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Bivalve Effects on the Food Web Supporting Delta Smelt—A Long-Term Study of Bivalve Recruitment, Biomass, and Grazing Rate Patterns with Varying Freshwater Outflow

By Jeff S. Crauder, Janet K. Thompson, Francis Parchaso, Rosa I. Anduaga, Sarah A. Pearson, Karen Gehrts, Heather Fuller, and Elizabeth Wells

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Conversion Factors

International System of Units to Inch/Pound

Multiply	By	To obtain
	Length	
millimeter (mm)	0.03937	inch (in.)
meter (m)	3.281	foot (ft)
kilometer (km)	0.6214	mile (mi)
	Area	
square meter (m^2)	10.76	square foot (ft^2)
	Volume	
liter (L)	0.2642	gallon (gal)
cubic meter (m^3)	264.2	gallon (gal)
	Mass	
gram (g)	0.03527	ounce, avoirdupois (oz)

Biomass units are grams of ash-free dry mass per square meter (g ash-free-dry-mass/m²).

Grazing rate is given as cubic meter per meter squared per day (GR = m³/m²/d).

Recruits are given as the number of bivalves ≤ 2.5 millimeters in length per meter squared (#/m² of bivalves ≤ 2.5 mm in length).

The low salinity zone (LSZ)—salinities range from 1 to 6 practical salinity units (psu).

Temperature in degrees Celsius (°C) may be converted to degrees Fahrenheit (°F) as °F = (1.8 × °C) + 32.

Temperature in degrees Fahrenheit (°F) may be converted to degrees Celsius (°C) as °C = (°F – 32) / 1.8.

Abbreviations

AFDM	ash-free dry mass
AFDW	ash-free dry weight
CBL	concentration boundary layer
CF	*Corbicula fluminea*
DWR	California Department of Water Resources
EMP	environmental monitoring program
GR	grazing rate
GRTO	grazing rate turnover rate
IEP	Interagency Ecological Program
LSZ	low salinity zone
PA	*Potamocorbula amurensis*
POD	pelagic organism decline
PR	pumping rate
Reclamation	Bureau of Reclamation
SWRCB	State Water Resources Control Board
USGS	U.S. Geological Survey

Bivalve Effects on the Food Web Supporting Delta Smelt—A Long-Term Study of Bivalve Recruitment, Biomass, and Grazing Rate Patterns with Varying Freshwater Outflow

By Jeff S. Crauder[1], Janet K. Thompson[1], Francis Parchaso[1], Rosa I. Anduaga[1], Sarah A. Pearson[1], Karen Gehrts[2], Heather Fuller[2], and Elizabeth Wells[2]

Executive Summary

Phytoplankton is an important and limiting food source in the Sacramento-San Joaquin Delta (the Delta) and San Francisco Bay; the decline of phytoplankton biomass is one possible factor in the pelagic organism decline and specifically in the decline of the protected delta smelt. The bivalves *Corbicula fluminea* and *Potamocorbula amurensis* have been shown to control phytoplankton biomass in several locations throughout the system, and their distribution and population dynamics are therefore of great interest. We were able to describe the distribution and dynamics of bivalve biomass through use of samples collected by the California Department of Water Resources (DWR) as part of a monitoring program from 1977 to 2013. As one element of DWR's and the Bureau of Reclamation's Environmental Monitoring Program (EMP), the DWR benthic monitoring program examines the impact of water project operations on the estuary as prescribed by a series of Water Rights Decisions mandated by the State Water Resources Control Board (SWRCB). The availability of multidecade samples allowed us to examine long-term trends in biomass, recruitment, and size of bivalves at the 15 stations sampled.

Biomass and grazing rate had the same basic trends, and the conclusions that we apply to biomass can be applied to grazing rate data. During winter of most years, *Potamocorbula* biomass was low at all locations and was near zero in the shallow San Pablo Bay station. The *Potamocorbula* biomass at shallow stations consistently peaked during summer and fall, but there was no consistent peak season in the deep stations. *Corbicula* had a much less consistent seasonal biomass pattern than *Potamocorbula*. However, some interannual patterns were consistent between stations. *Corbicula* biomass at three stations declined after 2003 (C9, D16, and D28). The Franks Tract (D19) *Corbicula* biomass had a baseline shift up (that is, all values were > 0) in 1985 until DWR ceased sampling at the station in 1995. Two other stations showed a similar increase in baseline but at different times; D24 shifted up after 2007 and D11 shifted up in 1991.

Potamocorbula recruitment (any bivalve ≤ 2.5 millimeters [mm] in length) occurred anytime between spring and fall, with bivalves at the most downstream stations in San Pablo Bay recruiting in spring and animals at the most upstream stations recruiting in fall. The bivalves at the stations between these endpoints recruited in (1) spring or (2) summer and fall (Carquinez Strait), or in some combination of two of those three seasons in Grizzly Bay. The few locations where *Potamocorbula* and *Corbicula* overlapped showed recruitment abundance opposing each other, with *Potamocorbula* recruits peaking

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during the more saline time of year and *Corbicula* recruits peaking during periods of lower salinities. *Corbicula* recruits were present throughout most of the year with some peaks in abundance, but the patterns were not seasonally consistent at any station.

Mean size peaked in both bivalves in late summer and early fall and never got above a certain size; maximum size depended on location. The mean size of both bivalves has decreased over the years, with the size distributions throughout the Delta now skewed toward smaller, younger *Corbicula* (< 10 mm). The mean size of *Potamocorbula* has also become skewed toward the small, younger bivalves, with sizes in the range of 2–8 mm. The mean size of *Potamocorbula* increased from spring to fall and decreased in winter. A similar generalization is not possible with *Corbicula* because seasonal patterns in size varied depending on station location. Station D24 on the Sacramento River was the only location with an increase in *Corbicula* mean size over the sampling period.

The largest mean sized *Potamocorbula* were seen in the channel areas, where sizes of 15 mm were common at stations D41C, 8.1, and D6; sizes in excess of 15 mm were observed at all three D4 stations during the mid 1990s. The mean size of *Potamocorbula* in the shoals was ≈5–7 mm in most years in Grizzly Bay (D7) and San Pablo Bay (D41A), with an increase to > 10 mm at D7 in the wet years.

The largest mean sized *Corbicula* were in the southern Delta (C9 ≈25 mm during 1996–97 and 2012–2013), and the smallest average sizes were in the San Joaquin River (P8 and D16). *Corbicula* at the upstream Sacramento River station (D24) and in the southern Delta (C9) showed similar interannual patterns in average size although the animals at C9 were consistently larger than those at D24 were. *Corbicula* in Franks Tract (D19) and the Old River (D28A) south of Franks Tract were also similar in size and in interannual patterns.

At the few stations where *Potamocorbula* and *Corbicula* co-occur, it appears that they did not hinder each other's growth. Both bivalves had large animals at D4, where *Corbicula* size increased coincident with the presence of *Potamocorbula* in 1987. *Corbicula* were observed in wet years prior to *Potamocorbula's* invasion at D7 (Grizzly Bay) and were capable of growing to significant size in wet years (> 20 mm in 1986).

Introduction

The State Water Resources Control Board (SWRCB) sets water quality objectives to protect beneficial uses of water in the Sacramento-San Joaquin Delta (the Delta) and Suisun and San Pablo Bays. To meet these objectives, the SWRCB establishes mandated standards in the water rights permits issued to the Department of Water Resources (DWR) and Bureau of Reclamation (Reclamation). Water Rights Decisions (D-1379, D-1485, and D-1641) have established water quality requirements and provided terms and conditions for a comprehensive monitoring program to determine water quality conditions and changes in environmental conditions within the estuary. The benthic monitoring program is one element of DWR and Reclamation's Environmental Monitoring Program (EMP) wherein the impact of water project operations on the estuary are determined. These impacts are determined by changes in benthic fauna presence, abundance and distribution of the benthos associated with physical factors in the estuary, and the detection of newly introduced species in the estuary. This benthic monitoring program is the backbone of this study, and we are using samples collected from 1977 through 2013 to examine how the biomass and grazing rate of the bivalves have changed in time and space.

Large changes that have occurred in San Francisco Bay (hereafter Bay) and the Delta over the past several decades have fueled the interest in bivalve grazing rates and biomass. Four species of fish, many macrozooplankton species, and the native mysid shrimp (*Neomysis mercedis*) have shown large

population declines in the San Francisco Bay estuary (Baxter and others, 2008). Although all of these reductions in abundance of species are problematic, the decline of the delta smelt, *Hypomesus transpacificus,* is of most concern because of its protected status under the Endangered Species Act (ESA). One of the suggested causes for ecological decline—the pelagic organism decline (POD)—is the reduction of phytoplankton in the northern estuary coincident with the introduction of the exotic, filter-feeding bivalve *Potamocorbula amurensis* (hereafter *Potamocorbula*) in 1987. Phytoplankton biomass immediately declined when *Potamocorbula* invaded, and since that time, net phytoplankton growth rates have remained very low (Alpine and Cloern, 1992; MacNally and others, 2010). The phytoplankton biomass in the northern estuary and the western Delta is now chronically low and is considered a contributor to, if not a major cause of, the POD (Baxter and others, 2008; Hammock and others, 2015).

If we consider the northern San Francisco Bay and the Delta as the habitat for the POD species, two large bivalve species inhabit the area—an estuarine bivalve, *Potamocorbula,* and a freshwater bivalve, *Corbicula fluminea* (hereafter *Corbicula*). Both bivalves can limit the availability of phytoplankton biomass to other members of the food web in the estuary (Kimmerer and Thompson, 2014; Lopez and others, 2006; Lucas and others, 2002; Lucas and others, 2009; Thompson and others, 2008). In addition, *Potamocorbula* can filter zooplankton nauplii and ciliates out of the water column (Kimmerer and others, 1994; Greene and others, 2011), and *Corbicula* can filter ciliates (Scherwass and others, 2001) and glochidia (Scherwass and Arndt, 2005) from the water column. We therefore hypothesize that both bivalves may reduce the food supply to delta smelt and other fish species on at least two levels of the food web. For example, any direct reduction in zooplankton through filtration by bivalves, or indirect reduction in zooplankton owing to food limitation, can affect delta smelt, which feed mostly on calanoid copepods throughout their lives (Nobriga, 2002).

We are interested in the dynamics of both species of bivalve and specifically want to describe their temporal and spatial distributions to begin exploring possible controls on their distributions. Because *Corbicula* and *Potamocorbula* have varying (almost opposite) salinity limits, we expect that the primary limit for both species will be physiological. Other factors that are likely to affect the bivalve's distribution include (1) physical habitat, which is important for reproductive and recruitment success but can also be a stress to adults; (2) food availability, which may limit both species at all ages in this food-limited estuary (Kimmerer and Thompson, 2014); and (3) available predators, which are poorly understood.

In this report, we summarize the temporal variability of *Corbicula* and *Potamocorbula* in the north Bay and Delta by examining time series of biomass, grazing rate, recruit density, and average length of bivalves in samples from 15 monitoring stations. These bivalves are from benthic samples collected as part of the monitoring program conducted by the California Department of Water Resources Environmental Monitoring Program (http://www.water.ca.gov/bdma/) between 1977 and 2013.
We specifically address the following questions in this paper:

1. How do *Potamocorbula* and *Corbicula* populations at a specific location respond to seasonal and interannual changes in salinity? How does salinity variability influence successful recruitment of these bivalves?
2. Is the magnitude of the grazing rate such that we would expect the feeding of the bivalves to limit seasonally the biomass of phytoplankton, copepods, bacteria, and microzooplankton?

Project Background and the Conceptual Model

All POD models have recognized that food limitation may be contributing to the decline of delta smelt (Baxter and others, 2008). The new, spatially explicit conceptual model for 2011 (as described in

"Draft Plan: Adaptive Management of Fall Outflow for delta smelt Protection and Water Supply Reliability") highlights the importance of the biotic habitat as well as the abiotic physical habitat as measured by the position of X2 (kilometers [km] upstream of the Golden Gate Bridge) (Jassby and others, 1995). The longitudinal salinity distribution helps determine the available habitat for each bivalve and thus, ultimately, what the potential for limiting grazing rates is along the longitudinal gradient. We will use the position of X2 as our measure of salinity distribution and expect that *Corbicula* and *Potamocorbula* will overlap in the region of X2. This overlap is expected because the physiological limit for new recruits of both species is a salinity of 2. The X2 position is not a precise measurement but represents the distance upstream from the Golden Gate Bridge, where a daily average salinity at 1 meter (m) above of the bottom is 2 (Jassby and others, 1995); therefore, the actual occurrence of a salinity of 2 is within an area upstream and downstream of the calculated X2 values. The X2 position moves up and down the estuary with tides and with seasons. We know that the abiotic habitat increases in complexity, and the potential for local food production increases where delta smelt habitat coincides with the shallow water (≤ 3 m) of Suisun Bay, Grizzly Bay, Honker Bay, and Suisun Marsh (fig 1). A critical component of food production, the phytoplankton biomass, is controlled by a combination of light and nutrient availability, residence time, and benthic and pelagic grazing losses (Kimmerer and others, 2012). Therefore, the high turbidity of the system limits positive net production to shallow areas, where accelerated vertical mixing rates expose phytoplankton cells to more light than in the channel (Cloern and others, 1985). Grazing losses to bivalves may also be greater in shallow water because increased mixing rates afford the bivalves more access to pelagic food. However, Thompson and others (2008) and Lucas and others (2009) have also shown that clams in the deep water (≥ 5 m) can have very high grazing rates and can depress the phytoplankton biomass that is transported from the shallows to this habitat.

The questions of how food availability for delta smelt has changed during the POD years and what factors are responsible for those changes have not been resolved. We know that the variability in salinity has decreased in late summer and fall during the POD and that delta smelt mostly live in the low salinity zone (LSZ) during this period. Several components of the LSZ food web, including the success and distribution of bivalves, may be affected by this change in salinity.

We analyzed bivalve grazing effects at all monitoring stations with available samples. We also examined bivalve recruitment patterns to understand how increasing freshwater flow can influence the distribution of each species.

Methods

Stations and Samples

The California Department of Water Resources Environmental Monitoring Program (http://www.water.ca.gov/bdma/) sampled 15 stations throughout the San Francisco Bay and Sacramento-San Joaquin Delta between 1977 and 2013 (fig. 1). Sampling occurred at various intervals until midway through 1980, when samples were collected at near monthly intervals. During 2004 and 2005, samples were collected quarterly. Station 8.1 is a U.S. Geological Survey (USGS) station that was a precursor to DWR sampling at site D6; it is in close approximation to but not in the same location as DWR site D6. Station 8.1 was sampled from 1988 to 2007, and DWR began sampling at D6 in 1996; the USGS measured bivalves through 2007 from station 8.1 and then finished the time series with samples from D6. From 1977-95, a single sample was archived of the 3–4 collected each month at each station. After 1996, three to four samples were collected and archived at each station (table 1). We measured all available bivalve samples except for those collected in 2003, when all samples were lost

(2003 appears as holes in the data). Station D4 was collected as an across channel transect, shown as D4C, D4L, and D4R. Samples were collected in the channel (D4C) from 1977 to 1995, in the left shoal (D4L) from 1976 to present, and in the right shoal (D4R) from 1977 to 1995.

Field Collection Methods

California Department of Water Resources Environmental Monitoring Program uses a 0.052-m^2 (square meter) ponar dredge to sample the bottom area to a depth that varies with the type of sediment and the ability of the dredge to penetrate it. At all sites, DWR collected an extra sample to determine the monthly length-to-weight (ash-free dry weight, [AFDW]) relation of the bivalve species. Each sample was sieved through a U.S. Standard No. 30 stainless steel mesh screen (0.595-mm openings) and preserved in a solution of approximately 10–20 percent buffered formaldehyde (depending on the substrate) with rose bengal dye added for laboratory analysis. We received sorted samples from DWR after their routine laboratory analyses were completed.

Analytical Methods

Measuring Bivalves

USGS personnel measured the bivalves to the nearest millimeter using a video image analyzer with HLImage++ software (http://www.wvision.com/) and handheld calipers (for the larger animals, > 5 mm). The USGS has used this technique for over 20 years. Bivalves were then returned to DWR for archiving. Biomass estimates were based on relations between shell length and dry tissue weight that were calculated by DWR and the USGS during each field sampling using the standard techniques described in Thompson and others (2008).

Estimating Grazing Rates

Grazing rates were calculated using the method described in Thompson and others (2008) for *Potamocorbula* and in Lopez and others (2006) for *Corbicula*. Pumping rates were adjusted for temperature and are provided as conservative rates (corrected for concentration boundary layer). Community pumping rates (*PR*) were based on published relations: *Potamocorbula*, 400 liters (L) per gram (g) of ash free dry weight (AFDW) per day (d) ($Lg^{-1}d^{-1}$)(Cole and others, 1992; AFDW=dry weight–ash weight). Community pumping rates were converted to grazing rates (*GR*) by reducing *PR* to adjust for the presence of a concentration boundary layer. This adjustment was based on O'Riordan and others' (1995, figure 7b) refiltration relationship, $n_{max}=2.5/(s(d_0)^{-1})$, where n_{max} is the maximum refiltration proportion. The refiltration proportion (n_{max}) is the proportion of water previously filtered by a square meter of bivalves ($GR=PR(1-n_{max})$). The distance between siphon pairs (s) is a measure of animal density, and d_0 is the average diameter of the excurrent siphon of the animals collected at each site (a measure of animal size). The diameter of the excurrent siphon was changed throughout each year to reflect the change in average size of animals as the year progressed, and the distance between siphon pairs was based on density of animals observed in our benthic sampling assuming equidistant spacing within the 0.05-m^2 grab. Benthic grazing rates calculated in this manner represent the minimum grazing rates because they assume that the near bottom boundary layer is depleted of phytoplankton, and mixing of the water column is inadequate to replenish that lower layer with biomass. We assumed all bivalves grazed continuously.

Dry weight was used to estimate temperature-corrected pumping rates for *Corbicula*. Pumping rate, expressed as a unit of weight (PR_{wt}), was derived from data published by Foe and Knight (1986)

for *Corbicula fluminea* from the Delta: PR_{wt} milliliters (mL) per milligram (mg) of ash free dry mass (AFDM) per hour (hr) (mL (mg AFDM)$^{-1}$ hr^{-1})=0.4307 $e^{0.1113(temp)}$, valid for temperatures between 16 and 30 °C. Pumping rate for each individual is calculated as PR (L d^{-1}) = (PR_{wt}) (AFDM). Calculated pumping rates were converted to grazing rates assuming a maximum effect of a concentration boundary layer (CBL) by decreasing pumping rate using the refiltration relationship, $n_{max}=3\ (s(d_0)^{-1})^{-1}$ derived by O'Riordan and others (1995) for a similar bivalve (*Venerupis japonica*, a bivalve with similar pumping rates [≈8 mL mg^{-1} hr^{-1}] as *Corbicula fluminea)*.

Data Analysis

Data were analyzed and geographic plots were made using the analysis program Tableau 9.0 (http://www.tableau.com/). Data are shown in graphs (figs. 2–156) as well as listed in appendixes 1–20.

Results

We begin by showing median biomass, grazing rate, and recruitment for each monitoring station (fig. 1) for the period before and after *Potamocorbula* invaded, when the bivalve presence greatly changed in the north San Francisco Bay and Delta. Median biomass prior to 1987 was mostly concentrated in the central and southern Delta in Franks Tract and Old River (fig. 2) and consisted entirely of *Corbicula*. Biomass distribution shifted after *Potamocorbula* invaded in1987, and after some stations were dropped in 1995 (D19C, D11, and D4C), others were started in 1996 (D41A, D41C, D6, 8.1, D16, D24, C9, and P8). There is much higher biomass in Suisun Bay now, than seen in the decade before (fig. 3), which is a function of *Potamocorbula* invading and the addition of new stations to northern San Francisco Bay. A new station on the Sacramento River (D24) revealed that *Corbicula* arefound in large numbers on that section of the river, whereas the two stations added on the San Joaquin River at the same time had much smaller populations of *Corbicula* than were seen in either the Delta or the Sacramento River stations. Grazing rate is a nonlinear function of biomass, particularly when the biomass is large, but figures 4 and 5 show median grazing rate patterns similar to those displayed by median biomass. We observed no relation between the median number of recruits and biomass for either bivalve (figs. 6–7).

We summarize the temporal variability of *Corbicula* and *Potamocorbula* in the Bay and Delta by examining time series of biomass, grazing rate, recruit density, and average length of bivalves in samples from 15 monitoring stations (fig. 1). We will focus on how *Potamocorbula* and *Corbicula* biomass and grazing rate at a specific location vary seasonally and interannually. We will also examine variability and trends, if visible, in successful recruitment and growth of these bivalves. We define recruitment for our purposes as any bivalve ≤ 2.5 mm in length. Data have been broken down into sections where visible breaks in the data can be observed (that is, the introduction of *Potamocorbula* in 1987, massive floods of water in 1996, and the POD in 2004); this will allow the reader to see the data in more detail. These ecological events or breaks correspond to potential changes in bivalve biomass, grazing rate, and recruitment. We briefly describe what distinguishes the populations at each station and then summarize general patterns that we have observed in the following sections.

Biomass

We examine how *Potamocorbula* and *Corbicula* biomass changed over time as well as seasonally (figs. 8–44). Biomass at most sites in San Francisco Bay and the Sacramento-San Joaquin Delta averaged at least 5 grams per square meter (g m^{-2}), with the highest average *Corbicula* biomass

over the entire period being observed north at D24 (Rio Vista) and in the central Delta (table 2). The highest average *Potamocorbula* biomass was in Suisun Bay.

Potamocorbula Biomass

D6 (Carquinez Strait, on shelf, fig. 8)—There was no clear seasonal pattern, although most peaks occurred in spring, summer, and (or) fall, and minimum biomass occurred in winter of most years.
D41A (San Pablo Bay, shoal, figs. 9–11)—Biomass was seasonal with high biomass in late summer/early fall (August–October) until 2004. *Potamocorbula* biomass remained low from 2004–2010, when high seasonal biomass returned in the fall of 2010 and continued through 2012. The biomass plot of 2013 shows the population in decline again with a small peak in biomass and the population disappearing earlier than in the previous three years.
D41C (San Pablo Bay, deep, figs. 12–13)—Seasonal trends in biomass were present, with high biomass in late summer and early fall for the first three years until 1999. *Potamocorbula* biomass rarely recovered to those high levels seen in the earlier years except in 2006.
USGS 8.1 (Carquinez Strait, deep, figs. 14–16) —Early in the *Potamocorbula* invasion, this station had extremely high biomass, which leveled out after 1990. Since then, the pattern has been mixed. When biomass peaks occurred, they seemed to do so in late spring and (or) late fall. Minimum biomass values occurred most often in December and January.

Corbicula Biomass

C9 (southern Delta, figs. 17–18)—Biomass peaks were high the first four years and declined after 1999 with the only exception being one month in 2001. Although the biomass was lower after the first 4 years, the baseline moved upward in 2009 (that is, there were very few zeros and never any zeros for 2 consecutive months). The baseline may have been declining at the end of 2013.
D16 (San Joaquin River near Franks Tract, figs. 19–20)—Biomass patterns differed before and after 2002. Peaks in biomass prior to 2002 were 5–10 times higher than those observed after 2002.
D19 (Franks Tract, figs. 21–22)—Peak *Corbicula* biomass usually fell between 40 and 60 g m^{-2} with the exception of 1986. The baseline shifted upward during 1986 and stayed elevated through the end of the sampling in 1995.
D24 (Sacramento River upstream of Rio Vista, figs. 23–24)—*Corbicula* biomass was mostly seasonal, with peaks in late spring or early summer in most years with an additional peak in late fall of some years. The biomass increased after 2002, and both the peaks and the baseline steadily increased between 2006 and 2013.
D28 (Old River, middle Delta, figs. 25–28)—D28 is one of the longest sampled stations, and the biomass was quite variable but mostly peaked at > 50 g m^{-2} until 2002. Prior to that time, any decrease was followed by a bounce back to prior biomass levels. After 2002, the biomass values never returned to their previous levels.
P8 (San Joaquin River near Rough and Ready Island, figs. 29–30)—Biomass was low throughout the entire study period at this station with the exception of 1997, a wet year.

Overlap Biomass (Stations Where *Corbicula* and *Potamocorbula* Co-Occur)

D4C (Collinsville, center of channel near the confluence of Sacramento and San Joaquin Rivers, figs. 31–32)—*Corbicula* biomass peaked between 1985 and 1989. *Corbicula* biomass then decreased after 1989 and remained relatively low through 1995 when DWR discontinued sampling. *Potamocorbula* had a small (< 10 g m^{-2}) but persistent biomass presence beginning in 1987.

D4L (Collinsville, left side of channel near the confluence of Sacramento and San Joaquin Rivers, figs. 33–36)—D4L is one of the stations that has been sampled the longest (1977 to present). *Corbicula* biomass was low through 1996, increased briefly through 2001, and then declined in 2002. From 2005, peak biomass was low, but the baseline shifted upward, a trend that persisted through 2013. *Potamocorbula* biomass was low throughout the study period with the exception of 1993–1994, when biomass was elevated for short time periods.

D4R (Collinsville, right side of channel near the confluence of Sacramento and San Joaquin Rivers, figs. 37–38)—*Corbicula* biomass was low throughout the sampling period. *Potamocorbula* biomass was low from 1987–1990 then dramatically increased from 1991–1994.

D7 (shoals of Grizzly Bay, figs. 39–42)—*Corbicula* biomass was high from 1984–1987, and then *Corbicula* essentially disappeared after *Potamocorbula* invaded. *Potamocorbula* biomass showed strong seasonal peaks in fall throughout the study period with biomass minima occurring in late winter/early spring of every year. The regular seasonal pattern did not stabilize until after the 1987–1992 drought. *Potamocorbula* peak biomass was lower during wet years.

D11 (Sherman Lake, figs. 43–44)—*Corbicula* biomass was low from 1977–1989 and then showed an upward trend through the end of the sampling period which ended in 1995 for this station. Annual increases occurred in *Corbicula* biomass in the spring from 1990–1995. *Potamocorbula* biomass was low throughout the sampling period.

Biomass Summary

Potamocorbula biomass was low in winter at all locations and near zero in the shallow San Pablo Bay station in winter. The *Potamocorbula* biomass at shallow stations consistently peaked in summer and fall, but there was no consistent peak season in the deep stations. *Corbicula* had a much less consistent seasonal biomass pattern than *Potamocorbula*. However, some interannual patterns were consistent between stations. *Corbicula* biomass at three stations declined after 2003 (C9, D16, and D28). The Franks Tract (D19) *Corbicula* biomass had a baseline shift up (that is, all values were > 0) in 1985 until DWR ceased sampling the station in 1995. Two other stations showed a similar increase in baseline but at different times; D24 shifted up after 2007, and D11 shifted up in 1991.

Grazing Rate

Grazing rates (figs. 45–81) have the same basic patterns as biomass, and the same descriptions and conclusions that we applied to biomass can be applied to grazing rate data. Grazing rate has a nonlinear relationship with biomass; high biomass will have lower grazing rates than might be expected owing to the formation of the concentration boundary, which is stronger with higher bivalve abundance and biomass. The concentration boundary layer, as explained earlier, decreases the effectiveness of the bivalves' feeding and reduces grazing rates. The pumping rate is a function of temperature, so grazing rates tend to be lower in winter months than one would expect if the relationship with biomass were linear. In this case, the lower temperatures slow down the pumping rate, resulting in lower grazing rates.

Potamocorbula's pumping rates are about four times higher than *Corbicula's* pumping rates. At the stations where the two bivalves overlap, the strength of feeding rate relative to biomass for the two species is affected (see figs. 68, 70, 74, and 76). *Potamocorbula* biomass can be about 25 percent of *Corbicula's* biomass and have a similar grazing rate as *Corbicula*.

Recruitment

Potamocorbula's seasonal recruitment changed with station location. *Corbicula's* recruitment showed less of a seasonal trend; recruitment occurred throughout the year with an occasional peak in the spring. We will define recruitment as any bivalve ≤ 2.5 mm in length.

Potamocorbula Recruitment

D6 (fig. 82)—Recruitment peaked in summer/early fall except during the wet year 2011, when recruitment was smaller and delayed to late fall. During dry or critically dry years on the Sacramento River (table 3), recruitment increased by as much as nine times that observed during other water years.
D41A (figs. 83–85)—Recruitment occurred in late spring/summer. Recruit abundance was very low in 2004–2009; recruits returned in 2010–2012. Recruitment in the wet year 2011 was seasonally anomalous with the peak occurring in fall.
D41C (figs. 86–87)—Recruitment was annual and peaked in spring/summer until 2001, when the number of recruits declined, and did not recover until 2006, when there was a small peak in spring.
8.1 (figs. 88–90)—This station is in the middle channel of Carquinez Strait, where current velocities are high and recruitment could be strongly influenced by the hydrodynamics. The only year with > 100 recruits during the initial 10 years of the study was 1992. There were then major peaks in recruitment in fall 1999 and spring 2000 and again in fall and winter 2006.

Corbicula Recruitment

C9 (figs. 91–92)—*Corbicula* recruits were observed in most months. The most frequent season of peak recruitment was spring, followed by fall. The largest numbers of recruits occurred in both a wet year (1996) and a dry year (2002).
D16 (figs. 93–94)—Recruits were present in most samples in this San Joaquin River channel station. Recruits were present through 2002 and peaked at different times of the year. Recruit abundance then declined and did not increase again until 2009, when we saw a small fall peak that reoccurred through 2013.
D19 (figs. 95–96)—*Corbicula* recruits were present for prolonged periods in many years, particularly before 1986. The number of recruits was lowest at the end of the drought, 1991–1994, and rapidly increased in 1995.
D24 (figs. 97–98)—*Corbicula* recruitment decreased after 2002, when recruits became less abundant.. No consistent seasonal pattern was evident during any period, with recruits occurring equally in spring, summer, and fall of some years (for example, 2000).
D28 (figs. 99–102, note the change in scale on vertical axes)—Recruit abundance is normal to high relative to other stations. *Corbicula* recruitment occurred in the spring/summer, with the most abundant recruitment years being 1982, 1989, and 1990. The abundance of recruits was lower in 1984–1988 and 1994–2013 relative to the periods of maximum abundance.
P8 (figs. 103–104)—Recruit abundance peaked in late winter/early spring and fall of most years. The recruit abundance was similar to that observed at C9.

Overlap Recruitment (Stations Where *Corbicula* and *Potamocorbula* Co-Occur)

D4C (figs. 105–106)—*Corbicula* recruitment peaked in spring and fall until 1986. *Potamocorbula* recruits appeared in late summer/fall of 1987 and again in 1991, after which neither bivalve had significant numbers of recruits.

D4L (figs. 107–110)—D4L is one of the longest-term monitoring stations. *Corbicula* recruits peaked in spring through 1987. *Potamocorbula* recruits appeared in summer 1988, and *Corbicula* recruit abundance declined with small peaks in 1990 and 1996. *Corbicula* recruit abundance increased from 1996–2013 but never to the sustained levels seen in the 1980s. *Potamocorbula* recruits were visible in fall of most years but in low abundance; highest *Potamocorbula* recruit abundance was in their first year of the invasion, 1987.

D4R (figs. 111–112)—*Corbicula* recruits at D4R, which is on the opposite side of the channel from D4L, had an interannual pattern similar to that seen at D4L but with fewer recruits. *Potamocorbula* recruit abundance was higher, started at the same time in 1987, but was more consistent than at D4L until 1993, when recruits at both stations declined.

D7 (figs. 113–116)—*Corbicula* recruitment was low except in 1984. *Potamocorbula* recruitment occurred in late summer/early fall beginning in 1987. Recruitment greatly increased in the summer of 2006, 2008, and 2009, and again in the spring of 2013.

D11 (figs. 117–118)—*Corbicula* recruits were present through most months with the exception of 1993 and 1994. Recruit abundance peaked in spring and fall, and the largest recruit abundance occurred in two drought years, 1990 and 1991. No *Potamocorbula* recruits were present.

Recruitment Summary

Potamocorbula recruitment occurs anytime between spring and fall, with bivalves at the most downstream stations in San Pablo Bay recruiting in spring and animals at the most upstream stations recruiting in fall. The bivalves at the stations between these endpoints recruit in (1)spring or (2) summer and fall (Carquinez Strait), or in some combination of two of those three seasons in Grizzly Bay. The shallow station in San Pablo Bay (D41A) had the highest peak recruit abundance (2,000 recruits/0.05 m^2 in the year 2000). The smallest recruit abundance, at a location where adults were found, was in Sherman Lake, where we found no recruits. San Pablo Bay shallow water *Potamocorbula* recruitment stopped after 2002 and did not restart until 2010, reflecting the declining and absent *Potamocorbula* biomass during those years at that station. The few locations where *Potamocorbula* and *Corbicula* overlapped show recruit abundance opposing each other, with *Potamocorbula* recruits peaking during the more saline time of year and the *Corbicula* recruits peaking during the periods with lower salinities.

Corbicula were mostly present throughout the year with some peaks in abundance, but the patterns were not seasonally consistent at any station. The highest recruit abundance occurred at D28 on Old River (1,200 recruits/0.05 m^2), and the lowest recruit abundances were at C9 in the south Delta at Clifton Court and at P8 on the San Joaquin River upstream of Stockton. Many stations showed a reduction in the volatility of recruit abundance; the high peaks were absent at D28 after 1993, after 1985 at D4C, and after 1987 at D4L and D4R.

Mean Size

The final parameter we examined was the mean size of the clams at each station over time. The mean size can change with an influx of juveniles, the mortality of an older year class, or the lack of recruitment but continual growth of the previous year classes. We therefore expect the size to be dynamic. *Potamocorbula* also live for at most 3 years, whereas *Corbicula* can live 5 years, which makes the average size range of *Potamocorbula* potentially more dynamic.

Potamocorbula Mean Size

D6 (fig. 155)—Average size declined coincident with recruitment. The 2011 data reflect a mean size of a population not diluted by spring recruits in that year. Prior to the recruitment in September 2011, the mean size of the population was about 9 mm.
D41A (figs. 120–122)—Unlike D6, this San Pablo Bay station had a distinct 1-month recruitment period, and this resulted in a regular pattern in mean size. Peaks were seen in fall in the 6–8 mm range in years when recruits were observed. Mean size varied greatly in years with low population abundance (1994–1995, 2002–2009).
D41C (figs. 123–124)—Individuals were very large at this deep-water station, with animals exceeding 10–12 mm some years.
8.1 (figs. 125–127)—Recruitment at this deep-water station was very low and uneven between years; the average size reflects that variability. The mean size in some years fluctuated around the 4–6 mm range (1999–2003) and was > 10 mm in other years.

Corbicula Mean Size

C9 (figs. 128–129)—Maximum mean size of *Corbicula* was > 25 mm in 1996–1997 but declined thereafter until the mean size was < 10 mm from 1999–2007. The mean size then began to increase in 2008 and was over 20 mm by 2012.
D16 (figs. 130–131)—Mean size peaked in the > 10 mm range through 2010. The sizes declined from 2011–2013, when recruitment (fig. 94) began to appear every year.
D19 (figs. 132–133)—Mean size steadily increased from the 4–6 mm range from 1981 through 1983 to a peak of > 16 mm in 1986 and 1987. The mean size declined after 1987 but never returned to the smaller sizes that observed at the beginning of the record in the early 1980s.
D24 (figs. 134–135) —Mean size decreased after 1998 from > 10 mm to a 4–6 mm range until 2006, when the average size began to increase and then maintained an annual mean peak size of > 12 mm after 2006.
D28 (figs. 136–139) —In a pattern similar to D19 before 1996, individual mean size increased from 10 mm in 1981 to 15–20 mm in 1984 through 1987. Thereafter, the maximum mean size was mostly ≈10–15 mm until 2002–2013, when it declined to < 10 mm.
P8 (figs. 140–141) —Animals were small at this station, with most annual maxima < 5 mm except for brief eruptions in 1997–1998, 2009, and 2012.

Overlap Mean Size (Stations Where *Corbicula* and *Potamocorbula* Co-Occur)

D4C (figs. 142–143)—The maximum mean size of *Corbicula* increased from 10–15 mm before 1985 to > 20 from 1985 through 1995. *Potamocorbula* was quite large in most years at this station (> 10 mm) except in 1990.
D4L (figs. 144–147)—As in the mid-channel station, the mean size of *Corbicula* was small (< 5 mm) until 1986, after which they were at least 10 mm. A strong seasonal pattern seen in most years disappeared in 2006 and continues through the present at this station. *Potamocorbula* mean size was very dynamic with large animals (15 mm and larger) in 1994 and 1996–1997. *Potamocorbula* showed the seasonal pattern we have seen downstream since 2007, with peak sizes occurring in summer and fall and minimum sizes in winter and spring.
D4R (figs. 148–149)—*Corbicula* mean size was small (< 10 mm) until 1987, when the population size became more dynamic, with maximum mean size exceeding 20 mm in several years. *Potamocorbula* mean size was also large (> 10 mm) at this station except in 1991–1992, when it was < 10 mm.

D7 (figs. 150–153)—*Corbicula* was present until *Potamocorbula* came into Grizzly Bay in 1987. During that time, the mean size steadily increased from 1984 to 1987, where it reached a maximum of 25 mm. *Potamocorbula* was less variable, and the mean size stayed under 10 mm with few exceptions.
D11 (figs. 154–155)—*Corbicula* mean size was consistently < 5 mm until 1992, when the individuals increased in size (> 15 mm). *Corbicula* stayed large until 1995, when they declined to about 10 mm. *Potamocorbula* was variable and had no consistent pattern.

Mean Size Summary

Both clams reached a peak size in late summer/early fall and never got above a certain size depending on location. The data show that the mean size has decreased over the years, and the size distributions throughout the Delta are now skewed toward small or young *Corbicula* (< 10 mm). The mean size of *Potamocorbula* was skewed toward the small, or young, with sizes in the range of 2–8 mm. The mean size of *Potamocorbula* increased from spring to fall and decreased in winter. A similar generalization is not possible with *Corbicula* because seasonal patterns in size varied depending on station location. Station D24 on the Sacramento River was the only location with an increase in *Corbicula* mean size over the sampling period.

The largest mean sized *Potamocorbula* were in the channel areas, where sizes of 15 mm were common at stations D41C, 8.1, and D6. Sizes in excess of 15 mm occurred at all three D4 stations in the mid-1990s. The average size of *Potamocorbula* in the shoals was ≈5–7 mm in most years in Grizzly Bay (D7) and San Pablo Bay (D41A), with an increase to > 10 mm at D7 in the wet years.

The largest mean sized *Corbicula* occurred in the southern Delta (C9 ≈25 mm in 1996–1997 and 2012–2013), and the smallest average sizes were observed in the San Joaquin River (P8 and D16). The bivalves at the upriver Sacramento River station (D24) and in the southern Delta (C9) showed similar interannual patterns in average size, although the animals at C9 were consistently larger than those at D24 were. Bivalves were largest in 1996–1997. The bivalves in Franks Tract (D19) and those in the Old River (D28A) south of Franks Tract were also similar in size and in interannual patterns.

At the few stations where *Potamocorbula* and *Corbicula* overlap, it appears that they do not hinder each other's growth. Both bivalves have large animals at D4, where *Corbicula* size increased coincident with the presence of *Potamocorbula* in 1987. *Corbicula* were observed in wet years prior to *Potamocorbula's* invasion at D7 and were capable of growing to significant size in wet years (> 20 mm in 1986).

Our Questions

How do *Potamocorbula* and *Corbicula* populations at a specific location respond to seasonal and interannual changes in salinity? How does salinity variability influence successful recruitment of these bivalves?

The conceptual model for the distribution of *Corbicula* and *Potamocorbula* is based on the physiological salinity limits of the recruits (*Potamocorbula* ≥ 2, *Corbicula* ≤ 2) and the adults (*Potamocorbula* > 0, *Corbicula* < 10) of each species. We use X2 to demonstrate where a salinity of 2 is most likely to occur during the study period with the stations designated on the figure to show their position in X2 space (fig. 156). Because X2 is not a specific location but rather a representation of a range of locations over a tidal cycle, we expect the relationship between X2 position and clam distribution to be approximate. Starting at the most down bay station, we see that *Potamocorbula* in San Pablo Bay appear to have not been limited by salinity since their arrival (fig. 156), and it is doubtful that *Corbicula* could live in this saline environment. Similarly, adult *Potamocorbula* were not likely to be

limited by salinity at the Carquinez Strait stations (8.1 and D6), although there were short periods in 1995 and 2006 when the water may have been too fresh for the recruits. The salinity was sufficiently low in the 1980s at the Grizzly Bay station (D7) to support *Corbicula*, but despite the low salinities in 1995, 1996, 2006, and 2011, we did not see *Corbicula* settle at this station , so something other than salinity may be limiting their success . The salinities were likely in the range that *Potamocorbula* adults could adjust after the species invaded in 1986. Recruits, however, were limited to the fall during the nondrought years (figs. 40–42); salinities were frequently < 2 in spring in nondrought years. The stations at Collinsville (D4R, D4C, and D4L) were at the border of the distribution of the two species for most of the study. *Corbicula* and *Potamocorbula* adults and recruits appeared and disappeared with changing freshwater flow and therefore with the position of X2. *Corbicula* was consistently present prior to *Potamocorbula*'s arrival and had not regained its dominance by 1996, despite the low salinity years 1995–1996, when two of the stations were discontinued. *Potamocorbula* settled and grew during the 1987–1992 drought in the shoals (D4R and D4L) adjacent to the channel but had a limited appearance at the mid-channel station (D4C). Sampling at D4L was continued and, despite many low flow years after 1998 (fig. 156) that moved X2 up stream, *Potamocorbula* never regained the biomass seen in the 1980s. *Corbicula*, however, developed a more consistent and persistent biomass presence (figs. 32–38). Salinity did not control distribution at the remaining stations in the Delta because the water at these stations was mostly fresh throughout the study.

Is the magnitude of the grazing rate such that we would expect the feeding of the bivalves to limit seasonally the biomass of phytoplankton, copepods, bacteria, and microzooplankton?

Limits on phytoplankton and zooplankton biomass by bivalve grazers is a function of a number of factors that control bivalve grazing rates, such as biomass, density of bivalves, and temperature, which can change pumping rate. Limits on phytoplankton growth rate include bivalve grazing rate, water depth, turbidity, residence time of the water column, and nutrients (Lucas and Thompson, 2012). Water depth determines the availability of pelagic food sources to bottom feeders because water column mixing and turnover is more frequent in shallow water. Residence time of the water column establishes how long the phytoplankton have to grow and be grazed before they are transported elsewhere; residence times in the channels or on the edge of channels in this tidal system are likely to be the shortest. Therefore, the locations where we would expect the bivalves to have the most influence are in shallow areas with relatively long residence times. We use the grazing rate turnover rate (GRTO/day, table 2), which is the ratio of grazing rate to water depth, to examine this dynamic. A phytoplankton doubling time of 3.5 days is reasonable for the northern estuary (Jassby, 2008), and thus any grazing rate that exceeds that rate, which is equivalent to a coupling rate of ≈0.2/day, has the potential to reduce the phytoplankton biomass given sufficient light and long enough residence time. The channel areas rarely meet the light requirements for phytoplankton growth because of high turbidity and low light, conditions which result in high respiration rates (Cloern and others, 1985). The channel location depths in this dataset are all greater than about 5 m (stations 8.1, D24, D4C, and D41C), and we will assume that factors other than bivalve grazing are first order controls on phytoplankton growth at these locations. The two stations on either side of D4C (D4R and D4L) are on the channel edge and unlikely to have a long enough residence time to be effective plankton growth areas, although they could reduce zooplankton to some unknown degree. Of the remaining stations, those with average water column turnover rates equal to or greater than the phytoplankton doubling rate include C9, D16, D19, D28, and D11 (locations with *Corbicula*), and also D41A, D6, and D7 (locations with *Potamocorbula*). Grazing rates that will result in no net phytoplankton growth given the water depths of each station (table 1) range from > 0.3 to > 0.9 $m^3m^{-2}d^{-1}$. If we look at the grazing rate graphs in figures 47–81 and

conservatively estimate that a grazing rate > 1 $m^3m^{-2}d^{-1}$ is likely to limit phytoplankton biomass, we see that there are periods when this is true at all stations. The two stations (D41A and D7) that are likely to have the most favorable conditions for phytoplankton growth (long residence time, shallow water, and good light) also had high grazing rates most of the time from *Potamocorbula*. The San Pablo Bay shallow station (D41A) has high bivalve grazing rates during the summer and fall periods through 2002, with the *Potamocorbula* population essentially disappearing each winter and spring. A very similar pattern occurred in Grizzly Bay (D7), but the winter/spring low grazing rate periods are shorter, and in most cases grazing rates were greater than zero. In both of these bays, we would expect to see phytoplankton biomass accumulate most frequently in the winter/spring period. *Corbicula* and *Potamocorbula* are concurrently present at D4L and D4R, which are on the edges of the main channel. Although neither site is likely to have high enough residence time to support phytoplankton growth, the bivalves on the right side of the channel (D4R) in particular had very high grazing rates in the 1990s and may have been significantly grazing some zooplankton biomass. The bivalves on the left side of the channel (D4L) have been variable, with *Corbicula* having sufficient grazing rates to reduce pelagic food resources from the mid-1990s until present. The grazing rates at D4 are certainly sufficient to reduce microzooplankton from the water column. The other two embayments with potential for phytoplankton growth were Franks Tract (figs. 57–58), where grazing rates > 1 $m^3m^{-2}d^{-1}$ for several months of every year until sampling at this station was discontinued in 1995, and Sherman Lake, where the smallest bivalve populations found in an embayment occurred. In Sherman Lake, *Potamocorbula* and *Corbicula* were both present, but grazing rates for both were too low most of the time. The remaining stations are likely to have low residence times because of their location in channels. We have chosen to comment on these stations because (1) they are shallow enough that benthic grazing could affect the pelagic system and, in particular, microzooplankton and (2) all of these stations have shown a shift in grazing magnitude at the same time. The San Joaquin River station near Jersey Point (D16) had quite high grazing rates in 1996–2002, and the rates were usually well above the 1 $m^3m^{-2}d^{-1}$ threshold. However, sometime between the 2003 period, when we do not have samples, and 2005, the grazing rate dropped to near zero. At this grazing rate, the bivalves at this station are unlikely to affect any portion of the food web with their filter feeding. We saw a similar change in grazing rate at D28 on the Old River and at C9 near Clifton Court. *Corbicula* grazing rates were well in excess of the threshold at both of these locations until 2005, and the grazing rate has exceeded the threshold only a few periods since 2005. The station near Stockton (P8) on the San Joaquin River had a similar but less dramatic shift in grazing rates in 2002.

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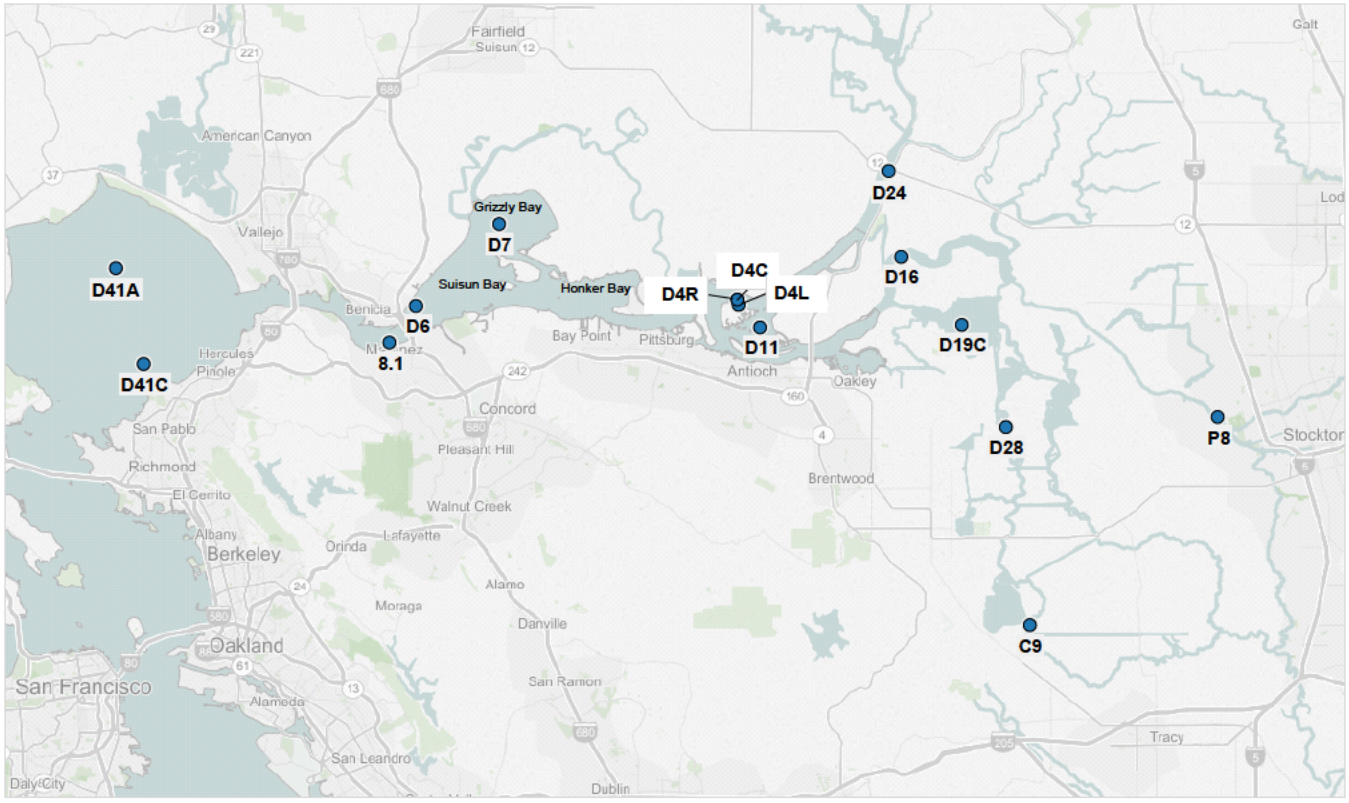

Figure 1. Map showing location of bivalve sampling stations in San Francisco Bay and the Sacramento-San Joaquin Delta.

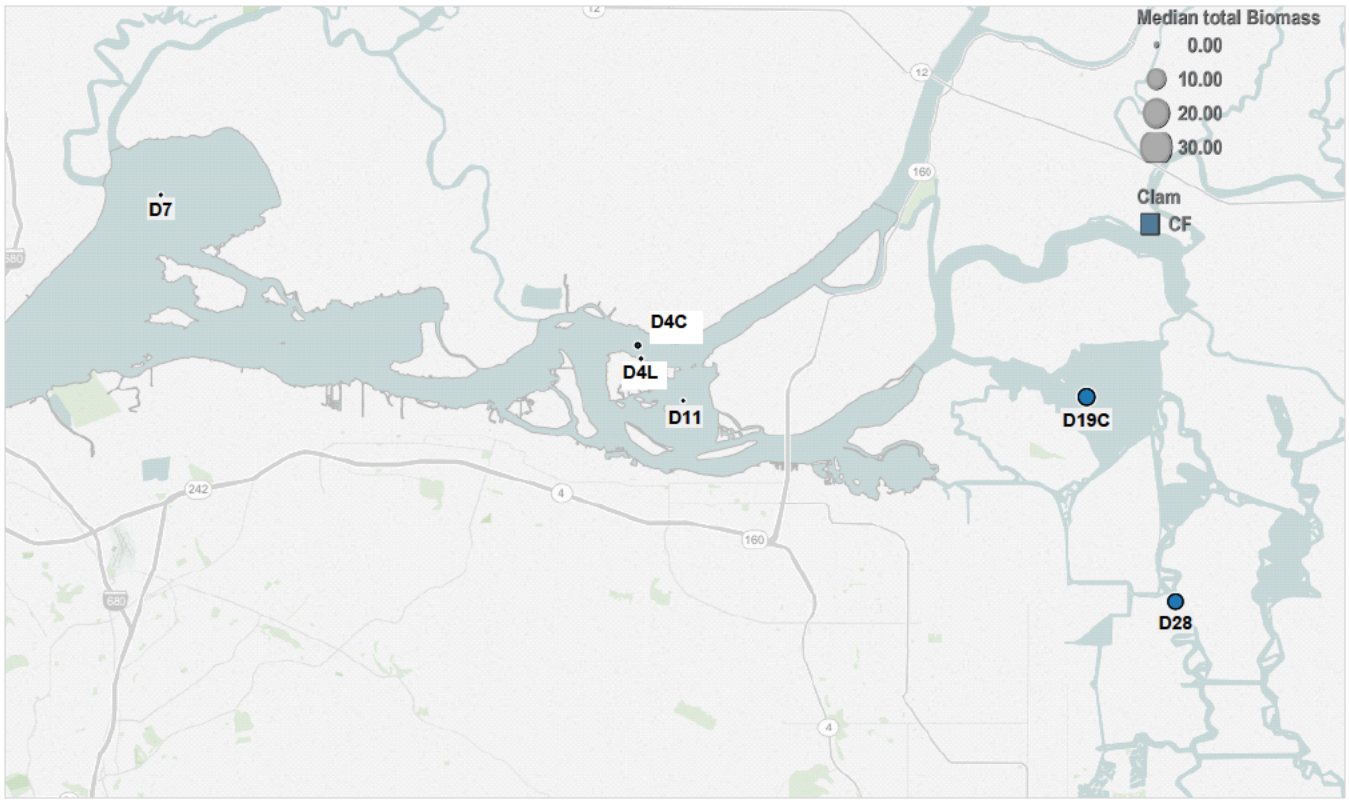

Figure 2. Map showing median biomass of *Corbicula fluminea* (CF) in grams per square meter (gm^{-2}) before the arrival of *Potamocorbula amurensis* to San Francisco Bay and the Sacramento-San Joaquin Delta in 1987.

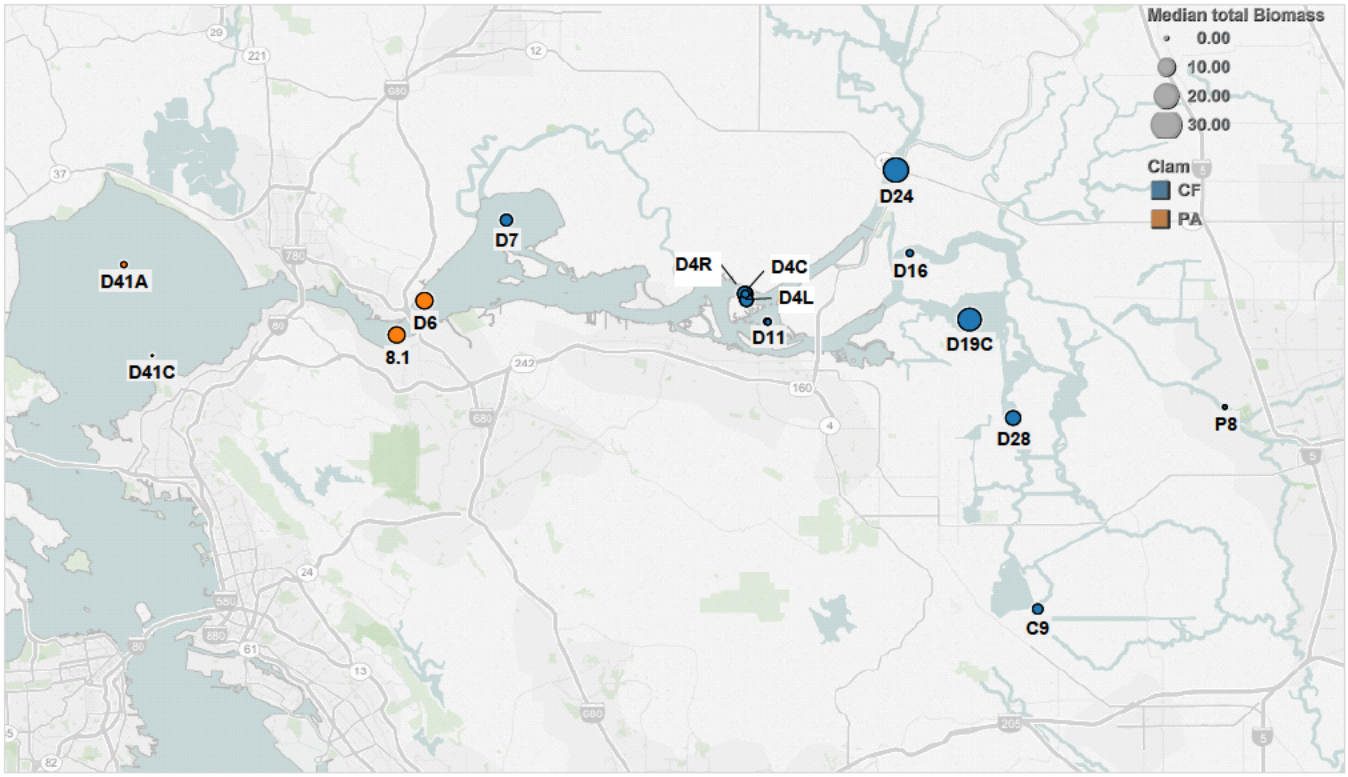

Figure 3. Map showing median bivalve biomass in grams per square meter (gm^{-2}) after the arrival of *Potamocorbula amurensis* to San Francisco Bay and the Sacramento-San Joaquin Delta in 1987. CF, *Corbicula fluminea*; PA, *Potamocorbula amurensis*.

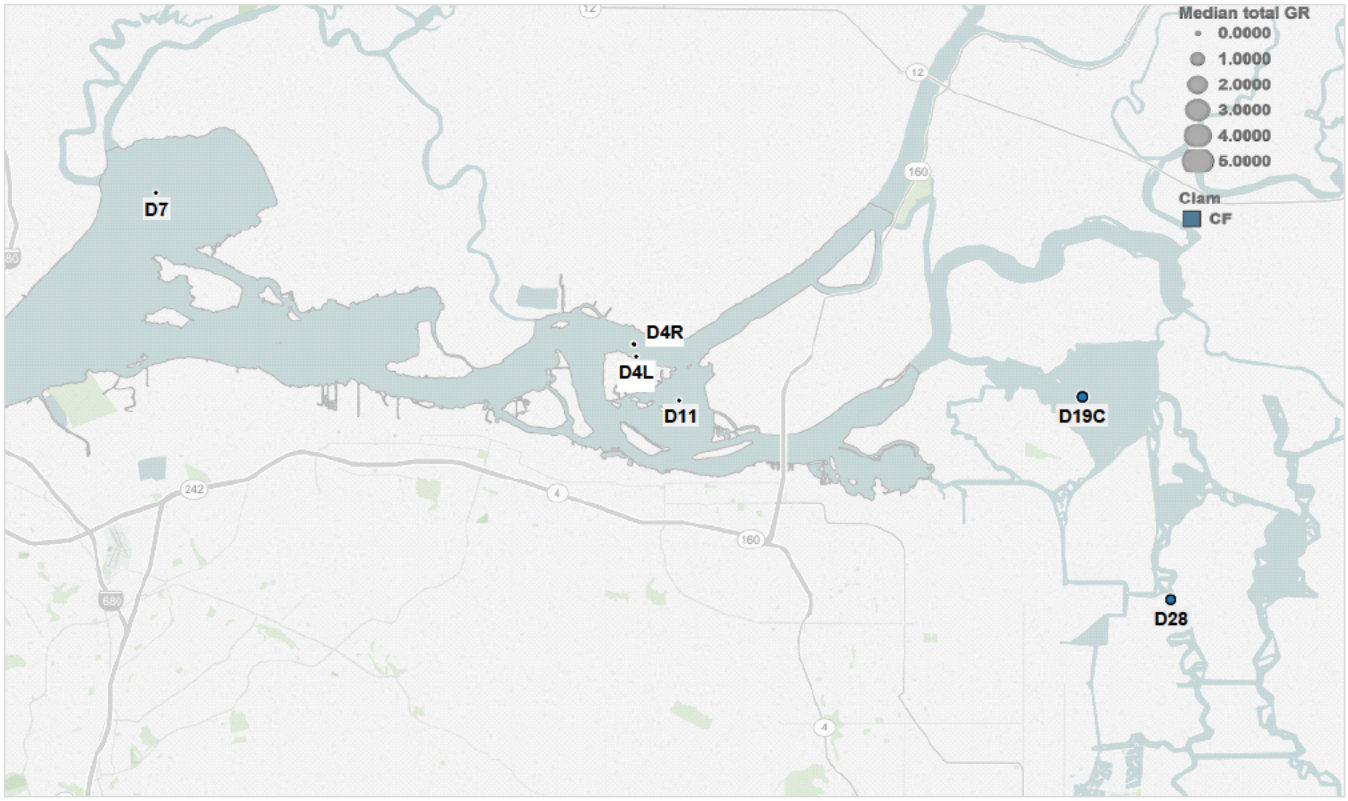

Figure 4. Map showing median grazing rate (GR) of *Corbicula fluminea* (CF) in cubic meters per square meter per day ($m^3m^{-2}d^{-1}$) before the arrival of *Potamocorbula amurensis* to San Francisco Bay and the Sacramento-San Joaquin Delta in 1987. CF= *Corbicula fluminea*.

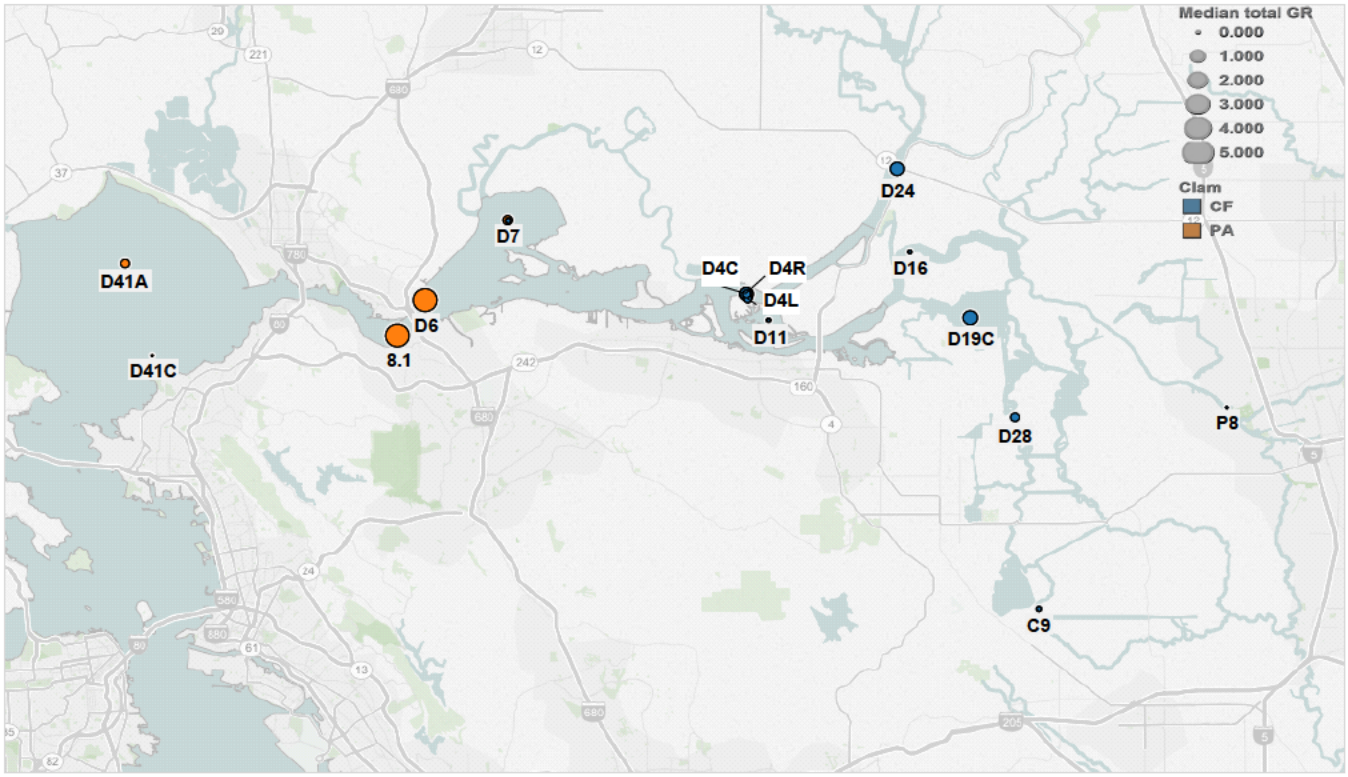

Figure 5. Map showing median grazing rate (GR) in cubic meters per square meter per day ($m^3m^{-2}d^{-1}$)after the arrival of *Potamocorbula amurensis* to San Francisco Bay and the Sacramento-San Joaquin Delta in 1987. CF= *Corbicula*. PA= *Potamocorbula*.

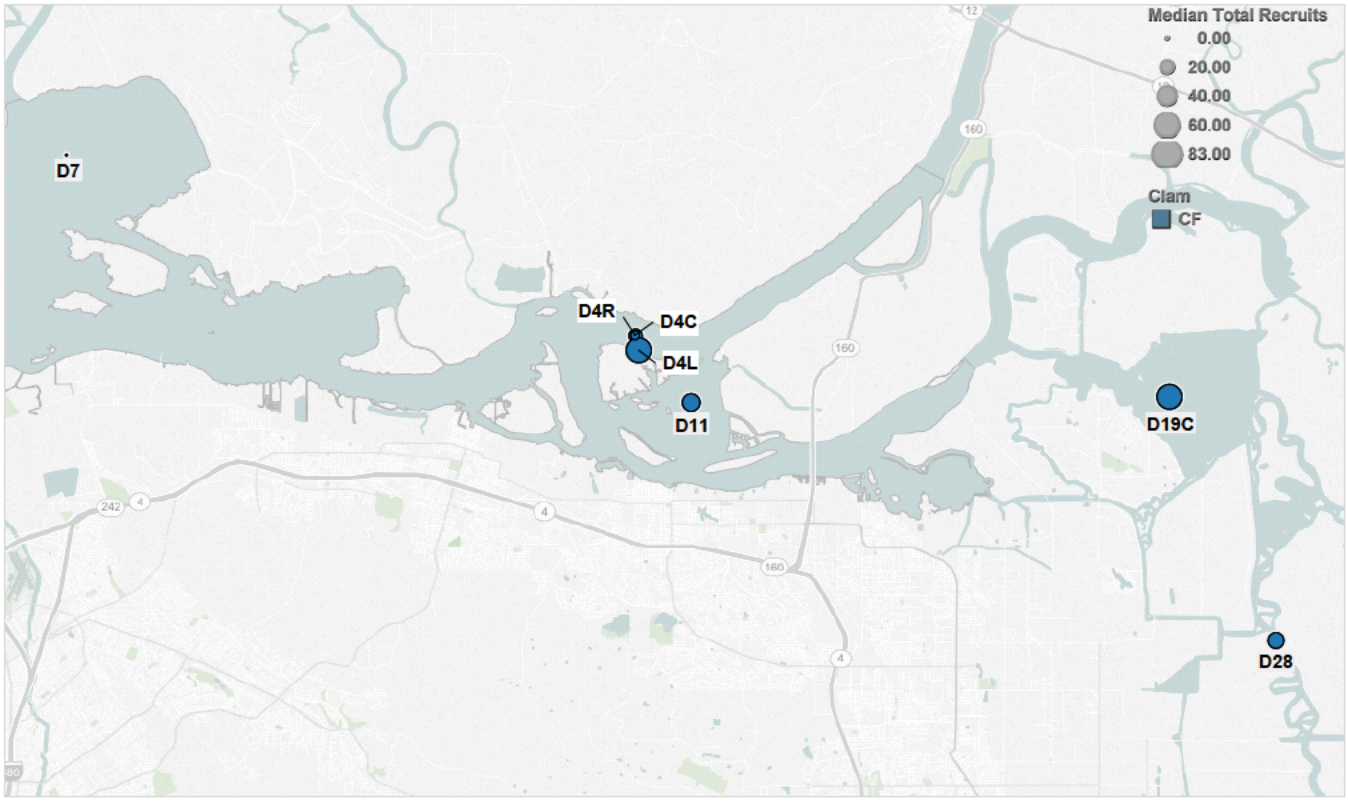

Figure 6. Map showing median recruitment of *Corbicula fluminea* (CF) in number of recruits per 0.05 meters squared (#/0.05m²) before the arrival of *Potamocorbula amurensis* to San Francisco Bay and the Sacramento-San Joaquin Delta in 1987. CF= *Corbicula*.

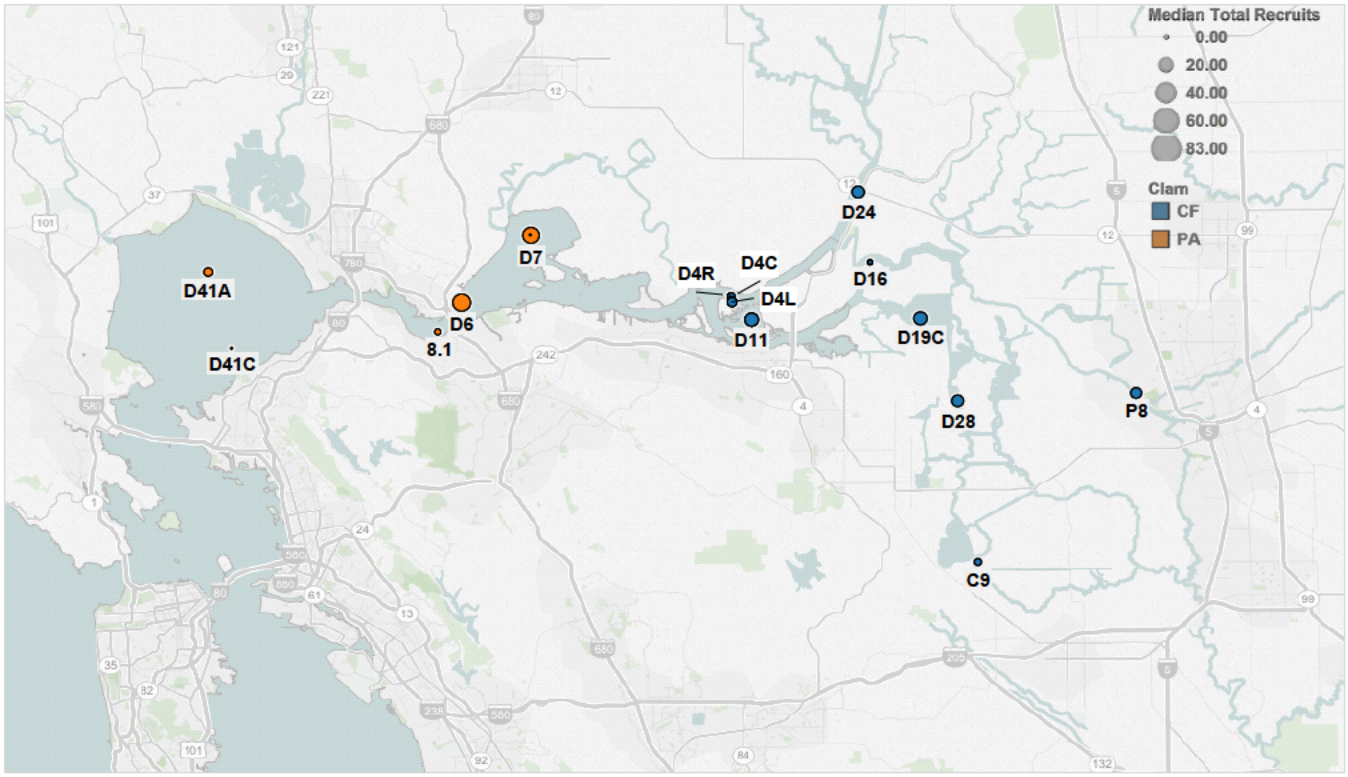

Figure 7. Map showing median recruitment of *Corbicula fluminea* (CF) and *Potamocorbula amurensis* (PA) in number of recruits per 0.05 meters squared (#/0.05m²) after the arrival of *Potamocorbula amurensis* to San Francisco Bay and the Sacramento-San Joaquin Delta in 1987. CF= *Corbicula*. PA= *Potamocorbula*.

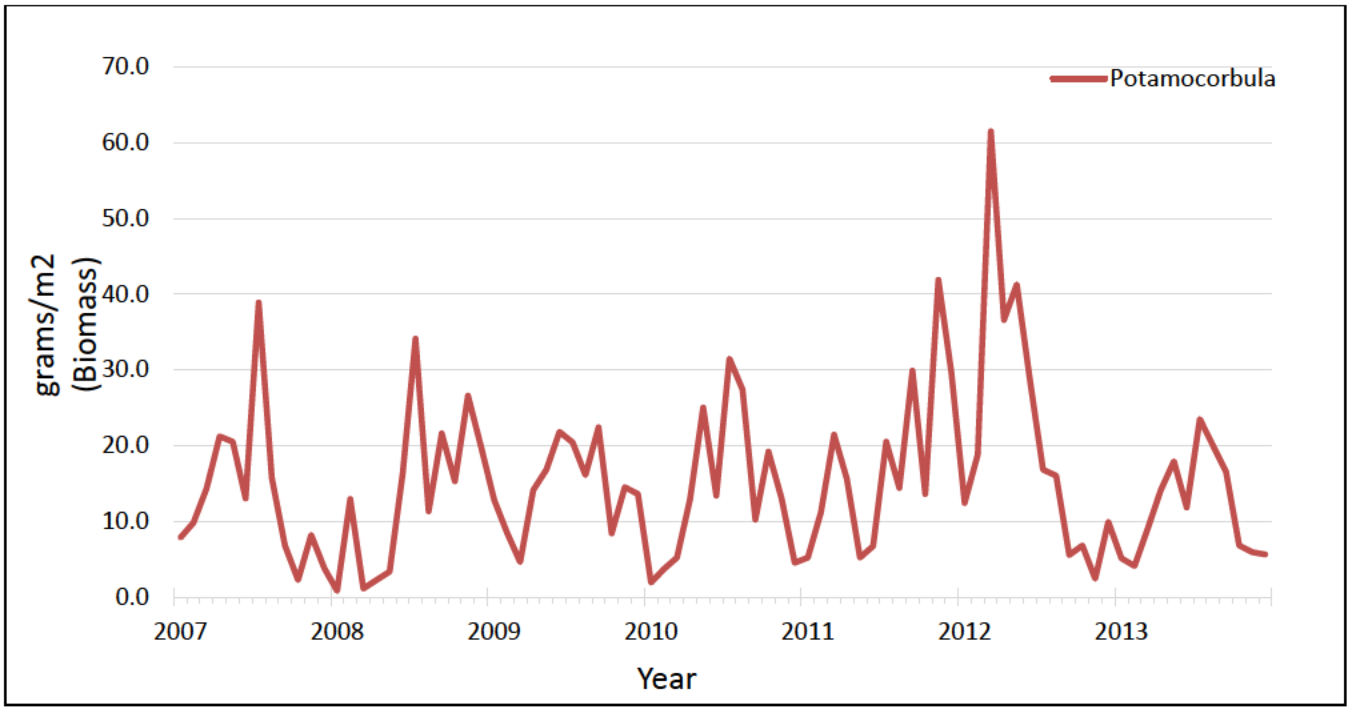

Figure 8. Graph showing *Potamocorbula amurensis* biomass at station D6 from 2007–2013. For station locations refer to table 1.

