	.	.	.
AB10061710	G. holbrooki	3	1	.	.	.	.	.	.	.	.	.	.
AB10062110	C. undecimalis	1	0	.	.	.	.	.	.	.	.	.	.
AB10062110	G. holbrooki	25	0	.	.	.	.	.	.	.	.	.	.
AB10062110	Menidia spp.	13	1	.	.	.	.	.	.	.	.	.	.
AB10062110	P. latipinna	5	1	.	.	.	.	.	.	.	.	.	.
AB10062110	M. gulosus	10	1	.	.	.	.	.	.	.	.	.	.
AB10062110	Eucinostomus spp.	7	1	.	.	.	.	.	.	.	.	.	.
AB10062110	O. saurus	1	0	.	.	.	.	.	.	.	.	.	.
AB10062320	G. holbrooki	25	1	.	.	.	.	.	.	.	.	.	.
AB10062320	Eucinostomus spp.	7	1	.	.	.	.	.	.	.	.	.	.
AB10062320	M. gulosus	10	1	.	.	.	.	.	.	.	.	.	.
AB10062320	T. maculatus	3	1	.	.	.	.	.	.	.	.	.	.
AB10062600	Eucinostomus spp.	8	1	.	.	.	.	.	.	.	.	.	.
AB10062600	Menidia spp.	20	1	.	.	.	.	.	.	.	.	.	.
AB10062600	G. holbrooki	30	1	.	.	.	.	.	.	.	.	.	.
AB10062600	P. latipinna	10	1	.	.	.	.	.	.	.	.	.	.
AB10062600	M. gulosus	5	1	.	.	.	.	.	.	.	.	.	.
AB10062600	T. maculatus	2	1	.	.	.	.	.	.	.	.	.	.
AB10062850	C. undecimalis	8	0	.	.	.	.	.	.	.	.	.	.

Table A9 continued.

AB10062850	E. harengulus	6	0	.	.	.	.	.	.	.	.	.	.
AB10062850	M. gulosus	11	0	.	.	.	.	.	.	.	.	.	.
AB10062850	Menidia spp.	36	0	.	.	.	.	.	.	.	.	.	.
AB10062850	Eucinostomus spp.	10	0	.	.	.	.	.	.	.	.	.	.
AB10062850	G. holbrooki	2	0	.	.	.	.	.	.	.	.	.	.
AB10062880	C. undecimalis	2	0	.	.	.	.	.	.	.	.	.	.
AB10062880	Eucinostomus spp.	5	1	.	.	.	.	.	.	.	.	.	.
AB10062880	P. latipinna	7	1	.	.	.	.	.	.	.	.	.	.
AB10062880	Menidia spp.	12	1	.	.	.	.	.	.	.	.	.	.
AB10062880	G. holbrooki	45	1	.	.	.	.	.	.	.	.	.	.
AB10062880	M. gulosus	28	1	.	.	.	.	.	.	.	.	.	.
AB10062880	T. maculatus	45	1	.	.	.	.	.	.	.	.	.	.
AB10063030	A. probatocephalus	1	0	78	.	.	.	.	.	.	.	.	.
AB10063030	C. undecimalis	6	0	.	.	.	.	.	.	.	.	.	.
AB10063030	M. gulosus	3	0	.	.	.	.	.	.	.	.	.	.
AB10063030	P. latipinna	13	0	.	.	.	.	.	.	.	.	.	.
AB10063030	G. holbrooki	20	0	.	.	.	.	.	.	.	.	.	.
AB10063030	A. mitchilli	60	1	.	.	.	.	.	.	.	.	.	.
AB10063030	Eucinostomus spp.	1	0	.	.	.	.	.	.	.	.	.	.
AB10063030	L. parva	2	0	.	.	.	.	.	.	.	.	.	.
AB10063030	T. maculatus	4	0	.	.	.	.	.	.	.	.	.	.
AB10063030	Menidia spp.	1	0	.	.	.	.	.	.	.	.	.	.
AB10063030	H. formosa	2	0	.	.	.	.	.	.	.	.	.	.
AB10063190	Menidia spp.	12	1	.	.	.	.	.	.	.	.	.	.
AB10063190	Eucinostomus spp.	13	1	.	.	.	.	.	.	.	.	.	.
AB10063190	G. holbrooki	12	1	.	.	.	.	.	.	.	.	.	.
AB10063190	Lepomis spp.	1	0	.	.	.	.	.	.	.	.	.	.
AB10063190	P. latipinna	1	0	.	.	.	.	.	.	.	.	.	.
AB1006P01-1	L. platyrhincus	1	0	535	.	.	.	.	.	.	.	.	.
AB1006P01-1	M. gulosus	51	0	.	.	.	.	.	.	.	.	.	.
AB1006P01-1	C. sapidus - m	3	0	57	92	52	.	.	.	.	.	.	.
AB1006P01-1	T. maculatus	64	0	.	.	.	.	.	.	.	.	.	.
AB1006P01-1	Eucinostomus spp.	1	0	.	.	.	.	.	.	.	.	.	.

Table A9 continued.

AB1006P01-1	G. holbrooki	8	0	.	.	.	.	.	.	.	.	.	.
AB1006P01-1	Palaemonetes spp.	1	0	.	.	.	.	.	.	.	.	.	.
AB1006P01-1	P. latipinna	1	0	.	.	.	.	.	.	.	.	.	.
AB1006P01-1	Lepomis spp.	1	0	53	.	.	.	.	.	.	.	.	.
AB1006P01-1	C. undecimalis	1	0	.	.	.	.	.	.	.	.	.	.
AB1006P01-2	G. holbrooki	178	1	.	.	.	.	.	.	.	.	.	.
AB1006P01-2	M. gulosus	24	1	.	.	.	.	.	.	.	.	.	.
AB1006P01-2	Lepomis spp.	11	1	.	.	.	.	.	.	.	.	.	.
AB1006P01-2	L. parva	28	1	.	.	.	.	.	.	.	.	.	.
AB1006P01-2	C. undecimalis	5	0	.	.	.	.	.	.	.	.	.	.
AB1006P01-2	H. formosa	6	1	.	.	.	.	.	.	.	.	.	.
AB1006P01-2	P. latipinna	144	1	.	.	.	.	.	.	.	.	.	.
AB1006P01-2	T. maculatus	8	1	.	.	.	.	.	.	.	.	.	.
AB1006P01-2	Palaemonetes spp.	1	0	.	.	.	.	.	.	.	.	.	.
AB1006P01-2	A. mitchilli	14	1	.	.	.	.	.	.	.	.	.	.
AB1006P01-2	Menidia spp.	1	0	.	.	.	.	.	.	.	.	.	.
AB1006P01-2	Eucinostomus spp.	1	0	.	.	.	.	.	.	.	.	.	.
AB1006P01-2	L. goodei	1	0	.	.	.	.	.	.	.	.	.	.
AB1006P01-2	H. littorale	2	0	.	.	.	.	.	.	.	.	.	.
AB1006P01-2	Ictaluridae	1	0	.	.	.	.	.	.	.	.	.	.
AB1006P01-3	C. sapidus - m	2	0	150	114	.	.	.	.	.	.	.	.
AB1006P01-3	C. undecimalis	17	0	.	.	.	.	.	.	.	.	.	.
AB1006P01-3	Eucinostomus spp.	6	0	.	.	.	.	.	.	.	.	.	.
AB1006P01-3	M. gulosus	30	1	.	.	.	.	.	.	.	.	.	.
AB1006P01-3	T. maculatus	15	1	.	.	.	.	.	.	.	.	.	.
AB1006P01-3	H. littorale	1	0	.	.	.	.	.	.	.	.	.	.
AB1006P01-3	L. parva	6	0	.	.	.	.	.	.	.	.	.	.
AB1006P01-3	P. latipinna	2	0	.	.	.	.	.	.	.	.	.	.
AB1006P01-3	Menidia spp.	5	0	.	.	.	.	.	.	.	.	.	.
AB1006P01-3	G. holbrooki	4	0	.	.	.	.	.	.	.	.	.	.
AB1006P02-1	C. undecimalis	13	0	.	.	.	.	.	.	.	.	.	.
AB1006P02-1	Cichlidae	1	0	.	.	.	.	.	.	.	.	.	.
AB1006P02-1	Lepomis spp.	13	1	.	.	.	.	.	.	.	.	.	.

Table A9 continued.

AB1006P02-1	Menidia spp.	2	0	.	.	.	.	.	.	.	.	.	.
AB1006P02-1	G. holbrooki	100	1	.	.	.	.	.	.	.	.	.	.
AB1006P02-1	P. latipinna	12	1	.	.	.	.	.	.	.	.	.	.
AB1006P02-1	M. gulosus	25	1	.	.	.	.	.	.	.	.	.	.
AB1006P02-1	Gobiosoma spp.	5	1	.	.	.	.	.	.	.	.	.	.
AB1006P02-1	T. maculatus	5	1	.	.	.	.	.	.	.	.	.	.
AB1006P02-1	D. plumieri	1	0	.	.	.	.	.	.	.	.	.	.
AB1006P02-1	Eucinostomus spp.	5	1	.	.	.	.	.	.	.	.	.	.
AB1006P02-2	C. undecimalis	2	0	.	.	.	.	.	.	.	.	.	.
AB1006P02-2	H. littorale	1	0	.	.	.	.	.	.	.	.	.	.
AB1006P02-2	G. holbrooki	27	1	.	.	.	.	.	.	.	.	.	.
AB1006P02-2	Eucinostomus spp.	1	0	.	.	.	.	.	.	.	.	.	.
AB1006P02-2	P. latipinna	5	1	.	.	.	.	.	.	.	.	.	.
AB1006P02-2	M. gulosus	5	1	.	.	.	.	.	.	.	.	.	.
AB1006P02-2	Lepomis spp.	1	0	.	.	.	.	.	.	.	.	.	.
AB1006P02-3	C. undecimalis	5	0	.	.	.	.	.	.	.	.	.	.
AB1006P02-3	H. littorale	1	0	.	.	.	.	.	.	.	.	.	.
AB1006P02-3	Eucinostomus spp.	4	1	.	.	.	.	.	.	.	.	.	.
AB1006P02-3	G. holbrooki	125	1	.	.	.	.	.	.	.	.	.	.
AB1006P02-3	P. latipinna	50	1	.	.	.	.	.	.	.	.	.	.
AB1006P02-3	M. gulosus	35	1	.	.	.	.	.	.	.	.	.	.
AB1006P02-3	Lepomis spp.	3	1	.	.	.	.	.	.	.	.	.	.
AB1006P06-1	A. mitchilli	30	1	.	.	.	.	.	.	.	.	.	.
AB1006P06-1	M. gulosus	8	1	.	.	.	.	.	.	.	.	.	.
AB1006P06-1	Menidia spp.	27	1	.	.	.	.	.	.	.	.	.	.
AB1006P06-1	Eucinostomus spp.	8	1	.	.	.	.	.	.	.	.	.	.
AB1006P06-1	G. holbrooki	35	1	.	.	.	.	.	.	.	.	.	.
AB1006P06-1	Gobiosoma spp.	2	1	.	.	.	.	.	.	.	.	.	.
AB1006P06-2	C. undecimalis	1	0	.	.	.	.	.	.	.	.	.	.
AB1006P06-2	A. mitchilli	18	1	.	.	.	.	.	.	.	.	.	.
AB1006P06-2	Menidia spp.	27	1	.	.	.	.	.	.	.	.	.	.
AB1006P06-2	Eucinostomus spp.	6	1	.	.	.	.	.	.	.	.	.	.
AB1006P06-2	M. gulosus	13	1	.	.	.	.	.	.	.	.	.	.

Table A9 continued.

AB1006P06-2	G. holbrooki	50	1	.	.	.	.	.	.	.	.	.	.
AB1006P06-3	Eucinostomus spp.	15	1	.	.	.	.	.	.	.	.	.	.
AB1006P06-3	M. gulosus	13	1	.	.	.	.	.	.	.	.	.	.
AB1006P06-3	G. holbrooki	17	1	.	.	.	.	.	.	.	.	.	.
AB1006P06-3	Menidia spp.	27	1	.	.	.	.	.	.	.	.	.	.
AB1006P06-3	T. maculatus	8	1	.	.	.	.	.	.	.	.	.	.
AB1006P06-3	Lepomis spp.	1	0	.	.	.	.	.	.	.	.	.	.
AB1006P07-1	C. sapidus - m	1	0	108	.	.	.	.	.	.	.	.	.
AB1006P07-1	M. gulosus	17	0	.	.	.	.	.	.	.	.	.	.
AB1006P07-1	Eucinostomus spp.	3	0	.	.	.	.	.	.	.	.	.	.
AB1006P07-1	T. maculatus	1	0	.	.	.	.	.	.	.	.	.	.
AB1006P07-1	Palaemonetes spp.	7	0	.	.	.	.	.	.	.	.	.	.
AB1006P07-1	G. holbrooki	15	0	.	.	.	.	.	.	.	.	.	.
AB1006P07-1	Gobiosoma spp.	3	0	.	.	.	.	.	.	.	.	.	.
AB1006P07-1	P. latipinna	1	0	.	.	.	.	.	.	.	.	.	.
AB1006P07-1	Fundulus spp.	1	0	.	.	.	.	.	.	.	.	.	.
AB1006P07-1	L. parva	3	0	.	.	.	.	.	.	.	.	.	.
AB1006P07-2	C. sapidus - m	1	0	107	.	.	.	.	.	.	.	.	.
AB1006P07-2	A. mitchilli	38	0	.	.	.	.	.	.	.	.	.	.
AB1006P07-2	Menidia spp.	9	0	.	.	.	.	.	.	.	.	.	.
AB1006P07-2	Eucinostomus spp.	5	0	.	.	.	.	.	.	.	.	.	.
AB1006P07-2	G. holbrooki	12	0	.	.	.	.	.	.	.	.	.	.
AB1006P07-2	M. gulosus	30	1	.	.	.	.	.	.	.	.	.	.
AB1006P07-2	P. latipinna	4	0	.	.	.	.	.	.	.	.	.	.
AB1006P07-2	L. parva	25	1	.	.	.	.	.	.	.	.	.	.
AB1006P07-2	E. harengulus	4	0	.	.	.	.	.	.	.	.	.	.
AB1006P07-2	Palaemonetes spp.	1	0	.	.	.	.	.	.	.	.	.	.
AB1006P07-3	T. maculatus	3	0	.	.	.	.	.	.	.	.	.	.
AB1006P07-3	Menidia spp.	7	0	.	.	.	.	.	.	.	.	.	.
AB1006P07-3	A. mitchilli	115	0	.	.	.	.	.	.	.	.	.	.
AB1006P07-3	G. holbrooki	37	0	.	.	.	.	.	.	.	.	.	.
AB1006P07-3	E. harengulus	6	0	.	.	.	.	.	.	.	.	.	.
AB1006P07-3	Eucinostomus spp.	13	0	.	.	.	.	.	.	.	.	.	.

Table A9 continued.

AB1006P07-3	C. undecimalis	1	0	.	.	.	.	.	.	.	.	.	.
AB11061550	A. mitchilli	137	1	.	.	.	.	.	.	.	.	.	.
AB11061550	Menidia spp.	25	1	.	.	.	.	.	.	.	.	.	.
AB11061550	T. maculatus	5	1	.	.	.	.	.	.	.	.	.	.
AB11061550	G. holbrooki	113	1	.	.	.	.	.	.	.	.	.	.
AB11061550	L. parva	90	1	.	.	.	.	.	.	.	.	.	.
AB11061550	M. gulosus	7	1	.	.	.	.	.	.	.	.	.	.
AB11061550	A. xenica	5	1	.	.	.	.	.	.	.	.	.	.
AB11061550	P. latipinna	5	1	.	.	.	.	.	.	.	.	.	.
AB11061550	C. sapidus - u	4	1	.	.	.	.	.	.	.	.	.	.
AB11061550	F. confluentus	2	0	.	.	.	.	.	.	.	.	.	.
AB11061720	C. sapidus - f	1	0	45	.	.	.	.	.	.	.	.	.
AB11061720	C. undecimalis	1	0	.	.	.	.	.	.	.	.	.	.
AB11061720	F. grandis	3	0	.	.	.	.	.	.	.	.	.	.
AB11061720	C. variegatus	6	0	.	.	.	.	.	.	.	.	.	.
AB11061720	P. latipinna	34	0	.	.	.	.	.	.	.	.	.	.
AB11061720	Menidia spp.	58	1	.	.	.	.	.	.	.	.	.	.
AB11061720	Eucinostomus spp.	14	0	.	.	.	.	.	.	.	.	.	.
AB11061720	L. parva	15	1	.	.	.	.	.	.	.	.	.	.
AB11061720	Palaemonetes spp.	17	1	.	.	.	.	.	.	.	.	.	.
AB11061720	G. holbrooki	2	1	.	.	.	.	.	.	.	.	.	.
AB11061720	A. mitchilli	1	0	.	.	.	.	.	.	.	.	.	.
AB11061800	C. sapidus - m	1	0	110	.	.	.	.	.	.	.	.	.
AB11061800	C. sapidus - f	1	0	107	.	.	.	.	.	.	.	.	.
AB11061800	S. ocellatus	3	0	23	26	24	.	.	.	.	.	.	.
AB11061800	C. variegatus	1	0	.	.	.	.	.	.	.	.	.	.
AB11061800	A. xenica	1	0	.	.	.	.	.	.	.	.	.	.
AB11061800	Menidia spp.	10	1	.	.	.	.	.	.	.	.	.	.
AB11061800	A. mitchilli	10	1	.	.	.	.	.	.	.	.	.	.
AB11061800	P. latipinna	2	0	.	.	.	.	.	.	.	.	.	.
AB11061800	G. holbrooki	5	1	.	.	.	.	.	.	.	.	.	.
AB11061800	L. parva	20	1	.	.	.	.	.	.	.	.	.	.
AB11061800	Eucinostomus spp.	1	0	.	.	.	.	.	.	.	.	.	.

Table A9 continued.

AB11061800	Palaemonetes spp.	2	0	.	.	.	.	.	.	.	.	.	.
AB11061800	C. sapidus - u	2	0	15	13	.	.	.	.	.	.	.	.
AB11061800	T. maculatus	2	0	.	.	.	.	.	.	.	.	.	.
AB11062040	F. confluentus	3	0	.	.	.	.	.	.	.	.	.	.
AB11062040	F. grandis	2	0	.	.	.	.	.	.	.	.	.	.
AB11062040	C. sapidus - u	2	0	15	11	.	.	.	.	.	.	.	.
AB11062040	Gobiosoma spp.	1	0	.	.	.	.	.	.	.	.	.	.
AB11062040	P. latipinna	10	1	.	.	.	.	.	.	.	.	.	.
AB11062040	M. gulosus	10	1	.	.	.	.	.	.	.	.	.	.
AB11062040	G. holbrooki	15	1	.	.	.	.	.	.	.	.	.	.
AB11062040	S. ocellatus	1	0	21	.	.	.	.	.	.	.	.	.
AB11062040	L. parva	15	1	.	.	.	.	.	.	.	.	.	.
AB11062040	Palaemonetes spp.	80	1	.	.	.	.	.	.	.	.	.	.
AB11062040	A. mitchilli	5	1	.	.	.	.	.	.	.	.	.	.
AB11062110	C. undecimalis	5	0	.	.	.	.	.	.	.	.	.	.
AB11062110	E. harengulus	7	0	.	.	.	.	.	.	.	.	.	.
AB11062110	Menidia spp.	5	1	.	.	.	.	.	.	.	.	.	.
AB11062110	D. plumieri	1	0	.	.	.	.	.	.	.	.	.	.
AB11062110	Palaemonetes spp.	2	0	.	.	.	.	.	.	.	.	.	.
AB11062110	M. gulosus	10	1	.	.	.	.	.	.	.	.	.	.
AB11062110	G. holbrooki	1	0	.	.	.	.	.	.	.	.	.	.
AB11062110	L. parva	1	0	.	.	.	.	.	.	.	.	.	.
AB11062110	A. mitchilli	1	0	.	.	.	.	.	.	.	.	.	.
AB11062110	C. sapidus - m	1	0	53	.	.	.	.	.	.	.	.	.
AB11062210	C. undecimalis	5	0	.	.	.	.	.	.	.	.	.	.
AB11062210	Eucinostomus spp.	47	0	.	.	.	.	.	.	.	.	.	.
AB11062210	Menidia spp.	10	1	.	.	.	.	.	.	.	.	.	.
AB11062210	P. latipinna	4	0	.	.	.	.	.	.	.	.	.	.
AB11062210	L. parva	1	0	.	.	.	.	.	.	.	.	.	.
AB11062210	Palaemonetes spp.	5	1	.	.	.	.	.	.	.	.	.	.
AB11062210	G. holbrooki	1	0	.	.	.	.	.	.	.	.	.	.
AB11062210	C. sapidus - m	2	0	103	69	.	.	.	.	.	.	.	.
AB11062210	T. maculatus	1	0	.	.	.	.	.	.	.	.	.	.

Table A9 continued.

AB11062550	Menidia spp.	19	0	.	.	.	.	.	.	.	.	.	.
AB11062550	A. mitchilli	2	0	.	.	.	.	.	.	.	.	.	.
AB11062550	P. latipinna	10	1	.	.	.	.	.	.	.	.	.	.
AB11062550	G. holbrooki	10	1	.	.	.	.	.	.	.	.	.	.
AB11062550	Palaemonetes spp.	5	1	.	.	.	.	.	.	.	.	.	.
AB11062620	C. sapidus - m	2	0	130	59	.	.	.	.	.	.	.	.
AB11062620	Menidia spp.	3	0	.	.	.	.	.	.	.	.	.	.
AB11062620	S. ocellatus	1	0	.	.	.	.	.	.	.	.	.	.
AB11062620	L. parva	1	0	.	.	.	.	.	.	.	.	.	.
AB11062620	Eucinostomus spp.	2	0	.	.	.	.	.	.	.	.	.	.
AB11062620	G. holbrooki	1	0	.	.	.	.	.	.	.	.	.	.
AB11062620	M. gulosus	2	0	.	.	.	.	.	.	.	.	.	.
AB11062820	C. undecimalis	15	0	.	.	.	.	.	.	.	.	.	.
AB11062820	T. maculatus	5	1	.	.	.	.	.	.	.	.	.	.
AB11062820	M. gulosus	11	1	.	.	.	.	.	.	.	.	.	.
AB11062820	P. latipinna	37	1	.	.	.	.	.	.	.	.	.	.
AB11062820	L. parva	17	1	.	.	.	.	.	.	.	.	.	.
AB11062820	Menidia spp.	5	1	.	.	.	.	.	.	.	.	.	.
AB11062820	E. harengulus	5	0	.	.	.	.	.	.	.	.	.	.
AB11062820	A. mitchilli	5	1	.	.	.	.	.	.	.	.	.	.
AB11062820	Palaemonetes spp.	50	1	.	.	.	.	.	.	.	.	.	.
AB11062820	Eucinostomus spp.	8	0	.	.	.	.	.	.	.	.	.	.
AB11062820	G. holbrooki	10	1	.	.	.	.	.	.	.	.	.	.
AB11062910	Menidia spp.	15	1	.	.	.	.	.	.	.	.	.	.
AB11062910	M. gulosus	17	1	.	.	.	.	.	.	.	.	.	.
AB11062910	T. maculatus	10	1	.	.	.	.	.	.	.	.	.	.
AB11062910	L. parva	50	1	.	.	.	.	.	.	.	.	.	.
AB11062910	S. ocellatus	1	0	.	.	.	.	.	.	.	.	.	.
AB11062910	Eucinostomus spp.	1	0	.	.	.	.	.	.	.	.	.	.
AB11062910	G. holbrooki	3	1	.	.	.	.	.	.	.	.	.	.
AB11062910	Palaemonetes spp.	5	1	.	.	.	.	.	.	.	.	.	.
AB11062910	Gobiosoma spp.	1	0	.	.	.	.	.	.	.	.	.	.
AB11063020	C. undecimalis	4	0	.	.	.	.	.	.	.	.	.	.

Table A9 continued.

AB11063020	A. mitchilli	55	1	.	.	.	.	.	.	.	.	.	.
AB11063020	C. sapidus - n	1	0	.	.	.	.	.	.	.	.	.	.
AB11063020	G. holbrooki	15	1	.	.	.	.	.	.	.	.	.	.
AB11063020	Palaemonetes spp.	5	1	.	.	.	.	.	.	.	.	.	.
AB11063020	M. gulosus	3	0	.	.	.	.	.	.	.	.	.	.
AB11063020	T. maculatus	2	0	.	.	.	.	.	.	.	.	.	.
AB11063020	E. harengulus	1	0	.	.	.	.	.	.	.	.	.	.
AB11063110	G. holbrooki	18	1	.	.	.	.	.	.	.	.	.	.
AB11063110	L. parva	1	1	.	.	.	.	.	.	.	.	.	.
AB11063110	P. latipinna	3	0	.	.	.	.	.	.	.	.	.	.
AB11063110	Palaemonetes spp.	2	0	.	.	.	.	.	.	.	.	.	.
AB11063110	M. gulosus	2	0	.	.	.	.	.	.	.	.	.	.
AB11063110	T. maculatus	1	0	.	.	.	.	.	.	.	.	.	.
AB1106P01-1	C. sapidus - f	2	0	93	125	.	.	.	.	.	.	.	.
AB1106P01-1	C. sapidus - m	3	0	62	98	116	.	.	.	.	.	.	.
AB1106P01-1	G. holbrooki	350	1	.	.	.	.	.	.	.	.	.	.
AB1106P01-1	M. gulosus	75	1	.	.	.	.	.	.	.	.	.	.
AB1106P01-1	L. parva	25	1	.	.	.	.	.	.	.	.	.	.
AB1106P01-1	A. mitchilli	25	1	.	.	.	.	.	.	.	.	.	.
AB1106P01-1	Menidia spp.	7	1	.	.	.	.	.	.	.	.	.	.
AB1106P01-1	T. maculatus	50	1	.	.	.	.	.	.	.	.	.	.
AB1106P01-1	C. sapidus - u	5	1	.	.	.	.	.	.	.	.	.	.
AB1106P01-1	Palaemonetes spp.	5	1	.	.	.	.	.	.	.	.	.	.
AB1106P01-1	Lepomis spp.	7	1	.	.	.	.	.	.	.	.	.	.
AB1106P01-1	C. undecimalis	4	0	.	.	.	.	.	.	.	.	.	.
AB1106P01-2	C. sapidus - m	3	0	61	90	94	.	.	.	.	.	.	.
AB1106P01-2	M. gulosus	35	1	.	.	.	.	.	.	.	.	.	.
AB1106P01-2	G. holbrooki	18	1	.	.	.	.	.	.	.	.	.	.
AB1106P01-2	C. variegatus	3	1	.	.	.	.	.	.	.	.	.	.
AB1106P01-2	L. parva	13	1	.	.	.	.	.	.	.	.	.	.
AB1106P01-2	T. maculatus	20	1	.	.	.	.	.	.	.	.	.	.
AB1106P01-2	Eucinostomus spp.	1	0	.	.	.	.	.	.	.	.	.	.
AB1106P01-2	A. mitchilli	5	1	.	.	.	.	.	.	.	.	.	.

Table A9 continued.

AB1106P01-2	Palaemonetes spp.	.	.	.	.	.	.	.	.	.	.	.	.
AB1106P01-2	Menidia spp.	10	1	.	.	.	.	.	.	.	.	.	.
AB1106P01-2	P. latipinna	7	1	.	.	.	.	.	.	.	.	.	.
AB1106P01-3	C. sapidus - m	3	0	82	106	91	.	.	.	.	.	.	.
AB1106P01-3	C. sapidus - f	2	0	70	65	.	.	.	.	.	.	.	.
AB1106P01-3	C. undecimalis	3	0	.	.	.	.	.	.	.	.	.	.
AB1106P01-3	M. gulosus	50	1	.	.	.	.	.	.	.	.	.	.
AB1106P01-3	G. holbrooki	55	1	.	.	.	.	.	.	.	.	.	.
AB1106P01-3	Lepomis spp.	3	1	.	.	.	.	.	.	.	.	.	.
AB1106P01-3	Menidia spp.	1	0	.	.	.	.	.	.	.	.	.	.
AB1106P01-3	T. maculatus	7	1	.	.	.	.	.	.	.	.	.	.
AB1106P01-3	S. ocellatus	1	0	.	.	.	.	.	.	.	.	.	.
AB1106P01-3	A. mitchilli	3	1	.	.	.	.	.	.	.	.	.	.
AB1106P01-3	C. sapidus - u	3	0	.	.	.	.	.	.	.	.	.	.
AB1106P01-3	Palaemonetes spp.	3	1	.	.	.	.	.	.	.	.	.	.
AB1106P02-1	C. undecimalis	37	0	.	.	.	.	.	.	.	.	.	.
AB1106P02-1	C. sapidus - m	4	0	149	96	100	42	.	.	.	.	.	.
AB1106P02-1	S. melanotheron	7	1	.	.	.	.	.	.	.	.	.	.
AB1106P02-1	P. latipinna	110	1	.	.	.	.	.	.	.	.	.	.
AB1106P02-1	G. holbrooki	230	1	.	.	.	.	.	.	.	.	.	.
AB1106P02-1	Menidia spp.	20	1	.	.	.	.	.	.	.	.	.	.
AB1106P02-1	A. mitchilli	5	1	.	.	.	.	.	.	.	.	.	.
AB1106P02-1	Eucinostomus spp.	2	0	.	.	.	.	.	.	.	.	.	.
AB1106P02-1	T. maculatus	7	1	.	.	.	.	.	.	.	.	.	.
AB1106P02-1	F. confluentus	11	0	.	.	.	.	.	.	.	.	.	.
AB1106P02-1	M. gulosus	40	1	.	.	.	.	.	.	.	.	.	.
AB1106P02-1	Palaemonetes spp.	13	1	.	.	.	.	.	.	.	.	.	.
AB1106P02-2	**C. undecimalis**	**9**	0	.	.	.	.	.	.	.	.	.	.
AB1106P02-2	D. plumieri	3	0	.	.	.	.	.	.	.	.	.	.
AB1106P02-2	T. maculatus	40	1	.	.	.	.	.	.	.	.	.	.
AB1106P02-2	G. holbrooki	70	1	.	.	.	.	.	.	.	.	.	.
AB1106P02-2	S. melanotheron	1	0	132	.	.	.	.	.	.	.	.	.
AB1106P02-2	Menidia spp.	10	1	.	.	.	.	.	.	.	.	.	.

Table A9 continued.

AB1106P02-2	A. mitchilli	17	1	.	.	.	.	.	.	.	.	.	.
AB1106P02-2	M. gulosus	60	1	.	.	.	.	.	.	.	.	.	.
AB1106P02-2	P. latipinna	13	1	.	.	.	.	.	.	.	.	.	.
AB1106P02-2	L. parva	10	1	.	.	.	.	.	.	.	.	.	.
AB1106P02-2	Palaemonetes spp.	5	1	.	.	.	.	.	.	.	.	.	.
AB1106P02-2	C. sapidus - u	2	0	.	.	.	.	.	.	.	.	.	.
AB1106P02-3	C. sapidus - m	1	0	128	.	.	.	.	.	.	.	.	.
AB1106P02-3	C. undecimalis	20	0	.	.	.	.	.	.	.	.	.	.
AB1106P02-3	G. holbrooki	225	1	.	.	.	.	.	.	.	.	.	.
AB1106P02-3	P. latipinna	10	1	.	.	.	.	.	.	.	.	.	.
AB1106P02-3	D. plumieri	3	0	.	.	.	.	.	.	.	.	.	.
AB1106P02-3	A. mitchilli	20	1	.	.	.	.	.	.	.	.	.	.
AB1106P02-3	T. maculatus	5	1	.	.	.	.	.	.	.	.	.	.
AB1106P02-3	C. sapidus - u	2	0	21	.	.	.	.	.	.	.	.	.
AB1106P02-3	M. gulosus	20	1	.	.	.	.	.	.	.	.	.	.
AB1106P02-3	Palaemonetes spp.	1	0	.	.	.	.	.	.	.	.	.	.
AB1106P06-1	L. parva	35	1	.	.	.	.	.	.	.	.	.	.
AB1106P06-1	G. holbrooki	35	1	.	.	.	.	.	.	.	.	.	.
AB1106P06-1	P. latipinna	5	1	.	.	.	.	.	.	.	.	.	.
AB1106P06-1	M. gulosus	35	1	.	.	.	.	.	.	.	.	.	.
AB1106P06-1	C. sapidus - u	4	1	.	.	.	.	.	.	.	.	.	.
AB1106P06-1	F. confluentus	1	0	.	.	.	.	.	.	.	.	.	.
AB1106P06-1	T. maculatus	10	1	.	.	.	.	.	.	.	.	.	.
AB1106P06-1	Palaemonetes spp.	5	1	.	.	.	.	.	.	.	.	.	.
AB1106P06-2	C. sapidus - m	1	0	117	.	.	.	.	.	.	.	.	.
AB1106P06-2	C. sapidus - u	7	0	14	.	.	.	.	.	.	.	.	.
AB1106P06-2	Menidia spp.	1	0	.	.	.	.	.	.	.	.	.	.
AB1106P06-2	S. ocellatus	2	0	23	24	.	.	.	.	.	.	.	.
AB1106P06-2	T. maculatus	5	1	.	.	.	.	.	.	.	.	.	.
AB1106P06-2	L. parva	5	1	.	.	.	.	.	.	.	.	.	.
AB1106P06-2	M. gulosus	50	1	.	.	.	.	.	.	.	.	.	.
AB1106P06-2	G. holbrooki	1	0	.	.	.	.	.	.	.	.	.	.
AB1106P06-3	C. undecimalis	1	0	.	.	.	.	.	.	.	.	.	.

Table A9 continued.