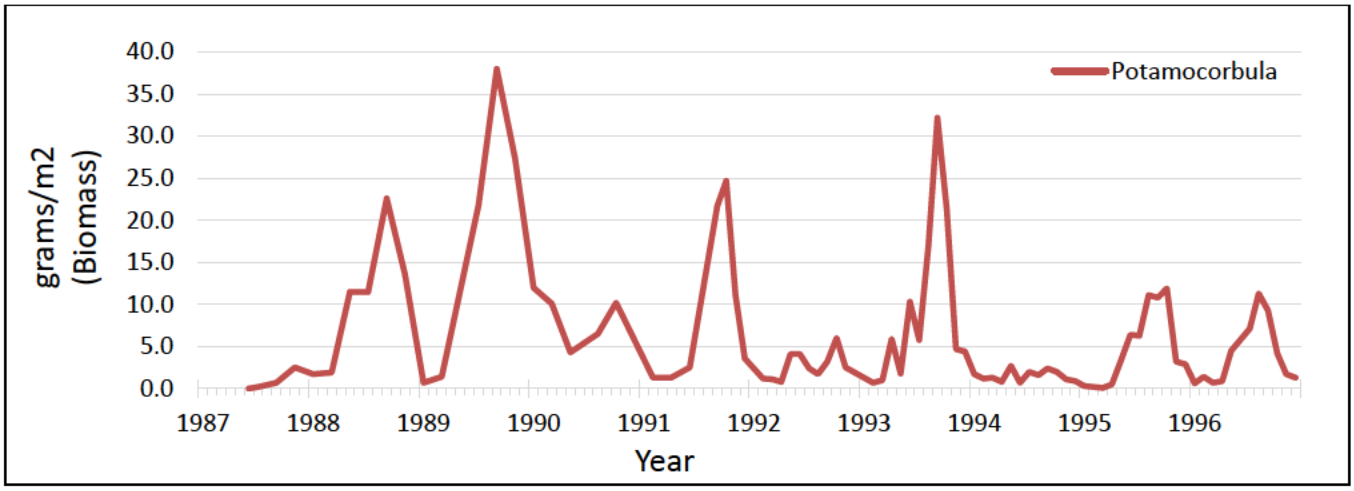

Figure 9. Graph showing *Potamocorbula amurensis* biomass at station D41A from 1987–1996. For station locations refer to table 1.

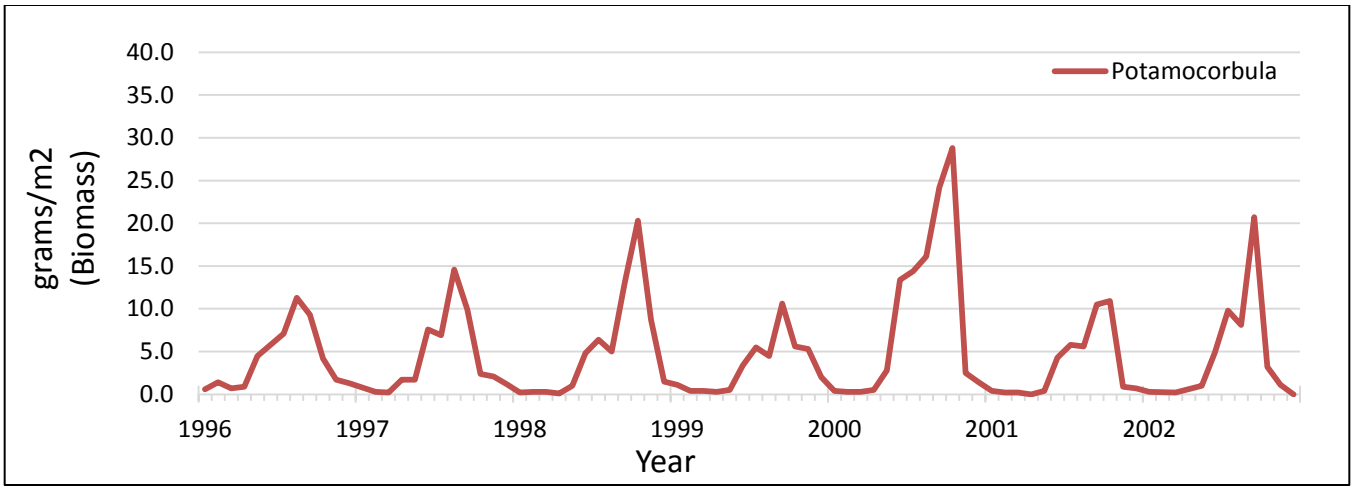

Figure 10. Graph showing *Potamocorbula amurensis* biomass at station D41A from 1996–2003. For station locations refer to table 1.

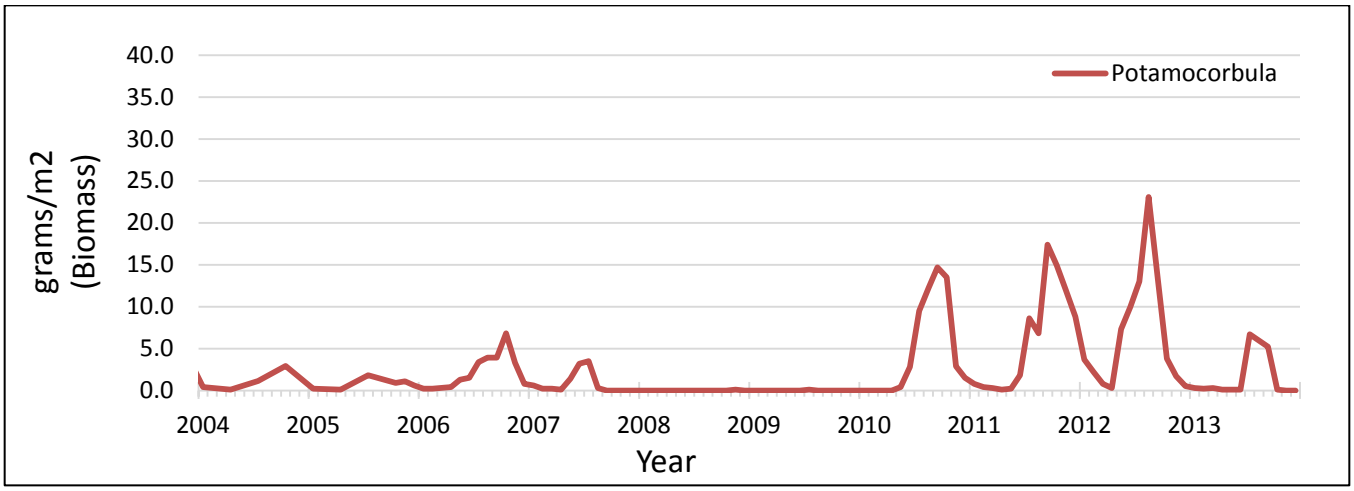

Figure 11. Graph showing *Potamocorbula amurensis* biomass at station D41A from 2003–2013. For station locations refer to table 1.

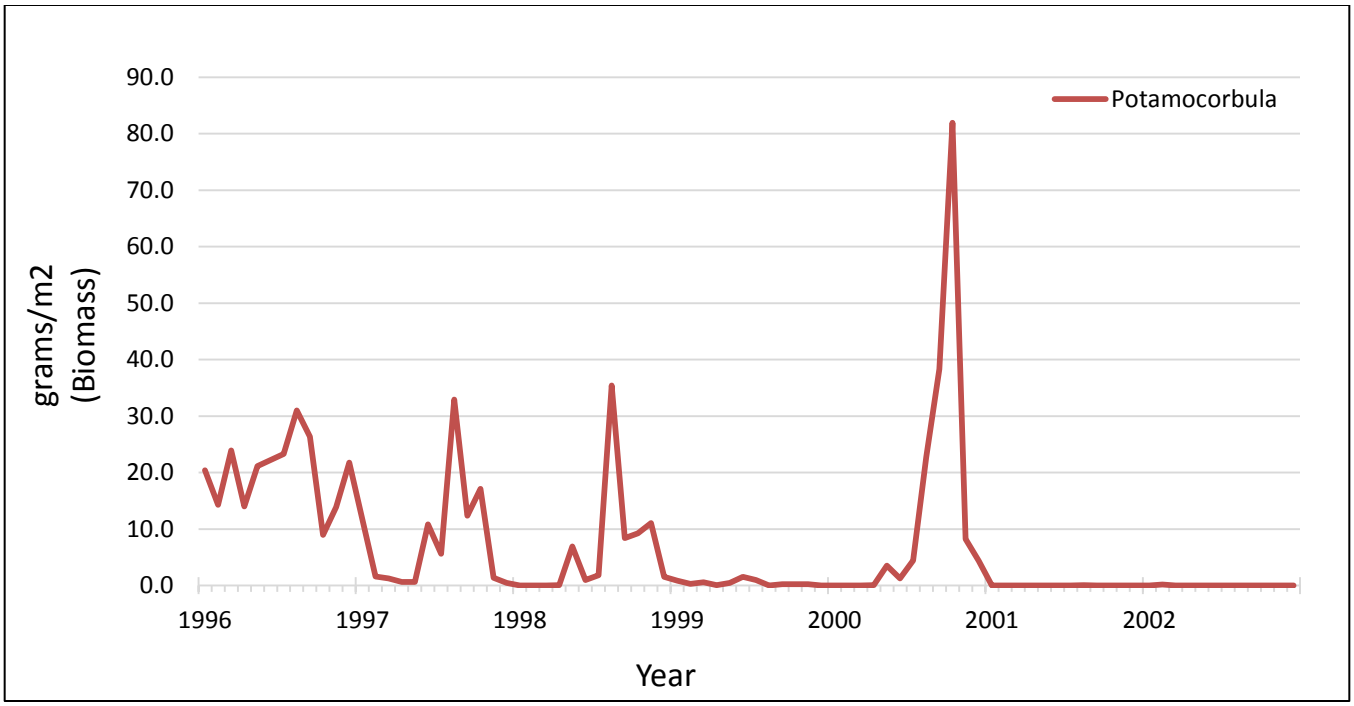

Figure 12. Graph showing *Potamocorbula amurensis* biomass at station D41C from 1996–2002. For station locations refer to table 1.

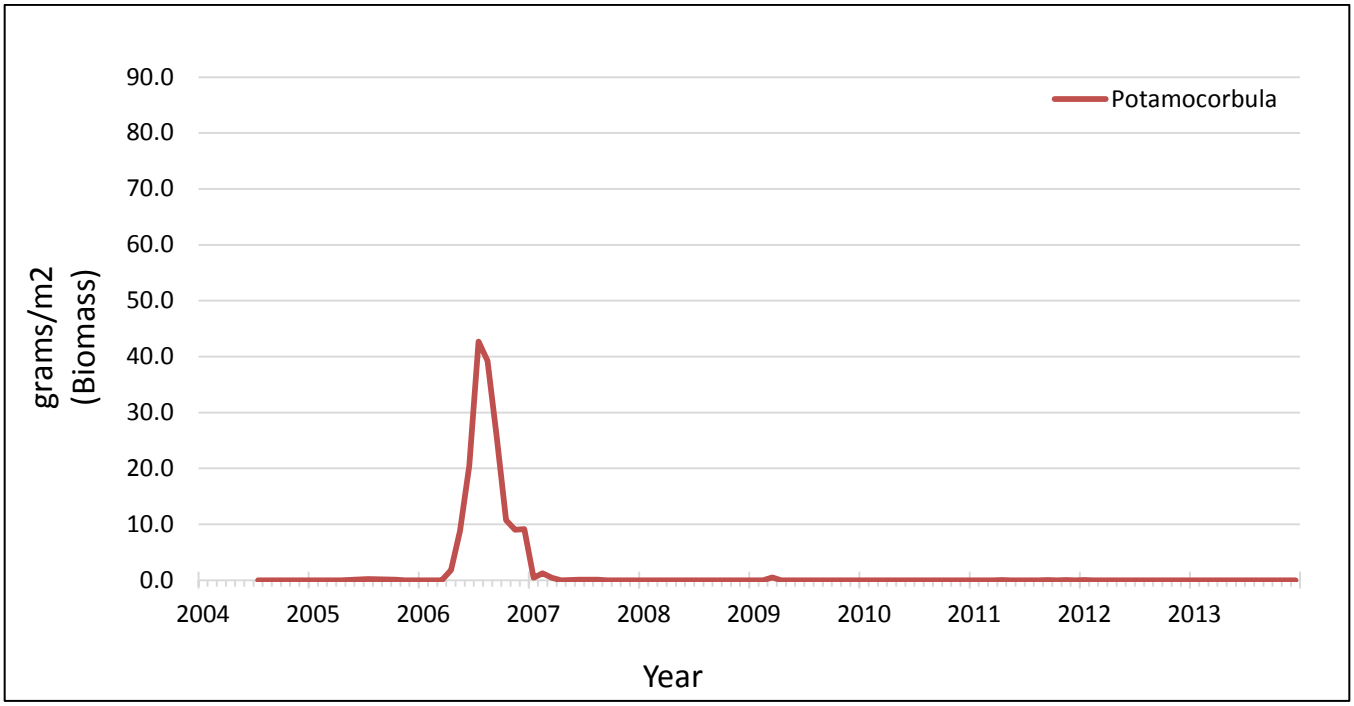

Figure 13. Graph showing biomass at station D41C from 2004–2013. For station locations refer to table 1.

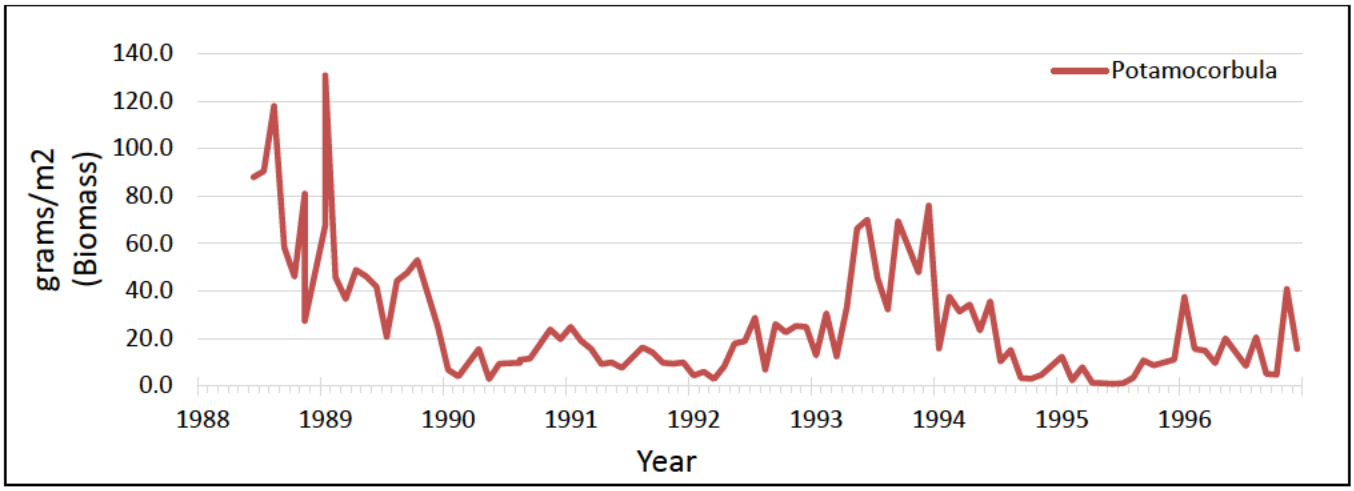

Figure 14. Graph showing biomass at station 8.1 from 1988–1996. For station locations refer to table 1.

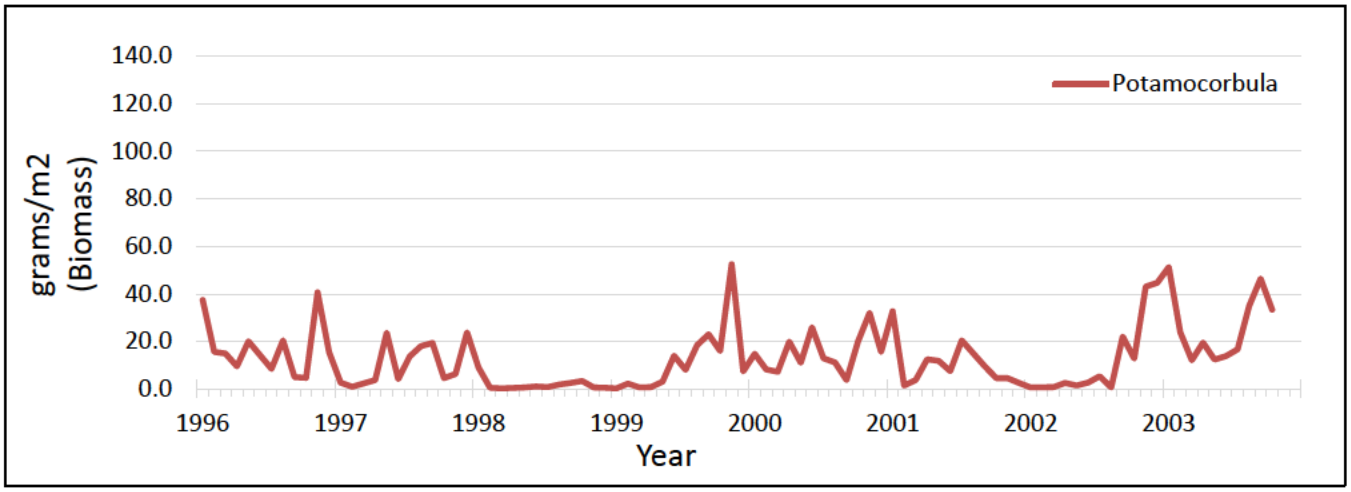

Figure 15. Graph showing biomass at station 8.1 from 1996–2003. For station locations refer to table 1.

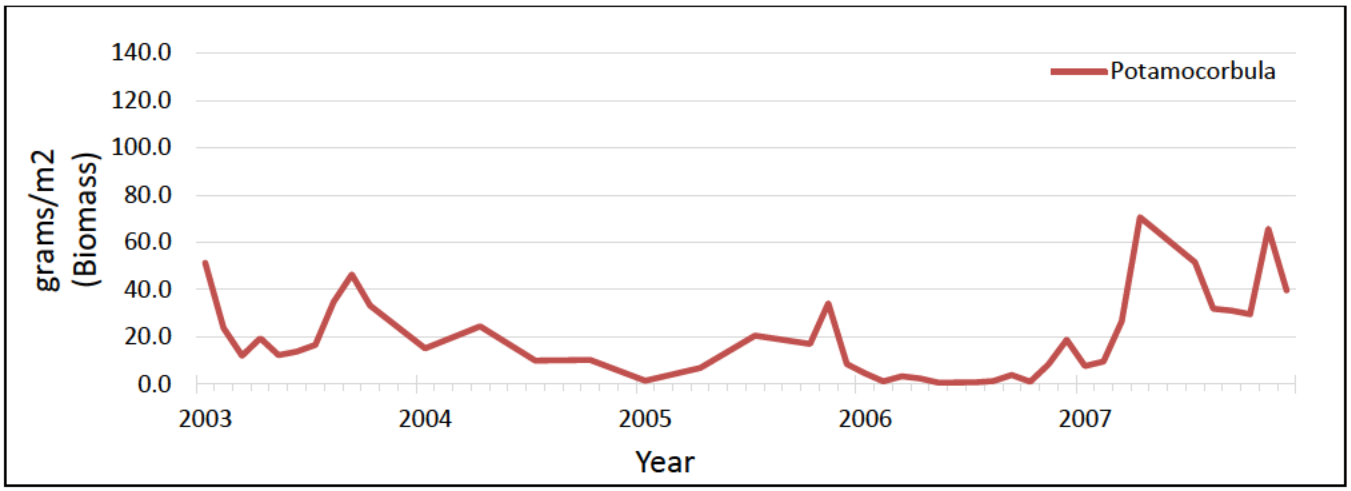

Figure 16. Graph showing biomass at station 8.1 from 2003–2007. For station locations refer to table 1.

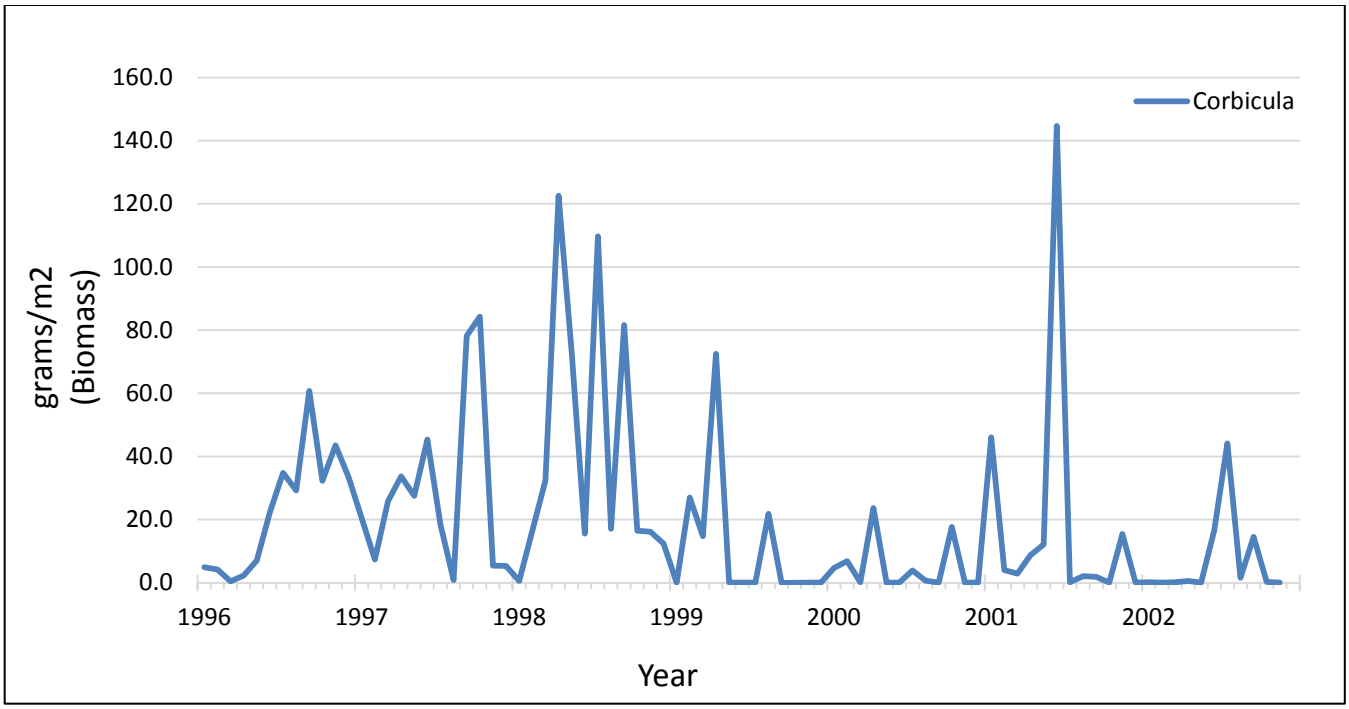

Figure 17. Graph showing *Corbicula fluminea* biomass at station C9 from 1996–2002. For station locations refer to table 1.

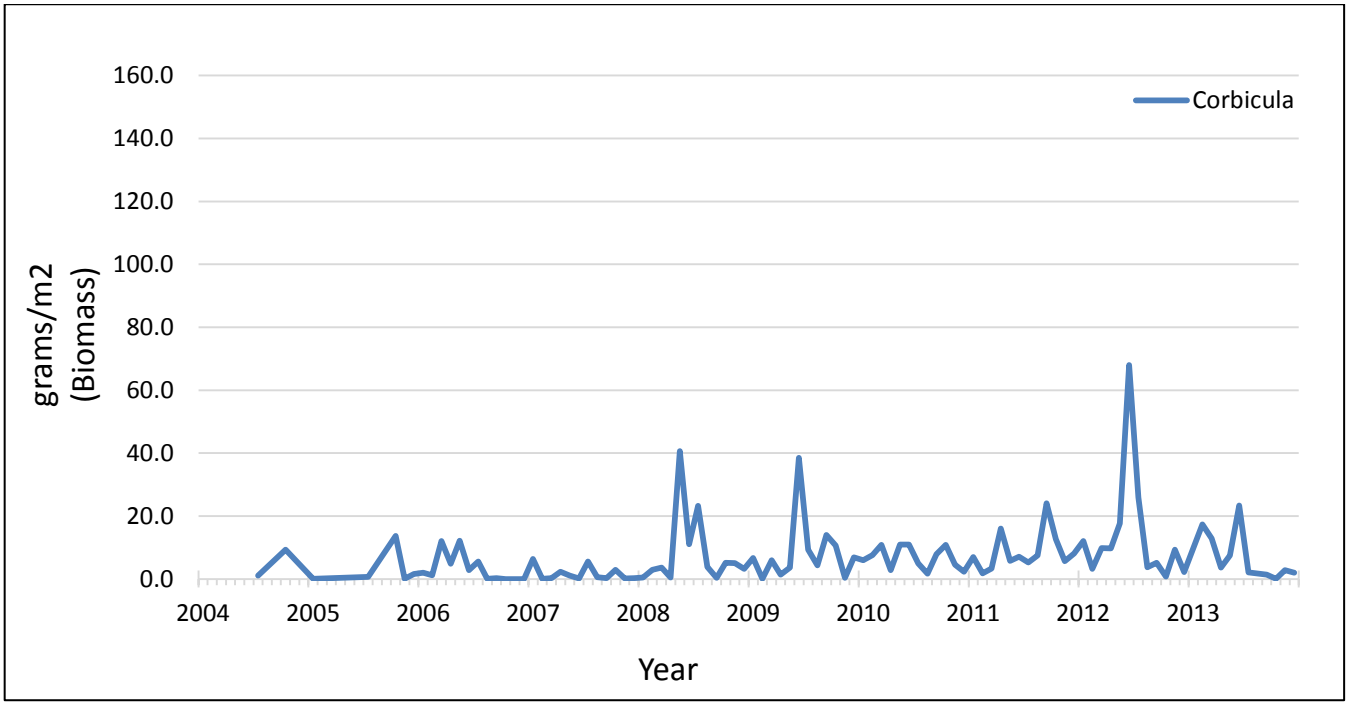

Figure 18. Graph showing biomass at station C9 from 2004–2013. For station locations refer to table 1.

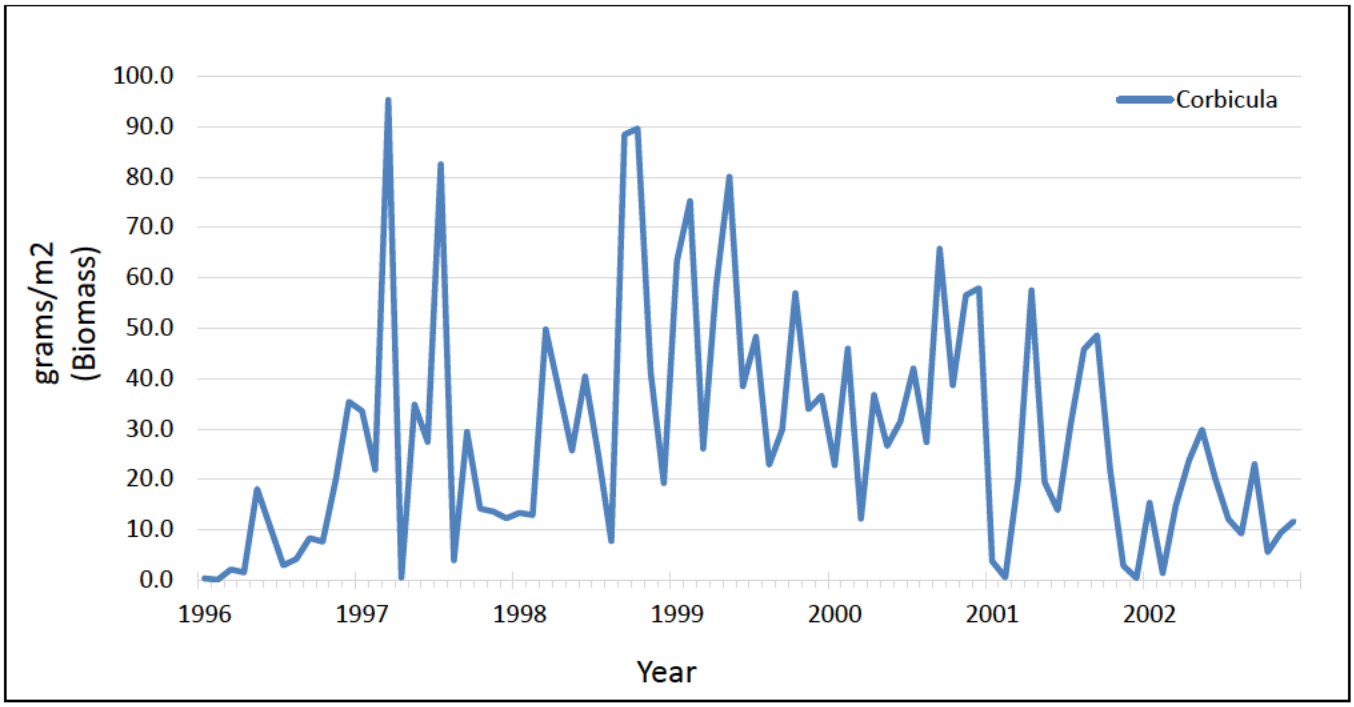

Figure 19. Graph showing biomass at station D16 from 1996–2002. For station locations refer to table 1.

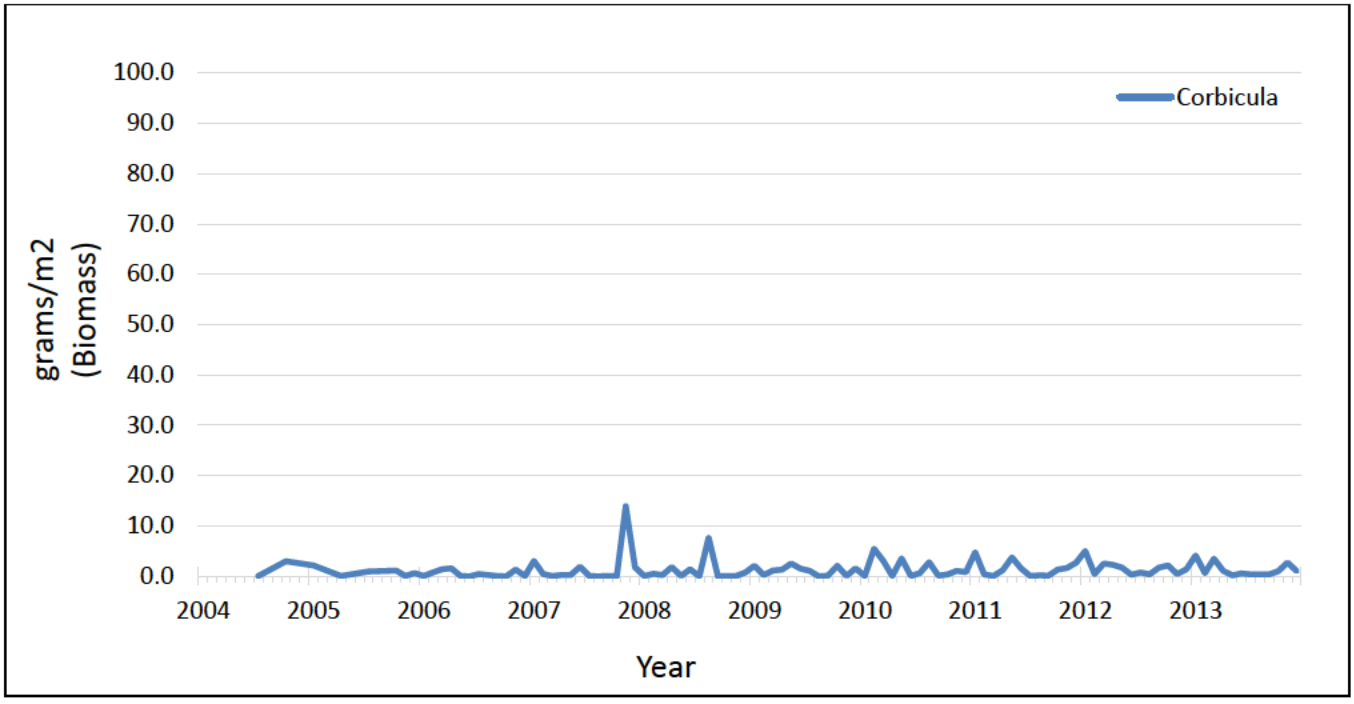

Figure 20. Graph showing biomass at station D16 from 2004–2013 For station locations refer to table 1.

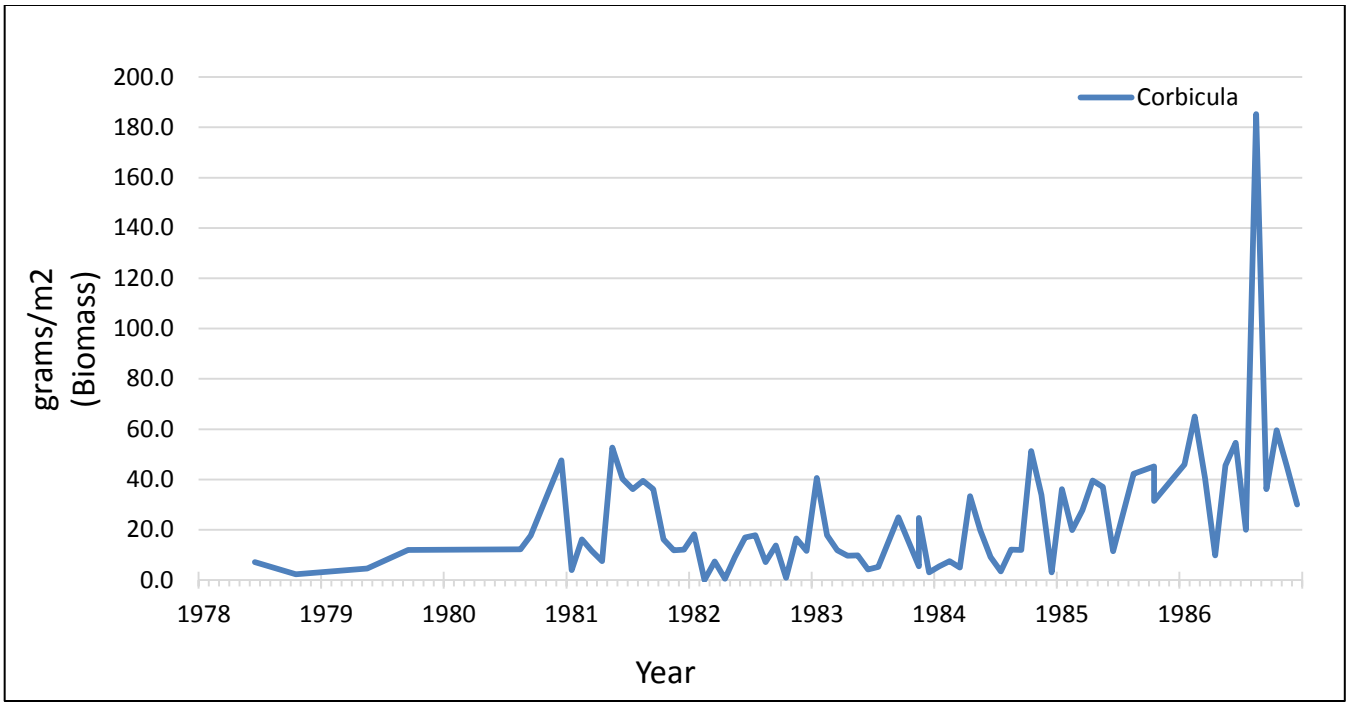

Figure 21. Graph showing biomass at station D19C from 1978–1986. For station locations refer to table 1.

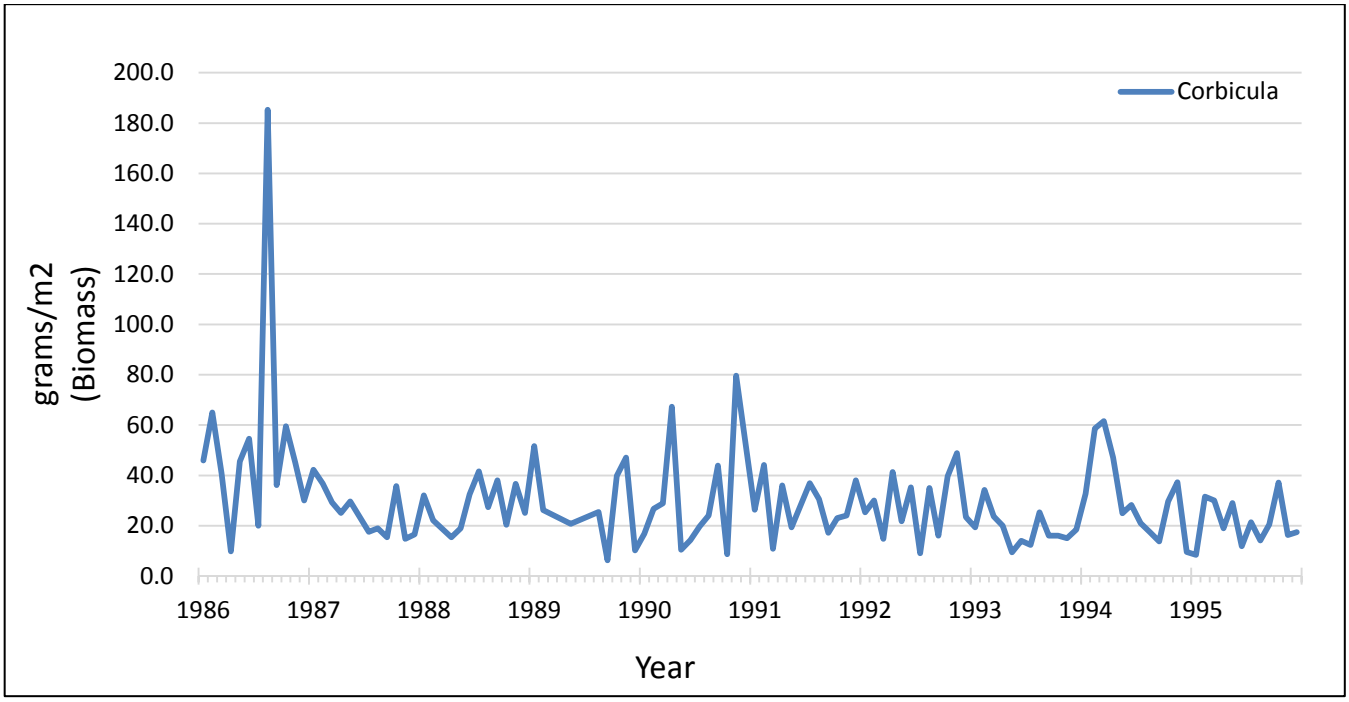

Figure 22. Graph showing biomass at station D19C from 1986–1995. For station locations refer to table 1.

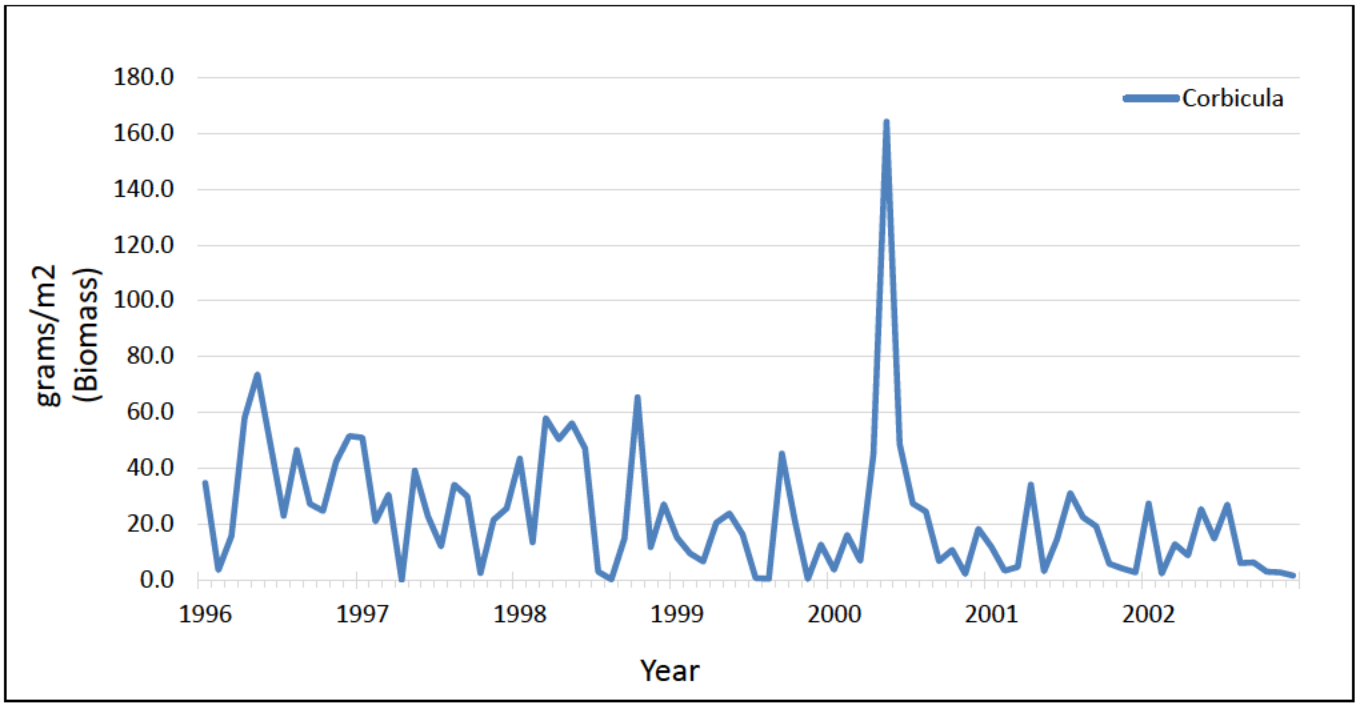

Figure 23. Graph showing biomass at station D24 from 1996–2002. For station locations refer to table 1.

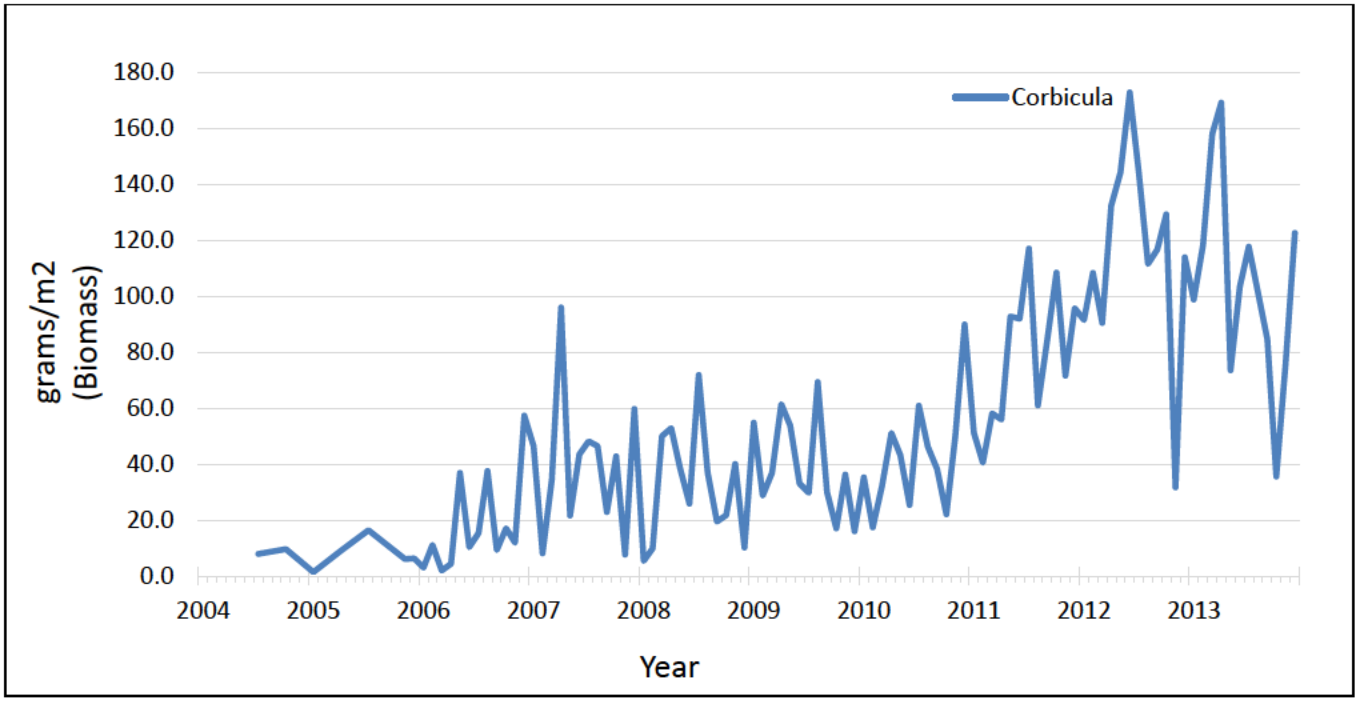

Figure 24. Graph showing biomass at station D24 from 2004–2013. For station locations refer to table 1.

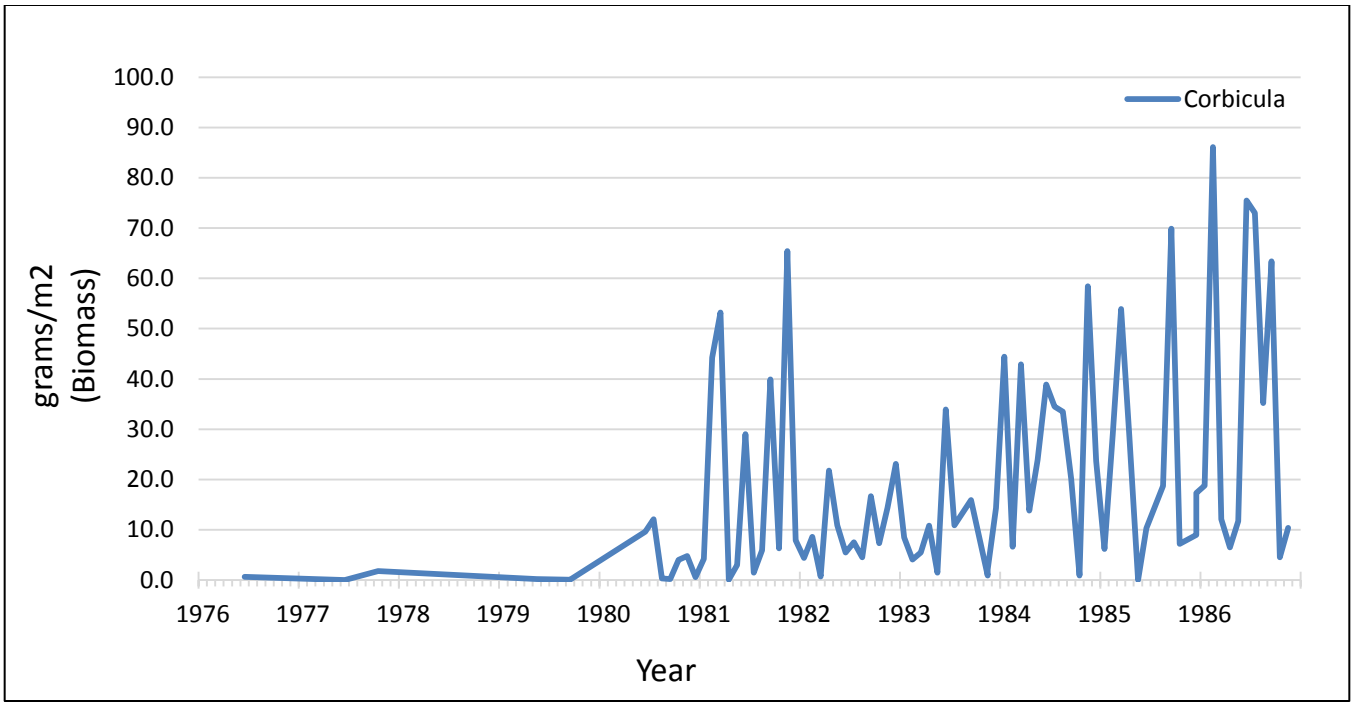

Figure 25. Graph showing biomass at station D28 from 1976–1986. For station locations refer to table 1.

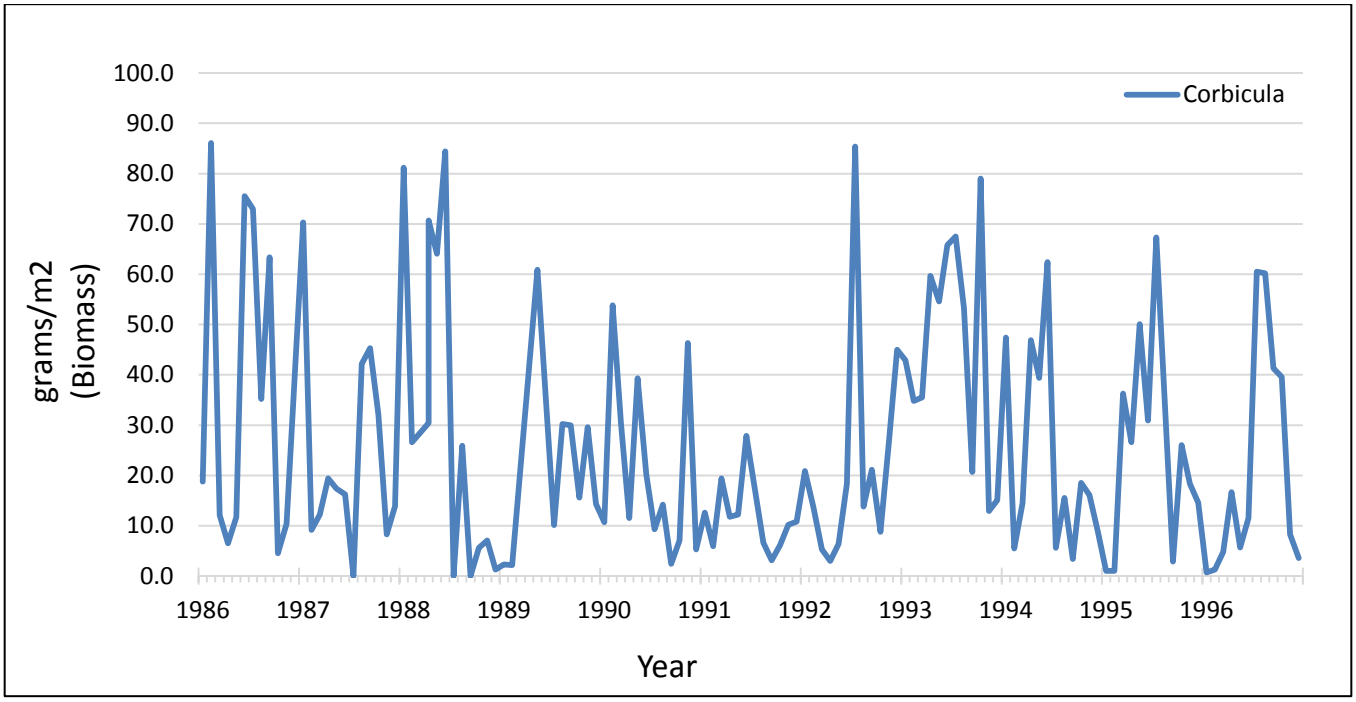

Figure 26. Graph showing biomass at station D28 from 1986–1996. For station locations refer to table 1.

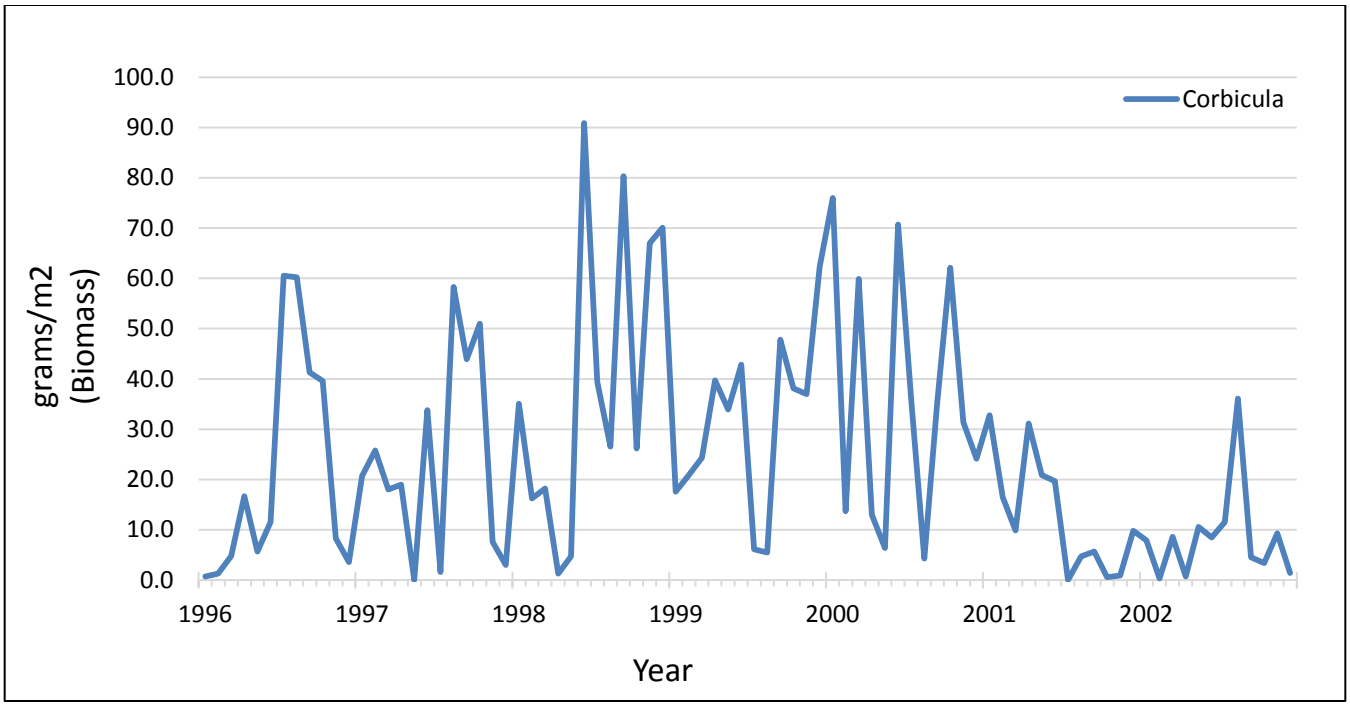

Figure 27. Graph showing biomass at station D28 from 1996–2002. For station locations refer to table 1.

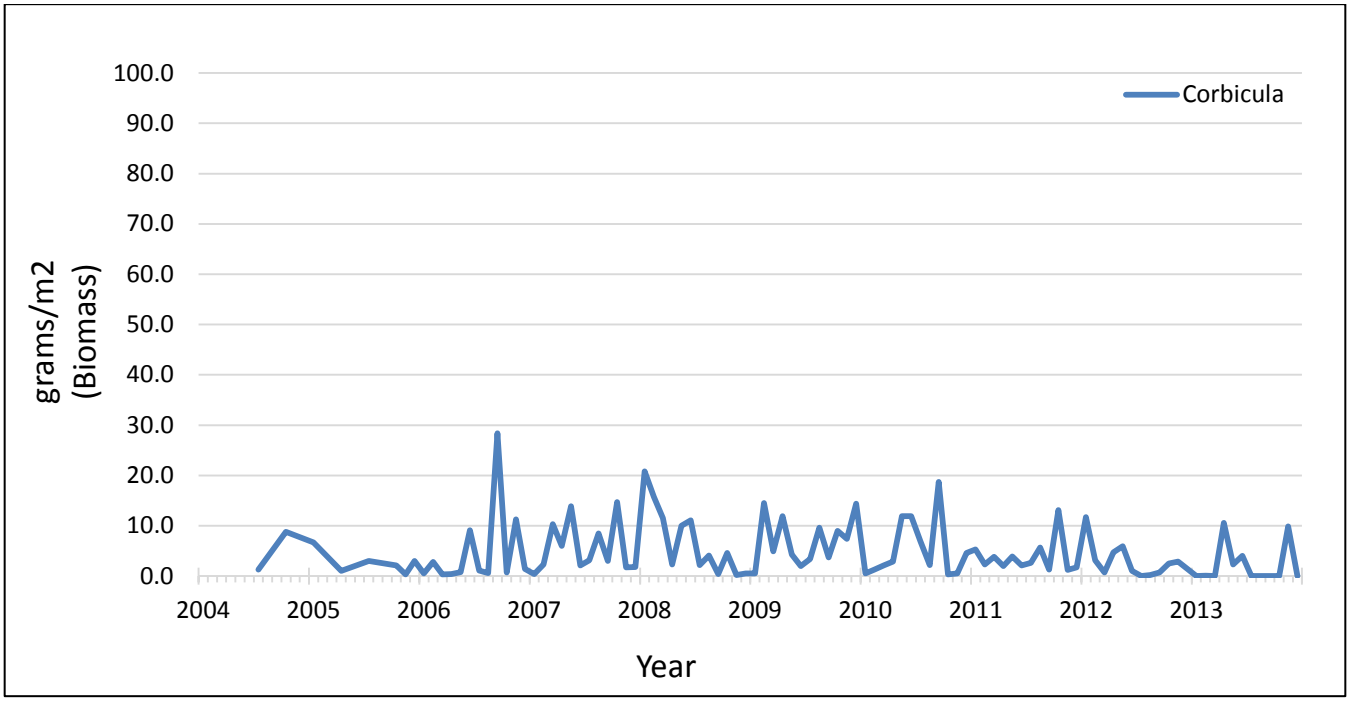

Figure 28. Graph showing biomass at station D28 from 2004–2013. For station locations refer to table 1.

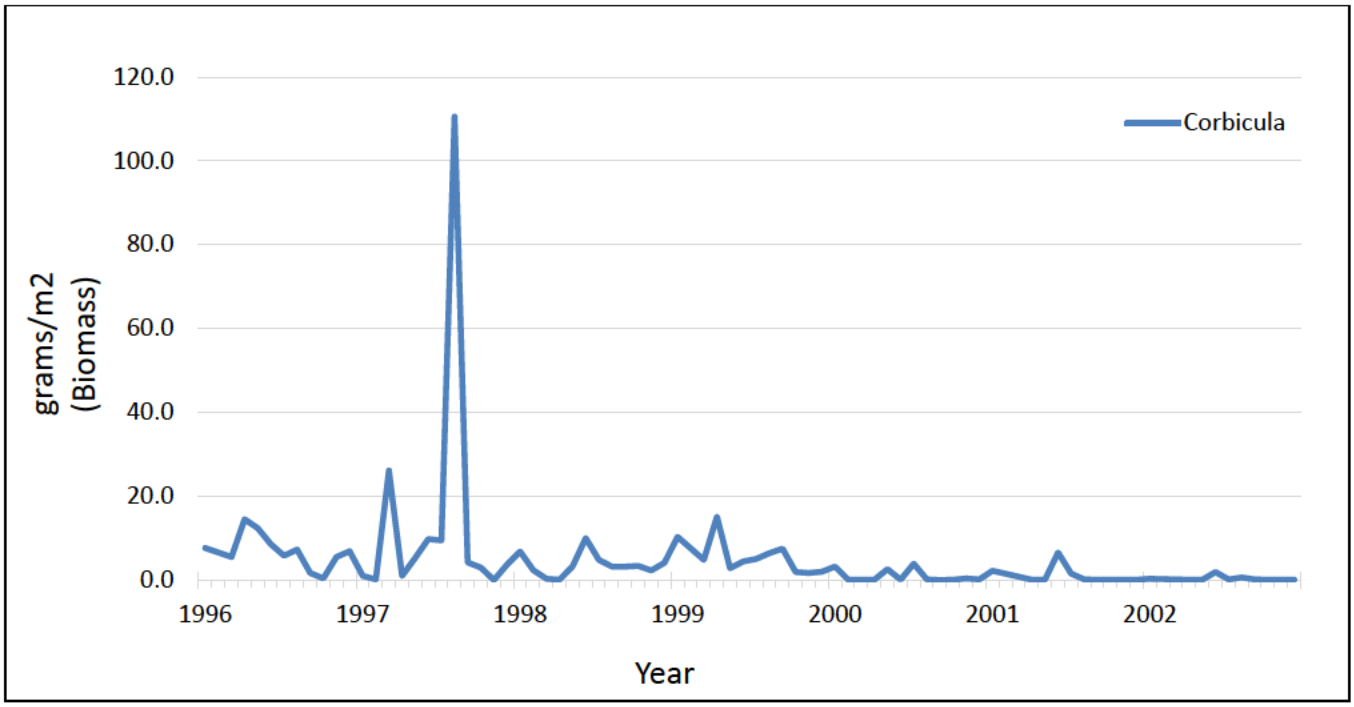

Figure 29. Graph showing biomass at station P8 from 1996–2002. For station locations refer to table 1.

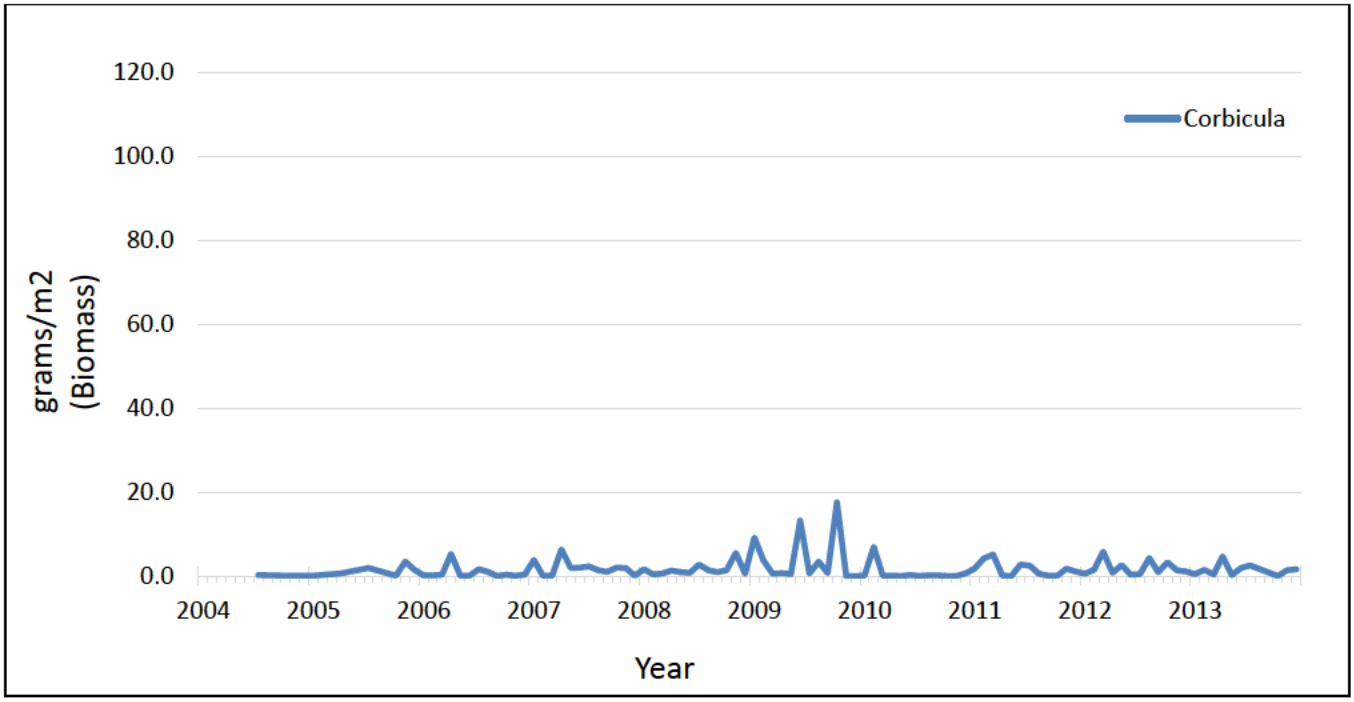

Figure 30. Graph showing biomass at station P8 from 2004–2013. For station locations refer to table 1.

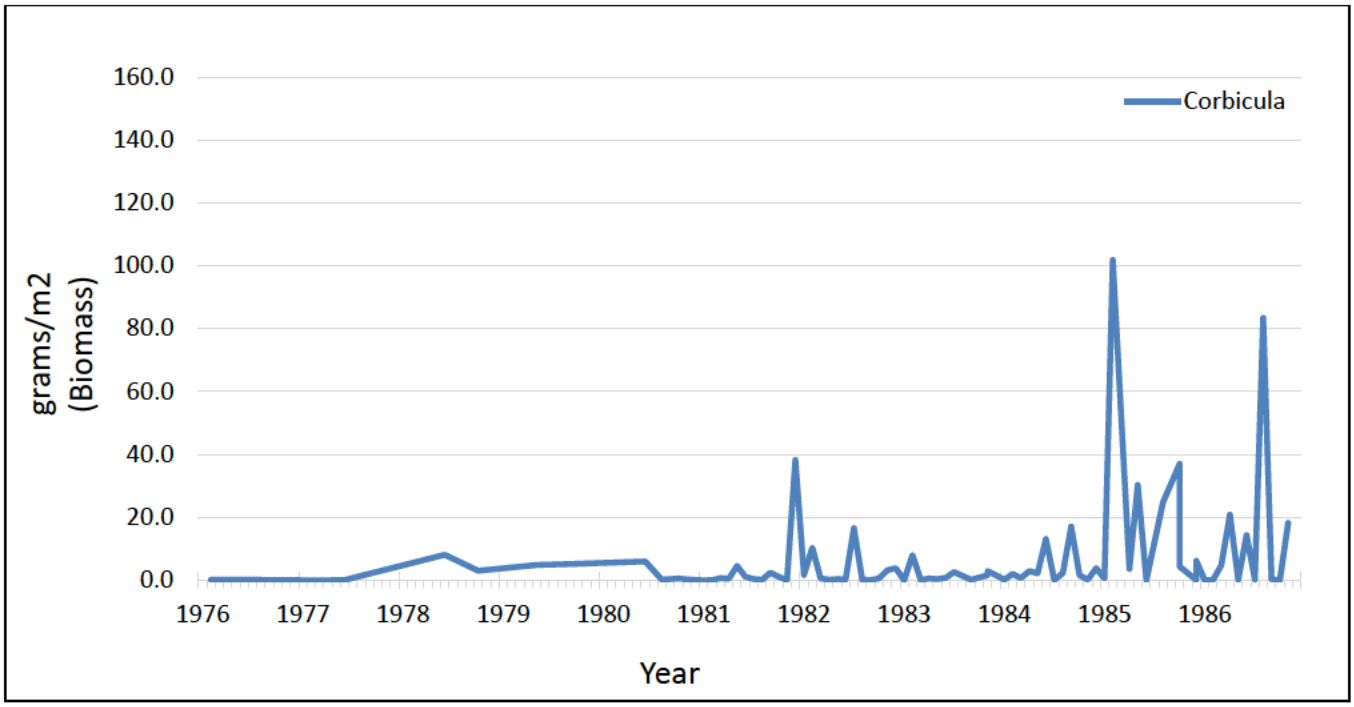

Figure 31. Graph showing biomass at station D4C from 1976–1986. For station locations refer to table 1.

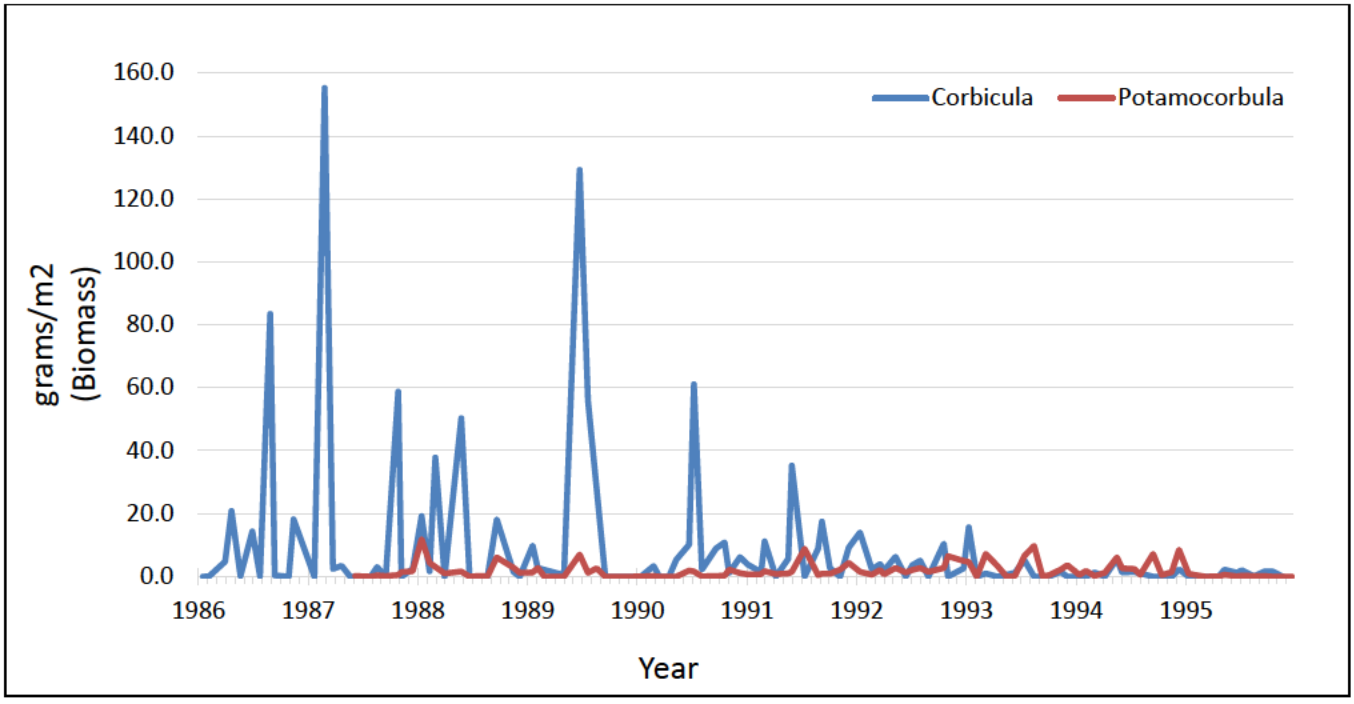

Figure 32. Graph showing biomass at station D4C from 1986–1995. For station locations refer to table 1.

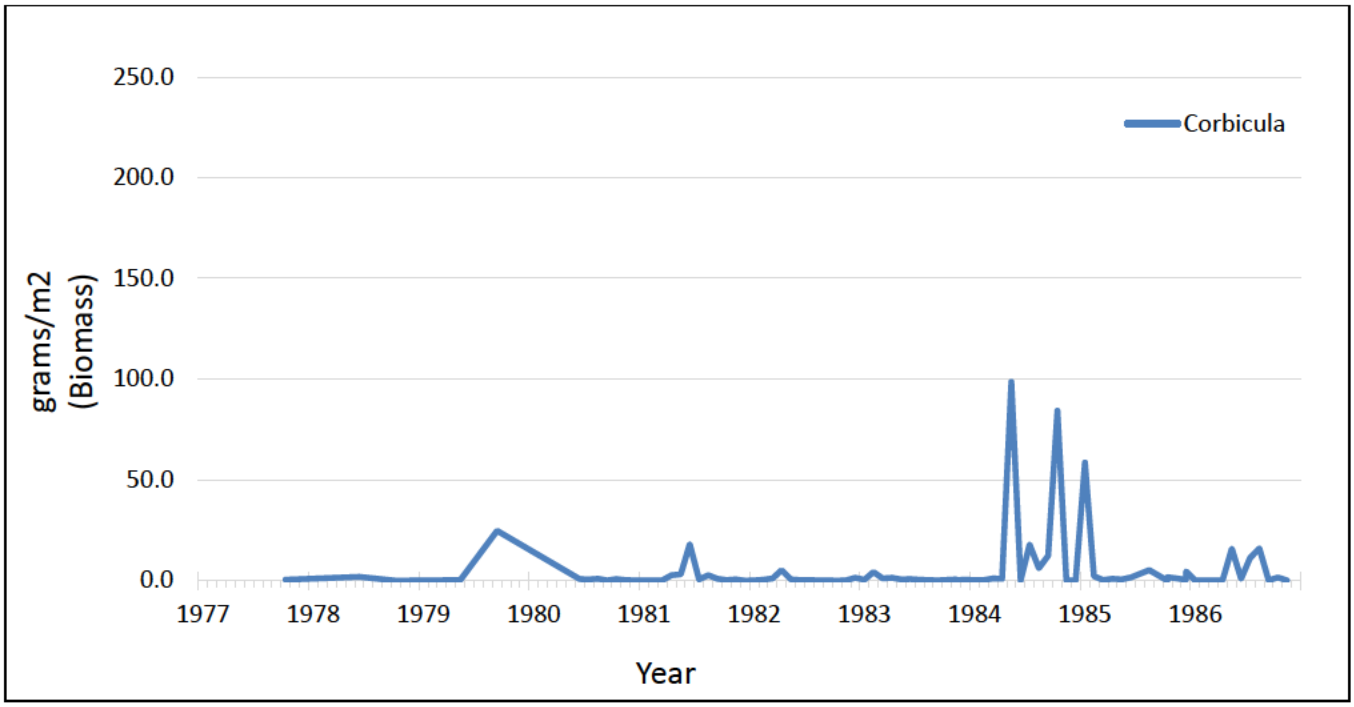

Figure 33. Graph showing biomass at station D4L from 1977–1986. For station locations refer to table 1.

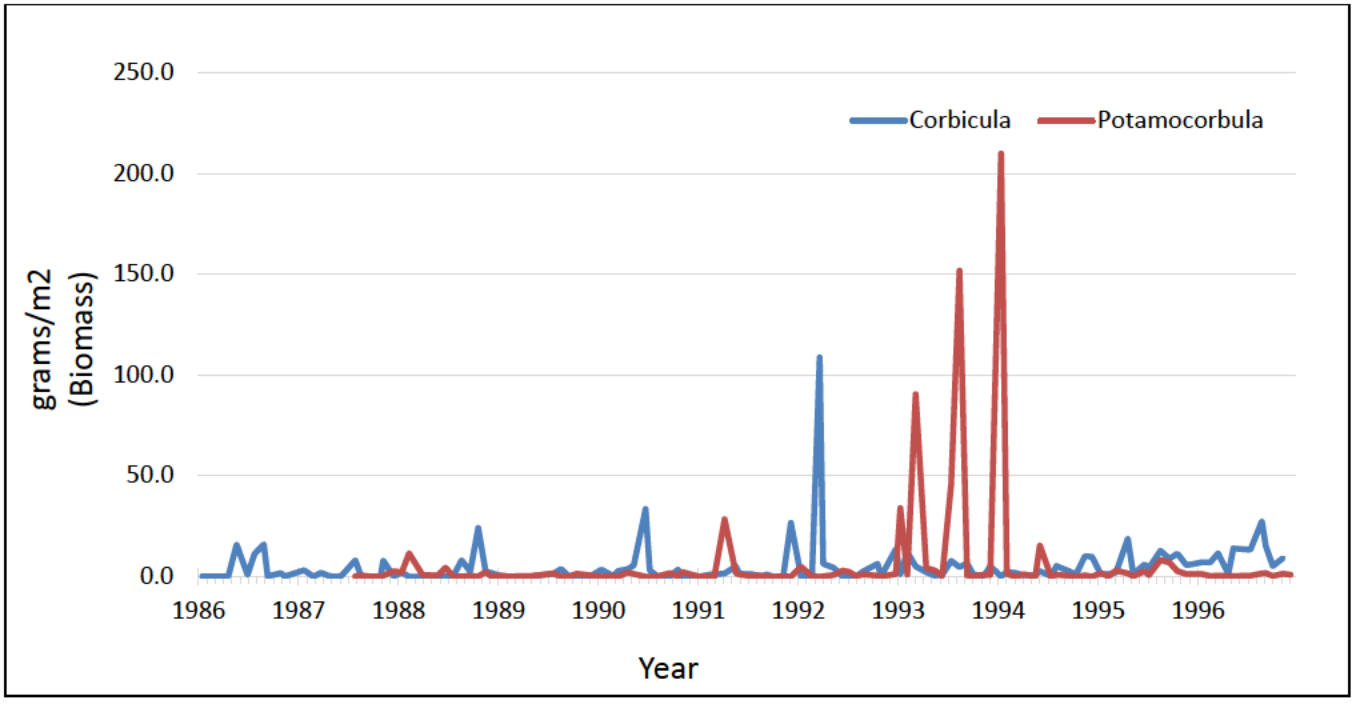

Figure 34. Graph showing biomass at station D4L from 1986–1996. For station locations refer to table 1.

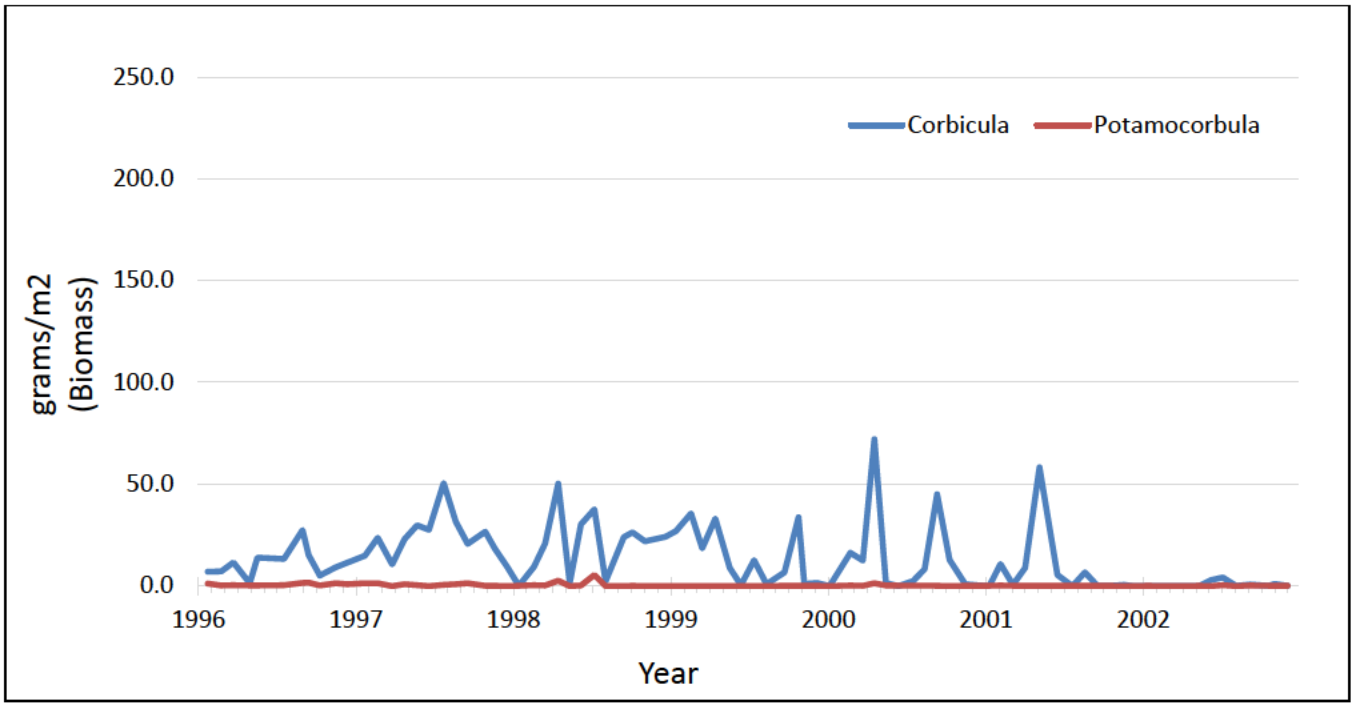

Figure 35. Graph showing biomass at station D4L from 1996–2002. For station locations refer to table 1.

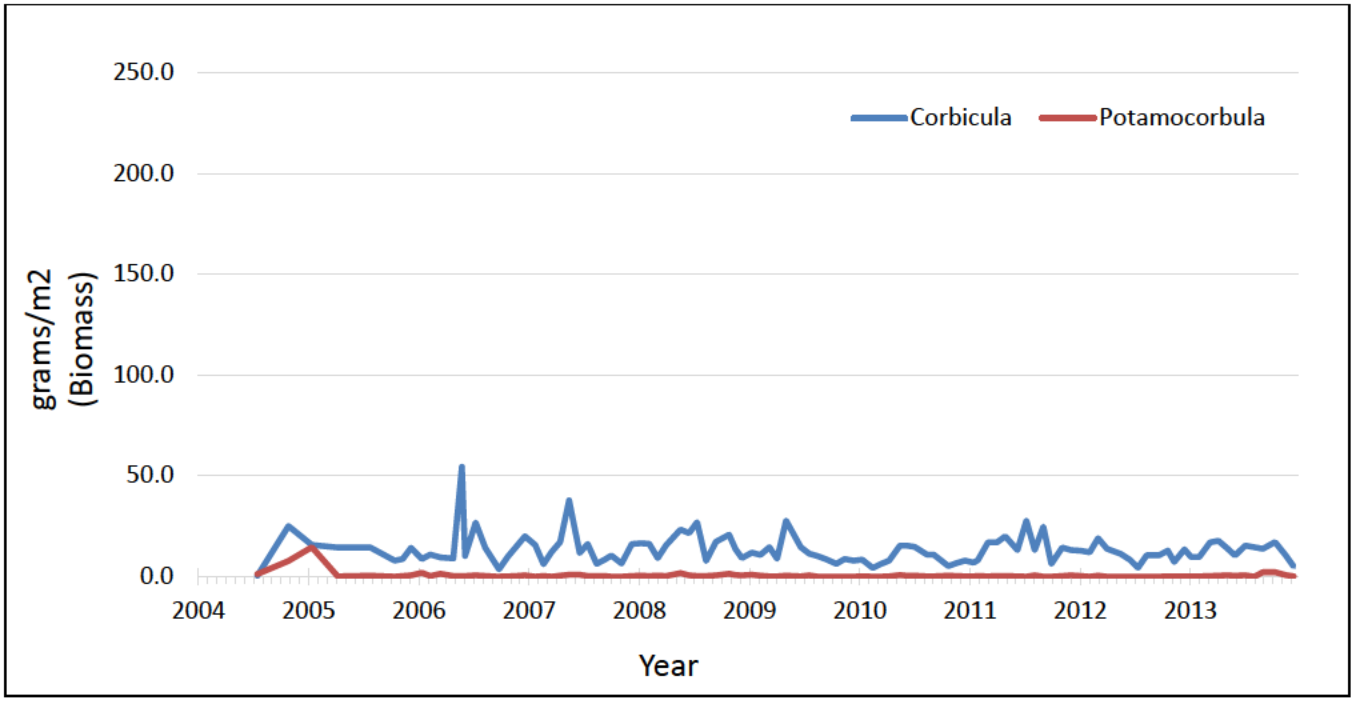

Figure 36. Graph showing biomass at station D4L from 2004–2013. For station locations refer to table 1.

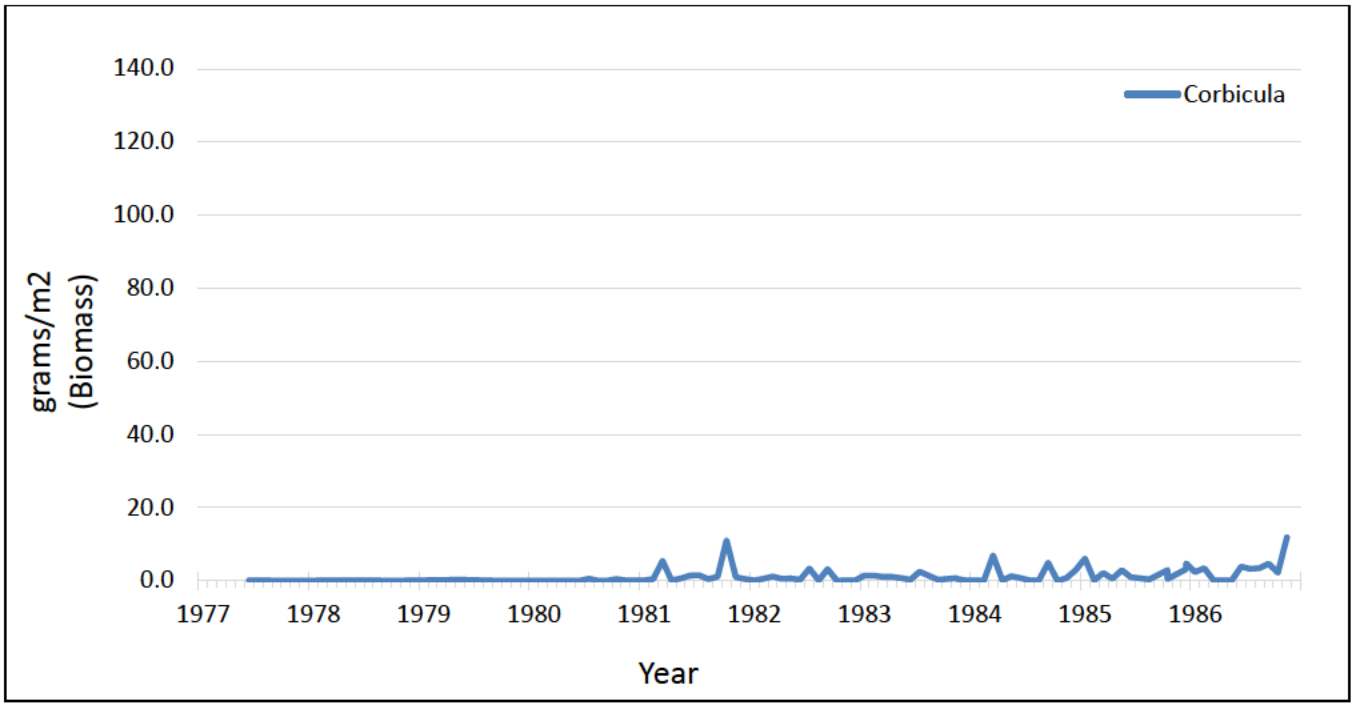

Figure 37. Graph showing biomass at station D4R from 1977–1986. For station locations refer to table 1.

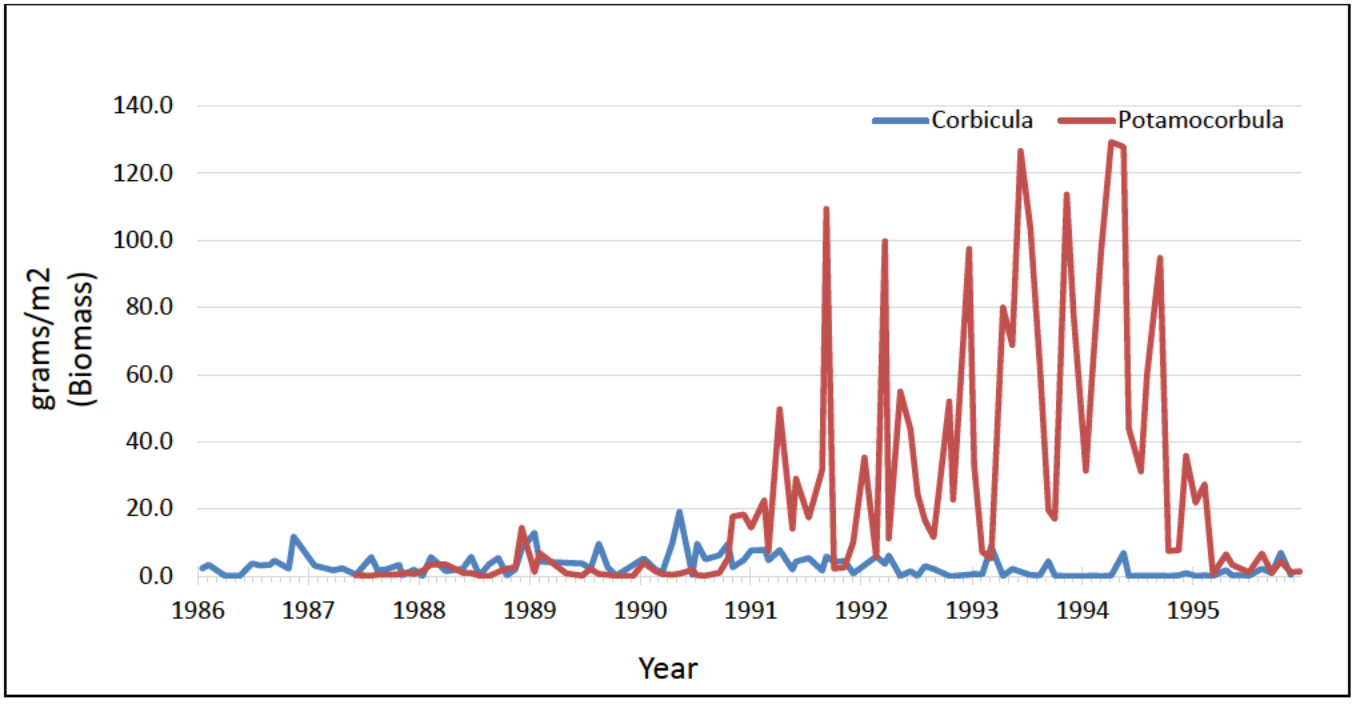

Figure 38. Graph showing biomass at station D4R from 1986–1995. For station locations refer to table 1.

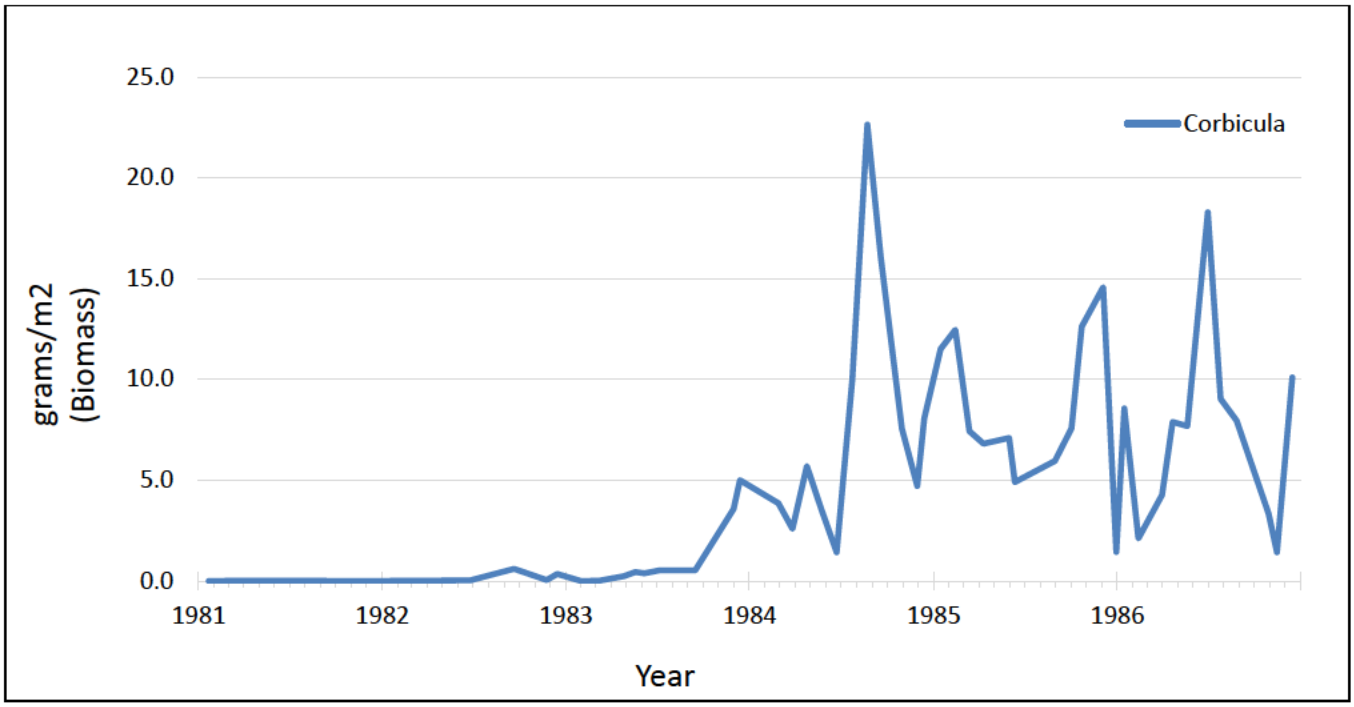

Figure 39. Graph showing biomass at station D7 from 1981–1986. For station locations refer to table 1.

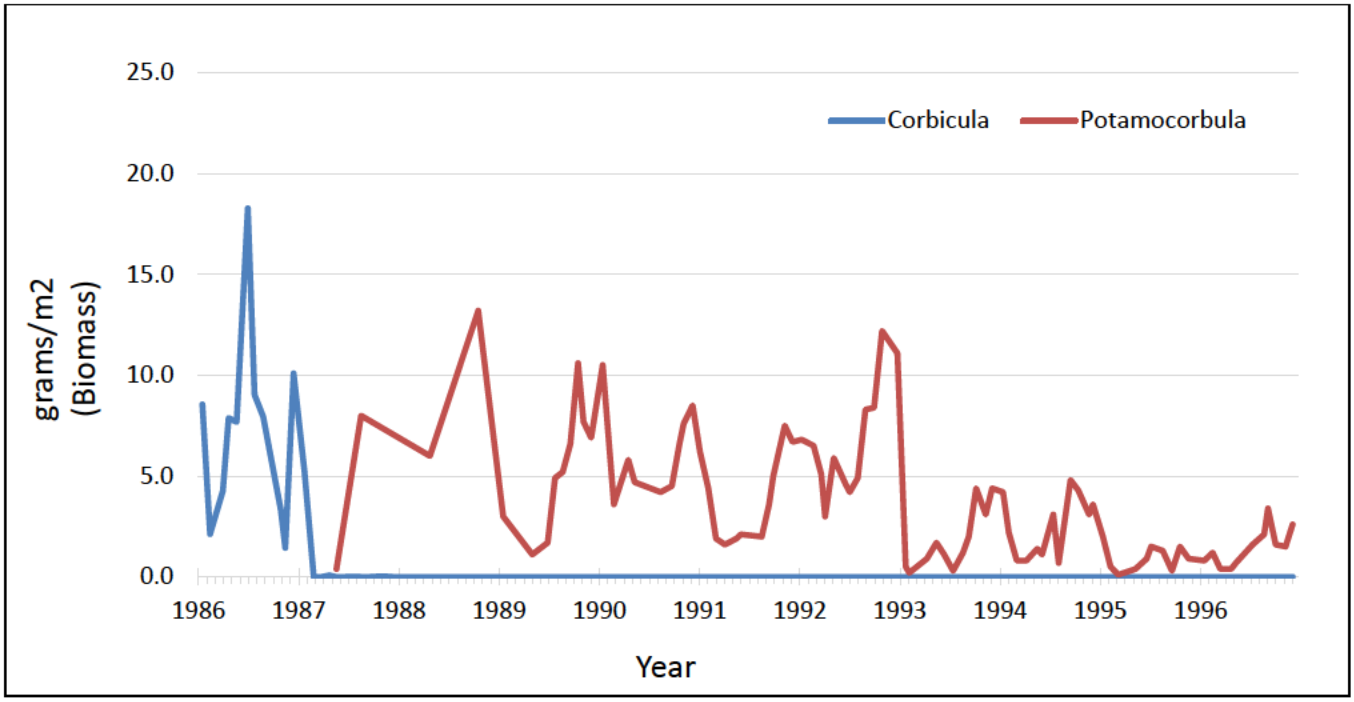

Figure 40. Graph showing biomass at station D7 from 1986–1996. For station locations refer to table 1.

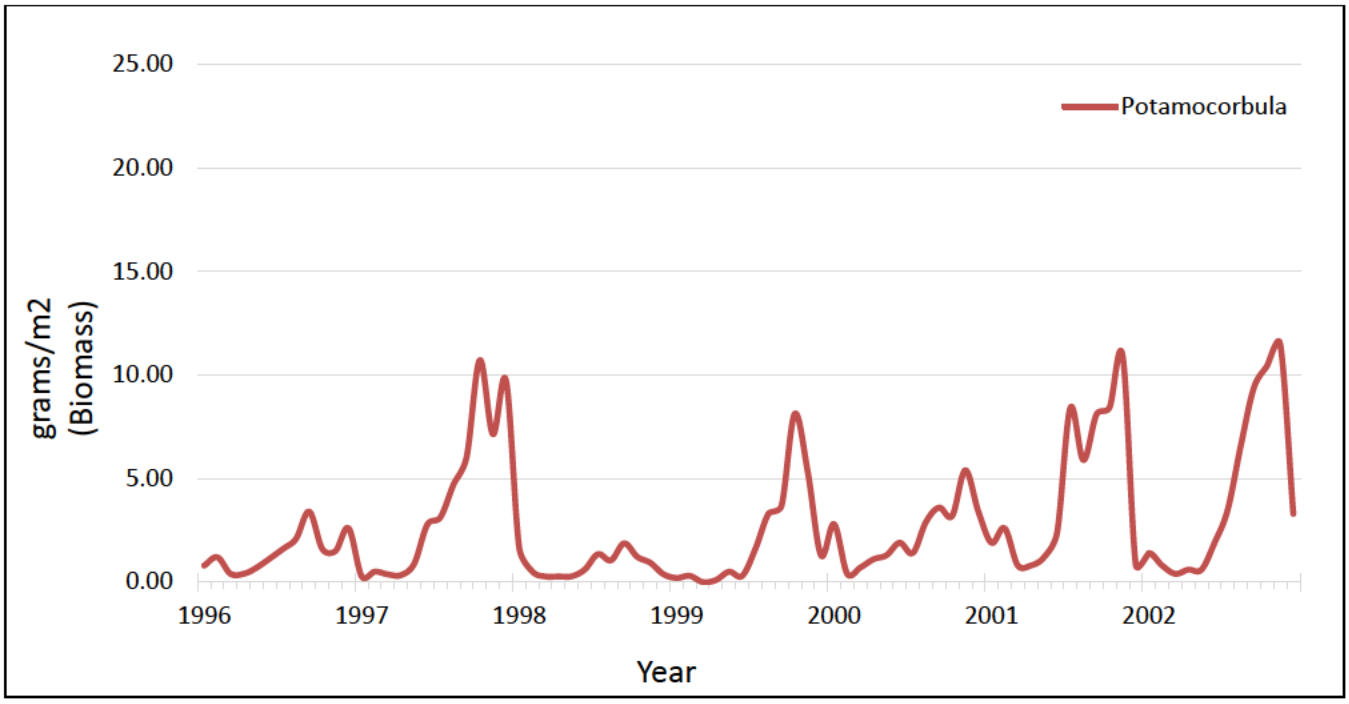

Figure 41. Graph showing biomass at station D7 from 1996–2003. For station locations refer to table 1.

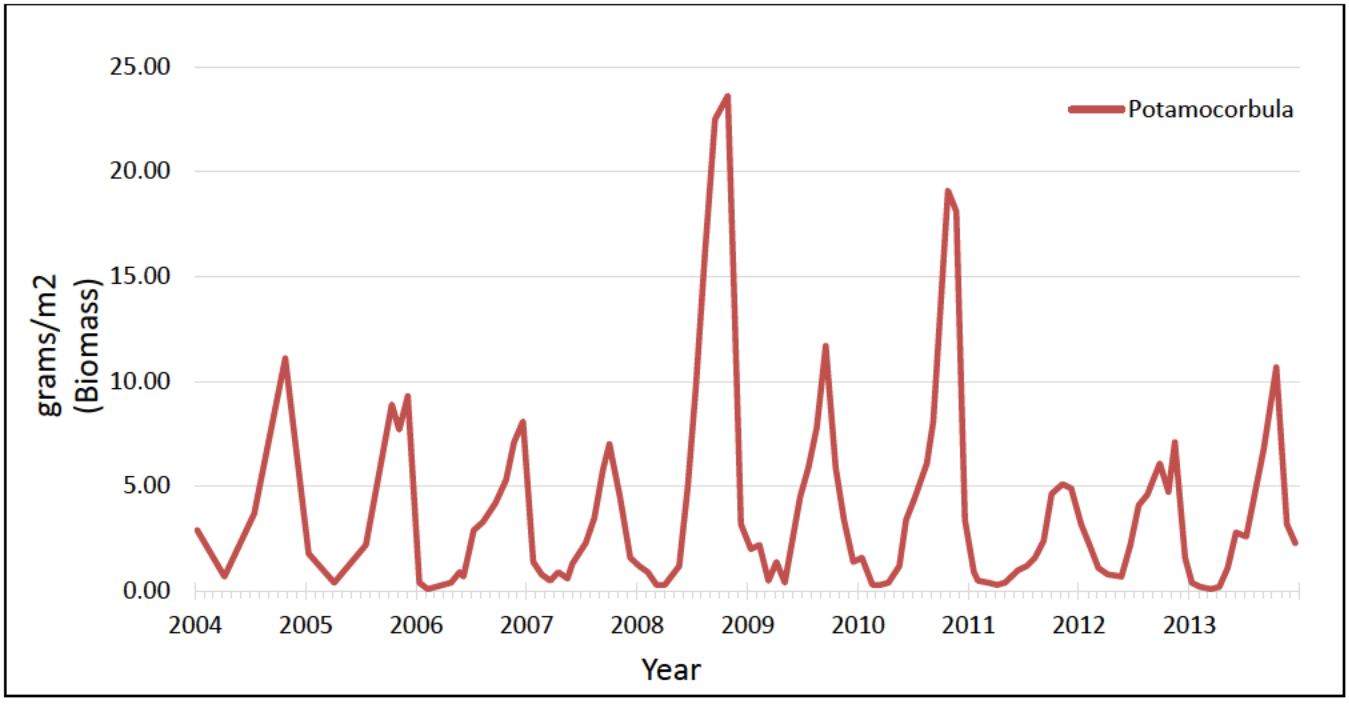

Figure 42. Graph showing biomass at station D7 from 2003–2013. For station locations refer to table 1.

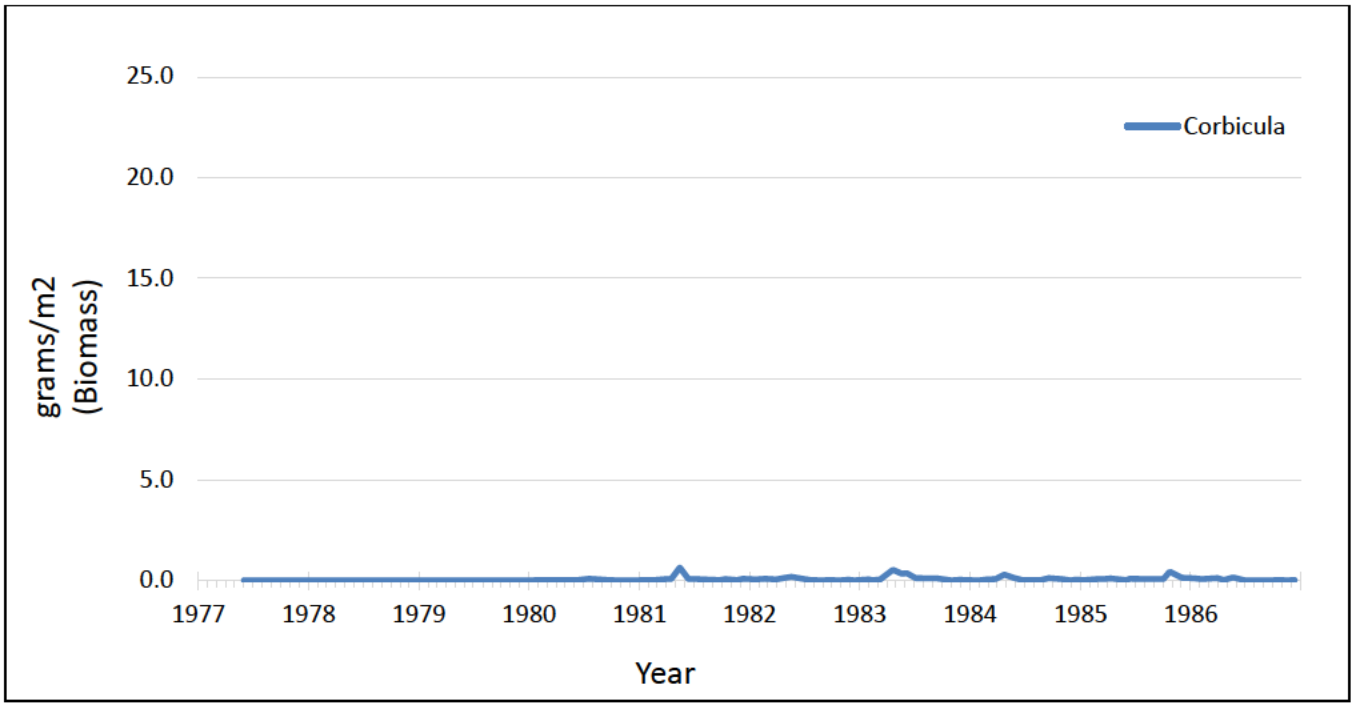

Figure 43. Graph showing biomass at station D11 from 1977–1986. For station locations refer to table 1.

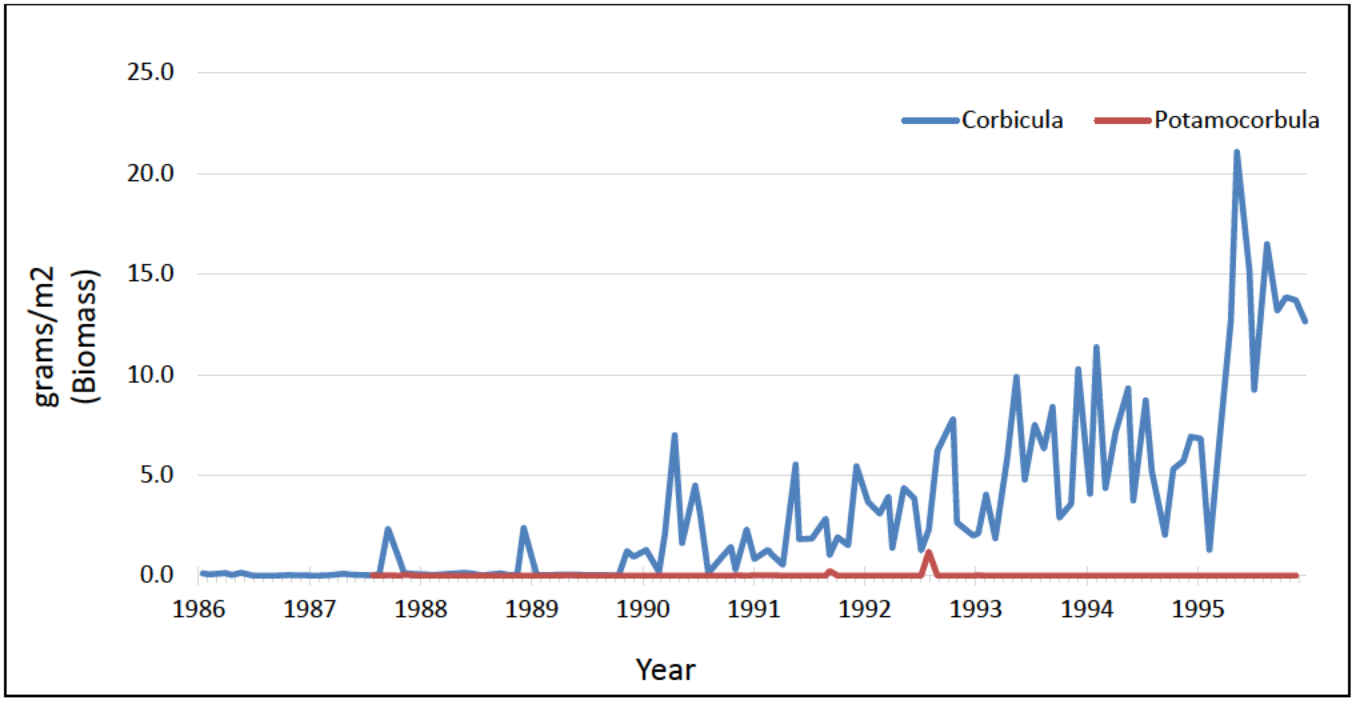

Figure 44. Graph showing biomass at station D11 from 1986–1995. For station locations refer to table 1.

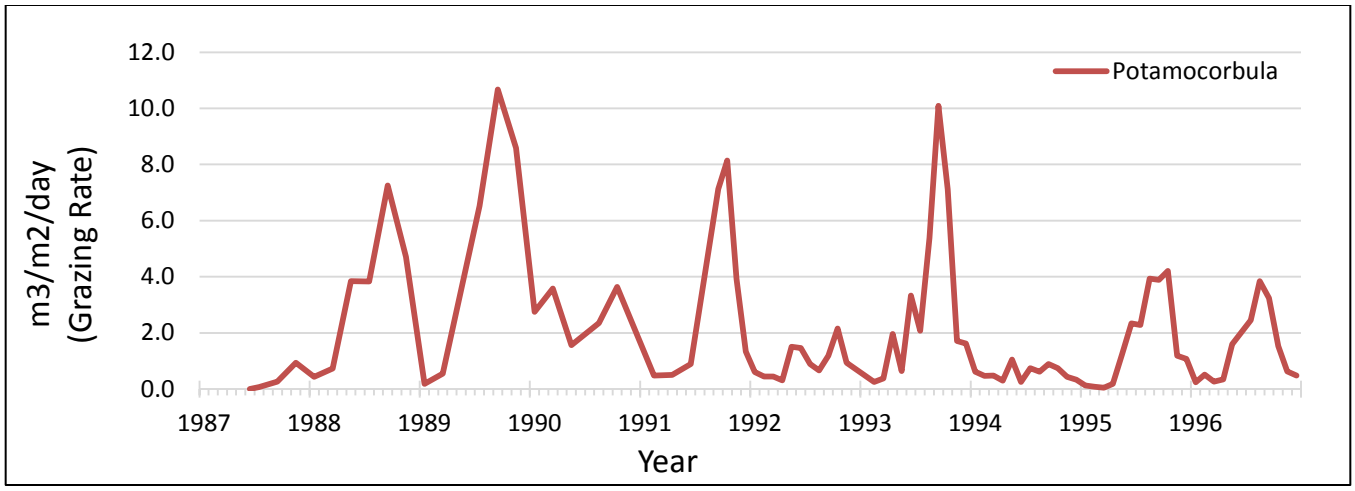

Figure 45. Graph showing grazing rate at station D41A from 1987–1996. For station locations refer to table 1.

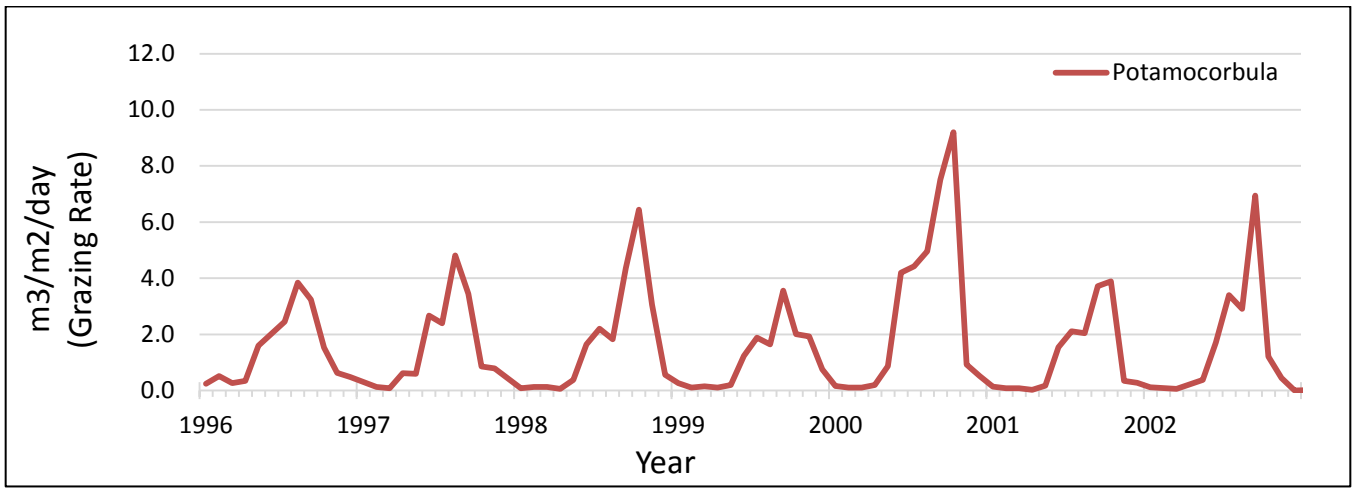

Figure 46. Graph showing grazing rate at station D41A from 1996–2003. For station locations refer to table 1.

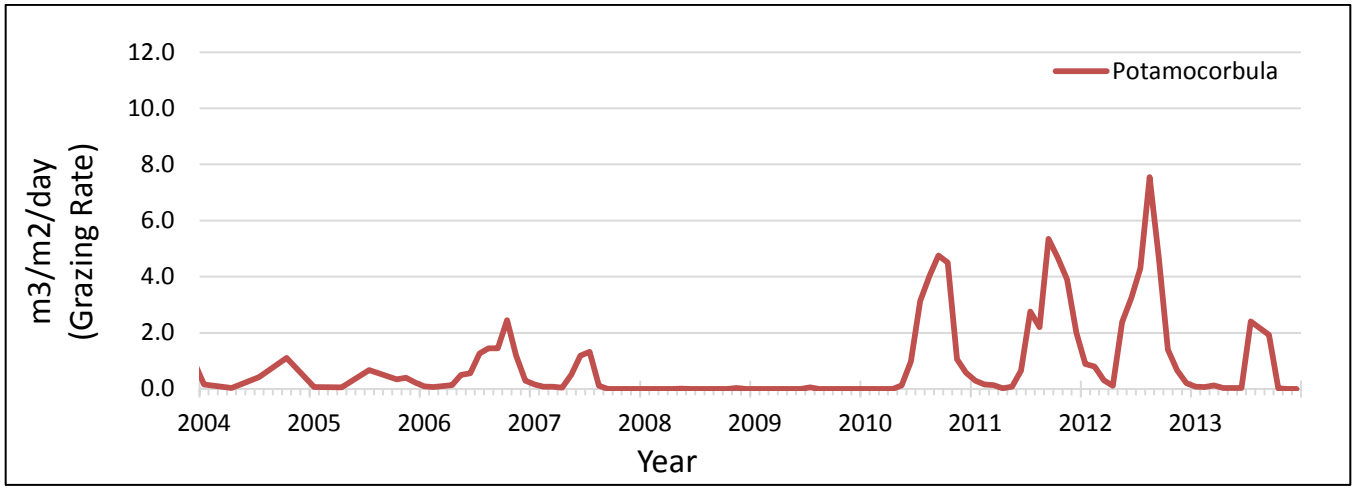

Figure 47. Graph showing grazing rate at station D41A from 2003–2013. For station locations refer to table 1.

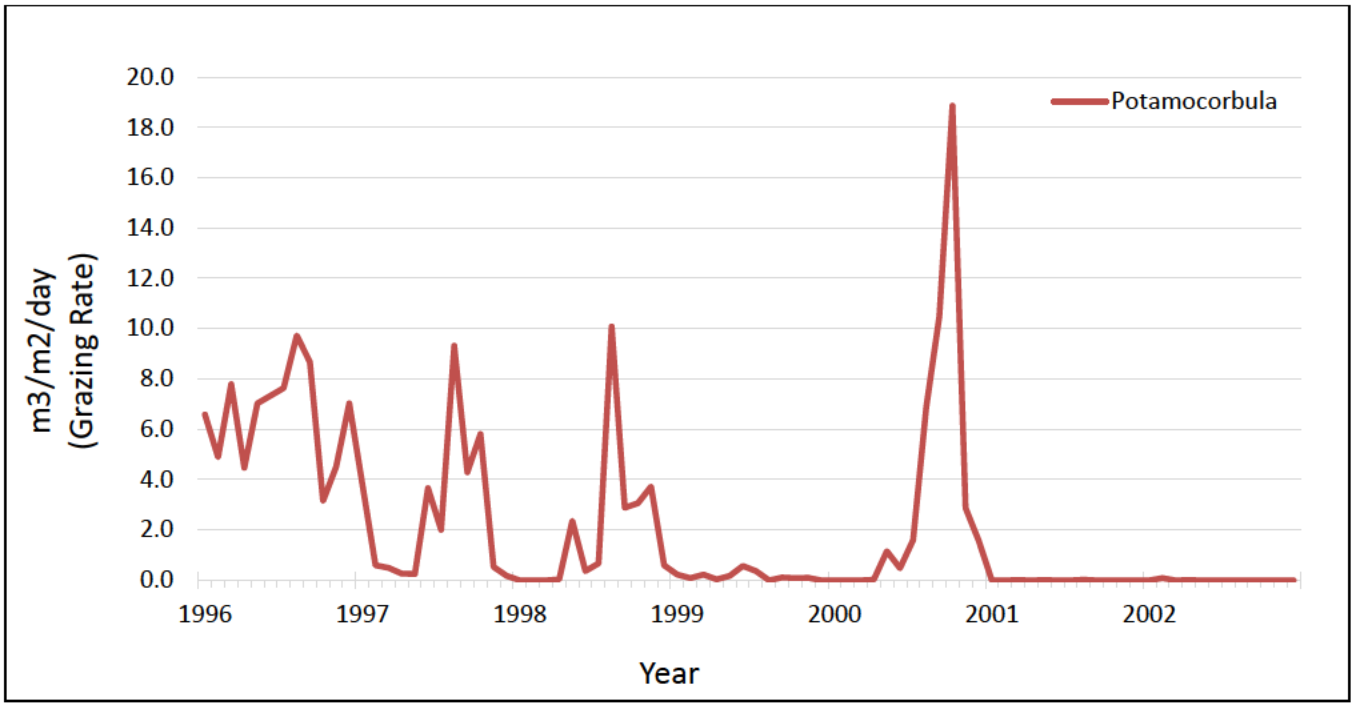

Figure 48. Graph showing grazing rate at station D41C from 1996–2002. For station locations refer to table 1.

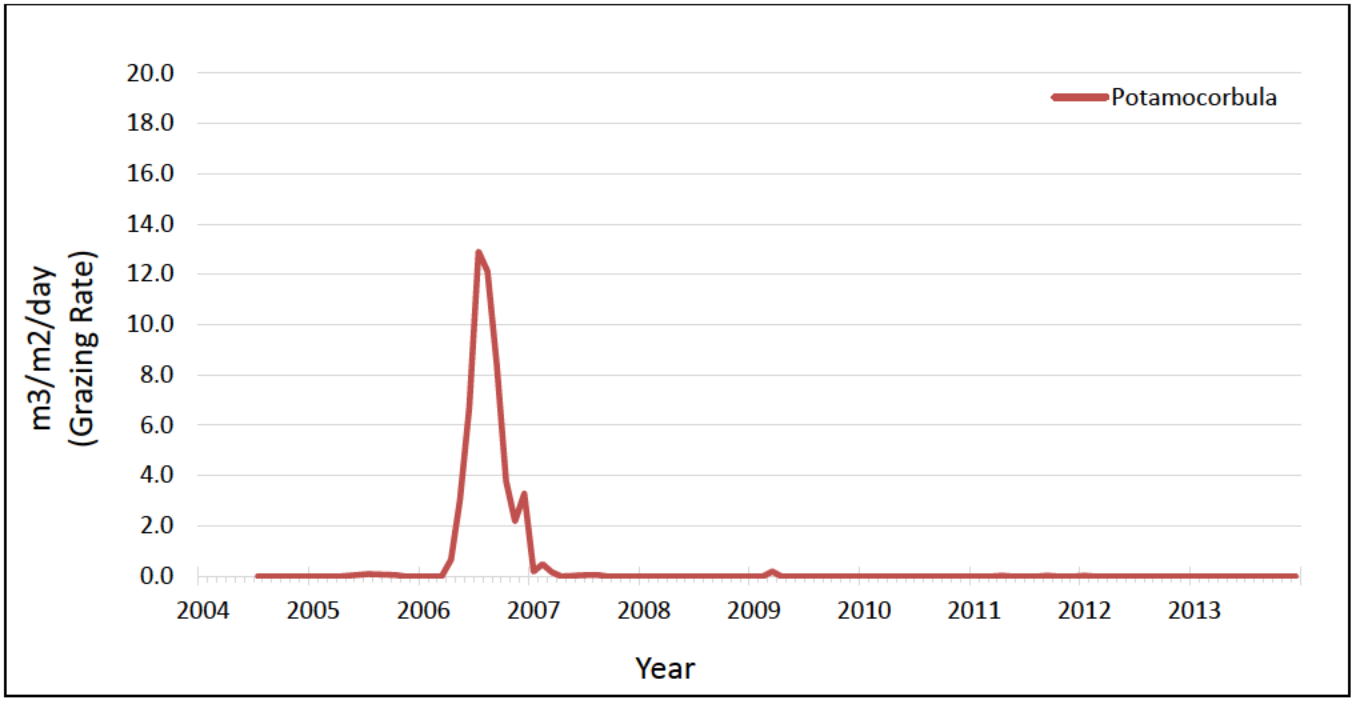

Figure 49. Graph showing grazing rate at station D41C from 2004–2013. For station locations refer to table 1.

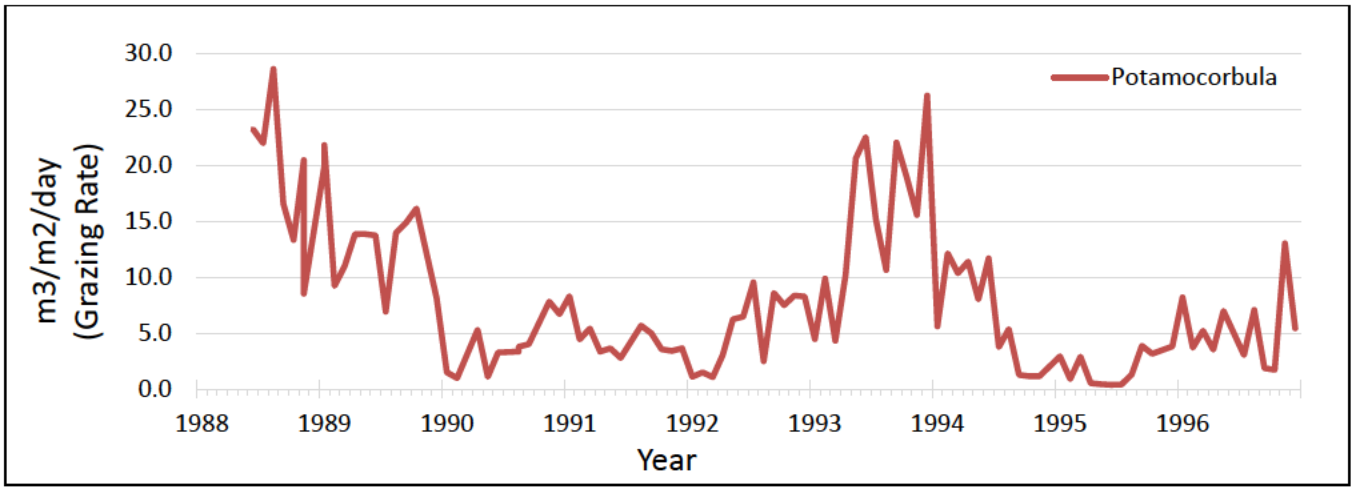

Figure 50. Graph showing grazing rate at station 8.1 from 1988–1996. For station locations refer to table 1.

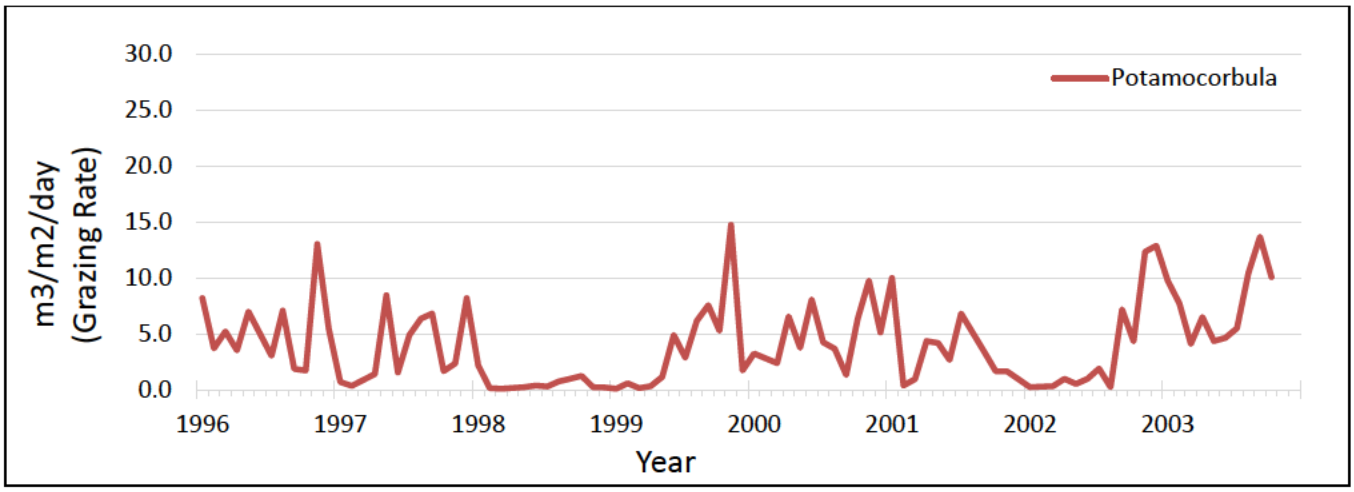

Figure 51. Graph showing grazing rate at station 8.1 from 1996–2003. For station locations refer to table 1.

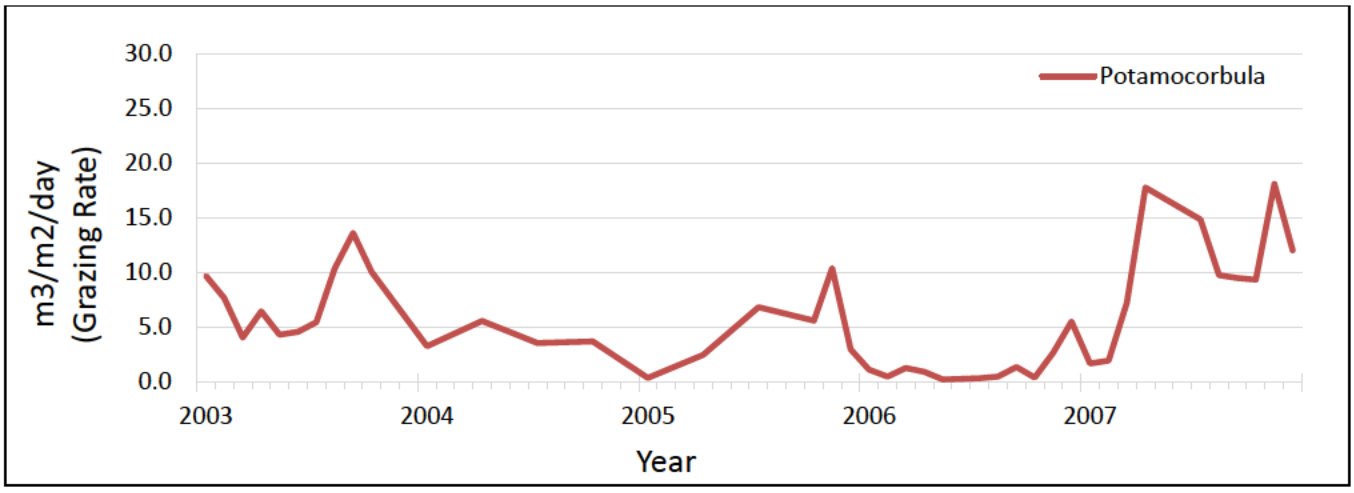

Figure 52. Graph showing grazing rate at station 8.1 from 2003–2007. For station locations refer to table 1.

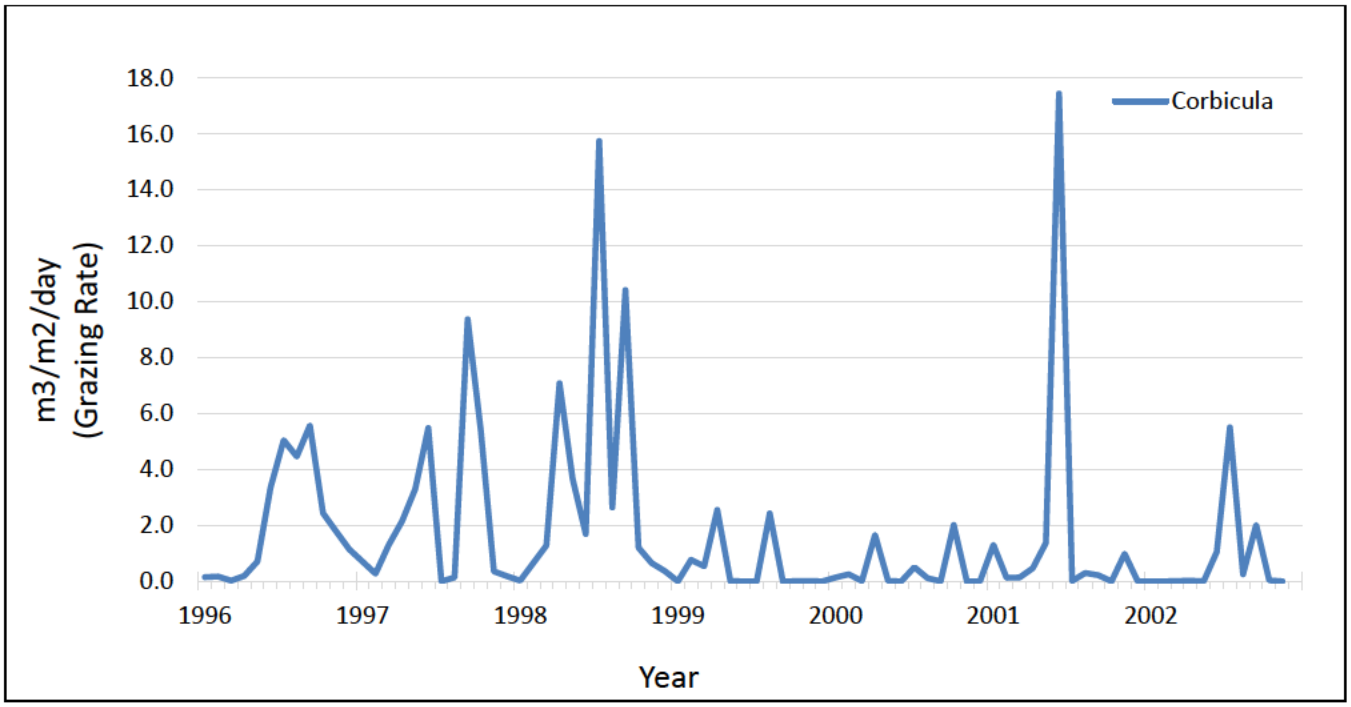

Figure 53. Graph showing grazing rate at station C9 from 1996–2002. For station locations refer to table 1.

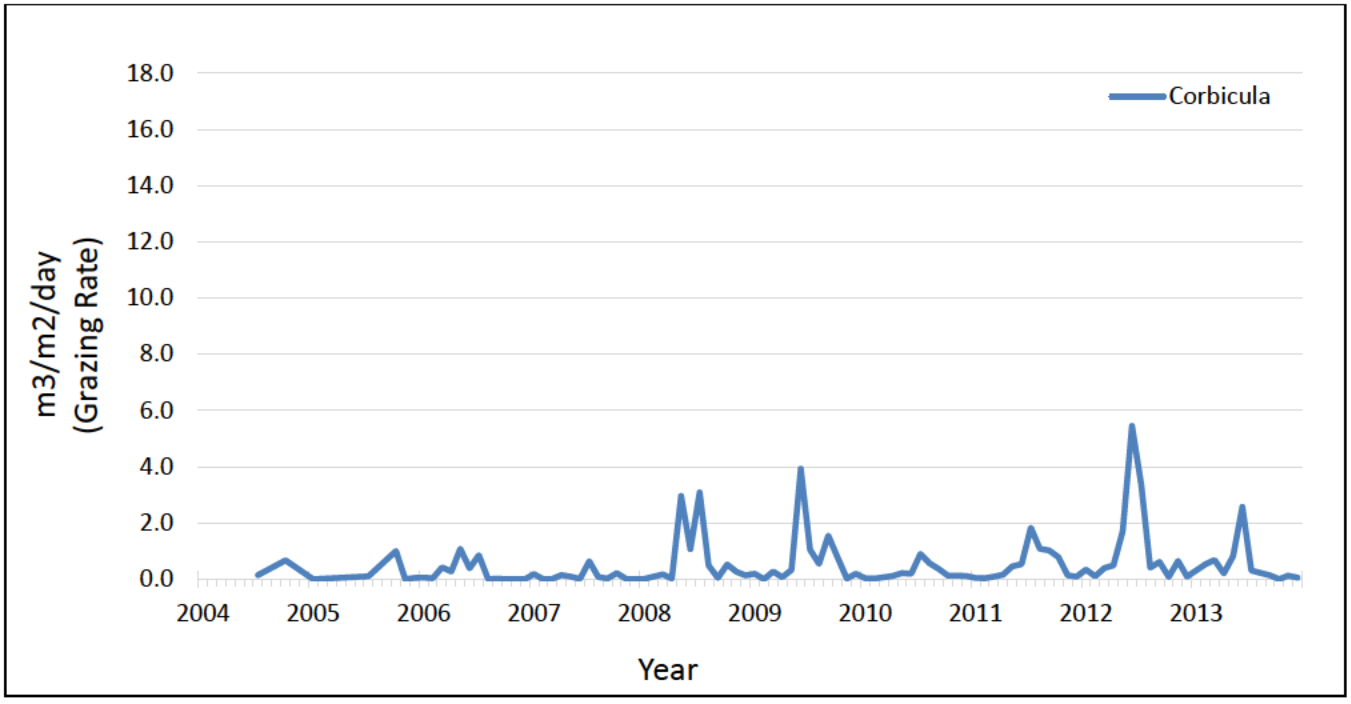

Figure 54. Graph showing grazing rate at station C9 from 2004–2013. For station locations refer to table 1.

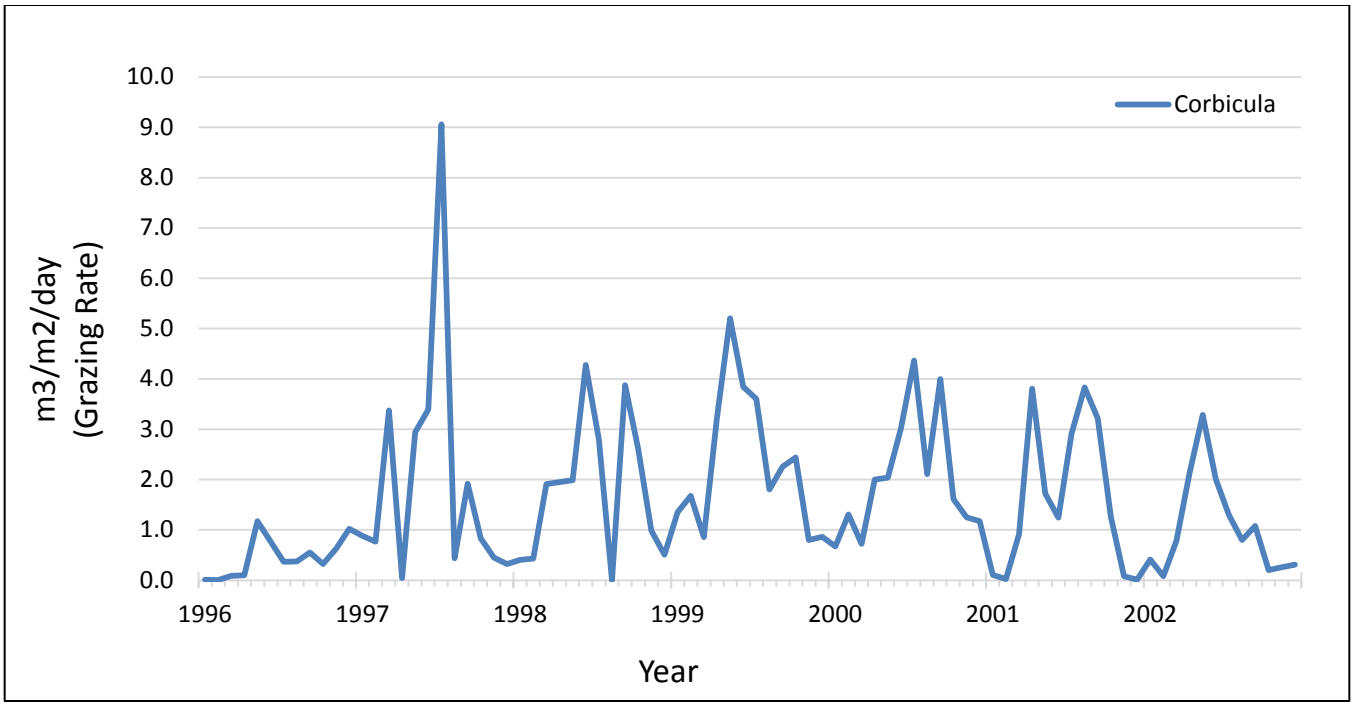

Figure 55. Graph showing grazing rate at station D16 from 1996–2002. For station locations refer to table 1.

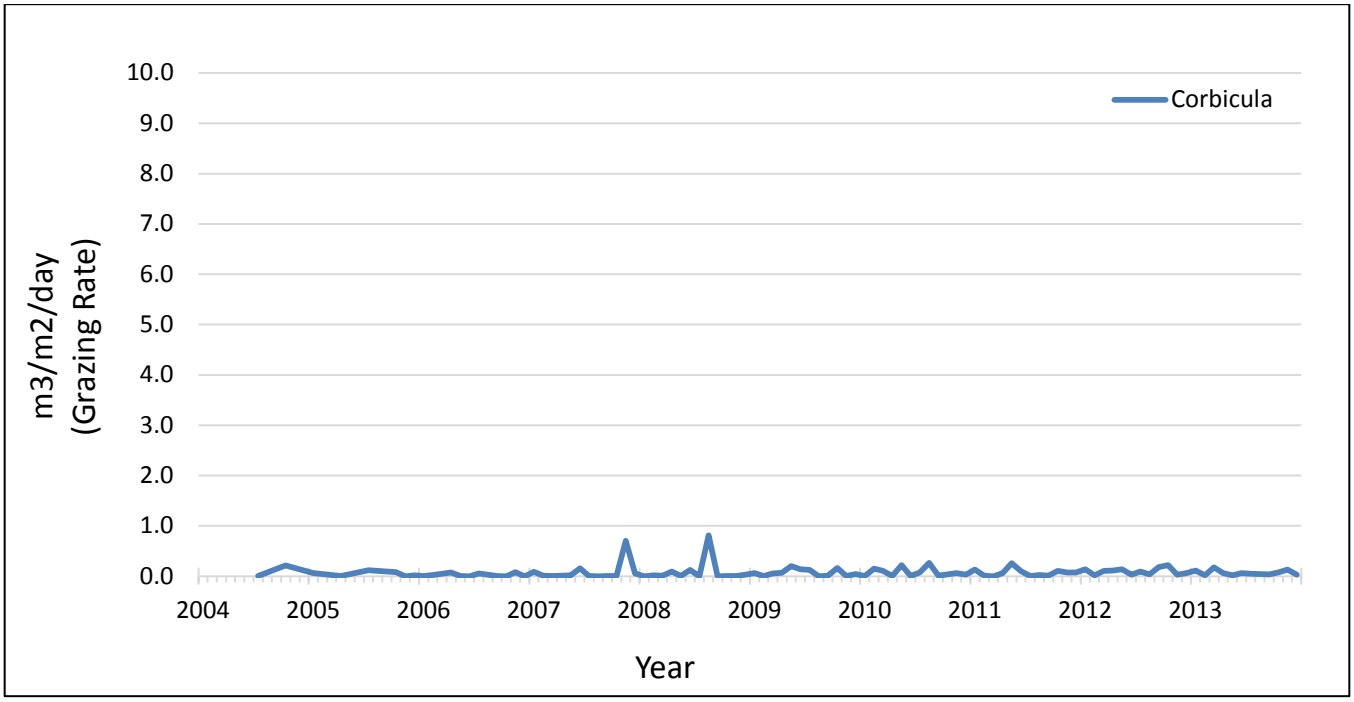

Figure 56. Graph showing grazing rate at station D16 from 2004–2013. For station locations refer to table 1.

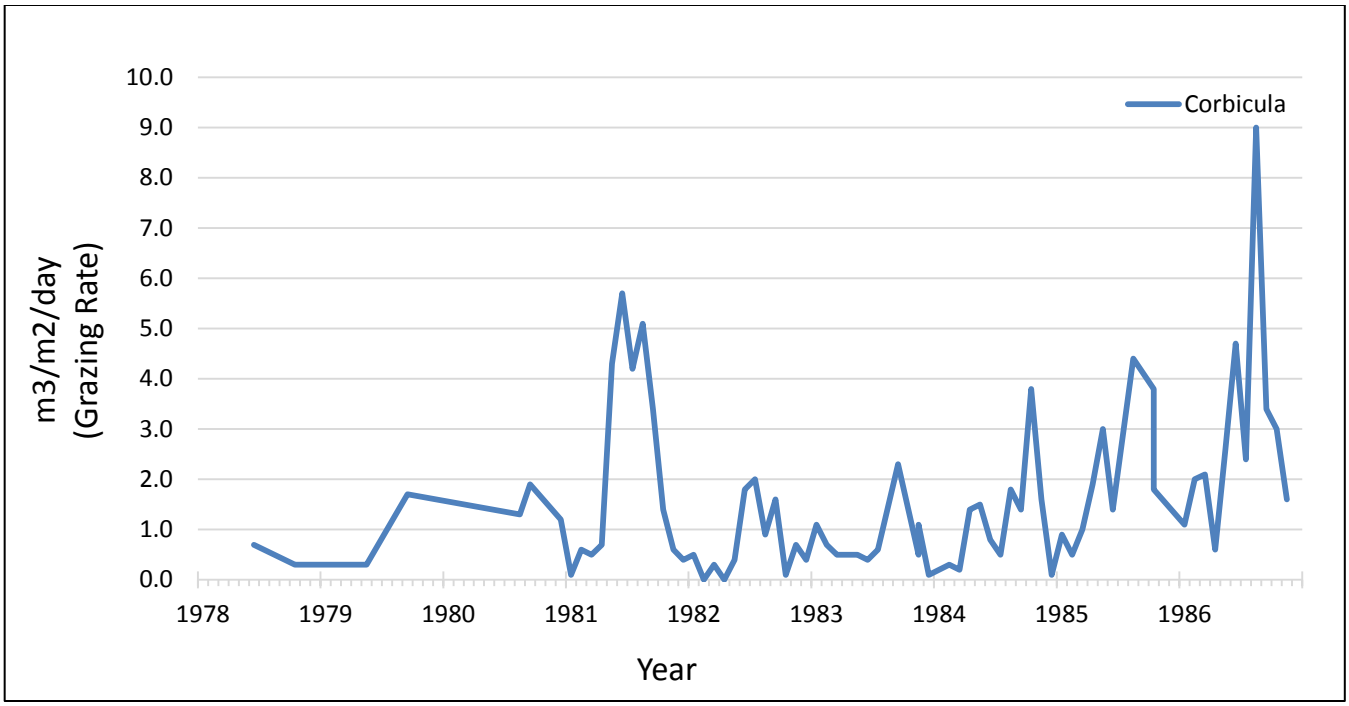

Figure 57. Graph showing grazing rate at station D19C from 1978–1986. For station locations refer to table 1.

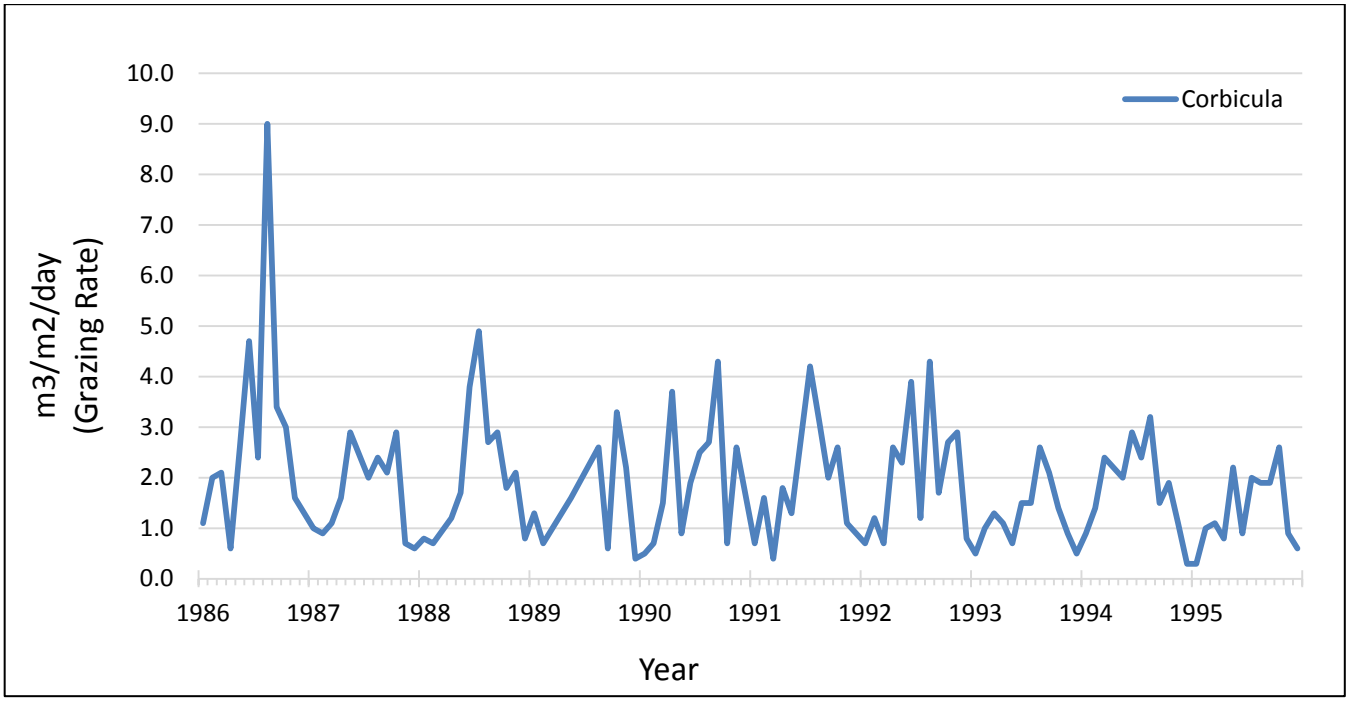

Figure 58. Graph showing grazing rate at station D19C from 1986–1995. For station locations refer to table 1.