AB1106P06-3	C. sapidus - m	1	0	91	.	.	.	.	.	.	.	.	.
AB1106P06-3	S. ocellatus	6	0	22	16	23	24	26	14	.	.	.	.
AB1106P06-3	Eucinostomus spp.	5	1	.	.	.	.	.	.	.	.	.	.
AB1106P06-3	M. gulosus	55	1	.	.	.	.	.	.	.	.	.	.
AB1106P06-3	T. maculatus	10	1	.	.	.	.	.	.	.	.	.	.
AB1106P06-3	L. parva	25	1	.	.	.	.	.	.	.	.	.	.
AB1106P06-3	A. mitchilli	1	0	.	.	.	.	.	.	.	.	.	.
AB1106P06-3	C. sapidus - u	5	1	.	.	.	.	.	.	.	.	.	.
AB1106P06-3	Palaemonetes spp.	1	0	.	.	.	.	.	.	.	.	.	.
AB1106P06-3	Menidia spp.	5	1	.	.	.	.	.	.	.	.	.	.
AB1106P06-3	Gobiosoma spp.	1	1	.	.	.	.	.	.	.	.	.	.
AB1106P06-3	G. holbrooki	3	1	.	.	.	.	.	.	.	.	.	.
AB1106P07-1	P. latipinna	75	1	.	.	.	.	.	.	.	.	.	.
AB1106P07-1	G. holbrooki	200	1	.	.	.	.	.	.	.	.	.	.
AB1106P07-1	A. mitchilli	40	1	.	.	.	.	.	.	.	.	.	.
AB1106P07-1	C. variegatus	3	0	.	.	.	.	.	.	.	.	.	.
AB1106P07-1	C. sapidus - f	1	0	41	.	.	.	.	.	.	.	.	.
AB1106P07-1	C. sapidus - u	5	0	14	18	10	12	.	.	.	.	.	.
AB1106P07-1	C. sapidus - m	2	0	40	18	.	.	.	.	.	.	.	.
AB1106P07-1	T. maculatus	10	1	.	.	.	.	.	.	.	.	.	.
AB1106P07-1	F. confluentus	11	0	.	.	.	.	.	.	.	.	.	.
AB1106P07-1	M. gulosus	20	1	.	.	.	.	.	.	.	.	.	.
AB1106P07-1	L. parva	20	1	.	.	.	.	.	.	.	.	.	.
AB1106P07-1	Gobiosoma spp.	3	0	.	.	.	.	.	.	.	.	.	.
AB1106P07-1	Menidia spp.	10	1	.	.	.	.	.	.	.	.	.	.
AB1106P07-1	Palaemonetes spp.	400	1	.	.	.	.	.	.	.	.	.	.
AB1106P07-2	C. undecimalis	2	0	.	.	.	.	.	.	.	.	.	.
AB1106P07-2	C. sapidus - m	1	0	98	.	.	.	.	.	.	.	.	.
AB1106P07-2	F. confluentus	1	0	.	.	.	.	.	.	.	.	.	.
AB1106P07-2	L. parva	17	1	.	.	.	.	.	.	.	.	.	.
AB1106P07-2	A. mitchilli	275	1	.	.	.	.	.	.	.	.	.	.
AB1106P07-2	Menidia spp.	24	0	.	.	.	.	.	.	.	.	.	.
AB1106P07-2	M. gulosus	40	1	.	.	.	.	.	.	.	.	.	.

Table A9 continued.

AB1106P07-2	G. holbrooki	7	1	.	.	.	.	.	.	.	.	.	.
AB1106P07-2	S. ocellatus	1	0	30	.	.	.	.	.	.	.	.	.
AB1106P07-2	P. latipinna	1	0	.	.	.	.	.	.	.	.	.	.
AB1106P07-2	C. sapidus - u	2	0	.	.	.	.	.	.	.	.	.	.
AB1106P07-2	T. maculatus	1	0	.	.	.	.	.	.	.	.	.	.
AB1106P07-2	Palaemonetes spp.	7	1	.	.	.	.	.	.	.	.	.	.
AB1106P07-2	Gobiosoma spp.	1	0	.	.	.	.	.	.	.	.	.	.
AB1106P07-3	C. undecimalis	9	0	.	.	.	.	.	.	.	.	.	.
AB1106P07-3	C. sapidus - m	1	0	92	.	.	.	.	.	.	.	.	.
AB1106P07-3	P. latipinna	15	1	.	.	.	.	.	.	.	.	.	.
AB1106P07-3	G. holbrooki	45	1	.	.	.	.	.	.	.	.	.	.
AB1106P07-3	Menidia spp.	1	0	.	.	.	.	.	.	.	.	.	.
AB1106P07-3	M. gulosus	45	1	.	.	.	.	.	.	.	.	.	.
AB1106P07-3	L. parva	30	1	.	.	.	.	.	.	.	.	.	.
AB1106P07-3	Palaemonetes spp.	35	1	.	.	.	.	.	.	.	.	.	.
AB1106P07-3	C. variegatus	1	0	.	.	.	.	.	.	.	.	.	.
AB1106P07-3	A. mitchilli	5	1	.	.	.	.	.	.	.	.	.	.
AB1106P07-3	C. sapidus - u	3	0	.	.	.	.	.	.	.	.	.	.
AB1106P07-3	T. maculatus	1	0	.	.	.	.	.	.	.	.	.	.
AB12061150	C. undecimalis	1	0	60	.	.	.	.	.	.	.	.	.
AB12061150	A. mitchilli	32	1	.	.	.	.	.	.	.	.	.	.
AB12061150	C. sapidus - n	3	0	.	.	.	.	.	.	.	.	.	.
AB12061150	E. harengulus	1	0	.	.	.	.	.	.	.	.	.	.
AB12061150	Eucinostomus spp.	2	0	.	.	.	.	.	.	.	.	.	.
AB12061150	M. gulosus	10	1	.	.	.	.	.	.	.	.	.	.
AB12061150	T. maculatus	1	0	.	.	.	.	.	.	.	.	.	.
AB12061150	P. latipinna	1	0	.	.	.	.	.	.	.	.	.	.
AB12061150	Menidia spp.	2	0	.	.	.	.	.	.	.	.	.	.
AB12061150	Palaemonetes spp.	12	1	.	.	.	.	.	.	.	.	.	.
AB12061470	C. undecimalis	1	0	60	.	.	.	.	.	.	.	.	.
AB12061470	Menidia spp.	37	1	.	.	.	.	.	.	.	.	.	.
AB12061470	A. mitchilli	7	1	.	.	.	.	.	.	.	.	.	.
AB12061470	L. parva	1	0	.	.	.	.	.	.	.	.	.	.

Table A9 continued.

AB12061470	Palaemonetes spp.	10	1	.	.	.	.	.	.	.	.	.	.
AB12061470	M. gulosus	1	0	.	.	.	.	.	.	.	.	.	.
AB12061730	C. sapidus - m	3	0	94	96	94	.	.	.	.	.	.	.
AB12061730	C. undecimalis	3	0	55	62	76	.	.	.	.	.	.	.
AB12061730	S. ocellatus	8	0	43	36	38	39	37	37	38	35	.	.
AB12061730	C. undecimalis - R	3	0	.	.	.	.	.	.	.	.	.	.
AB12061730	D. plumieri	1	0	69	.	.	.	.	.	.	.	.	.
AB12061730	A. mitchilli	375	1	.	.	.	.	.	.	.	.	.	.
AB12061730	Menidia spp.	12	1	.	.	.	.	.	.	.	.	.	.
AB12061730	Eucinostomus spp.	1	0	.	.	.	.	.	.	.	.	.	.
AB12061730	T. maculatus	18	1	.	.	.	.	.	.	.	.	.	.
AB12061730	L. parva	25	1	.	.	.	.	.	.	.	.	.	.
AB12061730	M. gulosus	12	1	.	.	.	.	.	.	.	.	.	.
AB12061940	C. sapidus - f	2	0	26	24	.	.	.	.	.	.	.	.
AB12061940	S. ocellatus	1	0	51	.	.	.	.	.	.	.	.	.
AB12061940	F. grandis	1	0	.	.	.	.	.	.	.	.	.	.
AB12061940	Palaemonetes spp.	15	1	.	.	.	.	.	.	.	.	.	.
AB12061940	L. parva	1	0	.	.	.	.	.	.	.	.	.	.
AB12061940	Menidia spp.	21	0	.	.	.	.	.	.	.	.	.	.
AB12061940	T. maculatus	4	1	.	.	.	.	.	.	.	.	.	.
AB12061940	C. sapidus - u	1	0	.	.	.	.	.	.	.	.	.	.
AB12062050	Menidia spp.	20	1	.	.	.	.	.	.	.	.	.	.
AB12062050	G. holbrooki	2	0	.	.	.	.	.	.	.	.	.	.
AB12062050	C. sapidus - n	2	0	.	.	.	.	.	.	.	.	.	.
AB12062050	Gobiosoma spp.	2	0	.	.	.	.	.	.	.	.	.	.
AB12062050	Palaemonetes spp.	8	1	.	.	.	.	.	.	.	.	.	.
AB12062190	C. undecimalis	4	0	66	60	46	46	.	.	.	.	.	.
AB12062190	D. plumieri	2	0	133	67	.	.	.	.	.	.	.	.
AB12062190	C. sapidus - f	1	0	32	.	.	.	.	.	.	.	.	.
AB12062190	Menidia spp.	15	1	.	.	.	.	.	.	.	.	.	.
AB12062190	M. gulosus	10	1	.	.	.	.	.	.	.	.	.	.
AB12062190	C. sapidus - m	1	0	45	.	.	.	.	.	.	.	.	.
AB12062190	T. maculatus	3	0	.	.	.	.	.	.	.	.	.	.

Table A9 continued.

AB12062190	A. mitchilli	2	0	.	.	.	.	.	.	.	.	.	.
AB12062590	C. undecimalis	1	0	75	.	.	.	.	.	.	.	.	.
AB12062590	E. harengulus	5	0	.	.	.	.	.	.	.	.	.	.
AB12062590	Menidia spp.	3	0	.	.	.	.	.	.	.	.	.	.
AB12062590	A. mitchilli	9	0	.	.	.	.	.	.	.	.	.	.
AB12062590	G. holbrooki	1	0	.	.	.	.	.	.	.	.	.	.
AB12062590	L. parva	1	0	.	.	.	.	.	.	.	.	.	.
AB12062620	Eucinostomus spp.	1	0	.	.	.	.	.	.	.	.	.	.
AB12062620	Menidia spp.	2	0	.	.	.	.	.	.	.	.	.	.
AB12062620	M. gulosus	3	0	.	.	.	.	.	.	.	.	.	.
AB12062620	P. latipinna	2	0	.	.	.	.	.	.	.	.	.	.
AB12062620	T. maculatus	1	0	.	.	.	.	.	.	.	.	.	.
AB12062620	Palaemonetes spp.	2	0	.	.	.	.	.	.	.	.	.	.
AB12062620	L. griseus	1	0	.	.	.	.	.	.	.	.	.	.
AB12062800	C. sapidus - m	1	0	106	.	.	.	.	.	.	.	.	.
AB12062800	G. holbrooki	5	0	.	.	.	.	.	.	.	.	.	.
AB12062800	Eucinostomus spp.	3	0	.	.	.	.	.	.	.	.	.	.
AB12062800	T. maculatus	1	0	.	.	.	.	.	.	.	.	.	.
AB12062800	L. parva	1	0	.	.	.	.	.	.	.	.	.	.
AB12062800	Palaemonetes spp.	4	0	.	.	.	.	.	.	.	.	.	.
AB12062800	M. gulosus	1	0	.	.	.	.	.	.	.	.	.	.
AB12062920	Mugil spp.	2	0	.	.	.	.	.	.	.	.	.	.
AB12062920	C. sapidus - m	1	0	139	.	.	.	.	.	.	.	.	.
AB12062920	Menidia spp.	1	0	.	.	.	.	.	.	.	.	.	.
AB12062920	M. gulosus	13	0	.	.	.	.	.	.	.	.	.	.
AB12062920	C. sapidus - n	1	0	.	.	.	.	.	.	.	.	.	.
AB12062920	G. holbrooki	5	1	.	.	.	.	.	.	.	.	.	.
AB12062920	Eucinostomus spp.	10	1	.	.	.	.	.	.	.	.	.	.
AB12062920	L. parva	5	1	.	.	.	.	.	.	.	.	.	.
AB12062920	T. maculatus	2	0	.	.	.	.	.	.	.	.	.	.
AB12062920	Palaemonetes spp.	2	0	.	.	.	.	.	.	.	.	.	.
AB12062980	C. undecimalis - R	1	0	230	.	.	.	.	.	.	.	.	.
AB12062980	A. mitchilli	140	1	.	.	.	.	.	.	.	.	.	.

Table A9 continued.

AB12062980	Menidia spp.	1	0	.	.	.	.	.	.	.	.	.	.
AB12062980	M. gulosus	1	0	.	.	.	.	.	.	.	.	.	.
AB12063100	C. sapidus - m	1	0	143	.	.	.	.	.	.	.	.	.
AB12063100	A. probatocephalus	1	0	148	.	.	.	.	.	.	.	.	.
AB12063100	L. griseus	1	0	67	.	.	.	.	.	.	.	.	.
AB12063100	Menidia spp.	5	1	.	.	.	.	.	.	.	.	.	.
AB12063100	G. holbrooki	30	1	.	.	.	.	.	.	.	.	.	.
AB12063100	Eucinostomus spp.	13	0	.	.	.	.	.	.	.	.	.	.
AB12063100	E. harengulus	1	0	.	.	.	.	.	.	.	.	.	.
AB12063100	T. maculatus	2	0	.	.	.	.	.	.	.	.	.	.
AB12063100	Palaemonetes spp.	5	0	.	.	.	.	.	.	.	.	.	.
AB1206P01-1	C. sapidus - m	1	0	84	.	.	.	.	.	.	.	.	.
AB1206P01-1	C. undecimalis	5	0	63	72	70	61	47	.	.	.	.	.
AB1206P01-1	S. melanotheron	1	0	129	.	.	.	.	.	.	.	.	.
AB1206P01-1	T. maculatus	33	1	.	.	.	.	.	.	.	.	.	.
AB1206P01-1	C. sapidus - u	5	1	.	.	.	.	.	.	.	.	.	.
AB1206P01-1	G. holbrooki	5	1	.	.	.	.	.	.	.	.	.	.
AB1206P01-1	D. plumieri	5	0	72	60	63	39	50	.	.	.	.	.
AB1206P01-1	M. gulosus	10	1	.	.	.	.	.	.	.	.	.	.
AB1206P01-1	C. sapidus - f	1	0	41	.	.	.	.	.	.	.	.	.
AB1206P01-1	E. harengulus	1	0	.	.	.	.	.	.	.	.	.	.
AB1206P01-1	A. mitchilli	30	1	.	.	.	.	.	.	.	.	.	.
AB1206P01-1	Eucinostomus spp.	10	1	.	.	.	.	.	.	.	.	.	.
AB1206P01-1	Menidia spp.	10	1	.	.	.	.	.	.	.	.	.	.
AB1206P01-2	C. sapidus - m	2	0	116	111	.	.	.	.	.	.	.	.
AB1206P01-2	C. undecimalis	4	0	62	89	67	60	.	.	.	.	.	.
AB1206P01-2	Menidia spp.	40	1	.	.	.	.	.	.	.	.	.	.
AB1206P01-2	C. sapidus - u	8	0	.	.	.	.	.	.	.	.	.	.
AB1206P01-2	Eucinostomus spp.	10	1	.	.	.	.	.	.	.	.	.	.
AB1206P01-2	G. holbrooki	5	1	.	.	.	.	.	.	.	.	.	.
AB1206P01-2	T. maculatus	10	1	.	.	.	.	.	.	.	.	.	.
AB1206P01-2	Lepomis spp.	1	0	.	.	.	.	.	.	.	.	.	.
AB1206P01-2	M. gulosus	15	0	.	.	.	.	.	.	.	.	.	.

Table A9 continued.

AB1206P01-2	D. plumieri	1	0	.	.	.	.	.	.	.	.	.	.
AB1206P01-2	E. harengulus	6	0	.	.	.	.	.	.	.	.	.	.
AB1206P01-2	Gobiosoma spp.	2	1	.	.	.	.	.	.	.	.	.	.
AB1206P01-2	A. mitchilli	30	1	.	.	.	.	.	.	.	.	.	.
AB1206P01-3	C. undecimalis	3	0	61	170	.	.	.	.	.	.	.	.
AB1206P01-3	E. harengulus	3	1	.	.	.	.	.	.	.	.	.	.
AB1206P01-3	C. sapidus - m	2	0	23	27	.	.	.	.	.	.	.	.
AB1206P01-3	C. sapidus - u	12	1	.	.	.	.	.	.	.	.	.	.
AB1206P01-3	T. maculatus	75	1	.	.	.	.	.	.	.	.	.	.
AB1206P01-3	G. holbrooki	40	1	.	.	.	.	.	.	.	.	.	.
AB1206P01-3	M. gulosus	38	1	.	.	.	.	.	.	.	.	.	.
AB1206P01-3	A. mitchilli	40	1	.	.	.	.	.	.	.	.	.	.
AB1206P01-3	Eucinostomus spp.	90	1	.	.	.	.	.	.	.	.	.	.
AB1206P01-3	C. sapidus - f	2	0	21	20	.	.	.	.	.	.	.	.
AB1206P02-1	C. undecimalis	4	0	79	70	50	51	.	.	.	.	.	.
AB1206P02-1	P. latipinna	15	1	.	.	.	.	.	.	.	.	.	.
AB1206P02-1	Menidia spp.	5	1	.	.	.	.	.	.	.	.	.	.
AB1206P02-1	M. gulosus	13	1	.	.	.	.	.	.	.	.	.	.
AB1206P02-1	C. variegatus	1	0	.	.	.	.	.	.	.	.	.	.
AB1206P02-1	L. parva	10	1	.	.	.	.	.	.	.	.	.	.
AB1206P02-1	G. holbrooki	4	1	.	.	.	.	.	.	.	.	.	.
AB1206P02-1	Gobiosoma spp.	1	0	.	.	.	.	.	.	.	.	.	.
AB1206P02-1	Palaemonetes spp.	35	1	.	.	.	.	.	.	.	.	.	.
AB1206P02-2	C. undecimalis	6	0	79	67	62	46	68	61	.	.	.	.
AB1206P02-2	P. latipinna	50	1	.	.	.	.	.	.	.	.	.	.
AB1206P02-2	Menidia spp.	5	1	.	.	.	.	.	.	.	.	.	.
AB1206P02-2	D. plumieri	2	0	.	.	.	.	.	.	.	.	.	.
AB1206P02-2	G. holbrooki	20	1	.	.	.	.	.	.	.	.	.	.
AB1206P02-2	M. gulosus	17	1	.	.	.	.	.	.	.	.	.	.
AB1206P02-2	C. sapidus - f	1	0	29	.	.	.	.	.	.	.	.	.
AB1206P02-2	C. sapidus - n	1	0	.	.	.	.	.	.	.	.	.	.
AB1206P02-2	T. maculatus	10	1	.	.	.	.	.	.	.	.	.	.
AB1206P02-2	Gobiosoma spp.	3	1	.	.	.	.	.	.	.	.	.	.

Table A9 continued.

AB1206P02-2	L. parva	10	1	.	.	.	.	.	.	.	.	.	.
AB1206P02-2	C. variegatus	1	0	.	.	.	.	.	.	.	.	.	.
AB1206P02-2	Palaemonetes spp.	30	1	.	.	.	.	.	.	.	.	.	.
AB1206P02-3	C. undecimalis	20	0	59	63	64	59	43	57	42	46	72	62
AB1206P02-3	C. undecimalis - R	3	0	44	51	44	.	.	.	.	.	.	.
AB1206P02-3	S. ocellatus	1	0	35	.	.	.	.	.	.	.	.	.
AB1206P02-3	C. sapidus - n	1	0	.	.	.	.	.	.	.	.	.	.
AB1206P02-3	A. mitchilli	5	1	.	.	.	.	.	.	.	.	.	.
AB1206P02-3	M. gulosus	35	1	.	.	.	.	.	.	.	.	.	.
AB1206P02-3	P. latipinna	10	1	.	.	.	.	.	.	.	.	.	.
AB1206P02-3	G. holbrooki	7	1	.	.	.	.	.	.	.	.	.	.
AB1206P02-3	L. parva	5	1	.	.	.	.	.	.	.	.	.	.
AB1206P02-3	Menidia spp.	2	0	.	.	.	.	.	.	.	.	.	.
AB1206P02-3	Eucinostomus spp.	10	1	.	.	.	.	.	.	.	.	.	.
AB1206P02-3	D. plumieri	2	0	.	.	.	.	.	.	.	.	.	.
AB1206P02-3	Gobiosoma spp.	1	0	.	.	.	.	.	.	.	.	.	.
AB1206P02-3	E. harengulus	1	0	.	.	.	.	.	.	.	.	.	.
AB1206P02-3	T. maculatus	2	0	.	.	.	.	.	.	.	.	.	.
AB1206P02-3	Cichlidae	2	0	.	.	.	.	.	.	.	.	.	.
AB1206P06-1	S. ocellatus	6	0	42	37	18	26	24	29	.	.	.	.
AB1206P06-1	C. sapidus - n	1	0	90	.	.	.	.	.	.	.	.	.
AB1206P06-1	A. mitchilli	140	1	.	.	.	.	.	.	.	.	.	.
AB1206P06-1	Menidia spp.	10	1	.	.	.	.	.	.	.	.	.	.
AB1206P06-1	Eucinostomus spp.	54	0	.	.	.	.	.	.	.	.	.	.
AB1206P06-1	T. maculatus	12	1	.	.	.	.	.	.	.	.	.	.
AB1206P06-1	M. gulosus	30	1	.	.	.	.	.	.	.	.	.	.
AB1206P06-1	C. sapidus - m	1	0	87	.	.	.	.	.	.	.	.	.
AB1206P06-1	C. sapidus - u	5	0	11	12	12	9	11	.	.	.	.	.
AB1206P06-1	L. parva	5	1	.	.	.	.	.	.	.	.	.	.
AB1206P06-1	Palaemonetes spp.	13	1	.	.	.	.	.	.	.	.	.	.
AB1206P06-1	C. sapidus - f	2	0	14	16	.	.	.	.	.	.	.	.
AB1206P06-2	C. undecimalis	2	0	77	61	.	.	.	.	.	.	.	.
AB1206P06-2	S. ocellatus	3	0	23	35	21	.	.	.	.	.	.	.

Table A9 continued.

AB1206P06-2	Eucinostomus spp.	100	1	.	.	.	.	.	.	.	.	.	.
AB1206P06-2	C. sapidus - m	1	0	27	.	.	.	.	.	.	.	.	.
AB1206P06-2	E. harengulus	2	0	.	.	.	.	.	.	.	.	.	.
AB1206P06-2	A. mitchilli	225	1	.	.	.	.	.	.	.	.	.	.
AB1206P06-2	T. maculatus	10	1	.	.	.	.	.	.	.	.	.	.
AB1206P06-2	Menidia spp.	5	1	.	.	.	.	.	.	.	.	.	.
AB1206P06-2	L. parva	4	1	.	.	.	.	.	.	.	.	.	.
AB1206P06-2	M. gulosus	5	1	.	.	.	.	.	.	.	.	.	.
AB1206P06-3	C. undecimalis	2	0	.	.	.	.	.	.	.	.	.	.
AB1206P06-3	C. undecimalis - R	1	0	.	.	.	.	.	.	.	.	.	.
AB1206P06-3	C. sapidus - n	4	0	.	.	.	.	.	.	.	.	.	.
AB1206P06-3	Menidia spp.	5	0	.	.	.	.	.	.	.	.	.	.
AB1206P06-3	A. mitchilli	25	1	.	.	.	.	.	.	.	.	.	.
AB1206P06-3	M. gulosus	10	1	.	.	.	.	.	.	.	.	.	.
AB1206P06-3	T. maculatus	4	1	.	.	.	.	.	.	.	.	.	.
AB1206P06-3	Gobiosoma spp.	1	1	.	.	.	.	.	.	.	.	.	.
AB1206P06-3	E. harengulus	8	1	.	.	.	.	.	.	.	.	.	.
AB1206P07-1	C. undecimalis	6	0	50	72	59	51	52	63	.	.	.	.
AB1206P07-1	C. undecimalis - R	1	0	.	.	.	.	.	.	.	.	.	.
AB1206P07-1	C. sapidus - m	2	0	74	32	.	.	.	.	.	.	.	.
AB1206P07-1	C. sapidus - n	4	1	.	.	.	.	.	.	.	.	.	.
AB1206P07-1	T. maculatus	5	1	.	.	.	.	.	.	.	.	.	.
AB1206P07-1	M. gulosus	22	1	.	.	.	.	.	.	.	.	.	.
AB1206P07-1	Menidia spp.	5	1	.	.	.	.	.	.	.	.	.	.
AB1206P07-1	A. mitchilli	12	1	.	.	.	.	.	.	.	.	.	.
AB1206P07-1	P. latipinna	10	1	.	.	.	.	.	.	.	.	.	.
AB1206P07-1	Gobiosoma spp.	1	0	.	.	.	.	.	.	.	.	.	.
AB1206P07-1	L. parva	5	1	.	.	.	.	.	.	.	.	.	.
AB1206P07-1	Eucinostomus spp.	2	1	.	.	.	.	.	.	.	.	.	.
AB1206P07-1	Palaemonetes spp.	13	1	.	.	.	.	.	.	.	.	.	.
AB1206P07-2	C. undecimalis	1	0	55	.	.	.	.	.	.	.	.	.
AB1206P07-2	C. sapidus - n	10	1	.	.	.	.	.	.	.	.	.	.
AB1206P07-2	Menidia spp.	5	1	.	.	.	.	.	.	.	.	.	.

Table A9 continued.

AB1206P07-2	Eucinostomus spp.	4	0	.	.	.	.	.	.	.	.	.	.
AB1206P07-2	L. parva	5	1	.	.	.	.	.	.	.	.	.	.
AB1206P07-2	T. maculatus	8	0	.	.	.	.	.	.	.	.	.	.
AB1206P07-2	M. gulosus	35	1	.	.	.	.	.	.	.	.	.	.
AB1206P07-2	Palaemonetes spp.	25	1	.	.	.	.	.	.	.	.	.	.
AB1206P07-2	P. latipinna	1	0	.	.	.	.	.	.	.	.	.	.
AB1206P07-3	C. sapidus - m	1	0	59	.	.	.	.	.	.	.	.	.
AB1206P07-3	Menidia spp.	5	1	.	.	.	.	.	.	.	.	.	.
AB1206P07-3	M. gulosus	35	1	.	.	.	.	.	.	.	.	.	.
AB1206P07-3	Gobiosoma spp.	5	1	.	.	.	.	.	.	.	.	.	.
AB1206P07-3	T. maculatus	5	1	.	.	.	.	.	.	.	.	.	.
AB1206P07-3	G. holbrooki	15	1	.	.	.	.	.	.	.	.	.	.
AB1206P07-3	L. parva	10	1	.	.	.	.	.	.	.	.	.	.
AB1206P07-3	P. latipinna	25	1	.	.	.	.	.	.	.	.	.	.
AB1206P07-3	Eucinostomus spp.	1	0	.	.	.	.	.	.	.	.	.	.
AB1206P07-3	C. sapidus - n	2	0	.	.	.	.	.	.	.	.	.	.
AB01071360	C. sapidus - f	3	0	73	30	84	.	.	.	.	.	.	.
AB01071360	C. undecimalis	4	0	87	64	57	58	.	.	.	.	.	.
AB01071360	Menidia spp.	20	1	.	.	.	.	.	.	.	.	.	.
AB01071360	A. mitchilli	50	1	.	.	.	.	.	.	.	.	.	.
AB01071360	F. grandis	8	1	.	.	.	.	.	.	.	.	.	.
AB01071360	T. maculatus	10	1	.	.	.	.	.	.	.	.	.	.
AB01071360	M. gulosus	10	1	.	.	.	.	.	.	.	.	.	.
AB01071360	C. sapidus - n	2	0	.	.	.	.	.	.	.	.	.	.
AB01071550	E. harengulus	4	0	.	.	.	.	.	.	.	.	.	.
AB01071550	D. plumieri	1	0	.	.	.	.	.	.	.	.	.	.
AB01071550	Menidia spp.	11	0	.	.	.	.	.	.	.	.	.	.
AB01071550	M. gulosus	3	0	.	.	.	.	.	.	.	.	.	.
AB01071550	T. maculatus	1	0	.	.	.	.	.	.	.	.	.	.
AB01071730	C. undecimalis	1	0	68	.	.	.	.	.	.	.	.	.
AB01071730	Menidia spp.	18	1	.	.	.	.	.	.	.	.	.	.
AB01071730	A. mitchilli	220	1	.	.	.	.	.	.	.	.	.	.
AB01071730	M. gulosus	3	0	.	.	.	.	.	.	.	.	.	.

Table A9 continued.

AB01071730	L. parva	4	0	.	.	.	.	.	.	.	.	.	.
AB01071730	E. harengulus	11	0	.	.	.	.	.	.	.	.	.	.
AB01071730	Eucinostomus spp.	1	0	.	.	.	.	.	.	.	.	.	.
AB01071730	Palaemonetes spp.	75	1	.	.	.	.	.	.	.	.	.	.
AB01071730	Gobiosoma spp.	2	0	.	.	.	.	.	.	.	.	.	.
AB01071730	T. maculatus	1	0	.	.	.	.	.	.	.	.	.	.
AB01071730	S. ocellatus	1	0	77	.	.	.	.	.	.	.	.	.
AB01071880	Menidia spp.	8	0	.	.	.	.	.	.	.	.	.	.
AB01071880	T. maculatus	1	0	.	.	.	.	.	.	.	.	.	.
AB01071880	Palaemonetes spp.	130	1	.	.	.	.	.	.	.	.	.	.
AB01071880	M. gulosus	1	0	.	.	.	.	.	.	.	.	.	.
AB01071880	C. sapidus - u	.	.	.	.	.	.	.	.	.	.	.	.
AB01072030	E. harengulus	6	0	.	.	.	.	.	.	.	.	.	.
AB01072030	Eucinostomus spp.	3	0	.	.	.	.	.	.	.	.	.	.
AB01072030	Menidia spp.	9	0	.	.	.	.	.	.	.	.	.	.
AB01072030	T. maculatus	3	0	.	.	.	.	.	.	.	.	.	.
AB01072030	Palaemonetes spp.	1	0	.	.	.	.	.	.	.	.	.	.
AB01072050	T. maculatus	3	0	.	.	.	.	.	.	.	.	.	.
AB01072050	Menidia spp.	11	0	.	.	.	.	.	.	.	.	.	.
AB01072050	A. mitchilli	3	0	.	.	.	.	.	.	.	.	.	.
AB01072050	Palaemonetes spp.	15	0	.	.	.	.	.	.	.	.	.	.
AB01072050	C. sapidus - n	1	0	.	.	.	.	.	.	.	.	.	.
AB01072050	Eucinostomus spp.	4	0	.	.	.	.	.	.	.	.	.	.
AB01072050	M. gulosus	2	0	.	.	.	.	.	.	.	.	.	.
AB01072340	C. undecimalis	2	0	67	57	.	.	.	.	.	.	.	.
AB01072340	D. plumieri	1	0	67	.	.	.	.	.	.	.	.	.
AB01072340	E. harengulus	7	0	.	.	.	.	.	.	.	.	.	.
AB01072340	A. mitchilli	49	0	.	.	.	.	.	.	.	.	.	.
AB01072340	Eucinostomus spp.	6	0	.	.	.	.	.	.	.	.	.	.
AB01072340	T. maculatus	1	0	.	.	.	.	.	.	.	.	.	.
AB01072340	L. xanthurus	1	0	.	.	.	.	.	.	.	.	.	.
AB01072640	P. latipinna	2	0	.	.	.	.	.	.	.	.	.	.
AB01072640	M. gulosus	4	0	.	.	.	.	.	.	.	.	.	.

Table A9 continued.

AB01072640	Gobiosoma spp.	2	0	.	.	.	.	.	.	.	.	.	.
AB01072640	Eucinostomus spp.	7	0	.	.	.	.	.	.	.	.	.	.
AB01072640	Palaemonetes spp.	7	0	.	.	.	.	.	.	.	.	.	.
AB01072780	C. undecimalis	1	0	110	.	.	.	.	.	.	.	.	.
AB01072780	A. mitchilli	70	1	.	.	.	.	.	.	.	.	.	.
AB01072840	C. sapidus - u	6	0	.	.	.	.	.	.	.	.	.	.
AB01072840	T. maculatus	9	1	.	.	.	.	.	.	.	.	.	.
AB01072840	Eucinostomus spp.	6	0	.	.	.	.	.	.	.	.	.	.
AB01072840	E. saurus	1	0	.	.	.	.	.	.	.	.	.	.
AB01072840	Gobiosoma spp.	4	0	.	.	.	.	.	.	.	.	.	.
AB01072840	M. gulosus	2	0	.	.	.	.	.	.	.	.	.	.
AB01072840	L. parva	1	0	.	.	.	.	.	.	.	.	.	.
AB01072840	Palaemonetes spp.	93	0	.	.	.	.	.	.	.	.	.	.
AB01072840	G. holbrooki	1	0	.	.	.	.	.	.	.	.	.	.
AB01072840	P. latipinna	1	0	.	.	.	.	.	.	.	.	.	.
AB01073060	C. undecimalis	4	0	123	75	86	81	.	.	.	.	.	.
AB01073060	Eucinostomus spp.	24	0	.	.	.	.	.	.	.	.	.	.
AB01073060	T. maculatus	3	0	.	.	.	.	.	.	.	.	.	.
AB01073060	Palaemonetes spp.	1	0	.	.	.	.	.	.	.	.	.	.
AB01073060	Menidia spp.	10	0	.	.	.	.	.	.	.	.	.	.
AB01073060	E. harengulus	1	0	.	.	.	.	.	.	.	.	.	.
AB01073150	C. undecimalis	14	0	115	73	86	73	52	71	62	80	68	67
AB01073150	P. latipinna	64	0	.	.	.	.	.	.	.	.	.	.
AB01073150	Menidia spp.	12	0	.	.	.	.	.	.	.	.	.	.
AB01073150	Eucinostomus spp.	14	1	.	.	.	.	.	.	.	.	.	.
AB01073150	C. sapidus - u	1	0	.	.	.	.	.	.	.	.	.	.
AB01073150	E. harengulus	3	0	.	.	.	.	.	.	.	.	.	.
AB01073150	Gobiosoma spp.	2	1	.	.	.	.	.	.	.	.	.	.
AB01073150	E. saurus	1	1	.	.	.	.	.	.	.	.	.	.
AB01073150	Palaemonetes spp.	33	1	.	.	.	.	.	.	.	.	.	.
AB01073150	G. holbrooki	1	0	.	.	.	.	.	.	.	.	.	.
AB0107P01-1	C. sapidus - m	2	0	100	66	.	.	.	.	.	.	.	.
AB0107P01-1	C. sapidus - f	3	0	101	81	71	.	.	.	.	.	.	.

Table A9 continued.