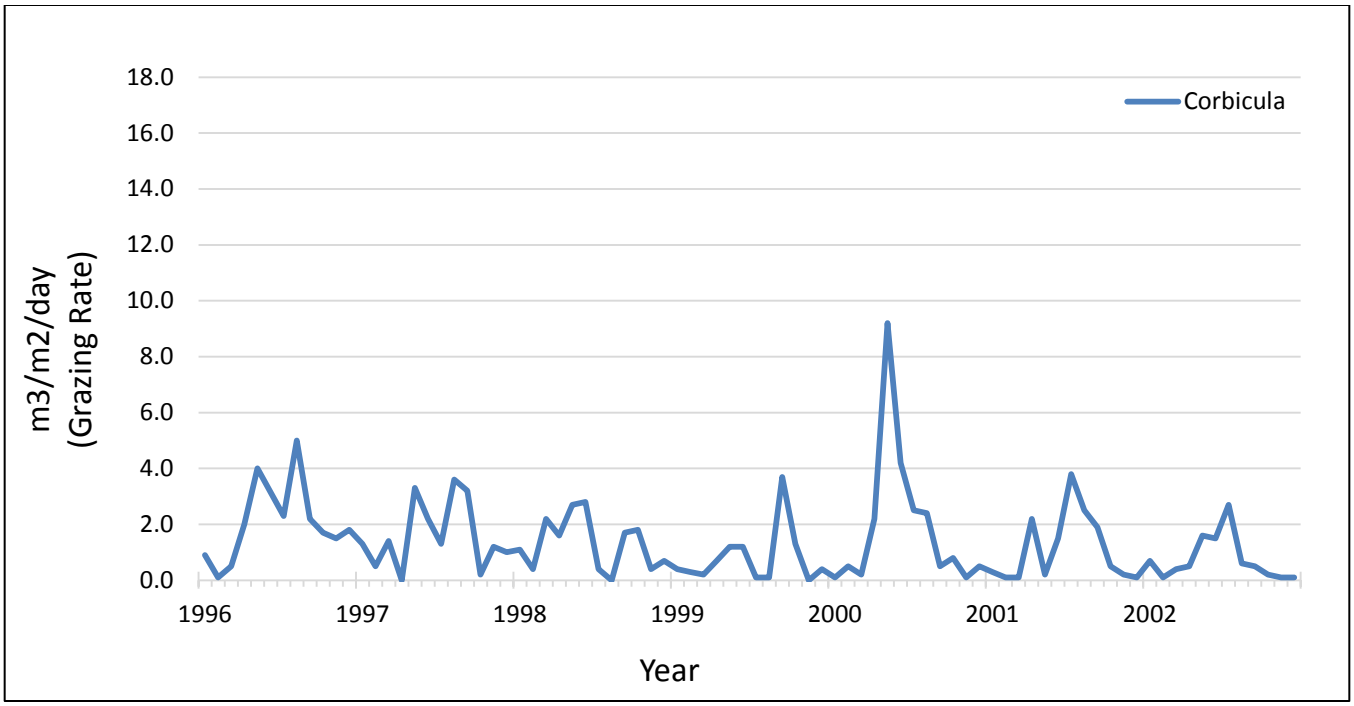

Figure 59. Graph showing grazing rate at station D24 from 1996–2002. For station locations refer to table 1.

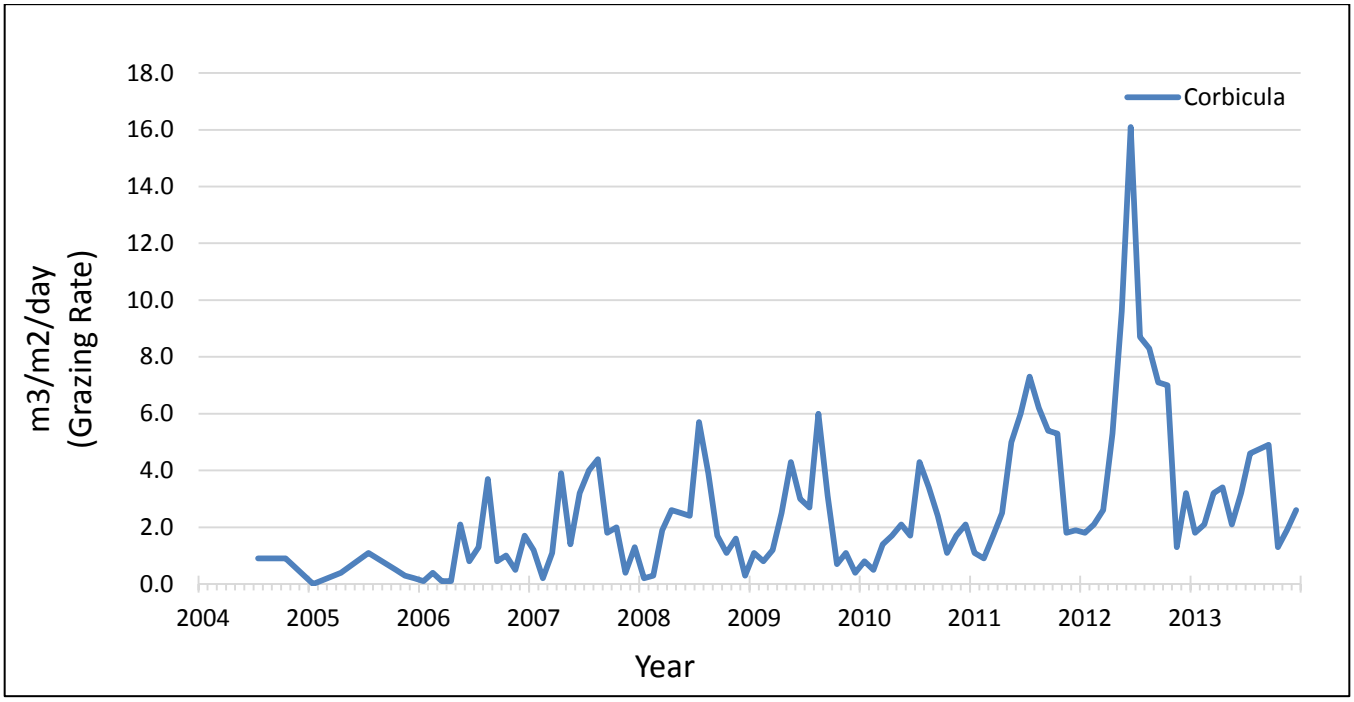

Figure 60. Graph showing grazing rate at station D24 from 2004–2013. For station locations refer to table 1.

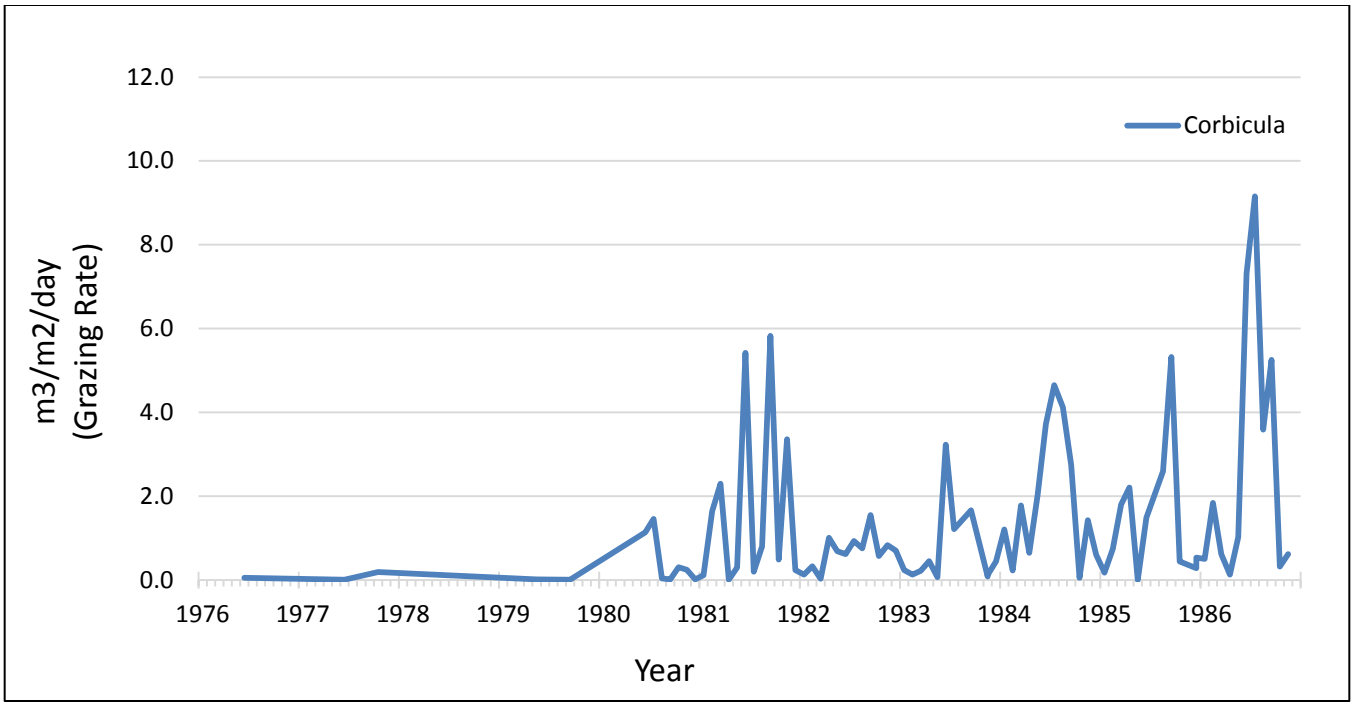

Figure 61. Graph showing grazing rate at station D28 from 1976–1986. For station locations refer to table 1.

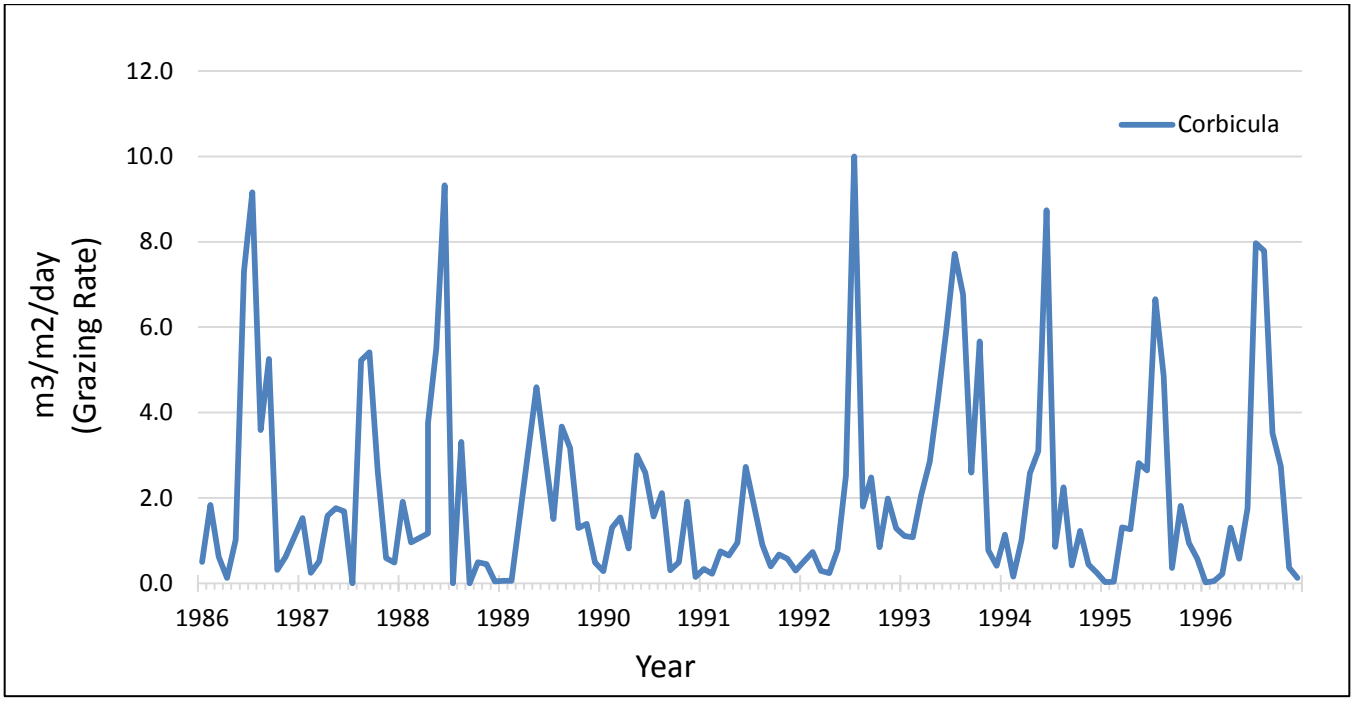

Figure 62. Graph showing grazing rate at station D28 from 1986–1996. For station locations refer to table 1.

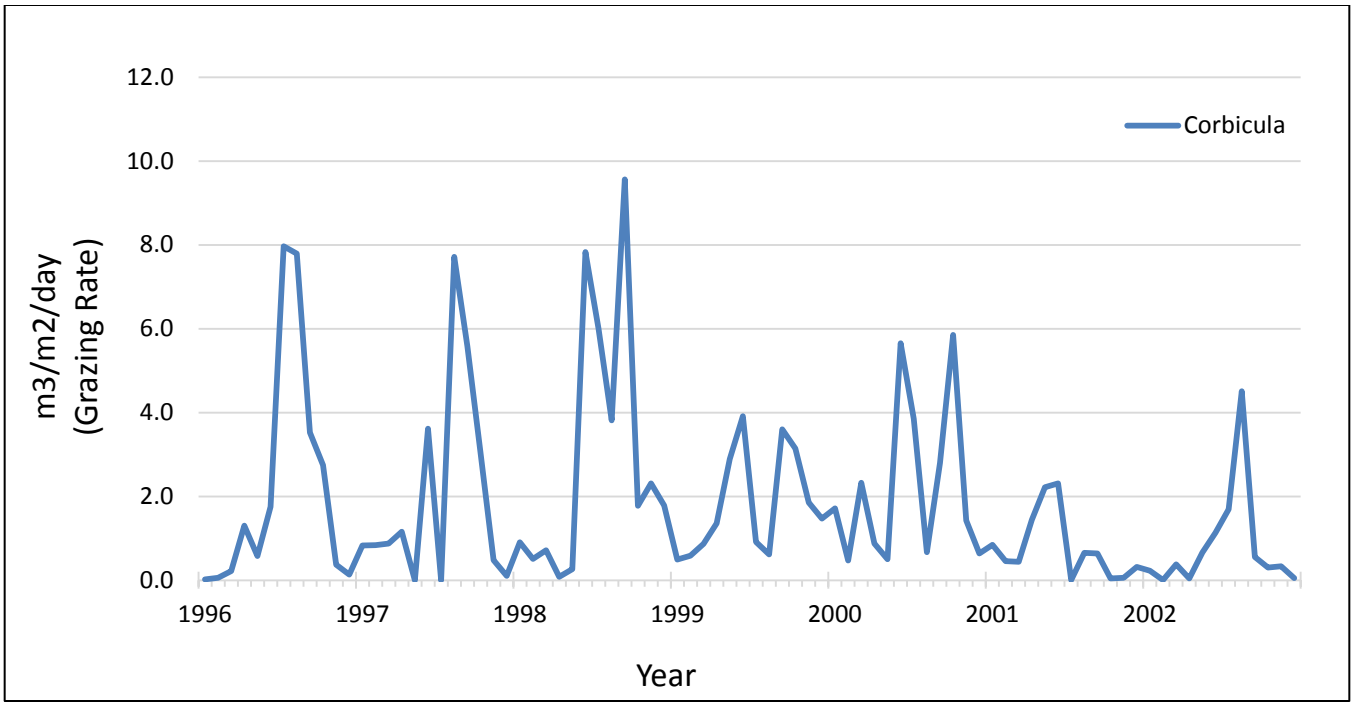

Figure 63. Graph showing grazing rate at station D28 from 1996–2002. For station locations refer to table 1.

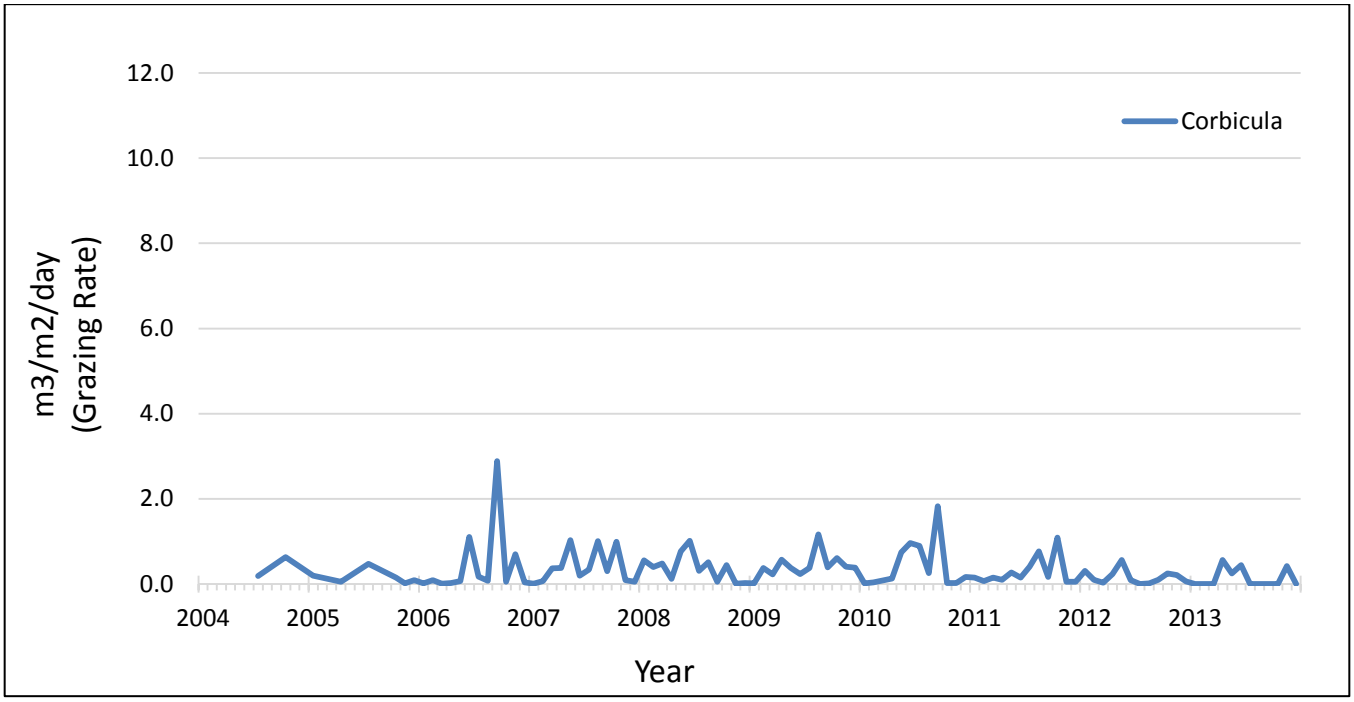

Figure 64. Graph showing grazing rate at station D28 from 2004–2013. For station locations refer to table 1.

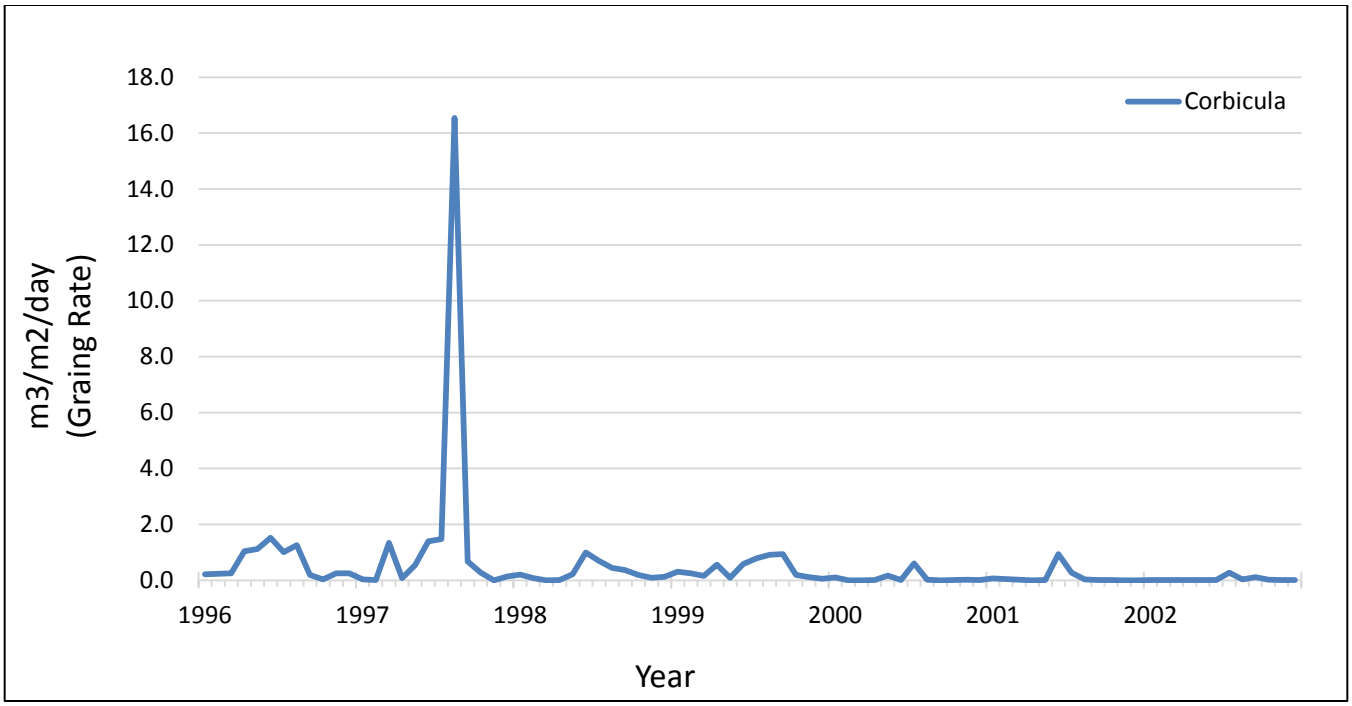

Figure 65. Graph showing grazing rate at station P8 from 1996–2002. For station locations refer to table 1.

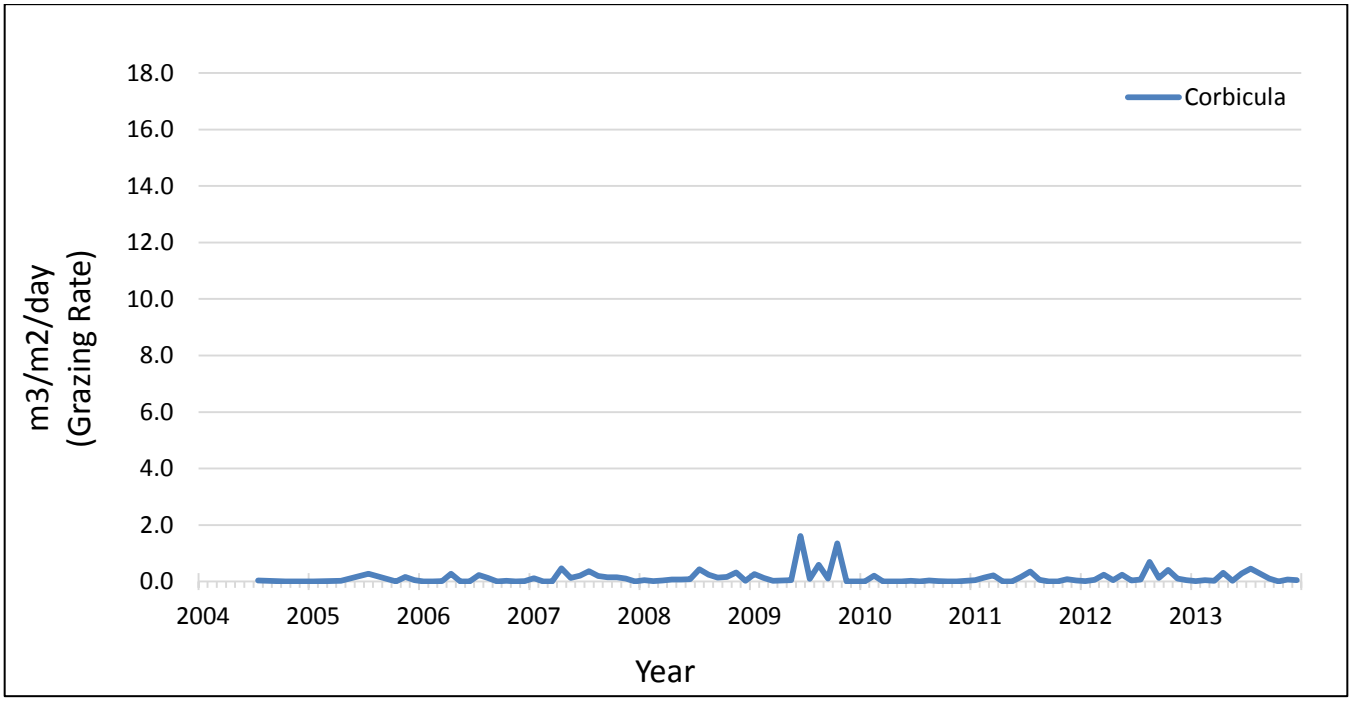

Figure 66. Graph showing grazing rate at station P8 from 2004–2013. For station locations refer to table 1.

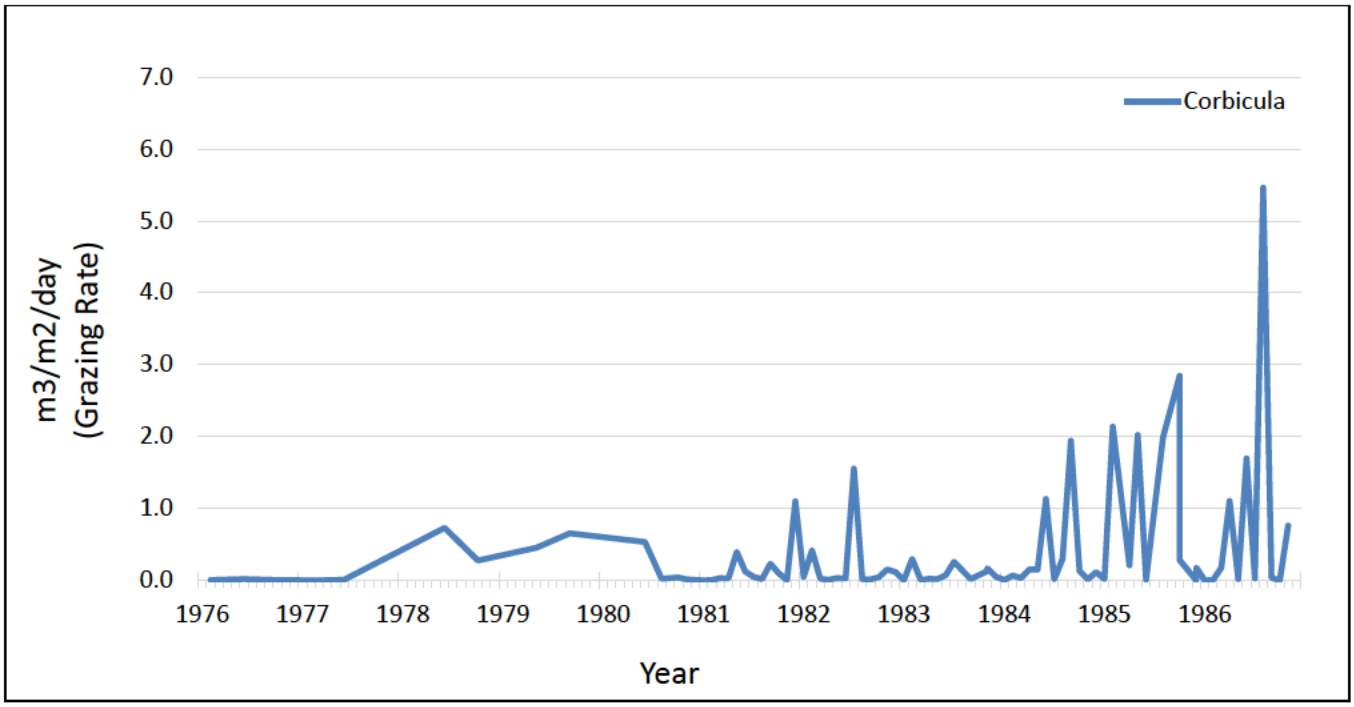

Figure 67. Graph showing grazing rate at station D4C from 1976–1986. For station locations refer to table 1.

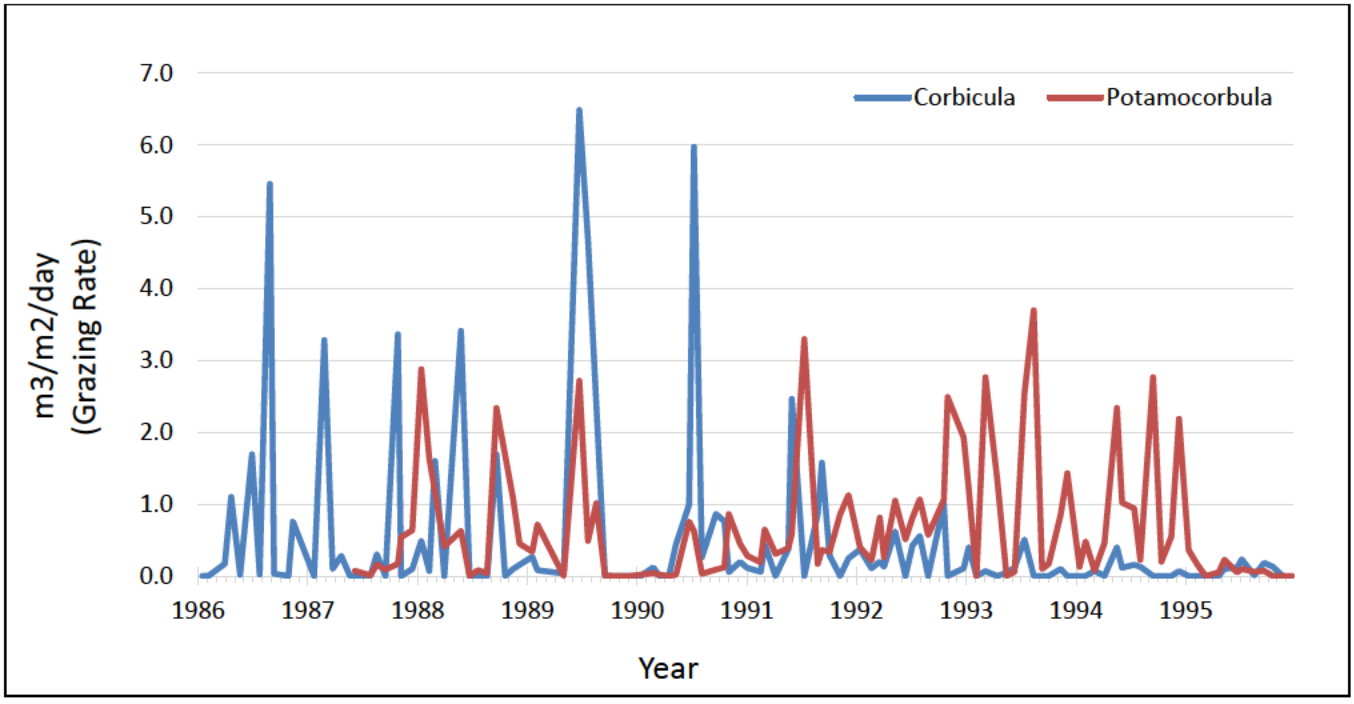

Figure 68. Graph showing grazing rate at station D4C from 1986–1995. For station locations refer to table 1.

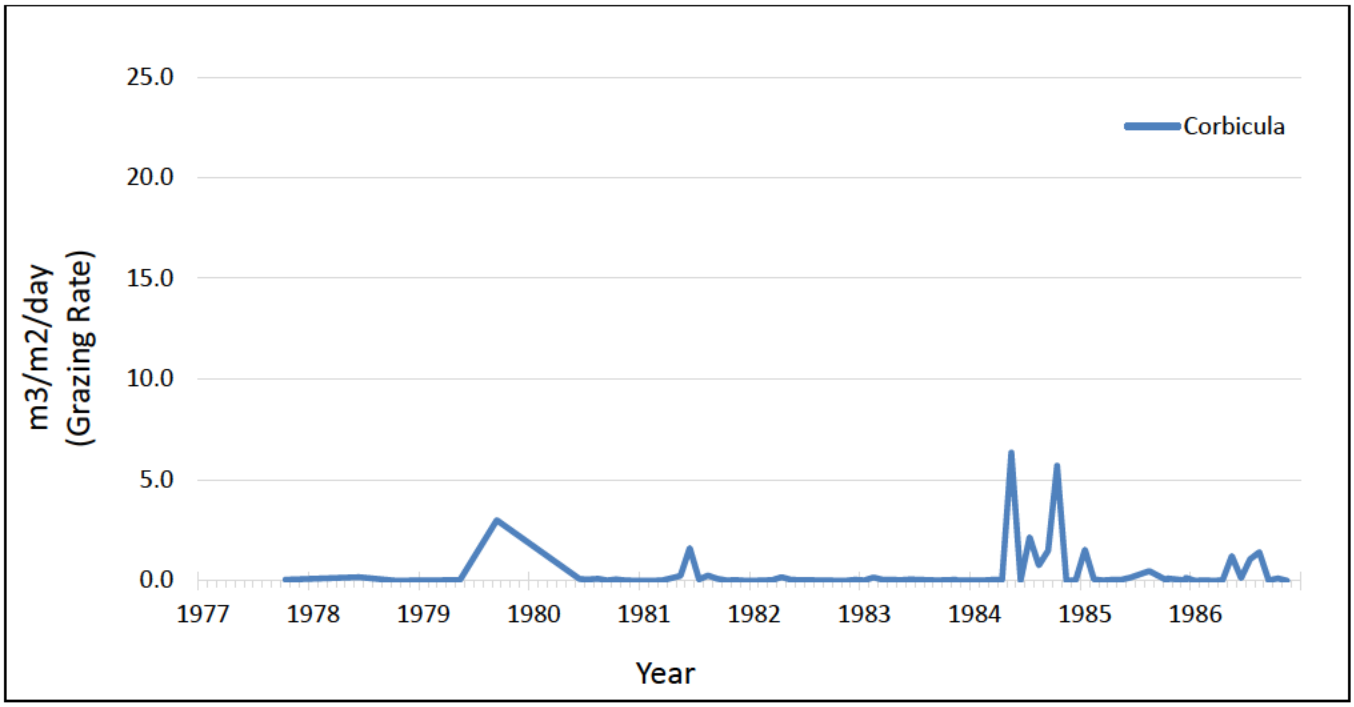

Figure 69. Graph showing grazing rate at station D4L from 1977–1986. For station locations refer to table 1.

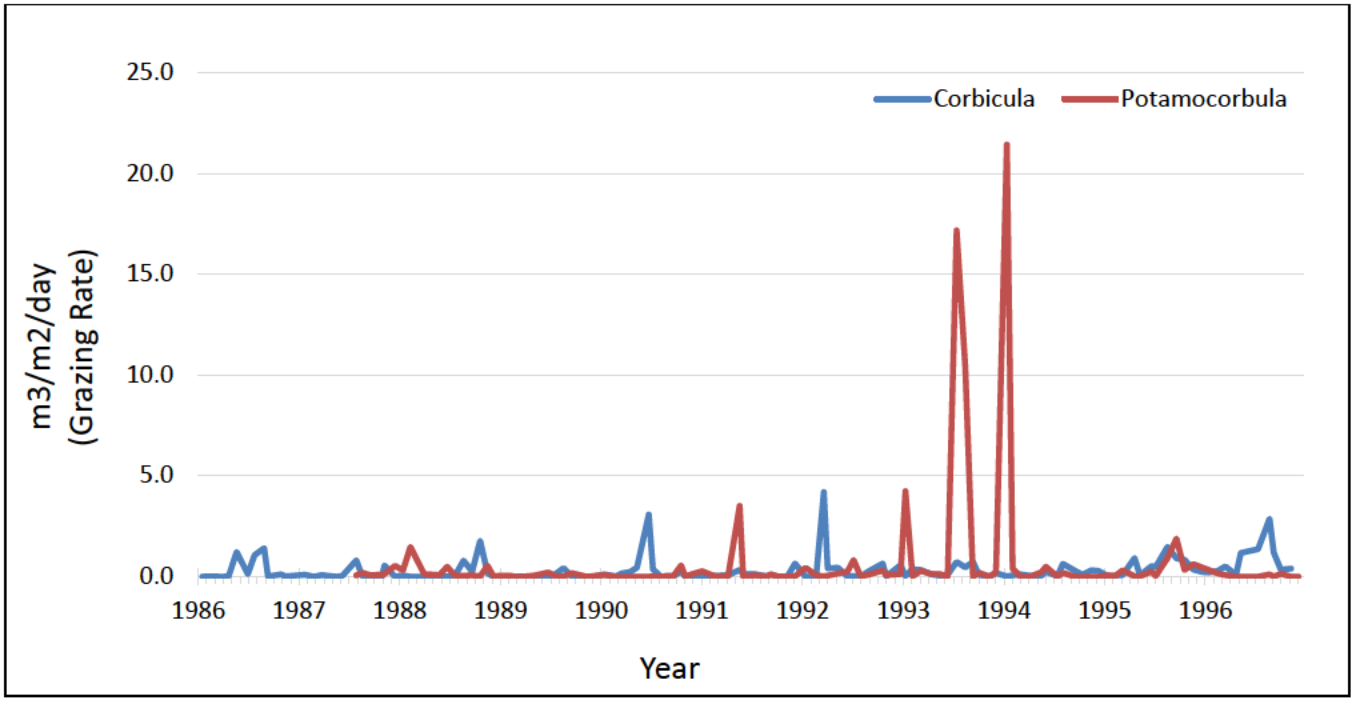

Figure 70. Graph showing grazing rate at station D4L from 1986–1996. For station locations refer to table 1.

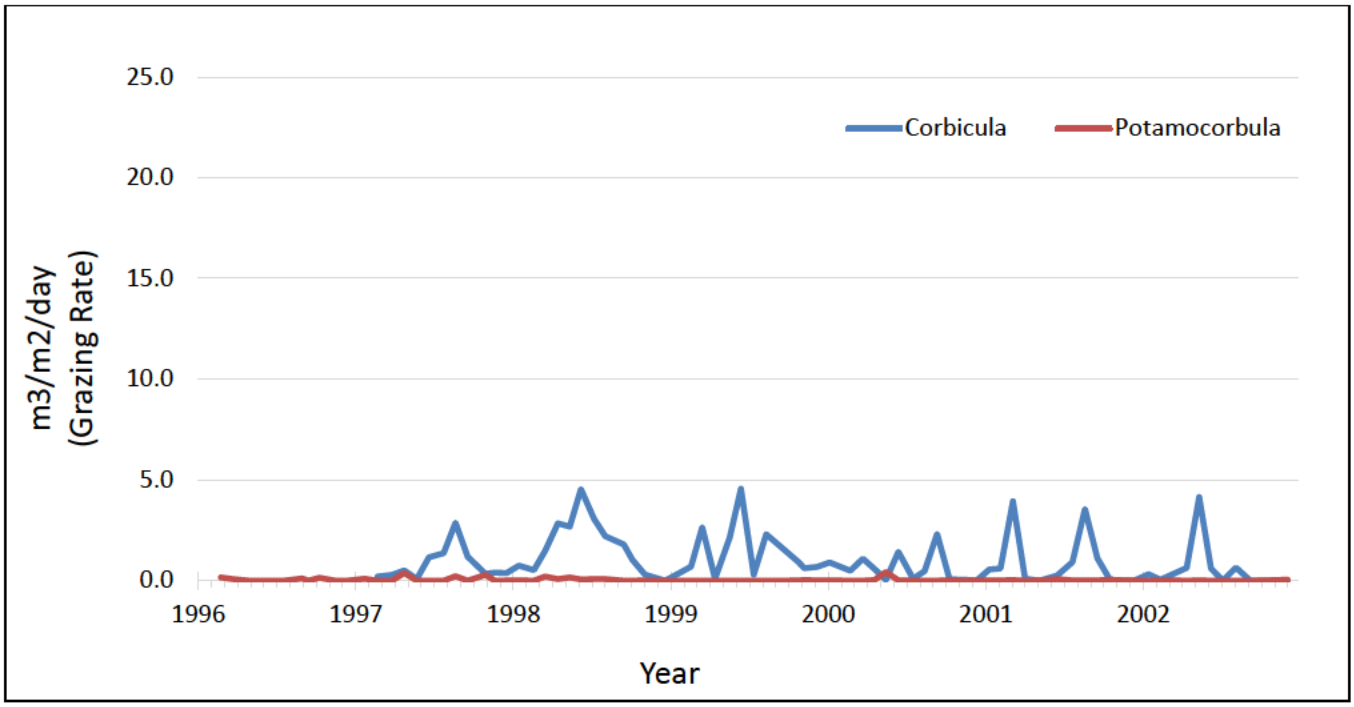

Figure 71. Graph showing grazing rate at station D4L from 1996–2002. For station locations refer to table 1.

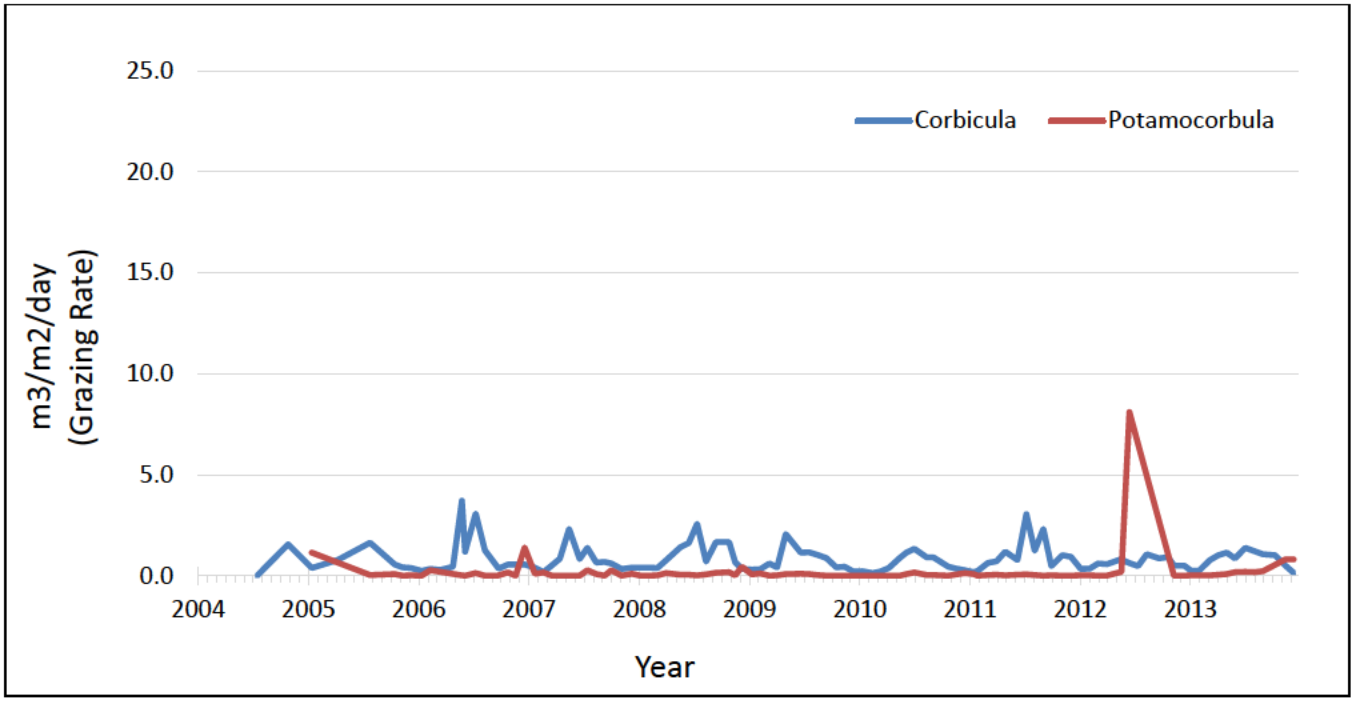

Figure 72. Graph showing grazing rate at station D4L from 2004–2013. For station locations refer to table 1.

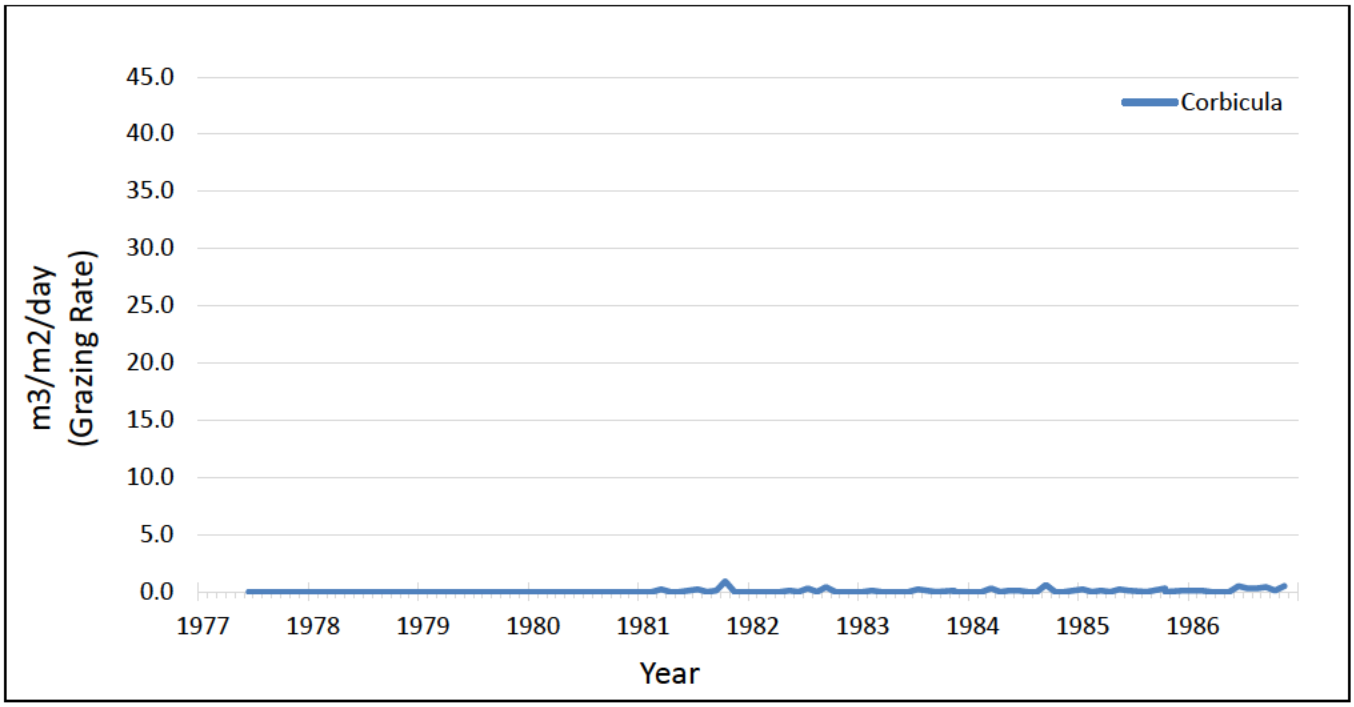

Figure 73. Graph showing grazing rate at station D4R from 1977–1986. For station locations refer to table 1.

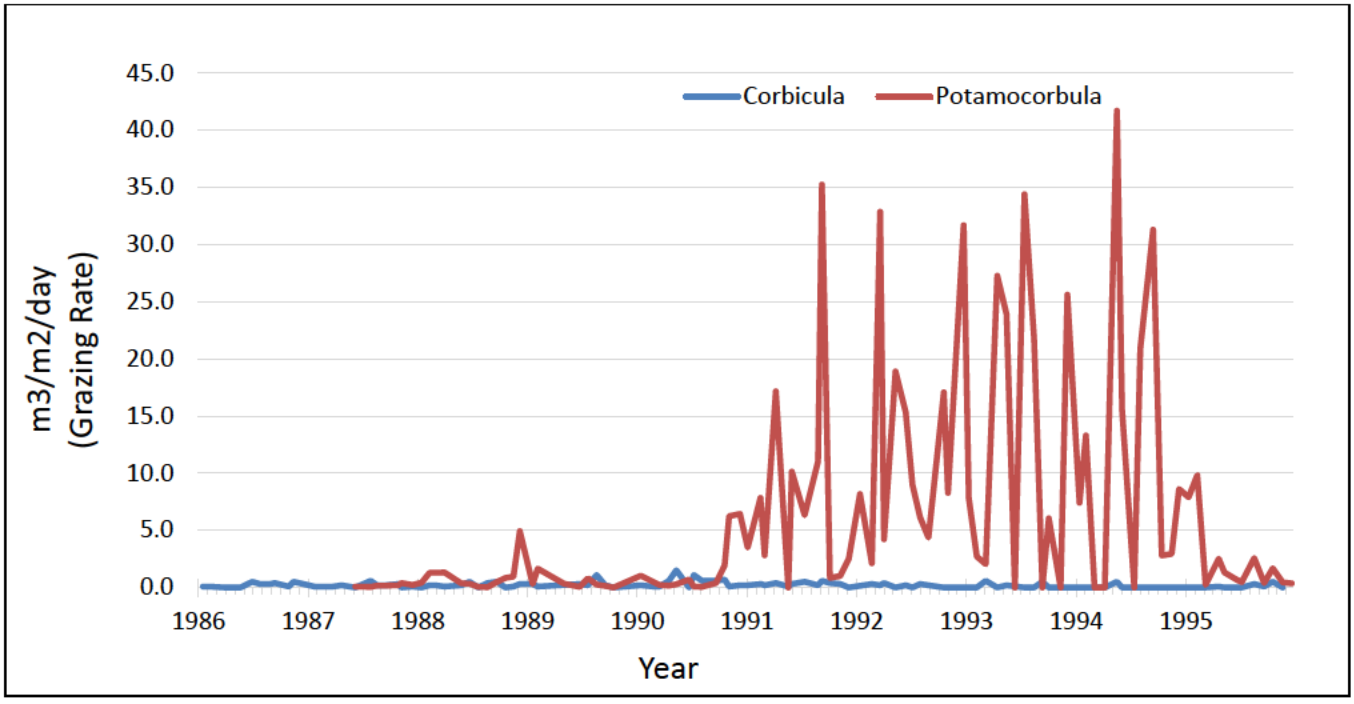

Figure 74. Graph showing grazing rate at station D4R from 1986–1995. For station locations refer to table 1.

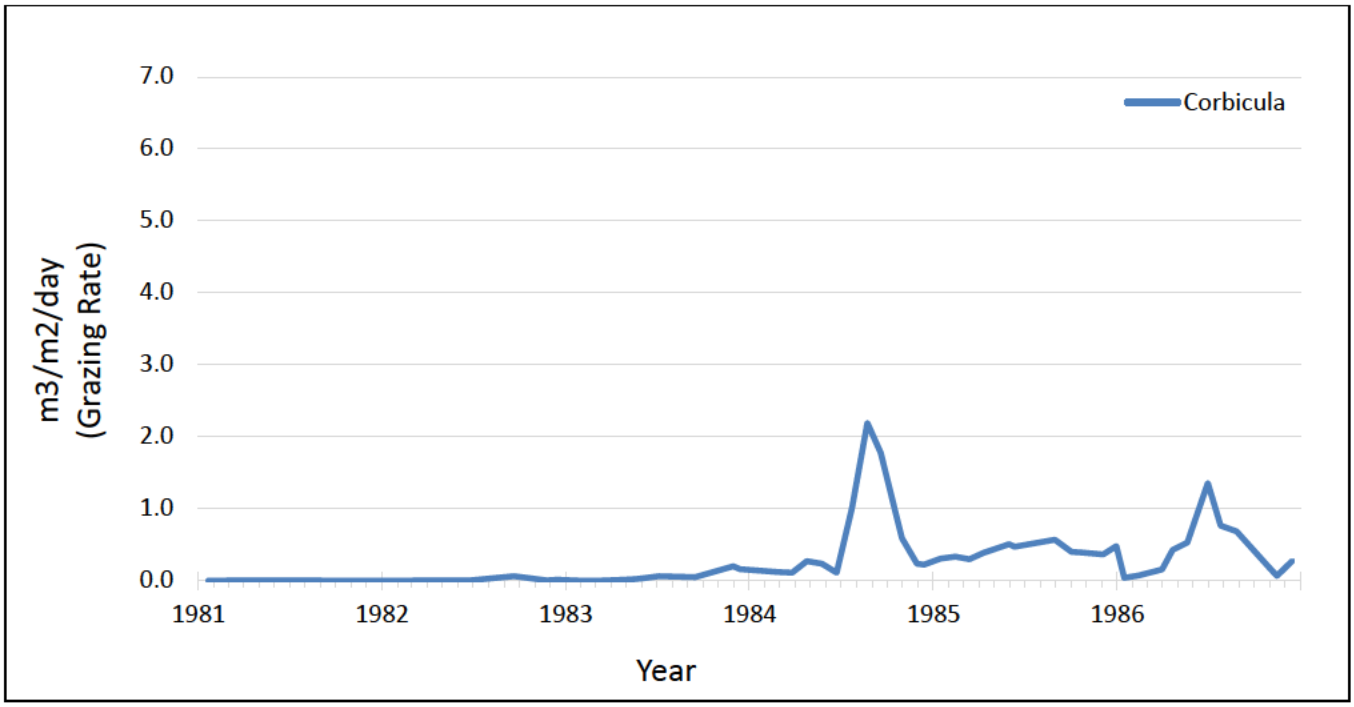

Figure 75. Graph showing grazing rate at station D7 from 1981–1986. For station locations refer to table 1.

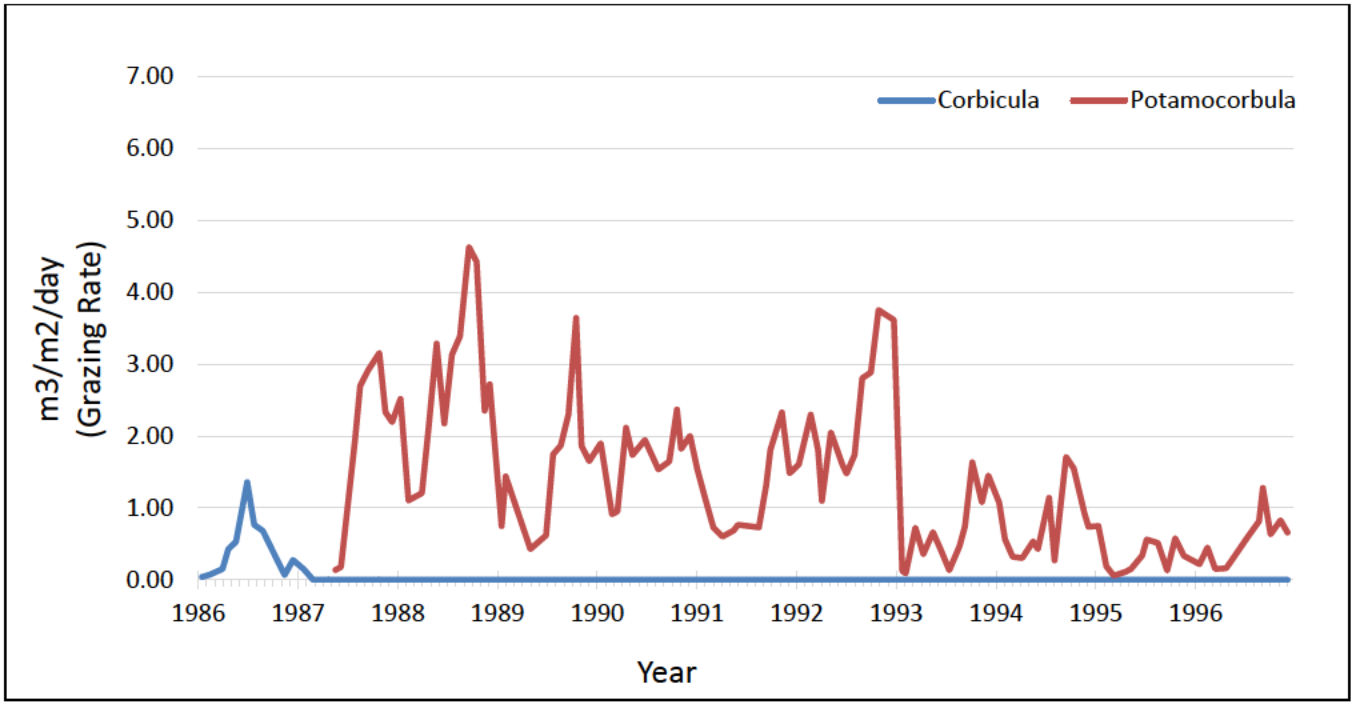

Figure 76. Graph showing grazing rate at station D7 from 1986–1996. For station locations refer to table 1.

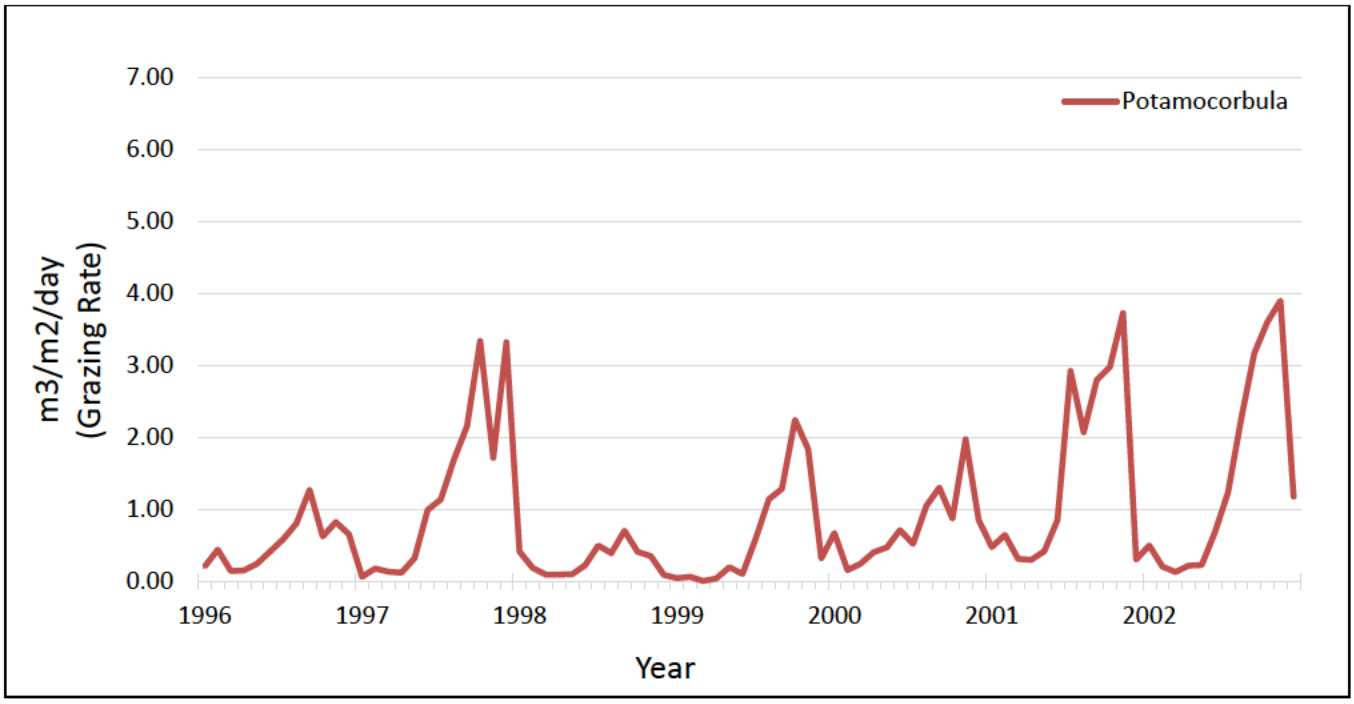

Figure 77. Graph showing grazing rate at station D7 from 1996–2003. For station locations refer to table 1.

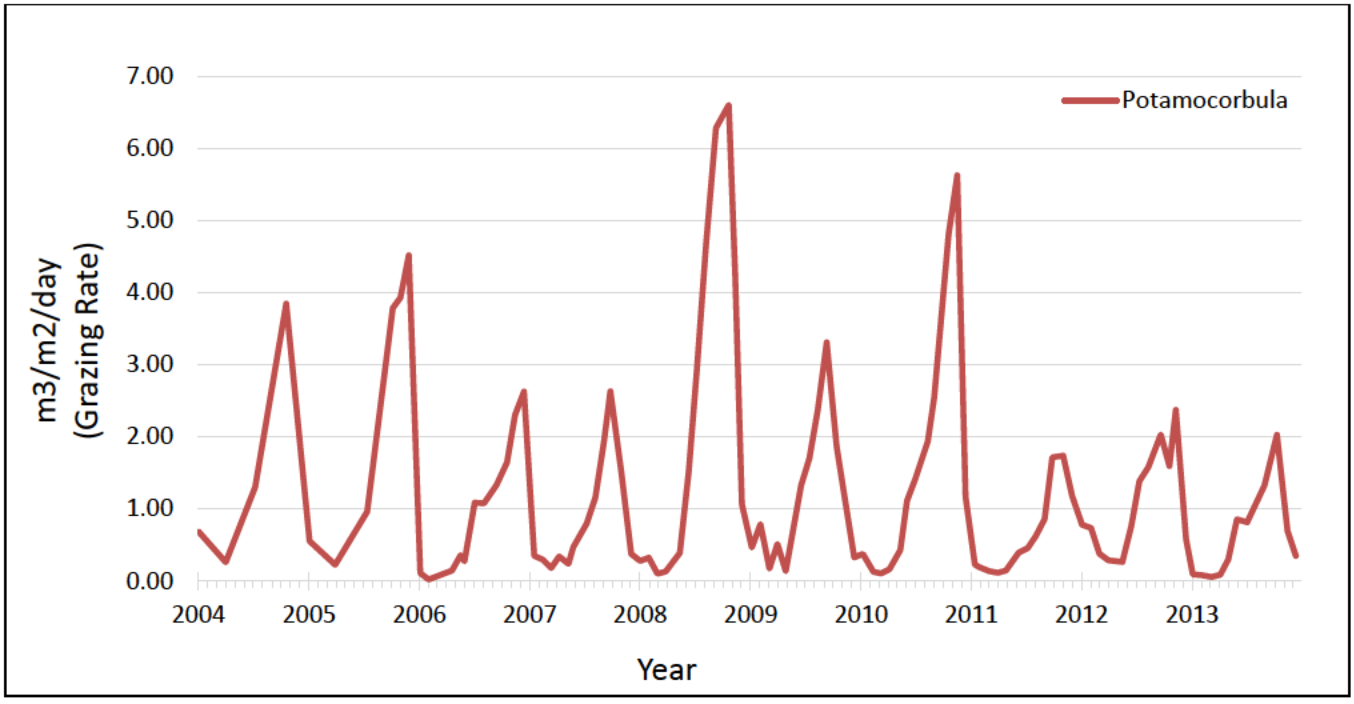

Figure 78. Graph showing grazing rate at station D7 from 2003–2013. For station locations refer to table 1.

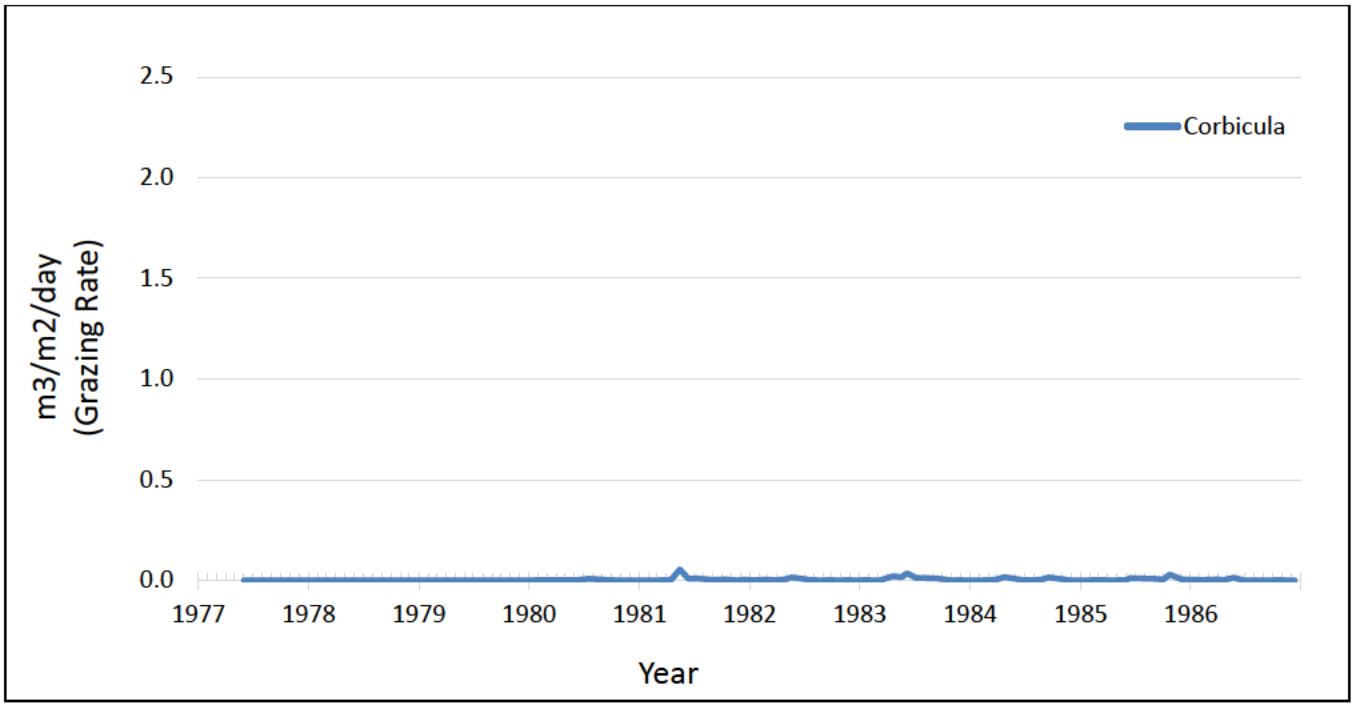

Figure 79. Graph showing grazing rate at station D11 from 1977–1986. For station locations refer to table 1.

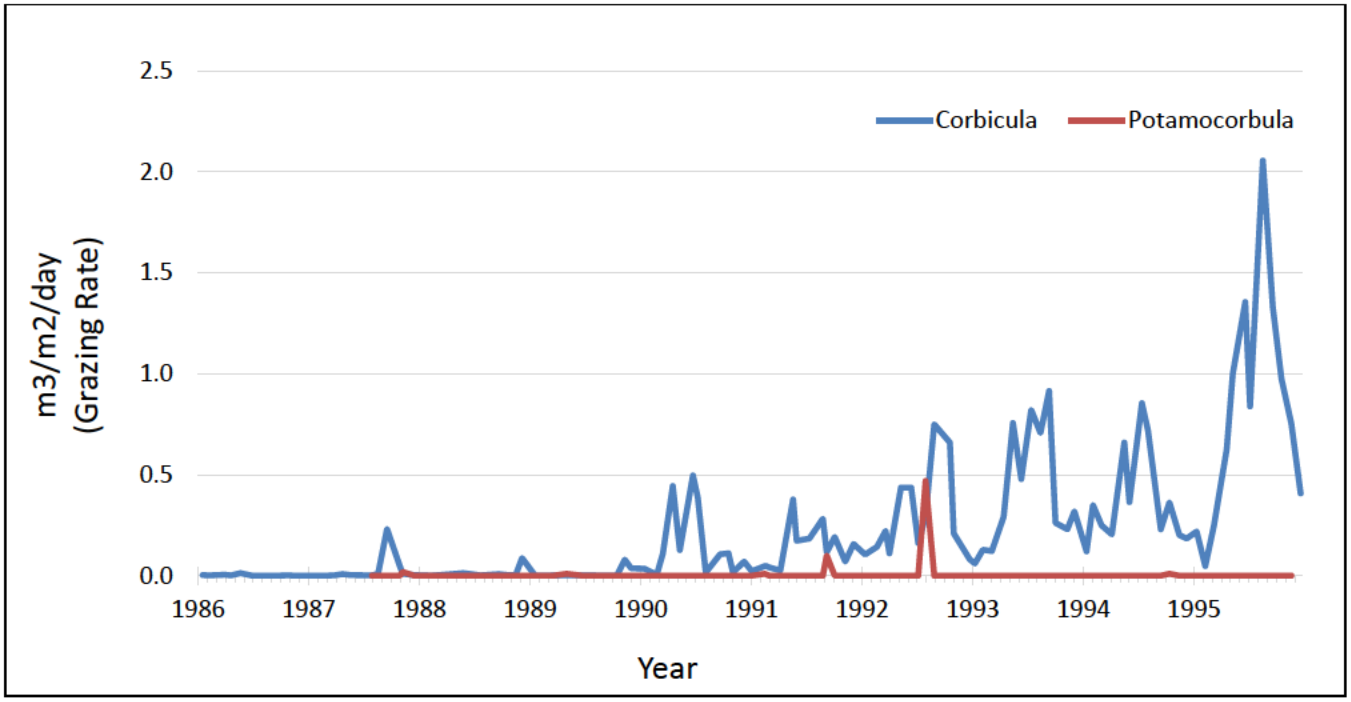

Figure 80. Graph showing grazing rate at station D11 from 1986–1995. For station locations refer to table 1.

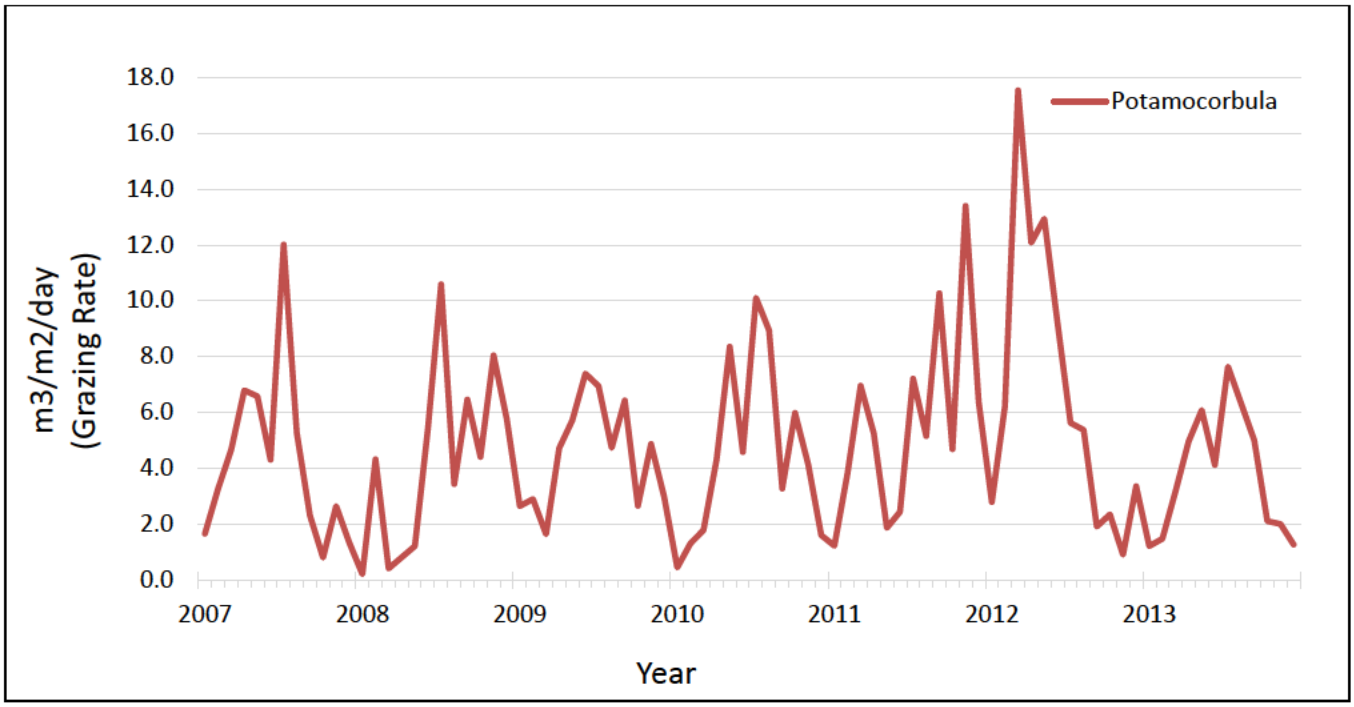

Figure 81. Graph showing grazing rate at station D6 from 2007–2013. For station locations refer to table 1.