AB0107P01-1	G. holbrooki	450	1	.	.	.	.	.	.	.	.	.	.
AB0107P01-1	C. sapidus - u	4	1	.	.	.	.	.	.	.	.	.	.
AB0107P01-1	Menidia spp.	30	1	.	.	.	.	.	.	.	.	.	.
AB0107P01-1	T. maculatus	60	1	.	.	.	.	.	.	.	.	.	.
AB0107P01-1	A. mitchilli	150	1	.	.	.	.	.	.	.	.	.	.
AB0107P01-1	M. gulosus	25	1	.	.	.	.	.	.	.	.	.	.
AB0107P01-1	P. latipinna	25	1	.	.	.	.	.	.	.	.	.	.
AB0107P01-1	Mugil spp.	4	1	.	.	.	.	.	.	.	.	.	.
AB0107P01-1	Palaemonetes spp.	60	1	.	.	.	.	.	.	.	.	.	.
AB0107P01-1	L. parva	10	1	.	.	.	.	.	.	.	.	.	.
AB0107P01-1	Eucinostomus spp.	9	1	.	.	.	.	.	.	.	.	.	.
AB0107P01-1	C. undecimalis	1	0	.	.	.	.	.	.	.	.	.	.
AB0107P01-2	C. sapidus - m	8	0	89	87	89	81	112	68	90	77	.	.
AB0107P01-2	P. latipinna	160	1	.	.	.	.	.	.	.	.	.	.
AB0107P01-2	Mugil spp.	250	1	.	.	.	.	.	.	.	.	.	.
AB0107P01-2	G. holbrooki	175	1	.	.	.	.	.	.	.	.	.	.
AB0107P01-2	T. maculatus	25	1	.	.	.	.	.	.	.	.	.	.
AB0107P01-2	C. sapidus - u	25	1	12	.	.	.	.	.	.	.	.	.
AB0107P01-2	Palaemonetes spp.	250	1	.	.	.	.	.	.	.	.	.	.
AB0107P01-2	Menidia spp.	5	1	.	.	.	.	.	.	.	.	.	.
AB0107P01-2	C. variegatus	1	0	.	.	.	.	.	.	.	.	.	.
AB0107P01-2	M. gulosus	15	1	.	.	.	.	.	.	.	.	.	.
AB0107P01-2	A. mitchilli	4	1	.	.	.	.	.	.	.	.	.	.
AB0107P01-2	L. parva	7	1	.	.	.	.	.	.	.	.	.	.
AB0107P01-3	C. sapidus - m	5	0	84	81	70	32	20	.	.	.	.	.
AB0107P01-3	C. sapidus - u	15	1	.	.	.	.	.	.	.	.	.	.
AB0107P01-3	T. maculatus	44	1	.	.	.	.	.	.	.	.	.	.
AB0107P01-3	G. holbrooki	60	1	.	.	.	.	.	.	.	.	.	.
AB0107P01-3	M. gulosus	20	1	.	.	.	.	.	.	.	.	.	.
AB0107P01-3	P. latipinna	1	1	.	.	.	.	.	.	.	.	.	.
AB0107P01-3	Palaemonetes spp.	100	1	.	.	.	.	.	.	.	.	.	.
AB0107P01-3	L. parva	4	1	.	.	.	.	.	.	.	.	.	.
AB0107P01-3	Menidia spp.	8	1	.	.	.	.	.	.	.	.	.	.

Table A9 continued.

AB0107P02-1	C. sapidus - f	1	0	66	.	.	.	.	.	.	.	.	.
AB0107P02-1	T. maculatus	35	1	.	.	.	.	.	.	.	.	.	.
AB0107P02-1	G. holbrooki	320	1	.	.	.	.	.	.	.	.	.	.
AB0107P02-1	P. latipinna	3	1	.	.	.	.	.	.	.	.	.	.
AB0107P02-1	Menidia spp.	4	1	.	.	.	.	.	.	.	.	.	.
AB0107P02-1	Gobiosoma spp.	30	1	.	.	.	.	.	.	.	.	.	.
AB0107P02-1	A. mitchilli	2	1	.	.	.	.	.	.	.	.	.	.
AB0107P02-1	E. saurus	2	1	.	.	.	.	.	.	.	.	.	.
AB0107P02-1	Palaemonetes spp.	95	1	.	.	.	.	.	.	.	.	.	.
AB0107P02-1	M. gulosus	8	1	.	.	.	.	.	.	.	.	.	.
AB0107P02-1	L. parva	2	1	.	.	.	.	.	.	.	.	.	.
AB0107P02-2	Palaemonetes spp.	450	1	.	.	.	.	.	.	.	.	.	.
AB0107P02-2	T. maculatus	5	1	.	.	.	.	.	.	.	.	.	.
AB0107P02-2	P. latipinna	45	1	.	.	.	.	.	.	.	.	.	.
AB0107P02-2	G. holbrooki	10	1	.	.	.	.	.	.	.	.	.	.
AB0107P02-2	Gobiosoma spp.	3	1	.	.	.	.	.	.	.	.	.	.
AB0107P02-3	C. sapidus - m	2	0	20	24	.	.	.	.	.	.	.	.
AB0107P02-3	P. latipinna	35	1	.	.	.	.	.	.	.	.	.	.
AB0107P02-3	L. parva	10	1	.	.	.	.	.	.	.	.	.	.
AB0107P02-3	T. maculatus	3	1	.	.	.	.	.	.	.	.	.	.
AB0107P02-3	G. holbrooki	46	1	.	.	.	.	.	.	.	.	.	.
AB0107P02-3	Palaemonetes spp.	475	1	.	.	.	.	.	.	.	.	.	.
AB0107P02-3	Gobiosoma spp.	10	1	.	.	.	.	.	.	.	.	.	.
AB0107P02-3	M. gulosus	5	1	.	.	.	.	.	.	.	.	.	.
AB0107P02-3	C. sapidus - u	2	0	.	.	.	.	.	.	.	.	.	.
AB0107P06-1	C. undecimalis	6	0	66	56	52	61	76	62	.	.	.	.
AB0107P06-1	C. undecimalis - R	1	0	.	.	.	.	.	.	.	.	.	.
AB0107P06-1	A. mitchilli	800	1	.	.	.	.	.	.	.	.	.	.
AB0107P06-1	D. plumieri	3	0	65	58	56	.	.	.	.	.	.	.
AB0107P06-1	E. harengulus	11	1	.	.	.	.	.	.	.	.	.	.
AB0107P06-1	C. sapidus - m	1	0	85	.	.	.	.	.	.	.	.	.
AB0107P06-1	T. maculatus	5	1	.	.	.	.	.	.	.	.	.	.
AB0107P06-1	M. gulosus	20	1	.	.	.	.	.	.	.	.	.	.

Table A9 continued.

AB0107P06-1	Eucinostomus spp.	40	1	.	.	.	.	.	.	.	.	.	.
AB0107P06-1	C. sapidus - u	5	1	.	.	.	.	.	.	.	.	.	.
AB0107P06-2	C. undecimalis	6	0	58	60	68	53	65	66	.	.	.	.
AB0107P06-2	E. harengulus	5	1	.	.	.	.	.	.	.	.	.	.
AB0107P06-2	C. sapidus - f	1	0	32	.	.	.	.	.	.	.	.	.
AB0107P06-2	Menidia spp.	75	1	.	.	.	.	.	.	.	.	.	.
AB0107P06-2	A. mitchilli	250	1	.	.	.	.	.	.	.	.	.	.
AB0107P06-2	T. maculatus	20	1	.	.	.	.	.	.	.	.	.	.
AB0107P06-2	Eucinostomus spp.	120	1	.	.	.	.	.	.	.	.	.	.
AB0107P06-2	M. gulosus	6	1	.	.	.	.	.	.	.	.	.	.
AB0107P06-2	L. xanthurus	5	1	.	.	.	.	.	.	.	.	.	.
AB0107P06-3	C. undecimalis	1	0	62	.	.	.	.	.	.	.	.	.
AB0107P06-3	D. sabina - m	1	0	.	.	.	.	.	.	.	.	.	.
AB0107P06-3	S. melanotheron	2	0	.	.	.	.	.	.	.	.	.	.
AB0107P06-3	Menidia spp.	15	.	.	.	.	.	.	.	.	.	.	.
AB0107P06-3	Eucinostomus spp.	120	1	.	.	.	.	.	.	.	.	.	.
AB0107P06-3	M. gulosus	12	1	.	.	.	.	.	.	.	.	.	.
AB0107P06-3	C. sapidus - f	1	0	84	.	.	.	.	.	.	.	.	.
AB0107P06-3	S. ocellatus	1	0	53	.	.	.	.	.	.	.	.	.
AB0107P06-3	Palaemonetes spp.	3	0	.	.	.	.	.	.	.	.	.	.
AB0107P06-3	T. maculatus	5	1	.	.	.	.	.	.	.	.	.	.
AB0107P06-3	Mugil spp.	15	1	.	.	.	.	.	.	.	.	.	.
AB0107P06-3	C. sapidus - u	4	0	.	.	.	.	.	.	.	.	.	.
AB0107P07-1	C. sapidus - m	1	0	85	.	.	.	.	.	.	.	.	.
AB0107P07-1	C. sapidus - f	1	0	96	.	.	.	.	.	.	.	.	.
AB0107P07-1	L. xanthurus	3	0	.	.	.	.	.	.	.	.	.	.
AB0107P07-1	Menidia spp.	50	1	.	.	.	.	.	.	.	.	.	.
AB0107P07-1	M. gulosus	6	0	.	.	.	.	.	.	.	.	.	.
AB0107P07-1	Palaemonetes spp.	20	1	.	.	.	.	.	.	.	.	.	.
AB0107P07-1	T. maculatus	1	0	.	.	.	.	.	.	.	.	.	.
AB0107P07-1	A. mitchilli	12	1	.	.	.	.	.	.	.	.	.	.
AB0107P07-1	Mugil spp.	7	0	.	.	.	.	.	.	.	.	.	.
AB0107P07-1	Eucinostomus spp.	25	1	.	.	.	.	.	.	.	.	.	.

Table A9 continued.

AB0107P07-1	Gobiosoma spp.	1	0	.	.	.	.	.	.	.	.	.	.
AB0107P07-1	C. sapidus - u	2	0	.	.	.	.	.	.	.	.	.	.
AB0107P07-2	C. sapidus - m	1	0	87	.	.	.	.	.	.	.	.	.
AB0107P07-2	C. undecimalis	2	0	50	48	.	.	.	.	.	.	.	.
AB0107P07-2	M. gulosus	3	0	.	.	.	.	.	.	.	.	.	.
AB0107P07-2	Eucinostomus spp.	7	0	.	.	.	.	.	.	.	.	.	.
AB0107P07-2	T. maculatus	1	0	.	.	.	.	.	.	.	.	.	.
AB0107P07-2	C. sapidus - u	2	0	.	.	.	.	.	.	.	.	.	.
AB0107P07-2	Palaemonetes spp.	5	0	.	.	.	.	.	.	.	.	.	.
AB0107P07-2	Gobiosoma spp.	1	0	.	.	.	.	.	.	.	.	.	.
AB0107P07-3	C. undecimalis	5	0	51	62	89	68	26	.	.	.	.	.
AB0107P07-3	A. mitchilli	160	1	.	.	.	.	.	.	.	.	.	.
AB0107P07-3	Menidia spp.	15	1	.	.	.	.	.	.	.	.	.	.
AB0107P07-3	Eucinostomus spp.	30	1	.	.	.	.	.	.	.	.	.	.
AB0107P07-3	M. gulosus	2	0	.	.	.	.	.	.	.	.	.	.
AB02071220	C. sapidus - n	1	0	.	.	.	.	.	.	.	.	.	.
AB02071220	E. harengulus	8	0	.	.	.	.	.	.	.	.	.	.
AB02071220	Menidia spp.	1	0	.	.	.	.	.	.	.	.	.	.
AB02071580	E. harengulus	25	1	.	.	.	.	.	.	.	.	.	.
AB02071580	A. mitchilli	13	0	.	.	.	.	.	.	.	.	.	.
AB02071580	Menidia spp.	15	1	.	.	.	.	.	.	.	.	.	.
AB02071700	C. sapidus - m	2	0	.	.	.	.	.	.	.	.	.	.
AB02071700	C. sapidus - f	1	0	.	.	.	.	.	.	.	.	.	.
AB02071700	E. harengulus	19	0	.	.	.	.	.	.	.	.	.	.
AB02071700	Eucinostomus spp.	1	0	.	.	.	.	.	.	.	.	.	.
AB02071700	Menidia spp.	40	1	.	.	.	.	.	.	.	.	.	.
AB02071700	M. gulosus	2	0	.	.	.	.	.	.	.	.	.	.
AB02071700	Gobiosoma spp.	1	0	.	.	.	.	.	.	.	.	.	.
AB02071900	C. undecimalis	2	0	.	.	.	.	.	.	.	.	.	.
AB02071900	A. mitchilli	129	0	.	.	.	.	.	.	.	.	.	.
AB02071900	Menidia spp.	91	0	.	.	.	.	.	.	.	.	.	.
AB02071900	Eucinostomus spp.	41	0	.	.	.	.	.	.	.	.	.	.
AB02071900	E. harengulus	4	0	.	.	.	.	.	.	.	.	.	.

Table A9 continued.

AB02071900	Gobiosoma spp.	7	0	.	.	.	.	.	.	.	.	.	.
AB02071900	M. gulosus	18	0	.	.	.	.	.	.	.	.	.	.
AB02071900	L. parva	36	0	.	.	.	.	.	.	.	.	.	.
AB02071900	L. rhomboides	17	0	.	.	.	.	.	.	.	.	.	.
AB02071900	L. xanthurus	9	0	.	.	.	.	.	.	.	.	.	.
AB02071900	C. variegatus	1	0	.	.	.	.	.	.	.	.	.	.
AB02071900	Clupeidae	1	0	.	.	.	.	.	.	.	.	.	.
AB02071900	Mugil spp.	16	0	.	.	.	.	.	.	.	.	.	.
AB02071900	Palaemonetes spp.	3	0	.	.	.	.	.	.	.	.	.	.
AB02071900	T. maculatus	1	0	.	.	.	.	.	.	.	.	.	.
AB02071980	C. undecimalis	1	0	73	.	.	.	.	.	.	.	.	.
AB02071980	S. ocellatus	1	0	68	.	.	.	.	.	.	.	.	.
AB02071980	E. harengulus	10	1	.	.	.	.	.	.	.	.	.	.
AB02071980	Menidia spp.	70	1	.	.	.	.	.	.	.	.	.	.
AB02071980	L. parva	15	1	.	.	.	.	.	.	.	.	.	.
AB02071980	M. gulosus	3	1	.	.	.	.	.	.	.	.	.	.
AB02071980	Palaemonetes spp.	7	1	.	.	.	.	.	.	.	.	.	.
AB02071980	Eucinostomus spp.	14	1	.	.	.	.	.	.	.	.	.	.
AB02071980	P. latipinna	2	0	.	.	.	.	.	.	.	.	.	.
AB02071980	C. variegatus	2	0	.	.	.	.	.	.	.	.	.	.
AB02071980	F. confluentus	1	0	.	.	.	.	.	.	.	.	.	.
AB02071980	Gobiosoma spp.	1	0	.	.	.	.	.	.	.	.	.	.
AB02071980	Mugil spp.	1	0	.	.	.	.	.	.	.	.	.	.
AB02071980	A. mitchilli	1	0	.	.	.	.	.	.	.	.	.	.
AB02072160	S. ocellatus	1	0	67	.	.	.	.	.	.	.	.	.
AB02072160	C. undecimalis	7	0	49	50	92	51	76	43	47	.	.	.
AB02072160	D. plumieri	1	0	.	.	.	.	.	.	.	.	.	.
AB02072160	Eucinostomus spp.	93	0	.	.	.	.	.	.	.	.	.	.
AB02072160	E. harengulus	8	0	.	.	.	.	.	.	.	.	.	.
AB02072160	C. variegatus	7	0	.	.	.	.	.	.	.	.	.	.
AB02072160	P. latipinna	21	0	.	.	.	.	.	.	.	.	.	.
AB02072160	G. holbrooki	1	0	.	.	.	.	.	.	.	.	.	.
AB02072160	M. gulosus	10	0	.	.	.	.	.	.	.	.	.	.

Table A9 continued.

AB02072160	Gobiosoma spp.	2	0	.	.	.	.	.	.	.	.	.	.
AB02072160	T. maculatus	15	0	.	.	.	.	.	.	.	.	.	.
AB02072160	Mugil spp.	2	0	.	.	.	.	.	.	.	.	.	.
AB02072160	Menidia spp.	40	0	.	.	.	.	.	.	.	.	.	.
AB02072160	A. mitchilli	9	0	.	.	.	.	.	.	.	.	.	.
AB02072160	C. sapidus - u	1	0	.	.	.	.	.	.	.	.	.	.
AB02072160	Palaemonetes spp.	1	0	.	.	.	.	.	.	.	.	.	.
AB02072350	C. undecimalis	5	0	64	82	61	69	64	.	.	.	.	.
AB02072350	T. maculatus	3	0	.	.	.	.	.	.	.	.	.	.
AB02072350	M. gulosus	10	1	.	.	.	.	.	.	.	.	.	.
AB02072350	Menidia spp.	5	1	.	.	.	.	.	.	.	.	.	.
AB02072350	Gobiosoma spp.	20	1	.	.	.	.	.	.	.	.	.	.
AB02072350	C. sapidus - n	2	0	.	.	.	.	.	.	.	.	.	.
AB02072350	E. harengulus	20	1	.	.	.	.	.	.	.	.	.	.
AB02072350	Mugil spp.	5	1	.	.	.	.	.	.	.	.	.	.
AB02072350	G. holbrooki	10	1	.	.	.	.	.	.	.	.	.	.
AB02072350	Eucinostomus spp.	40	1	.	.	.	.	.	.	.	.	.	.
AB02072350	S. ocellatus	1	0	.	.	.	.	.	.	.	.	.	.
AB02072350	Clupeidae	1	0	.	.	.	.	.	.	.	.	.	.
AB02072520	C. undecimalis	2	0	82	85	.	.	.	.	.	.	.	.
AB02072520	E. harengulus	20	0	.	.	.	.	.	.	.	.	.	.
AB02072520	G. holbrooki	3	0	.	.	.	.	.	.	.	.	.	.
AB02072520	A. mitchilli	24	0	.	.	.	.	.	.	.	.	.	.
AB02072520	Menidia spp.	15	1	.	.	.	.	.	.	.	.	.	.
AB02072520	Eucinostomus spp.	5	1	.	.	.	.	.	.	.	.	.	.
AB02072520	Gobiosoma spp.	2	0	.	.	.	.	.	.	.	.	.	.
AB02072520	M. gulosus	1	0	.	.	.	.	.	.	.	.	.	.
AB02072520	Palaemonetes spp.	40	1	.	.	.	.	.	.	.	.	.	.
AB02072520	T. maculatus	1	0	.	.	.	.	.	.	.	.	.	.
AB02072520	C. sapidus - m	1	0	.	.	.	.	.	.	.	.	.	.
AB02072770	C. undecimalis - R	1	0	242	.	.	.	.	.	.	.	.	.
AB02072770	Menidia spp.	5	1	.	.	.	.	.	.	.	.	.	.
AB02072770	Palaemonetes spp.	10	1	.	.	.	.	.	.	.	.	.	.

Table A9 continued.

AB02072770	G. holbrooki	10	1	.	.	.	.	.	.	.	.	.	.
AB02072820	C. undecimalis - R	1	0	320	.	.	.	.	.	.	.	.	.
AB02072820	A. probatocephalus	1	0	95	.	.	.	.	.	.	.	.	.
AB02072820	A. mitchilli	200	1	.	.	.	.	.	.	.	.	.	.
AB02072820	Menidia spp.	30	1	.	.	.	.	.	.	.	.	.	.
AB02073070	E. harengulus	5	1	.	.	.	.	.	.	.	.	.	.
AB02073070	A. mitchilli	175	1	.	.	.	.	.	.	.	.	.	.
AB02073070	Menidia spp.	1	0	.	.	.	.	.	.	.	.	.	.
AB02073070	E. saurus	1	0	230	.	.	.	.	.	.	.	.	.
AB02073170	C. undecimalis	11	0	90	71	92	73	65	72	88	90	65	63
AB02073170	D. plumieri	1	0	.	.	.	.	.	.	.	.	.	.
AB02073170	Eucinostomus spp.	20	1	.	.	.	.	.	.	.	.	.	.
AB02073170	Menidia spp.	15	1	.	.	.	.	.	.	.	.	.	.
AB02073170	A. mitchilli	6	0	.	.	.	.	.	.	.	.	.	.
AB02073170	M. gulosus	2	0	.	.	.	.	.	.	.	.	.	.
AB02073170	E. harengulus	20	1	.	.	.	.	.	.	.	.	.	.
AB0207P01-1	Mugil spp.	180	1	.	.	.	.	.	.	.	.	.	.
AB0207P01-1	M. gulosus	8	0	.	.	.	.	.	.	.	.	.	.
AB0207P01-1	G. holbrooki	2	0	.	.	.	.	.	.	.	.	.	.
AB0207P01-1	L. xanthurus	1	0	.	.	.	.	.	.	.	.	.	.
AB0207P01-1	T. maculatus	8	1	.	.	.	.	.	.	.	.	.	.
AB0207P01-1	C. sapidus - u	2	0	.	.	.	.	.	.	.	.	.	.
AB0207P01-1	C. sapidus - n	5	0	.	.	.	.	.	.	.	.	.	.
AB0207P01-1	E. harengulus	1	0	.	.	.	.	.	.	.	.	.	.
AB0207P01-2	C. undecimalis	3	0	47	48	182	.	.	.	.	.	.	.
AB0207P01-2	A. mitchilli	3	0	.	.	.	.	.	.	.	.	.	.
AB0207P01-2	Mugil spp.	1600	1	.	.	.	.	.	.	.	.	.	.
AB0207P01-2	T. maculatus	24	1	.	.	.	.	.	.	.	.	.	.
AB0207P01-2	C. sapidus - u	8	1	.	.	.	.	.	.	.	.	.	.
AB0207P01-2	G. holbrooki	110	1	.	.	.	.	.	.	.	.	.	.
AB0207P01-2	Menidia spp.	8	1	.	.	.	.	.	.	.	.	.	.
AB0207P01-2	M. gulosus	10	1	.	.	.	.	.	.	.	.	.	.
AB0207P01-2	Eucinostomus spp.	28	1	.	.	.	.	.	.	.	.	.	.

Table A9 continued.

AB0207P01-3	C. undecimalis	6	0	55	61	93	67	95	64	.	.	.	.
AB0207P01-3	D. plumieri	1	0	.	.	.	.	.	.	.	.	.	.
AB0207P01-3	Menidia spp.	20	1	.	.	.	.	.	.	.	.	.	.
AB0207P01-3	A. mitchilli	100	1	.	.	.	.	.	.	.	.	.	.
AB0207P01-3	T. maculatus	10	1	.	.	.	.	.	.	.	.	.	.
AB0207P01-3	Eucinostomus spp.	40	1	.	.	.	.	.	.	.	.	.	.
AB0207P01-3	Gobiosoma spp.	2	0	.	.	.	.	.	.	.	.	.	.
AB0207P01-3	M. gulosus	2	0	.	.	.	.	.	.	.	.	.	.
AB0207P01-3	C. sapidus - n	2	0	.	.	.	.	.	.	.	.	.	.
AB0207P01-3	Mugil spp.	1	0	.	.	.	.	.	.	.	.	.	.
AB0207P01-3	G. holbrooki	4	0	.	.	.	.	.	.	.	.	.	.
AB0207P01-3	L. xanthurus	1	0	.	.	.	.	.	.	.	.	.	.
AB0207P01-3	E. harengulus	1	0	.	.	.	.	.	.	.	.	.	.
AB0207P01-3	Clupeidae	1	0	.	.	.	.	.	.	.	.	.	.
AB0207P02-1	C. undecimalis	7	0	67	80	97	62	81	60	67	.	.	.
AB0207P02-1	D. plumieri	3	0	.	.	.	.	.	.	.	.	.	.
AB0207P02-1	E. harengulus	6	0	.	.	.	.	.	.	.	.	.	.
AB0207P02-1	T. maculatus	30	1	.	.	.	.	.	.	.	.	.	.
AB0207P02-1	Clupeidae	3	0	.	.	.	.	.	.	.	.	.	.
AB0207P02-1	A. mitchilli	225	1	.	.	.	.	.	.	.	.	.	.
AB0207P02-1	Menidia spp.	12	0	.	.	.	.	.	.	.	.	.	.
AB0207P02-1	C. sapidus - m	2	0	.	.	.	.	.	.	.	.	.	.
AB0207P02-1	G. holbrooki	45	1	.	.	.	.	.	.	.	.	.	.
AB0207P02-1	Eucinostomus spp.	10	1	.	.	.	.	.	.	.	.	.	.
AB0207P02-2	C. undecimalis - R	20	0	62	62	67	57	56	63	74	49	55	57
AB0207P02-2	C. undecimalis - R	2	0	38	47	.	.	.	.	.	.	.	.
AB0207P02-2	C. undecimalis	13	0	47	78	70	97	48	66	54	61	63	61
AB0207P02-2	S. ocellatus	3	0	65	69	37	.	.	.	.	.	.	.
AB0207P02-2	Mugil spp.	15	1	.	.	.	.	.	.	.	.	.	.
AB0207P02-2	C. sapidus - m	1	0	.	.	.	.	.	.	.	.	.	.
AB0207P02-2	E. saurus	2	0	41	.	.	.	.	.	.	.	.	.
AB0207P02-2	D. plumieri	5	0	.	.	.	.	.	.	.	.	.	.
AB0207P02-2	E. harengulus	11	0	.	.	.	.	.	.	.	.	.	.

Table A9 continued.

AB0207P02-2	A. mitchilli	500	1	.	.	.	.	.	.	.	.	.	.
AB0207P02-2	Menidia spp.	25	1	.	.	.	.	.	.	.	.	.	.
AB0207P02-2	L. xanthurus	2	0	33	24	.	.	.	.	.	.	.	.
AB0207P02-2	T. maculatus	15	0	.	.	.	.	.	.	.	.	.	.
AB0207P02-2	M. gulosus	8	0	.	.	.	.	.	.	.	.	.	.
AB0207P02-2	Gobiosoma spp.	1	0	.	.	.	.	.	.	.	.	.	.
AB0207P02-2	Eucinostomus spp.	62	1	.	.	.	.	.	.	.	.	.	.
AB0207P02-2	Palaemonetes spp.	2	0	.	.	.	.	.	.	.	.	.	.
AB0207P02-3	C. undecimalis	5	0	59	83	72	60	62	.	.	.	.	.
AB0207P02-3	S. melanotheron	1	0	340	.	.	.	.	.	.	.	.	.
AB0207P02-3	D. plumieri	1	0	.	.	.	.	.	.	.	.	.	.
AB0207P02-3	T. maculatus	12	1	.	.	.	.	.	.	.	.	.	.
AB0207P02-3	E. harengulus	6	0	.	.	.	.	.	.	.	.	.	.
AB0207P02-3	Eucinostomus spp.	5	1	.	.	.	.	.	.	.	.	.	.
AB0207P02-3	A. mitchilli	8	1	.	.	.	.	.	.	.	.	.	.
AB0207P02-3	Menidia spp.	17	1	.	.	.	.	.	.	.	.	.	.
AB0207P02-3	M. gulosus	2	0	.	.	.	.	.	.	.	.	.	.
AB0207P02-3	G. holbrooki	5	1	.	.	.	.	.	.	.	.	.	.
AB0207P02-3	E. saurus	2	0	.	.	.	.	.	.	.	.	.	.
AB0207P02-3	Palaemonetes spp.	1	0	.	.	.	.	.	.	.	.	.	.
AB0207P06-1	C. undecimalis	3	0	64	121	92	.	.	.	.	.	.	.
AB0207P06-1	D. plumieri	6	0	.	.	.	.	.	.	.	.	.	.
AB0207P06-1	A. mitchilli	400	1	.	.	.	.	.	.	.	.	.	.
AB0207P06-1	Mugil spp.	55	1	.	.	.	.	.	.	.	.	.	.
AB0207P06-1	M. gulosus	14	1	.	.	.	.	.	.	.	.	.	.
AB0207P06-1	C. sapidus - m	3	0	.	.	.	.	.	.	.	.	.	.
AB0207P06-1	L. xanthurus	2	0	.	.	.	.	.	.	.	.	.	.
AB0207P06-1	Menidia spp.	30	1	.	.	.	.	.	.	.	.	.	.
AB0207P06-1	Palaemonetes spp.	2	0	.	.	.	.	.	.	.	.	.	.
AB0207P06-1	Eucinostomus spp.	30	1	.	.	.	.	.	.	.	.	.	.
AB0207P06-1	Clupeidae	2	0	.	.	.	.	.	.	.	.	.	.
AB0207P06-2	Mugil spp.	640	0	.	.	.	.	.	.	.	.	.	.
AB0207P06-2	L. xanthurus	15	1	.	.	.	.	.	.	.	.	.	.

Table A9 continued.

AB0207P06-2	T. maculatus	52	0	.	.	.	.	.	.	.	.	.	.
AB0207P06-2	E. saurus	9	1	.	.	.	.	.	.	.	.	.	.
AB0207P06-2	C. variegatus	8	1	.	.	.	.	.	.	.	.	.	.
AB0207P06-2	M. gulosus	6	1	.	.	.	.	.	.	.	.	.	.
AB0207P06-2	A. mitchilli	120	1	.	.	.	.	.	.	.	.	.	.
AB0207P06-2	Menidia spp.	6	1	.	.	.	.	.	.	.	.	.	.
AB0207P06-2	Palaemonetes spp.	6	1	.	.	.	.	.	.	.	.	.	.
AB0207P06-2	Leptocephalus	4	0	.	.	.	.	.	.	.	.	.	.
AB0207P06-2	Eucinostomus spp.	40	1	.	.	.	.	.	.	.	.	.	.
AB0207P06-2	C. sapidus - u	7	1	.	.	.	.	.	.	.	.	.	.
AB0207P06-2	Clupeidae	4	1	.	.	.	.	.	.	.	.	.	.
AB0207P06-3	C. undecimalis	2	0	77	.	.	.	.	.	.	.	.	.
AB0207P06-3	Menidia spp.	20	1	.	.	.	.	.	.	.	.	.	.
AB0207P06-3	A. mitchilli	146	1	.	.	.	.	.	.	.	.	.	.
AB0207P06-3	L. parva	3	0	.	.	.	.	.	.	.	.	.	.
AB0207P06-3	P. latipinna	4	0	.	.	.	.	.	.	.	.	.	.
AB0207P06-3	F. confluentus	1	0	.	.	.	.	.	.	.	.	.	.
AB0207P06-3	Palaemonetes spp.	28	1	.	.	.	.	.	.	.	.	.	.
AB0207P06-3	M. gulosus	30	1	.	.	.	.	.	.	.	.	.	.
AB0207P06-3	C. variegatus	15	1	.	.	.	.	.	.	.	.	.	.
AB0207P06-3	T. maculatus	15	1	.	.	.	.	.	.	.	.	.	.
AB0207P06-3	Eucinostomus spp.	60	1	.	.	.	.	.	.	.	.	.	.
AB0207P06-3	Mugil spp.	100	1	.	.	.	.	.	.	.	.	.	.
AB0207P06-3	G. holbrooki	15	1	.	.	.	.	.	.	.	.	.	.
AB0207P06-3	L. xanthurus	13	1	.	.	.	.	.	.	.	.	.	.
AB0207P06-3	C. sapidus - u	4	0	.	.	.	.	.	.	.	.	.	.
AB0207P06-3	L. rhomboides	1	0	.	.	.	.	.	.	.	.	.	.
AB0207P07-1	C. undecimalis	1	0	66	.	.	.	.	.	.	.	.	.
AB0207P07-1	M. gulosus	30	1	.	.	.	.	.	.	.	.	.	.
AB0207P07-1	A. mitchilli	160	1	.	.	.	.	.	.	.	.	.	.
AB0207P07-1	E. harengulus	2	0	.	.	.	.	.	.	.	.	.	.
AB0207P07-1	Eucinostomus spp.	35	1	.	.	.	.	.	.	.	.	.	.
AB0207P07-1	T. maculatus	1	0	.	.	.	.	.	.	.	.	.	.

Table A9 continued.

AB0207P07-1	Menidia spp.	10	1	.	.	.	.	.	.	.	.	.	.
AB0207P07-1	C. sapidus - n	1	0	.	.	.	.	.	.	.	.	.	.
AB0207P07-1	Mugil spp.	4	0	.	.	.	.	.	.	.	.	.	.
AB0207P07-1	Palaemonetes spp.	10	0	.	.	.	.	.	.	.	.	.	.
AB0207P07-1	G. holbrooki	2	0	.	.	.	.	.	.	.	.	.	.
AB0207P07-1	C. sapidus - m	1	0	.	.	.	.	.	.	.	.	.	.
AB0207P07-2	C. undecimalis	5	0	75	63	68	81	71	.	.	.	.	.
AB0207P07-2	A. mitchilli	600	1	.	.	.	.	.	.	.	.	.	.
AB0207P07-2	Menidia spp.	15	1	.	.	.	.	.	.	.	.	.	.
AB0207P07-2	M. gulosus	20	1	.	.	.	.	.	.	.	.	.	.
AB0207P07-2	Eucinostomus spp.	120	1	.	.	.	.	.	.	.	.	.	.
AB0207P07-2	C. sapidus - m	1	0	.	.	.	.	.	.	.	.	.	.
AB0207P07-2	C. sapidus - u	1	0	.	.	.	.	.	.	.	.	.	.
AB0207P07-2	T. maculatus	1	0	.	.	.	.	.	.	.	.	.	.
AB0207P07-2	Gobiosoma spp.	13	0	.	.	.	.	.	.	.	.	.	.
AB0207P07-2	L. rhomboides	3	0	.	.	.	.	.	.	.	.	.	.
AB0207P07-2	G. holbrooki	1	0	.	.	.	.	.	.	.	.	.	.
AB0207P07-2	L. xanthurus	1	0	.	.	.	.	.	.	.	.	.	.
AB0207P07-2	Palaemonetes spp.	12	1	.	.	.	.	.	.	.	.	.	.
AB0207P07-3	C. undecimalis	5	0	62	58	63	70	61	.	.	.	.	.
AB0207P07-3	P. latipinna	21	1	.	.	.	.	.	.	.	.	.	.
AB0207P07-3	L. parva	28	1	.	.	.	.	.	.	.	.	.	.
AB0207P07-3	M. gulosus	32	1	.	.	.	.	.	.	.	.	.	.
AB0207P07-3	Mugil spp.	500	1	.	.	.	.	.	.	.	.	.	.
AB0207P07-3	C. variegatus	5	0	.	.	.	.	.	.	.	.	.	.
AB0207P07-3	A. mitchilli	40	1	.	.	.	.	.	.	.	.	.	.
AB0207P07-3	Eucinostomus spp.	32	1	.	.	.	.	.	.	.	.	.	.
AB0207P07-3	Menidia spp.	2	0	.	.	.	.	.	.	.	.	.	.
AB0207P07-3	T. maculatus	1	0	.	.	.	.	.	.	.	.	.	.
AB0207P07-3	Palaemonetes spp.	110	1	.	.	.	.	.	.	.	.	.	.
AB0207P07-3	L. rhomboides	13	1	.	.	.	.	.	.	.	.	.	.
AB0207P07-3	Gobiosoma spp.	1	0	.	.	.	.	.	.	.	.	.	.
AB11071420	C. undecimalis - R	1	0	208	.	.	.	.	.	.	.	.	.