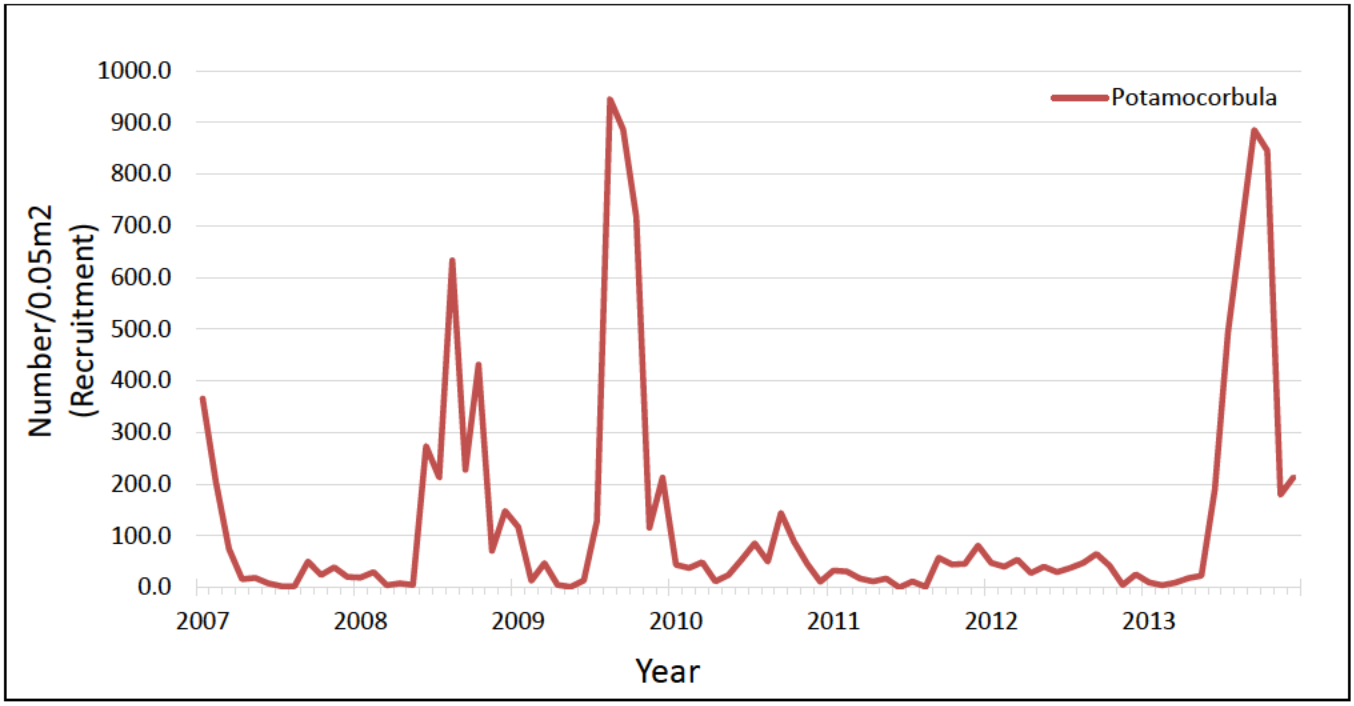

Figure 82. Graph showing recruitment at station D6 from 2007–2013. For station locations refer to table 1.

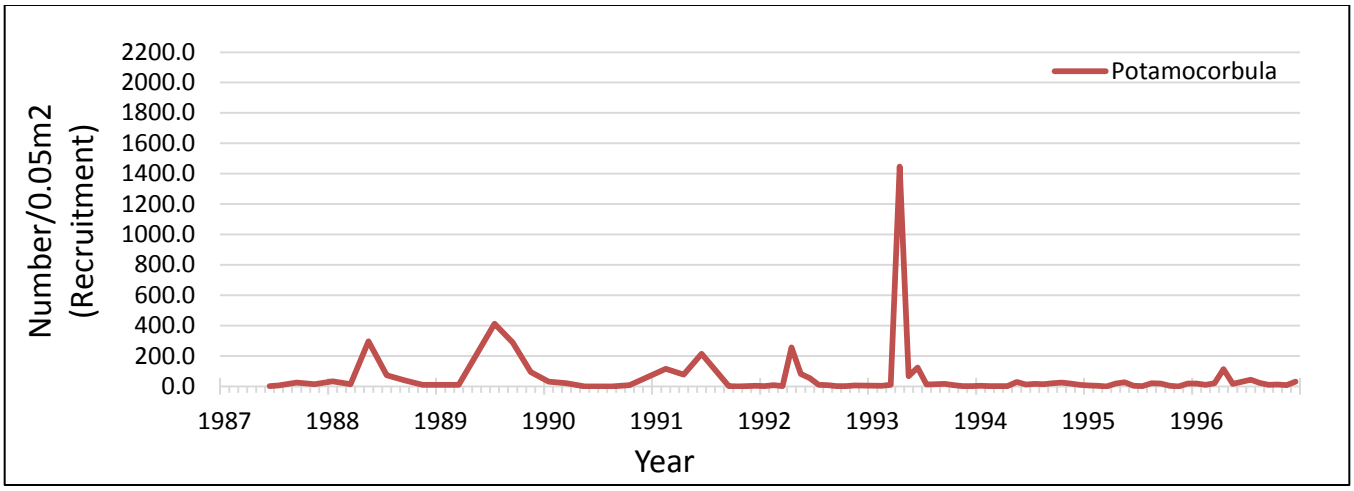

Figure 83. Graph showing recruitment at station D41A from 1987–1996. For station locations refer to table 1.

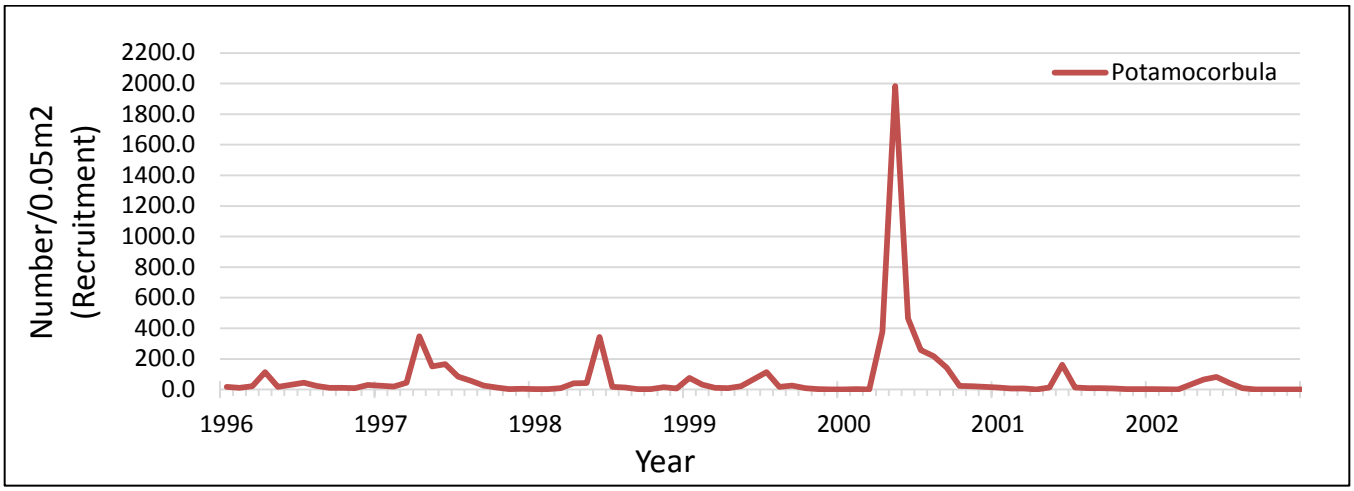

Figure 84. Graph showing recruitment at station D41A from 1996–2003. For station locations refer to table 1.

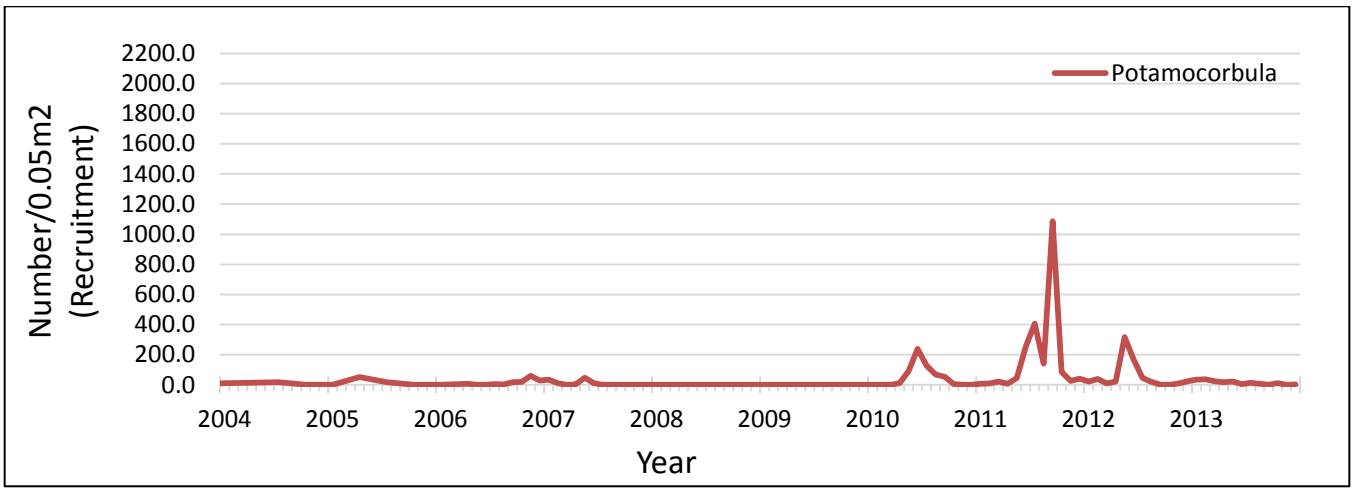

Figure 85. Graph showing recruitment at station D41A from 2003–2013. For station locations refer to table 1.

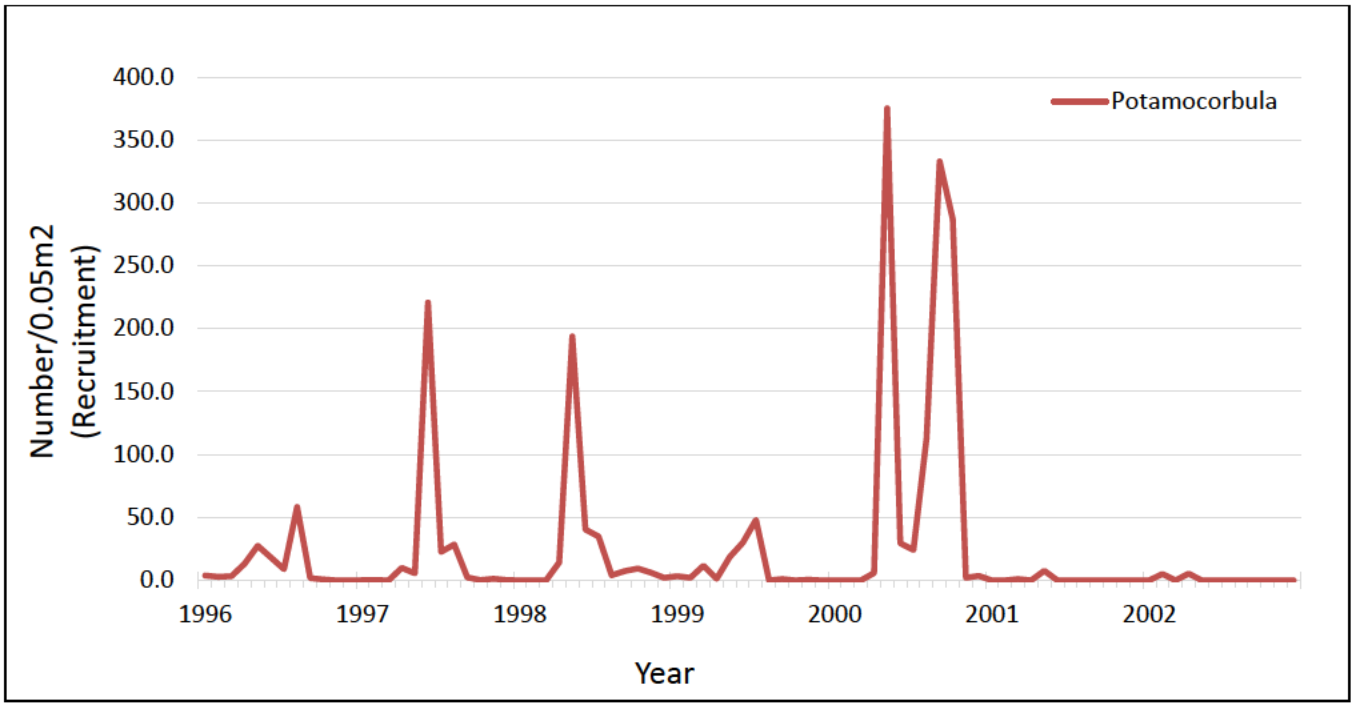

Figure 86. Graph showing recruitment at station D41C from 1996–2002. For station locations refer to table 1.

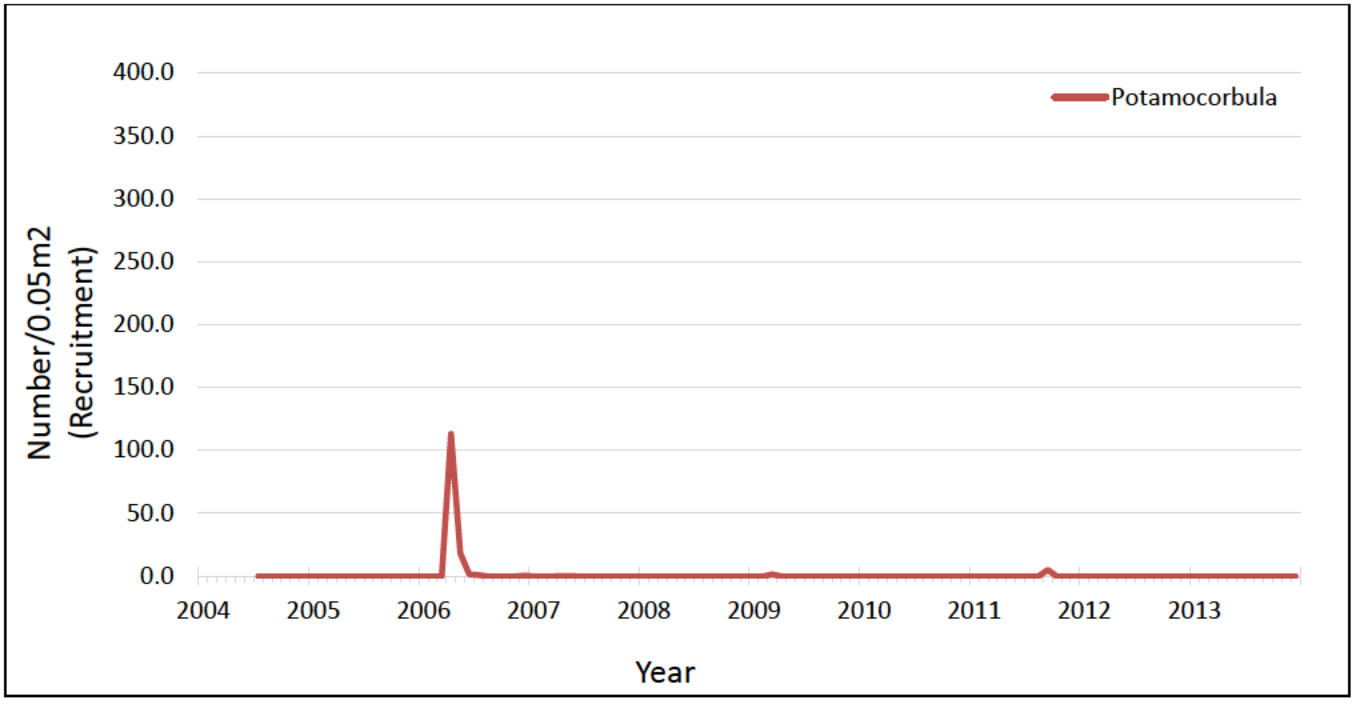

Figure 87. Graph showing recruitment at station D41C from 2004–2013. For station locations refer to table 1.

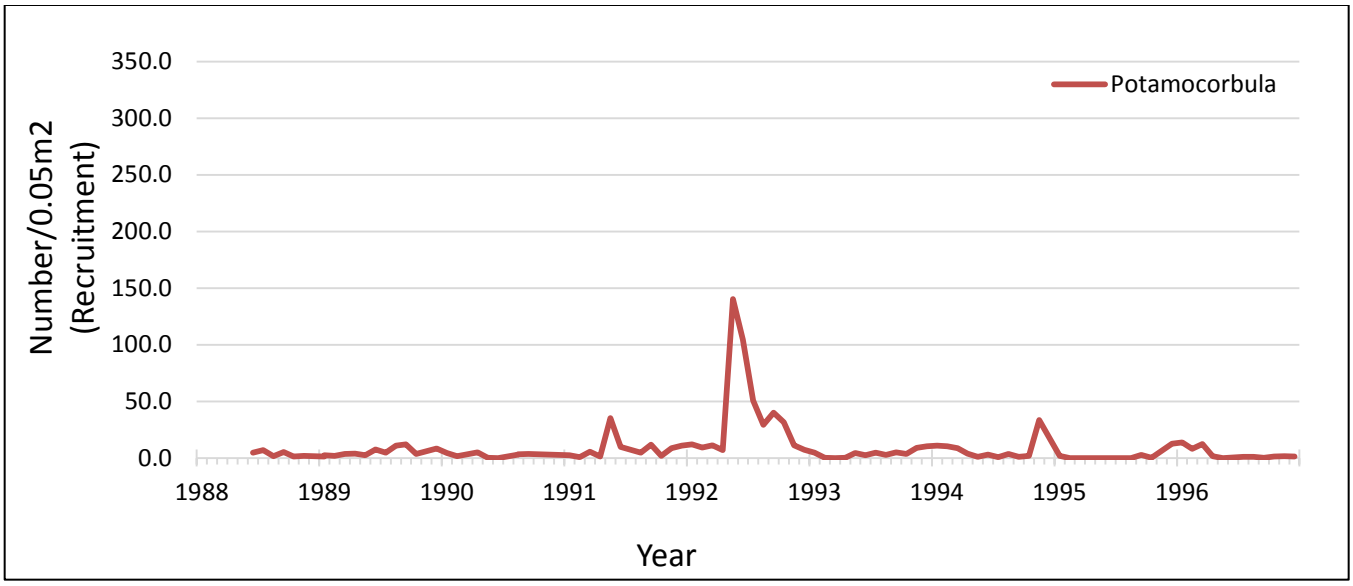

Figure 88. Graph showing recruitment at station 8.1 from 1988–1996. For station locations refer to table 1.

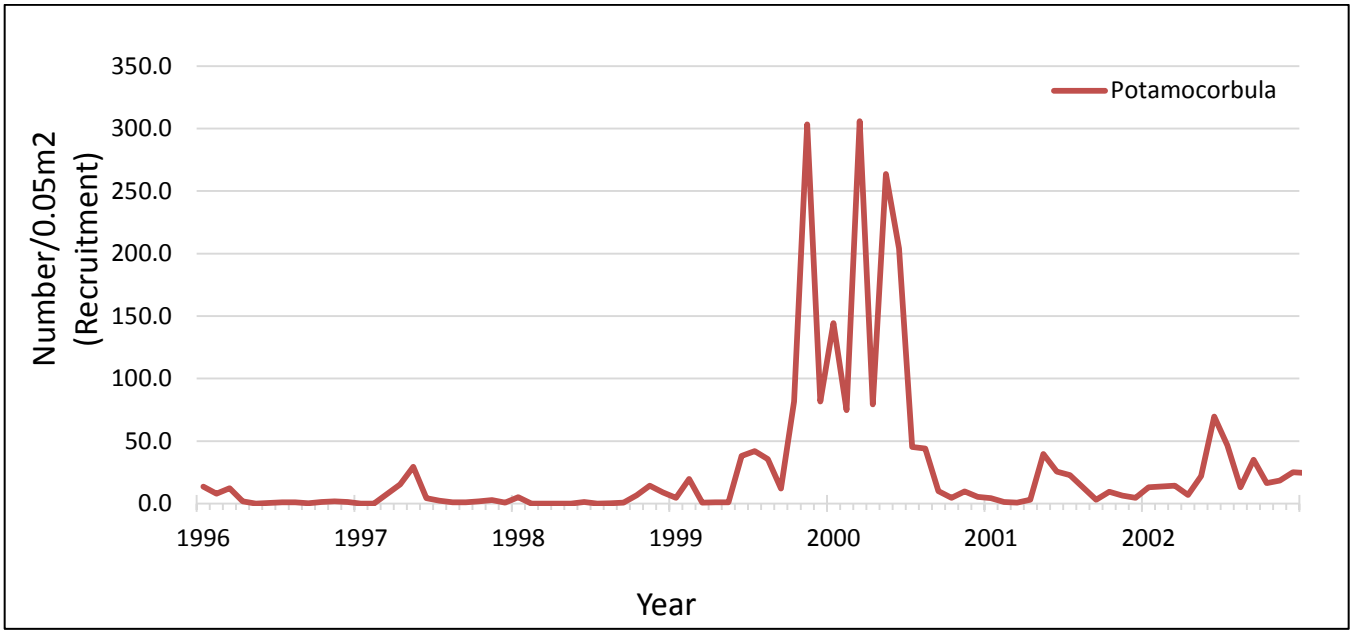

Figure 89. Graph showing recruitment at station 8.1 from 1996–2003 For station locations refer to table 1.

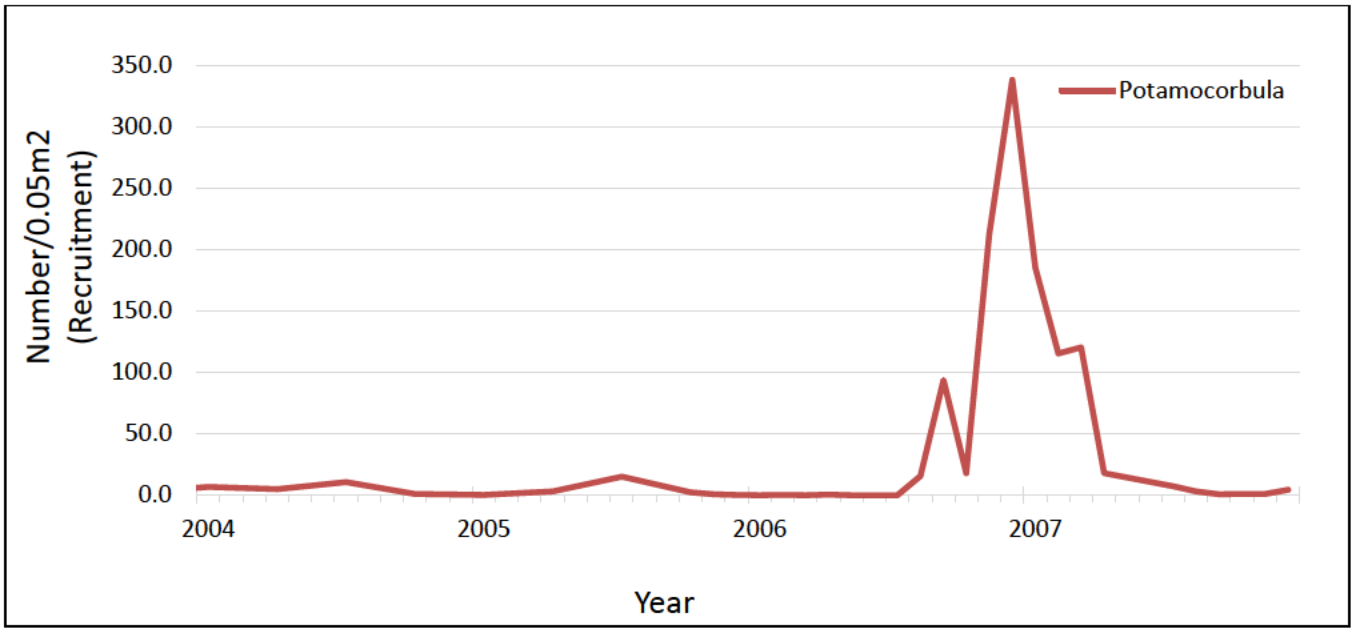

Figure 90. Graph showing recruitment at station 8.1 from 2003–2007. For station locations refer to table 1.

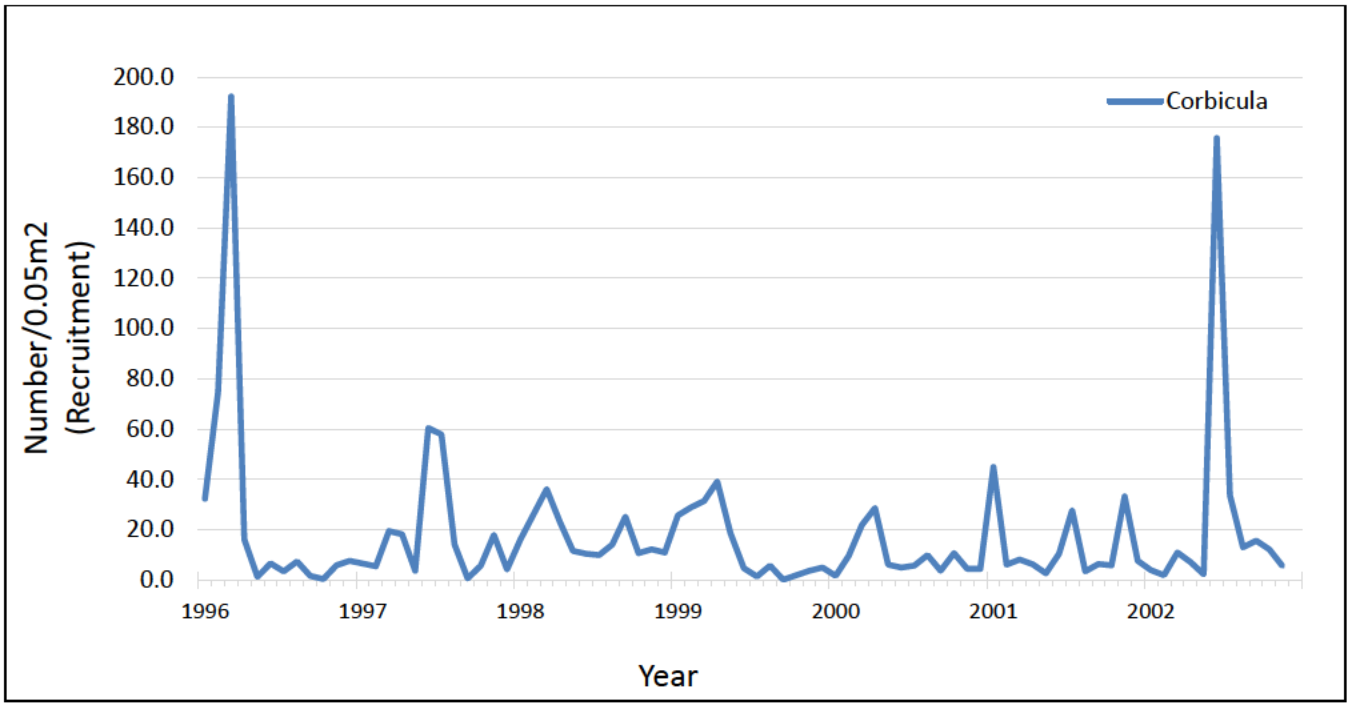

Figure 91. Graph showing recruitment at station C9 from 1996–2002. For station locations refer to table 1.

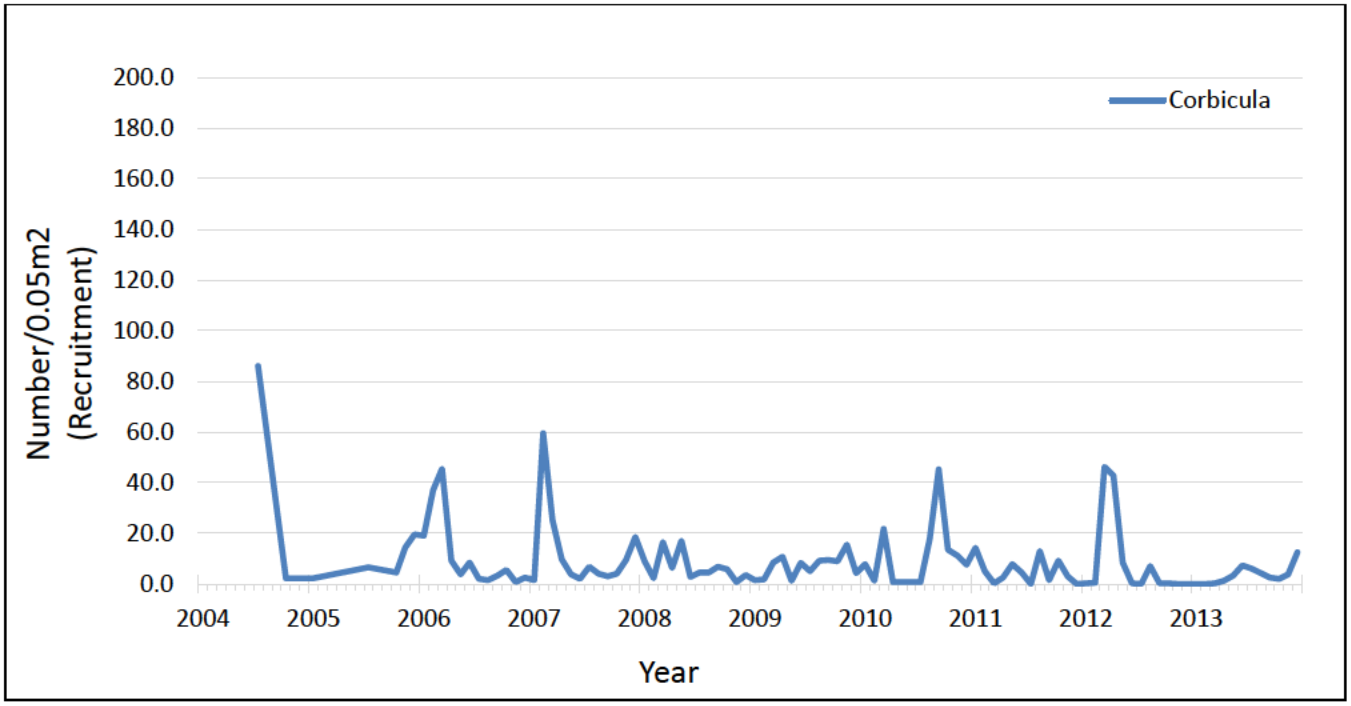

Figure 92. Graph showing recruitment at station C9 from 2004–2013. For station locations refer to table 1.

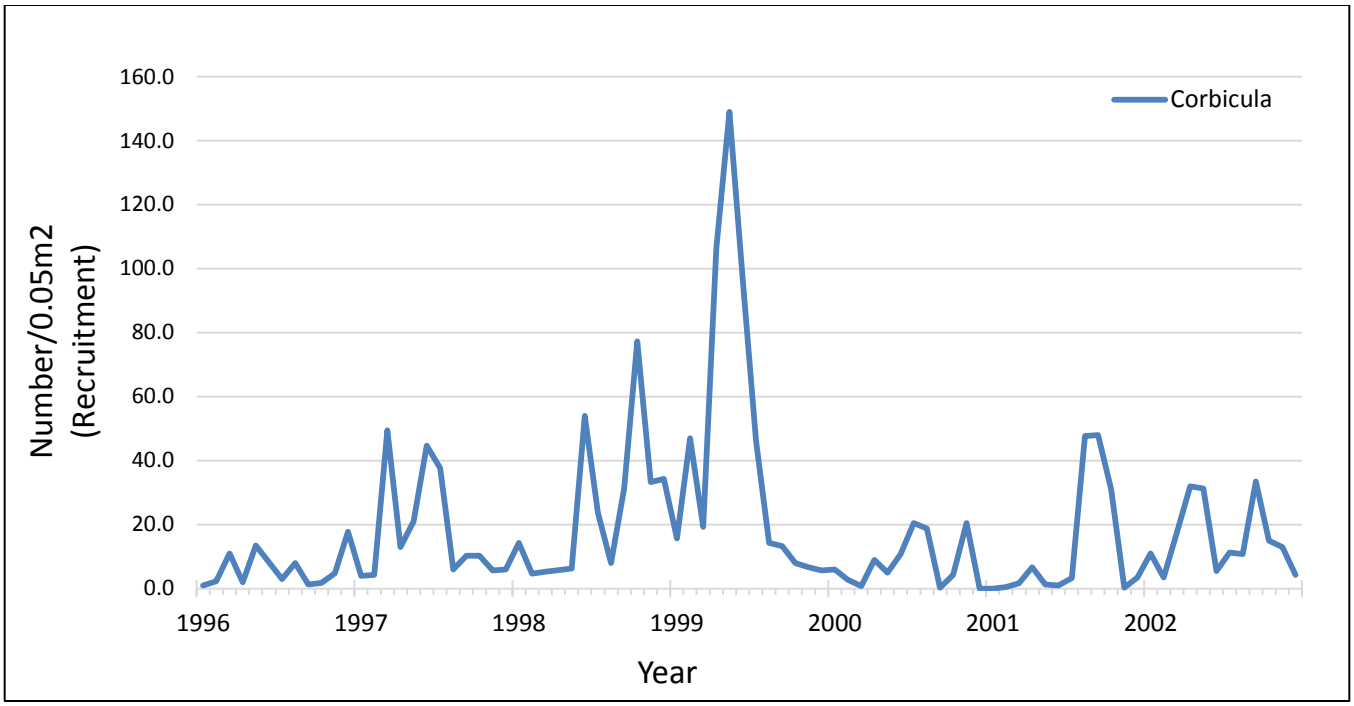

Figure 93. Graph showing recruitment at station D16 from 1996–2002. For station locations refer to table 1.

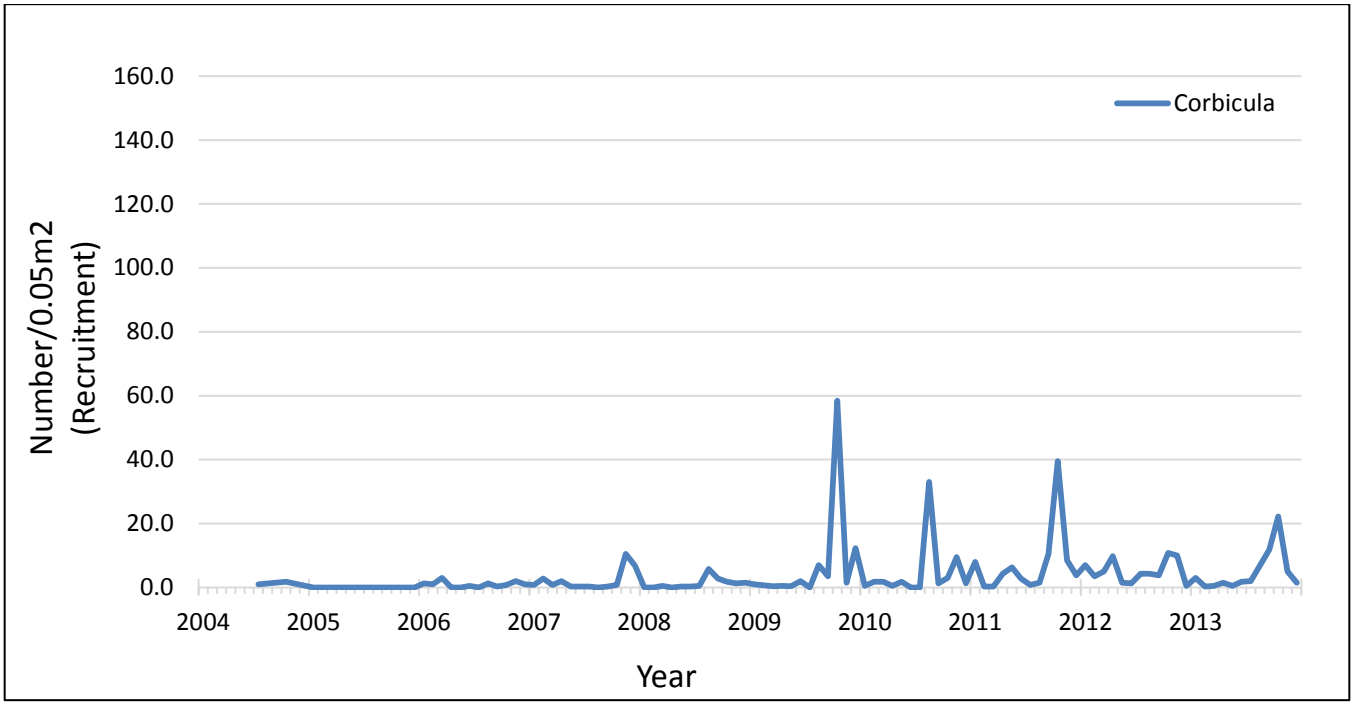

Figure 94. Graph showing recruitment at station D16 from 2004–2013. For station locations refer to table 1.

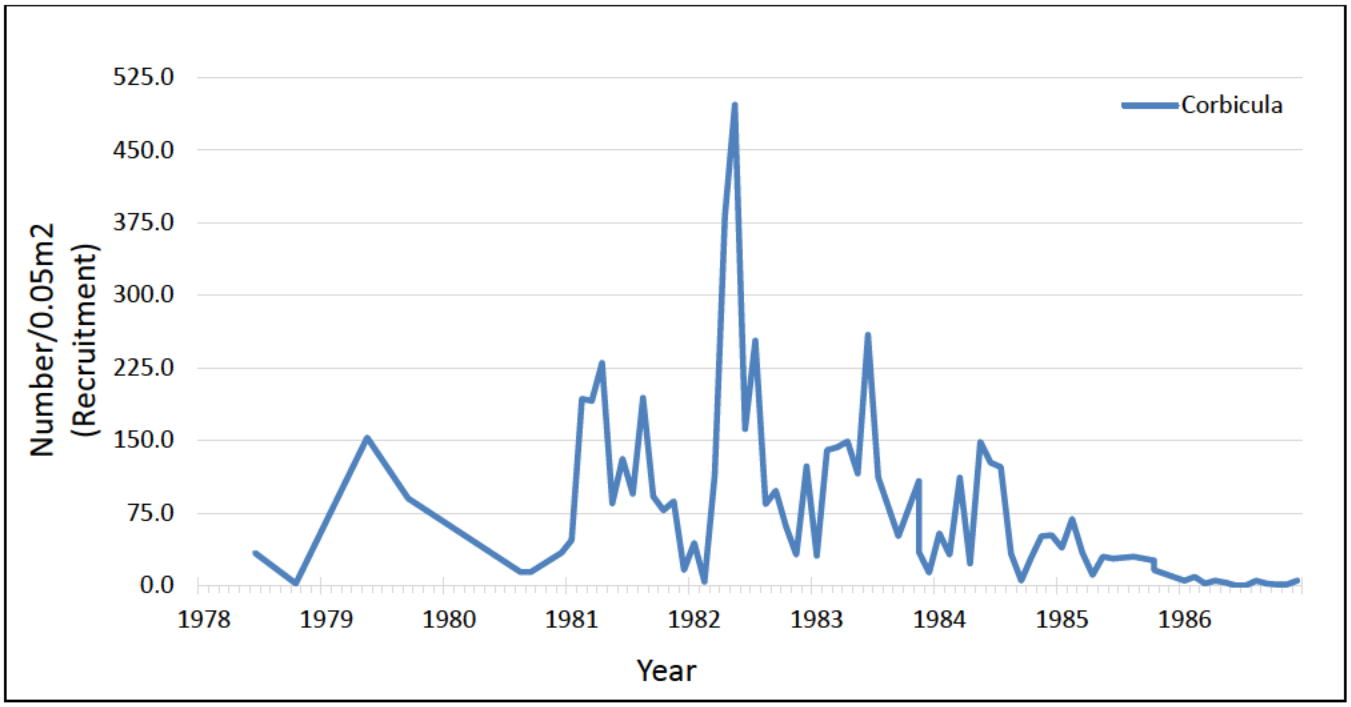

Figure 95. Graph showing recruitment at station D19C from 1978–1986. For station locations refer to table 1.

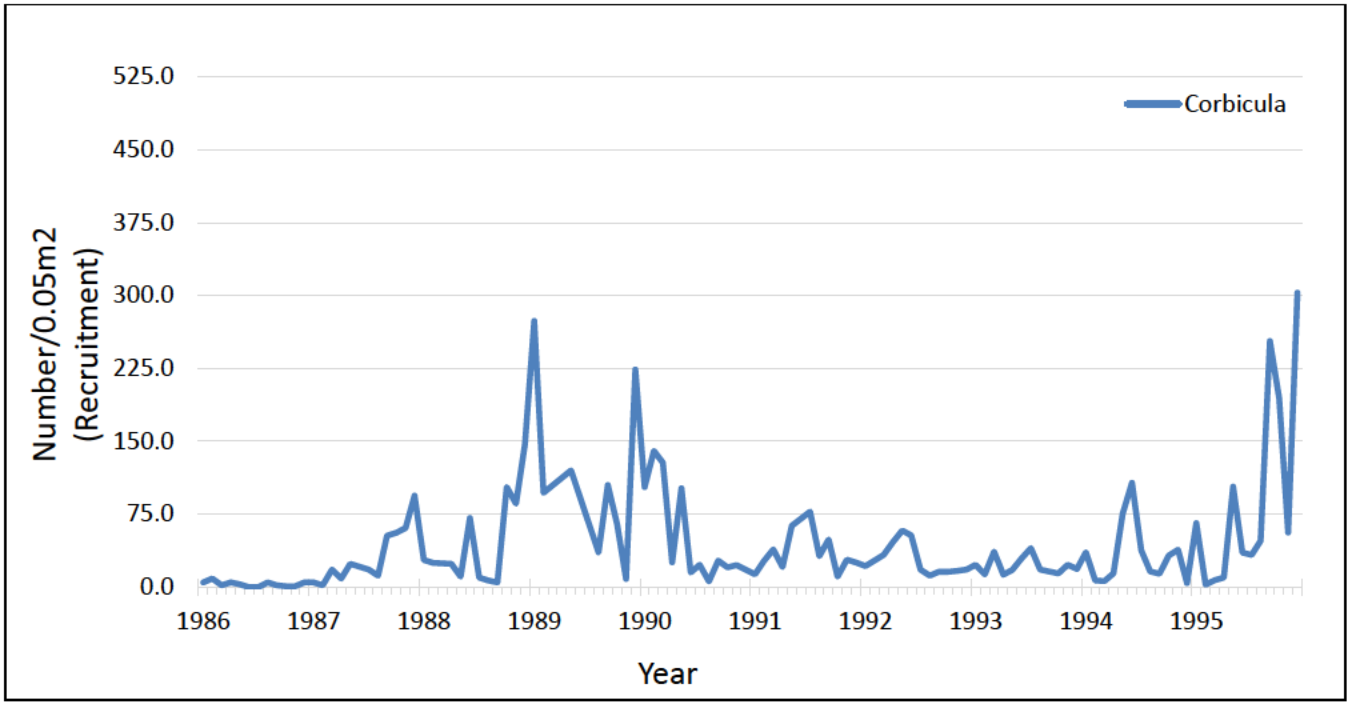

Figure 96. Graph showing recruitment at station D19C from 1986–1995. For station locations refer to table 1.

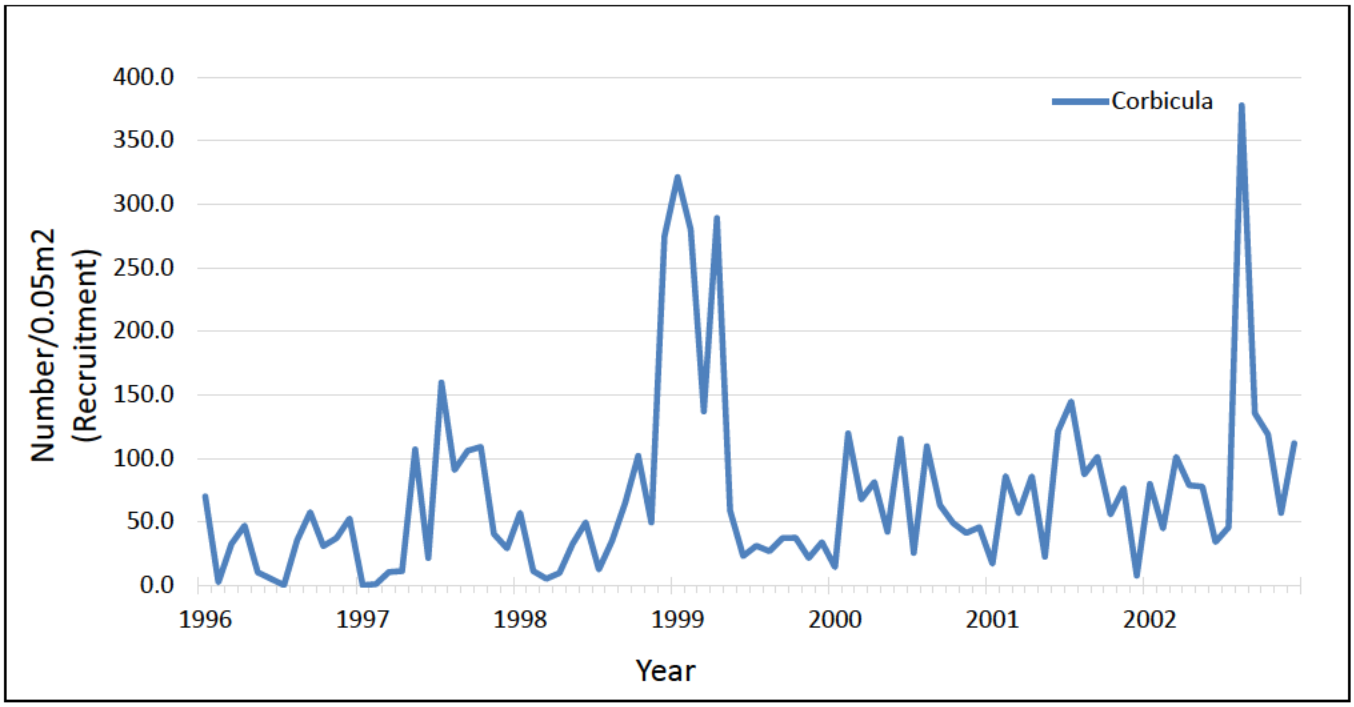

Figure 97. Graph showing recruitment at station D24 from 1996–2002. For station locations refer to table 1.

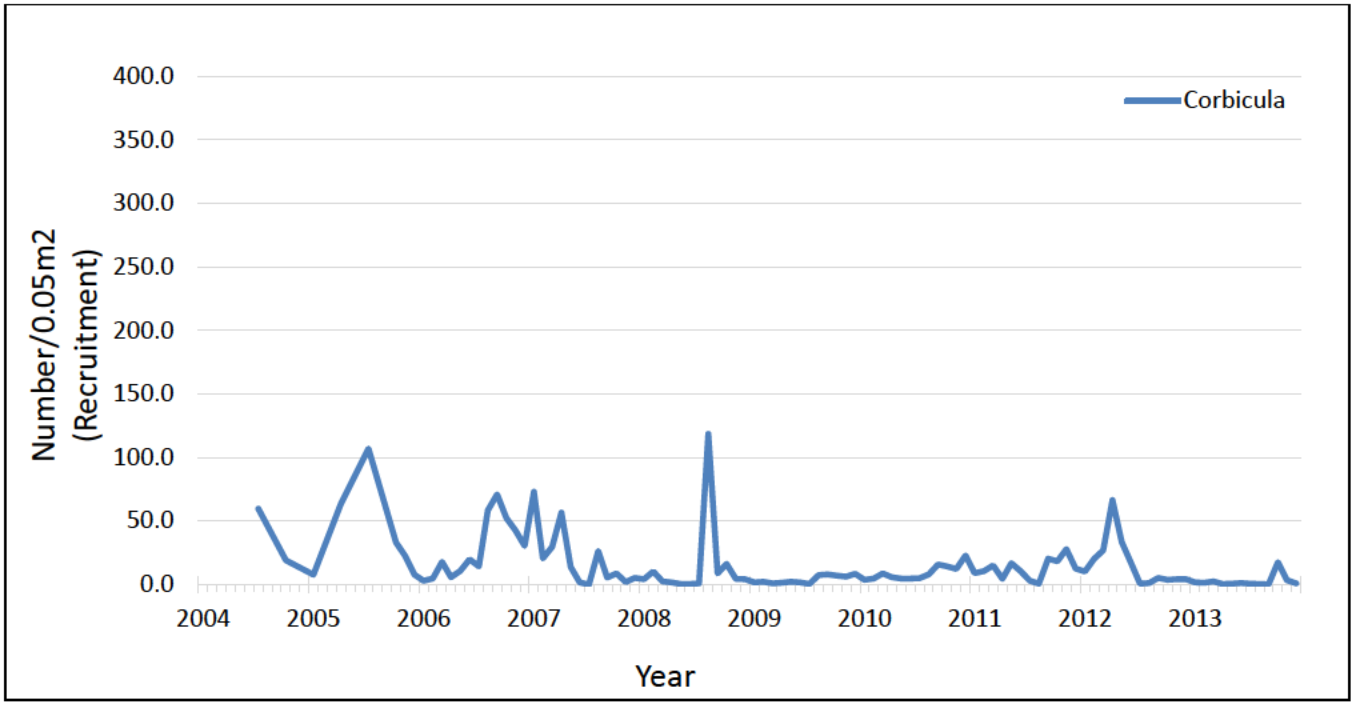

Figure 98. Graph showing recruitment at station D24 from 2004–2013. For station locations refer to table 1.

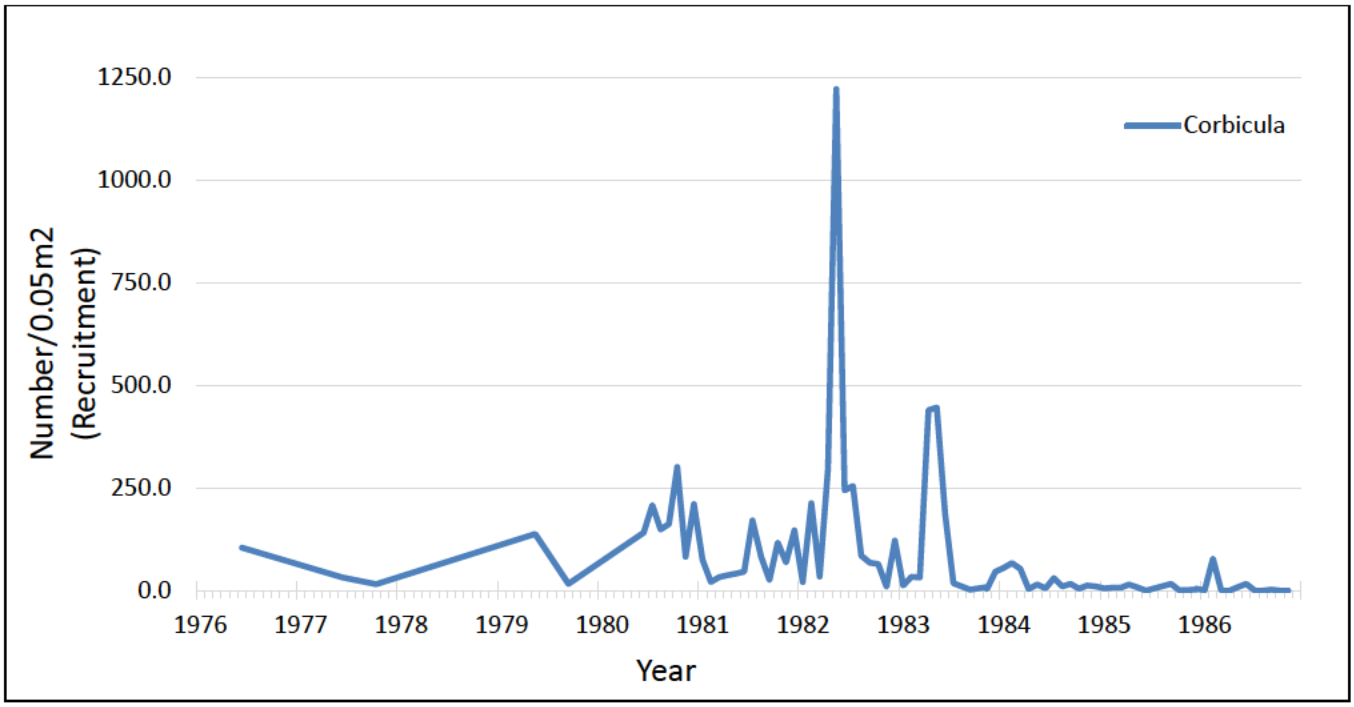

Figure 99. Graph showing recruitment at station D28 from 1976–1986. For station locations refer to table 1.

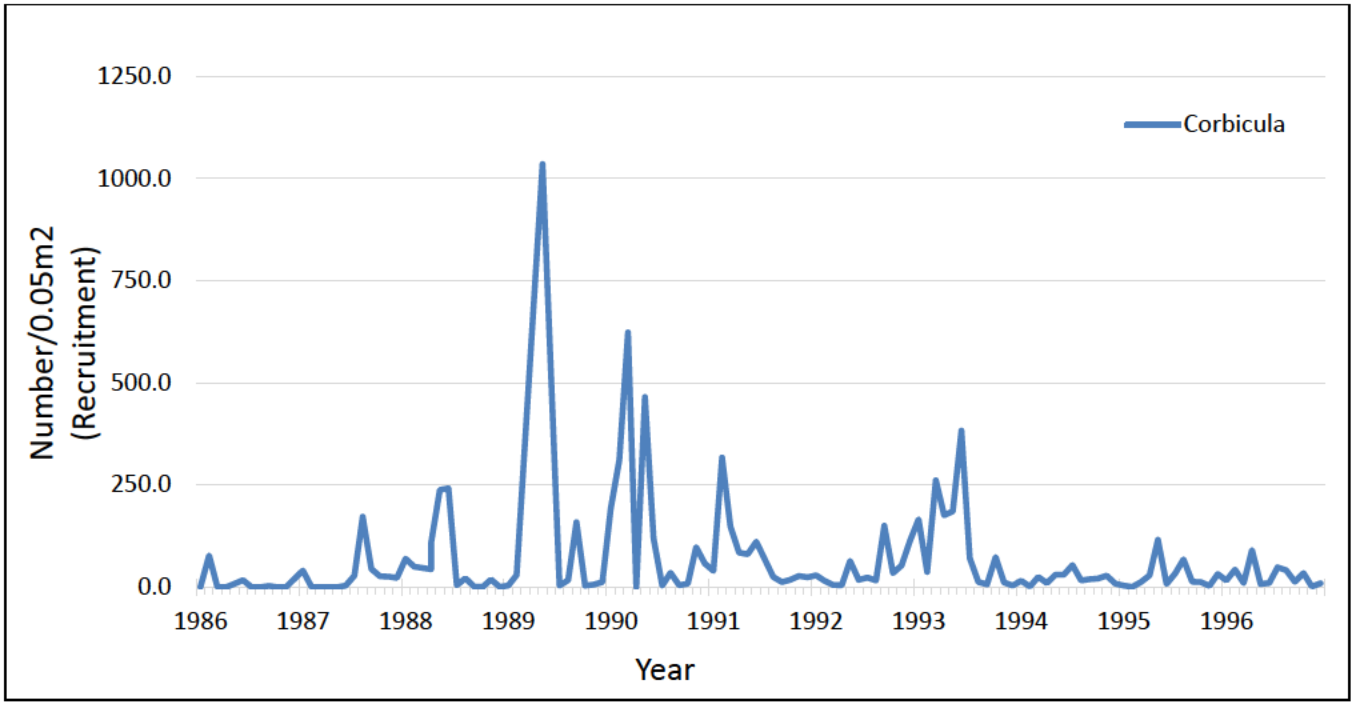

Figure 100. Graph showing recruitment at station D28 from 1986–1996. For station locations refer to table 1.

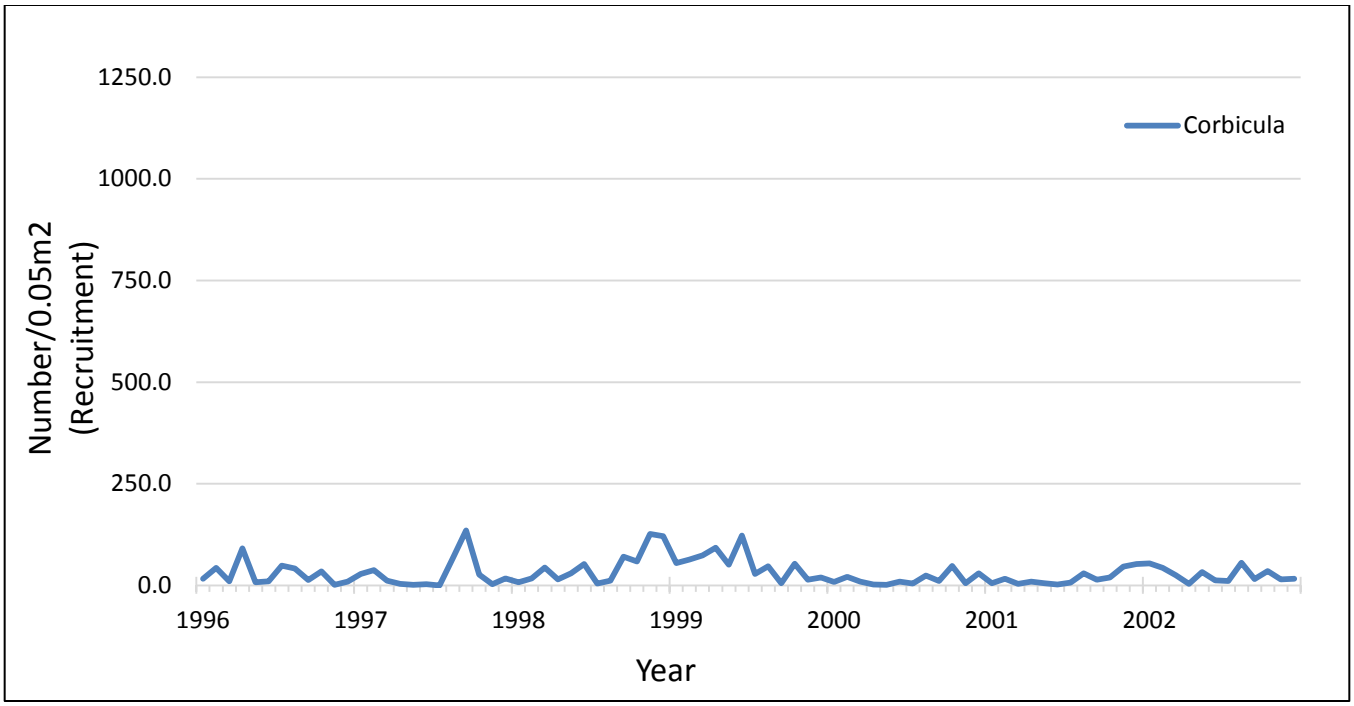

Figure 101. Graph showing recruitment at station D28 from 1996–2002. For station locations refer to table 1.

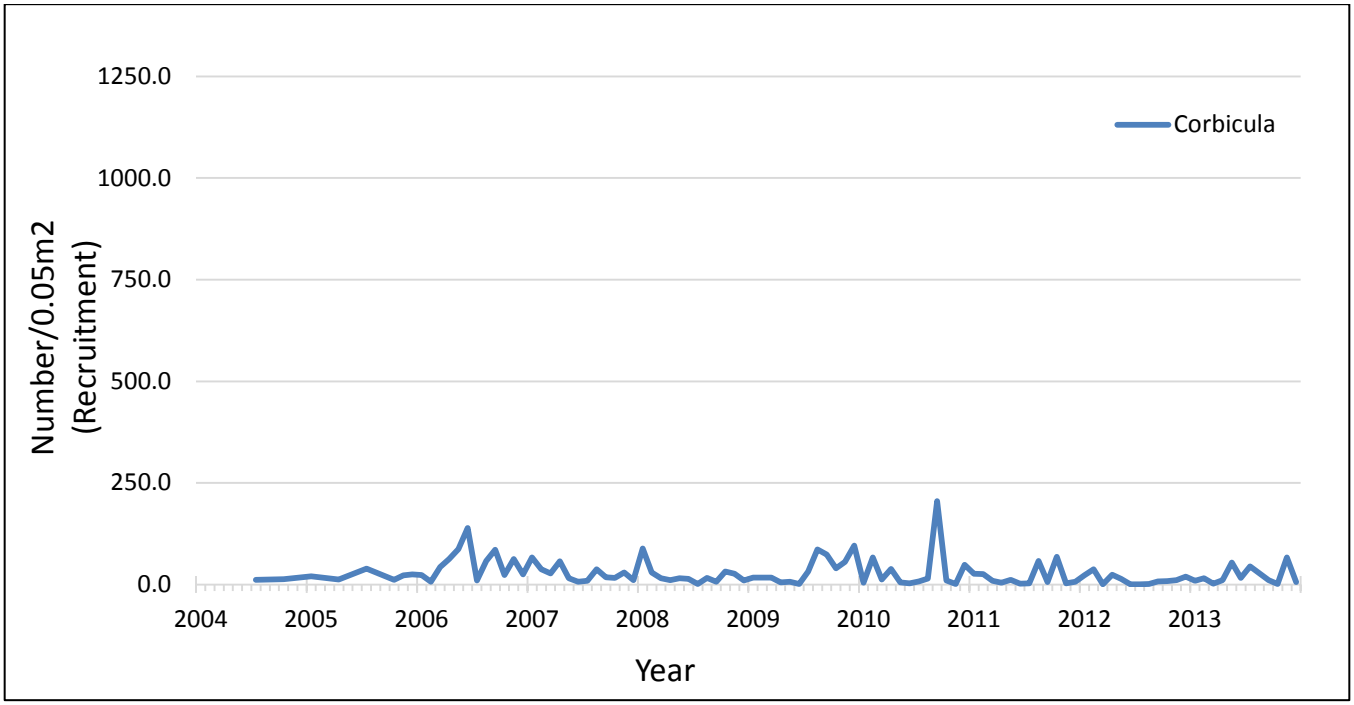

Figure 102. Graph showing recruitment at station D28 from 2004–2013. For station locations refer to table 1.

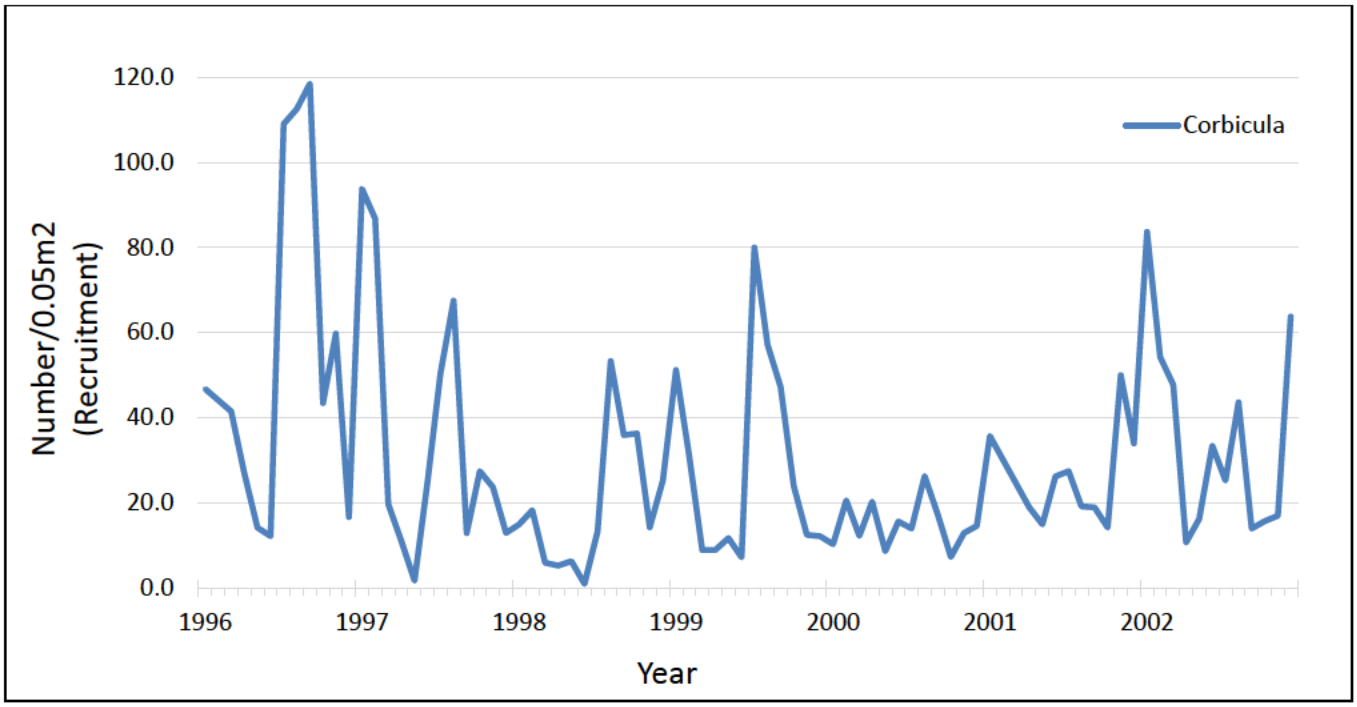

Figure 103. Graph showing recruitment at station P8 from 1996–2002. For station locations refer to table 1.

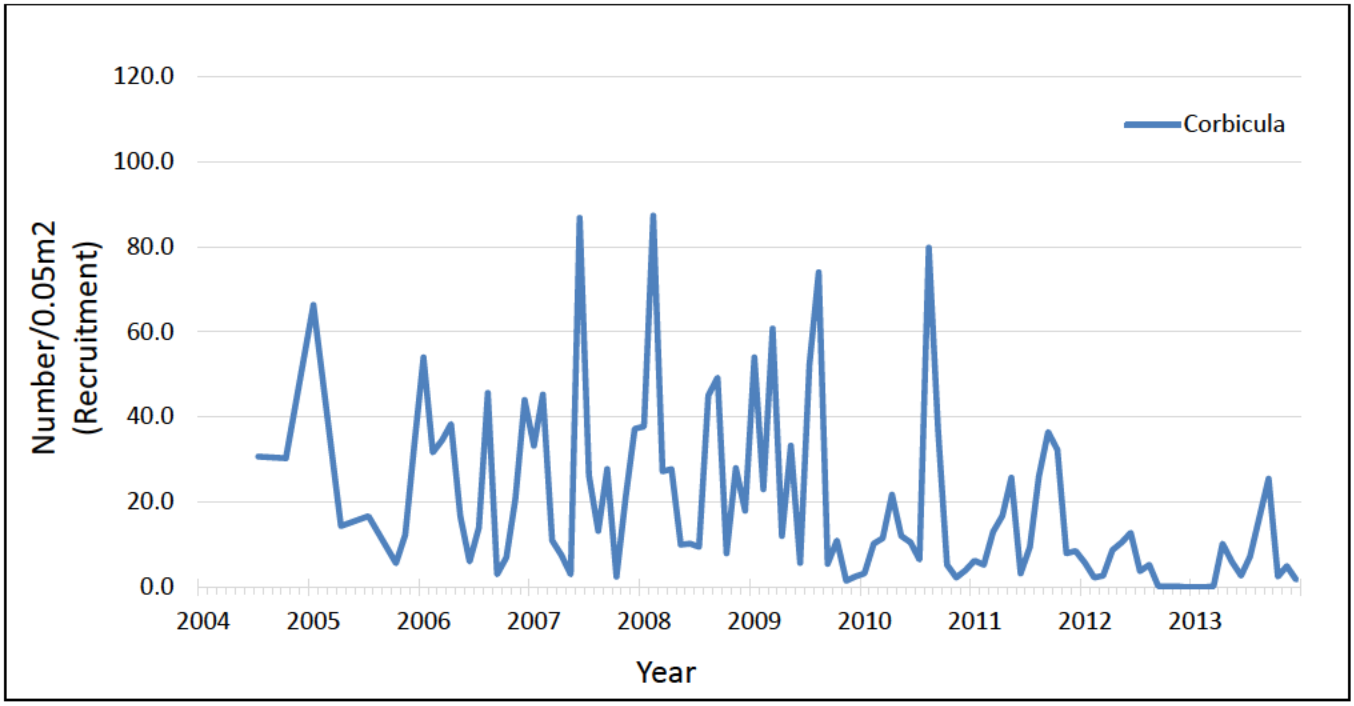

Figure 104. Graph showing recruitment at station P8 from 2004–2013. For station locations refer to table 1.

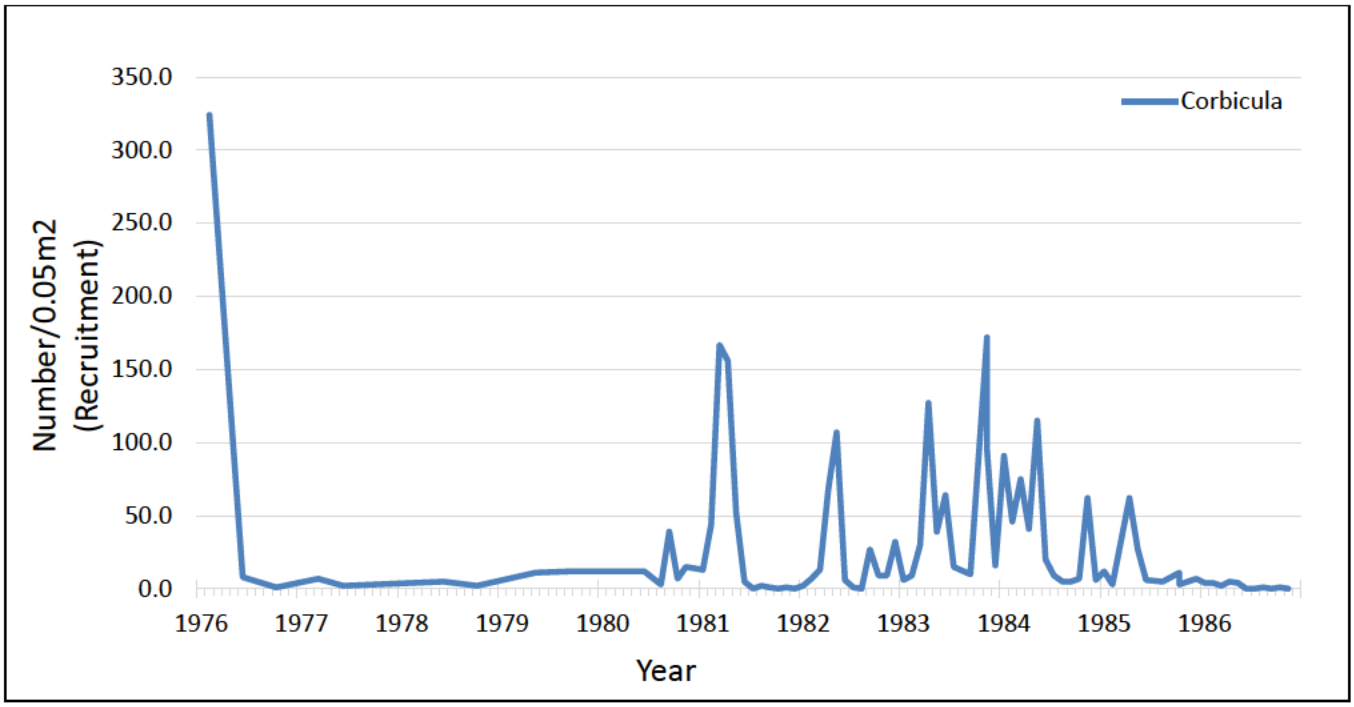

Figure 105. Graph showing recruitment at station D4C from 1976–1986 For station locations refer to table 1.

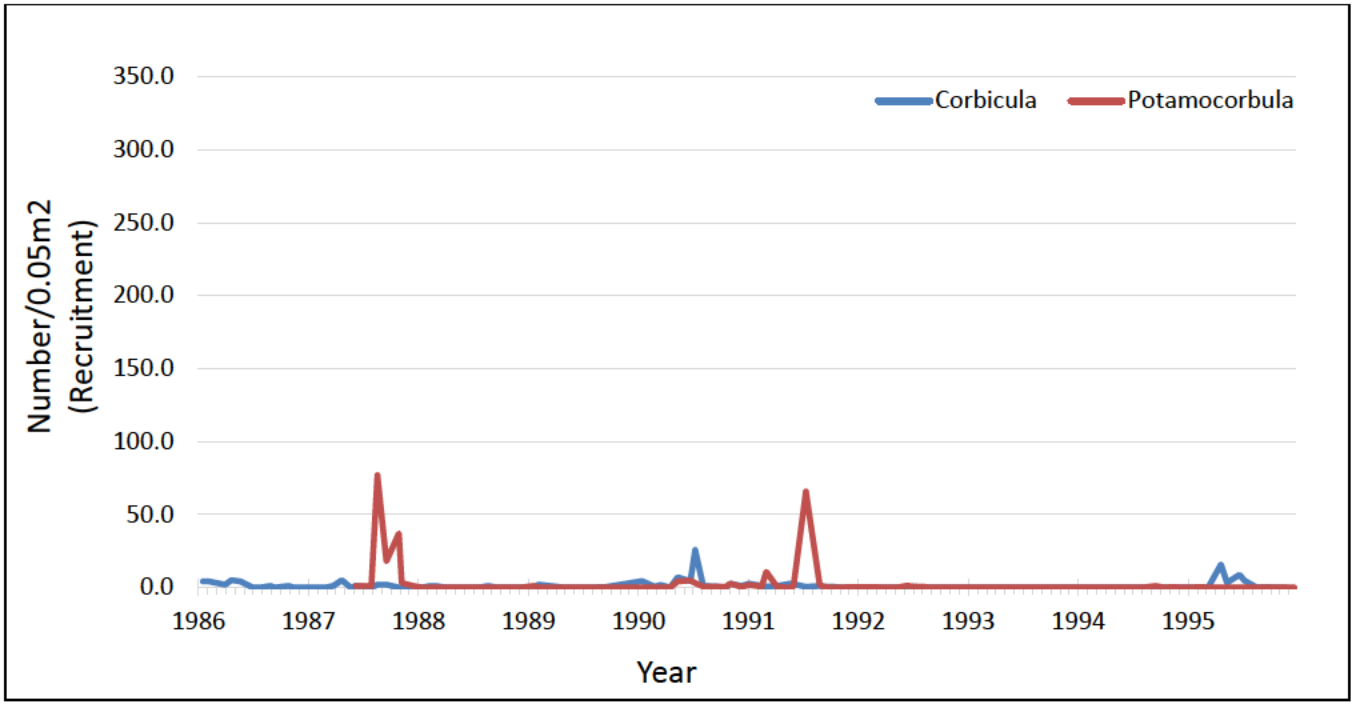

Figure 106. Graph showing recruitment at station D4C from 1986–1995. For station locations refer to table 1.