Table A9 continued.

AB11071420	E. harengulus	16	0	.	.	.	.	.	.	.	.	.	.
AB11071420	Menidia spp.	45	1	.	.	.	.	.	.	.	.	.	.
AB11071420	Eucinostomus spp.	10	1	.	.	.	.	.	.	.	.	.	.
AB11071420	C. sapidus - n	1	0	.	.	.	.	.	.	.	.	.	.
AB11071420	A. mitchilli	20	1	.	.	.	.	.	.	.	.	.	.
AB11071420	F. duorarum	1	0	.	.	.	.	.	.	.	.	.	.
AB11071420	Palaemonetes spp.	5	1	.	.	.	.	.	.	.	.	.	.
AB11071420	Gobiosoma spp.	1	0	.	.	.	.	.	.	.	.	.	.
AB11071860	G. holbrooki	100	1	.	.	.	.	.	.	.	.	.	.
AB11071860	P. latipinna	12	1	.	.	.	.	.	.	.	.	.	.
AB11071860	Menidia spp.	5	0	.	.	.	.	.	.	.	.	.	.
AB11071860	M. gulosus	5	1	.	.	.	.	.	.	.	.	.	.
AB11071860	T. maculatus	2	1	.	.	.	.	.	.	.	.	.	.
AB11071860	L. parva	35	1	.	.	.	.	.	.	.	.	.	.
AB11071860	Palaemonetes spp.	20	1	.	.	.	.	.	.	.	.	.	.
AB11071860	F. carpio	3	1	.	.	.	.	.	.	.	.	.	.
AB11071860	Gobiosoma spp.	5	1	.	.	.	.	.	.	.	.	.	.
AB11071860	Eucinostomus spp.	3	1	.	.	.	.	.	.	.	.	.	.
AB11071860	F. grandis	1	0	.	.	.	.	.	.	.	.	.	.
AB11071860	F. duorarum	1	0	.	.	.	.	.	.	.	.	.	.
AB11072000	G. holbrooki	15	1	.	.	.	.	.	.	.	.	.	.
AB11072000	L. parva	2	0	.	.	.	.	.	.	.	.	.	.
AB11072000	Menidia spp.	5	0	.	.	.	.	.	.	.	.	.	.
AB11072000	Eucinostomus spp.	1	0	.	.	.	.	.	.	.	.	.	.
AB11072000	Palaemonetes spp.	25	1	.	.	.	.	.	.	.	.	.	.
AB1107P07-1	G. holbrooki	10	1	.	.	.	.	.	.	.	.	.	.
AB1107P07-1	M. gulosus	5	1	.	.	.	.	.	.	.	.	.	.
AB1107P07-1	A. mitchilli	5	1	.	.	.	.	.	.	.	.	.	.
AB1107P07-1	Eucinostomus spp.	7	1	.	.	.	.	.	.	.	.	.	.
AB1107P07-1	T. maculatus	1	0	.	.	.	.	.	.	.	.	.	.
AB1107P07-1	L. parva	2	1	.	.	.	.	.	.	.	.	.	.
AB1107P07-2	G. holbrooki	5	1	.	.	.	.	.	.	.	.	.	.
AB1107P07-2	L. parva	2	1	.	.	.	.	.	.	.	.	.	.

Table A9 continued.

AB1107P07-2	A. mitchilli	10	1	.	.	.	.	.	.	.	.	.	.
AB1107P07-2	Menidia spp.	3	1	.	.	.	.	.	.	.	.	.	.
AB1107P07-2	M. gulosus	12	1	.	.	.	.	.	.	.	.	.	.
AB1107P07-2	F. duorarum	2	0	.	.	.	.	.	.	.	.	.	.
AB1107P07-3	F. duorarum	1	0	.	.	.	.	.	.	.	.	.	.
AB1107P07-3	C. sapidus - f	1	0	.	.	.	.	.	.	.	.	.	.
AB1107P07-3	A. mitchilli	20	1	.	.	.	.	.	.	.	.	.	.
AB1107P07-3	Eucinostomus spp.	15	1	.	.	.	.	.	.	.	.	.	.
AB1107P07-3	L. parva	2	1	.	.	.	.	.	.	.	.	.	.
AB1107P07-3	T. maculatus	2	1	.	.	.	.	.	.	.	.	.	.
AB1107P07-3	M. gulosus	15	1	.	.	.	.	.	.	.	.	.	.
AB1107P06-1	C. undecimalis	2	0	73	84	.	.	.	.	.	.	.	.
AB1107P06-1	G. holbrooki	10	1	.	.	.	.	.	.	.	.	.	.
AB1107P06-1	Menidia spp.	15	1	.	.	.	.	.	.	.	.	.	.
AB1107P06-1	A. mitchilli	23	1	.	.	.	.	.	.	.	.	.	.
AB1107P06-1	M. gulosus	5	1	.	.	.	.	.	.	.	.	.	.
AB1107P06-1	C. variegatus	1	0	.	.	.	.	.	.	.	.	.	.
AB1107P06-1	L. parva	10	1	.	.	.	.	.	.	.	.	.	.
AB1107P06-1	Eucinostomus spp.	25	1	.	.	.	.	.	.	.	.	.	.
AB1107P06-1	T. maculatus	1	0	.	.	.	.	.	.	.	.	.	.
AB1107P06-2	D. plumieri	3	0	.	.	.	.	.	.	.	.	.	.
AB1107P06-2	T. maculatus	4	0	.	.	.	.	.	.	.	.	.	.
AB1107P06-2	G. holbrooki	3	0	.	.	.	.	.	.	.	.	.	.
AB1107P06-2	A. mitchilli	5	1	.	.	.	.	.	.	.	.	.	.
AB1107P06-2	M. gulosus	14	1	.	.	.	.	.	.	.	.	.	.
AB1107P06-2	Menidia spp.	2	1	.	.	.	.	.	.	.	.	.	.
AB1107P06-2	F. duorarum	1	0	.	.	.	.	.	.	.	.	.	.
AB1107P06-2	Eucinostomus spp.	5	0	.	.	.	.	.	.	.	.	.	.
AB1107P06-2	L. parva	1	0	.	.	.	.	.	.	.	.	.	.
AB1107P06-2	Palaemonetes spp.	2	0	.	.	.	.	.	.	.	.	.	.
AB1107P06-3	D. plumieri	1	0	.	.	.	.	.	.	.	.	.	.
AB1107P06-3	Menidia spp.	3	0	.	.	.	.	.	.	.	.	.	.
AB1107P06-3	A. mitchilli	30	1	.	.	.	.	.	.	.	.	.	.

Table A9 continued.

AB1107P06-3	M. gulosus	14	1	.	.	.	.	.	.	.	.	.	.
AB1107P06-3	Eucinostomus spp.	10	1	.	.	.	.	.	.	.	.	.	.
AB11072680	C. undecimalis - R	1	0	200	.	.	.	.	.	.	.	.	.
AB11072680	A. probatocephalus	1	0	.	.	.	.	.	.	.	.	.	.
AB11072680	G. holbrooki	5	1	.	.	.	.	.	.	.	.	.	.
AB11072870	Cichlidae	1	0	.	.	.	.	.	.	.	.	.	.
AB11072870	Fish spp.	1	0	.	.	.	.	.	.	.	.	.	.
AB11072870	P. latipinna	40	1	.	.	.	.	.	.	.	.	.	.
AB11072870	Menidia spp.	30	1	.	.	.	.	.	.	.	.	.	.
AB11072870	M. gulosus	2	1	.	.	.	.	.	.	.	.	.	.
AB11072870	L. parva	110	1	.	.	.	.	.	.	.	.	.	.
AB11072870	F. carpio	4	0	.	.	.	.	.	.	.	.	.	.
AB11072870	F. duorarum	2	0	.	.	.	.	.	.	.	.	.	.
AB11072870	Eucinostomus spp.	20	1	.	.	.	.	.	.	.	.	.	.
AB11072870	Palaemonetes spp.	5	1	.	.	.	.	.	.	.	.	.	.
AB11073080	C. undecimalis - R	1	0	192	.	.	.	.	.	.	.	.	.
AB11073080	C. undecimalis	2	0	.	.	.	.	.	.	.	.	.	.
AB11073080	A. probatocephalus	1	0	.	.	.	.	.	.	.	.	.	.
AB11073080	D. plumieri	5	0	.	.	.	.	.	.	.	.	.	.
AB11073080	A. mitchilli	120	1	.	.	.	.	.	.	.	.	.	.
AB11073080	E. harengulus	3	0	.	.	.	.	.	.	.	.	.	.
AB11073080	Eucinostomus spp.	5	1	.	.	.	.	.	.	.	.	.	.
AB11073080	L. parva	3	1	.	.	.	.	.	.	.	.	.	.
AB11073080	Menidia spp.	23	1	.	.	.	.	.	.	.	.	.	.
AB11073080	P. latipinna	5	1	.	.	.	.	.	.	.	.	.	.
AB11073080	F. duorarum	1	0	.	.	.	.	.	.	.	.	.	.
AB11073080	S. ocellatus	1	0	.	.	.	.	.	.	.	.	.	.
AB11073080	M. gulosus	3	1	.	.	.	.	.	.	.	.	.	.
AB11073080	G. holbrooki	3	1	.	.	.	.	.	.	.	.	.	.
AB11072970	C. undecimalis - R	1	0	217	.	.	.	.	.	.	.	.	.
AB11072970	C. undecimalis	1	0	.	.	.	.	.	.	.	.	.	.
AB11072970	A. mitchilli	35	1	.	.	.	.	.	.	.	.	.	.
AB11072970	Eucinostomus spp.	1	0	.	.	.	.	.	.	.	.	.	.

Table A9 continued.

AB11072970	G. holbrooki	5	1	.	.	.	.	.	.	.	.	.	.
AB11072970	L. parva	1	0	.	.	.	.	.	.	.	.	.	.
AB11072970	P. latipinna	1	0	.	.	.	.	.	.	.	.	.	.
AB11072970	E. harengulus	1	0	.	.	.	.	.	.	.	.	.	.
AB11072760	C. undecimalis - R	1	0	240	.	.	.	.	.	.	.	.	.
AB11072760	C. sapidus - m	1	0	.	.	.	.	.	.	.	.	.	.
AB11072760	C. undecimalis	1	0	.	.	.	.	.	.	.	.	.	.
AB11072760	A. mitchilli	15	1	.	.	.	.	.	.	.	.	.	.
AB11072760	Eucinostomus spp.	2	1	.	.	.	.	.	.	.	.	.	.
AB11072760	E. harengulus	2	0	.	.	.	.	.	.	.	.	.	.
AB11072760	M. gulosus	2	0	.	.	.	.	.	.	.	.	.	.
AB1107P01-3	A. mitchilli	20	1	.	.	.	.	.	.	.	.	.	.
AB1107P01-3	Menidia spp.	20	1	.	.	.	.	.	.	.	.	.	.
AB1107P01-3	Eucinostomus spp.	30	1	.	.	.	.	.	.	.	.	.	.
AB1107P01-3	M. gulosus	100	1	.	.	.	.	.	.	.	.	.	.
AB1107P01-3	L. parva	30	1	.	.	.	.	.	.	.	.	.	.
AB1107P01-3	Cichlidae	6	1	.	.	.	.	.	.	.	.	.	.
AB1107P01-3	P. latipinna	4	1	.	.	.	.	.	.	.	.	.	.
AB1107P01-3	C. sapidus - n	3	1	.	.	.	.	.	.	.	.	.	.
AB1107P01-3	M. cephalus	1	0	.	.	.	.	.	.	.	.	.	.
AB1107P01-3	T. maculatus	25	1	.	.	.	.	.	.	.	.	.	.
AB1107P01-3	C. variegatus	4	1	.	.	.	.	.	.	.	.	.	.
AB1107P01-3	Gobiosoma spp.	5	1	.	.	.	.	.	.	.	.	.	.
AB1107P01-3	G. holbrooki	12	1	.	.	.	.	.	.	.	.	.	.
AB1107P01-3	F. confluentus	1	0	.	.	.	.	.	.	.	.	.	.
AB1107P01-2	T. maculatus	8	0	.	.	.	.	.	.	.	.	.	.
AB1107P01-2	C. sapidus - n	4	0	.	.	.	.	.	.	.	.	.	.
AB1107P01-2	A. mitchilli	15	1	.	.	.	.	.	.	.	.	.	.
AB1107P01-2	Menidia spp.	15	1	.	.	.	.	.	.	.	.	.	.
AB1107P01-2	E. harengulus	1	0	.	.	.	.	.	.	.	.	.	.
AB1107P01-2	Eucinostomus spp.	30	1	.	.	.	.	.	.	.	.	.	.
AB1107P01-2	L. parva	15	1	.	.	.	.	.	.	.	.	.	.
AB1107P01-2	G. holbrooki	60	1	.	.	.	.	.	.	.	.	.	.

Table A9 continued.

AB1107P01-2	M. gulosus	30	1	.	.	.	.	.	.	.	.	.	.
AB1107P01-2	Gobiosoma spp.	4	1	.	.	.	.	.	.	.	.	.	.
AB1107P01-2	P. latipinna	4	1	.	.	.	.	.	.	.	.	.	.
AB1107P01-1	C. variegatus	5	1	.	.	.	.	.	.	.	.	.	.
AB1107P01-1	D. plumieri	1	0	.	.	.	.	.	.	.	.	.	.
AB1107P01-1	Menidia spp.	100	1	.	.	.	.	.	.	.	.	.	.
AB1107P01-1	A. mitchilli	150	1	.	.	.	.	.	.	.	.	.	.
AB1107P01-1	C. sapidus - n	2	0	.	.	.	.	.	.	.	.	.	.
AB1107P01-1	G. holbrooki	150	1	.	.	.	.	.	.	.	.	.	.
AB1107P01-1	M. gulosus	50	1	.	.	.	.	.	.	.	.	.	.
AB1107P01-1	P. latipinna	1	0	.	.	.	.	.	.	.	.	.	.
AB1107P01-1	A. xenica	1	0	.	.	.	.	.	.	.	.	.	.
AB1107P01-1	F. confluentus	2	0	.	.	.	.	.	.	.	.	.	.
AB1107P01-1	Eucinostomus spp.	20	1	.	.	.	.	.	.	.	.	.	.
AB1107P01-1	L. parva	6	1	.	.	.	.	.	.	.	.	.	.
AB1107P01-1	T. maculatus	12	1	.	.	.	.	.	.	.	.	.	.
AB1107P01-1	C. undecimalis - R	1	0	238	.	.	.	.	.	.	.	.	.
AB11072530	C. undecimalis - R	4	0	245	220	220	205	.	.	.	.	.	.
AB11072530	C. undecimalis	2	0	195	87	.	.	.	.	.	.	.	.
AB11072530	D. plumieri	1	0	145	.	.	.	.	.	.	.	.	.
AB11072530	Eucinostomus spp.	5	1	.	.	.	.	.	.	.	.	.	.
AB11072530	F. confluentus	1	0	.	.	.	.	.	.	.	.	.	.
AB11072530	T. maculatus	1	0	.	.	.	.	.	.	.	.	.	.
AB11072530	C. variegatus	1	0	.	.	.	.	.	.	.	.	.	.
AB11072530	F. duorarum	1	0	.	.	.	.	.	.	.	.	.	.
AB11072530	C. sapidus - n	1	0	.	.	.	.	.	.	.	.	.	.
AB11072530	M. gulosus	1	0	.	.	.	.	.	.	.	.	.	.
AB11071380	A. probatocephalus	1	0	.	.	.	.	.	.	.	.	.	.
AB11071380	Menidia spp.	15	1	.	.	.	.	.	.	.	.	.	.
AB11071380	A. mitchilli	15	1	.	.	.	.	.	.	.	.	.	.
AB11071380	Eucinostomus spp.	15	1	.	.	.	.	.	.	.	.	.	.
AB11071380	E. harengulus	8	0	.	.	.	.	.	.	.	.	.	.
AB11071380	M. gulosus	1	0	.	.	.	.	.	.	.	.	.	.

Table A9 continued.

AB11071890	S. ocellatus	2	0	.	.	.	.	.	.	.	.	.	.
AB11071890	Eucinostomus spp.	20	1	.	.	.	.	.	.	.	.	.	.
AB11071890	Menidia spp.	30	1	.	.	.	.	.	.	.	.	.	.
AB11071890	F. carpio	3	0	.	.	.	.	.	.	.	.	.	.
AB11071890	F. grandis	1	0	.	.	.	.	.	.	.	.	.	.
AB11071890	F. duorarum	1	0	.	.	.	.	.	.	.	.	.	.
AB11071890	T. maculatus	1	0	.	.	.	.	.	.	.	.	.	.
AB11071890	M. gulosus	15	1	.	.	.	.	.	.	.	.	.	.
AB11071890	A. mitchilli	5	1	.	.	.	.	.	.	.	.	.	.
AB11071890	L. parva	1	0	.	.	.	.	.	.	.	.	.	.
AB11071890	G. holbrooki	1	0	.	.	.	.	.	.	.	.	.	.
AB11072280	C. undecimalis - R	3	0	183	203	255	.	.	.	.	.	.	.
AB11072280	E. harengulus	17	0	.	.	.	.	.	.	.	.	.	.
AB11072280	Eucinostomus spp.	8	0	.	.	.	.	.	.	.	.	.	.
AB11072280	L. parva	1	0	.	.	.	.	.	.	.	.	.	.
AB11072280	M. gulosus	1	0	.	.	.	.	.	.	.	.	.	.
AB11072280	A. mitchilli	2	0	.	.	.	.	.	.	.	.	.	.
AB1107P02-1	C. undecimalis - R	2	0	177	230	.	.	.	.	.	.	.	.
AB1107P02-1	A. mitchilli	75	1	.	.	.	.	.	.	.	.	.	.
AB1107P02-1	Menidia spp.	10	1	.	.	.	.	.	.	.	.	.	.
AB1107P02-1	D. plumieri	2	0	.	.	.	.	.	.	.	.	.	.
AB1107P02-1	G. holbrooki	20	1	.	.	.	.	.	.	.	.	.	.
AB1107P02-1	M. gulosus	30	1	.	.	.	.	.	.	.	.	.	.
AB1107P02-1	T. maculatus	5	1	.	.	.	.	.	.	.	.	.	.
AB1107P02-1	Eucinostomus spp.	10	1	.	.	.	.	.	.	.	.	.	.
AB1107P02-3	C. undecimalis - R	2	0	200	270	.	.	.	.	.	.	.	.
AB1107P02-3	A. mitchilli	100	1	.	.	.	.	.	.	.	.	.	.
AB1107P02-3	Menidia spp.	5	0	.	.	.	.	.	.	.	.	.	.
AB1107P02-3	M. gulosus	7	0	.	.	.	.	.	.	.	.	.	.
AB1107P02-3	Eucinostomus spp.	5	0	.	.	.	.	.	.	.	.	.	.
AB1107P02-3	T. maculatus	3	0	.	.	.	.	.	.	.	.	.	.
AB1107P02-3	G. holbrooki	1	0	.	.	.	.	.	.	.	.	.	.
AB1107P02-2	Menidia spp.	5	1	.	.	.	.	.	.	.	.	.	.

Table A9 continued.

AB1107P02-2	A. mitchilli	50	1	.	.	.	.	.	.	.	.	.	.
AB1107P02-2	Eucinostomus spp.	5	1	.	.	.	.	.	.	.	.	.	.
AB1107P02-2	D. plumieri	2	0	.	.	.	.	.	.	.	.	.	.
AB1107P02-2	T. maculatus	1	0	.	.	.	.	.	.	.	.	.	.
AB1107P02-2	M. gulosus	20	1	.	.	.	.	.	.	.	.	.	.
AB1107P02-2	G. holbrooki	2	0	.	.	.	.	.	.	.	.	.	.
AB1107P02-2	C. undecimalis	1	0	.	.	.	.	.	.	.	.	.	.
AB02082640	C. undecimalis - R	1	0	445	.	.	.	.	.	.	.	.	.
AB02082640	C. undecimalis	1	0	171	.	.	.	.	.	.	.	.	.
AB02082640	Menidia spp.	10	0	.	.	.	.	.	.	.	.	.	.
AB02082640	Clupeidae	4	0	.	.	.	.	.	.	.	.	.	.
AB02082640	Gobiosoma spp.	1	0	.	.	.	.	.	.	.	.	.	.
AB02082900	C. undecimalis - R	2	0	187	187	.	.	.	.	.	.	.	.
AB02082900	A. probatocephalus	1	0	73	.	.	.	.	.	.	.	.	.
AB02082900	Clupeidae	21	0	.	.	.	.	.	.	.	.	.	.
AB02082900	A. mitchilli	26	0	.	.	.	.	.	.	.	.	.	.
AB02082900	Palaemonetes spp.	1	0	.	.	.	.	.	.	.	.	.	.
AB02083050	C. undecimalis	3	0	73	73	71	.	.	.	.	.	.	.
AB02083050	E. harengulus	10	1	.	.	.	.	.	.	.	.	.	.
AB02083050	Eucinostomus spp.	75	1	.	.	.	.	.	.	.	.	.	.
AB02083050	P. latipinna	10	1	.	.	.	.	.	.	.	.	.	.
AB02083050	L. parva	5	1	.	.	.	.	.	.	.	.	.	.
AB02083050	Palaemonetes spp.	25	1	.	.	.	.	.	.	.	.	.	.
AB02083050	A. mitchilli	10	1	.	.	.	.	.	.	.	.	.	.
AB02083050	Menidia spp.	10	1	.	.	.	.	.	.	.	.	.	.
AB02083050	L. xanthurus	1	0	.	.	.	.	.	.	.	.	.	.
AB02083050	G. holbrooki	5	1	.	.	.	.	.	.	.	.	.	.
AB02083050	T. maculatus	2	0	.	.	.	.	.	.	.	.	.	.
AB02083050	F. carpio	5	1	.	.	.	.	.	.	.	.	.	.
AB02083050	C. variegatus	1	0	.	.	.	.	.	.	.	.	.	.
AB02083050	M. gulosus	10	1	.	.	.	.	.	.	.	.	.	.
AB02083050	A. probatocephalus	1	0	61	.	.	.	.	.	.	.	.	.
AB02083050	Gobiosoma spp.	1	0	.	.	.	.	.	.	.	.	.	.

Table A9 continued.

AB0208P01-1	C. sapidus - n	2	0	.	.	.	.	.	.	.	.	.	.
AB0208P01-1	D. plumieri	1	0	.	.	.	.	.	.	.	.	.	.
AB0208P01-1	G. holbrooki	30	1	.	.	.	.	.	.	.	.	.	.
AB0208P01-1	T. maculatus	40	1	.	.	.	.	.	.	.	.	.	.
AB0208P01-1	Eucinostomus spp.	40	1	.	.	.	.	.	.	.	.	.	.
AB0208P01-1	L. xanthurus	8	1	.	.	.	.	.	.	.	.	.	.
AB0208P01-1	Mugil spp.	600	1	.	.	.	.	.	.	.	.	.	.
AB0208P01-1	F. confluentus	8	1	.	.	.	.	.	.	.	.	.	.
AB0208P01-1	M. gulosus	32	1	.	.	.	.	.	.	.	.	.	.
AB0208P01-3	C. undecimalis - R	2	0	195	255	.	.	.	.	.	.	.	.
AB0208P01-3	D. plumieri	1	0	.	.	.	.	.	.	.	.	.	.
AB0208P01-3	Menidia spp.	15	1	.	.	.	.	.	.	.	.	.	.
AB0208P01-3	M. gulosus	15	1	.	.	.	.	.	.	.	.	.	.
AB0208P01-3	T. maculatus	30	1	.	.	.	.	.	.	.	.	.	.
AB0208P01-3	L. parva	5	1	.	.	.	.	.	.	.	.	.	.
AB0208P01-3	Mugil spp.	15	1	.	.	.	.	.	.	.	.	.	.
AB0208P01-3	Eucinostomus spp.	20	1	.	.	.	.	.	.	.	.	.	.
AB0208P01-3	Palaemonetes spp.	1	0	.	.	.	.	.	.	.	.	.	.
AB0208P01-3	G. holbrooki	8	1	.	.	.	.	.	.	.	.	.	.
AB0208P01-3	A. mitchilli	1	0	.	.	.	.	.	.	.	.	.	.
AB0208P01-2	Mugil spp.	160	1	.	.	.	.	.	.	.	.	.	.
AB0208P01-2	T. maculatus	40	1	.	.	.	.	.	.	.	.	.	.
AB0208P01-2	Eucinostomus spp.	94	1	.	.	.	.	.	.	.	.	.	.
AB0208P01-2	M. gulosus	20	1	.	.	.	.	.	.	.	.	.	.
AB0208P01-2	G. holbrooki	32	1	.	.	.	.	.	.	.	.	.	.
AB0208P01-2	E. saurus	2	0	.	.	.	.	.	.	.	.	.	.
AB0208P01-2	A. mitchilli	10	1	.	.	.	.	.	.	.	.	.	.
AB0208P06-3	Menidia spp.	30	1	.	.	.	.	.	.	.	.	.	.
AB0208P06-3	A. mitchilli	40	1	.	.	.	.	.	.	.	.	.	.
AB0208P06-3	Mugil spp.	200	1	.	.	.	.	.	.	.	.	.	.
AB0208P06-3	L. parva	35	1	.	.	.	.	.	.	.	.	.	.
AB0208P06-3	L. xanthurus	10	1	.	.	.	.	.	.	.	.	.	.
AB0208P06-3	M. gulosus	5	1	.	.	.	.	.	.	.	.	.	.

Table A9 continued.

AB0208P06-3	T. maculatus	3	1	.	.	.	.	.	.	.	.	.	.
AB0208P06-3	C. variegatus	1	0	.	.	.	.	.	.	.	.	.	.
AB0208P06-3	Eucinostomus spp.	5	1	.	.	.	.	.	.	.	.	.	.
AB0208P06-3	C. sapidus - n	1	0	.	.	.	.	.	.	.	.	.	.
AB0208P06-3	Palaemonetes spp.	5	1	.	.	.	.	.	.	.	.	.	.
AB0208P06-3	Clupeidae	7	1	.	.	.	.	.	.	.	.	.	.
AB0208P06-1	Mugil spp.	4	0	.	.	.	.	.	.	.	.	.	.
AB0208P06-1	L. xanthurus	5	1	.	.	.	.	.	.	.	.	.	.
AB0208P06-1	M. gulosus	5	1	.	.	.	.	.	.	.	.	.	.
AB0208P06-1	T. maculatus	3	1	.	.	.	.	.	.	.	.	.	.
AB0208P06-1	A. mitchilli	200	1	.	.	.	.	.	.	.	.	.	.
AB0208P06-1	Menidia spp.	5	1	.	.	.	.	.	.	.	.	.	.
AB0208P06-1	Clupeidae	20	1	.	.	.	.	.	.	.	.	.	.
AB0208P06-1	L. parva	3	1	.	.	.	.	.	.	.	.	.	.
AB0208P06-1	D. plumieri	1	0	.	.	.	.	.	.	.	.	.	.
AB0208P06-2	C. undecimalis - R	1	0	182	.	.	.	.	.	.	.	.	.
AB0208P06-2	D. plumieri	2	0	.	.	.	.	.	.	.	.	.	.
AB0208P06-2	Mugil spp.	4	0	.	.	.	.	.	.	.	.	.	.
AB0208P06-2	A. mitchilli	3	0	.	.	.	.	.	.	.	.	.	.
AB0208P06-2	M. gulosus	2	0	.	.	.	.	.	.	.	.	.	.
AB0208P06-2	L. parva	2	0	.	.	.	.	.	.	.	.	.	.
AB0208P06-2	Clupeidae	1	0	.	.	.	.	.	.	.	.	.	.
AB02082090	C. undecimalis - R	3	0	195	220	.	.	.	.	.	.	.	.
AB02082090	D. plumieri	1	0	.	.	.	.	.	.	.	.	.	.
AB02082090	G. holbrooki	1	0	.	.	.	.	.	.	.	.	.	.
AB02082090	Palaemonetes spp.	24	0	.	.	.	.	.	.	.	.	.	.
AB02081790	Menidia spp.	125	1	.	.	.	.	.	.	.	.	.	.
AB02081790	M. gulosus	15	1	.	.	.	.	.	.	.	.	.	.
AB02081790	Palaemonetes spp.	10	1	.	.	.	.	.	.	.	.	.	.
AB02081790	L. parva	3	1	.	.	.	.	.	.	.	.	.	.
AB02081790	F. grandis	1	0	.	.	.	.	.	.	.	.	.	.
AB02081790	Gobiosoma spp.	1	0	.	.	.	.	.	.	.	.	.	.
AB02081790	Eucinostomus spp.	3	0	.	.	.	.	.	.	.	.	.	.

Table A9 continued.

AB02081280	D. plumieri	1	0	.	.	.	.	.	.	.	.	.	.
AB02081280	A. mitchilli	13	0	.	.	.	.	.	.	.	.	.	.
AB02081280	Menidia spp.	10	0	.	.	.	.	.	.	.	.	.	.
AB02081280	M. gulosus	12	0	.	.	.	.	.	.	.	.	.	.
AB02081280	C. sapidus - n	4	0	.	.	.	.	.	.	.	.	.	.
AB02081280	Palaemonetes spp.	1	0	.	.	.	.	.	.	.	.	.	.
AB02081280	Gobiosoma spp.	1	0	.	.	.	.	.	.	.	.	.	.
AB02081280	Mugil spp.	1	0	.	.	.	.	.	.	.	.	.	.
AB02081280	Clupeidae	3	0	.	.	.	.	.	.	.	.	.	.
AB02081590	A. mitchilli	160	1	.	.	.	.	.	.	.	.	.	.
AB02081590	Clupeidae	172	1	.	.	.	.	.	.	.	.	.	.
AB02081590	E. harengulus	2	1	.	.	.	.	.	.	.	.	.	.
AB02081590	Eucinostomus spp.	4	1	.	.	.	.	.	.	.	.	.	.
AB02081590	Mugil spp.	2	1	.	.	.	.	.	.	.	.	.	.
AB02081590	A. probatocephalus	2	1	.	.	.	.	.	.	.	.	.	.
AB02081590	Gobiosoma spp.	8	1	.	.	.	.	.	.	.	.	.	.
AB02081590	F. duorarum	2	1	.	.	.	.	.	.	.	.	.	.
AB02081590	S. scovelli	1	0	.	.	.	.	.	.	.	.	.	.
AB02081670	S. ocellatus	6	0	.	.	.	.	.	.	.	.	.	.
AB02081670	M. gulosus	36	0	.	.	.	.	.	.	.	.	.	.
AB02081670	Menidia spp.	27	0	.	.	.	.	.	.	.	.	.	.
AB02081670	L. parva	1	0	.	.	.	.	.	.	.	.	.	.
AB02081670	Eucinostomus spp.	2	0	.	.	.	.	.	.	.	.	.	.
AB02081670	C. sapidus - n	2	0	.	.	.	.	.	.	.	.	.	.
AB02081670	A. mitchilli	6	0	.	.	.	.	.	.	.	.	.	.
AB02081670	Clupeidae	5	1	.	.	.	.	.	.	.	.	.	.
AB02081670	Palaemonetes spp.	2	1	.	.	.	.	.	.	.	.	.	.
AB02081670	Gobiosoma spp.	3	0	.	.	.	.	.	.	.	.	.	.
AB02081930	Menidia spp.	15	0	.	.	.	.	.	.	.	.	.	.
AB02081930	F. grandis	2	0	.	.	.	.	.	.	.	.	.	.
AB02081930	L. parva	1	0	.	.	.	.	.	.	.	.	.	.
AB02081930	G. holbrooki	7	0	.	.	.	.	.	.	.	.	.	.
AB02081930	M. gulosus	2	0	.	.	.	.	.	.	.	.	.	.

Table A9 continued.

AB02081930	P. latipinna	1	0	.	.	.	.	.	.	.	.	.	.
AB02081930	Palaemonetes spp.	40	1	.	.	.	.	.	.	.	.	.	.
AB0208P07-2	C. undecimalis - R	1	0	188	.	.	.	.	.	.	.	.	.
AB0208P07-2	C. undecimalis	1	0	178	.	.	.	.	.	.	.	.	.
AB0208P07-2	A. mitchilli	300	1	.	.	.	.	.	.	.	.	.	.
AB0208P07-2	D. plumieri	6	0	.	.	.	.	.	.	.	.	.	.
AB0208P07-2	M. gulosus	7	0	.	.	.	.	.	.	.	.	.	.
AB0208P07-2	Menidia spp.	8	1	.	.	.	.	.	.	.	.	.	.
AB0208P07-3	A. mitchilli	320	1	.	.	.	.	.	.	.	.	.	.
AB0208P07-3	M. gulosus	20	1	.	.	.	.	.	.	.	.	.	.
AB0208P07-3	A. probatocephalus	1	0	.	.	.	.	.	.	.	.	.	.
AB0208P07-3	Menidia spp.	4	1	.	.	.	.	.	.	.	.	.	.
AB0208P07-1	Mugil spp.	2	0	.	.	.	.	.	.	.	.	.	.
AB0208P07-1	C. undecimalis - R	1	0	206	.	.	.	.	.	.	.	.	.
AB0208P07-1	C. sapidus - n	1	0	.	.	.	.	.	.	.	.	.	.
AB0208P07-1	M. gulosus	20	1	.	.	.	.	.	.	.	.	.	.
AB0208P07-1	Menidia spp.	4	0	.	.	.	.	.	.	.	.	.	.
AB0208P07-1	A. mitchilli	60	1	.	.	.	.	.	.	.	.	.	.
AB02082410	C. undecimalis - R	1	0	237	.	.	.	.	.	.	.	.	.
AB02082410	M. gulosus	1	0	.	.	.	.	.	.	.	.	.	.
AB02082410	D. plumieri	1	0	.	.	.	.	.	.	.	.	.	.
AB02082410	Eucinostomus spp.	2	0	.	.	.	.	.	.	.	.	.	.
AB02082410	F. duorarum	1	0	.	.	.	.	.	.	.	.	.	.
AB02082410	A. mitchilli	10	0	.	.	.	.	.	.	.	.	.	.
AB02082730	Eucinostomus spp.	7	0	.	.	.	.	.	.	.	.	.	.
AB02082730	Palaemonetes spp.	2	0	.	.	.	.	.	.	.	.	.	.
AB02082730	L. xanthurus	1	0	.	.	.	.	.	.	.	.	.	.
AB02083000	C. undecimalis	1	0	.	.	.	.	.	.	.	.	.	.
AB02083000	Eucinostomus spp.	8	0	.	.	.	.	.	.	.	.	.	.
AB02083000	A. probatocephalus	2	0	.	.	.	.	.	.	.	.	.	.
AB02083000	Palaemonetes spp.	10	1	.	.	.	.	.	.	.	.	.	.
AB02083000	M. gulosus	2	0	.	.	.	.	.	.	.	.	.	.
AB02083000	Clupeidae	2	0	.	.	.	.	.	.	.	.	.	.

Table A9 continued.

AB02083000	Menidia spp.	17	0	.	.	.	.	.	.	.	.	.	.
AB02083000	A. mitchilli	20	1	.	.	.	.	.	.	.	.	.	.
AB0208P02-3	D. plumieri	2	0	.	.	.	.	.	.	.	.	.	.
AB0208P02-3	C. undecimalis	1	0	83	.	.	.	.	.	.	.	.	.
AB0208P02-3	T. maculatus	4	0	.	.	.	.	.	.	.	.	.	.
AB0208P02-3	M. gulosus	4	1	.	.	.	.	.	.	.	.	.	.
AB0208P02-3	E. saurus	1	0	.	.	.	.	.	.	.	.	.	.
AB0208P02-3	Menidia spp.	2	1	.	.	.	.	.	.	.	.	.	.
AB0208P02-3	A. mitchilli	10	1	.	.	.	.	.	.	.	.	.	.
AB0208P02-3	G. holbrooki	4	1	.	.	.	.	.	.	.	.	.	.
AB0208P02-3	Palaemonetes spp.	6	1	.	.	.	.	.	.	.	.	.	.
AB0208P02-1	S. ocellatus	1	0	.	.	.	.	.	.	.	.	.	.
AB0208P02-1	Palaemonetes spp.	100	1	.	.	.	.	.	.	.	.	.	.
AB0208P02-1	A. mitchilli	36	1	.	.	.	.	.	.	.	.	.	.
AB0208P02-1	Menidia spp.	12	1	.	.	.	.	.	.	.	.	.	.
AB0208P02-1	M. gulosus	32	1	.	.	.	.	.	.	.	.	.	.
AB0208P02-1	Mugil spp.	8	1	.	.	.	.	.	.	.	.	.	.
AB0208P02-1	G. holbrooki	4	1	.	.	.	.	.	.	.	.	.	.
AB0208P02-1	E. saurus	10	1	.	.	.	.	.	.	.	.	.	.
AB0208P02-2	C. undecimalis - R	2	0	215	210	.	.	.	.	.	.	.	.
AB0208P02-2	C. undecimalis	1	0	68	.	.	.	.	.	.	.	.	.
AB0208P02-2	A. mitchilli	25	1	.	.	.	.	.	.	.	.	.	.
AB0208P02-2	D. plumieri	4	0	.	.	.	.	.	.	.	.	.	.
AB0208P02-2	M. gulosus	6	1	.	.	.	.	.	.	.	.	.	.
AB0208P02-2	Palaemonetes spp.	3	1	.	.	.	.	.	.	.	.	.	.

APPENDIX F – SNOOK WORK-UP DATA

Table A10. Raw snook work-up data. This is a large table that is two pages wide by sixteen pages long. The first page column is labeled as “A” and the second page column is labeled as “B”. Pages are linked by “sampleID” and “snook sample”.

SampleID	Species	Location	Habitat type	Date	Snook sample	Field SL	SL	Final SL	FL	TL	Weight
AB09062950	C. undecimalis	Up	Creek	9/19/2006	43	196	191	191	218	242	101.18
AB0906P02-1	C. undecimalis	Up	Pond	9/19/2006	30	20	20	20	23	25	0.1405
AB0906P02-1	C. undecimalis	Up	Pond	9/19/2006	31	20	20	20	23	25	0.1427
AB0906P02-1	C. undecimalis	Up	Pond	9/19/2006	32	23	23	23	26	30	0.22
AB0906P02-2	C. undecimalis	Up	Pond	9/19/2006	26	28	28	28	33	36	0.3509
AB0906P02-2	C. undecimalis	Up	Pond	9/19/2006	27	21	21	21	24	28	0.1743
AB0906P02-3	C. undecimalis - R	Up	Pond	9/19/2006	.	530	.	530	.	.	.
AB0906P06-3	C. undecimalis	Down	Pond	9/19/2006	33	16	16	16	18	20	0.0686
AB0906P06-3	C. undecimalis	Down	Pond	9/19/2006	34	34	34	34	38	44	0.6375
AB0906P06-3	C. undecimalis	Down	Pond	9/19/2006	35	246	246	246	280	312	210.8
AB09061650	C. undecimalis	Down	Creek	9/29/2006	46	.	165	165	187	187	63.89
AB0906P01-1	C. undecimalis	Up	Pond	9/29/2006	44	.	27	27	31	31	0.3501
AB0906P01-1	C. undecimalis	Up	Pond	9/29/2006	45	.	42	42	48	48	1.2259
AB0906P01-3	C. undecimalis	Up	Pond	9/29/2006	36	31	31	31	35	41	0.5327
AB0906P01-3	C. undecimalis	Up	Pond	9/29/2006	37	32	32	32	35	41	0.5896
AB0906P01-3	C. undecimalis	Up	Pond	9/29/2006	38	34	34	34	39	44	0.7224
AB0906P01-3	C. undecimalis	Up	Pond	9/29/2006	39	46	46	46	54	61	1.6948
AB0906P01-3	C. undecimalis	Up	Pond	9/29/2006	40	49	49	49	56	63	1.9038
AB0906P01-3	C. undecimalis	Up	Pond	9/29/2006	41	29	29	29	33	38	0.442
AB0906P01-3	C. undecimalis	Up	Pond	9/29/2006	42	29	29	29	33	38	0.4714
AB0906P07-1	C. undecimalis	Down	Pond	9/29/2006	28	30	30	30	34	37	0.3954
AB0906P07-1	C. undecimalis	Down	Pond	9/29/2006	29	33	33	33	37	42	0.5682
AB10062110	C. undecimalis	Up	Creek	10/6/2006	48	.	102	102	118	118	16.6542
AB10062880	C. undecimalis	Up	Creek	10/6/2006	49	.	37	37	42	42	0.7911
AB10062880	C. undecimalis	Up	Creek	10/6/2006	50	.	55	55	61	61	2.4635

Table A10 continued. Page column A.

AB1006P02-1	C. undecimalis	Up	Pond	10/6/2006	98	.	37	37	41	48	1.0448
AB1006P02-1	C. undecimalis	Up	Pond	10/6/2006	99	.	35	35	41	47	0.7274
AB1006P02-1	C. undecimalis	Up	Pond	10/6/2006	100	.	41	41	47	53	1.0442
AB1006P02-1	C. undecimalis	Up	Pond	10/6/2006	101	.	36	36	43	49	0.8237
AB1006P02-1	C. undecimalis	Up	Pond	10/6/2006	102	.	35	35	41	46	0.8255
AB1006P02-1	C. undecimalis	Up	Pond	10/6/2006	103	.	34	34	39	44	0.6582
AB1006P02-1	C. undecimalis	Up	Pond	10/6/2006	104	.	37	37	43	48	0.8078
AB1006P02-1	C. undecimalis	Up	Pond	10/6/2006	105	.	38	38	45	51	0.9278
AB1006P02-1	C. undecimalis	Up	Pond	10/6/2006	106	.	46	46	54	61	1.722
AB1006P02-1	C. undecimalis	Up	Pond	10/6/2006	107	.	40	40	46	52	0.9751
AB1006P02-1	C. undecimalis	Up	Pond	10/6/2006	108	.	31	31	36	41	0.5125
AB1006P02-1	C. undecimalis	Up	Pond	10/6/2006	109	.	40	40	47	52	1.1645
AB1006P02-1	C. undecimalis	Up	Pond	10/6/2006	110	.	36	36	42	48	0.7672
AB1006P02-2	C. undecimalis	Up	Pond	10/6/2006	88	.	40	40	49	52	0.9344
AB1006P02-2	C. undecimalis	Up	Pond	10/6/2006	89	.	221	221	256	277	152.44
AB1006P02-3	C. undecimalis	Up	Pond	10/6/2006	111	.	104	104	119	133	16.7209
AB1006P02-3	C. undecimalis	Up	Pond	10/6/2006	112	.	194	194	225	251	110.07
AB1006P02-3	C. undecimalis	Up	Pond	10/6/2006	113	.	65	65	75	84	4.0843
AB1006P02-3	C. undecimalis	Up	Pond	10/6/2006	114	.	42	42	48	54	1.053
AB1006P02-3	C. undecimalis	Up	Pond	10/6/2006	115	.	50	50	58	65	1.8721
AB1006P06-2	C. undecimalis	Down	Pond	10/6/2006	47	.	39	39	45	45	0.8735
AB10062850	C. undecimalis	Up	Creek	10/24/2006	90	.	46	46	53	60	1.3782
AB10062850	C. undecimalis	Up	Creek	10/24/2006	91	.	49	49	57	65	1.6421
AB10062850	C. undecimalis	Up	Creek	10/24/2006	92	.	53	53	61	70	2.4061
AB10062850	C. undecimalis	Up	Creek	10/24/2006	93	.	47	47	54	62	1.5671
AB10062850	C. undecimalis	Up	Creek	10/24/2006	94	.	53	53	61	69	2.2705
AB10062850	C. undecimalis	Up	Creek	10/24/2006	95	.	54	54	63	71	2.6375
AB10062850	C. undecimalis	Up	Creek	10/24/2006	96	.	70	70	81	91	5.0558
AB10062850	C. undecimalis	Up	Creek	10/24/2006	97	.	70	70	82	90	4.8352
AB10063030	C. undecimalis	Up	Creek	10/24/2006	79	.	53	53	62	70	2.4854
AB10063030	C. undecimalis	Up	Creek	10/24/2006	80	.	43	43	48	56	1.2539
AB10063030	C. undecimalis	Up	Creek	10/24/2006	81	.	40	40	47	52	0.9582
AB10063030	C. undecimalis	Up	Creek	10/24/2006	82	.	56	56	65	74	2.9247

Table A10 continued. Page column A.

AB10063030	C. undecimalis	Up	Creek	10/24/2006	83	.	54	54	61	70	2.3899
AB10063030	C. undecimalis	Up	Creek	10/24/2006	84	.	61	61	70	80	3.5213
AB1006P01-1	C. undecimalis	Up	Pond	10/24/2006	51	.	30	30	33	33	0.4549
AB1006P01-2	C. undecimalis	Up	Pond	10/24/2006	116	.	26	26	30	34	0.3075
AB1006P01-2	C. undecimalis	Up	Pond	10/24/2006	117	.	42	42	48	55	1.1615
AB1006P01-2	C. undecimalis	Up	Pond	10/24/2006	118	.	34	34	39	45	0.6317
AB1006P01-2	C. undecimalis	Up	Pond	10/24/2006	119	.	24	24	27	30	0.2196
AB1006P01-2	C. undecimalis	Up	Pond	10/24/2006	120	.	70	70	81	91	5.3142
AB1006P01-3	C. undecimalis	Up	Pond	10/24/2006	121	.	35	35	40	46	0.6895
AB1006P01-3	C. undecimalis	Up	Pond	10/24/2006	122	.	47	47	54	61	1.6142
AB1006P01-3	C. undecimalis	Up	Pond	10/24/2006	123	.	49	49	56	64	1.7174
AB1006P01-3	C. undecimalis	Up	Pond	10/24/2006	124	.	44	44	51	58	1.3151
AB1006P01-3	C. undecimalis	Up	Pond	10/24/2006	125	.	35	35	41	46	0.693
AB1006P01-3	C. undecimalis	Up	Pond	10/24/2006	126	.	44	44	50	57	1.2532
AB1006P01-3	C. undecimalis	Up	Pond	10/24/2006	127	.	49	49	56	63	1.6217
AB1006P01-3	C. undecimalis	Up	Pond	10/24/2006	128	.	47	47	55	61	1.5751
AB1006P01-3	C. undecimalis	Up	Pond	10/24/2006	129	.	48	48	54	62	1.5336
AB1006P01-3	C. undecimalis	Up	Pond	10/24/2006	130	.	27	27	31	36	0.2808
AB1006P01-3	C. undecimalis	Up	Pond	10/24/2006	131	.	52	52	60	68	1.9445
AB1006P01-3	C. undecimalis	Up	Pond	10/24/2006	132	.	43	43	50	57	1.3295
AB1006P01-3	C. undecimalis	Up	Pond	10/24/2006	133	.	47	47	54	62	1.429
AB1006P01-3	C. undecimalis	Up	Pond	10/24/2006	134	.	39	39	45	51	0.8694
AB1006P01-3	C. undecimalis	Up	Pond	10/24/2006	135	.	31	31	36	41	0.4657
AB1006P01-3	C. undecimalis	Up	Pond	10/24/2006	136	.	38	38	43	49	0.812
AB1006P01-3	C. undecimalis	Up	Pond	10/24/2006	137	.	39	39	45	51	0.8768
AB1006P07-3	C. undecimalis	Down	Pond	10/24/2006	63	.	53	53	61	69	2.1364
AB10061040	C. undecimalis	Down	Creek	10/31/2006	55	.	54	54	62	62	2.4983
AB10061040	C. undecimalis	Down	Creek	10/31/2006	56	.	63	63	73	73	3.9767
AB10061040	C. undecimalis	Down	Creek	10/31/2006	57	.	62	62	72	72	3.8423
AB10061040	C. undecimalis	Down	Creek	10/31/2006	58	.	68	68	80	80	5.1325
AB10061040	C. undecimalis	Down	Creek	10/31/2006	59	.	84	84	96	96	9.1921
AB10061100	C. undecimalis	Down	Creek	10/31/2006	85	.	91	91	105	118	12.0382
AB10061100	C. undecimalis	Down	Creek	10/31/2006	86	.	107	107	122	135	20.1688

Table A10 continued. Page column A.

AB10061100	C. undecimalis	Down	Creek	10/31/2006	87	.	65	65	74	84	4.1013
AB10061480	C. undecimalis	Down	Creek	10/31/2006	52	.	64	64	74	74	4.2631
AB11062110	C. undecimalis	Up	Creek	11/21/2006	138	.	69	69	79	89	4.9234
AB11062110	C. undecimalis	Up	Creek	11/21/2006	139	.	69	69	80	89	4.7632
AB11062110	C. undecimalis	Up	Creek	11/21/2006	140	.	67	67	77	88	4.472
AB11062110	C. undecimalis	Up	Creek	11/21/2006	141	.	68	68	78	88	4.6623
AB11062110	C. undecimalis	Up	Creek	11/21/2006	142	.	86	86	98	113	10.4478
AB1106P01-1	C. undecimalis	Up	Pond	11/21/2006	152	.	73	73	84	95	5.7429
AB1106P01-1	C. undecimalis	Up	Pond	11/21/2006	153	.	38	38	43	49	0.8115
AB1106P01-1	C. undecimalis	Up	Pond	11/21/2006	154	.	51	51	58	67	2.0789
AB1106P01-1	C. undecimalis	Up	Pond	11/21/2006	155	.	60	60	69	78	3.2568
AB1106P01-3	C. undecimalis	Up	Pond	11/21/2006	149	.	67	67	78	88	4.7534
AB1106P01-3	C. undecimalis	Up	Pond	11/21/2006	150	.	45	45	52	60	0.8553
AB1106P01-3	C. undecimalis	Up	Pond	11/21/2006	151	.	60	60	69	79	3.2872
AB1106P06-3	C. undecimalis	Down	Pond	11/21/2006	62	.	49	49	56	64	1.8218
AB11061720	C. undecimalis	Down	Creek	11/25/2006	143	.	59	59	68	78	2.9741
AB11062210	C. undecimalis	Down	Creek	11/25/2006	144	.	46	46	53	60	1.5109
AB11062210	C. undecimalis	Down	Creek	11/25/2006	145	.	47	47	54	61	1.5176
AB11062210	C. undecimalis	Down	Creek	11/25/2006	146	.	56	56	64	73	2.6371
AB11062210	C. undecimalis	Down	Creek	11/25/2006	147	.	52	52	60	67	2.1511
AB11062210	C. undecimalis	Down	Creek	11/25/2006	148	.	59	59	68	77	2.9804
AB11062820	C. undecimalis	Up	Creek	11/25/2006	174	.	45	45	52	59	1.3191
AB11062820	C. undecimalis	Up	Creek	11/25/2006	175	.	49	49	56	63	1.8608
AB11062820	C. undecimalis	Up	Creek	11/25/2006	176	.	51	51	60	69	2.0308
AB11062820	C. undecimalis	Up	Creek	11/25/2006	177	.	60	60	70	78	3.1049
AB11062820	C. undecimalis	Up	Creek	11/25/2006	178	.	47	47	54	61	1.5034
AB11062820	C. undecimalis	Up	Creek	11/25/2006	179	.	57	57	65	74	2.8242
AB11062820	C. undecimalis	Up	Creek	11/25/2006	180	.	42	42	48	55	1.1488
AB11062820	C. undecimalis	Up	Creek	11/25/2006	181	.	102	102	116	132	15.5026
AB11062820	C. undecimalis	Up	Creek	11/25/2006	182	.	53	53	61	70	2.2648
AB11062820	C. undecimalis	Up	Creek	11/25/2006	183	.	44	44	52	58	1.32
AB11062820	C. undecimalis	Up	Creek	11/25/2006	184	.	43	43	50	57	1.337
AB11062820	C. undecimalis	Up	Creek	11/25/2006	185	.	46	46	53	61	1.4858

Table A10 continued. Page column A.

AB11062820	C. undecimalis	Up	Creek	11/25/2006	186	.	48	48	55	62	1.6509
AB11062820	C. undecimalis	Up	Creek	11/25/2006	187	.	43	43	50	57	1.3281
AB11062820	C. undecimalis	Up	Creek	11/25/2006	188	.	46	46	53	60	1.4635
AB11063020	C. undecimalis	Up	Creek	11/25/2006	16	.	61	61	70	79	3.2894
AB11063020	C. undecimalis	Up	Creek	11/25/2006	17	.	88	88	102	113	10.695
AB11063020	C. undecimalis	Up	Creek	11/25/2006	18	.	53	53	60	69	2.105
AB11063020	C. undecimalis	Up	Creek	11/25/2006	19	.	51	51	58	66	1.8518
AB1106P02-1	C. undecimalis	Up	Pond	11/25/2006	1	.	87	87	99	111	10.4447
AB1106P02-1	C. undecimalis	Up	Pond	11/25/2006	2	.	68	68	77	88	4.5969
AB1106P02-1	C. undecimalis	Up	Pond	11/25/2006	3	.	60	60	68	78	2.9717
AB1106P02-1	C. undecimalis	Up	Pond	11/25/2006	4	.	52	52	60	68	2.1745
AB1106P02-1	C. undecimalis	Up	Pond	11/25/2006	5	.	44	44	51	58	1.3397
AB1106P02-1	C. undecimalis	Up	Pond	11/25/2006	6	.	55	55	62	71	2.3978
AB1106P02-1	C. undecimalis	Up	Pond	11/25/2006	7	.	46	46	52	60	1.4974
AB1106P02-1	C. undecimalis	Up	Pond	11/25/2006	8	.	53	53	62	69	2.2353
AB1106P02-1	C. undecimalis	Up	Pond	11/25/2006	9	.	49	49	56	65	1.9727
AB1106P02-1	C. undecimalis	Up	Pond	11/25/2006	10	.	47	47	55	62	1.6587
AB1106P02-1	C. undecimalis	Up	Pond	11/25/2006	394	.	52	52	60	69	2.1607
AB1106P02-1	C. undecimalis	Up	Pond	11/25/2006	395	.	44	44	51	58	1.2886
AB1106P02-1	C. undecimalis	Up	Pond	11/25/2006	396	.	44	44	52	58	1.279
AB1106P02-1	C. undecimalis	Up	Pond	11/25/2006	397	.	42	42	48	54	1.0576
AB1106P02-1	C. undecimalis	Up	Pond	11/25/2006	398	.	43	43	49	55	1.1655
AB1106P02-1	C. undecimalis	Up	Pond	11/25/2006	399	.	33	33	48	43	0.5256
AB1106P02-1	C. undecimalis	Up	Pond	11/25/2006	400	.	46	46	53	61	1.3664
AB1106P02-1	C. undecimalis	Up	Pond	11/25/2006	401	.	52	52	60	68	2.1675
AB1106P02-1	C. undecimalis	Up	Pond	11/25/2006	402	.	43	43	49	56	1.2857
AB1106P02-1	C. undecimalis	Up	Pond	11/25/2006	403	.	52	52	60	67	1.9563
AB1106P02-1	C. undecimalis	Up	Pond	11/25/2006	404	.	49	49	57	65	1.8615
AB1106P02-1	C. undecimalis	Up	Pond	11/25/2006	405	.	57	57	66	75	2.5308
AB1106P02-1	C. undecimalis	Up	Pond	11/25/2006	406	.	45	45	52	59	1.3457
AB1106P02-1	C. undecimalis	Up	Pond	11/25/2006	407	.	52	52	59	67	1.9454
AB1106P02-1	C. undecimalis	Up	Pond	11/25/2006	408	.	47	47	54	61	1.4316
AB1106P02-2	C. undecimalis	Up	Pond	11/25/2006	165	.	46	46	53	60	1.3293

Table A10 continued. Page column A.

AB1106P02-2	C. undecimalis	Up	Pond	11/25/2006	166	.	56	56	64	73	2.4313
AB1106P02-2	C. undecimalis	Up	Pond	11/25/2006	167	.	45	45	52	59	1.3314
AB1106P02-2	C. undecimalis	Up	Pond	11/25/2006	168	.	53	53	62	70	2.1722
AB1106P02-2	C. undecimalis	Up	Pond	11/25/2006	169	.	46	46	53	61	1.4381
AB1106P02-2	C. undecimalis	Up	Pond	11/25/2006	170	.	53	53	61	69	2.0199
AB1106P02-2	C. undecimalis	Up	Pond	11/25/2006	171	.	46	46	54	60	1.4534
AB1106P02-2	C. undecimalis	Up	Pond	11/25/2006	172	.	57	57	65	73	2.6476
AB1106P02-2	C. undecimalis	Up	Pond	11/25/2006	173	.	53	53	61	69	2.2507
AB1106P02-3	C. undecimalis	Up	Pond	11/25/2006	189	.	51	51	58	66	1.9047
AB1106P02-3	C. undecimalis	Up	Pond	11/25/2006	190	.	73	73	84	94	5.7383
AB1106P02-3	C. undecimalis	Up	Pond	11/25/2006	191	.	46	46	53	61	1.4514
AB1106P02-3	C. undecimalis	Up	Pond	11/25/2006	192	.	42	42	48	56	1.0952
AB1106P02-3	C. undecimalis	Up	Pond	11/25/2006	193	.	50	50	58	66	1.8927
AB1106P02-3	C. undecimalis	Up	Pond	11/25/2006	194	.	64	64	74	84	4.0921
AB1106P02-3	C. undecimalis	Up	Pond	11/25/2006	195	.	35	35	40	46	0.6741
AB1106P02-3	C. undecimalis	Up	Pond	11/25/2006	196	.	65	65	74	85	3.9176
AB1106P02-3	C. undecimalis	Up	Pond	11/25/2006	197	.	69	69	80	89	5.1566
AB1106P02-3	C. undecimalis	Up	Pond	11/25/2006	198	.	50	50	58	66	2.0008
AB1106P02-3	C. undecimalis	Up	Pond	11/25/2006	409	.	48	48	56	62	1.5846
AB1106P02-3	C. undecimalis	Up	Pond	11/25/2006	410	.	65	65	75	85	4.1069
AB1106P02-3	C. undecimalis	Up	Pond	11/25/2006	411	.	53	53	60	69	2.1712
AB1106P02-3	C. undecimalis	Up	Pond	11/25/2006	412	.	56	56	64	73	2.7028
AB1106P02-3	C. undecimalis	Up	Pond	11/25/2006	413	.	60	60	69	79	3.1865
AB1106P02-3	C. undecimalis	Up	Pond	11/25/2006	414	.	48	48	55	63	1.6456
AB1106P02-3	C. undecimalis	Up	Pond	11/25/2006	415	.	40	40	47	53	0.9747
AB1106P02-3	C. undecimalis	Up	Pond	11/25/2006	416	.	53	53	60	69	2.137
AB1106P02-3	C. undecimalis	Up	Pond	11/25/2006	417	.	43	43	49	56	1.1775
AB1106P02-3	C. undecimalis	Up	Pond	11/25/2006	418	.	53	53	62	69	2.1216
AB1106P07-2	C. undecimalis	Down	Pond	11/25/2006	60	.	48	48	53	64	1.6235
AB1106P07-2	C. undecimalis	Down	Pond	11/25/2006	61	.	58	58	68	76	2.7166
AB1106P07-3	C. undecimalis	Down	Pond	11/25/2006	156	.	75	75	86	98	6.0761
AB1106P07-3	C. undecimalis	Down	Pond	11/25/2006	157	.	53	53	62	70	2.232
AB1106P07-3	C. undecimalis	Down	Pond	11/25/2006	158	.	57	57	66	75	2.8494

Table A10 continued. Page column A.

AB1106P07-3	C. undecimalis	Down	Pond	11/25/2006	159	.	78	78	89	99	6.7497
AB1106P07-3	C. undecimalis	Down	Pond	11/25/2006	160	.	48	48	55	63	1.5758
AB1106P07-3	C. undecimalis	Down	Pond	11/25/2006	161	.	55	55	63	73	2.3716
AB1106P07-3	C. undecimalis	Down	Pond	11/25/2006	162	.	65	65	76	86	3.9671
AB1106P07-3	C. undecimalis	Down	Pond	11/25/2006	163	.	44	44	50	57	1.2743
AB1106P07-3	C. undecimalis	Down	Pond	11/25/2006	164	.	65	65	74	84	4.1467
AB12061730	C. undecimalis	Down	Creek	12/21/2006	204	62	58	58	67	.	2.9469
AB12061730	C. undecimalis	Down	Creek	12/21/2006	205	76	75	75	86	98	6.0913
AB12061730	C. undecimalis	Down	Creek	12/21/2006	206	55	54	54	62	70	2.3005
AB12062190	C. undecimalis	Down	Creek	12/21/2006	214	46	47	47	53	61	1.3758
AB12062190	C. undecimalis	Down	Creek	12/21/2006	215	46	45	45	51	59	1.2349
AB12062190	C. undecimalis	Down	Creek	12/21/2006	216	66	65	65	75	85	4.1886
AB12062190	C. undecimalis	Down	Creek	12/21/2006	217	60	60	60	69	78	3.2384
AB12062590	C. undecimalis	Up	Creek	12/21/2006	203	75	75	75	85	98	6.2533
AB1206P01-1	C. undecimalis	Up	Pond	12/21/2006	231	61	60	60	69	78	3.2288
AB1206P01-1	C. undecimalis	Up	Pond	12/21/2006	232	72	72	72	83	93	5.1573
AB1206P01-1	C. undecimalis	Up	Pond	12/21/2006	233	47	48	48	55	63	1.6475
AB1206P01-1	C. undecimalis	Up	Pond	12/21/2006	234	70	69	69	79	89	5.007
AB1206P01-1	C. undecimalis	Up	Pond	12/21/2006	235	63	61	61	70	79	3.2925
AB1206P01-2	C. undecimalis	Up	Pond	12/21/2006	238	67	67	67	76	86	4.183
AB1206P01-2	C. undecimalis	Up	Pond	12/21/2006	239	60	60	60	68	77	3.1746
AB1206P01-2	C. undecimalis	Up	Pond	12/21/2006	240	89	88	88	100	114	9.7599
AB1206P01-2	C. undecimalis	Up	Pond	12/21/2006	241	62	61	61	70	80	3.4668
AB1206P01-3	C. undecimalis	Up	Pond	12/21/2006	200	.	41	41	48	54	0.9528
AB1206P01-3	C. undecimalis	Up	Pond	12/21/2006	201	61	56	56	65	73	2.1538
AB1206P01-3	C. undecimalis	Up	Pond	12/21/2006	202	170	165	165	189	211	62.24
AB1206P06-2	C. undecimalis	Down	Pond	12/21/2006	236	61	59	59	67	76	2.9307
AB1206P06-2	C. undecimalis	Down	Pond	12/21/2006	237	77	76	76	86	98	6.1418
AB1206P06-3	C. undecimalis	Down	Pond	12/21/2006	219	.	58	58	67	76	2.69
AB1206P06-3	C. undecimalis	Down	Pond	12/21/2006	220	.	61	61	70	79	3.2744
AB12061150	C. undecimalis	Down	Creek	12/28/2006	207	60	59	59	68	77	2.9481
AB12061470	C. undecimalis	Down	Creek	12/28/2006	218	60	59	59	68	79	3.0664
AB1206P02-1	C. undecimalis	Up	Pond	12/28/2006	227	50	49	49	55	64	1.6731

Table A10 continued. Page column A.

AB1206P02-1	C. undecimalis	Up	Pond	12/28/2006	228	51	49	49	56	64	1.5924
AB1206P02-1	C. undecimalis	Up	Pond	12/28/2006	229	79	69	69	79	89	4.5818
AB1206P02-1	C. undecimalis	Up	Pond	12/28/2006	230	70	68	68	77	87	4.1349
AB1206P02-2	C. undecimalis	Up	Pond	12/28/2006	221	62	64	64	73	83	3.6714
AB1206P02-2	C. undecimalis	Up	Pond	12/28/2006	222	68	67	67	77	88	4.2391
AB1206P02-2	C. undecimalis	Up	Pond	12/28/2006	223	67	64	64	73	83	3.5495
AB1206P02-2	C. undecimalis	Up	Pond	12/28/2006	224	79	76	76	86	98	6.4344
AB1206P02-2	C. undecimalis	Up	Pond	12/28/2006	225	61	61	61	70	79	3.0217
AB1206P02-2	C. undecimalis	Up	Pond	12/28/2006	226	46	46	46	52	60	1.4139
AB1206P02-3	C. undecimalis	Up	Pond	12/28/2006	379	51	49	49	56	63	1.9067
AB1206P02-3	C. undecimalis	Up	Pond	12/28/2006	380	41	41	41	47	53	0.9928
AB1206P02-3	C. undecimalis	Up	Pond	12/28/2006	381	46	46	46	52	60	1.4471
AB1206P02-3	C. undecimalis	Up	Pond	12/28/2006	382	57	57	57	64	73	2.6668
AB1206P02-3	C. undecimalis	Up	Pond	12/28/2006	383	62	61	61	70	79	3.0079
AB1206P02-3	C. undecimalis	Up	Pond	12/28/2006	384	40	40	40	45	52	0.9589
AB1206P02-3	C. undecimalis	Up	Pond	12/28/2006	385	64	63	63	72	82	3.4387
AB1206P02-3	C. undecimalis	Up	Pond	12/28/2006	386	53	50	50	57	65	1.8966
AB1206P02-3	C. undecimalis	Up	Pond	12/28/2006	387	57	56	56	64	73	2.5519
AB1206P02-3	C. undecimalis	Up	Pond	12/28/2006	388	54	52	52	60	68	2.0352
AB1206P02-3	C. undecimalis	Up	Pond	12/28/2006	.	42	.	42	.	.	.
AB1206P02-3	C. undecimalis	Up	Pond	12/28/2006	.	43	.	43	.	.	.
AB1206P02-3	C. undecimalis	Up	Pond	12/28/2006	.	43	.	43	.	.	.
AB1206P02-3	C. undecimalis	Up	Pond	12/28/2006	.	54	.	54	.	.	.
AB1206P02-3	C. undecimalis	Up	Pond	12/28/2006	.	56	.	56	.	.	.
AB1206P02-3	C. undecimalis	Up	Pond	12/28/2006	.	59	.	59	.	.	.
AB1206P02-3	C. undecimalis	Up	Pond	12/28/2006	.	59	.	59	.	.	.
AB1206P02-3	C. undecimalis	Up	Pond	12/28/2006	.	59	.	59	.	.	.
AB1206P02-3	C. undecimalis	Up	Pond	12/28/2006	.	63	.	63	.	.	.
AB1206P02-3	C. undecimalis	Up	Pond	12/28/2006	.	72	.	72	.	.	.
AB1206P02-3	C. undecimalis - R	Up	Pond	12/28/2006	.	44	.	44	.	.	.
AB1206P02-3	C. undecimalis - R	Up	Pond	12/28/2006	.	44	.	44	.	.	.
AB1206P02-3	C. undecimalis - R	Up	Pond	12/28/2006	.	51	.	51	.	.	.
AB1206P07-1	C. undecimalis	Down	Pond	12/28/2006	208	51	49	49	56	64	1.658

Table A10 continued. Page column A.