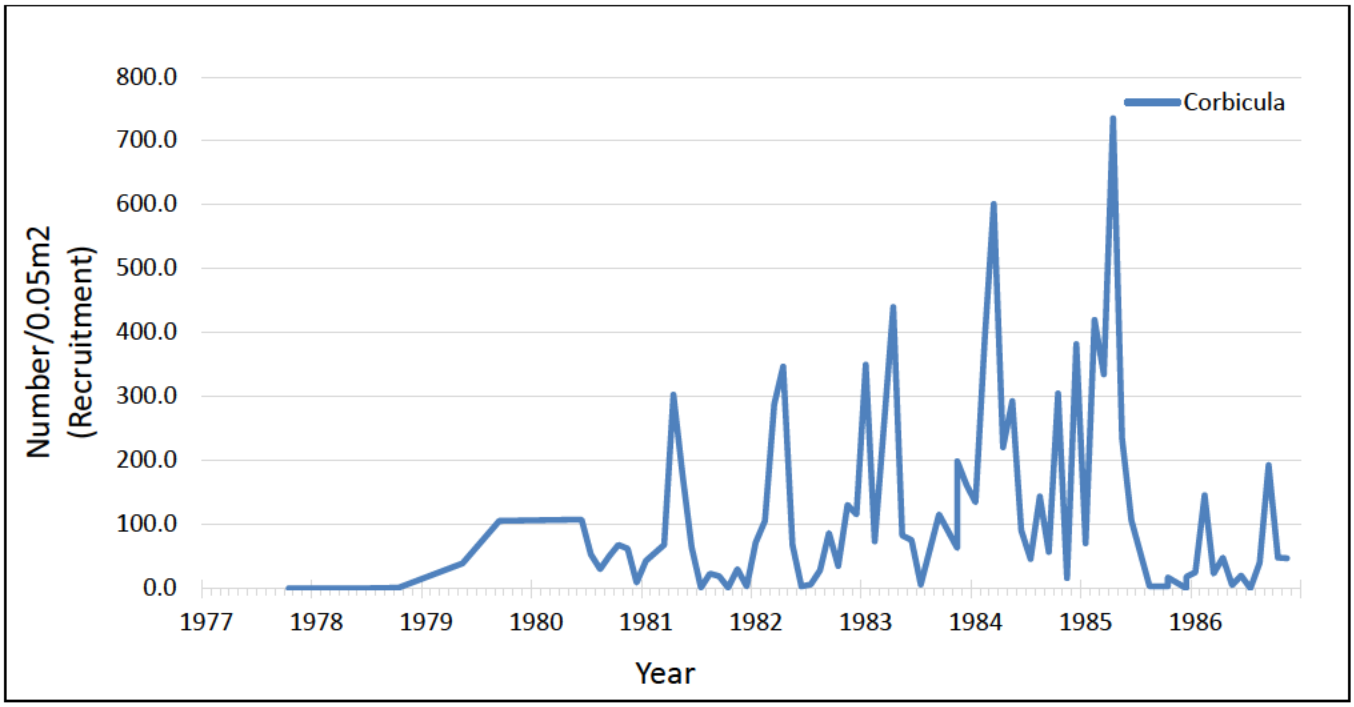

Figure 107. Graph showing recruitment at station D4L from 1977–1986. For station locations refer to table 1.

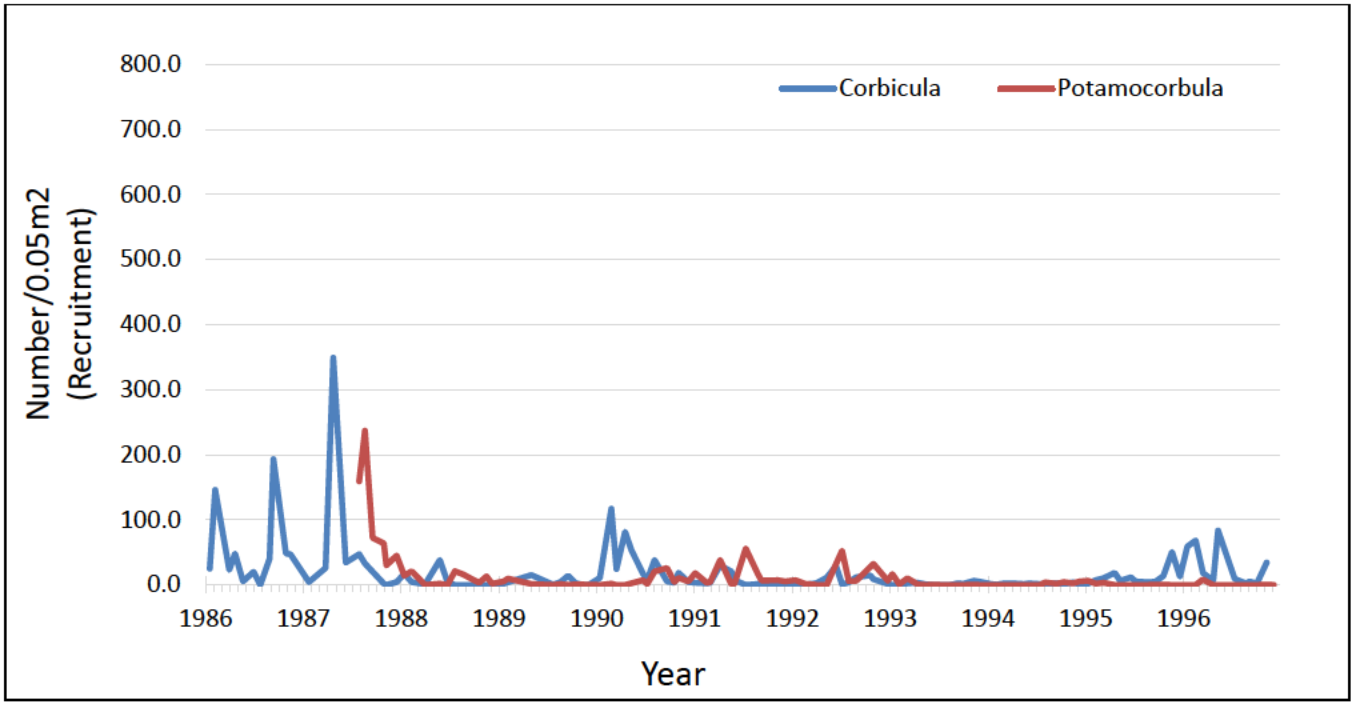

Figure 108. Graph showing recruitment at station D4L from 1986–1996. For station locations refer to table 1.

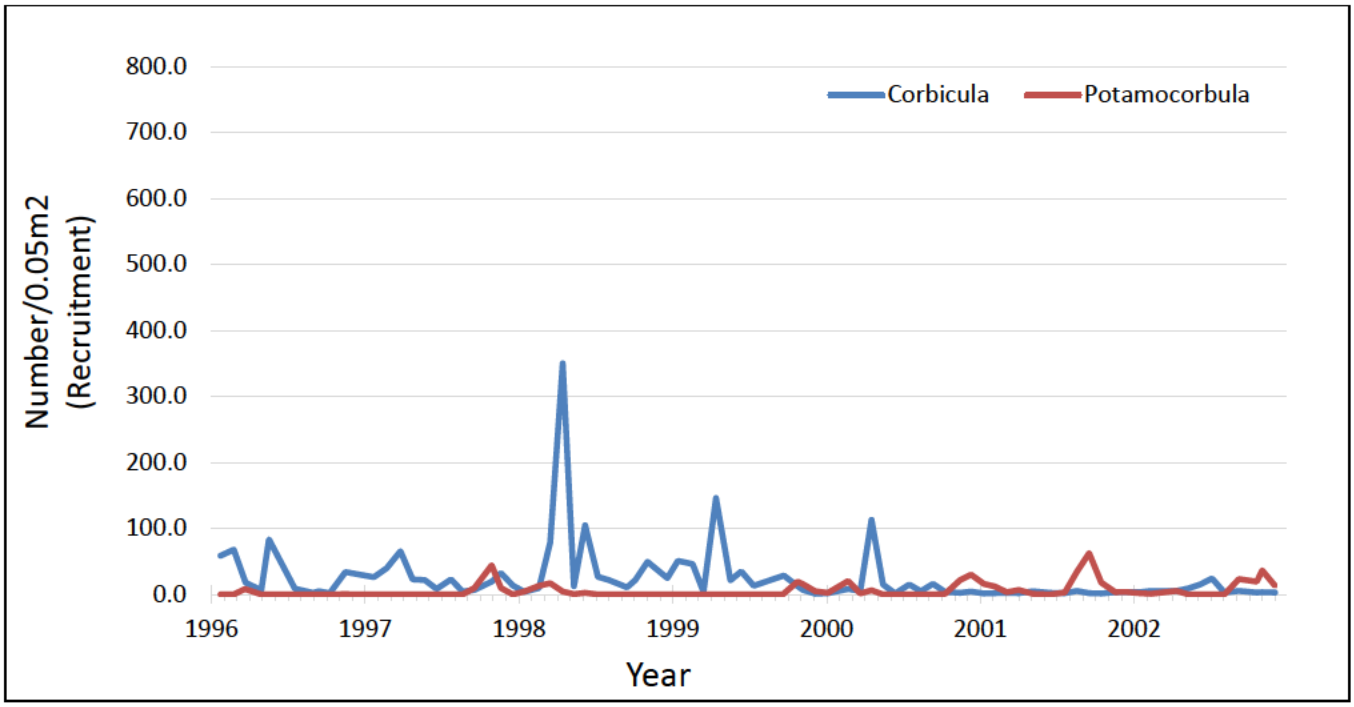

Figure 109. Graph showing recruitment at station D4L from 1996–2002. For station locations refer to table 1.

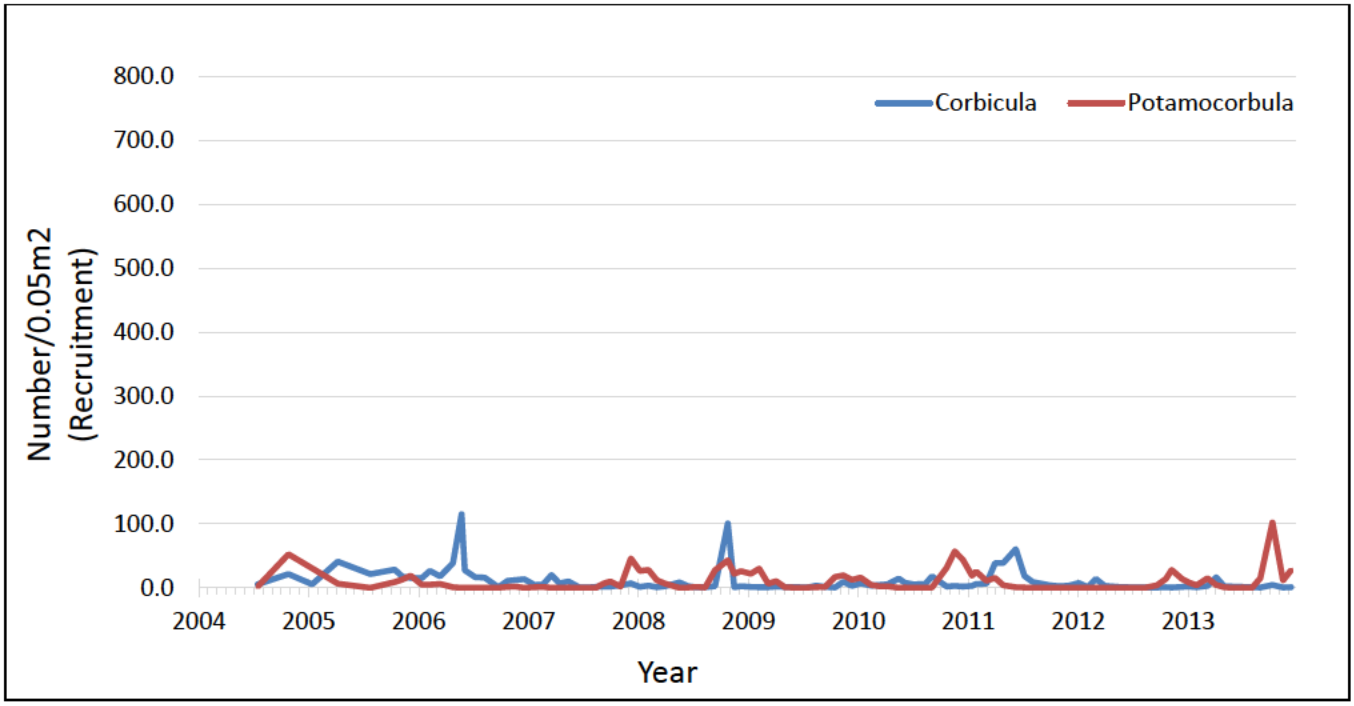

Figure 110. Graph showing recruitment at station D4L from 2004–2013. For station locations refer to table 1.

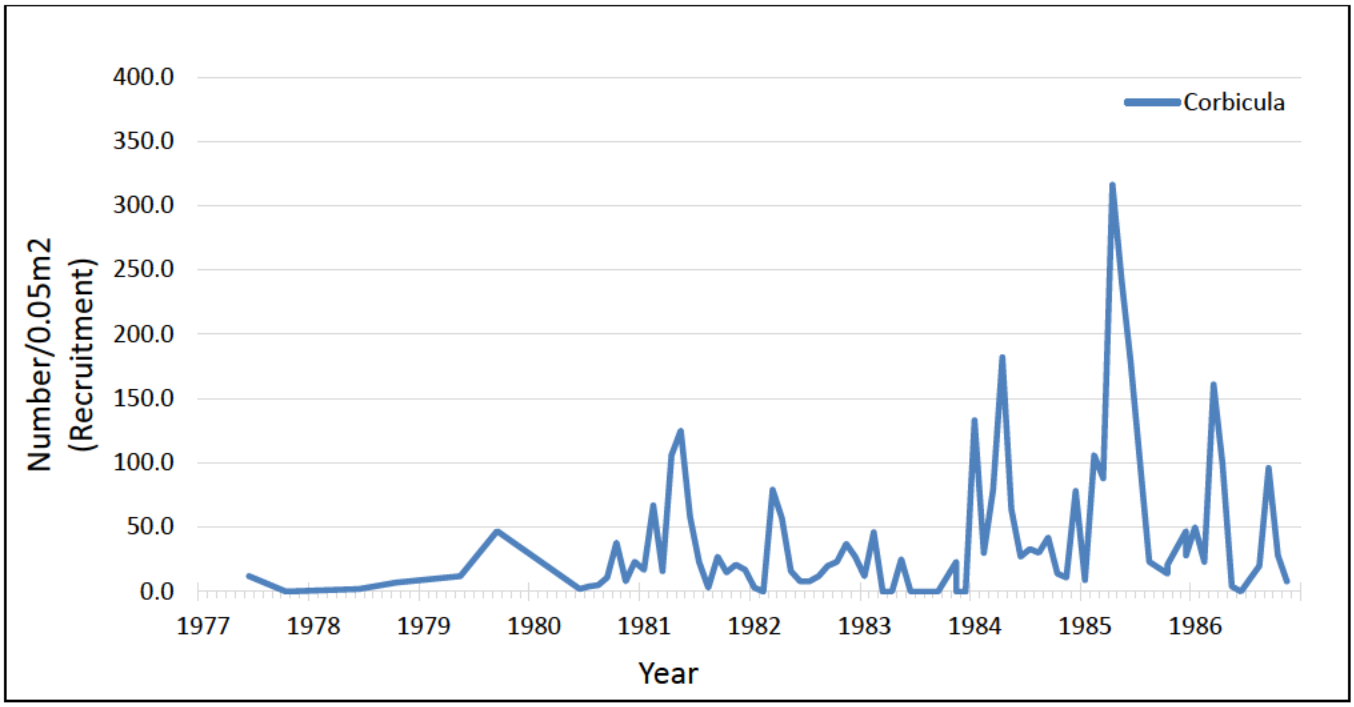

Figure 111. Graph showing recruitment at station D4R from 1977–1986. For station locations refer to table 1.

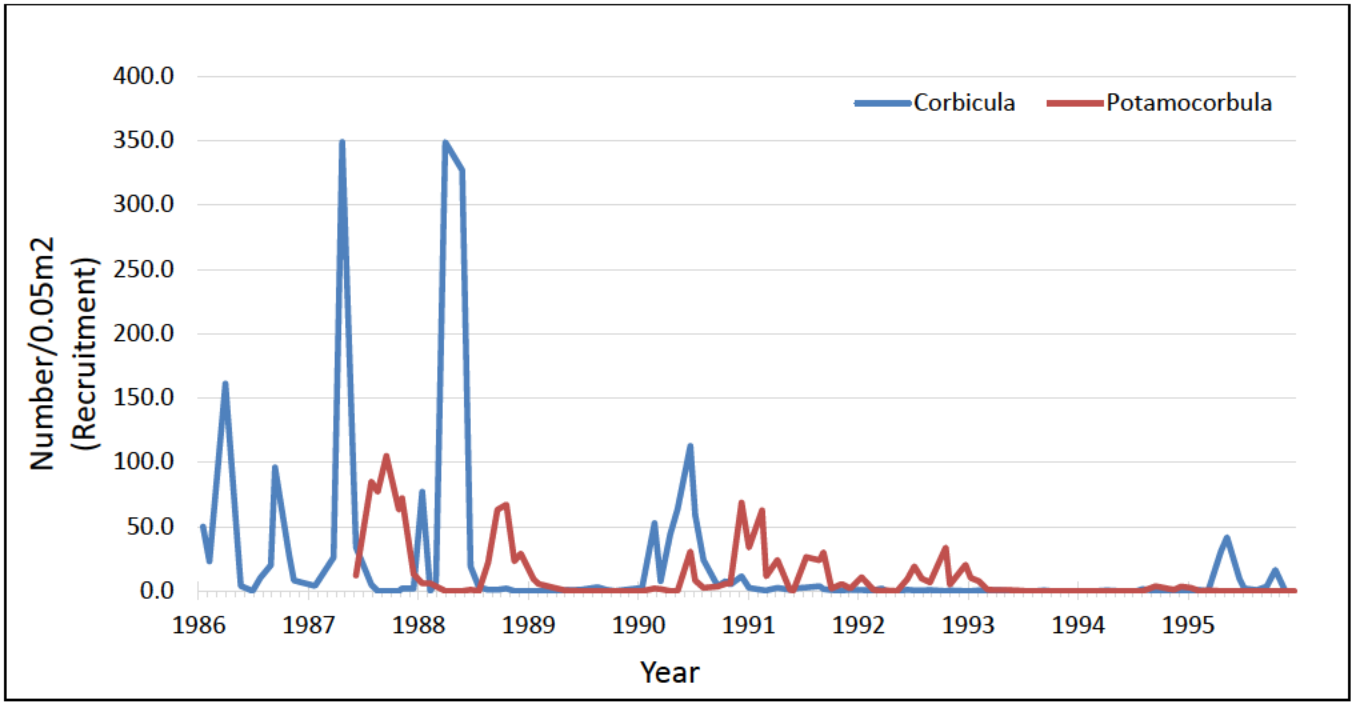

Figure 112. Graph showing recruitment at station D4R from 1986–1995. For station locations refer to table 1.

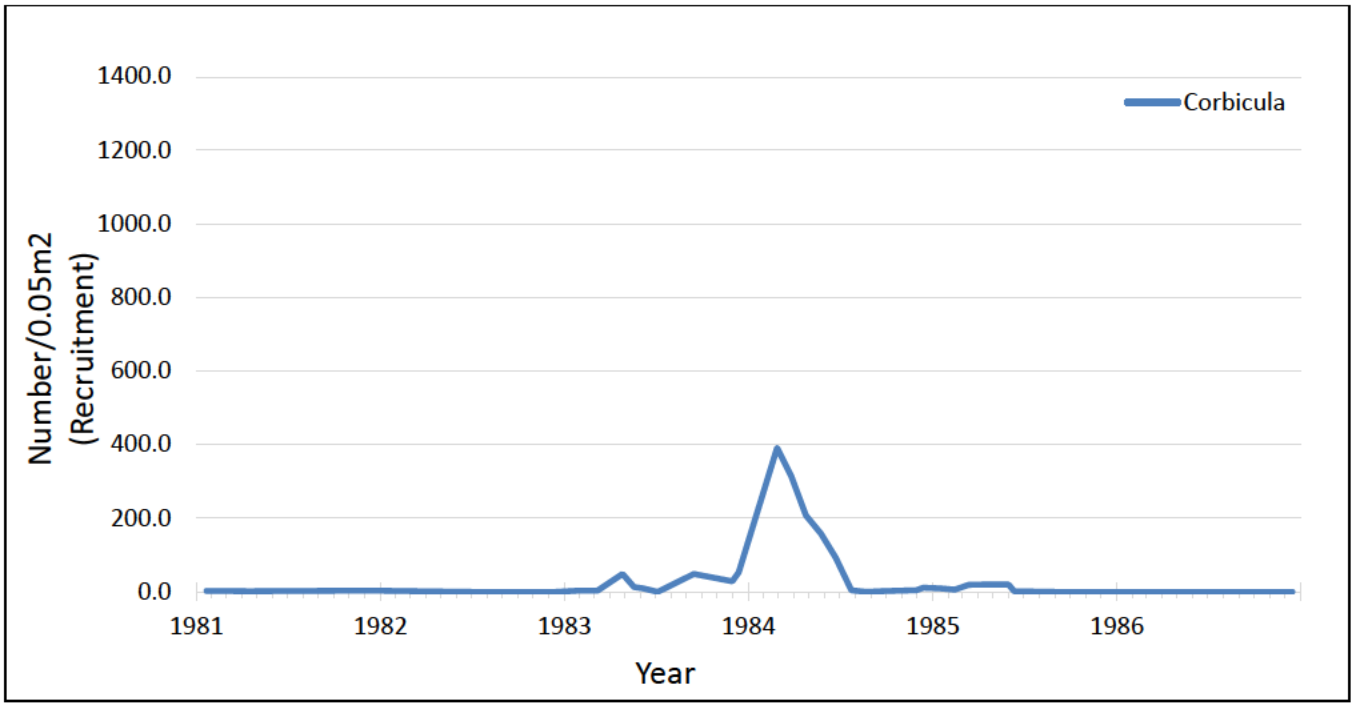

Figure 113. Graph showing recruitment at station D7 from 1981–1986. For station locations refer to table 1.

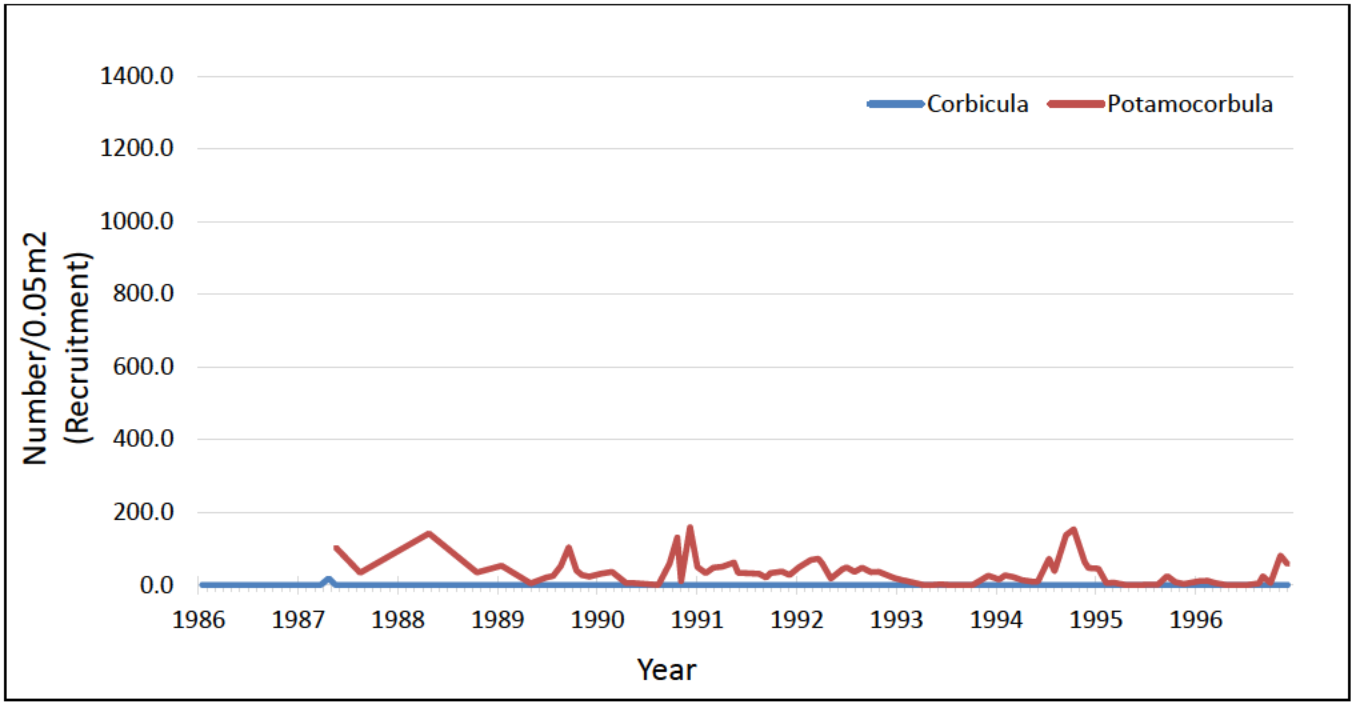

Figure 114. Graph showing recruitment at station D7 from 1986–1996. For station locations refer to table 1.

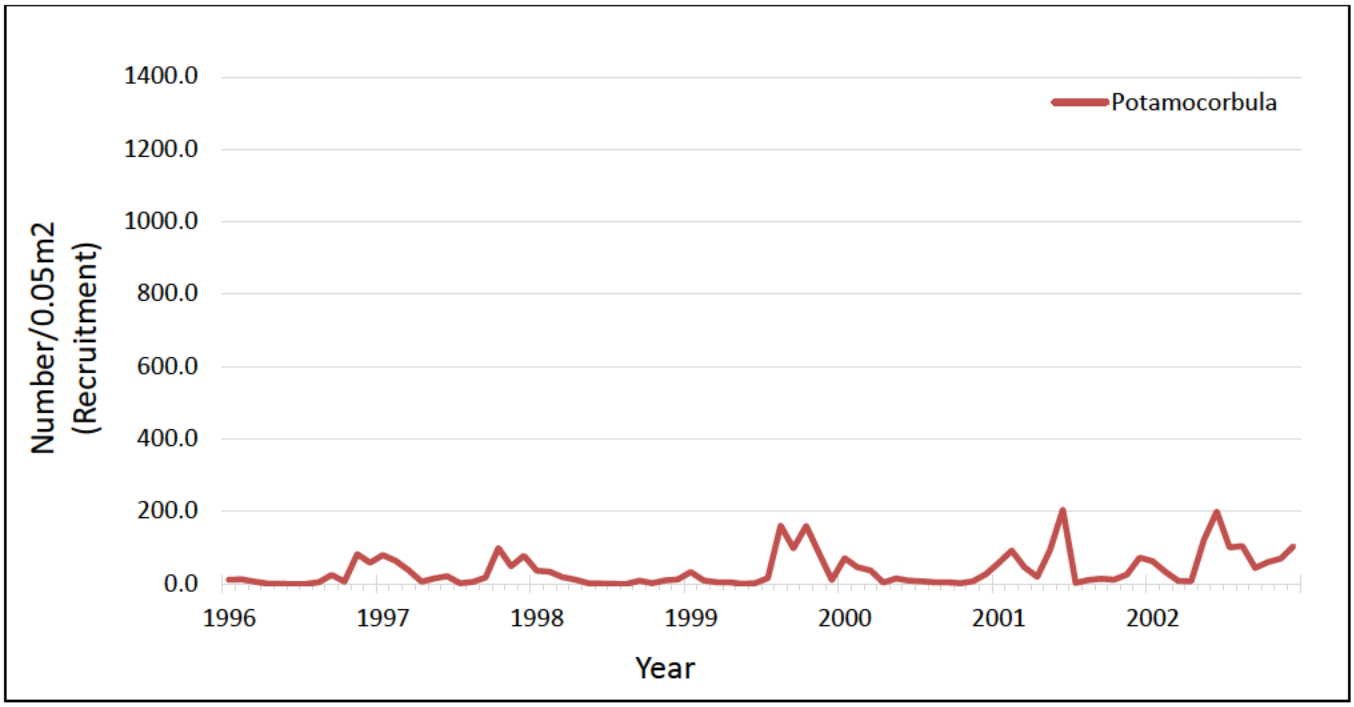

Figure 115. Graph showing recruitment at station D7 from 1996–2002. For station locations refer to table 1.

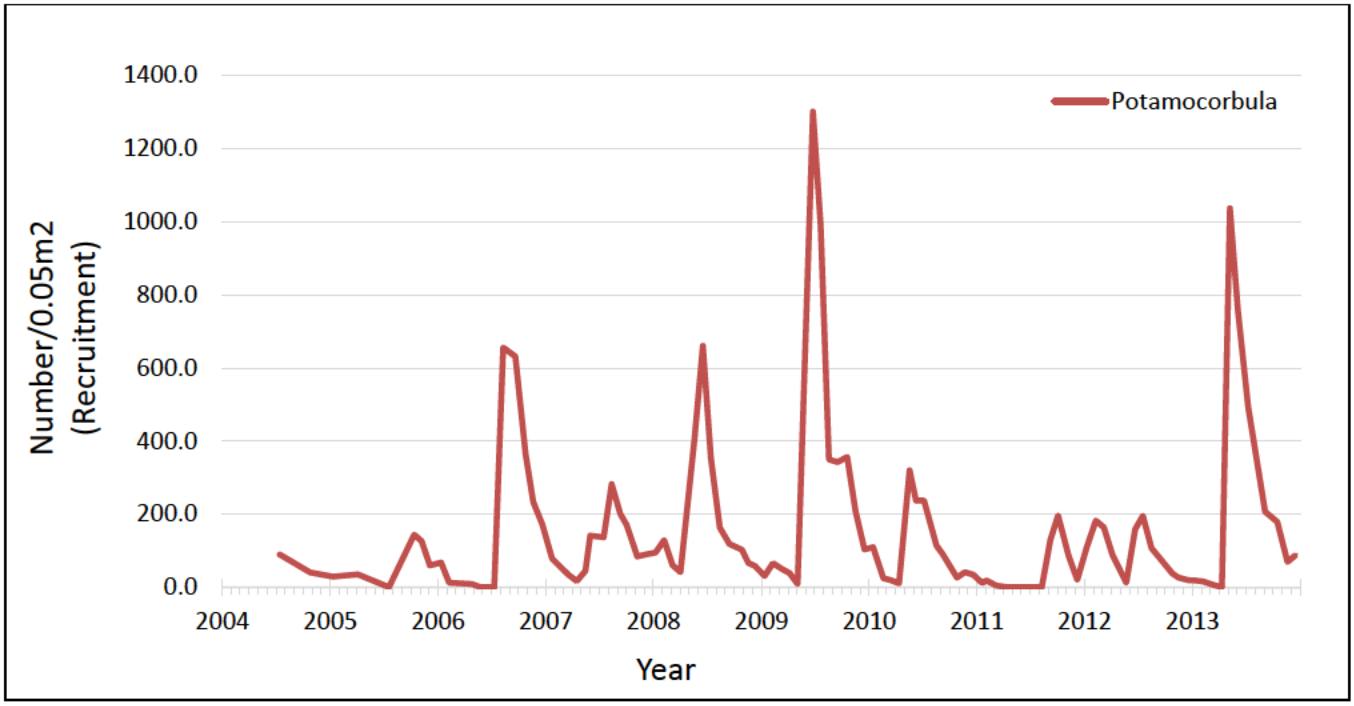

Figure 116. Graph showing recruitment at station D7 from 2004–2013. For station locations refer to table 1.

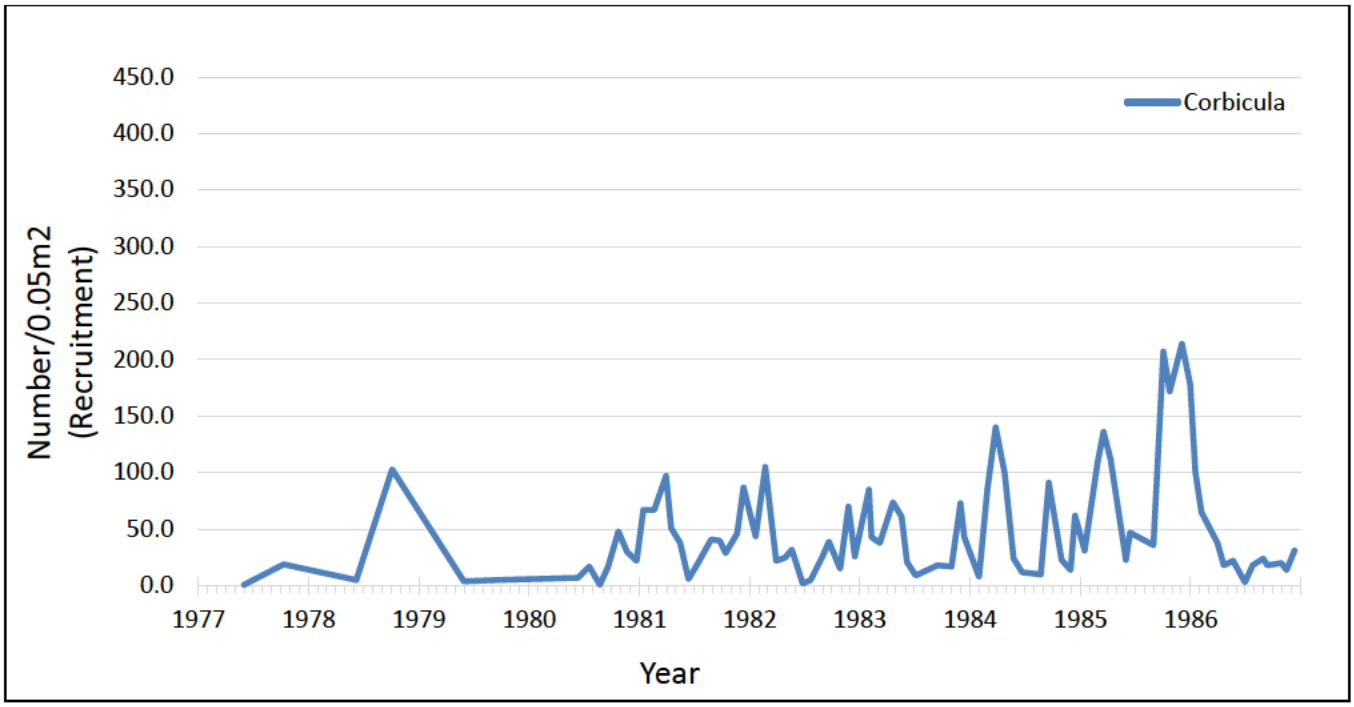

Figure 117. Graph showing recruitment at station D11 from 1977–1986. For station locations refer to table 1.

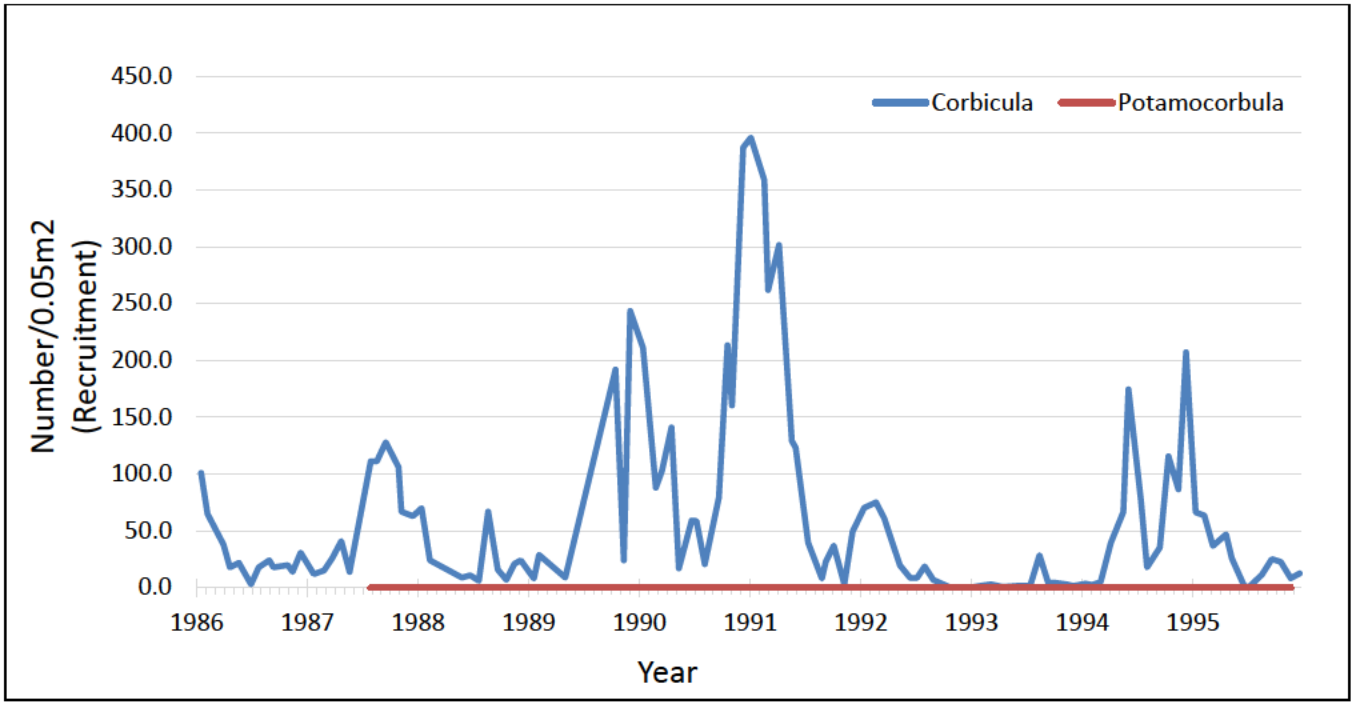

Figure 118. Graph showing recruitment at station D11 from 1986–1995. For station locations refer to table 1.

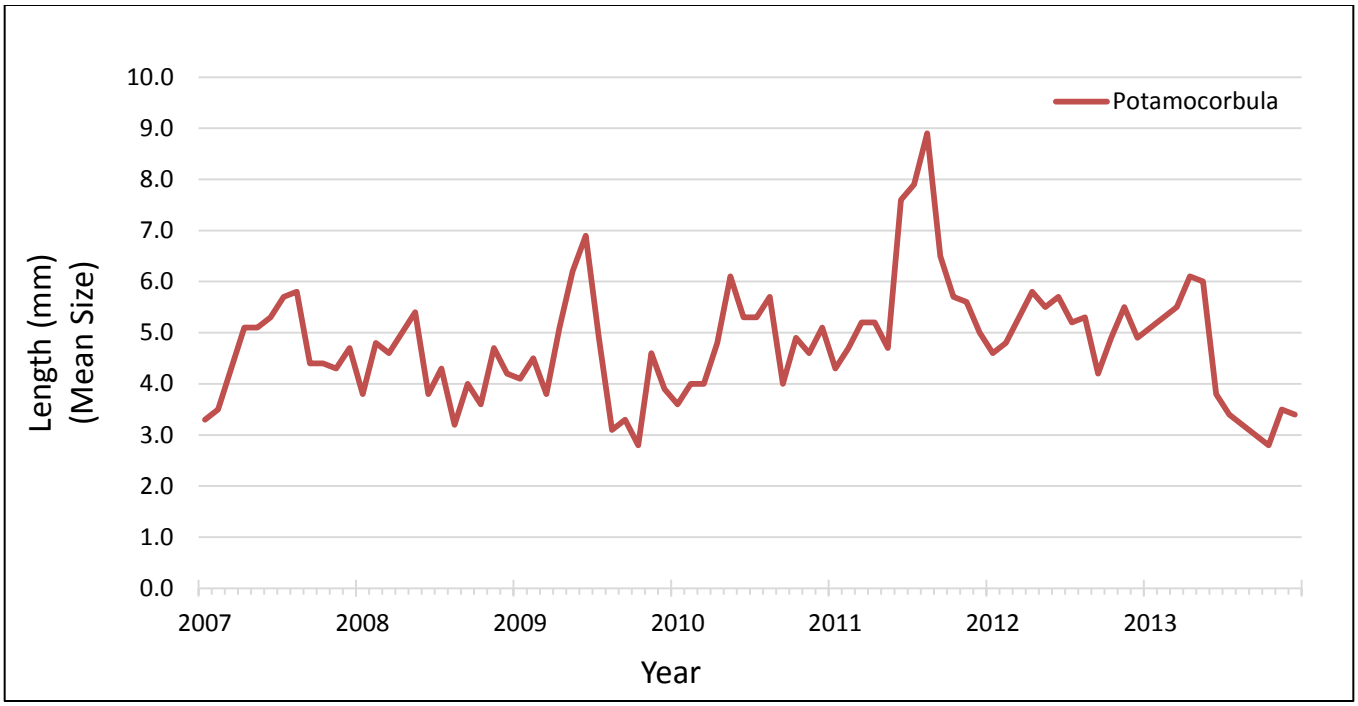

Figure 119. Graph showing mean size at station D6 from 2007–2013. For station locations refer to table 1.

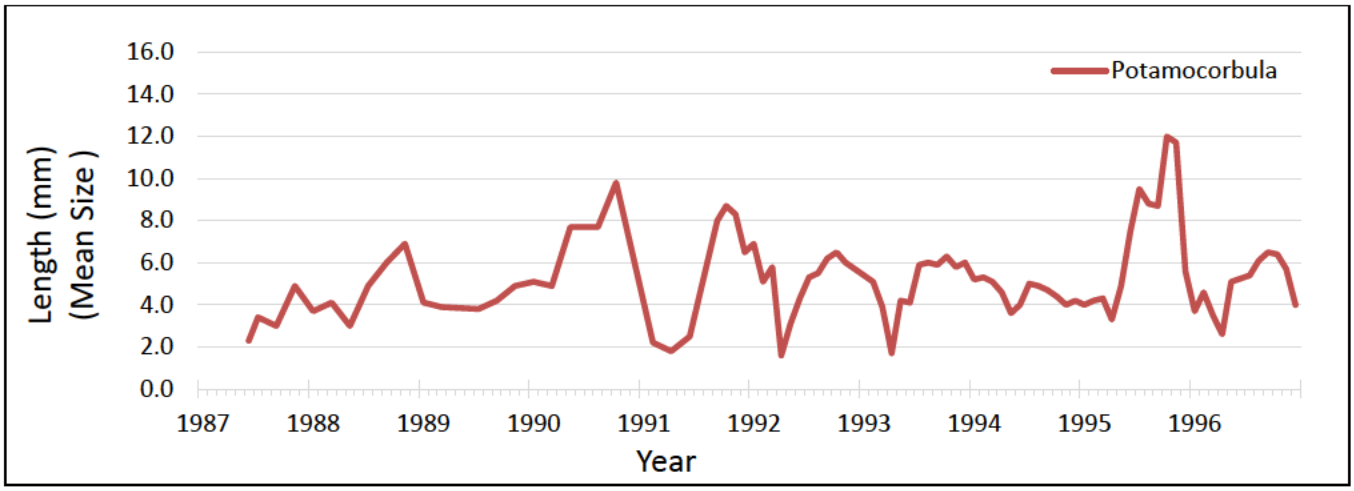

Figure 120. Graph showing mean size at station D41A from 1987–1996. For station locations refer to table 1.

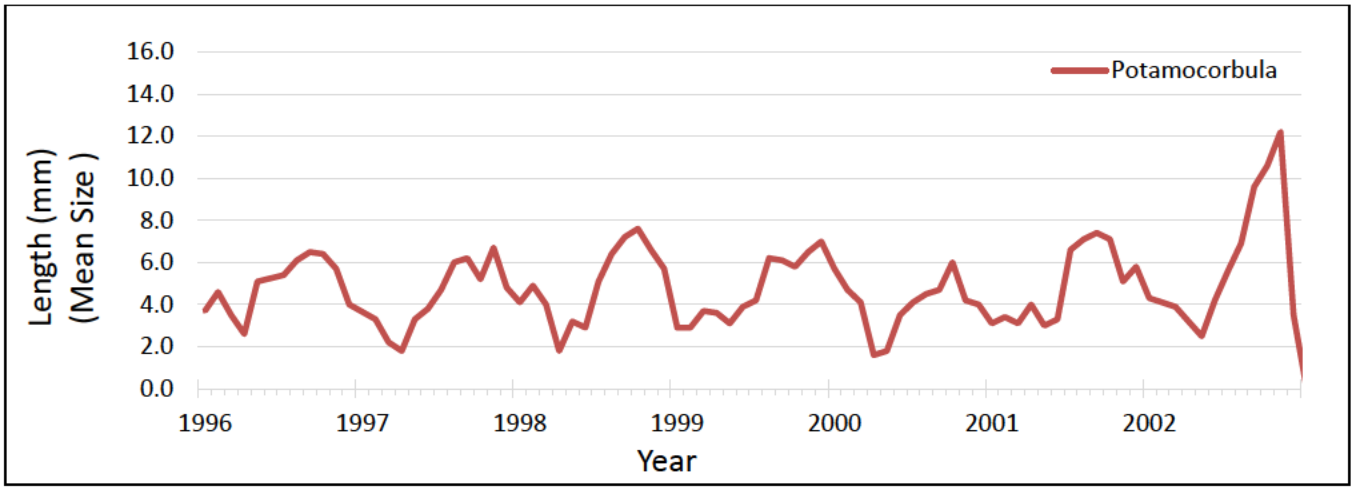

Figure 121. Graph showing mean size at station D41A from 1996–2003. For station locations refer to table 1.

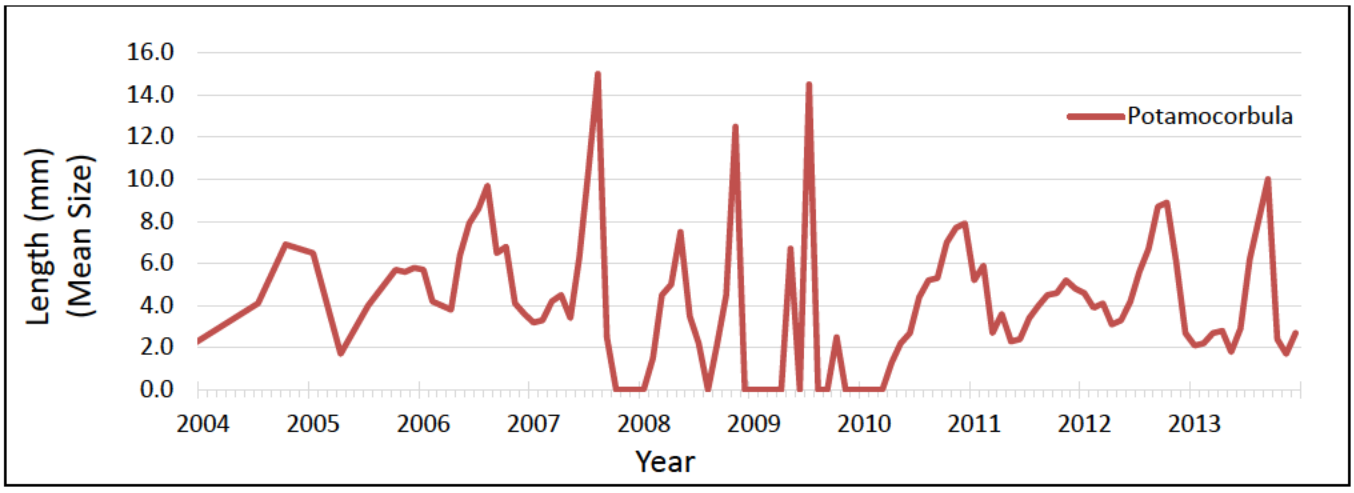

Figure 122. Graph showing mean size at station D41A from 2003–2013. For station locations refer to table 1.

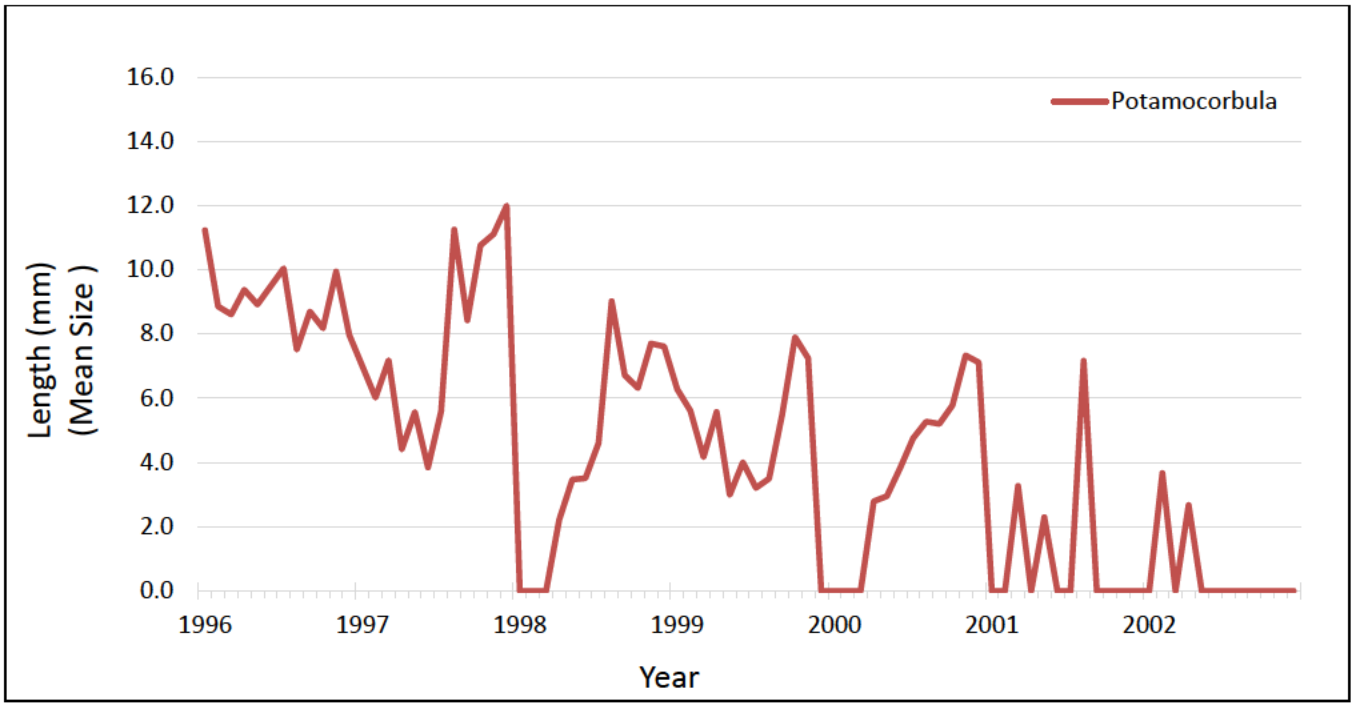

Figure 123. Graph showing mean size at station D41C from 1996–2002. For station locations refer to table 1.

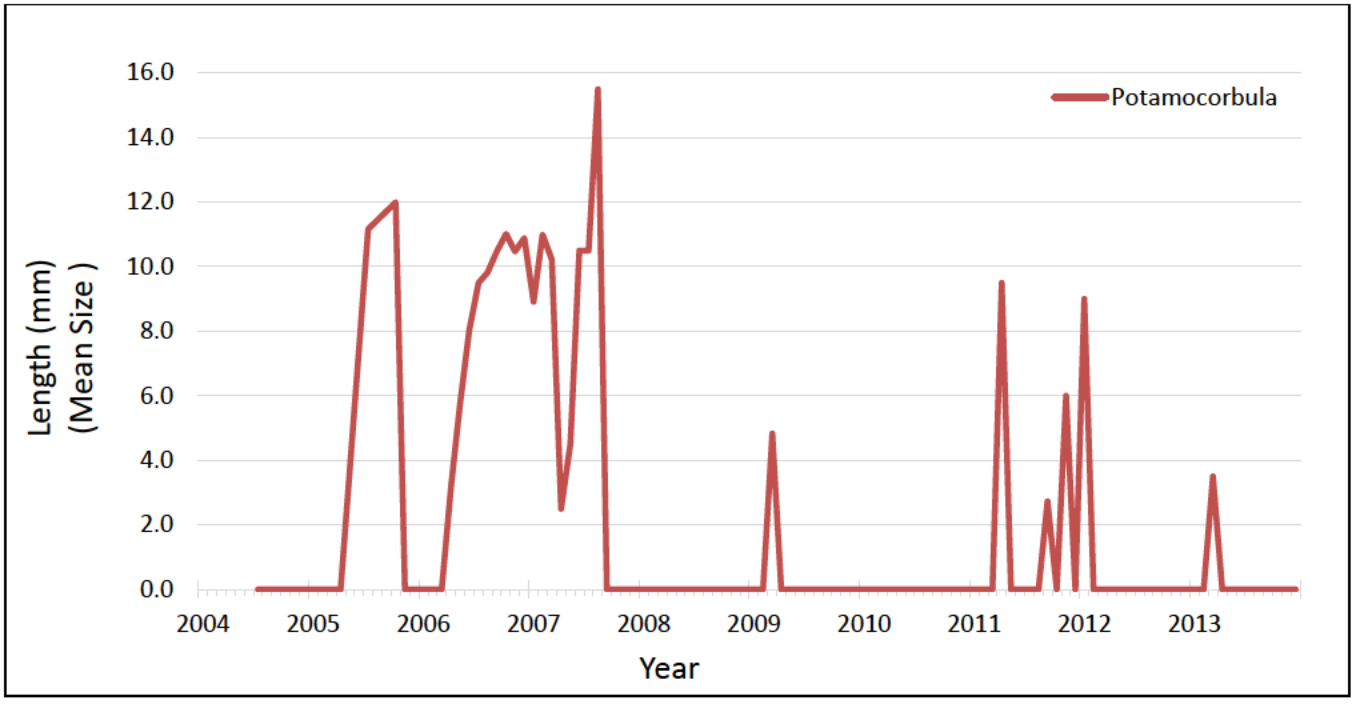

Figure 124. Graph showing mean size at station D41C from 2004–2013. For station locations refer to table 1.

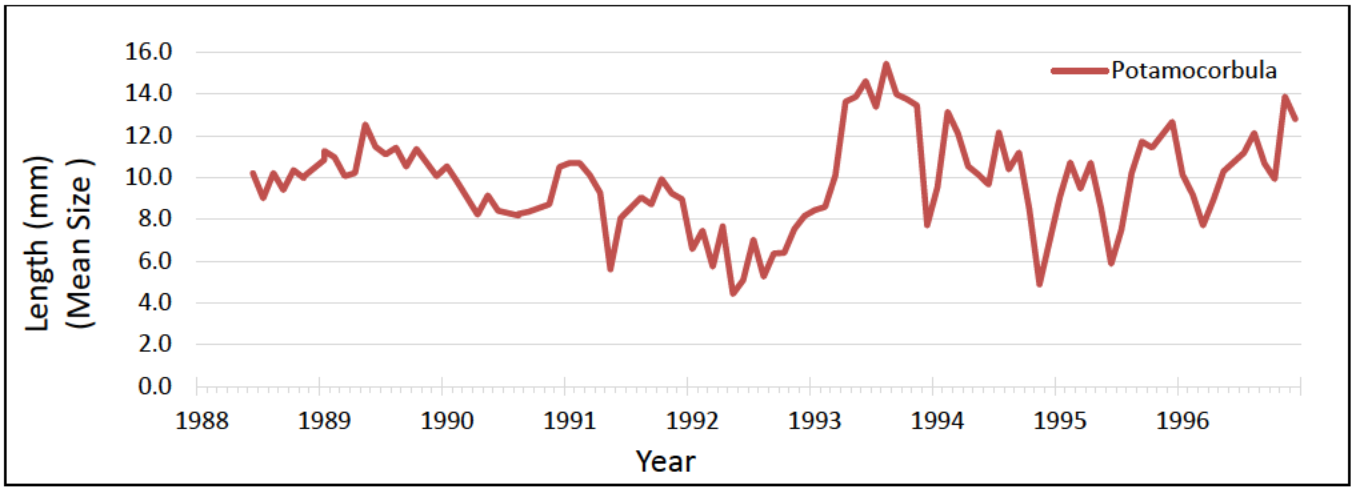

Figure 125. Graph showing mean size at station 8.1 from 1988–1996. For station locations refer to table 1.

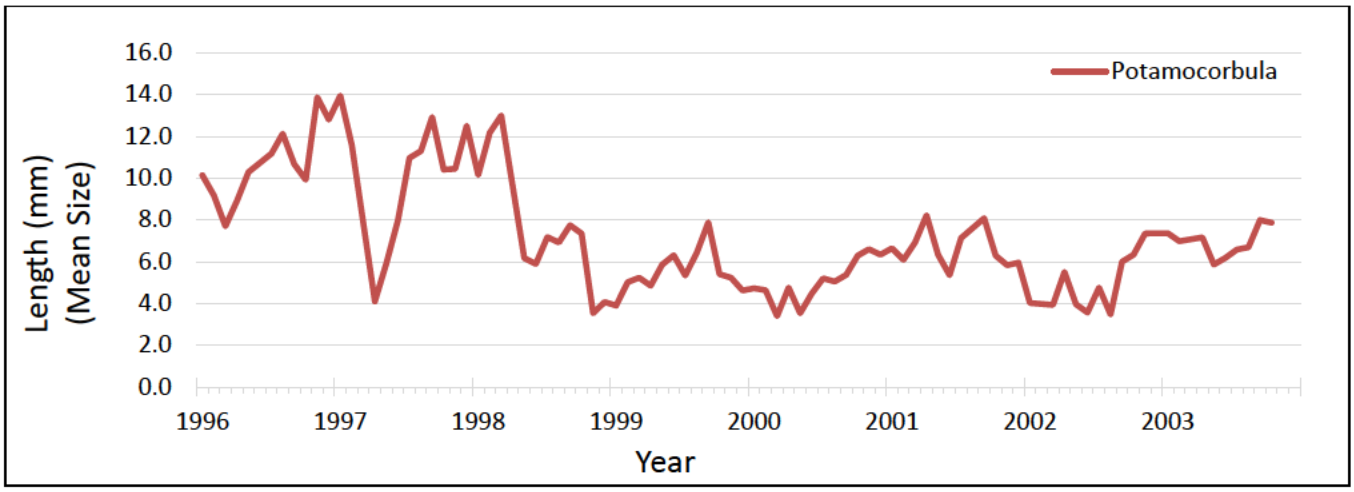

Figure 126. Graph showing mean size at station 8.1 from 1996–2003. For station locations refer to table 1.

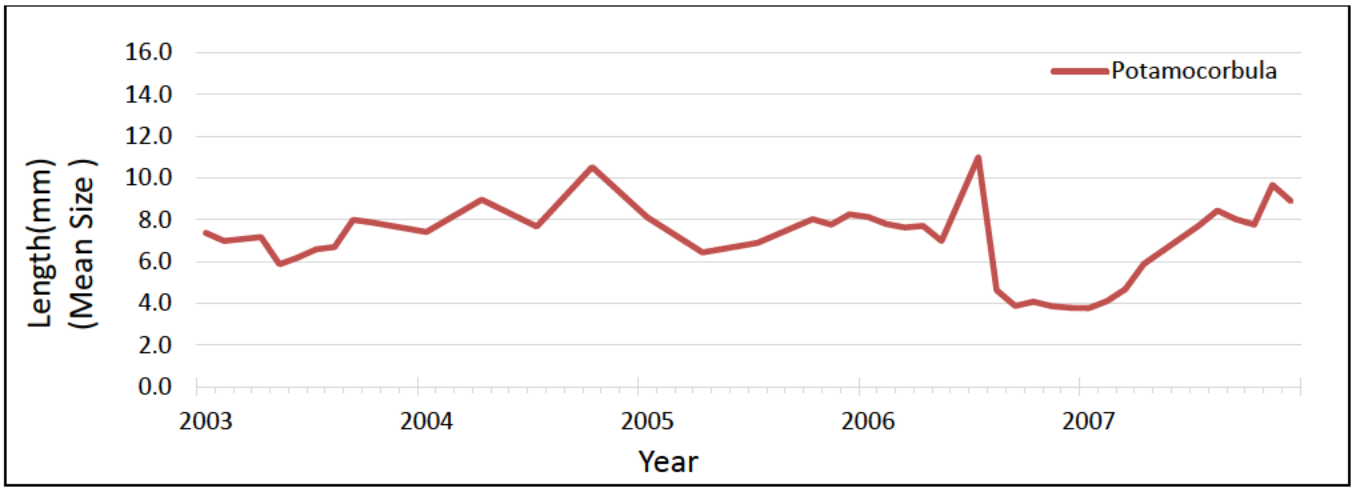

Figure 127. Graph showing mean size at station 8.1 from 2003–2007. For station locations refer to table 1.

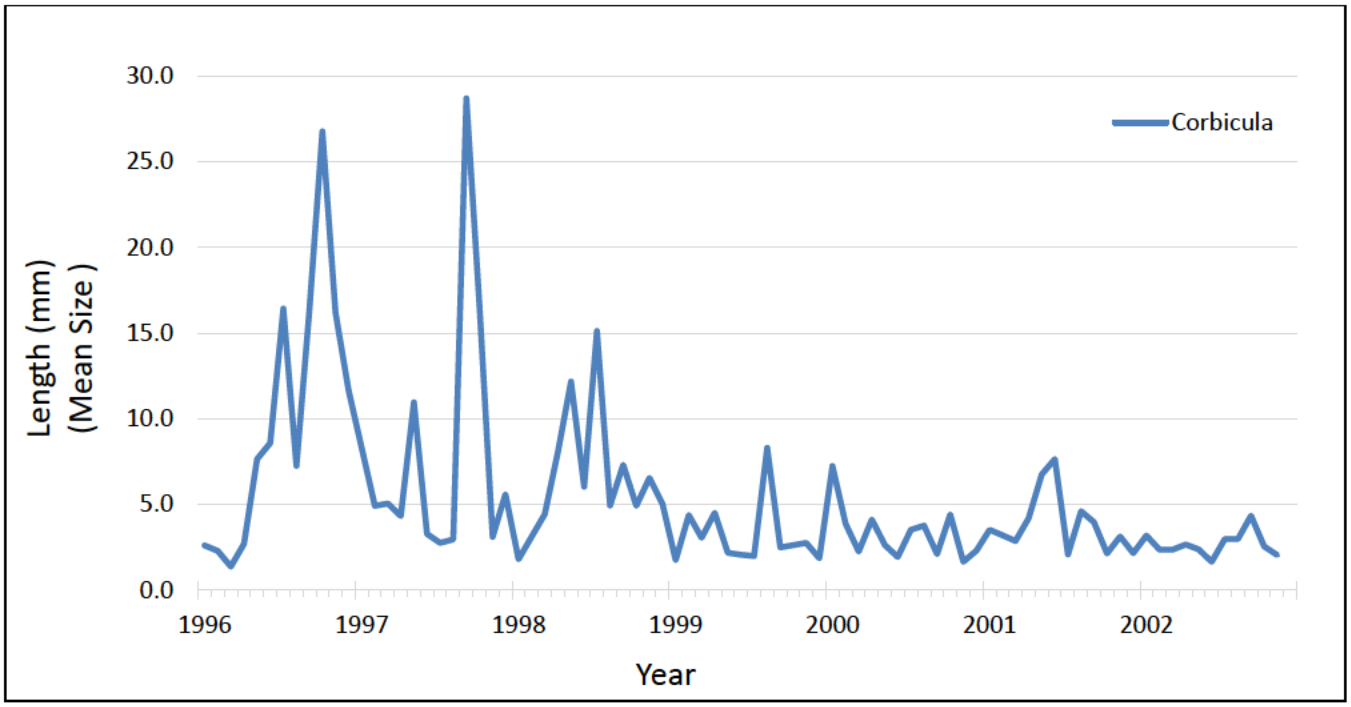

Figure 128. Graph showing mean size at station C9 from 1996–2002. For station locations refer to table 1.

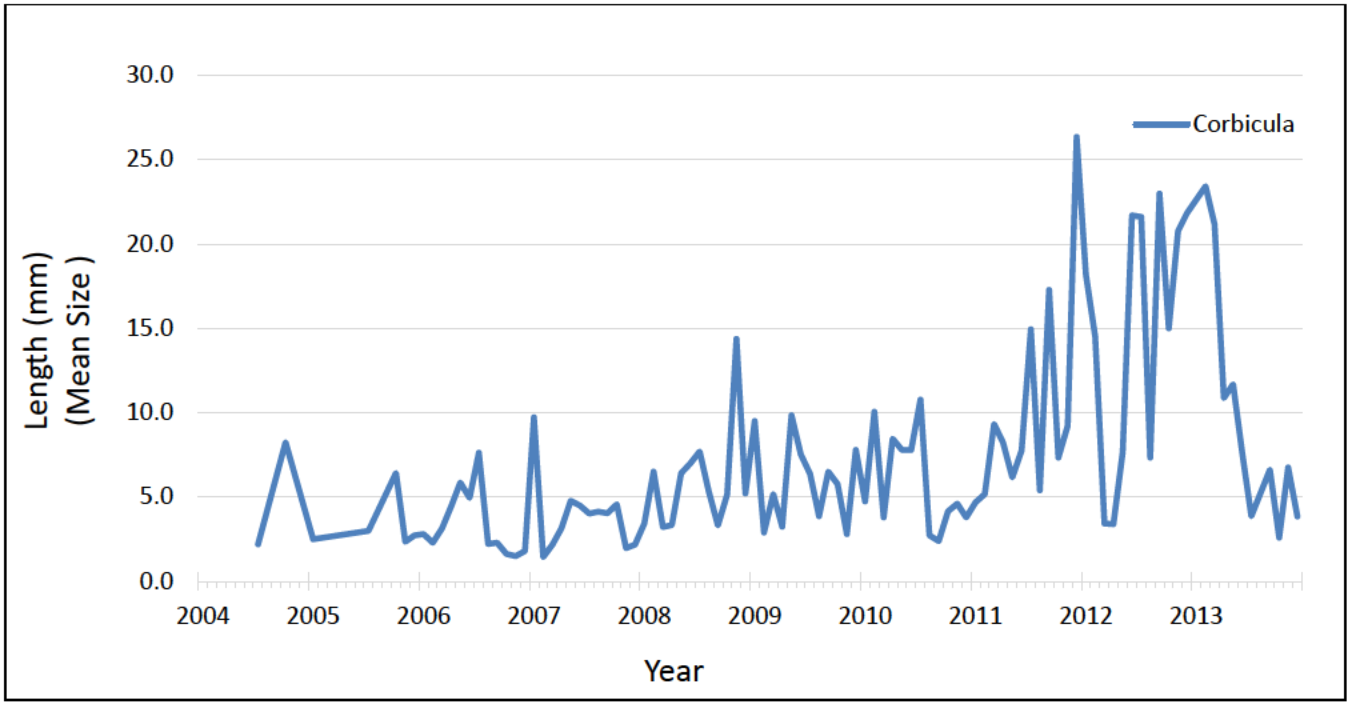

Figure 129. Graph showing mean size at station C9 from 2004–2013. For station locations refer to table 1.

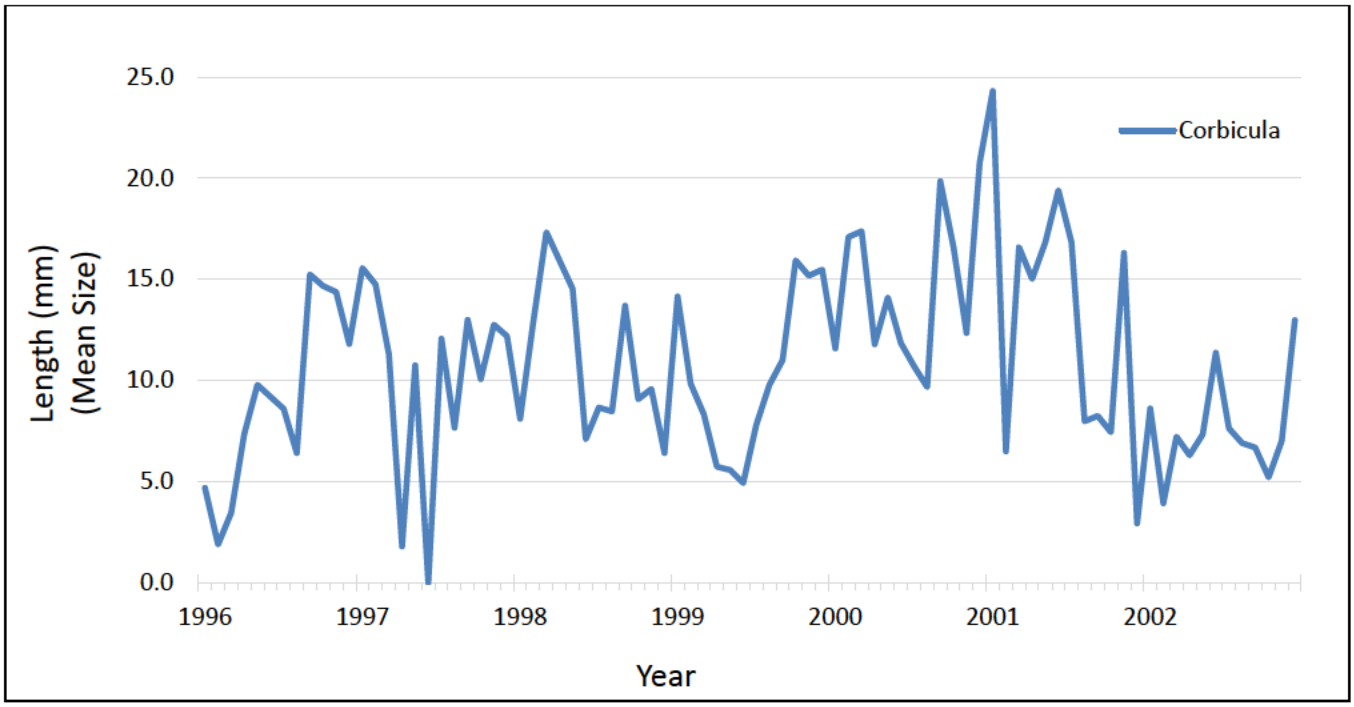

Figure 130. Graph showing mean size at station D16 from 1996–2002. For station locations refer to table 1.

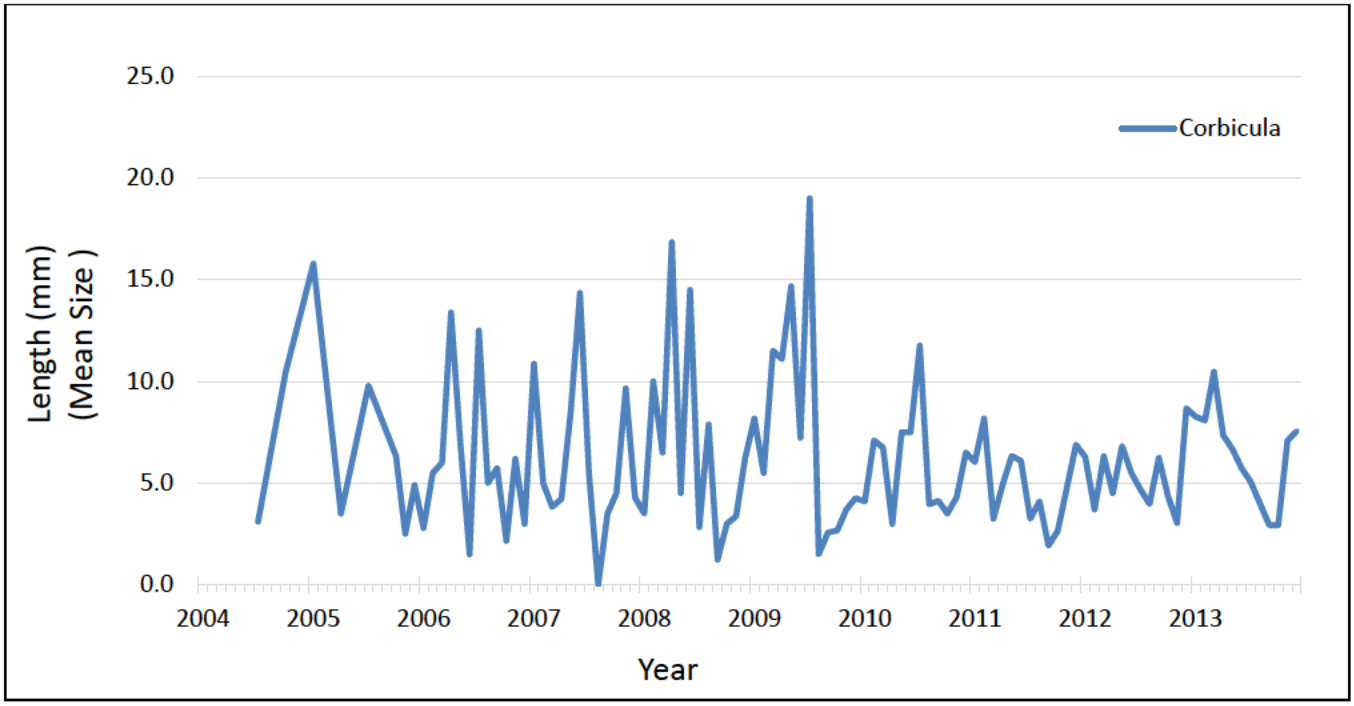

Figure 131. Graph showing mean size at station D16 from 2004–2013. For station locations refer to table 1.