AB1206P07-1	C. undecimalis	Down	Pond	12/28/2006	209	50	48	48	55	63	1.4671
AB1206P07-1	C. undecimalis	Down	Pond	12/28/2006	210	63	62	62	71	81	3.2918
AB1206P07-1	C. undecimalis	Down	Pond	12/28/2006	211	59	56	56	65	74	2.7271
AB1206P07-1	C. undecimalis	Down	Pond	12/28/2006	212	52	50	50	57	65	1.7948
AB1206P07-1	C. undecimalis	Down	Pond	12/28/2006	213	72	69	69	79	90	4.8236
AB1206P07-2	C. undecimalis	Down	Pond	12/28/2006	199	55	53	53	62	70	2.0047
AB01071360	C. undecimalis	Down	Creek	1/24/2007	249	58	57	57	66	74	2.5276
AB01071360	C. undecimalis	Down	Creek	1/24/2007	250	57	56	56	65	74	2.3658
AB01071360	C. undecimalis	Down	Creek	1/24/2007	251	64	65	65	74	85	3.9654
AB01071360	C. undecimalis	Down	Creek	1/24/2007	252	87	88	88	99	112	8.3321
AB01071730	C. undecimalis	Down	Creek	1/24/2007	268	68	67	67	77	88	4.2822
AB01072340	C. undecimalis	Up	Creek	1/24/2007	243	67	68	68	78	88	4.2515
AB01072340	C. undecimalis	Up	Creek	1/24/2007	244	57	59	59	67	77	2.8039
AB01072780	C. undecimalis	Up	Creek	1/24/2007	242	110	110	110	125	143	19.7135
AB01073060	C. undecimalis	Up	Creek	1/24/2007	245	75	74	74	85	96	5.8378
AB01073060	C. undecimalis	Up	Creek	1/24/2007	246	123	119	119	136	154	25.0981
AB01073060	C. undecimalis	Up	Creek	1/24/2007	247	86	84	84	95	108	8.0324
AB01073060	C. undecimalis	Up	Creek	1/24/2007	248	81	81	81	91	103	7.0741
AB0107P06-1	C. undecimalis	Down	Pond	1/24/2007	253	61	62	62	70	80	3.0674
AB0107P06-1	C. undecimalis	Down	Pond	1/24/2007	254	66	66	66	75	85	4.067
AB0107P06-1	C. undecimalis	Down	Pond	1/24/2007	255	76	75	75	86	97	5.8247
AB0107P06-1	C. undecimalis	Down	Pond	1/24/2007	256	52	54	54	62	71	2.3433
AB0107P06-1	C. undecimalis	Down	Pond	1/24/2007	257	56	56	56	65	73	2.5908
AB0107P06-1	C. undecimalis	Down	Pond	1/24/2007	258	62	62	62	71	81	3.3787
AB0107P06-2	C. undecimalis	Down	Pond	1/24/2007	269	58	56	56	64	73	2.4592
AB0107P06-2	C. undecimalis	Down	Pond	1/24/2007	270	60	60	60	68	78	3.2784
AB0107P06-2	C. undecimalis	Down	Pond	1/24/2007	271	68	67	67	77	88	3.8856
AB0107P06-2	C. undecimalis	Down	Pond	1/24/2007	272	53	53	53	61	70	2.2801
AB0107P06-2	C. undecimalis	Down	Pond	1/24/2007	273	66	66	66	76	86	4.0931
AB0107P06-2	C. undecimalis	Down	Pond	1/24/2007	274	65	65	65	75	85	3.8816
AB0107P06-3	C. undecimalis	Down	Pond	1/24/2007	262	62	64	64	73	83	3.6136
AB01073150	C. undecimalis	Up	Creek	1/26/2007	275	65	65	65	74	85	3.8441
AB01073150	C. undecimalis	Up	Creek	1/26/2007	276	52	52	52	60	68	2.0053

Table A10 continued. Page column A.

AB01073150	C. undecimalis	Up	Creek	1/26/2007	277	64	63	63	72	83	3.6599
AB01073150	C. undecimalis	Up	Creek	1/26/2007	278	73	72	72	82	.	5.1572
AB01073150	C. undecimalis	Up	Creek	1/26/2007	279	81	82	82	94	107	8.1346
AB01073150	C. undecimalis	Up	Creek	1/26/2007	280	71	71	71	80	92	5.0272
AB01073150	C. undecimalis	Up	Creek	1/26/2007	281	59	61	61	69	79	3.3397
AB01073150	C. undecimalis	Up	Creek	1/26/2007	282	62	61	61	69	79	3.0994
AB01073150	C. undecimalis	Up	Creek	1/26/2007	283	73	71	71	81	.	5.0913
AB01073150	C. undecimalis	Up	Creek	1/26/2007	284	67	66	66	76	86	4.1389
AB01073150	C. undecimalis	Up	Creek	1/26/2007	285	80	80	80	92	106	7.6813
AB01073150	C. undecimalis	Up	Creek	1/26/2007	286	68	67	67	78	88	4.6822
AB01073150	C. undecimalis	Up	Creek	1/26/2007	287	86	85	85	97	110	8.5819
AB01073150	C. undecimalis	Up	Creek	1/26/2007	288	115	114	114	130	146	20.5356
AB0107P01-1	C. undecimalis	Up	Pond	1/26/2007	259	.	22	22	25	29	0.1375
AB0107P07-2	C. undecimalis	Down	Pond	1/31/2007	260	48	50	50	57	65	1.7704
AB0107P07-2	C. undecimalis	Down	Pond	1/31/2007	261	50	50	50	56	64	1.7345
AB0107P07-3	C. undecimalis	Down	Pond	1/31/2007	263	68	68	68	78	88	4.4697
AB0107P07-3	C. undecimalis	Down	Pond	1/31/2007	264	51	51	51	58	67	1.8487
AB0107P07-3	C. undecimalis	Down	Pond	1/31/2007	265	62	60	60	69	78	3.0065
AB0107P07-3	C. undecimalis	Down	Pond	1/31/2007	266	26	26	26	30	35	0.3007
AB0107P07-3	C. undecimalis	Down	Pond	1/31/2007	267	89	88	88	100	112	9.9038
AB02071980	C. undecimalis	Down	Creek	2/26/2007	321	73	72	72	82	93	5.2871
AB02072350	C. undecimalis	Down	Creek	2/26/2007	307	64	60	60	69	78	2.7736
AB02072350	C. undecimalis	Down	Creek	2/26/2007	308	69	68	68	77	87	4.4175
AB02072350	C. undecimalis	Down	Creek	2/26/2007	309	64	61	61	71	81	3.2738
AB02072350	C. undecimalis	Down	Creek	2/26/2007	310	61	59	59	67	76	2.9831
AB02072350	C. undecimalis	Down	Creek	2/26/2007	311	82	80	80	92	105	6.2732
AB02073170	C. undecimalis	Up	Creek	2/26/2007	289	72	71	71	81	92	4.6803
AB02073170	C. undecimalis	Up	Creek	2/26/2007	290	90	90	90	103	117	10.9891
AB02073170	C. undecimalis	Up	Creek	2/26/2007	291	63	60	60	70	80	3.4342
AB02073170	C. undecimalis	Up	Creek	2/26/2007	292	88	87	87	99	113	8.4763
AB02073170	C. undecimalis	Up	Creek	2/26/2007	293	90	87	87	99	113	9.471
AB02073170	C. undecimalis	Up	Creek	2/26/2007	294	92	91	91	105	119	10.7469
AB02073170	C. undecimalis	Up	Creek	2/26/2007	295	71	70	70	80	91	4.7425

Table A10 continued. Page column A.

AB02073170	C. undecimalis	Up	Creek	2/26/2007	296	65	65	65	75	84	3.8056
AB02073170	C. undecimalis	Up	Creek	2/26/2007	297	73	72	72	82	93	5.0303
AB02073170	C. undecimalis	Up	Creek	2/26/2007	298	71	68	68	78	89	4.6134
AB02073170	C. undecimalis	Up	Creek	2/26/2007	299	65	64	64	73	82	3.7078
AB02071900	C. undecimalis	Down	Creek	2/28/2007	312	.	68	68	77	88	4.2358
AB02071900	C. undecimalis	Down	Creek	2/28/2007	313	.	102	102	117	132	14.9625
AB02072160	C. undecimalis	Down	Creek	2/28/2007	300	49	49	49	56	64	1.4567
AB02072160	C. undecimalis	Down	Creek	2/28/2007	301	50	50	50	57	66	1.713
AB02072160	C. undecimalis	Down	Creek	2/28/2007	302	92	91	91	105	118	10.4008
AB02072160	C. undecimalis	Down	Creek	2/28/2007	303	51	52	52	59	67	1.9969
AB02072160	C. undecimalis	Down	Creek	2/28/2007	304	43	41	41	46	53	1.0978
AB02072160	C. undecimalis	Down	Creek	2/28/2007	305	47	46	46	53	60	1.3795
AB02072160	C. undecimalis	Down	Creek	2/28/2007	306	76	74	74	84	95	6.0059
AB02072520	C. undecimalis	Up	Creek	2/28/2007	329	82	82	82	93	105	7.7172
AB02072520	C. undecimalis	Up	Creek	2/28/2007	330	85	82	82	93	106	8.9132
AB0207P01-2	C. undecimalis	Up	Pond	2/28/2007	337	47	45	45	52	58	1.3971
AB0207P01-2	C. undecimalis	Up	Pond	2/28/2007	338	48	45	45	52	59	1.4227
AB0207P01-2	C. undecimalis	Up	Pond	2/28/2007	339	182	173	173	199	223	71.8738
AB0207P01-3	C. undecimalis	Up	Pond	2/28/2007	331	64	62	62	70	80	3.4665
AB0207P01-3	C. undecimalis	Up	Pond	2/28/2007	332	67	63	63	73	84	3.8301
AB0207P01-3	C. undecimalis	Up	Pond	2/28/2007	333	61	59	59	68	77	3.0448
AB0207P01-3	C. undecimalis	Up	Pond	2/28/2007	334	55	55	55	63	72	2.3821
AB0207P01-3	C. undecimalis	Up	Pond	2/28/2007	335	93	92	92	104	118	10.3507
AB0207P01-3	C. undecimalis	Up	Pond	2/28/2007	336	95	97	97	110	124	11.0196
AB0207P02-1	C. undecimalis	Up	Pond	2/28/2007	322	80	79	79	90	104	7.3129
AB0207P02-1	C. undecimalis	Up	Pond	2/28/2007	323	81	80	80	90	101	6.5017
AB0207P02-1	C. undecimalis	Up	Pond	2/28/2007	324	67	67	67	77	88	4.3163
AB0207P02-1	C. undecimalis	Up	Pond	2/28/2007	325	67	64	64	73	84	3.7345
AB0207P02-1	C. undecimalis	Up	Pond	2/28/2007	326	60	60	60	68	76	2.9819
AB0207P02-1	C. undecimalis	Up	Pond	2/28/2007	327	62	60	60	68	78	3.2028
AB0207P02-1	C. undecimalis	Up	Pond	2/28/2007	328	97	97	97	111	125	13.5262
AB0207P02-2	C. undecimalis	Up	Pond	2/28/2007	353	36	36	36	41	46	0.7006
AB0207P02-2	C. undecimalis	Up	Pond	2/28/2007	354	70	70	70	80	92	4.6422

Table A10 continued. Page column A.

AB0207P02-2	C. undecimalis	Up	Pond	2/28/2007	355	78	77	77	88	100	5.9655
AB0207P02-2	C. undecimalis	Up	Pond	2/28/2007	356	47	45	45	51	59	1.2801
AB0207P02-2	C. undecimalis	Up	Pond	2/28/2007	357	48	47	47	53	61	1.5777
AB0207P02-2	C. undecimalis	Up	Pond	2/28/2007	358	63	62	62	71	80	3.2486
AB0207P02-2	C. undecimalis	Up	Pond	2/28/2007	359	61	59	59	68	76	2.9613
AB0207P02-2	C. undecimalis	Up	Pond	2/28/2007	360	97	93	93	106	120	11.8242
AB0207P02-2	C. undecimalis	Up	Pond	2/28/2007	389	42	40	40	46	53	1.0073
AB0207P02-2	C. undecimalis	Up	Pond	2/28/2007	390	54	54	54	63	71	2.4145
AB0207P02-2	C. undecimalis	Up	Pond	2/28/2007	391	52	51	51	60	68	1.7487
AB0207P02-2	C. undecimalis	Up	Pond	2/28/2007	392	61	60	60	68	78	2.8073
AB0207P02-2	C. undecimalis	Up	Pond	2/28/2007	393	66	62	62	71	80	3.3019
AB0207P02-2	C. undecimalis - R	Up	Pond	2/28/2007	.	38	.	38	.	.	.
AB0207P02-2	C. undecimalis - R	Up	Pond	2/28/2007	.	47	.	47	.	.	.
AB0207P02-2	C. undecimalis - R	Up	Pond	2/28/2007	.	49	.	49	.	.	.
AB0207P02-2	C. undecimalis - R	Up	Pond	2/28/2007	.	54	.	54	.	.	.
AB0207P02-2	C. undecimalis - R	Up	Pond	2/28/2007	.	55	.	55	.	.	.
AB0207P02-2	C. undecimalis - R	Up	Pond	2/28/2007	.	56	.	56	.	.	.
AB0207P02-2	C. undecimalis - R	Up	Pond	2/28/2007	.	57	.	57	.	.	.
AB0207P02-2	C. undecimalis - R	Up	Pond	2/28/2007	.	57	.	57	.	.	.
AB0207P02-2	C. undecimalis - R	Up	Pond	2/28/2007	.	59	.	59	.	.	.
AB0207P02-2	C. undecimalis - R	Up	Pond	2/28/2007	.	60	.	60	.	.	.
AB0207P02-2	C. undecimalis - R	Up	Pond	2/28/2007	.	62	.	62	.	.	.
AB0207P02-2	C. undecimalis - R	Up	Pond	2/28/2007	.	62	.	62	.	.	.
AB0207P02-2	C. undecimalis - R	Up	Pond	2/28/2007	.	62	.	62	.	.	.
AB0207P02-2	C. undecimalis - R	Up	Pond	2/28/2007	.	63	.	63	.	.	.
AB0207P02-2	C. undecimalis - R	Up	Pond	2/28/2007	.	63	.	63	.	.	.
AB0207P02-2	C. undecimalis - R	Up	Pond	2/28/2007	.	66	.	66	.	.	.
AB0207P02-2	C. undecimalis - R	Up	Pond	2/28/2007	.	66	.	66	.	.	.
AB0207P02-2	C. undecimalis - R	Up	Pond	2/28/2007	.	66	.	66	.	.	.
AB0207P02-2	C. undecimalis - R	Up	Pond	2/28/2007	.	67	.	67	.	.	.
AB0207P02-2	C. undecimalis - R	Up	Pond	2/28/2007	.	69	.	69	.	.	.
AB0207P02-2	C. undecimalis - R	Up	Pond	2/28/2007	.	74	.	74	.	.	.
AB0207P02-2	C. undecimalis - R	Up	Pond	2/28/2007	.	83	.	83	.	.	.

Table A10 continued. Page column A.

AB0207P02-3	C. undecimalis	Up	Pond	2/28/2007	348	60	59	59	68	78	3.1188
AB0207P02-3	C. undecimalis	Up	Pond	2/28/2007	349	72	71	71	80	91	4.6058
AB0207P02-3	C. undecimalis	Up	Pond	2/28/2007	350	62	60	60	69	78	3.408
AB0207P02-3	C. undecimalis	Up	Pond	2/28/2007	351	59	57	57	65	73	2.6111
AB0207P02-3	C. undecimalis	Up	Pond	2/28/2007	352	83	77	77	88	100	6.6754
AB0207P06-1	C. undecimalis	Down	Pond	2/28/2007	340	64	63	63	73	83	3.2262
AB0207P06-1	C. undecimalis	Down	Pond	2/28/2007	341	92	91	91	104	119	9.9739
AB0207P06-1	C. undecimalis	Down	Pond	2/28/2007	342	121	118	118	134	152	20.9759
AB0207P06-3	C. undecimalis	Down	Pond	2/28/2007	319	77	76	76	87	99	6.2341
AB0207P07-1	C. undecimalis	Down	Pond	2/28/2007	320	66	65	65	75	85	4.1228
AB0207P07-2	C. undecimalis	Down	Pond	2/28/2007	314	63	62	62	71	82	3.5241
AB0207P07-2	C. undecimalis	Down	Pond	2/28/2007	315	68	68	68	78	88	4.2418
AB0207P07-2	C. undecimalis	Down	Pond	2/28/2007	316	75	77	77	87	99	6.2132
AB0207P07-2	C. undecimalis	Down	Pond	2/28/2007	317	71	71	71	81	91	4.982
AB0207P07-2	C. undecimalis	Down	Pond	2/28/2007	318	81	82	82	93	105	6.8502
AB0207P07-3	C. undecimalis	Down	Pond	2/28/2007	343	58	55	55	63	72	2.5706
AB0207P07-3	C. undecimalis	Down	Pond	2/28/2007	344	63	65	65	74	84	3.5204
AB0207P07-3	C. undecimalis	Down	Pond	2/28/2007	345	62	61	61	69	78	3.0214
AB0207P07-3	C. undecimalis	Down	Pond	2/28/2007	346	61	59	59	68	77	2.9884
AB0207P07-3	C. undecimalis	Down	Pond	2/28/2007	347	70	65	65	74	84	4.1286
AB11072760	C. undecimalis	Up	Creek	11/20/2007	362	.	86	86	98	112	9.6708
AB11072970	C. undecimalis	Up	Creek	11/20/2007	364	.	69	69	79	89	4.5018
AB11073080	C. undecimalis	Up	Creek	11/20/2007	367	.	66	66	76	87	4.3652
AB11073080	C. undecimalis	Up	Creek	11/20/2007	368	.	90	90	102	116	10.3177
AB11073080	C. undecimalis - R	Up	Creek	11/20/2007	.	192	.	192	.	.	.
AB1107P06-1	C. undecimalis	Down	Pond	11/20/2007	365	84	82	82	94	106	8.1732
AB1107P06-1	C. undecimalis	Down	Pond	11/20/2007	366	73	72	72	81	93	5.2508
AB11072530	C. undecimalis	Up	Creek	11/21/2007	369	87	87	87	100	114	9.1756
AB11072530	C. undecimalis	Up	Creek	11/21/2007	370	195	182	182	208	234	84.8925
AB1107P02-2	C. undecimalis	Up	Pond	11/21/2007	361	.	69	69	79	89	4.6149
AB1107P05-3	C. undecimalis	Down	Pond	11/21/2007	363	.	64	64	73	84	4.3361
AB02082640	C. undecimalis	Up	Creek	2/5/2008	373	171	176	176	189	214	62.0962
AB02083050	C. undecimalis	Up	Creek	2/5/2008	374	73	73	73	83	95	5.6301

Table A10 continued. Page column A.

AB02083050	C. undecimalis	Up	Creek	2/5/2008	375	71	72	72	83	94	5.0729
AB02083050	C. undecimalis	Up	Creek	2/5/2008	376	73	79	79	90	102	7.0785
AB02083000	C. undecimalis	Up	Creek	2/6/2008	377	.	63	63	73	83	3.6515
AB0208P02-2	C. undecimalis	Up	Pond	2/6/2008	371	68	67	67	77	88	4.5246
AB0208P02-3	C. undecimalis	Up	Pond	2/6/2008	372	83	82	82	93	106	7.8154
AB0208P07-2	C. undecimalis	Down	Pond	2/6/2008	378	178	177	177	201	224	76.1377
AB02072770	C. undecimalis - R	Up	Creek	.	.	242		242	.	.	.
AB02072820	C. undecimalis - R	Up	Creek	.	.	320		320	.	.	.
AB02082090	C. undecimalis - R	Down	Creek	.	.	195		195	.	.	.
AB02082090	C. undecimalis - R	Down	Creek	.	.	220		220	.	.	.
AB02082410	C. undecimalis - R	Up	Creek	.	.	237		237	.	.	.
AB02082640	C. undecimalis - R	Up	Creek	.	.	445		445	.	.	.
AB02082900	C. undecimalis - R	Up	Creek	.	.	187		187	.	.	.
AB02082900	C. undecimalis - R	Up	Creek	.	.	187		187	.	.	.
AB0208P01-3	C. undecimalis - R	Up	Pond	.	.	195		195	.	.	.
AB0208P01-3	C. undecimalis - R	Up	Pond	.	.	255		255	.	.	.
AB0208P02-2	C. undecimalis - R	Up	Pond	.	.	210		210	.	.	.
AB0208P02-2	C. undecimalis - R	Up	Pond	.	.	215		215	.	.	.
AB0208P06-2	C. undecimalis - R	Down	Pond	.	.	182		182	.	.	.
AB0208P07-1	C. undecimalis - R	Down	Pond	.	.	206		206	.	.	.
AB0208P07-2	C. undecimalis - R	Down	Pond	.	.	188		188	.	.	.
AB09061530	C. undecimalis - R	Down	Creek	.	.	255		255	.	.	.
AB09061530	C. undecimalis - R	Down	Creek	.	.	268		268	.	.	.
AB11071420	C. undecimalis - R	Down	Creek	.	.	208		208	.	.	.
AB11072280	C. undecimalis - R	Up	Creek	.	.	183		183	.	.	.
AB11072280	C. undecimalis - R	Up	Creek	.	.	203		203	.	.	.
AB11072280	C. undecimalis - R	Up	Creek	.	.	255		255	.	.	.
AB11072530	C. undecimalis - R	Up	Creek	.	.	205		205	.	.	.
AB11072530	C. undecimalis - R	Up	Creek	.	.	220		220	.	.	.
AB11072530	C. undecimalis - R	Up	Creek	.	.	220		220	.	.	.
AB11072530	C. undecimalis - R	Up	Creek	.	.	245		245	.	.	.
AB11072680	C. undecimalis - R	Up	Creek	.	.	200		200	.	.	.
AB11072760	C. undecimalis - R	Up	Creek	.	.	240		240	.	.	.

Table A10 continued. Page column A.

AB11072970	C. undecimalis - R	Up	Creek	.	.	217		217	.	.	.
AB1107P01-1	C. undecimalis - R	Up	Pond	.	.	238		238	.	.	.
AB1107P02-1	C. undecimalis - R	Up	Pond	.	.	177		177	.	.	.
AB1107P02-1	C. undecimalis - R	Up	Pond	.	.	230		230	.	.	.
AB1107P02-3	C. undecimalis - R	Up	Pond	.	.	200		200	.	.	.
AB1107P02-3	C. undecimalis - R	Up	Pond	.	.	270		270	.	.	.
AB12062980	C. undecimalis - R	Up	Creek	.	.	230		230	.	.	.
TC1006C02-4	C. undecimalis	Down	Creek	10/20/2006	11	.	56	56	61	72	2.4986
TC1006C02-4	C. undecimalis	Down	Creek	10/20/2006	12	.	56	56	63	72	2.695
TC1006C02-5	C. undecimalis	Down	Creek	10/9/2006	13	.	64	64	72	83	4.1699
TC1006C02-5	C. undecimalis	Down	Creek	10/9/2006	14	.	54	54	62	71	2.4474
TC1006C02-5	C. undecimalis	Down	Creek	10/9/2006	15	.	78	78	90	100	7.5542
TC1006C02-7	C. undecimalis	Up	Creek	10/19/2006	20	.	45	45	51	58	1.2374
TC1006C02-7	C. undecimalis	Up	Creek	10/19/2006	21	.	56	56		72	2.452
TC1006C02-6	C. undecimalis	Up	Creek	10/19/2006	22	.	46	46	52	60	1.4292
TC1006C02-6	C. undecimalis	Up	Creek	10/19/2006	23	.	43	43	48	55	1.1173
TC1006C02-6	C. undecimalis	Up	Creek	10/19/2006	24	.	87	87	101	112	10.0237
TC1006C02-6	C. undecimalis	Up	Creek	10/19/2006	25	.	66	66	76	85	4.1714
TC1006C02-3	C. undecimalis	Down	Creek	10/31/2006	53	.	61	61	70	70	3.8685
TC1006C02-3	C. undecimalis	Down	Creek	10/31/2006	54	.	61	61	69	69	3.836
AB1006P06-E	C. undecimalis	Down	Pond	10/5/2006	64	.	37	37	42	48	0.7337
AB1006P06-E	C. undecimalis	Down	Pond	10/5/2006	65	.	39	39	46	51	0.9686
AB1006P06-E	C. undecimalis	Down	Pond	10/5/2006	66	.	36	36	41	47	0.7199
AB1006P06-E	C. undecimalis	Down	Pond	10/5/2006	67	.	40	40	47	53	0.9846
AB1006P06-E	C. undecimalis	Down	Pond	10/5/2006	68	.	40	40	46	51	1.0856
AB1006P06-E	C. undecimalis	Down	Pond	10/5/2006	69	.	47	47	56	62	1.8652
AB1006P06-E	C. undecimalis	Down	Pond	10/5/2006	70	.	38	38	43	51	0.9238
AB1006P06-E	C. undecimalis	Down	Pond	10/5/2006	71	.	48	48	55	62	1.7527
AB1006P06-E	C. undecimalis	Down	Pond	10/5/2006	72	.	44	44	51	57	1.3386
AB1006P06-E	C. undecimalis	Down	Pond	10/5/2006	73	.	49	49	57	63	1.815
AB1006P06-E	C. undecimalis	Down	Pond	10/5/2006	74	.	61	61	70	79	3.4419
AB1006P06-E	C. undecimalis	Down	Pond	10/5/2006	75	.	33	33	38	43	0.5138
AB1006P06-E	C. undecimalis	Down	Pond	10/5/2006	76	.	45	45	52	59	1.4551

Table A10 continued. Page column A.

AB1006P06-E	C. undecimalis	Down	Pond	10/5/2006	77	.	37	37	42	48	0.8001
AB1006P06-E	C. undecimalis	Down	Pond	10/5/2006	78	.	40	40	47	53	1.0371

Table A10 continued. Page column B.

SampleID	Snook sample	liver_weight	Condition_TL	Condition_SL	Hep_coefficient	Hep_index	Avg dN	Avg dC
AB09062950	43	0.7088	0.7139	1.4521	0.0071	0.7005	12.2145	-24.0056
AB0906P02-1	30	0.0012	0.8992	1.7563	0.0086	0.8541	11.6837	-25.0078
AB0906P02-1	31	0.0009	0.9133	1.7838	0.0063	0.6307	11.8592	-24.9868
AB0906P02-1	32	0.0004	0.8148	1.8082	0.0018	0.1818	10.8635	-24.4638
AB0906P02-2	26	0.0028	0.7521	1.5985	0.0080	0.7979	10.2768	-24.1784
AB0906P02-2	27	0.0003	0.7940	1.8821	0.0017	0.1721	10.5318	-24.4061
AB0906P02-3	.	.	.	.	.	.	.	.
AB0906P06-3	33	.	0.8575	1.6748	.	.	11.3062	-24.7048
AB0906P06-3	34	0.0057	0.7484	1.6220	0.0090	0.8941	11.5108	-25.0574
AB0906P06-3	35	1.8784	0.6941	1.4160	0.0090	0.8911	12.2238	-23.3114
AB09061650	46	0.6537	0.9770	1.4223	0.0103	1.0232	8.7668	-25.7933
AB0906P01-1	44	0.0034	1.1752	1.7787	0.0098	0.9712	12.0208	-24.0926
AB0906P01-1	45	0.0146	1.1085	1.6547	0.0121	1.1910	12.0958	-24.8250
AB0906P01-3	36	0.0051	0.7729	1.7881	0.0097	0.9574	12.3442	-24.6351
AB0906P01-3	37	0.0048	0.8555	1.7993	0.0082	0.8141	11.8578	-24.4884
AB0906P01-3	38	0.0035	0.8480	1.8380	0.0049	0.4845	12.0542	-24.4720
AB0906P01-3	39	0.0143	0.7467	1.7412	0.0085	0.8438	8.9522	-22.5713
AB0906P01-3	40	0.0206	0.7614	1.6182	0.0109	1.0820	12.3725	-25.9573
AB0906P01-3	41	0.0028	0.8055	1.8123	0.0064	0.6335	11.3692	-24.1583
AB0906P01-3	42	0.0032	0.8591	1.9328	0.0068	0.6788	10.6305	-25.5553
AB0906P07-1	28	0.0035	0.7806	1.4644	0.0089	0.8852	11.7412	-26.0131
AB0906P07-1	29	0.0071	0.7669	1.5811	0.0127	1.2496	11.7435	-25.6558
AB10062110	48	0.1457	1.0136	1.5694	0.0088	0.8749	8.1955	-22.7760
AB10062880	49	0.0068	1.0678	1.5618	0.0087	0.8596	11.2572	-24.8116
AB10062880	50	0.0197	1.0853	1.4807	0.0081	0.7997	8.0177	-21.9386
AB1006P02-1	98	0.0107	0.9447	2.0627	0.0103	1.0241	12.0271	-25.7252
AB1006P02-1	99	0.0063	0.7006	1.6966	0.0087	0.8661	11.6256	-25.5458
AB1006P02-1	100	0.0083	0.7014	1.5151	0.0080	0.7949	12.0594	-25.2074
AB1006P02-1	101	0.0062	0.7001	1.7655	0.0076	0.7527	12.1312	-25.5636
AB1006P02-1	102	0.0053	0.8481	1.9254	0.0065	0.6420	9.9825	-26.0793
AB1006P02-1	103	0.0044	0.7727	1.6746	0.0067	0.6685	11.7262	-25.5968

Table A10 continued. Page column B.

AB1006P02-1	104	0.0077	0.7304	1.5948	0.0096	0.9532	12.1256	-25.2421
AB1006P02-1	105	0.0108	0.6994	1.6908	0.0118	1.1640	12.4088	-26.2169
AB1006P02-1	106	0.0132	0.7587	1.7691	0.0077	0.7666	12.4369	-25.3951
AB1006P02-1	107	0.0066	0.6935	1.5236	0.0068	0.6769	11.0043	-25.3191
AB1006P02-1	108	0.0045	0.7436	1.7203	0.0089	0.8780	12.0860	-24.5138
AB1006P02-1	109	0.0062	0.8282	1.8195	0.0054	0.5324	9.8099	-26.4182
AB1006P02-1	110	0.0048	0.6937	1.6444	0.0063	0.6257	12.0244	-25.2618
AB1006P02-2	88	0.0101	0.7942	1.4600	0.0109	1.0809	11.0432	-23.6124
AB1006P02-2	89	1.0963	0.9086	1.4123	0.0072	0.7192	12.8254	-25.1183
AB1006P02-3	111	0.1506	0.7107	1.4865	0.0091	0.9007	13.0160	-26.5343
AB1006P02-3	112	0.6886	0.6961	1.5075	0.0063	0.6256	13.8184	-25.9312
AB1006P02-3	113	0.0347	0.6891	1.4872	0.0086	0.8496	10.5803	-25.0292
AB1006P02-3	114	0.0137	0.6687	1.4213	0.0132	1.3010	10.6429	-24.7591
AB1006P02-3	115	0.0153	0.6817	1.4977	0.0082	0.8173	11.1434	-25.5846
AB1006P06-2	47	0.0085	0.9586	1.4725	0.0098	0.9731	8.3705	-22.9786
AB10062850	90	0.0156	0.6381	1.4159	0.0114	1.1319	12.2131	-25.4485
AB10062850	91	0.0162	0.5979	1.3958	0.0100	0.9865	11.4416	-24.8461
AB10062850	92	0.0242	0.7015	1.6162	0.0102	1.0058	11.4057	-24.8798
AB10062850	93	0.0107	0.6575	1.5094	0.0069	0.6828	11.7278	-25.2171
AB10062850	94	0.021	0.6912	1.5251	0.0093	0.9249	10.9360	-26.2694
AB10062850	95	0.0285	0.7369	1.6750	0.0109	1.0806	9.2732	-23.1161
AB10062850	96	0.0408	0.6709	1.4740	0.0081	0.8070	11.2788	-25.5264
AB10062850	97	0.0393	0.6633	1.4097	0.0082	0.8128	9.1893	-24.9582
AB10063030	79	0.022	1.0428	1.6694	0.0089	0.8852	10.1654	-24.0179
AB10063030	80	0.0088	1.1338	1.5771	0.0071	0.7018	12.1134	-24.7292
AB10063030	81	0.0067	0.9229	1.4972	0.0070	0.6992	12.3999	-25.6501
AB10063030	82	0.0188	1.0650	1.6654	0.0065	0.6428	8.8536	-22.9886
AB10063030	83	0.0222	1.0529	1.5177	0.0094	0.9289	12.3323	-25.5357
AB10063030	84	0.0299	1.0266	1.5514	0.0086	0.8491	10.5767	-23.5987
AB1006P01-1	51	0.0043	1.2658	1.6848	0.0095	0.9453	12.1160	-26.8656
AB1006P01-2	116	0.0037	0.7824	1.7495	0.0122	1.2033	11.5278	-26.1608
AB1006P01-2	117	0.0093	0.6981	1.5677	0.0081	0.8007	12.7923	-26.0696
AB1006P01-2	118	0.0066	0.6932	1.6072	0.0106	1.0448	11.3203	-25.5858

Table A10 continued. Page column B.

AB1006P01-2	119	0.0034	0.8133	1.5885	0.0157	1.5483	12.6716	-26.1702
AB1006P01-2	120	0.0405	0.7052	1.5493	0.0077	0.7621	9.5509	-22.4563
AB1006P01-3	121	0.0074	0.7084	1.6082	0.0108	1.0732	12.5484	-26.2752
AB1006P01-3	122	0.0136	0.7112	1.5548	0.0085	0.8425	13.1863	-25.6989
AB1006P01-3	123	0.0121	0.6551	1.4598	0.0071	0.7046	12.4253	-25.5934
AB1006P01-3	124	0.0081	0.6740	1.5438	0.0062	0.6159	12.4599	-25.7436
AB1006P01-3	125	0.0057	0.7120	1.6163	0.0083	0.8225	11.9497	-25.0820
AB1006P01-3	126	0.0098	0.6767	1.4712	0.0079	0.7820	10.2963	-26.1139
AB1006P01-3	127	0.0131	0.6486	1.3784	0.0081	0.8078	12.9792	-25.5117
AB1006P01-3	128	0.0144	0.6939	1.5171	0.0092	0.9142	12.9491	-25.9515
AB1006P01-3	129	0.0113	0.6435	1.3867	0.0074	0.7368	.	.
AB1006P01-3	130	0.0007	0.6019	1.4266	0.0025	0.2493	.	.
AB1006P01-3	131	0.0089	0.6184	1.3829	0.0046	0.4577	.	.
AB1006P01-3	132	0.0034	0.7179	1.6722	0.0026	0.2557	.	.
AB1006P01-3	133	0.0062	0.5996	1.3764	0.0044	0.4339	.	.
AB1006P01-3	134	0.0034	0.6554	1.4656	0.0039	0.3911	.	.
AB1006P01-3	135	.	0.6757	1.5632	.	.	.	.
AB1006P01-3	136	0.0031	0.6902	1.4798	0.0038	0.3818	.	.
AB1006P01-3	137	0.0032	0.6610	1.4781	0.0037	0.3650	.	.
AB1006P07-3	63	0.0122	0.6503	1.4350	0.0057	0.5711	11.5833	-25.6267
AB10061040	55	0.0217	1.0483	1.5866	0.0088	0.8686	10.5747	-25.2423
AB10061040	56	0.0437	1.0222	1.5904	0.0111	1.0989	10.6667	-25.2036
AB10061040	57	0.0365	1.0294	1.6122	0.0096	0.9500	10.4137	-24.3739
AB10061040	58	0.0615	1.0024	1.6323	0.0121	1.1982	9.4543	-25.2829
AB10061040	59	0.0919	1.0390	1.5509	0.0101	0.9998	10.5223	-25.3326
AB10061100	85	0.0868	1.0399	1.5975	0.0073	0.7210	9.8609	-26.2222
AB10061100	86	0.1793	1.1107	1.6464	0.0090	0.8890	9.5463	-24.1191
AB10061100	87	0.0423	1.0121	1.4934	0.0104	1.0314	9.8554	-24.0128
AB10061480	52	0.0521	1.0520	1.6262	0.0124	1.2221	10.5847	-24.3686
AB11062110	138	0.0497	0.6984	1.4987	0.0102	1.0095	11.9221	-26.2037
AB11062110	139	0.0396	0.6757	1.4499	0.0084	0.8314	11.7491	-25.9155
AB11062110	140	0.0367	0.6562	1.4869	0.0083	0.8207	11.3636	-25.1926
AB11062110	141	0.0416	0.6842	1.4828	0.0090	0.8923	11.6134	-24.9567

Table A10 continued. Page column B.