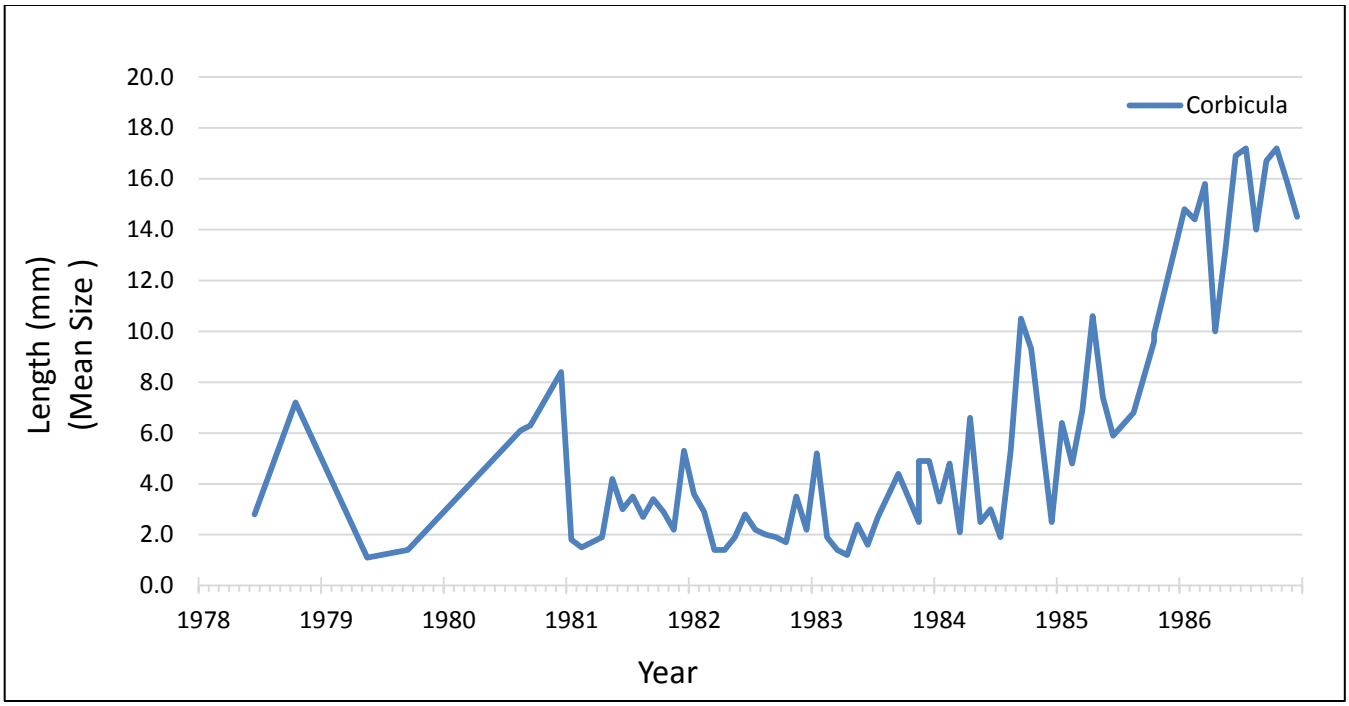

Figure 132. Graph showing mean size at station D19C from 1978–1986. For station locations refer to table 1.

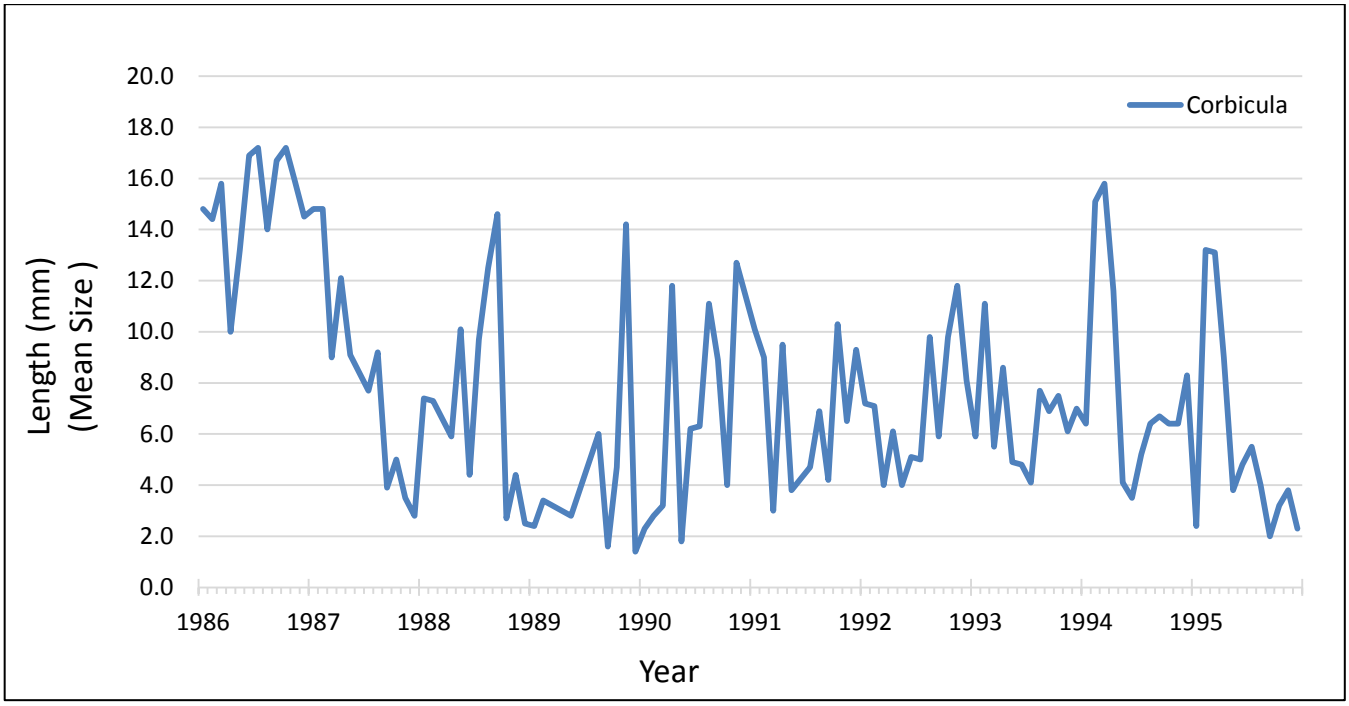

Figure 133. Graph showing mean size at station D19C from 1986–1995. For station locations refer to table 1.

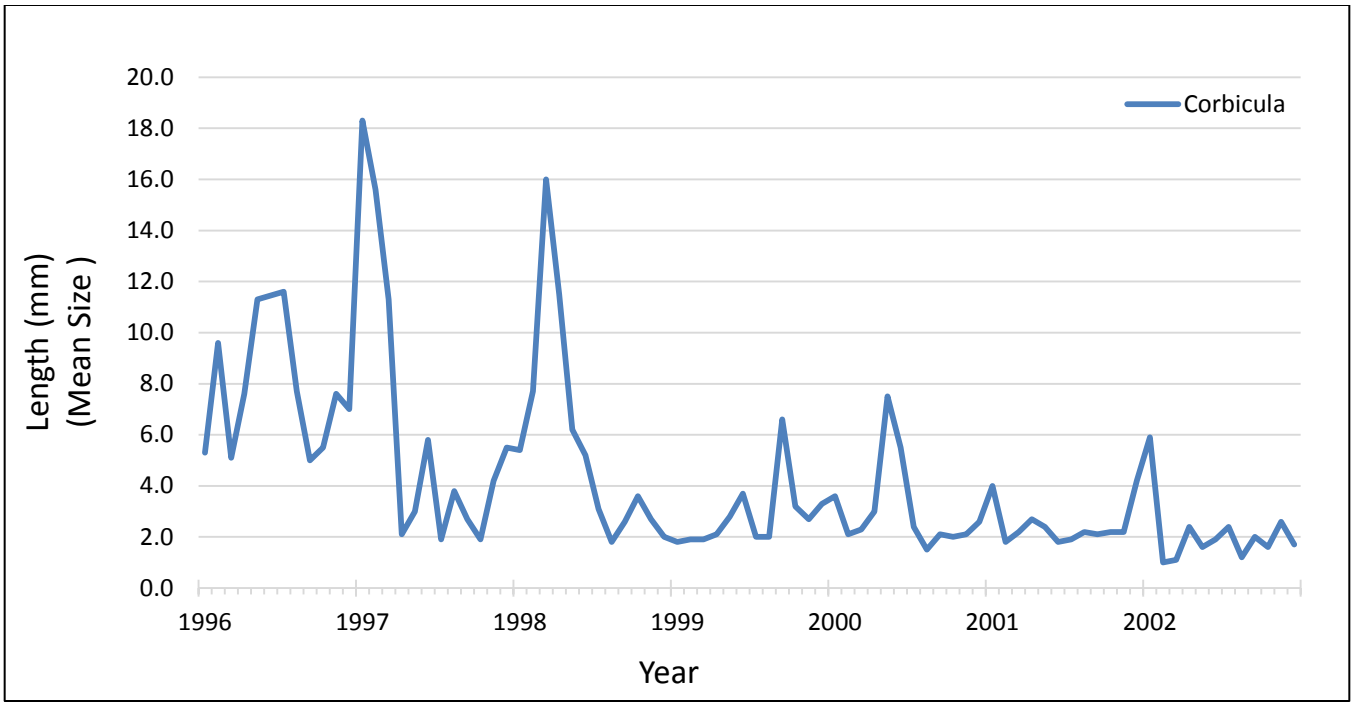

Figure 134. Graph showing mean size at station D24 from 1996–2002. For station locations refer to table 1.

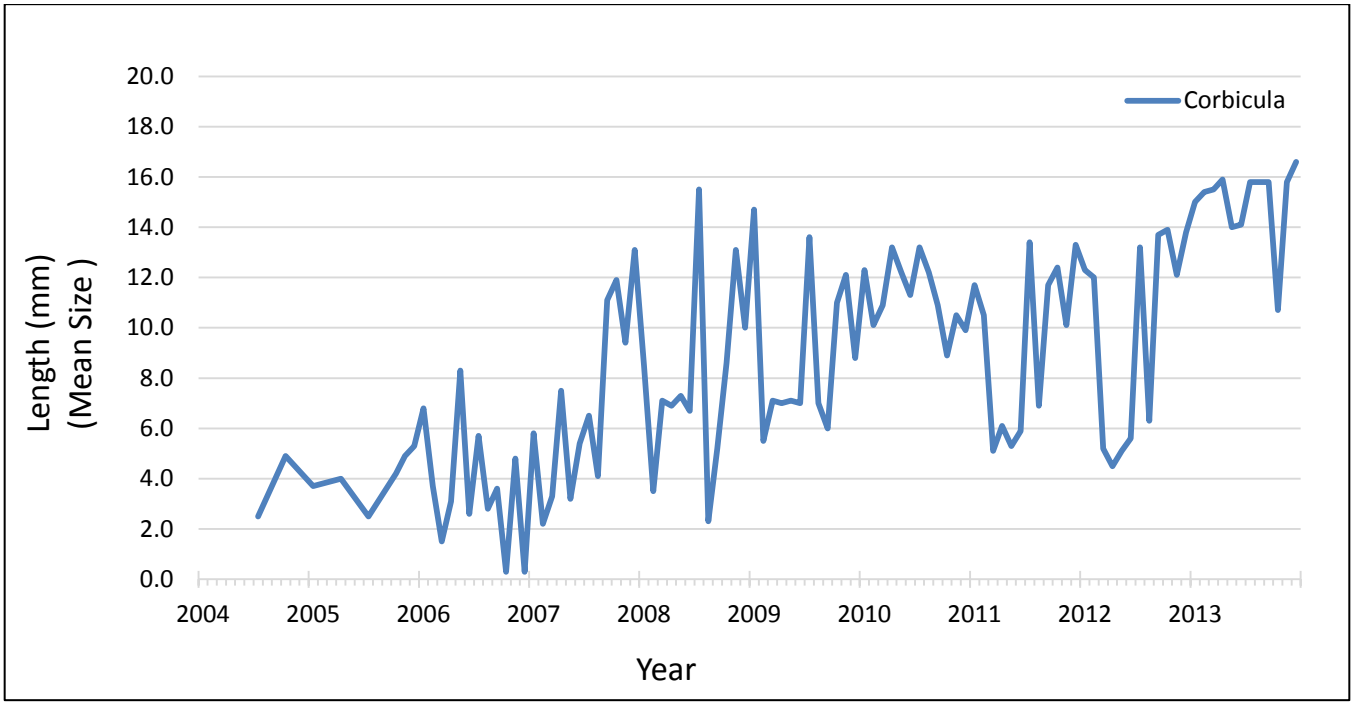

Figure 135. Graph showing mean size at station D24 from 2004–2013 For station locations refer to table 1.

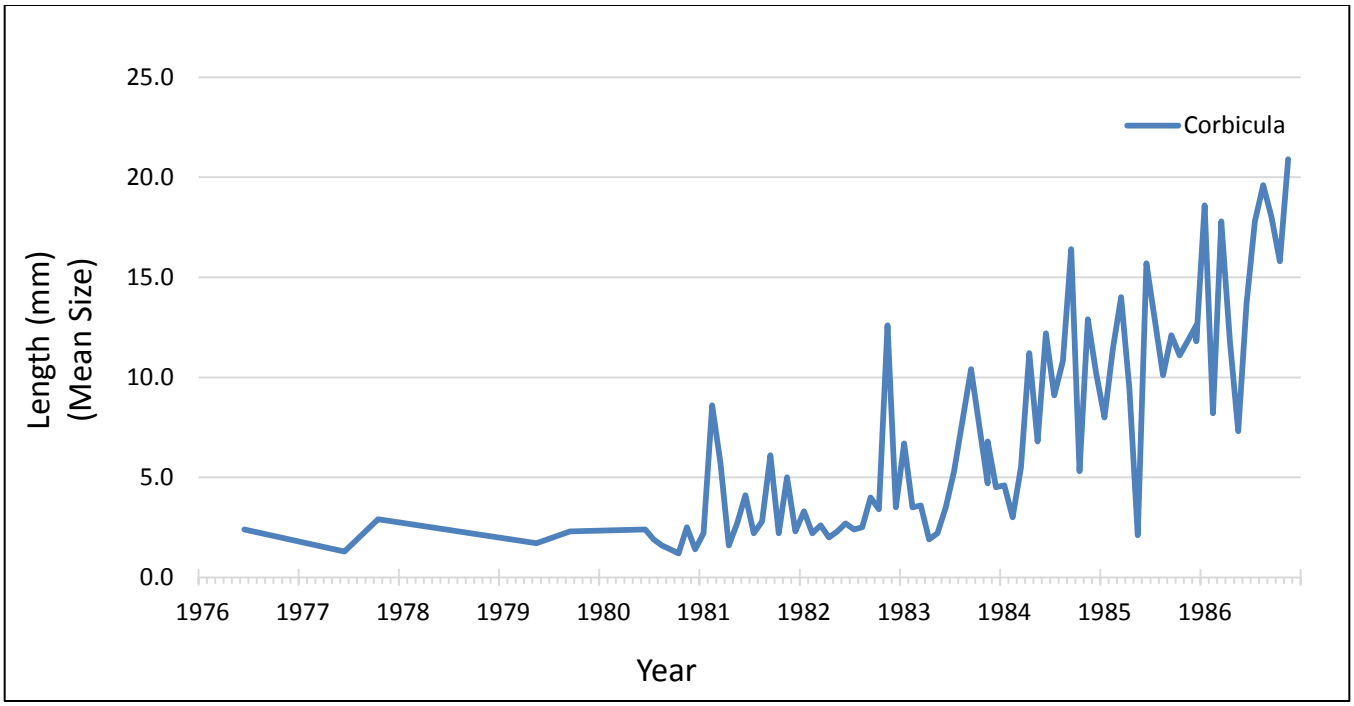

Figure 136. Graph showing mean size at station D28 from 1976–1986. For station locations refer to table 1.

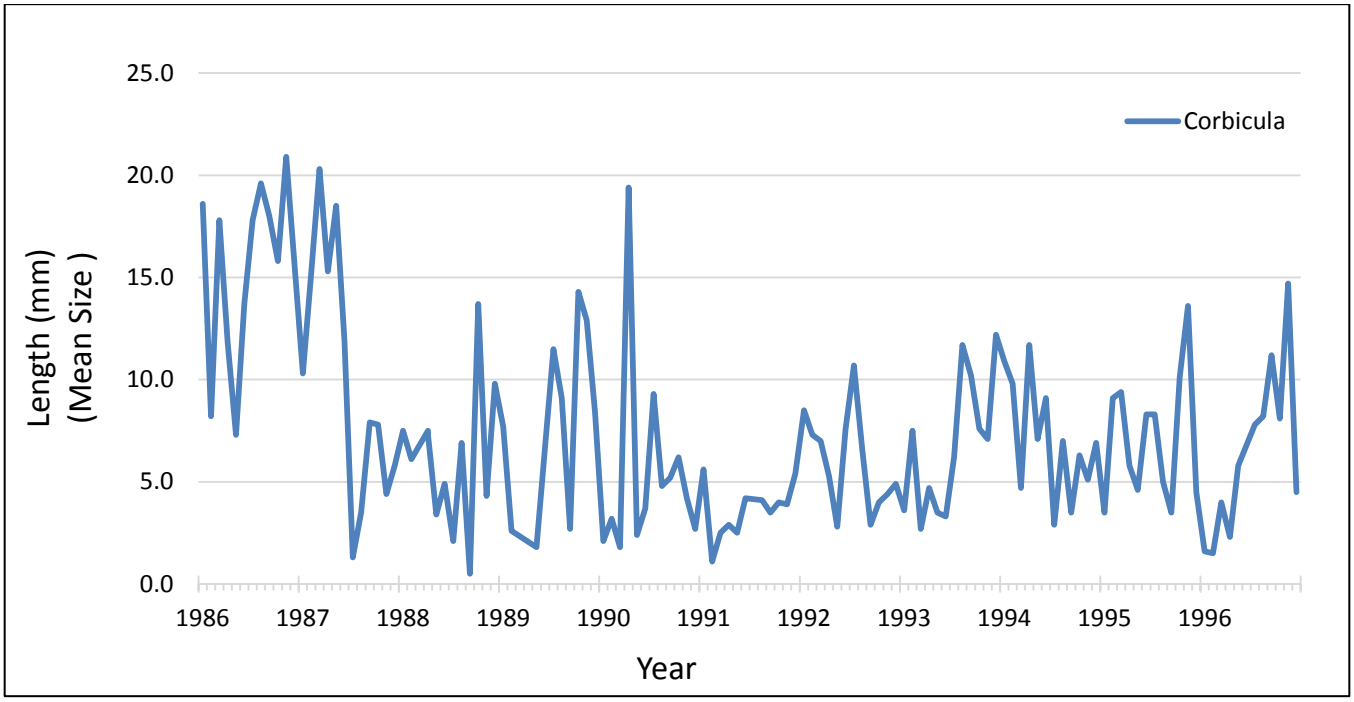

Figure 137. Graph showing mean size at station D28 from 1986–1996. For station locations refer to table 1.

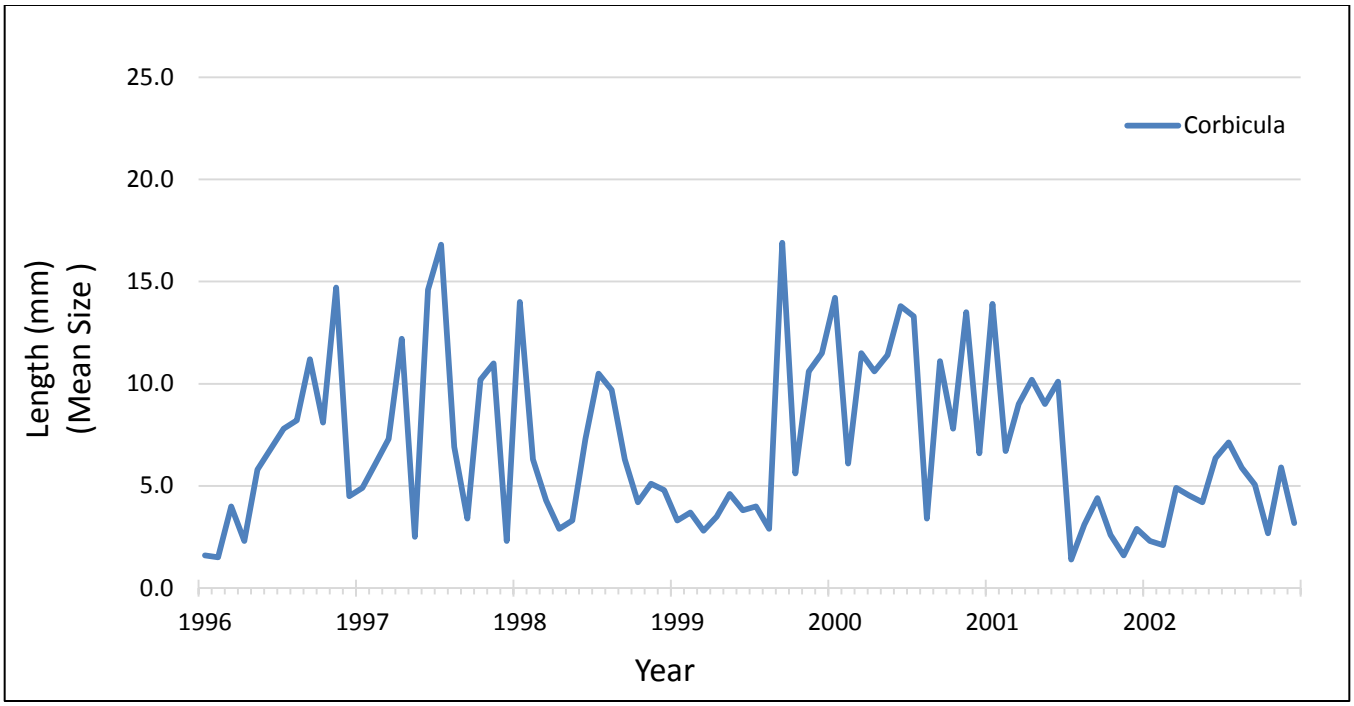

Figure 138. Graph showing mean size at station D28 from 1996–2002. For station locations refer to table 1.

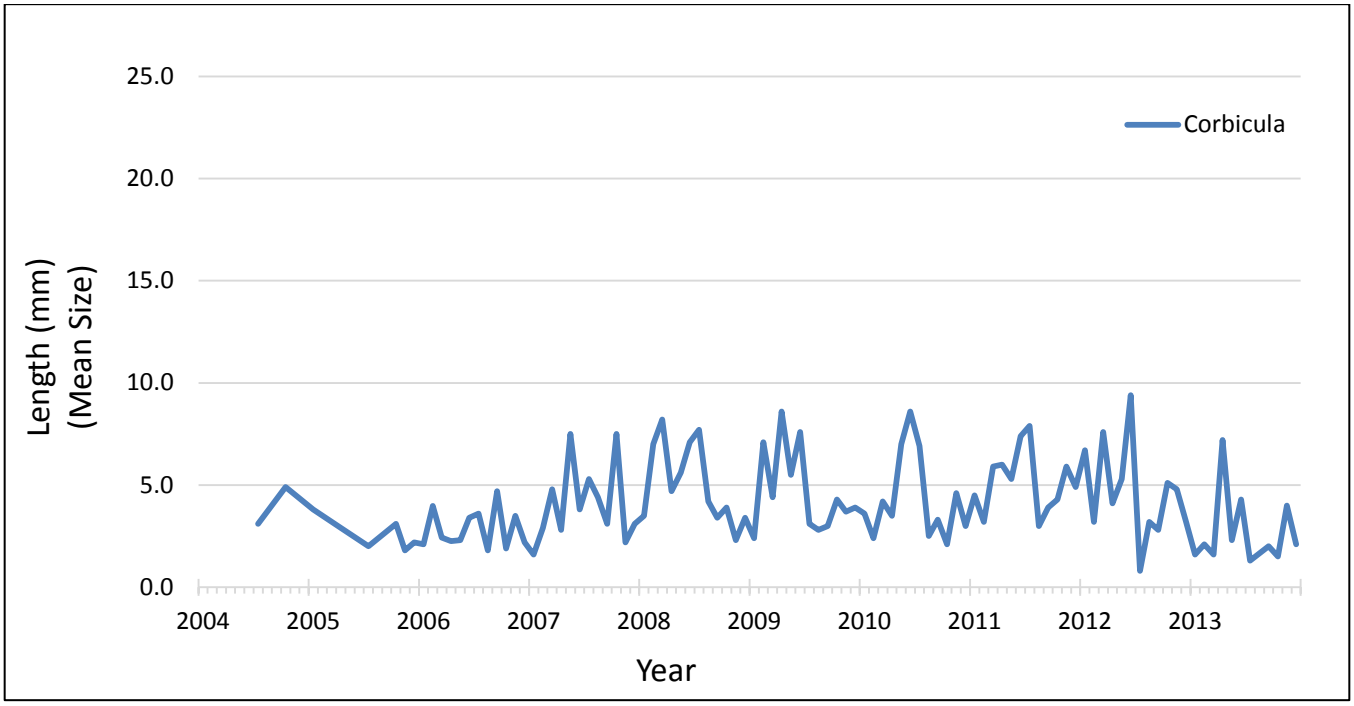

Figure 139. Graph showing mean size at station D28 from 2004–2013. For station locations refer to table 1.

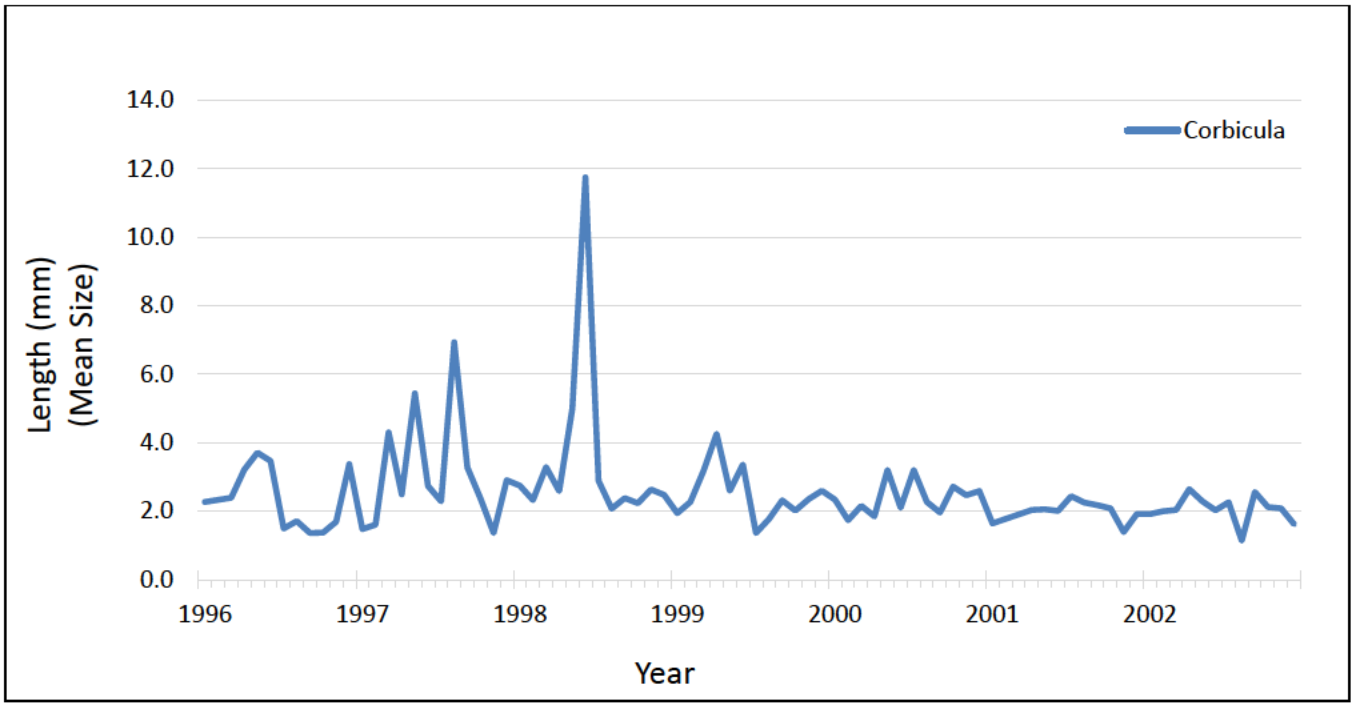

Figure 140. Graph showing mean size at station P8 from 1996–2002. For station locations refer to table 1.

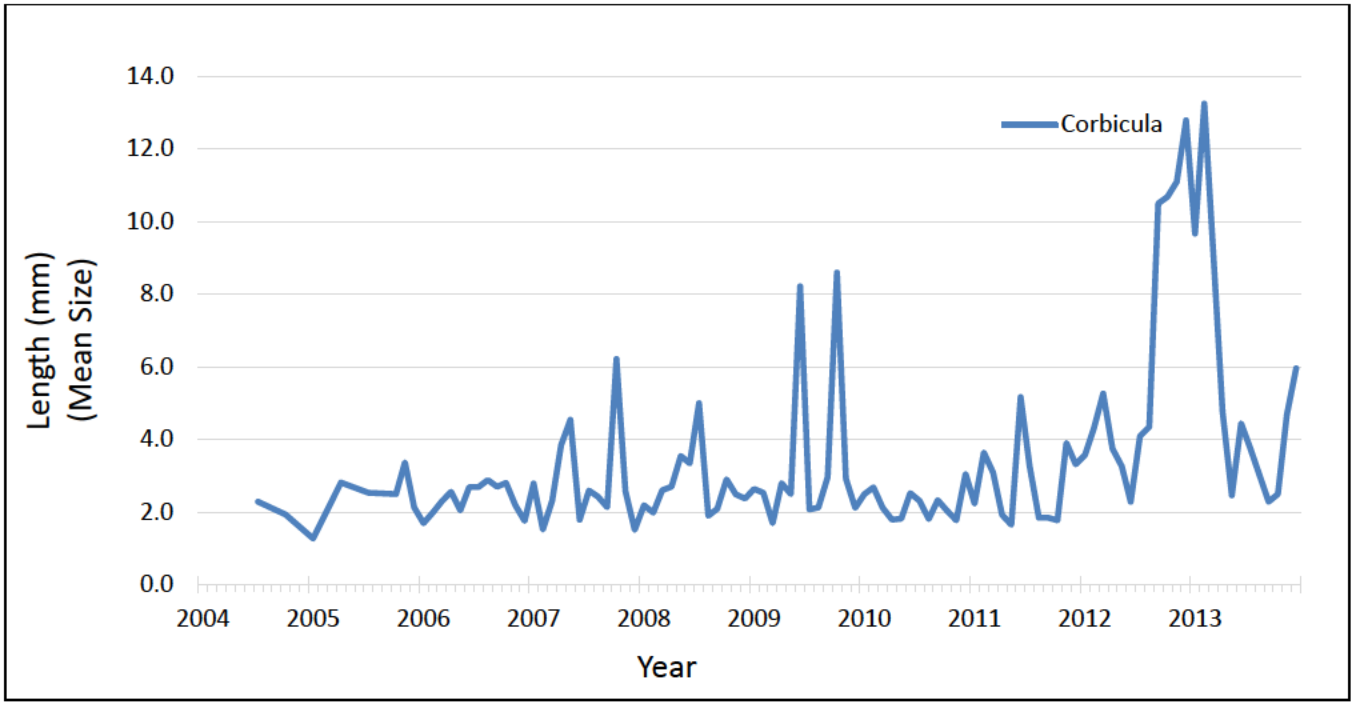

Figure 141. Graph showing mean size at station P8 from 2004–2013. For station locations refer to table 1.

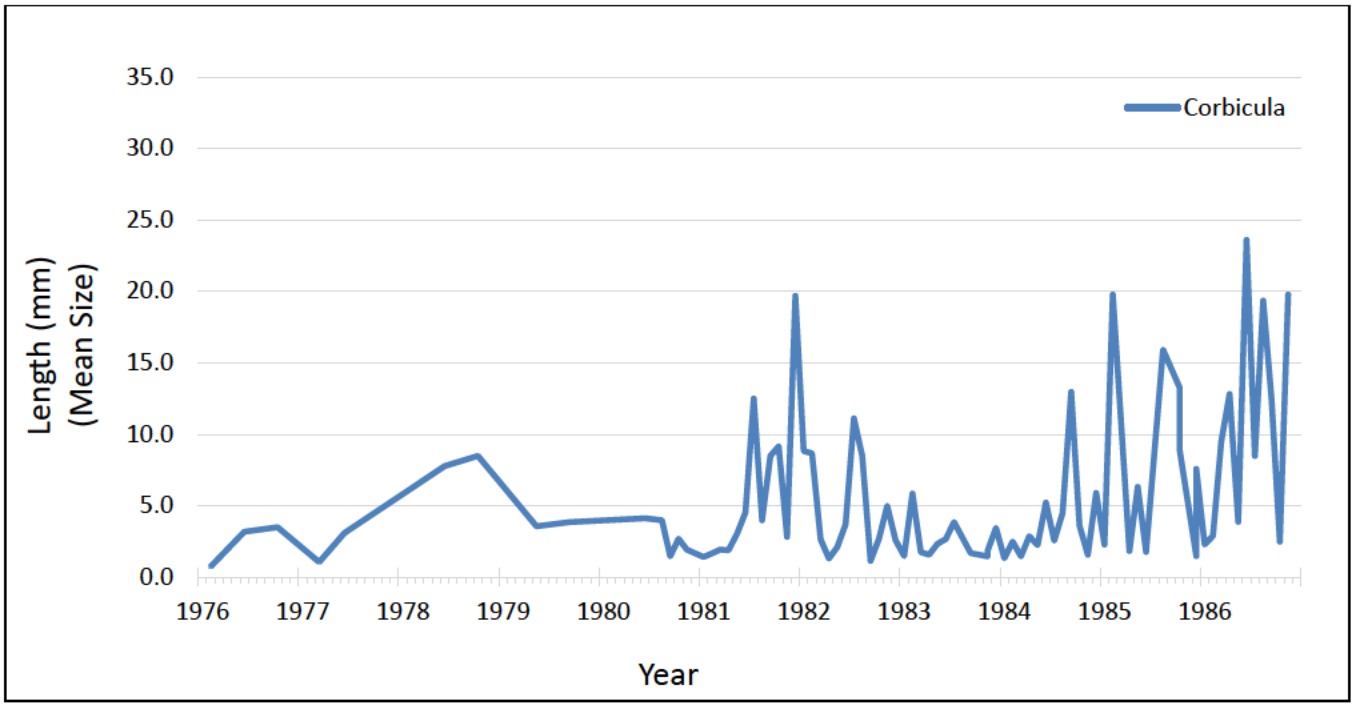

Figure 142. Graph showing mean size at station D4C from 1976–1986. For station locations refer to table 1.

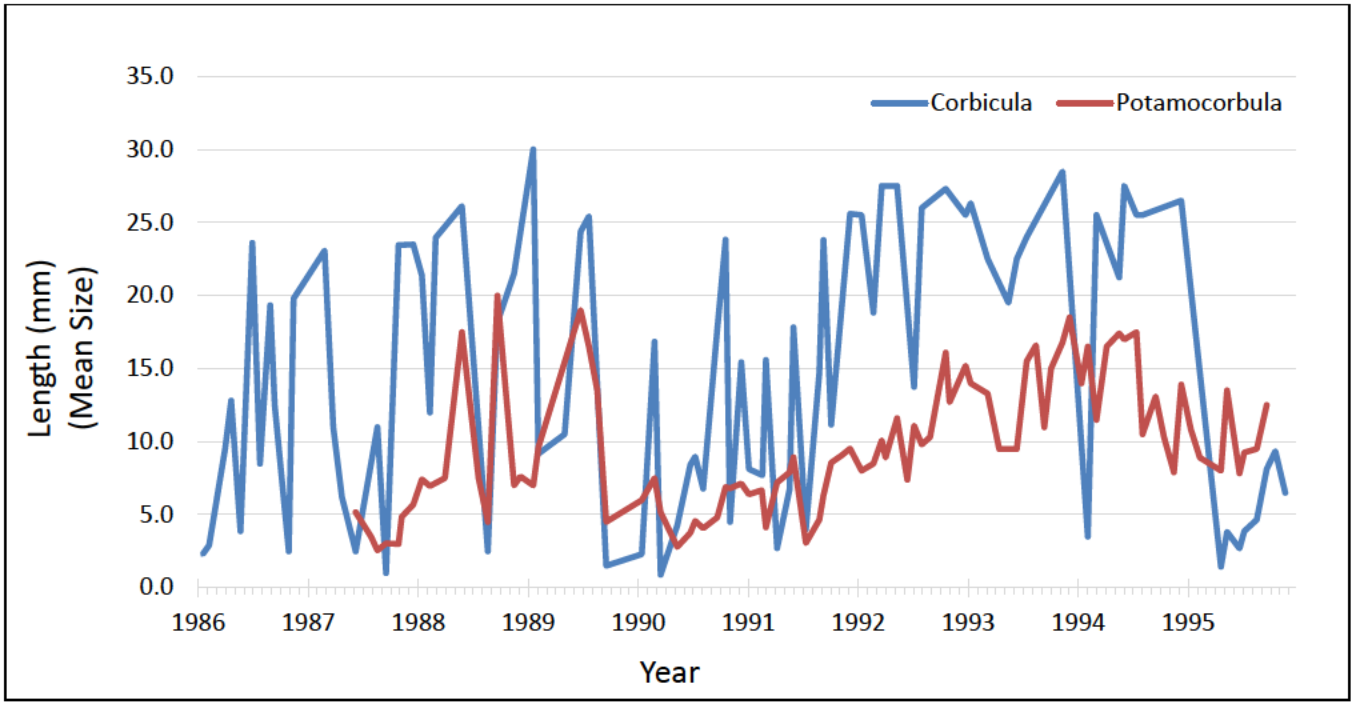

Figure 143. Graph showing mean size at station D4C from 1986–1995. For station locations refer to table 1.

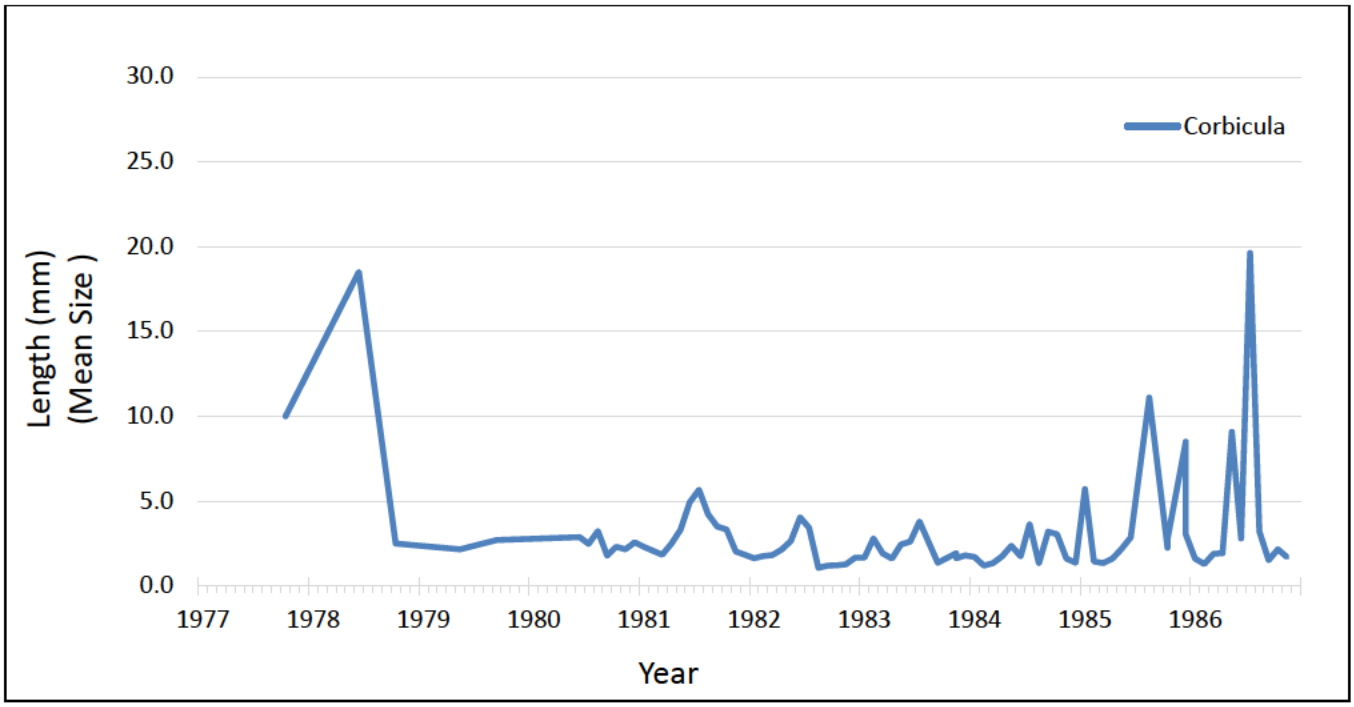

Figure 144. Graph showing mean size at station D4L from 1977–1986. For station locations refer to table 1.

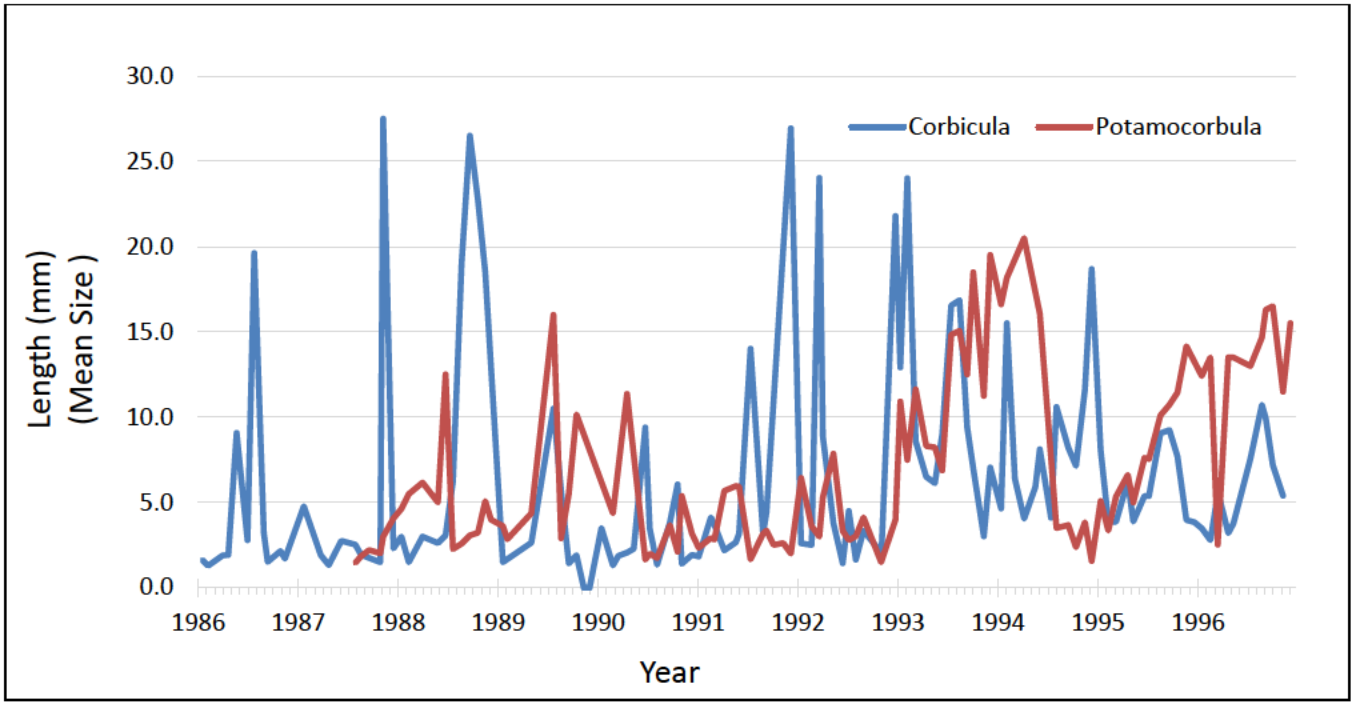

Figure 145. Graph showing mean size at station D4L from 1986–1996. For station locations refer to table 1.

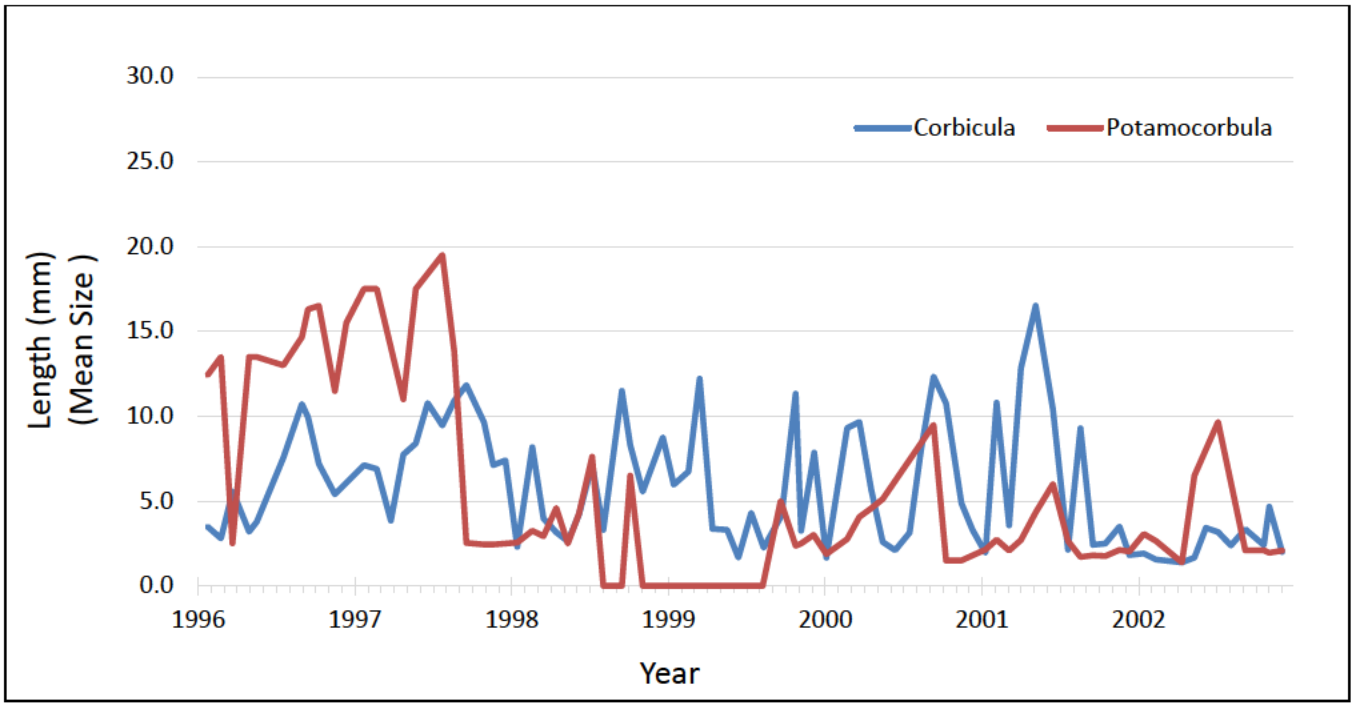

Figure 146. Graph showing mean size at station D4L from 1996–2002. For station locations refer to table 1.

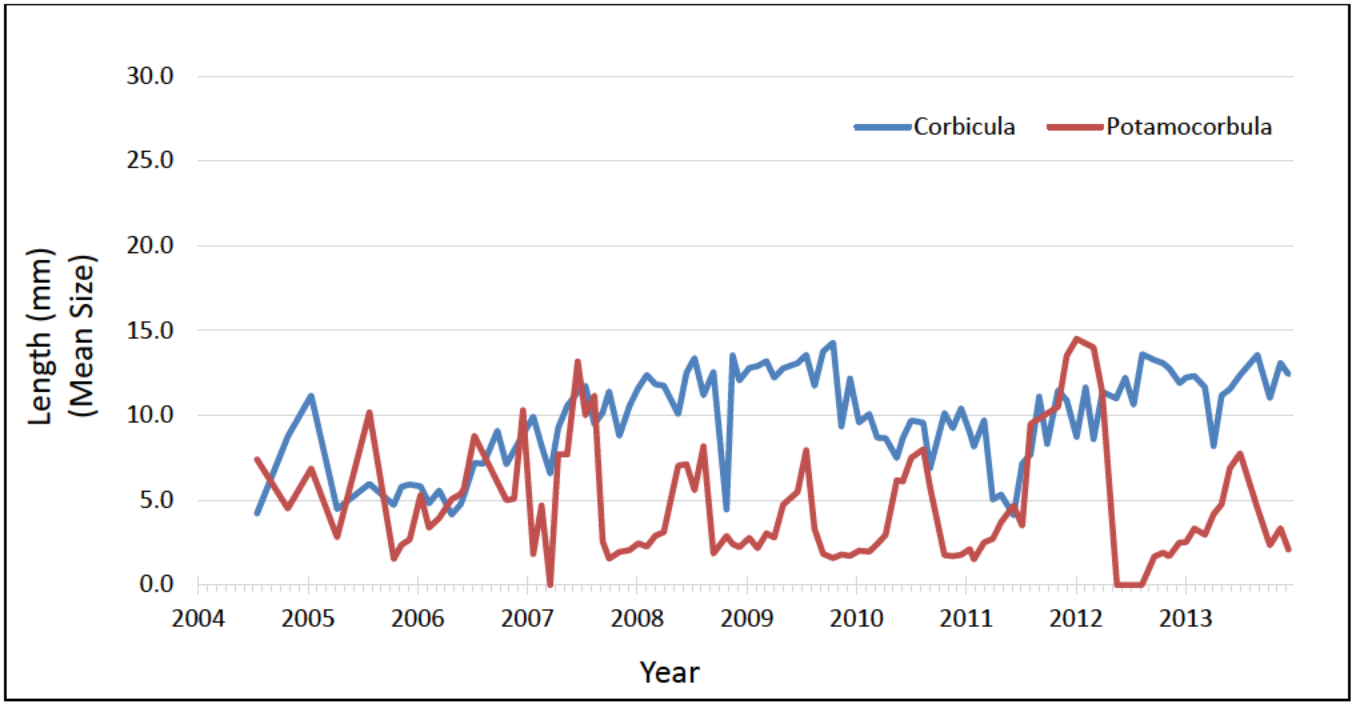

Figure 147. Graph showing mean size at station D4L from 2004–2013. For station locations refer to table 1.

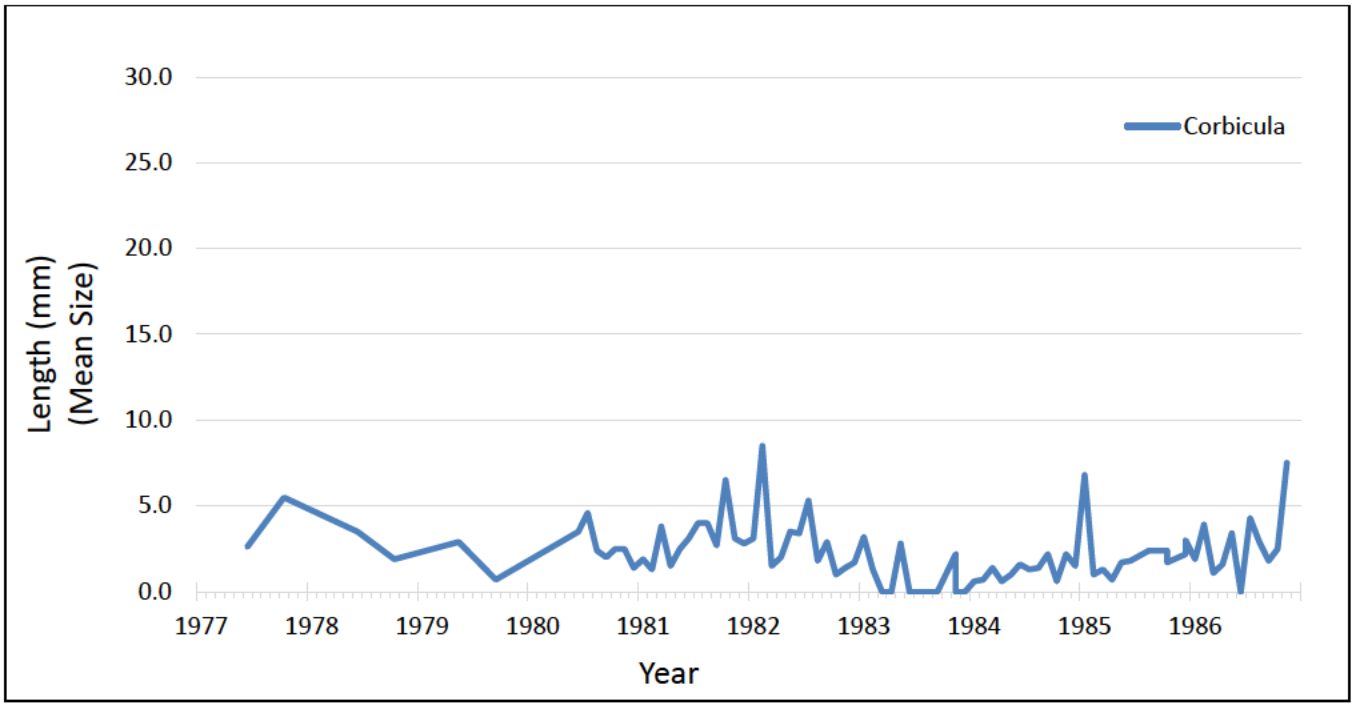

Figure 148. Graph showing mean size at station D4R from 1977–1986. For station locations refer to table 1.

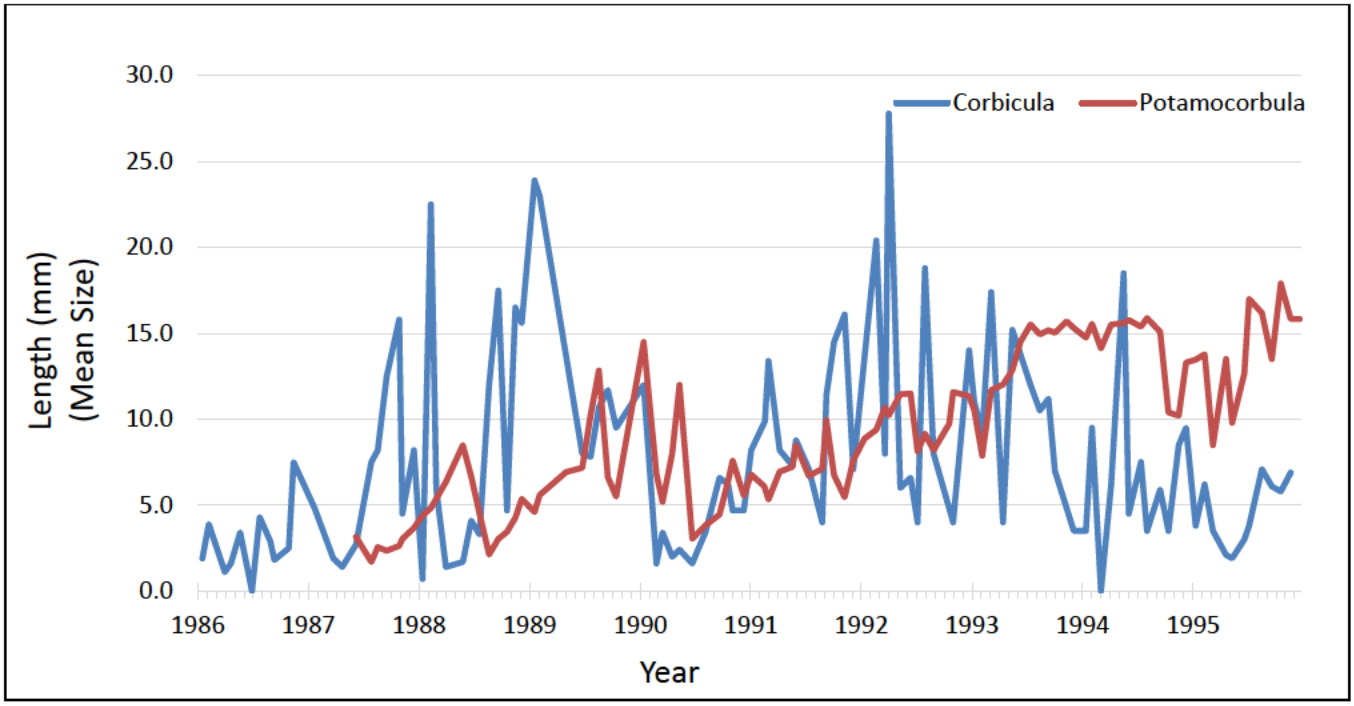

Figure 149. Graph showing mean size at station D4R from 1986–1995. For station locations refer to table 1.

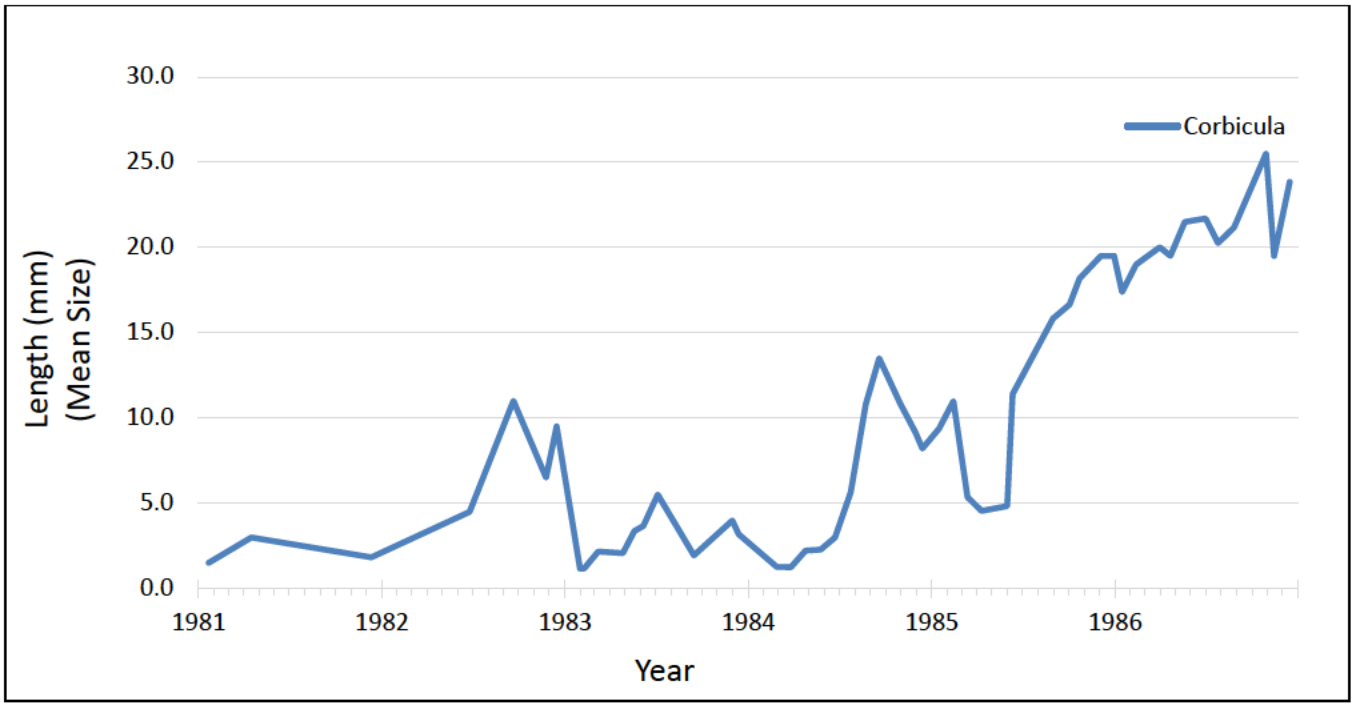

Figure 150. Graph showing mean size at station D7 from 1981–1986. For station locations refer to table 1.

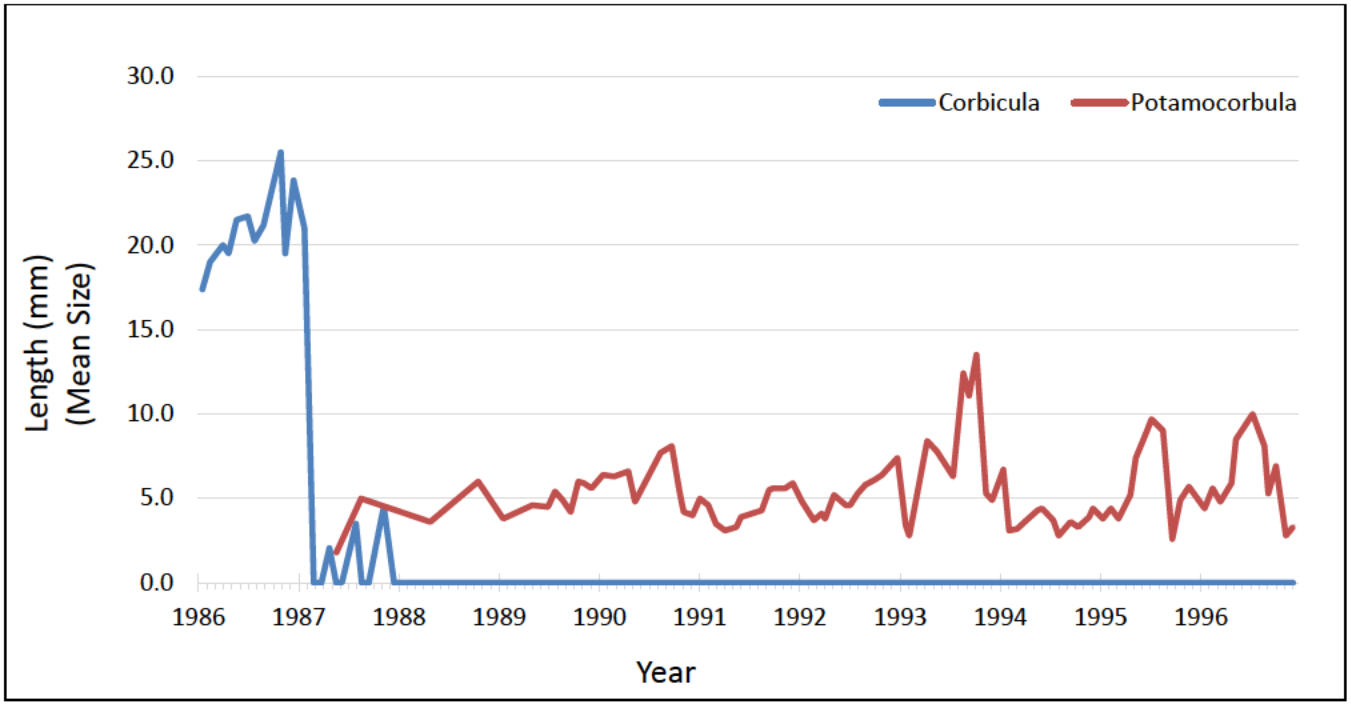

Figure 151. Graph showing mean size at station D7 from 1986–1996. For station locations refer to table 1.

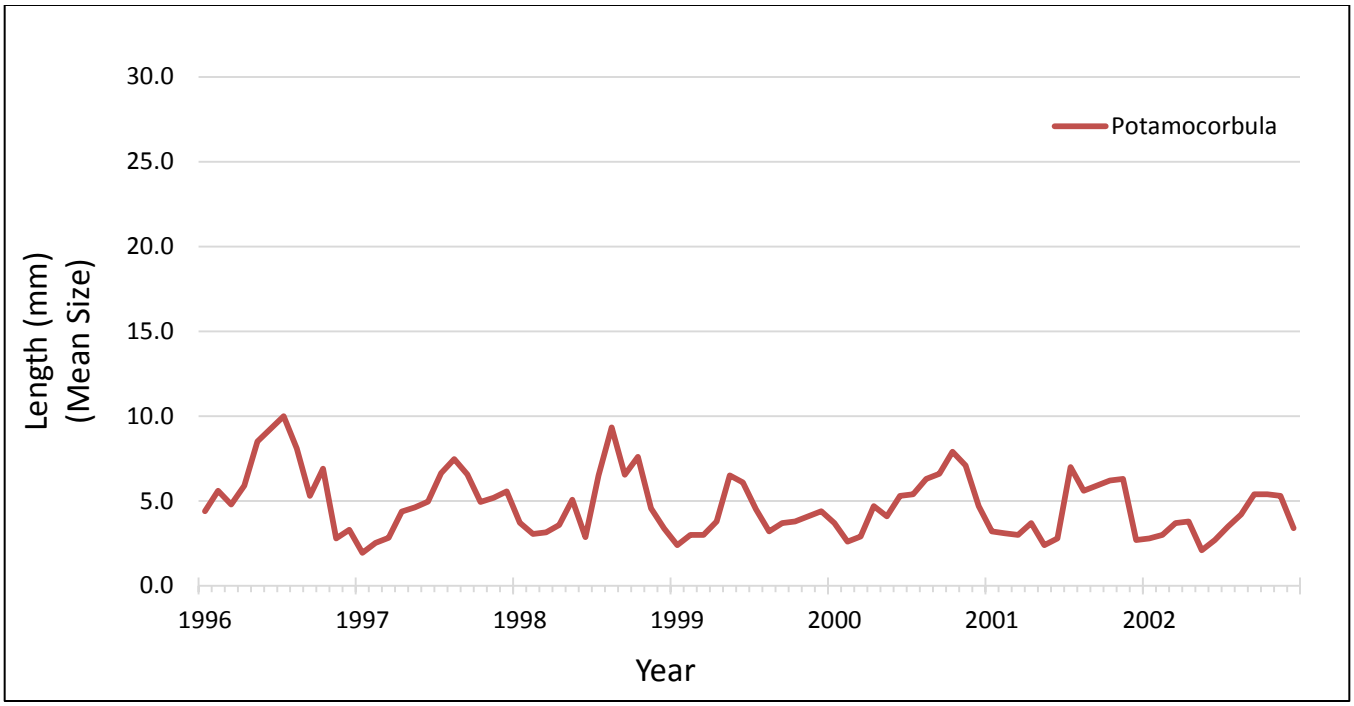

Figure 152. Graph showing mean size at station D7 from 1996–2002. For station locations refer to table 1.

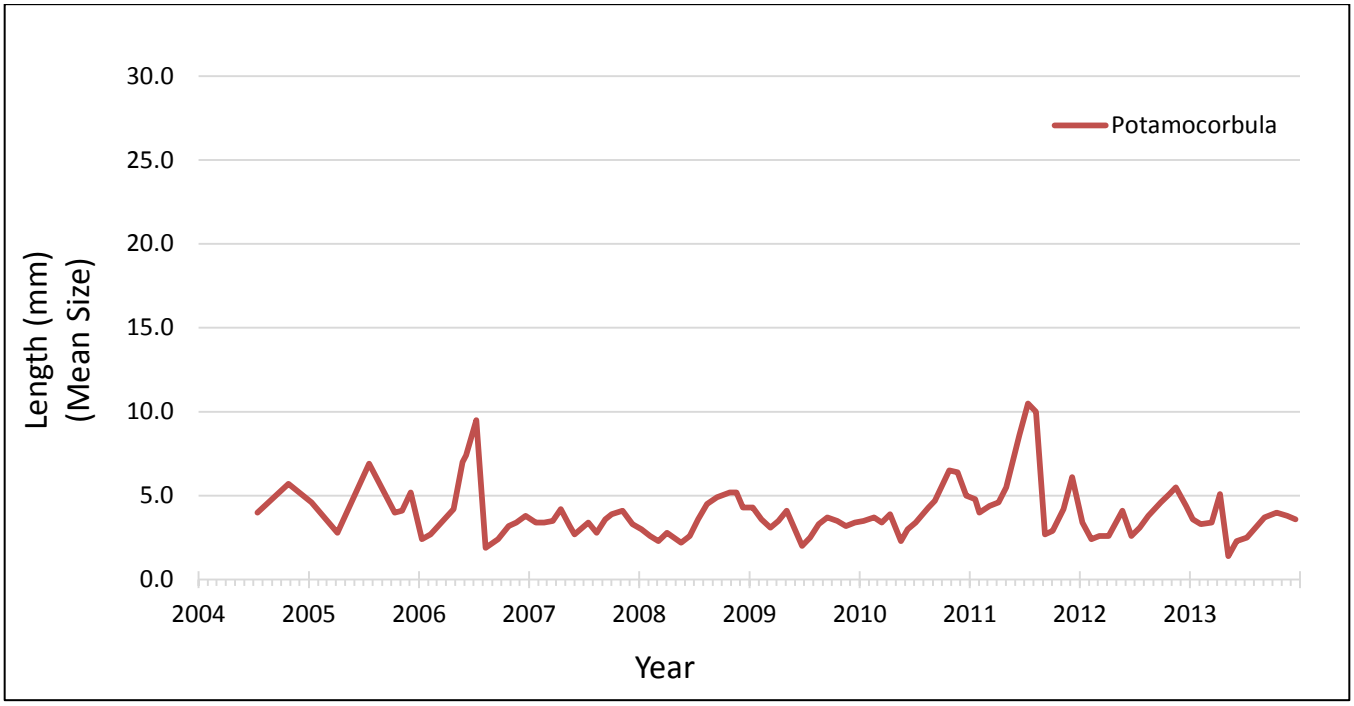

Figure 153. Graph showing mean size at station D7 from 2004–2013. For station locations refer to table 1.

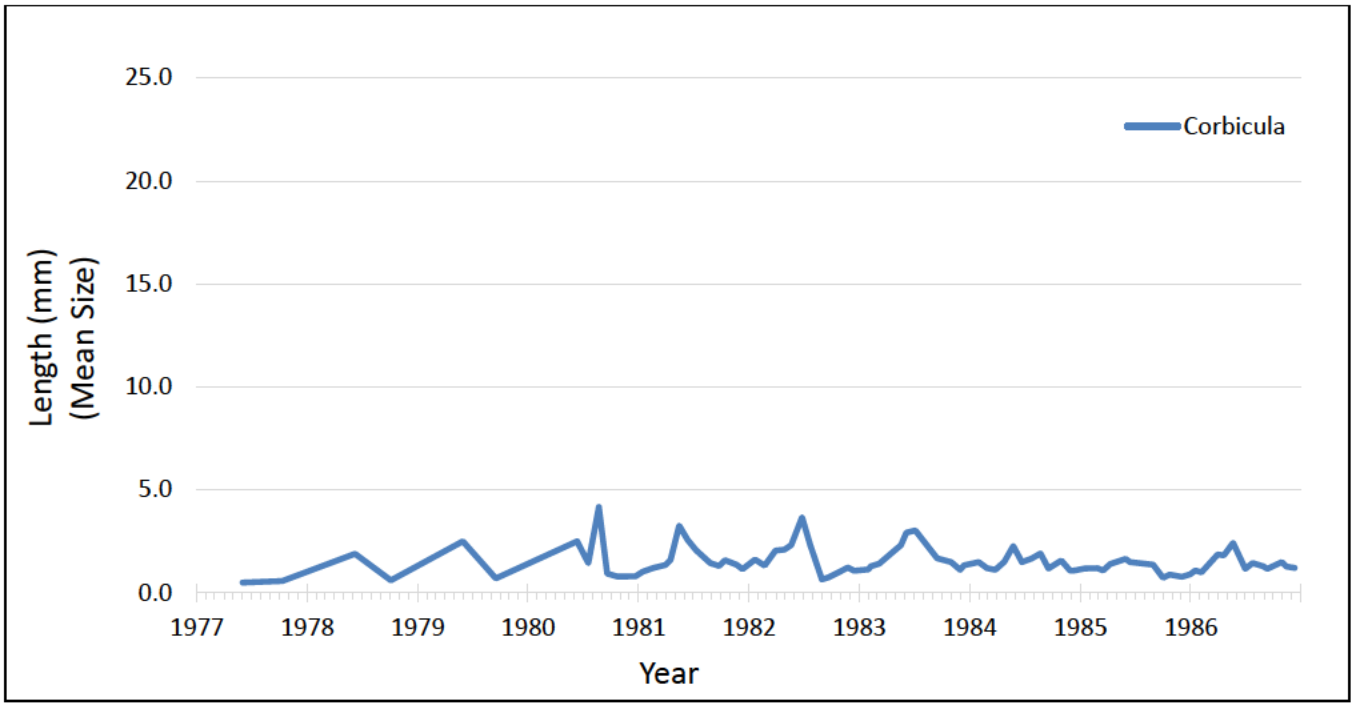

Figure 154. Graph showing mean size at station D11 from 1977–1986. For station locations refer to table 1.

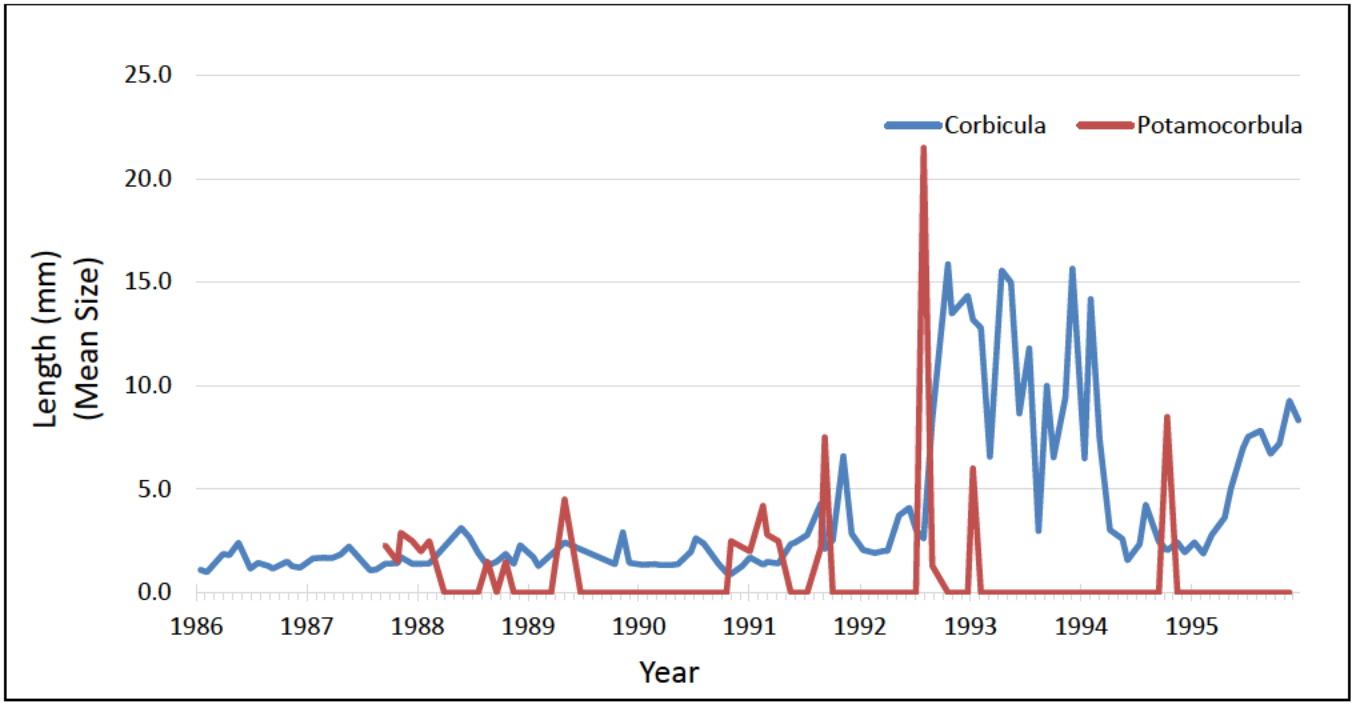

Figure 155. Graph showing mean size at station D11 from 1986–1995. For station locations refer to table 1.