AB11062110	142	0.1337	0.7241	1.6426	0.0130	1.2797	11.5883	-24.9557
AB1106P01-1	152	0.055	0.6698	1.4763	0.0097	0.9577	10.5547	-25.0052
AB1106P01-1	153	0.0058	0.6898	1.4789	0.0072	0.7147	12.4248	-25.5651
AB1106P01-1	154	0.0229	0.6912	1.5672	0.0111	1.1015	12.6557	-25.2872
AB1106P01-1	155	0.0239	0.6863	1.5078	0.0074	0.7338	12.9259	-25.5013
AB1106P01-3	149	0.0412	0.6975	1.5804	0.0087	0.8667	12.7971	-25.3196
AB1106P01-3	150	0.0045	0.3960	0.9386	0.0053	0.5261	12.1798	-24.3593
AB1106P01-3	151	0.0273	0.6667	1.5219	0.0084	0.8305	12.6582	-25.4026
AB1106P06-3	62	0.0216	0.6950	1.5485	0.0120	1.1856	12.8800	-24.8900
AB11061720	143	0.0251	0.6267	1.4481	0.0085	0.8440	10.8659	-25.3636
AB11062210	144	0.0119	0.6995	1.5523	0.0079	0.7876	12.5489	-27.7631
AB11062210	145	0.0117	0.6686	1.4617	0.0078	0.7710	.	.
AB11062210	146	0.0262	0.6779	1.5016	0.0100	0.9935	12.0047	-25.4345
AB11062210	147	0.0212	0.7152	1.5299	0.0100	0.9855	12.7513	-27.1788
AB11062210	148	0.0261	0.6528	1.4512	0.0088	0.8757	13.2560	-26.0915
AB11062820	174	0.0111	0.6423	1.4476	0.0085	0.8415	11.1705	-24.9232
AB11062820	175	0.018	0.7442	1.5817	0.0098	0.9673	11.9951	-25.1865
AB11062820	176	0.0143	0.6182	1.5309	0.0071	0.7042	11.3692	-24.5527
AB11062820	177	0.0232	0.6543	1.4375	0.0075	0.7472	12.1214	-26.8032
AB11062820	178	0.0138	0.6623	1.4480	0.0093	0.9179	12.4429	-25.7802
AB11062820	179	0.0188	0.6969	1.5250	0.0067	0.6657	11.3863	-24.5411
AB11062820	180	0.0108	0.6905	1.5506	0.0095	0.9401	13.4421	-26.0293
AB11062820	181	0.1066	0.6740	1.4608	0.0069	0.6876	9.6518	-25.4547
AB11062820	182	0.0179	0.6603	1.5213	0.0080	0.7904	12.7945	-26.1630
AB11062820	183	0.0097	0.6765	1.5496	0.0074	0.7348	12.3518	-25.1737
AB11062820	184	0.0068	0.7219	1.6816	0.0051	0.5086	11.9835	-25.2760
AB11062820	185	0.0093	0.6546	1.5265	0.0063	0.6259	13.4233	-26.9381
AB11062820	186	0.0109	0.6927	1.4928	0.0066	0.6602	12.7004	-26.0632
AB11062820	187	0.0078	0.7171	1.6704	0.0059	0.5873	12.3829	-25.2101
AB11062820	188	0.0087	0.6775	1.5036	0.0060	0.5945	12.5550	-24.7231
AB11063020	16	0.0269	0.6672	1.4492	0.0082	0.8178	9.8000	-22.9215
AB11063020	17	0.1153	0.7412	1.5694	0.0109	1.0781	10.1497	-23.8152
AB11063020	18	0.0183	0.6408	1.4139	0.0088	0.8694	13.3340	-26.1975

Table A10 continued. Page column B.

AB11063020	19	0.0167	0.6441	1.3960	0.0091	0.9018	12.6030	-25.2259
AB1106P02-1	1	0.0815	0.7637	1.5861	0.0079	0.7803	12.4234	-26.0879
AB1106P02-1	2	0.0258	0.6746	1.4620	0.0056	0.5612	12.7710	-24.4766
AB1106P02-1	3	0.0256	0.6262	1.3758	0.0087	0.8615	12.4394	-24.3302
AB1106P02-1	4	0.0165	0.6916	1.5465	0.0076	0.7588	13.9817	-25.9656
AB1106P02-1	5	0.0119	0.6866	1.5727	0.0090	0.8883	13.4200	-25.1416
AB1106P02-1	6	0.0196	0.6699	1.4412	0.0082	0.8174	13.0144	-25.0142
AB1106P02-1	7	0.0105	0.6932	1.5384	0.0071	0.7012	13.8724	-25.7112
AB1106P02-1	8	0.0144	0.6804	1.5014	0.0065	0.6442	12.8860	-25.0206
AB1106P02-1	9	0.013	0.7183	1.6768	0.0066	0.6590	12.6277	-24.8926
AB1106P02-1	10	0.0121	0.6960	1.5976	0.0073	0.7295	12.2107	-25.9922
AB1106P02-1	394	.	0.6577	1.5367	.	.	.	.
AB1106P02-1	395	.	0.6604	1.5127	.	.	.	.
AB1106P02-1	396	.	0.6555	1.5015	.	.	.	.
AB1106P02-1	397	.	0.6716	1.4275	.	.	.	.
AB1106P02-1	398	.	0.7005	1.4659	.	.	.	.
AB1106P02-1	399	.	0.6611	1.4626	.	.	.	.
AB1106P02-1	400	.	0.6020	1.4038	.	.	.	.
AB1106P02-1	401	.	0.6893	1.5415	.	.	.	.
AB1106P02-1	402	.	0.7321	1.6171	.	.	.	.
AB1106P02-1	403	.	0.6504	1.3913	.	.	.	.
AB1106P02-1	404	.	0.6778	1.5822	.	.	.	.
AB1106P02-1	405	.	0.5999	1.3666	.	.	.	.
AB1106P02-1	406	.	0.6552	1.4768	.	.	.	.
AB1106P02-1	407	.	0.6468	1.3836	.	.	.	.
AB1106P02-1	408	.	0.6307	1.3789	.	.	.	.
AB1106P02-2	165	0.0149	0.6154	1.3657	0.0113	1.1209	13.5704	-26.4211
AB1106P02-2	166	0.0252	0.6250	1.3844	0.0105	1.0365	13.0195	-25.8820
AB1106P02-2	167	0.0164	0.6483	1.4611	0.0125	1.2318	12.6099	-24.8215
AB1106P02-2	168	0.0221	0.6333	1.4591	0.0103	1.0174	12.4716	-25.6031
AB1106P02-2	169	0.0165	0.6336	1.4775	0.0116	1.1473	12.2653	-25.6324
AB1106P02-2	170	0.0219	0.6149	1.3568	0.0110	1.0842	12.8268	-26.1508
AB1106P02-2	171	0.0148	0.6729	1.4932	0.0103	1.0183	13.0758	-26.0586

Table A10 continued. Page column B.

AB1106P02-2	172	0.0263	0.6806	1.4296	0.0100	0.9934	13.2001	-26.6564
AB1106P02-2	173	0.0234	0.6851	1.5118	0.0105	1.0397	13.4990	-25.8592
AB1106P02-3	189	0.0186	0.6625	1.4359	0.0099	0.9765	12.5319	-25.3585
AB1106P02-3	190	0.0598	0.6909	1.4751	0.0105	1.0421	12.6752	-25.7904
AB1106P02-3	191	0.0091	0.6394	1.4911	0.0063	0.6270	12.9922	-25.7838
AB1106P02-3	192	0.0099	0.6236	1.4782	0.0091	0.9039	13.3101	-26.5123
AB1106P02-3	193	0.0169	0.6583	1.5142	0.0090	0.8929	12.8614	-25.3990
AB1106P02-3	194	0.0351	0.6904	1.5610	0.0087	0.8578	12.9841	-25.9200
AB1106P02-3	195	0.0048	0.6925	1.5722	0.0072	0.7121	13.0284	-26.0253
AB1106P02-3	196	0.0349	0.6379	1.4265	0.0090	0.8909	11.9704	-24.8639
AB1106P02-3	197	0.0461	0.7315	1.5697	0.0090	0.8940	13.0098	-25.7752
AB1106P02-3	198	0.0164	0.6959	1.6006	0.0083	0.8197	12.6984	-25.3575
AB1106P02-3	409	.	0.6649	1.4328	.	.	.	.
AB1106P02-3	410	.	0.6687	1.4955	.	.	.	.
AB1106P02-3	411	.	0.6609	1.4584	.	.	.	.
AB1106P02-3	412	.	0.6948	1.5390	.	.	.	.
AB1106P02-3	413	.	0.6463	1.4752	.	.	.	.
AB1106P02-3	414	.	0.6581	1.4880	.	.	.	.
AB1106P02-3	415	.	0.6547	1.5230	.	.	.	.
AB1106P02-3	416	.	0.6505	1.4354	.	.	.	.
AB1106P02-3	417	.	0.6705	1.4810	.	.	.	.
AB1106P02-3	418	.	0.6458	1.4251	.	.	.	.
AB1106P07-2	60	0.0142	0.6193	1.4680	0.0088	0.8747	12.5667	-26.1700
AB1106P07-2	61	0.0183	0.6188	1.3923	0.0068	0.6736	12.4633	-25.9433
AB1106P07-3	156	0.058	0.6456	1.4403	0.0096	0.9546	13.0361	-27.0533
AB1106P07-3	157	0.0245	0.6507	1.4992	0.0111	1.0977	12.9299	-26.8159
AB1106P07-3	158	0.029	0.6754	1.5386	0.0103	1.0178	13.2947	-27.7053
AB1106P07-3	159	0.0614	0.6956	1.4223	0.0092	0.9097	11.0528	-24.1189
AB1106P07-3	160	0.0153	0.6302	1.4249	0.0098	0.9709	12.9828	-26.6352
AB1106P07-3	161	0.018	0.6096	1.4255	0.0076	0.7590	13.4270	-26.0688
AB1106P07-3	162	0.0341	0.6237	1.4446	0.0087	0.8596	10.0284	-23.4902
AB1106P07-3	163	0.0121	0.6881	1.4959	0.0096	0.9495	12.2472	-26.3958
AB1106P07-3	164	0.0358	0.6996	1.5099	0.0087	0.8633	12.4620	-26.1184

Table A10 continued. Page column B.

AB12061730	204	0.0344	.	1.5104	0.0118	1.1673	10.4596	-24.1489
AB12061730	205	0.048	0.6472	1.4439	0.0079	0.7880	11.0718	-24.2604
AB12061730	206	0.0205	0.6707	1.4610	0.0090	0.8911	10.5307	-24.6045
AB12062190	214	0.0127	0.6061	1.3251	0.0093	0.9231	10.4608	-24.9824
AB12062190	215	0.0128	0.6013	1.3552	0.0105	1.0365	12.4087	-25.9841
AB12062190	216	0.0308	0.6820	1.5252	0.0074	0.7353	12.4512	-25.0383
AB12062190	217	0.0414	0.6824	1.4993	0.0129	1.2784	12.4457	-25.6554
AB12062590	203	0.0613	0.6644	1.4823	0.0099	0.9803	9.1537	-23.1009
AB1206P01-1	231	0.0315	0.6804	1.4948	0.0099	0.9756	13.5188	-25.7557
AB1206P01-1	232	0.0457	0.6412	1.3817	0.0089	0.8861	.	.
AB1206P01-1	233	0.0146	0.6589	1.4897	0.0089	0.8862	13.5002	-26.9184
AB1206P01-1	234	0.0448	0.7102	1.5242	0.0090	0.8947	13.2135	-25.7444
AB1206P01-1	235	0.0326	0.6678	1.4506	0.0100	0.9901	13.8782	-25.6520
AB1206P01-2	238	0.0405	0.6576	1.3908	0.0098	0.9682	.	.
AB1206P01-2	239	0.0339	0.6954	1.4697	0.0108	1.0679	.	.
AB1206P01-2	240	0.0805	0.6588	1.4322	0.0083	0.8248	.	.
AB1206P01-2	241	0.0372	0.6771	1.5274	0.0108	1.0730	.	.
AB1206P01-3	200	0.01	0.6051	1.3825	0.0106	1.0495	13.4104	-26.2738
AB1206P01-3	201	0.0142	0.5537	1.2264	0.0066	0.6593	11.0738	-24.8741
AB1206P01-3	202	0.4856	0.6626	1.3855	0.0079	0.7802	.	.
AB1206P06-2	236	0.0379	0.6676	1.4270	0.0131	1.2932	12.7960	-25.0855
AB1206P06-2	237	0.0554	0.6526	1.3991	0.0091	0.9020	13.0281	-25.6193
AB1206P06-3	219	0.026	0.6128	1.3787	0.0098	0.9665	11.5300	-25.1612
AB1206P06-3	220	0.0335	0.6641	1.4426	0.0103	1.0231	12.7156	-24.8671
AB12061150	207	0.0271	0.6458	1.4354	0.0093	0.9192	8.9535	-22.8612
AB12061470	218	0.0343	0.6219	1.4930	0.0113	1.1186	11.1806	-23.0883
AB1206P02-1	227	0.0129	0.6382	1.4221	0.0078	0.7710	.	.
AB1206P02-1	228	0.0134	0.6075	1.3535	0.0085	0.8415	.	.
AB1206P02-1	229	0.0464	0.6499	1.3947	0.0102	1.0127	.	.
AB1206P02-1	230	0.0376	0.6279	1.3150	0.0092	0.9093	.	.
AB1206P02-2	221	0.039	0.6421	1.4005	0.0107	1.0623	13.0305	-26.3635
AB1206P02-2	222	0.0417	0.6221	1.4094	0.0099	0.9837	12.8361	-25.7448
AB1206P02-2	223	0.0303	0.6208	1.3540	0.0086	0.8536	13.3594	-25.7588

Table A10 continued. Page column B.

AB1206P02-2	224	0.0567	0.6836	1.4658	0.0089	0.8812	13.3854	-25.9401
AB1206P02-2	225	0.0266	0.6129	1.3313	0.0089	0.8803	13.3248	-26.0739
AB1206P02-2	226	0.0125	0.6546	1.4526	0.0089	0.8841	13.6336	-26.0801
AB1206P02-3	379	0.0238	0.7625	1.6207	0.0126	1.2482	.	.
AB1206P02-3	380	0.0098	0.6669	1.4405	0.0100	0.9871	.	.
AB1206P02-3	381	0.0147	0.6700	1.4867	0.0103	1.0158	.	.
AB1206P02-3	382	0.015	0.6855	1.4400	0.0057	0.5625	.	.
AB1206P02-3	383	0.0284	0.6101	1.3252	0.0095	0.9442	.	.
AB1206P02-3	384	0.0098	0.6820	1.4983	0.0103	1.0220	.	.
AB1206P02-3	385	0.0337	0.6237	1.3752	0.0099	0.9800	.	.
AB1206P02-3	386	0.0183	0.6906	1.5173	0.0097	0.9649	.	.
AB1206P02-3	387	0.0225	0.6560	1.4531	0.0089	0.8817	.	.
AB1206P02-3	388	0.0193	0.6473	1.4474	0.0096	0.9483	.	.
AB1206P02-3	.	.	.	.	.	.	.	.
AB1206P02-3	.	.	.	.	.	.	.	.
AB1206P02-3	.	.	.	.	.	.	.	.
AB1206P02-3	.	.	.	.	.	.	.	.
AB1206P02-3	.	.	.	.	.	.	.	.
AB1206P02-3	.	.	.	.	.	.	.	.
AB1206P02-3	.	.	.	.	.	.	.	.
AB1206P02-3	.	.	.	.	.	.	.	.
AB1206P02-3	.	.	.	.	.	.	.	.
AB1206P02-3	.	.	.	.	.	.	.	.
AB1206P02-3	.	.	.	.	.	.	.	.
AB1206P02-3	.	.	.	.	.	.	.	.
AB1206P02-3	.	.	.	.	.	.	.	.
AB1206P07-1	208	0.0176	0.6325	1.4093	0.0107	1.0615	12.8283	-25.8502
AB1206P07-1	209	0.0111	0.5867	1.3266	0.0076	0.7566	13.7588	-26.3833
AB1206P07-1	210	0.0261	0.6194	1.3812	0.0080	0.7929	12.6741	-26.0618
AB1206P07-1	211	0.0284	0.6730	1.5529	0.0105	1.0414	14.0567	-28.0458
AB1206P07-1	212	0.0132	0.6535	1.4358	0.0074	0.7355	13.3559	-26.6144
AB1206P07-1	213	0.0423	0.6617	1.4683	0.0088	0.8769	13.8858	-27.1640
AB1206P07-2	199	0.0155	0.5845	1.3465	0.0078	0.7732	13.3659	-25.8025

Table A10 continued. Page column B.

AB01071360	249	0.023	0.6238	1.3648	0.0092	0.9100	11.5299	-25.1396
AB01071360	250	0.027	0.5838	1.3471	0.0115	1.1413	11.5053	-25.0500
AB01071360	251	0.0322	0.6457	1.4439	0.0082	0.8120	11.3950	-24.7600
AB01071360	252	0.0701	0.5931	1.2227	0.0085	0.8413	10.8978	-24.8295
AB01071730	268	0.0579	0.6284	1.4238	0.0137	1.3521	12.2478	-24.8593
AB01072340	243	0.0377	0.6239	1.3521	0.0089	0.8867	9.3289	-23.7481
AB01072340	244	0.0253	0.6142	1.3652	0.0091	0.9023	11.4356	-24.8847
AB01072780	242	0.1943	0.6741	1.4811	0.0100	0.9856	10.5790	-25.5176
AB01073060	245	0.0653	0.6598	1.4406	0.0113	1.1186	11.9529	-25.4691
AB01073060	246	0.2044	0.6872	1.4894	0.0082	0.8144	10.6076	-24.4582
AB01073060	247	0.0683	0.6376	1.3552	0.0086	0.8503	10.8196	-24.4995
AB01073060	248	0.0664	0.6474	1.3311	0.0095	0.9386	12.7830	-26.0341
AB0107P06-1	253	0.0244	0.5991	1.2870	0.0080	0.7955	12.7499	-25.8691
AB0107P06-1	254	0.0373	0.6622	1.4146	0.0093	0.9171	13.3509	-25.0844
AB0107P06-1	255	0.0514	0.6382	1.3807	0.0089	0.8824	13.0035	-25.1427
AB0107P06-1	256	0.0232	0.6547	1.4881	0.0100	0.9901	12.2582	-24.6472
AB0107P06-1	257	0.0223	0.6660	1.4753	0.0087	0.8607	12.6586	-25.1386
AB0107P06-1	258	0.0358	0.6358	1.4177	0.0107	1.0596	12.0587	-24.7049
AB0107P06-2	269	0.0273	0.6322	1.4003	0.0112	1.1101	.	.
AB0107P06-2	270	0.0305	0.6908	1.5178	0.0094	0.9303	.	.
AB0107P06-2	271	0.0283	0.5702	1.2919	0.0073	0.7283	.	.
AB0107P06-2	272	0.0223	0.6648	1.5315	0.0099	0.9780	.	.
AB0107P06-2	273	0.0317	0.6435	1.4237	0.0078	0.7745	.	.
AB0107P06-2	274	0.0265	0.6321	1.4134	0.0069	0.6827	.	.
AB0107P06-3	262	0.0284	0.6320	1.3785	0.0079	0.7859	13.2020	-24.2829
AB01073150	275	0.0419	0.6259	1.3998	0.0110	1.0900	.	.
AB01073150	276	0.0204	0.6378	1.4262	0.0103	1.0173	.	.
AB01073150	277	0.0382	0.6401	1.4637	0.0105	1.0437	.	.
AB01073150	278	0.0491	.	1.3817	0.0096	0.9521	13.6276	-25.8704
AB01073150	279	0.0981	0.6640	1.4753	0.0122	1.2060	13.3856	-26.0922
AB01073150	280	0.049	0.6456	1.4046	0.0098	0.9747	13.4629	-25.8913
AB01073150	281	0.0375	0.6774	1.4714	0.0114	1.1229	13.4063	-25.3921
AB01073150	282	0.0304	0.6286	1.3655	0.0099	0.9808	13.8307	-27.7459

Table A10 continued. Page column B.

AB01073150	283	0.0426	.	1.4225	0.0084	0.8367	.	.
AB01073150	284	0.0337	0.6507	1.4396	0.0082	0.8142	11.1809	-24.7429
AB01073150	285	0.0847	0.6449	1.5003	0.0111	1.1027	13.2460	-25.5798
AB01073150	286	0.0468	0.6871	1.5568	0.0101	0.9995	12.8726	-25.9736
AB01073150	287	0.0698	0.6448	1.3974	0.0082	0.8133	11.8223	-26.1246
AB01073150	288	0.1582	0.6599	1.3861	0.0078	0.7704	.	.
AB0107P01-1	259	0.0014	0.5638	1.2913	0.0103	1.0182	14.2350	-27.0057
AB0107P07-2	260	0.017	0.6447	1.4163	0.0097	0.9602	13.2386	-25.2305
AB0107P07-2	261	0.0135	0.6617	1.3876	0.0078	0.7783	13.5774	-26.9459
AB0107P07-3	263	0.0403	0.6559	1.4215	0.0091	0.9016	13.8626	-26.5271
AB0107P07-3	264	0.0188	0.6147	1.3937	0.0103	1.0169	12.6987	-25.6116
AB0107P07-3	265	0.0244	0.6335	1.3919	0.0082	0.8116	13.2005	-26.0045
AB0107P07-3	266	0.0021	0.7013	1.7109	0.0070	0.6984	14.0781	-25.7240
AB0107P07-3	267	0.0684	0.7049	1.4533	0.0070	0.6906	10.9974	-22.0190
AB02071980	321	0.0513	0.6573	1.4165	0.0098	0.9703	10.7470	-23.8112
AB02072350	307	0.0459	0.5845	1.2841	0.0168	1.6549	.	.
AB02072350	308	0.0621	0.6708	1.4049	0.0143	1.4058	.	.
AB02072350	309	0.0395	0.6160	1.4423	0.0122	1.2065	.	.
AB02072350	310	0.0303	0.6796	1.4525	0.0103	1.0157	.	.
AB02072350	311	0.0669	0.5419	1.2252	0.0108	1.0664	.	.
AB02073170	289	0.0602	0.6010	1.3077	0.0130	1.2862	10.9085	-22.6709
AB02073170	290	0.1913	0.6861	1.5074	0.0177	1.7408	11.9316	-24.4039
AB02073170	291	0.0344	0.6707	1.5899	0.0101	1.0017	13.2886	-26.0096
AB02073170	292	0.0815	0.5875	1.2872	0.0097	0.9615	9.1574	-24.8521
AB02073170	293	0.1144	0.6564	1.4383	0.0122	1.2079	11.9851	-23.0511
AB02073170	294	0.0934	0.6377	1.4261	0.0088	0.8691	12.5075	-25.0260
AB02073170	295	0.0555	0.6293	1.3827	0.0118	1.1703	13.0542	-25.8301
AB02073170	296	0.0402	0.6421	1.3857	0.0107	1.0563	12.8455	-25.9357
AB02073170	297	0.0596	0.6254	1.3477	0.0120	1.1848	13.4813	-26.8890
AB02073170	298	0.0359	0.6544	1.4672	0.0078	0.7782	13.1633	-25.7394
AB02073170	299	0.0318	0.6725	1.4144	0.0087	0.8577	12.7253	-25.1652
AB02071900	312	0.0444	0.6216	1.3471	0.0106	1.0482	8.9303	-23.2366
AB02071900	313	0.1932	0.6506	1.4099	0.0131	1.2912	10.2345	-21.3336

Table A10 continued. Page column B.

AB02072160	300	0.0221	0.5557	1.2382	0.0154	1.5171	13.2353	-24.5263
AB02072160	301	0.0215	0.5958	1.3704	0.0127	1.2551	12.1642	-24.7981
AB02072160	302	0.1058	0.6330	1.3802	0.0103	1.0172	12.7619	-24.7915
AB02072160	303	0.0234	0.6639	1.4202	0.0119	1.1718	13.3965	-24.9828
AB02072160	304	0.0127	0.7374	1.5928	0.0117	1.1569	13.0290	-25.1325
AB02072160	305	0.0165	0.6387	1.4173	0.0121	1.1961	12.7091	-24.9487
AB02072160	306	0.0663	0.7005	1.4821	0.0112	1.1039	13.1430	-25.5254
AB02072520	329	0.0996	0.6666	1.3996	0.0131	1.2906	11.5443	-26.5240
AB02072520	330	0.123	0.7484	1.6166	0.0140	1.3800	10.2882	-24.2112
AB0207P01-2	337	0.0156	0.7161	1.5332	0.0113	1.1166	13.2008	-26.2079
AB0207P01-2	338	0.0143	0.6927	1.5613	0.0102	1.0051	13.3646	-26.3148
AB0207P01-2	339	0.5625	0.6481	1.3881	0.0079	0.7826	9.4757	-23.4956
AB0207P01-3	331	0.0431	0.6771	1.4545	0.0126	1.2433	.	.
AB0207P01-3	332	0.0275	0.6462	1.5318	0.0072	0.7180	.	.
AB0207P01-3	333	0.0239	0.6669	1.4825	0.0079	0.7849	.	.
AB0207P01-3	334	0.019	0.6382	1.4318	0.0080	0.7976	.	.
AB0207P01-3	335	0.0786	0.6300	1.3292	0.0077	0.7594	.	.
AB0207P01-3	336	0.0941	0.5780	1.2074	0.0086	0.8539	.	.
AB0207P02-1	322	0.0721	0.6501	1.4832	0.0100	0.9859	13.6155	-25.9947
AB0207P02-1	323	0.051	0.6310	1.2699	0.0079	0.7844	13.7432	-26.0333
AB0207P02-1	324	0.0616	0.6334	1.4351	0.0145	1.4271	13.3433	-25.4287
AB0207P02-1	325	0.0286	0.6301	1.4246	0.0077	0.7658	13.6621	-26.0420
AB0207P02-1	326	0.0288	0.6793	1.3805	0.0098	0.9658	10.1514	-23.8341
AB0207P02-1	327	0.0339	0.6749	1.4828	0.0107	1.0584	13.2941	-25.0821
AB0207P02-1	328	0.1649	0.6925	1.4820	0.0123	1.2191	13.1405	-26.1697
AB0207P02-2	353	0.0067	0.7198	1.5016	0.0097	0.9563	.	.
AB0207P02-2	354	0.0417	0.5962	1.3534	0.0091	0.8983	.	.
AB0207P02-2	355	0.0493	0.5966	1.3067	0.0083	0.8264	.	.
AB0207P02-2	356	0.0099	0.6233	1.4048	0.0078	0.7734	.	.
AB0207P02-2	357	0.0124	0.6951	1.5196	0.0079	0.7860	.	.
AB0207P02-2	358	0.0243	0.6345	1.3631	0.0075	0.7480	.	.
AB0207P02-2	359	0.0314	0.6746	1.4419	0.0107	1.0603	.	.
AB0207P02-2	360	0.1163	0.6843	1.4700	0.0099	0.9836	.	.

Table A10 continued. Page column B.

AB0207P02-2	389	.	0.6766	1.5739	.	.	.	.
AB0207P02-2	390	.	0.6746	1.5334	.	.	.	.
AB0207P02-2	391	.	0.5561	1.3183	.	.	.	.
AB0207P02-2	392	.	0.5916	1.2997	.	.	.	.
AB0207P02-2	393	.	0.6449	1.3854	.	.	.	.
AB0207P02-2	.	.	.	.	.	.	.	.
AB0207P02-2	.	.	.	.	.	.	.	.
AB0207P02-2	.	.	.	.	.	.	.	.
AB0207P02-2	.	.	.	.	.	.	.	.
AB0207P02-2	.	.	.	.	.	.	.	.
AB0207P02-2	.	.	.	.	.	.	.	.
AB0207P02-2	.	.	.	.	.	.	.	.
AB0207P02-2	.	.	.	.	.	.	.	.
AB0207P02-2	.	.	.	.	.	.	.	.
AB0207P02-2	.	.	.	.	.	.	.	.
AB0207P02-2	.	.	.	.	.	.	.	.
AB0207P02-2	.	.	.	.	.	.	.	.
AB0207P02-2	.	.	.	.	.	.	.	.
AB0207P02-2	.	.	.	.	.	.	.	.
AB0207P02-2	.	.	.	.	.	.	.	.
AB0207P02-2	.	.	.	.	.	.	.	.
AB0207P02-2	.	.	.	.	.	.	.	.
AB0207P02-2	.	.	.	.	.	.	.	.
AB0207P02-2	.	.	.	.	.	.	.	.
AB0207P02-2	.	.	.	.	.	.	.	.
AB0207P02-2	.	.	.	.	.	.	.	.
AB0207P02-2	.	.	.	.	.	.	.	.
AB0207P02-3	348	0.0267	0.6572	1.5186	0.0086	0.8561	.	.
AB0207P02-3	349	0.0394	0.6112	1.2869	0.0086	0.8554	.	.
AB0207P02-3	350	0.027	0.7182	1.5778	0.0080	0.7923	.	.
AB0207P02-3	351	0.0211	0.6712	1.4099	0.0081	0.8081	.	.
AB0207P02-3	352	0.0628	0.6675	1.4622	0.0095	0.9408	.	.
AB0207P06-1	340	0.036	0.5642	1.2902	0.0113	1.1159	13.4913	-24.8317

Table A10 continued. Page column B.

AB0207P06-1	341	0.1063	0.5919	1.3236	0.0108	1.0658	12.8749	-24.7258
AB0207P06-1	342	0.1882	0.5973	1.2767	0.0091	0.8972	11.8266	-24.7889
AB0207P06-3	319	0.0638	0.6425	1.4201	0.0103	1.0234	13.0325	-24.9518
AB0207P07-1	320	0.0387	0.6713	1.5012	0.0095	0.9387	13.0650	-25.5488
AB0207P07-2	314	0.0421	0.6392	1.4787	0.0121	1.1946	13.4213	-26.3041
AB0207P07-2	315	0.0582	0.6224	1.3490	0.0139	1.3721	12.4141	-26.0970
AB0207P07-2	316	0.0749	0.6403	1.3610	0.0122	1.2055	13.5293	-26.0506
AB0207P07-2	317	0.0631	0.6611	1.3920	0.0128	1.2666	12.1181	-25.2165
AB0207P07-2	318	0.0541	0.5917	1.2424	0.0080	0.7898	13.3499	-26.3586
AB0207P07-3	343	0.0249	0.6887	1.5451	0.0098	0.9686	.	.
AB0207P07-3	344	0.0287	0.5940	1.2819	0.0082	0.8152	.	.
AB0207P07-3	345	0.0303	0.6367	1.3311	0.0101	1.0028	.	.
AB0207P07-3	346	0.0344	0.6546	1.4551	0.0116	1.1511	.	.
AB0207P07-3	347	0.0409	0.6966	1.5034	0.0100	0.9907	.	.
AB11072760	362	0.0943	0.6883	1.5204	0.0098	0.9751	12.5474	-26.0511
AB11072970	364	0.0711	0.6386	1.3704	0.0160	1.5794	9.9735	-23.9431
AB11073080	367	0.0547	0.6629	1.5184	0.0127	1.2531	11.0489	-24.5038
AB11073080	368	0.1144	0.6610	1.4153	0.0112	1.1088	13.8069	-26.7353
AB11073080	.	.	.	.	.	.	.	.
AB1107P06-1	365	0.0942	0.6862	1.4823	0.0117	1.1525	10.7337	-24.9990
AB1107P06-1	366	0.0581	0.6528	1.4068	0.0112	1.1065	11.5597	-25.7690
AB11072530	369	0.1022	0.6193	1.3934	0.0113	1.1138	12.7520	-26.4329
AB11072530	370	0.8101	0.6626	1.4082	0.0096	0.9543	12.2125	-24.8322
AB1107P02-2	361	0.0671	0.6546	1.4048	0.0148	1.4540	13.5531	-26.9622
AB1107P05-3	363	0.0551	0.7316	1.6541	0.0129	1.2707	11.5679	-27.1389
AB02082640	373	0.5316	0.6336	1.1390	0.0086	0.8561	10.9499	-23.1913
AB02083050	374	0.0729	0.6567	1.4473	0.0131	1.2948	10.2482	-23.7940
AB02083050	375	0.0524	0.6108	1.3591	0.0104	1.0329	11.7820	-24.6619
AB02083050	376	0.1018	0.6670	1.4357	0.0146	1.4382	12.6449	-24.8888
AB02083000	377	0.0336	0.6386	1.4603	0.0093	0.9202	11.7921	-24.2208
AB0208P02-2	371	0.041	0.6639	1.5044	0.0091	0.9062	13.2290	-25.5782
AB0208P02-3	372	0.0853	0.6562	1.4175	0.0110	1.0914	14.0404	-26.3237
AB0208P07-2	378	0.7534	0.6774	1.3730	0.0100	0.9895	13.1380	-26.0984

Table A10 continued. Page column B.

AB02072770	.	.	.	.	.	.	.	.
AB02072820	.	.	.	.	.	.	.	.
AB02082090	.	.	.	.	.	.	.	.
AB02082090	.	.	.	.	.	.	.	.
AB02082410	.	.	.	.	.	.	.	.
AB02082640	.	.	.	.	.	.	.	.
AB02082900	.	.	.	.	.	.	.	.
AB02082900	.	.	.	.	.	.	.	.
AB0208P01-3	.	.	.	.	.	.	.	.
AB0208P01-3	.	.	.	.	.	.	.	.
AB0208P02-2	.	.	.	.	.	.	.	.
AB0208P02-2	.	.	.	.	.	.	.	.
AB0208P06-2	.	.	.	.	.	.	.	.
AB0208P07-1	.	.	.	.	.	.	.	.
AB0208P07-2	.	.	.	.	.	.	.	.
AB09061530	.	.	.	.	.	.	.	.
AB09061530	.	.	.	.	.	.	.	.
AB11071420	.	.	.	.	.	.	.	.
AB11072280	.	.	.	.	.	.	.	.
AB11072280	.	.	.	.	.	.	.	.
AB11072280	.	.	.	.	.	.	.	.
AB11072530	.	.	.	.	.	.	.	.
AB11072530	.	.	.	.	.	.	.	.
AB11072530	.	.	.	.	.	.	.	.
AB11072530	.	.	.	.	.	.	.	.
AB11072680	.	.	.	.	.	.	.	.
AB11072760	.	.	.	.	.	.	.	.
AB11072970	.	.	.	.	.	.	.	.
AB1107P01-1	.	.	.	.	.	.	.	.
AB1107P02-1	.	.	.	.	.	.	.	.
AB1107P02-1	.	.	.	.	.	.	.	.
AB1107P02-3	.	.	.	.	.	.	.	.
AB1107P02-3	.	.	.	.	.	.	.	.

Table A10 continued. Page column B.

AB12062980	.	.	.	.	.	.	.	.
TC1006C02-4	11	0.0221	0.6694	1.4228	0.0089	0.8845	10.2304	-23.7722
TC1006C02-4	12	0.0207	0.7220	1.5346	0.0077	0.7681	8.4744	-23.1929
TC1006C02-5	13	0.0502	0.7293	1.5907	0.0122	1.2039	11.4860	-25.5919
TC1006C02-5	14	0.0175	0.6838	1.5543	0.0072	0.7150	9.8680	-25.2172
TC1006C02-5	15	0.0765	0.7554	1.5919	0.0102	1.0127	9.2353	-22.3509
TC1006C02-7	20	0.009	0.6342	1.3579	0.0073	0.7273	10.8983	-25.4105
TC1006C02-7	21	0.0195	0.6569	1.3962	0.0080	0.7953	9.7753	-23.4669
TC1006C02-6	22	0.0117	0.6617	1.4683	0.0083	0.8186	11.4533	-25.1935
TC1006C02-6	23	0.0086	0.6716	1.4053	0.0078	0.7697	11.2240	-24.5769
TC1006C02-6	24	0.0762	0.7135	1.5222	0.0077	0.7602	8.2717	-22.3039
TC1006C02-6	25	0.0291	0.6792	1.4509	0.0070	0.6976	8.1088	-22.3201
TC1006C02-3	53	0.0466	1.1278	1.7043	0.0122	1.2046	9.9750	-24.1663
TC1006C02-3	54	0.0445	1.1677	1.6900	0.0117	1.1601	10.6043	-24.4093
AB1006P06-E	64	0.0026	0.6634	1.4485	0.0036	0.3544	11.6233	-25.1567
AB1006P06-E	65	0.0052	0.7302	1.6329	0.0054	0.5369	11.4167	-25.0533
AB1006P06-E	66	0.0041	0.6934	1.5430	0.0057	0.5695	10.8567	-25.0367
AB1006P06-E	67	0.0084	0.6614	1.5384	0.0086	0.8531	11.9667	-25.5233
AB1006P06-E	68	0.0073	0.8184	1.6963	0.0068	0.6724	11.0267	-24.9067
AB1006P06-E	69	0.0112	0.7826	1.7965	0.0060	0.6005	9.5800	-23.9233
AB1006P06-E	70	0.0045	1.1619	1.6836	0.0049	0.4871	9.5879	-24.5252
AB1006P06-E	71	0.0101	1.0535	1.5848	0.0058	0.5763	9.6114	-24.8654
AB1006P06-E	72	0.0055	1.0091	1.5714	0.0041	0.4109	12.1084	-25.1479
AB1006P06-E	73	0.0119	0.9801	1.5427	0.0066	0.6556	12.1620	-25.0193
AB1006P06-E	74	0.0212	1.0035	1.5164	0.0062	0.6159	10.2075	-23.4524
AB1006P06-E	75	0.0019	0.9364	1.4297	0.0037	0.3698	11.6175	-25.2719
AB1006P06-E	76	0.0116	1.0349	1.5968	0.0080	0.7972	10.4214	-24.2675
AB1006P06-E	77	0.0054	1.0799	1.5796	0.0068	0.6749	11.1422	-25.2319
AB1006P06-E	78	0.0029	0.9989	1.6205	0.0028	0.2796	12.0959	-25.1155

APPENDIX G – CONSUMER ISOTOPIC DATA

Table A11. Raw Consumer isotopic data.

Species ID	Avg N	Avg C	SL	Period	Location	Habitat type
Anchoa mitchilli 1	11.58	-23.29	27	1	Down	Creek
Anchoa mitchilli 2	11.03	-21.83	22	1	Down	Creek
Anchoa mitchilli 3	11.43	-21.17	22	1	Down	Creek
Anchoa mitchilli 4	10.18	-21.97	23	1	Down	Creek
Anchoa mitchilli 5	10.78	-25.04	27	1	Down	Creek
Anchoa mitchilli 6	11.06	-25.05	25	1	Down	Creek
Eucinostomus spp. 1	9.86	-21.77	34	1	Down	Creek
Eucinostomus spp. 2	10.12	-21.68	31	1	Down	Creek
Eucinostomus spp. 3	10.24	-24.34	35	1	Down	Creek
Eucinostomus spp. 4	10.43	-25.02	37	1	Down	Creek
Eucinostomus spp. 5	8.84	-22.48	32	1	Down	Creek
Gambusia holbrooki 1	10.53	-25.67	17	1	Down	Creek
Gambusia holbrooki 1	9.30	-25.26		1	Down	Creek
Gambusia holbrooki 2	10.73	-25.90	22	1	Down	Creek
Gambusia holbrooki 2	9.44	-24.92		1	Down	Creek
Gambusia holbrooki 3	10.42	-25.26	22	1	Down	Creek
Gambusia holbrooki 3	9.57	-25.46		1	Down	Creek
Gambusia holbrooki 4	10.39	-25.48	19	1	Down	Creek
Gambusia holbrooki 5	10.57	-25.42	15, 15	1	Down	Creek
Gambusia holbrooki 6	10.23	-25.55	15	1	Down	Creek
Microgobius gulosus 1	11.11	-27.58	21	1	Down	Creek
Microgobius gulosus 2	11.24	-28.73	22	1	Down	Creek
Microgobius gulosus 3	11.19	-27.31	23	1	Down	Creek
Microgobius gulosus 4	11.28	-27.11	23	1	Down	Creek
Microgobius gulosus 5	10.93	-28.74	21	1	Down	Creek
Microgobius gulosus 6	11.15	-27.15	19	1	Down	Creek
Poecillia latipinna 1	8.35	-23.82	21	1	Down	Creek
Poecillia latipinna 6	10.05	-24.70	30	1	Down	Creek
Anchoa mitchilli 1	12.96	-26.90	30	1	Down	Pond
Anchoa mitchilli 1	11.35	-27.35		1	Down	Pond
Anchoa mitchilli 2	11.62	-22.65	23	1	Down	Pond
Anchoa mitchilli 2	11.03	-27.31		1	Down	Pond
Anchoa mitchilli 3	11.38	-21.78	24	1	Down	Pond
Anchoa mitchilli 3	10.90	-27.70		1	Down	Pond
Anchoa mitchilli 4	11.50	-23.20	23	1	Down	Pond
Anchoa mitchilli 5	11.56	-25.28	25	1	Down	Pond
Anchoa mitchilli 6	12.03	-25.77	26	1	Down	Pond
Eucinostomus spp. 1	11.36	-24.71	35	1	Down	Pond

Table A11 continued.

Eucinostomus spp. 2	9.81	-22.17	31	1	Down	Pond
Gambusia holbrooki 1	12.27	-27.63	20	1	Down	Pond
Gambusia holbrooki 2	12.24	-27.04	22	1	Down	Pond
Gambusia holbrooki 3	11.71	-27.14	19	1	Down	Pond
Gambusia holbrooki 4	11.36	-27.69	14	1	Down	Pond
Gambusia holbrooki 5	11.40	-28.37	20	1	Down	Pond
Gambusia holbrooki 6	12.00	-28.48	20	1	Down	Pond
Microgobius gulosus 1	11.05	-28.90	19	1	Down	Pond
Microgobius gulosus 2	13.01	-29.04	19	1	Down	Pond
Microgobius gulosus 3	12.42	-30.21	20	1	Down	Pond
Microgobius gulosus 4	10.98	-31.57	15	1	Down	Pond
Microgobius gulosus 5	12.93	-29.25	22	1	Down	Pond
Microgobius gulosus 6	12.50	-29.25	22	1	Down	Pond
Poecillia latipinna 1	9.16	-26.11	17	1	Down	Pond
Poecillia latipinna 2	9.06	-27.39	18	1	Down	Pond
Poecillia latipinna 3	11.13	-26.18	20	1	Down	Pond
Poecillia latipinna 4	10.23	-28.84	16, 16	1	Down	Pond
Poecillia latipinna 5	9.34	-27.91	21	1	Down	Pond
Anchoa mitchilli 1	12.19	-23.86	26	1	Up	Creek
Anchoa mitchilli 2	11.78	-21.99	26	1	Up	Creek
Anchoa mitchilli 3	11.71	-23.19	23	1	Up	Creek
Anchoa mitchilli 4	11.32	-23.81	26	1	Up	Creek
Anchoa mitchilli 5	11.92	-25.03	29	1	Up	Creek
Anchoa mitchilli 6	11.63	-28.38	27	1	Up	Creek
Eucinostomus spp. 1	11.01	-25.75	38	1	Up	Creek
Eucinostomus spp. 2	8.31	-17.50	33	1	Up	Creek
Eucinostomus spp. 3	10.16	-25.09	39	1	Up	Creek
Eucinostomus spp. 4	8.95	-23.29	30	1	Up	Creek
Eucinostomus spp. 5	9.18	-20.59	33	1	Up	Creek
Gambusia holbrooki 1	11.96	-26.62	19	1	Up	Creek
Gambusia holbrooki 2	11.94	-25.99	19	1	Up	Creek
Gambusia holbrooki 3	10.07	-26.25	23	1	Up	Creek
Gambusia holbrooki 4	10.82	-25.92	24	1	Up	Creek
Gambusia holbrooki 5	10.14	-26.89	20	1	Up	Creek
Gambusia holbrooki 6	7.21	-29.31	20	1	Up	Creek
Microgobius gulosus 1	12.04	-28.86	20	1	Up	Creek
Microgobius gulosus 2	12.21	-30.63	20	1	Up	Creek
Microgobius gulosus 3	11.53	-29.47	18	1	Up	Creek
Microgobius gulosus 4	11.59	-28.43	18	1	Up	Creek
Microgobius gulosus 5	11.87	-29.24	18	1	Up	Creek
Microgobius gulosus 6	10.46	-27.91	20	1	Up	Creek
Poecillia latipinna 1	10.28	-26.33	17	1	Up	Creek
Poecillia latipinna 2	10.71	-27.16	18	1	Up	Creek
Poecillia latipinna 3	12.49	-28.50	16	1	Up	Creek

Table A11 continued.

Poecillia latipinna 4	10.53	-28.01	16	1	Up	Creek
Poecillia latipinna 5	11.76	-26.83	14	1	Up	Creek
Poecillia latipinna 6	8.28	-27.52	19	1	Up	Creek
Anchoa mitchilli 1	11.00	-22.46	23	1	Up	Pond
Anchoa mitchilli 2	10.81	-22.73	23	1	Up	Pond
Anchoa mitchilli 3	11.45	-23.27	23	1	Up	Pond
Anchoa mitchilli 4	11.33	-22.36	26	1	Up	Pond
Anchoa mitchilli 5	9.69	-21.97	24	1	Up	Pond
Anchoa mitchilli 6	11.24	-26.13	30	1	Up	Pond
Eucinostomus spp. 1	10.20	-24.89	32	1	Up	Pond
Eucinostomus spp. 2	10.78	-25.03	34	1	Up	Pond
Eucinostomus spp. 3	10.10	-25.97	33	1	Up	Pond
Eucinostomus spp. 4	9.49	-20.28	31	1	Up	Pond
Gambusia holbrooki 1	12.09	-26.91	20	1	Up	Pond
Gambusia holbrooki 2	6.87	-25.69	21	1	Up	Pond
Gambusia holbrooki 3	9.90	-28.53	21	1	Up	Pond
Gambusia holbrooki 4	11.80	-27.81	18	1	Up	Pond
Gambusia holbrooki 5	11.89	-27.37	20	1	Up	Pond
Gambusia holbrooki 6	11.10	-25.48	21	1	Up	Pond
Microgobius gulosus 1	11.68	-28.21	23	1	Up	Pond
Microgobius gulosus 2	11.20	-28.79	20	1	Up	Pond
Microgobius gulosus 3	11.30	-29.46	19	1	Up	Pond
Microgobius gulosus 4	11.48	-28.69	24	1	Up	Pond
Microgobius gulosus 5	10.15	-29.27	18	1	Up	Pond
Microgobius gulosus 6	10.87	-28.71	19	1	Up	Pond
Poecillia latipinna 1	10.99	-27.29	19	1	Up	Pond
Poecillia latipinna 2	9.32	-27.87	17	1	Up	Pond
Poecillia latipinna 3	10.08	-26.43	16, 15	1	Up	Pond
Poecillia latipinna 4	9.22	-28.62	17	1	Up	Pond
Poecillia latipinna 5	10.27	-27.82	16	1	Up	Pond
Poecillia latipinna 6	12.33	-29.35	17	1	Up	Pond
Anchoa mitchilli 1	12.78	-28.32	28	2	Down	Creek
Anchoa mitchilli 2	11.50	-22.79	24	2	Down	Creek
Anchoa mitchilli 3	11.98	-25.48	28	2	Down	Creek
Eucinostomus spp. 1	11.89	-22.30	18	2	Down	Creek
Eucinostomus spp. 2	11.27	-22.63	17	2	Down	Creek
Gambusia holbrooki 1	9.06	-25.11	24	2	Down	Creek
Gambusia holbrooki 2	9.00	-25.67	22	2	Down	Creek
Gambusia holbrooki 3	9.92	-26.06	16	2	Down	Creek
Microgobius gulosus 1	12.01	-26.05	26	2	Down	Creek
Microgobius gulosus 2	12.06	-26.29	23	2	Down	Creek
Microgobius gulosus 3	11.56	-27.17	25	2	Down	Creek
Poecillia latipinna 1	8.07	-27.74	21	2	Down	Creek
Poecillia latipinna 1	9.21	-25.61		2	Down	Creek

Table A11 continued.

Poecillia latipinna 2	10.85	-26.97		2	Down	Creek
Poecillia latipinna 3	10.44	-27.02		2	Down	Creek
Anchoa mitchilli 1	12.84	-25.62	31	2	Down	Pond
Anchoa mitchilli 2	13.04	-25.90	33	2	Down	Pond
Anchoa mitchilli 3	12.98	-27.58	28	2	Down	Pond
Eucinostomus spp. 1	12.06	-25.24	20	2	Down	Pond
Eucinostomus spp. 1	10.48	-24.00		2	Down	Pond
Eucinostomus spp. 2	11.42	-24.14	18	2	Down	Pond
Eucinostomus spp. 2	10.78	-23.81		2	Down	Pond
Eucinostomus spp. 3	12.13	-24.38	18	2	Down	Pond
Eucinostomus spp. 3	10.40	-25.70		2	Down	Pond
Gambusia holbrooki 1	12.14	-26.27	20	2	Down	Pond
Gambusia holbrooki 2	12.62	-27.20	18	2	Down	Pond
Gambusia holbrooki 3	12.17	-27.26	19	2	Down	Pond
Microgobius gulosus 1	12.09	-26.36	22	2	Down	Pond
Microgobius gulosus 2	12.66	-28.56	20	2	Down	Pond
Microgobius gulosus 3	12.11	-28.31	21	2	Down	Pond
Poecillia latipinna 1	8.99	-24.91	20	2	Down	Pond
Poecillia latipinna 2	10.30	-26.15	26	2	Down	Pond
Poecillia latipinna 3	10.29	-26.31	22	2	Down	Pond
Anchoa mitchilli 1	11.98	-25.08	27	2	Up	Creek
Anchoa mitchilli 2	12.02	-24.27	28	2	Up	Creek
Anchoa mitchilli 3	12.32	-28.97	28	2	Up	Creek
Eucinostomus spp. 1	12.17	-23.03	19	2	Up	Creek
Eucinostomus spp. 2	10.99	-25.42	15, 16	2	Up	Creek
Eucinostomus spp. 3	11.28	-25.39	15, 16	2	Up	Creek
Gambusia holbrooki 1	8.46	-23.80	19	2	Up	Creek
Gambusia holbrooki 2	8.42	-24.27	21	2	Up	Creek
Gambusia holbrooki 3	9.29	-26.30	21	2	Up	Creek
Microgobius gulosus 1	12.02	-25.78	30	2	Up	Creek
Microgobius gulosus 1	9.81	-25.96		2	Up	Creek
Microgobius gulosus 2	12.47	-24.70	23	2	Up	Creek
Microgobius gulosus 2	9.79	-25.66		2	Up	Creek
Microgobius gulosus 3	12.42	-24.46	26	2	Up	Creek
Microgobius gulosus 3	10.73	-26.95		2	Up	Creek
Poecillia latipinna 1	12.55	-26.76	18	2	Up	Creek
Poecillia latipinna 2	9.92	-24.65	22	2	Up	Creek
Poecillia latipinna 3	9.95	-26.82	32	2	Up	Creek
Anchoa mitchilli 1	12.62	-28.24	26	2	Up	Pond
Anchoa mitchilli 2	11.79	-44.71	22	2	Up	Pond
Anchoa mitchilli 3	11.61	-24.92	21	2	Up	Pond
Eucinostomus spp. 1	12.43	-26.52	18	2	Up	Pond
Eucinostomus spp. 2	9.66	-22.29	13	2	Up	Pond
Eucinostomus spp. 3	11.29	-25.95	15	2	Up	Pond

Table A11 continued.

Gambusia holbrooki 1	11.91	-25.28	18	2	Up	Pond
Gambusia holbrooki 2	11.81	-25.26	17	2	Up	Pond
Gambusia holbrooki 3	12.05	-25.74	18	2	Up	Pond
Grass shrimp 1	10.38	-24.07		2	Up	Pond
Grass shrimp 2	10.52	-25.21		2	Up	Pond
Grass shrimp 3	10.75	-25.25		2	Up	Pond
Microgobius gulosus 1	12.83	-28.25	28	2	Up	Pond
Microgobius gulosus 2	12.64	-28.33	26	2	Up	Pond
Microgobius gulosus 3	13.14	-28.87	22	2	Up	Pond
Poecillia latipinna 1	10.57	-25.78	24	2	Up	Pond
Poecillia latipinna 2	10.38	-25.15	22	2	Up	Pond
Poecillia latipinna 3	10.49	-25.67	22	2	Up	Pond
Anchoa mitchilli 1	12.82	-26.15	30	3	Down	Creek
Anchoa mitchilli 2	12.01	-25.79	33	3	Down	Creek
Anchoa mitchilli 3	12.28	-26.36	33	3	Down	Creek
Eucinostomus spp. 1	12.14	-25.20	23	3	Down	Creek
Eucinostomus spp. 2	12.24	-25.08	23	3	Down	Creek
Eucinostomus spp. 3	12.58	-25.13	22	3	Down	Creek
Gambusia holbrooki 1	8.02	-28.68	19	3	Down	Creek
Gambusia holbrooki 2	7.76	-27.63	21	3	Down	Creek
Gambusia holbrooki 3	11.40	-25.14	24	3	Down	Creek
Grass shrimp 1	10.99	-25.42		3	Down	Creek
Grass shrimp 2	10.70	-25.82		3	Down	Creek
Grass shrimp 3	10.93	-26.29		3	Down	Creek
Microgobius gulosus 1	11.98	-27.78	30	3	Down	Creek
Microgobius gulosus 2	11.76	-27.29	31	3	Down	Creek
Microgobius gulosus 3	11.72	-23.89	31	3	Down	Creek
Poecillia latipinna 1	9.65	-26.50	30	3	Down	Creek
Poecillia latipinna 2	7.98	-27.52	31	3	Down	Creek
Poecillia latipinna 3	9.63	-26.31	22	3	Down	Creek
Anchoa mitchilli 1	12.40	-26.19	28	3	Down	Pond
Anchoa mitchilli 2	12.23	-26.60	27	3	Down	Pond
Anchoa mitchilli 3	12.37	-26.16	27	3	Down	Pond
Eucinostomus spp. 1	12.69	-24.12	19	3	Down	Pond
Eucinostomus spp. 2	12.38	-23.63	20	3	Down	Pond
Eucinostomus spp. 3	12.48	-23.87	23	3	Down	Pond
Gambusia holbrooki 1	11.94	-24.68	23	3	Down	Pond
Gambusia holbrooki 2	12.51	-25.13	22	3	Down	Pond
Gambusia holbrooki 3	11.32	-25.77	22	3	Down	Pond
Grass shrimp 1	10.78	-24.01		3	Down	Pond
Grass shrimp 2	10.55	-22.87		3	Down	Pond
Grass shrimp 3	11.25	-25.43		3	Down	Pond
Microgobius gulosus 1	11.91	-26.08	28	3	Down	Pond
Microgobius gulosus 2	11.77	-26.32	31	3	Down	Pond

Table A11 continued.

Microgobius gulosus 3	12.33	-26.13	32	3	Down	Pond
Poecillia latipinna 1	6.59	-33.26	28	3	Down	Pond
Poecillia latipinna 2	9.41	-26.06	28	3	Down	Pond
Poecillia latipinna 3	10.36	-24.49	27	3	Down	Pond
Anchoa mitchilli 1	12.06	-25.84	25	3	Up	Creek
Anchoa mitchilli 2	12.21	-26.65	27	3	Up	Creek
Anchoa mitchilli 3	12.19	-26.15	25	3	Up	Creek
Eucinostomus spp. 1	12.68	-25.01	23	3	Up	Creek
Eucinostomus spp. 2	12.68	-25.50	15, 19	3	Up	Creek
Eucinostomus spp. 3	12.16	-25.91	17, 17	3	Up	Creek
Gambusia holbrooki 1	11.18	-25.39	20	3	Up	Creek
Gambusia holbrooki 2	8.15	-27.21	21	3	Up	Creek
Gambusia holbrooki 3	8.52	-30.33	22	3	Up	Creek
Grass shrimp 1	10.41	-24.96		3	Up	Creek
Grass shrimp 2	10.96	-25.28		3	Up	Creek
Grass shrimp 3	10.44	-24.46		3	Up	Creek
Microgobius gulosus 1	12.69	-26.32	35	3	Up	Creek
Poecillia latipinna 1	11.72	-24.32	23	3	Up	Creek
Poecillia latipinna 2	11.74	-25.40	23	3	Up	Creek
Poecillia latipinna 3	6.78	-21.38	24	3	Up	Creek
Anchoa mitchilli 1	12.39	-26.57	30	3	Up	Pond
Anchoa mitchilli 2	12.58	-27.71	33	3	Up	Pond
Anchoa mitchilli 3	12.27	-27.55	30	3	Up	Pond
Eucinostomus spp. 1	12.87	-26.29	20	3	Up	Pond
Eucinostomus spp. 2	13.21	-26.11	21	3	Up	Pond
Eucinostomus spp. 3	12.87	-25.65	24	3	Up	Pond
Gambusia holbrooki 1	12.02	-25.78	19	3	Up	Pond
Gambusia holbrooki 2	11.97	-24.79	19	3	Up	Pond
Gambusia holbrooki 3	11.98	-25.39	18	3	Up	Pond
Grass shrimp 1	10.80	-25.25		3	Up	Pond
Grass shrimp 2	11.22	-24.74		3	Up	Pond
Microgobius gulosus 1	12.22	-26.57	24	3	Up	Pond
Microgobius gulosus 2	12.65	-26.01	31	3	Up	Pond
Microgobius gulosus 3	13.16	-26.55	28	3	Up	Pond
Poecillia latipinna 1	10.42	-25.52	19	3	Up	Pond
Poecillia latipinna 2	11.52	-24.85	19	3	Up	Pond
Poecillia latipinna 3	10.45	-25.28	23	3	Up	Pond
Amphipod 5	7.11	-24.72			Down	Creek
Amphipod 6	7.23	-28.11			Down	Creek
Amphipod 7	7.52	-24.38			Down	Creek
Amphipod 8	7.67	-24.35			Down	Creek
Amphipod 9	7.46	-24.54			Down	Creek
Barnacles 4	2.57	-24.92			Down	Creek
Barnacles 4	2.81	-24.96			Down	Creek

Table A11 continued.

Barnacles 5	2.71	-25.05	Down	Creek
CB snail 1	2.55	-24.90	Down	Creek
CB snail 3	7.16	-30.47	Down	Creek
CB Snails 1	6.82	-30.14	Down	Creek
CB Snails 1	7.32	-31.48	Down	Creek
CB Snails 2	9.99	-28.32	Down	Creek
CB Snails 2	9.70	-27.19	Down	Creek
CB Snails 3	9.54	-27.60	Down	Creek
CB Snails 3	9.57	-27.76	Down	Creek
Amphipod 2	6.64	-27.74	Down	Pond
Amphipod 3	6.97	-26.81	Down	Pond
Barnacles 1	7.63	-30.71	Down	Pond
Barnacles 1	7.23	-31.09	Down	Pond
Barnacles 1	4.55	-23.14	Down	Pond
Barnacles 1	4.91	-23.44	Down	Pond
Barnacles 2	5.32	-23.73	Down	Pond
Barnacles 2	10.39	-28.28	Down	Pond
Barnacles 2	11.19	-27.90	Down	Pond
Barnacles 2	10.40	-27.64	Down	Pond
Barnacles 3	10.16	-27.58	Down	Pond
Barnacles 3	9.98	-27.62	Down	Pond
Barnacles 3	10.12	-27.66	Down	Pond
Barnacles 3	10.32	-28.10	Down	Pond
CB snail 2	6.48	-31.18	Down	Pond
Sm. Mussels 1	10.69	-27.48	Down	Pond
Sm. Mussels 1	10.59	-27.43	Down	Pond
Sm. Mussels 2	10.85	-27.63	Down	Pond
Amphipod 4	7.80	-26.20	Up	Creek
Rangia 1 (foot)	9.46	-27.32	Up	Creek
Rangia 2	9.36	-27.32	Up	Creek
Rangia 3	9.50	-28.02	Up	Creek
Rangia 4	9.08	-28.41	Up	Creek
Rangia 5 (f)	9.21	-28.51	Up	Creek
Sm mussel	7.05	-31.46	Up	Creek
Amphipod 1	9.99	-32.46	Up	Pond
CB Snails 4	4.34	-24.39	Up	Pond
Lg. ribbed mussel 1	3.91	-24.98	Up	Pond
Lg. ribbed mussel 2	3.80	-24.45	Up	Pond
Mussels 1	10.50	-30.58	Up	Pond
Mussels 2	10.46	-30.60	Up	Pond
Oyster	10.90	-30.28	Up	Pond
Rangia (f)	7.86	-32.00	Up	Pond
Rangia 1 (adductor)	7.72	-31.98	Up	Pond

APPENDIX H – PRIMARY PRODUCER ISOTOPIC DATA

Table A12. Raw primary producer isotopic data.

Sample type	Habitat type	Location	Avg N	Avg C
BM g	Creek	Down	1.87	-30.53
BM g	Creek	Down	2.21	-28.80
BM g	Creek	Down	1.22	-29.83
BM g	Pond	Down	5.84	-27.47
BM g	Pond	Down	5.53	-28.07
BM g	Pond	Down	6.27	-28.04
BM g	Pond	Down	5.10	-27.50
BM g	Pond	Down	4.52	-27.54
BM g	Creek	Up	5.58	-29.52
BM g	Creek	Up	6.58	-28.33
BM g	Creek	Up	5.68	-29.15
BM g	Creek	Up	6.97	-27.90
BM g	Creek	Up	7.83	-28.16
BM g	Pond	Up	7.18	-29.27
BM g	Pond	Up	6.42	-28.61
BM g	Pond	Up	4.10	-29.84
BM g	Pond	Up	7.31	-29.03
BM g	Pond	Up	6.70	-28.26
BM g	Pond	Up	4.25	-29.50
BM g	Pond	Up	4.13	-29.64
BM g	Pond	Up	4.10	-30.08
BMA	Creek	Down	7.14	-25.62
BMA in	Creek	Down	3.50	-29.62
BMA in	Creek	Down	5.74	-26.77
BMA in	Pond	Down	6.10	-27.30
BMA in	Pond	Down	5.09	-28.92
BMA in	Creek	Up	7.83	-27.94
BMA in	Creek	Up	5.78	-30.39
BMA in	Pond	Up	5.84	-27.41
BMA in	Pond	Up	6.40	-26.32
BP g	Creek	Down	1.15	-28.43
BP g	Creek	Down	0.81	-29.03
BP g	Creek	Down	0.84	-27.26
BW d	Creek	Up	4.96	-25.78
BW g	Creek	Up	2.64	-26.74
BW g	Creek	Up	3.24	-26.12
BW g	Creek	Up	3.28	-26.61
BW g	Creek	Up	3.66	-26.59

Table A12 continued.

BW g	Creek	Up	2.74	-26.86
BW g	Pond	Up	3.40	-28.78
BW g	Pond	Up	3.03	-28.69
BW g	Pond	Up	3.39	-28.53
BW g	Pond	Up	3.26	-28.45
BW g	Pond	Up	2.63	-28.77
CS	Pond	Up	7.75	-27.09
CS	Pond	Up	7.70	-28.87
FG	Creek	Down	4.19	-27.58
FG	Creek	Down	3.84	-27.69
FG	Pond	Down	10.05	-22.71
FG	Creek	Up	9.78	-24.01
FG	Pond	Up	5.09	-22.36
FG	Pond	Up	4.96	-23.40
FG	Pond	Up	4.98	-22.86
HY	Pond	Up	11.43	-30.55
HY	Pond	Up	12.17	-30.49
HY	Pond	Up	12.29	-30.25
LF	Pond	Up	6.20	-28.14
LF	Pond	Up	1.74	-25.88
LF	Pond	Up	6.13	-27.95
LF	Pond	Up	5.98	-28.25
LF	Pond	Up	6.00	-28.61
RM d	Creek	Down	3.75	-29.87
RM d	Creek	Down	4.00	-29.23
RM d	Creek	Down	3.85	-29.87
RM d	Creek	Up	4.82	-29.05
RM d	Creek	Up	4.52	-26.81
RM d	Creek	Up	5.29	-28.81
RM g	Creek	Down	8.59	-29.19
RM g	Creek	Down	7.09	-27.19
RM g	Creek	Down	8.47	-28.84
RM g	Creek	Down	6.95	-27.49
RM g	Creek	Down	7.78	-26.57
RM g	Creek	Down	5.33	-26.36
RM g	Pond	Down	6.54	-29.10
RM g	Pond	Down	3.64	-30.23
RM g	Pond	Down	5.82	-28.69
RM g	Pond	Down	5.80	-29.42
RM g	Pond	Down	5.88	-29.10
RM g	Creek	Up	2.47	-27.98
RM g	Creek	Up	2.29	-28.53
RM g	Creek	Up	3.16	-28.18
RM g	Creek	Up	4.12	-29.00

Table A12 continued.

RM g	Pond	Up	3.23	-28.08
RM g	Pond	Up	4.27	-29.66
RM g	Pond	Up	3.18	-27.82
RM g	Pond	Up	3.63	-29.28
RM g	Pond	Up	4.89	-29.87
RM y	Creek	Up	8.31	-29.23
WL	Pond	Up	12.27	-29.68
WL	Pond	Up	12.08	-29.81
WL	Pond	Up	11.64	-29.21
WL roots	Pond	Up	9.02	-28.97
WM d	Creek	Down	6.18	-28.72
WM d	Creek	Down	5.59	-29.13
WM d	Creek	Down	6.61	-28.09
WM d	Pond	Down	5.46	-27.97
WM d	Pond	Down	6.43	-30.34
WM d	Pond	Down	5.29	-28.83
WM d	Pond	Down	6.09	-28.31
WM d	Pond	Down	6.10	-29.95
WM d	Creek	Up	6.75	-28.50
WM d	Creek	Up	6.48	-29.01
WM d	Creek	Up	6.86	-28.85
WM d	Creek	Up	2.26	-30.79
WM d	Creek	Up	6.08	-30.15
WM g	Creek	Down	7.46	-26.84
WM g	Creek	Down	6.43	-27.65
WM g	Creek	Down	6.36	-27.48
WM g	Creek	Down	6.67	-26.29
WM g	Creek	Down	7.26	-29.61
WM g	Pond	Down	5.18	-28.12
WM g	Pond	Down	5.96	-30.25
WM g	Pond	Down	7.18	-30.36
WM g	Pond	Down	5.22	-29.37
WM g	Creek	Up	5.97	-27.45
WM g	Creek	Up	6.79	-29.02
WM g	Creek	Up	6.75	-27.93
WM g	Creek	Up	5.42	-27.01
WM g	Creek	Up	6.37	-28.05
WM g	Pond	Up	6.01	-25.66
WM g	Pond	Up	5.31	-29.35
WM g	Pond	Up	4.54	-27.95
WM g	Pond	Up	5.99	-26.19
WM g	Pond	Up	5.85	-26.04
BMA out	Creek	Down	8.38	-30.36
BMA out	Creek	Down	5.76	-29.26

Table A12 continued.

BMA out	Creek	Up	7.94	-25.28
BMA out	Creek	Up	5.79	-31.52
BMA out	Pond	Down	6.94	-26.68
BMA out	Pond	Down	6.81	-29.17
BMA out	Pond	Up	6.12	-23.45
BMA out	Pond	Up	7.02	-31.22
POM	Creek	Down	4.71	-28.65
POM	Creek	Down	4.61	-28.22
POM	Creek	Down	2.55	-23.26
POM	Creek	Up	7.70	-33.87
POM	Creek	Up	6.08	-30.94
POM	Creek	Up	5.55	-30.29
POM	Pond	Down	5.68	-30.45
POM	Pond	Down	5.84	-29.38
POM	Pond	Down	5.77	-30.47
POM	Pond	Up	5.27	-30.39
POM	Pond	Up	6.64	-30.46
POM	Pond	Up	5.36	-30.57
DIC	Creek	Up		-9.34
DIC	Creek	Up		-8.08
DIC	Creek	Up		-8.05
DIC	Creek	Down		-7.85
DIC	Creek	Down		-8.02
DIC	Creek	Down		-7.59
DIC	Pond	Up		-7.83
DIC	Pond	Up		-7.71
DIC	Pond	Up		-7.62
DIC	Pond	Down		-7.74
DIC	Pond	Down		-7.74
DIC	Pond	Down		-6.89