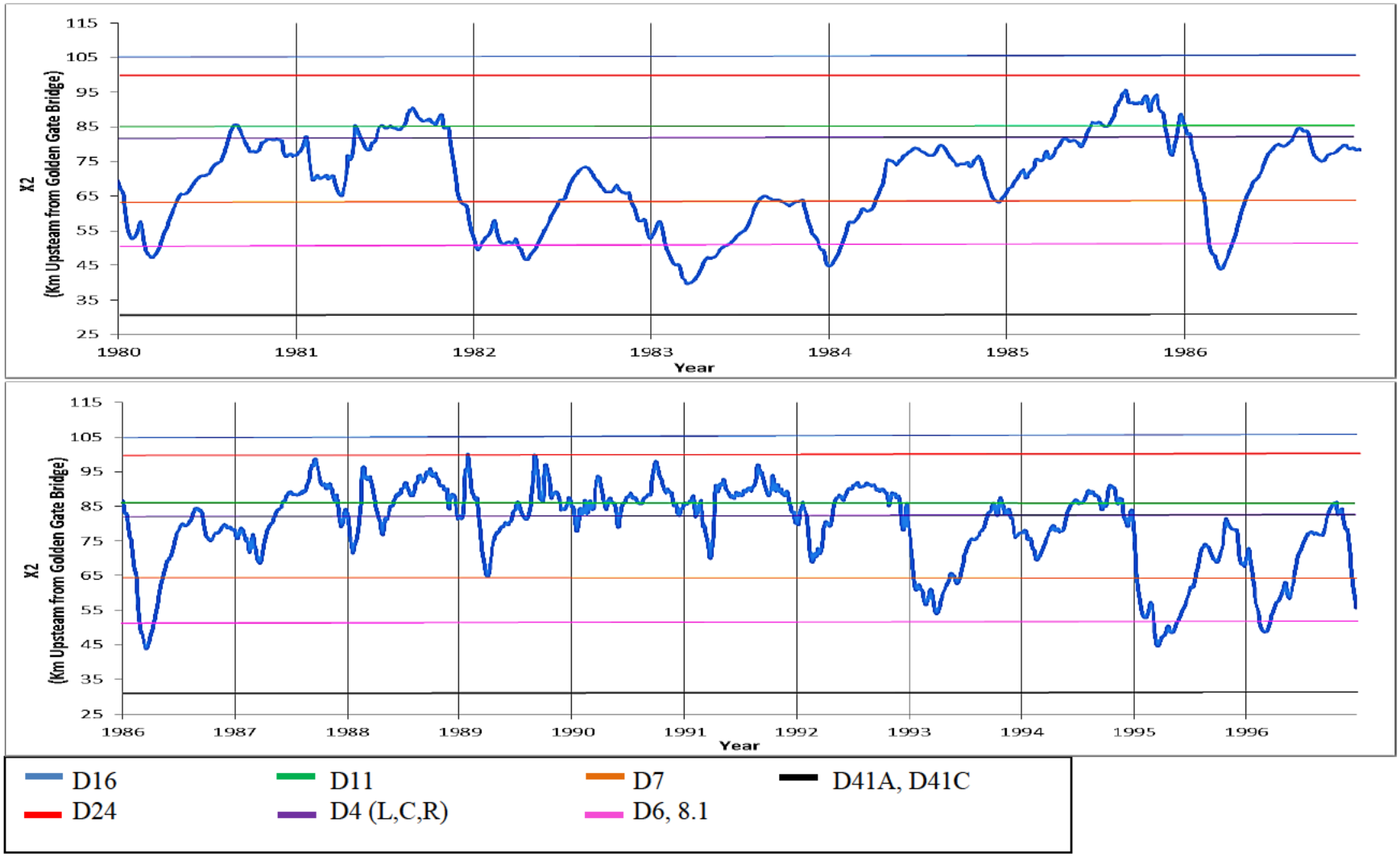

Figure 156. Graphs plotting X2 in kilometers upstream of the Golden Gate Bridge from 1980 through 1996. Colors represent station locations relative to X2. The X2 position is not a precise measurement but represents the distance upstream from the Golden Gate Bridge, where a daily average salinity at 1 meter (m) above of the bottom is 2 (Jassby and others, 1995).

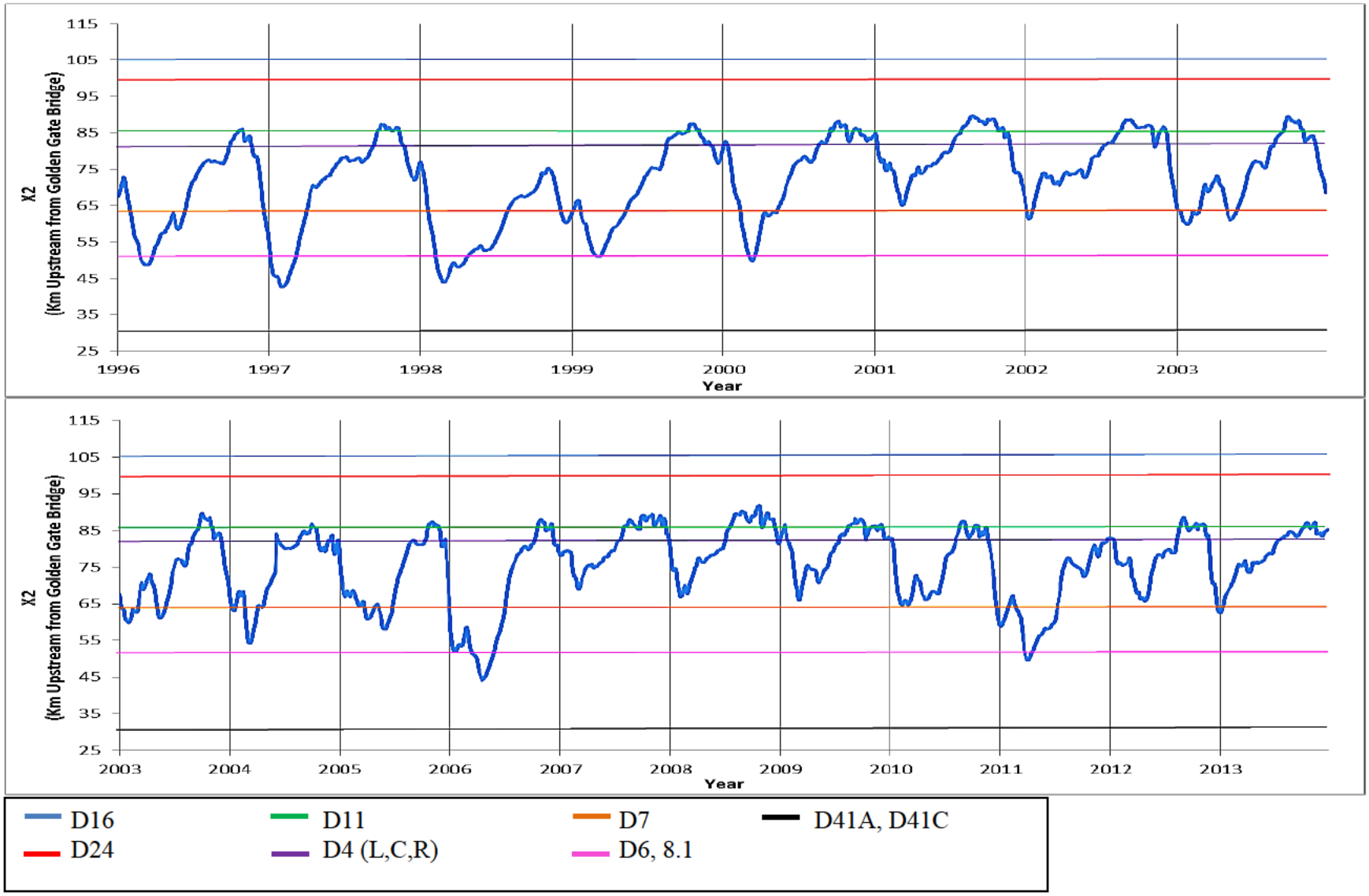

Figure 157. Graphs plotting X2 in kilometers upstream of the Golden Gate Bridge from 1996 through 2013. Colors represent station locations relative to X2. The X2 position is not a precise measurement but represents the distance upstream from the Golden Gate Bridge, where a daily average salinity at 1 meter (m) above of the bottom is 2 (Jassby and others, 1995).

Table 1. The benthic monitoring station locations, names, and latitude and longitude of DWR and Reclamation's Environmental Monitoring Program (EMP).

[Samples were taken and sorted for the bivalves *Potamocorbula amurensis* and *Corbicula fluminea*. All depths are in meters (m), left and right are in reference to which side of the shipping channel (looking downstream) samples were taken]

Station code	Location	Latitude	Longitude	Depth (m)
8.1	Sacramento River downstream of I-680 bridge	38.0316	122.1403	15.0
C9	Old River upstream of Clifton Court Forebay Intake (left)	37.8271	121.5522	1.7
D11	Sherman Lake (center)	38.0422	121.7995	3.0
D16	San Joaquin River at Bradford Island (left)	38.0930	121.6697	3.0
D19	Franks Tract (center)	38.0438	121.6148	3.0
D24	Sacramento River downstream of Rio Vista bridge (left)	38.1547	121.6814	8.0
D28A	Old River upstream of Rock Slough (left)	37.9701	121.5741	4.5
D4C	Sacramento River at Sherman Island upstream of Point Sacramento (center)	38.0581	121.8193	10.0
D4L	Sacramento River at Sherman Island upstream of Point Sacramento (left)	38.0581	121.8193	4.9
D4R	Sacramento River at Sherman Island upstream of Point Sacramento (right)	38.0581	121.8193	4.5
D41A	San Pablo Bay—north central (shallow)	38.0847	122.3906	2.5
D41C	San Pablo Bay near Pinole Point (deep)	38.0160	122.3647	4.9
D6	Suisun Bay upstream of I-680 bridge (right)	38.0577	122.1149	3.5
D7	Grizzly Bay at Dolphin near Suisun Slough (center)	38.1171	122.0395	3.0
P8	San Joaquin River at Buckley Cove (right)	37.9778	121.3799	3.0

Table 2. Average grazing rate, biomass, and recruitment of the bivalves *Potamocorbula amurensis* and *Corbicula fluminea* at each site at specified depth in meters (m).

[Grazing rate (GR) is given in units of meters cubed per meter squared per day ($m^3/m^2/d$). Grazing rate turnover rate (GRTO) is the amount of time in days (d) it takes the clams to completely graze the water column. Biomass is given in units of grams per meter squared (g/m^2). Recruitment is the number of each bivalve less than 2.5 mm in length per 0.05 meter squared ($\#/0.05m^2$). Years sampled represent the time period in years in which each station was actively sampled]

Station	Depth (m)	AVG GR ($m^3/m^2/d$)	AVG GRTO (/d)	AVG biomass (g/m^2)	AVG recruitment (#/0.05)	Years sampled
8.1[1] *Potamocorbula*	15.0	5.88	0.39	20.07	4.67	1988–2007
C9 *Corbicula*	3.0	1.06	0.35	12.88	6.5	1996–present
D11 *Potamocorbula*	3.0	0.28	0.09	0.02	36.00	1987–1995
D11 *Corbicula*	3.0	0.24	0.08	2.30	26.00	1987–1995
D16 *Corbicula*	3.0	0.76	0.25	13.46	3.50	1996–present
D19 *Corbicula*	3.0	1.87	0.62	26.10	23.5	1977–1995
D24 *Corbicula*	8.0	2.03	0.25	40.50	19.38	1996–present
D28 *Corbicula*	3.5	1.39	0.40	18.63	17.88	1976–present
D41A *Potamocorbula*	2.5	1.48	0.49	4.42	9.75	1987–present
D41C *Potamocorbula*	4.9	1.20	0.26	3.88	0.02	1996–present
D4L *Potamocorbula*	4.9	0.34	0.07	2.77	12.29	1987–present
D4L *Corbicula*	4.9	0.60	0.12	9.00	11.00	1987–present
D4C *Potamocorbula*	10.0	0.67	0.13	1.82	2.40	1976–1995
D4C *Corbicula*	10.0	0.10	0.02	8.10	12.30	1976–1995
D4R *Potamocorbula*	4.5	6.28	1.28	24.02	5.58	1976–1995
D4R *Corbicula*	4.5	0.10	0.02	2.50	12.50	1976–1995
D6 *Potamocorbula*	7.0	4.76	0.68	15.01	40.88	2007–present
D7 *Potamocorbula*	1.7	1.20	0.70	3.90	34.50	1987–present
D7 *Corbicula*	1.7	0.32	0.18	5.02	0.00	1987–present
P8 *Corbicula*	3.0	0.29	0.10	3.01	15.33	1996–present

[1]Station 8.1 is a U.S. Geological Survey station that was a precursor to Department of Water Resources sampling at site D6.

Table 3. Table showing the water year type in Sacramento and San Joaquin Rivers from 1975–2014.
[**WY,** water year (October 1–September 30); **W,** wet year type; **AN,** above normal year type; **BN,** below normal year type; **D,** dry year type; **C,** critical year type]

Water year	Sacramento River	San Joaquin River	Water year	Sacramento River	San Joaquin River
1975	W	W	**1995**	W	W
1976	C	C	**1996**	W	W
1977	C	C	**1997**	W	W
1978	AN	W	**1998**	W	W
1979	BN	AN	**1999**	W	AN
1980	AN	W	**2000**	AN	AN
1981	D	D	**2001**	D	D
1982	W	W	**2002**	D	D
1983	W	W	**2003**	AN	BN
1984	W	AN	**2004**	BN	D
1985	D	D	**2005**	AN	W
1986	W	W	**2006**	W	W
1987	D	C	**2007**	D	C
1988	C	C	**2008**	C	C
1989	D	C	**2009**	D	BN
1990	C	C	**2010**	BN	AN
1991	C	C	**2011**	W	W
1992	C	C	**2012**	BN	D
1993	AN	W	**2013**	D	C
1994	C	C	**2014**	C	C

Appendixes

Potamocorbula amurensis and *Corbicula fluminea* data are shown in the following units**:**
Biomass—grams ash-free dry mass/square meter (g/m^2), a biomass of ≥ 5 g/m^2 is considered high
Grazing rate (GR)—cubic meter per square meter per day ($m^3/m^2/d$)
Recruitment—number of bivalves ≤ 2.5 millimeters in length per square meter ($\#/m^2$)
Mean size—mean length of bivalve in millimeters (mm)
Number of grabs per sample—number of archived samples used in data analysis
N/D means no data was found.

Appendix 1. Station 8.1 *Potamocorbula* Data							
Date	Total # of clams in sample (#/m^2)	Biomass (g/m^2)	rec/0.05m^2	Mean size (mm)	GR ($m^3/m^2/d$)	Depth (m)	# grabs
6/23/1988	10753.00	87.90	4.67	10.20	23.22	15	3
7/21/1988	16000.00	90.50	7.00	9.00	21.95	15	3
8/17/1988	14453.00	117.90	1.67	10.21	28.59	15	3
9/13/1988	8693.00	58.30	5.33	9.41	16.56	15	3
10/5/1988	7140.00	46.00	1.33	10.35	13.31	15	3
11/2/1988	14130.00	81.00	2.00	9.97	20.43	15	3
11/30/1988	4627.00	27.40	2.00	10.05	8.52	15	3
1/4/1989	6480.00	67.60	1.33	10.84	19.91	15	3
1/31/1989	11333.00	130.80	2.33	11.27	21.78	15	3
2/28/1989	5967.00	45.70	2.00	10.96	9.22	15	3
3/21/1989	5773.00	36.60	3.67	10.07	11.00	15	3
4/12/1989	7987.00	48.90	4.00	10.21	13.83	15	3
5/10/1989	4393.00	46.10	2.33	12.54	13.83	15	3
6/14/1989	2487.00	41.80	7.67	11.48	13.73	15	3
7/12/1989	2120.00	20.70	4.67	11.11	6.92	15	3
8/9/1989	3540.00	44.30	11.00	11.42	13.94	15	3
9/6/1989	4460.00	47.60	12.00	10.52	14.88	15	3
10/4/1989	4407.00	53.00	3.67	11.37	16.13	15	3
11/9/1989	N/D	N/D	N/D	N/D	N/D	N/D	N/D
12/12/1989	3187.00	24.90	8.33	10.07	8.13	15	3
1/17/1990	3113.30	6.80	4.33	10.54	1.50	15	3
2/26/1990	526.70	3.90	1.67	9.80	0.98	15	3
3/18/1990	N/D	N/D	N/D	N/D	N/D	N/D	N/D
4/18/1990	2993.30	15.60	5.00	8.22	5.29	15	3
5/30/1990	413.30	2.90	0.33	9.15	1.08	15	3
6/28/1990	1910.00	9.30	0.00	8.41	3.26	15	3
8/2/1990	2190.00	9.70	3.00	8.18	3.36	15	3
8/22/1990	2353.30	10.90	3.33	8.25	3.77	15	3
9/27/1990	2360.00	11.50	3.67	8.37	3.99	15	3
10/25/1990	N/D	N/D	N/D	N/D	N/D	N/D	N/D
11/8/1990	4220.00	23.80	3.00	8.71	7.80	15	3
12/6/1990	2153.30	19.70	2.67	10.51	6.68	15	3
1/7/1991	2527.00	24.80	2.33	10.69	8.28	15	3
2/6/1991	1860.00	19.10	0.67	10.69	4.44	15	3
3/6/1991	1467.00	15.50	5.67	10.11	5.41	15	3
4/8/1991	820.00	9.20	1.33	9.27	3.36	15	3
5/20/1991	1540.00	9.90	35.33	5.60	3.63	15	3
6/5/1991	1020.00	7.60	9.67	8.05	2.78	15	3

Appendix 1. Station 8.1 *Potamocorbula* Data							
Date	Total # of clams in sample (#/m^2)	Biomass (g/m^2)	rec/0.05m^2	Mean size (mm)	GR ($m^3/m^2/d$)	Depth (m)	# grabs
8/20/1991	1633.00	16.20	4.67	9.05	5.65	15	3
9/16/1991	1593.00	14.00	11.67	8.71	4.99	15	3
10/1/1991	860.00	9.80	2.00	9.92	3.56	15	3
11/13/1991	800.00	9.30	8.67	9.24	3.39	15	3
12/11/1991	933.00	9.90	11.00	8.96	3.62	15	3
1/14/1992	593.00	4.30	12.00	6.57	1.09	15	3
2/26/1992	940.00	6.00	9.33	7.46	1.50	15	3
3/25/1992	620.00	2.80	11.33	5.73	1.05	15	3
4/8/1992	1173.00	8.30	7.00	7.66	3.02	15	3
5/10/1992	4247.00	17.90	140.33	4.43	6.24	15	3
6/22/1992	4380.00	18.80	104.33	5.08	6.45	15	3
7/7/1992	4413.00	28.80	50.67	7.03	9.51	15	3
8/5/1992	2273.00	6.90	29.33	5.25	2.50	15	3
9/2/1992	6020.00	26.10	40.00	6.37	8.59	15	3
10/4/1992	5220.00	22.50	31.67	6.38	7.50	15	3
11/2/1992	4320.00	25.20	11.33	7.54	8.34	15	3
12/28/1992	3680.00	24.90	7.33	8.17	8.27	15	3
1/27/1993	2280.00	12.90	4.67	8.44	4.46	15	3
2/9/1993	4913.30	30.60	0.33	8.60	9.85	15	3
3/17/1993	1486.70	12.40	0.00	10.10	4.33	15	3
4/15/1993	3240.00	33.20	0.33	13.63	10.19	15	3
5/20/1993	2920.00	66.20	4.33	13.87	20.61	15	3
6/17/1993	2113.30	70.00	2.33	14.62	22.51	15	3
7/19/1993	1673.30	45.30	4.67	13.38	15.09	15	3
8/25/1993	1486.70	32.30	2.67	15.45	10.65	15	3
9/15/1993	2580.00	69.50	5.00	13.98	22.02	15	3
10/12/1993	2233.30	58.70	3.67	13.76	18.94	15	3
11/16/1993	2066.70	47.80	9.00	13.45	15.56	15	3
12/9/1993	2726.70	75.90	10.33	7.72	26.21	15	3
1/18/1994	1407.00	15.80	11.00	9.53	5.60	15	3
2/8/1994	2327.00	37.70	10.33	13.15	12.12	15	3
3/9/1994	2120.00	31.30	8.67	12.12	10.36	15	3
4/13/1994	2680.00	34.30	4.00	10.54	11.38	15	3
5/23/1994	1907.00	23.40	1.00	10.14	8.02	15	3
6/9/1994	3367.00	35.60	3.00	9.66	11.66	15	3
7/20/1994	567.00	10.30	0.67	12.15	3.74	15	3
8/9/1994	1207.00	15.10	3.67	10.38	5.35	15	3
9/21/1994	247.00	3.30	1.00	11.20	1.26	15	3

Appendix 1. Station 8.1 *Potamocorbula* Data							
Date	Total # of clams in sample (#/m^2)	Biomass (g/m^2)	rec/0.05m^2	Mean size (mm)	GR ($m^3/m^2/d$)	Depth (m)	# grabs
10/19/1994	433.33	3.04	2.00	8.50	1.15	15	3
11/28/1994	1247.00	4.60	33.67	4.88	1.15	15	3
12/12/1994	N/D	N/D	N/D	N/D	N/D	N/D	N/D
1/17/1995	1480.00	12.30	2.00	9.08	2.93	15	3
2/15/1995	180.00	2.30	0.00	10.72	0.88	15	3
3/15/1995	747.00	7.90	0.00	9.46	2.90	15	3
4/27/1995	93.00	1.30	0.00	10.71	0.51	15	3
5/17/1995	120.00	1.10	0.00	8.56	0.42	15	3
6/27/1995	167.00	0.90	0.00	5.86	0.36	15	3
7/13/1995	260.00	1.10	0.00	7.50	0.41	15	3
8/24/1995	347.00	3.40	0.00	10.21	1.28	15	3
9/27/1995	773.00	10.70	2.67	11.72	3.85	15	3
10/26/1995	533.00	8.60	0.33	11.43	3.14	15	3
11/27/1995	N/D	N/D	N/D	N/D	N/D	N/D	N/D
12/15/1995	1453.00	11.10	12.67	12.67	3.79	15	3
1/23/1996	3327.00	37.40	13.67	10.14	8.19	15	3
2/22/1996	1627.00	15.60	8.00	9.17	3.69	15	3
3/21/1996	2240.00	14.90	12.33	7.70	5.21	15	3
4/30/1996	1007.00	9.60	1.67	8.91	3.51	15	3
5/17/1996	1533.00	20.00	0.00	10.29	6.98	15	3
7/17/1996	687.00	8.40	1.00	11.18	3.03	15	3
8/29/1996	1347.00	20.50	1.00	12.13	7.06	15	3
9/12/1996	500.00	5.00	0.33	10.67	1.85	15	3
10/10/1996	587.00	4.70	1.33	9.93	1.73	15	3
11/15/1996	2407.00	40.70	1.67	13.88	13.02	15	3
12/11/1996	1093.00	15.50	1.33	12.80	5.43	15	3
1/21/1997	147.00	2.70	0.00	13.95	0.69	15	3
2/23/1997	80.00	0.90	0.00	11.58	0.35	15	3
3/25/1997	N/D	N/D	N/D	N/D	N/D	N/D	N/D
4/22/1997	460.00	3.70	15.33	4.11	1.40	15	3
5/21/1997	2760.00	23.70	29.33	5.92	8.43	15	3
6/18/1997	693.00	4.20	4.33	7.98	1.55	15	3
7/22/1997	1080.00	13.70	2.33	10.97	4.89	15	3
8/19/1997	1047.00	18.00	1.00	11.31	6.34	15	3
9/16/1997	1060.00	19.40	1.00	12.93	6.80	15	3
10/28/1997	393.00	4.50	1.67	10.42	1.67	15	3
11/18/1997	493.00	6.30	2.67	10.45	2.34	15	3
12/14/1997	1440.00	23.80	0.67	12.51	8.17	15	3

Appendix 1. Station 8.1 *Potamocorbula* Data							
Date	Total # of clams in sample (#/m^2)	Biomass (g/m^2)	rec/0.05m^2	Mean size (mm)	GR ($m^3/m^2/d$)	Depth (m)	# grabs
1/12/1998	1027.00	9.00	5.00	10.16	2.17	15	3
2/17/1998	40.00	0.50	0.00	12.17	0.14	15	3
3/16/1998	13.00	0.20	0.00	13.00	0.08	15	3
4/13/1998	N/D	N/D	N/D	N/D	N/D	N/D	N/D
5/12/1998	120.00	0.60	0.00	6.17	0.22	15	3
6/8/1998	367.00	1.00	1.33	5.90	0.37	15	3
7/8/1998	207.00	0.80	0.00	7.18	0.30	15	3
8/3/1998	560.00	1.90	0.33	6.92	0.74	15	3
9/16/1998	613.00	2.60	0.67	7.75	0.97	15	3
10/6/1998	800.00	3.30	6.67	7.35	1.23	15	3
11/3/1998	447.00	0.60	14.33	3.53	0.23	15	3
12/21/1998	333.00	0.50	9.00	4.08	0.20	15	3
1/13/1999	260.00	0.20	4.67	3.91	0.08	15	3
2/17/1999	973.00	2.30	19.67	5.03	0.57	15	3
3/16/1999	273.00	0.60	0.67	5.23	0.15	15	3
4/14/1999	560.00	0.80	1.00	4.85	0.32	15	3
5/18/1999	1107.00	3.10	1.00	5.87	1.15	15	3
6/14/1999	2940.00	14.00	38.00	6.31	4.90	15	3
7/13/1999	3120.00	8.10	42.00	5.35	2.85	15	3
8/11/1999	5187.00	18.40	35.67	6.43	6.15	15	3
9/22/1999	4647.00	23.00	12.00	7.89	7.56	15	3
10/27/1999	6927.00	16.00	81.67	5.40	5.25	15	3
11/9/1999	19827.00	52.50	303.33	5.24	14.71	15	3
12/8/1999	4947.00	7.40	81.67	4.62	1.72	15	3
1/5/2000	9440.00	14.85	144.33	4.73	3.24	15	3
2/23/2000	5840.00	8.20	74.67	4.64	2.79	15	3
3/22/2000	11733.00	7.24	306.00	3.40	2.38	15	3
4/19/2000	8287.00	19.91	79.33	4.77	6.54	15	3
5/16/2000	8927.00	11.08	263.67	3.54	3.75	15	3
6/14/2000	12793.00	25.94	204.00	4.47	8.07	15	3
7/17/2000	7293.00	12.92	45.33	5.21	4.23	15	3
8/16/2000	6980.00	11.12	44.00	5.06	3.66	15	3
9/13/2000	2567.00	3.69	10.00	5.37	1.32	15	3
10/10/2000	8493.00	20.10	4.67	6.30	6.34	15	3
11/15/2000	10667.00	31.97	9.67	6.60	9.76	15	3
12/13/2000	6280.00	15.60	5.33	6.35	5.11	15	3
1/11/2001	10833.00	32.70	4.33	6.64	9.97	15	3
2/7/2001	867.00	1.50	1.33	6.09	0.37	15	3

Appendix 1. Station 8.1 *Potamocorbula* Data							
Date	Total # of clams in sample (#/m^2)	Biomass (g/m^2)	rec/0.05m^2	Mean size (mm)	GR ($m^3/m^2/d$)	Depth (m)	# grabs
3/7/2001	1140.00	3.80	0.67	6.92	0.94	15	3
4/4/2001	2260.00	12.50	3.00	8.22	4.35	15	3
5/9/2001	2493.00	11.80	39.67	6.34	4.18	15	3
6/5/2001	2987.00	7.50	25.67	5.36	2.65	15	3
7/24/2001	4020.00	20.40	22.67	7.13	6.80	15	3
8/22/2001	N/D	N/D	N/D	N/D	N/D	N/D	N/D
9/18/2001	1553.00	9.50	3.00	8.08	3.39	15	3
10/16/2001	1407.00	4.60	9.33	6.30	1.67	15	3
11/19/2001	2007.00	4.50	6.33	5.84	1.64	15	3
12/11/2001	1153.00	2.50	4.67	5.95	0.94	15	3
1/15/2002	820.00	0.60	13.00	4.02	0.24	15	3
2/14/2002	N/D	N/D	N/D	N/D	N/D	N/D	N/D
3/12/2002	713.00	0.80	14.33	3.93	0.31	15	3
4/15/2002	993.00	2.60	7.00	5.51	0.96	15	3
5/13/2002	1133.00	1.40	22.00	3.96	0.51	15	3
6/10/2002	2887.00	2.70	69.67	3.56	0.97	15	3
7/7/2002	4160.00	5.40	46.67	4.76	1.90	15	3
8/8/2002	387.00	0.60	13.00	3.48	0.23	15	3
9/9/2002	6460.00	22.00	35.00	6.01	7.17	15	3
10/23/2002	4573.00	12.80	16.33	6.34	4.32	15	3
11/5/2002	11927.00	43.10	18.33	7.35	12.32	15	3
12/4/2002	11460.00	44.70	25.00	7.37	12.88	15	3
1/21/2003	13030.00	51.30	41.50	7.36	9.72	15	3
2/18/2003	6847.00	23.80	23.67	6.98	7.72	15	3
3/18/2003	3313.00	12.10	3.33	7.08	4.10	15	3
4/16/2003	4160.00	19.50	14.67	7.17	6.49	15	3
5/14/2003	3553.00	12.40	40.67	5.87	4.34	15	3
6/1/2003	4847.00	13.80	14.00	6.19	4.63	15	3
7/14/2003	5847.00	16.70	9.67	6.58	5.50	15	3
8/13/2003	11947.00	34.80	30.33	6.69	10.43	15	3
9/18/2003	10140.00	46.40	7.33	7.99	13.66	15	3
10/23/2003	8687.00	33.30	2.33	7.87	10.07	15	3
1/8/2004	5620.00	15.20	6.67	7.41	3.29	15	3
4/7/2004	2900.00	24.50	5.00	8.96	5.62	15	3
7/15/2004	1533.00	10.00	10.67	7.67	3.58	15	3
10/26/2004	973.00	10.40	1.00	10.53	3.73	15	3
1/11/2005	293.00	1.60	0.33	8.11	0.41	15	3
4/6/2005	1793.00	7.00	3.00	6.43	2.51	15	3

Appendix 1. Station 8.1 *Potamocorbula* Data							
Date	Total # of clams in sample (#/m^2)	Biomass (g/m^2)	rec/0.05m^2	Mean size (mm)	GR ($m^3/m^2/d$)	Depth (m)	# grabs
7/20/2005	5167.00	20.60	15.00	6.89	6.87	15	3
10/13/2005	3973.00	17.10	2.33	8.03	5.65	15	3
11/7/2005	8320.00	34.20	0.67	7.76	10.42	15	3
12/5/2005	1953.00	8.60	0.33	8.26	3.02	15	3
1/12/2006	1100.00	4.70	0.00	8.14	1.16	15	3
2/8/2006	247.00	1.30	0.33	7.80	0.51	15	3
3/15/2006	667.00	3.50	0.00	7.63	1.31	15	3
4/26/2006	580.00	2.50	0.50	7.71	0.95	15	3
5/25/2006	153.00	0.70	0.00	6.98	0.27	15	3
6/6/2006	N/D	N/D	N/D	N/D	N/D	N/D	N/D
7/10/2006	67.00	0.90	0.00	11.00	0.37	15	3
8/10/2006	1227.00	1.40	15.67	4.63	0.51	15	3
9/20/2006	5850.00	4.00	94.00	3.88	1.41	15	3
10/25/2006	1613.00	1.20	18.00	4.08	0.44	15	3
11/20/2006	15167.00	8.50	213.00	3.86	2.71	15	3
12/20/2006	25580.00	18.80	338.67	3.78	5.54	15	3
1/23/2007	12013.00	7.80	185.67	3.76	1.73	15	3
2/20/2007	14267.00	9.60	115.67	4.10	1.98	15	3
3/20/2007	26140.00	26.70	120.67	4.67	7.29	15	3
4/16/2007	30087.00	70.60	18.00	5.88	17.81	15	3
5/16/2007	N/D	N/D	N/D	N/D	N/D	N/D	N/D
6/20/2007	N/D	N/D	N/D	N/D	N/D	N/D	N/D
7/16/2007	11307.00	51.50	7.33	7.72	14.87	15	3
8/13/2007	6967.00	31.90	3.00	8.44	9.80	15	3
9/11/2007	7033.00	31.10	0.67	8.02	9.53	15	3
10/2/2007	6420.00	29.60	1.00	7.76	9.37	15	3
11/7/2007	9993.00	65.80	1.00	9.67	18.13	15	3
12/10/2007	7567.00	39.80	4.33	8.88	12.07	15	3

Appendix 2. Station D4C *Corbicula* Data							
Date	Total # of clams in sample (#/m^2)	biomass (g/m^2)	recruit/0.05 m^2	mean size (mm)	GR ($m^3/m^2/d$)	Depth(M)	# Grabs
2/18/1976	6194.0	0.2	324	0.7	0.0	10.0	1
6/11/1976	361.0	0.2	8	3.2	0.0	10.0	1
10/7/1976	95.0	0.0	1	3.5	0.0	10.0	1
3/4/1977	133.0	0.0	7	1.1	0.0	10.0	1
6/1/1977	95.0	0.1	2.0	3.1	0.0	10.0	1
10/13/1977	13.0	N/A	N/A	N/A	N/A	10.0	1
6/8/1978	133.0	8.1	5.0	7.8	0.7	10.0	1
10/4/1978	76.0	3.0	2.0	8.5	0.3	10.0	1
5/30/1979	247.0	4.9	11.0	3.6	0.5	10.0	1
9/17/1979	411.7	5.1	12.0	3.9	0.7	10.0	1
6/11/1980	418.0	6.0	12.0	4.1	0.5	10.0	1
7/18/1980	76.0	N/A	N/A	N/A	N/A	10.0	1
8/22/1980	76.0	0.2	3.0	4.0	0.0	10.0	1
9/19/1980	798.0	0.3	39.0	1.5	0.0	10.0	1
10/23/1980	190.0	0.6	7.0	2.7	0.0	10.0	1
11/20/1980	342.0	0.3	15.0	1.9	0.0	10.0	1
12/22/1980	513.0	N/A	N/A	N/A	N/A	10.0	1
1/14/1981	266.0	0.0	13.0	1.4	0.0	10.0	1
2/19/1981	988.0	0.1	44.0	1.7	0.0	10.0	1
3/30/1981	3686.0	0.7	167.0	1.9	0.0	10.0	1
4/16/1981	3420.0	0.5	156.0	1.9	0.0	10.0	1
5/15/1981	1330.0	4.6	52.0	3.1	0.4	10.0	1
6/12/1981	418.0	1.1	5.0	4.5	0.1	10.0	1
7/10/1981	19.0	0.4	0.0	12.5	0.0	10.0	1
8/26/1981	114.0	0.2	2.0	4.0	0.0	10.0	1
9/24/1981	209.0	2.4	1.0	8.5	0.2	10.0	1
10/13/1981	57.0	1.1	0.0	9.2	0.1	10.0	1
11/20/1981	57.0	0.0	1.0	2.8	0.0	10.0	1
12/11/1981	418.0	38.2	0.0	19.7	1.1	10.0	1
1/21/1982	114.0	1.7	2.0	8.8	0.0	10.0	1
2/22/1982	228.0	10.4	7.0	8.7	0.4	10.0	1
3/30/1982	361.0	0.6	13.0	2.7	0.0	10.0	1
4/28/1982	1330.0	0.1	68.0	1.3	0.0	10.0	1
6/25/1982	285.0	0.3	6.0	3.7	0.0	10.0	1
7/22/1982	247.0	16.5	1.0	11.1	1.6	10.0	1
8/30/1982	19.0	0.1	0.0	8.5	0.0	10.0	1
9/20/1982	551.0	0.1	27.0	1.2	0.0	10.0	1
10/28/1982	228.0	0.6	9.0	2.7	0.0	10.0	1

Appendix 2. Station D4C *Corbicula* Data							
Date	Total # of clams in sample (#/m^2)	biomass (g/m^2)	recruit/0.05 m^2	mean size (mm)	GR ($m^3/m^2/d$)	Depth(M)	# Grabs
11/24/1982	228.0	3.2	9.0	5.0	0.1	10.0	1
12/15/1982	665.0	3.9	32.0	2.6	0.1	10.0	1
1/31/1983	114.0	0.0	6.0	1.5	0.0	10.0	1
2/8/1983	209.0	8.0	9.0	5.9	0.3	10.0	1
3/8/1983	608.0	0.1	30.0	1.8	0.0	10.0	1
4/21/1983	2603.0	0.6	127.0	1.6	0.0	10.0	1
5/19/1983	1007.0	0.4	39.0	2.3	0.0	10.0	1
6/6/1983	1786.0	0.8	64.0	2.7	0.1	10.0	1
7/5/1983	741.0	2.6	15.0	3.9	0.3	10.0	1
9/15/1983	209.0	0.2	10.0	1.7	0.0	10.0	1
11/1/1983	3420.0	1.6	172.0	1.5	0.1	10.0	1
11/30/1983	1995.0	2.9	95.0	1.9	0.2	10.0	1
12/13/1983	399.0	1.6	16.0	3.5	0.1	10.0	1
1/31/1984	1824.0	0.1	91.0	1.3	0.0	10.0	1
2/27/1984	988.0	2.1	46.0	2.5	0.1	10.0	1
3/26/1984	1558.0	0.7	75.0	1.5	0.0	10.0	1
4/24/1984	988.0	2.9	41.0	2.9	0.1	10.0	1
5/24/1984	2907.0	2.2	115.0	2.2	0.1	10.0	1
6/22/1984	684.0	13.1	20.0	5.2	1.1	10.0	1
7/23/1984	266.0	0.1	9.0	2.6	0.0	10.0	1
8/22/1984	266.0	2.3	5.0	4.5	0.3	10.0	1
9/18/1984	285.0	17.1	5.0	13.0	1.9	10.0	1
10/30/1984	152.0	1.6	7.0	3.6	0.1	10.0	1
11/29/1984	1235.0	0.2	62.0	1.6	0.0	10.0	1
12/14/1984	190.0	3.9	6.0	5.9	0.1	10.0	1
1/15/1985	285.0	0.5	12.0	2.3	0.0	10.0	1
2/26/1985	627.0	101.8	3.0	19.8	2.1	10.0	1
3/18/1985	389.5	N/A	N/A	N/A	N/A	10.0	1
4/10/1985	1273.0	3.6	62.0	1.9	0.2	10.0	1
5/31/1985	779.0	30.3	27.0	6.3	2.0	10.0	1
6/14/1985	133.0	0.0	6.0	1.8	0.0	10.0	1
8/30/1985	266.0	24.8	5.0	15.9	2.0	10.0	1
10/2/1985	494.0	37.0	11.0	13.3	2.8	10.0	1
10/24/1985	190.0	4.4	3.0	8.9	0.3	10.0	1
12/30/1985	247.0	6.2	7.0	7.6	0.2	10.0	1
1/16/1986	95.0	0.0	4.0	2.3	0.0	10.0	1
2/6/1986	95.0	0.1	4.0	2.9	0.0	10.0	1
3/31/1986	114.0	4.7	2.0	9.5	0.2	10.0	1

Appendix 2. Station D4C *Corbicula* Data							
Date	Total # of clams in sample (#/m^2)	biomass (g/m^2)	recruit/0.05 m^2	mean size (mm)	GR ($m^3/m^2/d$)	Depth(M)	# Grabs
4/21/1986	247.0	20.8	5.0	12.8	1.1	10.0	1
5/21/1986	152.0	0.2	4.0	3.9	0.0	10.0	1
6/30/1986	57.0	14.3	0.0	23.6	1.7	10.0	1
7/25/1986	38.0	0.2	0.0	8.5	0.0	10.0	1
8/29/1986	608.0	83.4	1.0	19.3	5.5	10.0	1
9/12/1986	19.0	0.4	0.0	12.5	0.0	10.0	1
10/29/1986	19.0	0.0	1.0	2.5	0.0	10.0	1
11/14/1986	133.0	18.2	0.0	19.8	0.8	10.0	1
1/23/1987	0.0	0.0	0.0	N/A	0.0	10.0	1
2/26/1987	893.0	155.3	0.0	23.1	3.3	10.0	1
3/26/1987	38.0	2.4	1.0	11.0	0.1	10.0	1
4/24/1987	133.0	3.4	5.0	6.2	0.3	10.0	1
5/22/1987	0.0	0.0	0.0	N/A	0.0	10.0	1
6/9/1987	19.0	0.0	1.0	2.5	0.0	10.0	1
7/30/1987	0.0	0.0	0.0	N/A	0.0	10.0	1
8/20/1987	76.0	3.0	2.0	11.0	0.3	10.0	1
9/18/1987	38.0	0.0	2.0	1.0	0.0	10.0	1
10/30/1987	475.0	58.7	0.0	23.5	3.4	10.0	1
11/9/1987	0.0	0.0	0.0	N/A	0.0	10.0	1
12/17/1987	19.0	2.4	0.0	23.5	0.1	10.0	1
1/15/1988	152.0	19.2	0.0	21.4	0.5	10.0	1
2/11/1988	38.0	1.8	1.0	12.0	0.1	10.0	1
3/1/1988	209.0	37.8	1.0	24.0	1.6	10.0	1
4/1/1988	0.0	0.0	0.0	N/A	0.0	10.0	1
5/27/1988	152.0	50.3	0.0	26.1	3.4	10.0	1
6/24/1988	0.0	0.0	0.0	N/A	0.0	10.0	1
7/22/1988	0.0	0.0	0.0	N/A	0.0	10.0	1
8/22/1988	19.0	0.0	1.0	2.5	0.0	10.0	1
9/22/1988	114.0	18.2	0.0	18.2	1.7	10.0	1
10/21/1988	0.0	N/A	N/A	N/A	0.0	10.0	1
11/17/1988	19.0	1.6	0.0	21.5	0.1	10.0	1
12/8/1988	5.7	0.0	0.0	N/A	N/A	10.0	1
1/20/1989	38.0	9.9	0.0	30.0	0.3	10.0	1
2/6/1989	57.0	2.8	2.0	9.2	0.1	10.0	1
5/4/1989	28.5	0.5	0.0	10.5	0.0	10.0	1
7/24/1989	171.0	55.9	0.0	25.4	4.7	10.0	1
8/21/1989	24.7	N/A	N/A	N/A	N/A	10.0	1
9/19/1989	6.3	0.0	0.3	1.5	0.0	10.0	1

Appendix 2. Station D4C *Corbicula* Data							
Date	Total # of clams in sample (#/m^2)	biomass (g/m^2)	recruit/0.05 m^2	mean size (mm)	GR ($m^3/m^2/d$)	Depth(M)	# Grabs
10/17/1989	43.7	N/A	N/A	N/A	N/A	10.0	1
11/13/1989	38.0	N/A	N/A	N/A	N/A	10.0	1
12/4/1989	24.7	N/A	N/A	N/A	N/A	10.0	1
1/16/1990	95.0	0.0	4.3	2.3	0.0	10.0	3
2/27/1990	38.0	3.4	0.7	16.8	0.1	10.0	3
3/19/1990	31.7	0.0	1.7	0.9	0.0	10.0	3
4/20/1990	0.0	0.0	0.0	N/A	0.0	10.0	3
5/14/1990	158.3	5.3	7.0	4.3	0.4	10.0	3
6/26/1990	183.7	10.1	4.3	8.4	1.0	10.0	3
7/12/1990	779.0	61.0	25.7	9.0	6.0	10.0	3
8/8/1990	44.3	2.3	1.0	6.8	0.3	10.0	3
9/24/1990	69.7	8.9	0.7	17.7	0.9	10.0	3
10/22/1990	38.0	10.9	0.0	23.8	0.8	10.0	3
11/6/1990	101.3	1.1	2.7	4.5	0.1	10.0	3
12/13/1990	95.0	6.2	1.0	15.4	0.2	10.0	3
1/7/1991	82.3	3.8	2.7	8.1	0.1	10.0	3
2/21/1991	31.7	1.4	1.0	7.7	0.1	10.0	3
3/5/1991	76.0	11.2	0.7	15.6	0.4	10.0	3
4/11/1991	31.7	0.0	1.0	2.7	0.0	10.0	3
5/23/1991	76.0	5.6	2.7	6.8	0.4	10.0	3
6/4/1991	272.3	35.3	2.3	17.8	2.5	10.0	3
7/16/1991	50.7	0.0	0.3	4.0	0.0	10.0	3
8/30/1991	82.3	8.9	1.0	14.7	0.9	10.0	3
9/12/1991	101.3	17.5	0.3	23.8	1.6	10.0	3
10/8/1991	19.0	2.7	0.7	11.2	0.3	10.0	3
11/12/1991	0.0	0.0	0.0	N/A	0.0	10.0	3
12/10/1991	69.7	9.3	0.3	25.6	0.2	10.0	3
1/17/1992	76.0	14.0	0.0	25.5	0.4	10.0	3
2/25/1992	19.0	2.4	0.3	18.8	0.1	10.0	3
3/24/1992	12.7	3.9	0.0	27.5	0.2	10.0	3
4/6/1992	6.3	2.0	0.0	27.5	0.1	10.0	3
5/14/1992	19.0	6.3	0.0	27.5	0.6	10.0	3
6/17/1992	0.0	0.0	0.0	N/A	0.0	10.0	3
7/10/1992	25.3	3.7	0.7	13.8	0.4	10.0	3
8/4/1992	25.3	5.1	0.0	26.0	0.6	10.0	3
9/1/1992	0.0	0.0	0.0	N/A	0.0	10.0	3
11/5/1992	0.0	0.0	0.0	N/A	0.0	10.0	3
12/28/1992	19.0	2.6	0.0	25.5	0.1	10.0	3

Appendix 2. Station D4C *Corbicula* Data							
Date	Total # of clams in sample (#/m^2)	biomass (g/m^2)	recruit/0.05 m^2	mean size (mm)	GR ($m^3/m^2/d$)	Depth(M)	# Grabs
1/14/1993	101.3	15.7	0.0	26.3	0.4	10.0	3
2/9/1993	0.0	0.0	0.0	N/A	0.0	10.0	3
3/11/1993	6.3	1.0	0.0	22.5	0.1	10.0	3
4/19/1993	0.0	0.0	0.0	N/A	0.0	10.0	3
5/20/1993	6.3	0.6	0.0	19.5	0.0	10.0	3
6/16/1993	6.3	1.2	0.0	22.5	0.1	10.0	3
7/19/1993	25.3	5.1	0.0	24.0	0.5	10.0	3
8/19/1993	0.0	0.0	0.0	N/A	0.0	10.0	3
9/16/1993	0.0	0.0	0.0	N/A	0.0	10.0	3
10/8/1993	0.0	0.0	0.0	N/A	0.0	10.0	3
11/16/1993	6.3	1.5	0.0	28.5	0.1	10.0	3
12/9/1993	0.0	0.0	0.0	N/A	0.0	10.0	3
1/18/1994	0.0	0.0	0.0	N/A	0.0	10.0	3
2/8/1994	6.3	0.0	0.0	3.5	0.0	10.0	3
3/9/1994	6.3	1.4	0.0	25.5	0.1	10.0	3
4/12/1994	0.0	0.0	0.0	N/A	0.0	10.0	3
5/23/1994	25.3	5.6	0.0	21.3	0.4	10.0	3
6/9/1994	6.3	1.3	0.0	27.5	0.1	10.0	3
7/20/1994	6.3	1.5	0.0	25.5	0.2	10.0	3
8/9/1994	6.3	1.0	0.0	25.5	0.1	10.0	3
9/21/1994	0.0	0.0	0.0	N/A	0.0	10.0	3
10/19/1994	0.0	0.0	0.0	N/A	0.0	10.0	3
11/21/1994	0.0	0.0	0.0	N/A	0.0	10.0	3
12/16/1994	12.7	2.3	0.0	26.5	0.1	10.0	3
1/17/1995	0.0	0.0	0.0	N/A	0.0	10.0	3
2/15/1995	0.0	0.0	0.0	N/A	0.0	10.0	3
3/15/1995	0.0	0.0	0.0	N/A	0.0	10.0	3
4/27/1995	304.0	0.0	15.7	1.4	0.0	10.0	3
5/17/1995	76.0	2.2	3.3	3.8	0.1	10.0	3
6/27/1995	196.3	1.2	8.7	2.7	0.1	10.0	3
7/13/1995	139.3	2.0	4.7	3.9	0.2	10.0	3
8/24/1995	38.0	0.1	0.0	4.7	0.0	10.0	3
9/26/1995	50.7	1.6	0.3	8.1	0.2	10.0	3
10/25/1995	44.3	1.6	0.0	9.4	0.1	10.0	3
11/27/1995	6.3	0.0	0.0	6.5	0.0	10.0	3

Appendix 3. Station D4C *Potamocorbula* Data							
Date	Total # of clams in sample (#/m^2)	Biomass (g/m^2)	rec/0.05m^2	mean size (mm)	GR ($m^3/m^2/d$)	Depth(M)	# Grabs
6/9/1987	57.00	0.17	1.00	5.17	0.07	10.0	1
7/30/1987	38.00	0.03	1.00	3.50	0.01	10.0	1
8/20/1987	1767.00	0.44	77.00	2.56	0.16	10.0	1
9/18/1987	684.00	0.24	18.00	3.03	0.09	10.0	1
10/30/1987	1349.00	0.45	37.00	2.99	0.17	10.0	1
11/9/1987	950.00	1.43	3.00	4.86	0.54	10.0	1
12/17/1987	684.00	1.70	1.00	5.69	0.64	10.0	1
1/15/1988	1558.00	11.91	0.00	7.41	2.88	10.0	1
2/11/1988	646.00	4.36	0.00	6.97	1.64	10.0	1
4/1/1988	133.00	1.05	0.00	7.50	0.41	10.0	1
5/27/1988	19.00	1.61	0.00	17.50	0.63	10.0	1
6/24/1988	0.00	0.00	0.00	N/D	0	10.0	1
7/22/1988	38.00	0.20	0.00	7.50	0.08	10.0	1
8/22/1988	95.00	0.09	0.00	4.50	0.04	10.0	1
9/22/1988	38.00	6.07	0.00	20.00	2.34	10.0	1
10/21/1988	N/D	N/D	N/D	N/D	N/D	10.0	1
11/17/1988	190.00	2.81	0.00	7.00	1.08	10.0	1
12/8/1988	171.00	1.17	0.00	7.61	0.45	10.0	1
1/20/1989	209.00	1.32	1.00	7.00	0.34	10.0	1
2/6/1989	180.50	2.77	0.00	9.60	0.72	10.0	1
2/28/1989	0.00	0.00	0.00	N/D	N/D	10.0	1
3/21/1989	0.00	0.00	0.00	N/D	N/D	10.0	1
5/4/1989	0.00	0.00	0.00	N/D	0	10.0	1
6/26/1989	38.00	7.04	0.00	19.00	2.72	10.0	1
7/24/1989	12.67	1.24	0.00	16.50	0.49	10.0	1
8/21/1989	47.50	2.60	0.00	13.50	1.01	10.0	1
9/19/1989	19.00	0.02	0.00	4.50	0.01	10.0	1
10/17/1989	0.00	0.00	0.00	N/D	0	10.0	1
11/13/1989	0.00	0.00	0.00	N/D	0	10.0	1
12/12/1989	0.00	0.00	0.00	N/D	0	10.0	1
1/16/1990	25.33	0.06	0.00	6.00	0.02	10.0	3
2/27/1990	19.00	0.17	0.00	7.50	0.04	10.0	3
3/19/1990	19.00	0.04	0.00	5.17	0.02	10.0	3
4/20/1990	0.00	0.00	0.00	N/D	0	10.0	3
5/14/1990	133.00	0.04	4.00	2.79	0.02	10.0	3
6/26/1990	164.67	1.94	4.67	3.77	0.76	10.0	3
7/12/1990	228.00	1.61	3.00	4.58	0.63	10.0	3
8/8/1990	44.33	0.09	0.67	4.07	0.03	10.0	3

Appendix 3. Station D4C *Potamocorbula* Data							
Date	Total # of clams in sample (#/m^2)	Biomass (g/m^2)	rec/0.05m^2	mean size (mm)	GR ($m^3/m^2/d$)	Depth(M)	# Grabs
9/24/1990	101.33	0.22	0.67	4.81	0.09	10.0	3
10/22/1990	88.67	0.32	0.33	6.90	0.12	10.0	3
11/6/1990	297.67	2.24	2.67	6.80	0.86	10.0	3
12/13/1990	69.67	1.15	0.33	7.14	0.45	10.0	3
1/7/1991	126.67	0.73	1.67	6.40	0.28	10.0	3
2/19/1991	76.00	0.71	0.67	6.67	0.19	10.0	3
3/5/1991	589.00	1.71	10.67	4.13	0.65	10.0	3
4/11/1991	82.33	0.79	0.33	7.19	0.31	10.0	3
5/23/1991	95.00	1.01	0.00	7.90	0.39	10.0	3
6/4/1991	88.67	1.51	0.33	8.93	0.59	10.0	3
7/16/1991	1868.33	8.87	65.67	3.05	3.3	10.0	3
8/30/1991	291.33	0.45	2.00	4.67	0.17	10.0	3
9/12/1991	177.33	0.93	0.67	6.32	0.36	10.0	3
10/8/1991	114.00	0.87	0.00	8.56	0.34	10.0	3
11/12/1991	158.33	2.23	0.00	9.06	0.86	10.0	3
12/10/1991	221.67	4.38	0.33	9.53	1.13	10.0	3
1/17/1992	158.33	1.53	0.33	8.00	0.40	10.0	3
2/25/1992	63.33	0.56	0.33	8.50	0.22	10.0	3
3/24/1992	107.67	2.11	0.00	10.10	0.81	10.0	3
4/6/1992	44.33	0.67	0.00	8.90	0.26	10.0	3
5/14/1992	57.00	2.70	0.00	11.60	1.05	10.0	3
6/17/1992	76.00	1.29	1.33	7.40	0.51	10.0	3
7/10/1992	57.00	2.08	0.33	11.10	0.81	10.0	3
8/4/1992	101.33	2.76	0.67	9.80	1.07	10.0	3
9/1/1992	50.67	1.47	0.00	10.30	0.57	10.0	3
10/23/1992	69.67	2.76	0.00	16.10	1.06	10.0	3
11/5/1992	120.33	6.50	0.00	12.70	2.49	10.0	3
12/28/1992	63.33	5.01	0.00	15.20	1.93	10.0	3
1/14/1993	82.33	4.67	0.00	14.00	1.21	10.0	3
2/9/1993	0.00	0.00	0.00	N/D	0.00	10.0	3
3/11/1993	101.33	7.22	0.00	13.30	2.77	10.0	3
4/19/1993	120.33	3.48	0.00	9.50	1.34	10.0	3
5/20/1993	0.00	0.00	0.00	N/D	0.00	10.0	3
6/16/1993	12.67	0.15	0.00	9.50	0.06	10.0	3
7/19/1993	69.67	6.59	0.00	15.50	2.54	10.0	3
8/19/1993	107.67	9.73	0.00	16.60	3.70	10.0	3
9/16/1993	12.67	0.24	0.00	11.00	0.10	10.0	3
10/8/1993	12.67	0.43	0.00	15.00	0.17	10.0	3

Appendix 3. Station D4C *Potamocorbula* Data							
Date	Total # of clams in sample (#/m^2)	Biomass (g/m^2)	rec/0.05m^2	mean size (mm)	GR ($m^3/m^2/d$)	Depth(M)	# Grabs
11/16/1993	25.33	2.18	0.00	16.80	0.85	10.0	3
12/9/1993	31.67	3.69	0.00	18.50	1.43	10.0	3
1/18/1994	12.67	0.49	0.00	14.00	0.13	10.0	3
2/8/1994	31.67	1.81	0.00	16.50	0.48	10.0	3
3/9/1994	6.33	0.17	0.00	11.50	0.07	10.0	3
4/12/1994	12.67	1.16	0.00	16.50	0.46	10.0	3
5/23/1994	50.67	6.06	0.00	17.40	2.34	10.0	3
6/9/1994	25.33	2.62	0.00	17.00	1.02	10.0	3
7/20/1994	19.00	2.41	0.00	17.50	0.94	10.0	3
8/9/1994	19.00	0.58	0.00	10.50	0.23	10.0	3
9/21/1994	95.00	7.21	1.00	13.10	2.77	10.0	3
10/19/1994	31.67	0.52	0.00	10.30	0.20	10.0	3
11/21/1994	63.33	1.40	0.33	7.90	0.55	10.0	3
12/16/1994	120.33	8.49	0.00	13.90	2.19	10.0	3
1/17/1995	38.00	0.91	0.00	10.83	0.36	10.0	3
2/15/1995	31.67	0.41	0.33	8.90	0.16	10.0	3
3/15/1995	0.00	0.00	0.00	N/D	.000	10.0	3
4/27/1995	12.67	0.12	0.00	8.00	0.05	10.0	3
5/17/1995	12.67	0.58	0.00	13.50	0.23	10.0	3
6/27/1995	19.00	0.13	0.00	7.83	0.05	10.0	3
7/13/1995	25.33	0.25	0.00	9.25	0.10	10.0	3
8/24/1995	12.67	0.15	0.00	9.50	0.06	10.0	3
9/26/1995	6.33	0.19	0.00	12.50	0.07	10.0	3
10/25/1995	0.00	0.00	0.00	N/D	0.00	10.0	3
11/27/1995	0.00	0.00	0.00	N/D	0.00	10.0	3
12/27/1995	0.00	0.00	0.00	N/D	0.00	10.0	3

Appendix 4. Station D4L *Corbicula* Data							
Date	Total # of clams in sample (#/m^2)	Biomass (g/m^2)	recruit/0.05 m^2	mean size (mm)	GR ($m^3/m^2/d$)	Depth (m)	# Grabs
6/1/1977	N/D	N/D	N/D	N/D	N/D	N/D	N/D
10/13/1977	38.00	0.4	0.00	10.0	0.0	4.9	1
6/8/1978	19.00	1.9	0.00	18.5	0.2	4.9	1
10/4/1978	19.00	0.0	1.00	2.5	0.0	4.9	1
5/30/1979	931.00	0.3	39.00	2.2	0.0	4.9	1
9/17/1979	2178.67	24.8	106.00	2.7	3.0	4.9	1
6/11/1980	3268.00	0.8	108.00	2.9	0.1	4.9	1
7/18/1980	1463.00	0.6	53.00	2.5	0.1	4.9	1
8/22/1980	912.00	0.9	30.00	3.2	0.1	4.9	1
9/19/1980	1007.00	0.0	50.00	1.8	0.0	4.9	1
10/23/1980	1520.00	0.8	68.00	2.3	0.1	4.9	1
11/20/1980	1444.00	0.3	62.00	2.2	0.0	4.9	1
12/22/1980	247.00	0.1	9.00	2.6	0.0	4.9	1
1/14/1981	950.00	0.1	43.00	2.3	0.0	4.9	1
2/19/1981	N/D	N/D	N/D	N/D	0.0	4.9	N/D
3/30/1981	1406.00	0.1	68.00	1.8	0.0	4.9	1
4/16/1981	7220.00	2.6	303.00	2.5	0.1	4.9	1
5/15/1981	8056.00	3.2	180.00	3.3	0.2	4.9	1
6/12/1981	6023.00	18.0	64.00	4.9	1.6	4.9	1
7/10/1981	228.00	0.6	1.00	5.7	0.1	4.9	1
8/26/1981	931.00	2.6	23.00	4.2	0.3	4.9	1
9/24/1981	570.00	0.9	19.00	3.5	0.1	4.9	1
10/13/1981	114.00	0.2	1.00	3.3	0.0	4.9	1
11/20/1981	646.00	0.5	30.00	2.0	0.0	4.9	1
12/11/1981	57.00	0.0	3.00	1.8	0.0	4.9	1
1/21/1982	1368.00	0.1	72.00	1.6	0.0	4.9	1
2/22/1982	2166.00	0.4	106.00	1.8	0.0	4.9	1
3/30/1982	5681.00	1.0	288.00	1.8	0.0	4.9	1
4/28/1982	7695.00	5.2	347.00	2.1	0.2	4.9	1
5/20/1982	1767.00	0.5	68.00	2.6	0.0	4.9	1
6/25/1982	247.00	0.3	3.00	4.0	0.0	4.9	1
7/22/1982	247.00	0.3	6.00	3.4	0.0	4.9	1
8/30/1982	570.00	0.1	28.00	1.1	0.0	4.9	1
9/20/1982	1672.00	0.1	87.00	1.2	0.0	4.9	1
10/28/1982	665.00	0.0	35.00	1.2	0.0	4.9	1
11/24/1982	2489.00	0.1	131.00	1.3	0.0	4.9	1
12/15/1982	2261.00	1.4	116.00	1.7	0.0	4.9	1
1/31/1983	6745.00	0.5	350.00	1.7	0.0	4.9	1

Appendix 4. Station D4L *Corbicula* Data							
Date	Total # of clams in sample (#/m^2)	Biomass (g/m^2)	recruit/0.05 m^2	mean size (mm)	GR ($m^3/m^2/d$)	Depth (m)	# Grabs
2/8/1983	1482.00	4.2	74.00	2.8	0.2	4.9	1
3/8/1983	5149.00	1.1	256.00	1.9	0.0	4.9	1
4/21/1983	8797.00	1.5	440.00	1.6	0.0	4.9	1
5/19/1983	2033.00	0.5	83.00	2.4	0.0	4.9	1
6/6/1983	1976.00	0.8	76.00	2.6	0.1	4.9	1
7/5/1983	323.00	0.4	6.00	3.8	0.0	4.9	1
9/15/1983	2204.00	0.2	116.00	1.4	0.0	4.9	1
11/1/1983	1273.00	0.5	63.00	1.9	0.0	4.9	1
11/30/1983	3933.00	0.3	199.00	1.6	0.0	4.9	1
12/13/1983	3249.00	0.4	162.00	1.8	0.0	4.9	1
1/31/1984	2698.00	0.3	135.00	1.7	0.0	4.9	1
2/27/1984	7524.00	0.3	391.00	1.2	0.0	4.9	1
3/26/1984	11609.00	1.0	601.00	1.3	0.0	4.9	1
4/24/1984	4503.00	0.9	221.00	1.7	0.0	4.9	1
5/24/1984	6099.00	98.5	293.00	2.4	6.3	4.9	1
6/22/1984	1786.00	0.2	91.00	1.7	0.0	4.9	1
7/23/1984	1254.00	17.8	46.00	3.7	2.2	4.9	1
8/22/1984	2831.00	6.1	144.00	1.3	0.8	4.9	1
9/18/1984	1235.00	12.3	57.00	3.2	1.5	4.9	1
10/30/1984	6308.00	84.4	305.00	3.0	5.7	4.9	1
11/29/1984	323.00	0.0	16.00	1.6	0.0	4.9	1
12/14/1984	7296.00	0.3	382.00	1.4	0.0	4.9	1
1/15/1985	1615.00	58.6	71.00	5.7	1.5	4.9	1
2/26/1985	7999.00	2.2	420.00	1.4	0.1	4.9	1
3/18/1985	6384.00	0.2	335.00	1.4	0.0	4.9	1
4/10/1985	14383.00	0.9	735.00	1.6	0.0	4.9	1
5/31/1985	5092.00	0.6	235.00	2.2	0.0	4.9	1
6/14/1985	3040.00	1.5	107.00	2.9	0.2	4.9	1
8/30/1985	95.00	5.3	3.00	11.1	0.5	4.9	1
10/2/1985	76.00	0.0	3.00	2.3	0.0	4.9	1
10/24/1985	361.00	1.7	17.00	2.8	0.1	4.9	1
12/3/1985	57.00	0.4	0.00	8.5	0.0	4.9	1
12/30/1985	380.00	4.5	18.00	3.1	0.1	4.9	1
1/16/1986	475.00	0.0	25.00	1.6	0.0	4.9	1
2/6/1986	2812.00	0.2	146.00	1.3	0.0	4.9	1
3/31/1986	494.00	0.0	23.00	1.9	0.0	4.9	1
4/21/1986	988.00	0.1	48.00	1.9	0.0	4.9	1
5/21/1986	266.00	15.9	5.00	9.1	1.2	4.9	1

Appendix 4. Station D4L *Corbicula* Data							
Date	Total # of clams in sample (#/m^2)	Biomass (g/m^2)	recruit/0.05 m^2	mean size (mm)	GR ($m^3/m^2/d$)	Depth (m)	# Grabs
6/30/1986	513.00	0.9	20.00	2.8	0.1	4.9	1
7/25/1986	76.00	11.2	0.00	19.6	1.1	4.9	1
8/29/1986	836.00	16.0	40.00	3.2	1.4	4.9	1
9/12/1986	3686.00	0.1	193.00	1.5	0.0	4.9	1
10/29/1986	931.00	1.6	48.00	2.2	0.1	4.9	1
11/14/1986	912.00	0.1	47.00	1.7	0.0	4.9	1
1/23/1987	38.00	3.1	4.00	4.8	0.1	4.9	1
2/26/1987	0.00	0.0	N/D	N/D	0.0	4.9	1
3/26/1987	513.00	1.8	26.00	1.9	0.1	4.9	1
4/24/1987	6726.00	0.3	349.00	1.3	0.0	4.9	1
5/22/1987	0.00	0.0	N/D	N/D	0.0	4.9	1
6/9/1987	931.00	0.4	34.00	2.7	0.0	4.9	1
7/30/1987	969.00	8.0	47.00	2.5	0.8	4.9	1
8/20/1987	703.00	0.1	33.00	1.9	0.0	4.9	1
9/18/1987	0.00	0.0	N/D	N/D	0.0	4.9	1
10/30/1987	38.00	0.0	2.00	1.5	0.0	4.9	1
11/9/1987	38.00	7.9	0.00	27.5	0.6	4.9	1
12/17/1987	95.00	0.0	4.00	2.3	0.0	4.9	1
1/15/1988	380.00	2.0	17.00	3.0	0.1	4.9	1
2/11/1988	76.00	0.0	4.00	1.5	0.0	4.9	1
4/1/1988	38.00	0.0	1.00	3.0	0.0	4.9	1
5/27/1988	988.00	0.2	38.00	2.6	0.0	4.9	1
6/24/1988	133.00	0.1	4.00	3.1	0.0	4.9	1
7/22/1988	76.00	0.2	0.00	6.3	0.0	4.9	1
8/22/1988	38.00	8.0	0.00	19.0	0.8	4.9	1
9/22/1988	19.00	2.5	0.00	26.5	0.3	4.9	1
10/21/1988	95.00	24.0	0.00	22.8	1.8	4.9	1
11/17/1988	38.00	2.7	0.00	18.5	0.2	4.9	1
12/8/1988	N/D	N/D	N/D	N/D	0.0	4.9	1
1/20/1989	38.00	0.0	2.00	1.5	0.0	4.9	1
2/6/1989	N/D	N/D	N/D	N/D	0.0	4.9	1
5/4/1989	399.00	0.1	15.00	2.6	0.0	4.9	1
6/26/1989	N/D	N/D	N/D	N/D	0.0	4.9	1
7/24/1989	31.67	1.4	0.33	10.5	0.1	4.9	1
8/21/1989	101.33	3.7	4.00	5.7	0.4	4.9	1
9/19/1989	266.00	0.0	14.00	1.4	0.0	4.9	1
10/17/1989	63.33	0.0	2.67	1.9	0.0	4.9	1
11/13/1989	0.00	0.0	0.00	0.0	0.0	4.9	1

Appendix 4. Station D4L *Corbicula* Data							
Date	Total # of clams in sample (#/m^2)	Biomass (g/m^2)	recruit/0.05 m^2	mean size (mm)	GR ($m^3/m^2/d$)	Depth (m)	# Grabs
12/4/1989	0.00	0.0	0.00	0.0	0.0	4.9	1
1/16/1990	253.33	3.4	10.67	3.5	0.1	4.9	3
2/27/1990	2305.33	0.3	117.00	1.3	0.0	4.9	3
3/19/1990	468.67	2.7	24.33	1.9	0.1	4.9	3
4/20/1990	1798.67	3.6	81.33	2.1	0.2	4.9	3
5/14/1990	1140.00	5.4	53.00	2.3	0.4	4.9	3
6/26/1990	456.00	33.4	17.00	9.4	3.1	4.9	3
7/12/1990	152.00	3.1	7.00	3.5	0.4	4.9	3
8/8/1990	867.67	0.1	38.33	1.3	0.0	4.9	3
9/24/1990	234.33	0.3	5.33	3.8	0.0	4.9	3
10/22/1990	69.67	3.4	3.00	6.0	0.3	4.9	3
11/6/1990	411.67	0.0	18.67	1.4	0.0	4.9	3
12/13/1990	88.67	0.0	4.33	1.9	0.0	4.9	3
1/7/1991	76.00	0.0	3.33	1.8	0.0	4.9	3
2/21/1991	50.67	1.0	2.33	4.1	0.0	4.9	3
3/5/1991	63.33	1.0	3.00	3.7	0.0	4.9	3
4/11/1991	715.67	1.5	30.00	2.2	0.1	4.9	3
5/23/1991	418.00	5.0	20.67	2.7	0.3	4.9	3
6/4/1991	152.00	1.4	7.00	3.2	0.1	4.9	3
7/16/1991	12.67	1.2	0.00	14.0	0.1	4.9	3
8/30/1991	76.00	0.0	1.33	3.2	0.0	4.9	3
9/12/1991	95.00	1.1	2.33	4.4	0.1	4.9	3
10/8/1991	0.00	0	0.00	N/D	0	4.9	3
11/12/1991	0.00	0	0.00	N/D	0	4.9	3
12/10/1991	190.00	26.7	0.33	26.9	0.7	4.9	3
1/17/1992	57.00	0.0	1.67	2.6	0.0	4.9	3
2/25/1992	6.33	0.0	0.33	2.5	0.0	4.9	3
3/24/1992	386.33	108.7	2.00	24.0	4.2	4.9	3
4/6/1992	69.67	6.3	2.67	8.9	0.4	4.9	3
5/14/1992	266.00	4.4	11.00	3.8	0.4	4.9	3
6/17/1992	614.33	0.1	29.00	1.4	0.0	4.9	3
7/10/1992	95.00	0.2	1.00	4.5	0.0	4.9	3
8/4/1992	88.67	0.0	3.67	1.6	0.0	4.9	3
9/1/1992	316.67	2.7	11.67	3.4	0.2	4.9	3
10/23/1992	291.33	6.3	14.33	2.3	0.6	4.9	3
11/5/1992	190.00	0.1	8.67	1.6	0.0	4.9	3
12/28/1992	120.33	13.6	1.33	21.8	0.6	4.9	3
1/14/1993	44.33	1.1	0.00	12.9	0.0	4.9	3

Appendix 4. Station D4L *Corbicula* Data							
Date	Total # of clams in sample (#/m^2)	Biomass (g/m^2)	recruit/0.05 m^2	mean size (mm)	GR ($m^3/m^2/d$)	Depth (m)	# Grabs
2/9/1993	75.99	12.0	0.33	24.0	0.4	4.9	3
3/11/1993	69.67	5.0	2.33	8.6	0.3	4.9	3
4/19/1993	158.33	2.1	3.00	6.5	0.1	4.9	3
5/20/1993	69.67	0.5	0.67	6.1	0.0	4.9	3
6/16/1993	63.33	1.0	0.00	9.0	0.1	4.9	3
7/19/1993	126.67	7.8	0.00	16.6	0.7	4.9	3
8/19/1993	69.67	4.7	0.00	16.9	0.5	4.9	3
9/16/1993	69.67	6.5	2.33	9.4	0.7	4.9	3
10/8/1993	50.67	1.0	1.67	7.0	0.1	4.9	3
11/16/1993	145.67	0.2	6.00	3.0	0.0	4.9	3
12/9/1993	139.33	5.0	4.67	7.0	0.2	4.9	3
1/18/1994	44.33	0.1	1.33	4.6	0.0	4.9	3
2/8/1994	12.67	2.2	0.33	15.5	0.1	4.9	3
3/9/1994	114.00	1.9	2.33	6.4	0.1	4.9	3
4/12/1994	57.00	0.6	2.33	4.1	0.0	4.9	3
5/23/1994	31.67	0.6	1.33	5.9	0.0	4.9	3
6/9/1994	152.00	2.6	2.33	8.1	0.2	4.9	3
7/20/1994	31.67	0.3	1.33	4.1	0.0	4.9	3
8/9/1994	126.67	5.2	1.33	10.6	0.6	4.9	3
9/21/1994	88.67	2.9	2.33	8.2	0.3	4.9	3
10/19/1994	69.67	1.1	1.33	7.1	0.1	4.9	3
11/21/1994	158.33	10.1	3.67	11.6	0.3	4.9	3
12/16/1994	69.67	9.8	1.00	18.7	0.3	4.9	3
1/17/1995	88.67	1.3	1.67	8.1	0.0	4.9	3
2/15/1995	196.33	1.2	7.33	3.9	0.0	4.9	3
3/15/1995	304.00	2.0	10.00	3.9	0.1	4.9	3
4/27/1995	671.33	18.9	18.67	6.3	0.9	4.9	3
5/17/1995	215.33	1.2	6.00	3.9	0.1	4.9	3
6/27/1995	589.00	6.0	11.67	5.4	0.5	4.9	3
7/13/1995	513.00	4.2	5.33	5.4	0.5	4.9	3
8/24/1995	475.00	12.8	4.00	9.0	1.5	4.9	3
9/26/1995	582.67	8.9	4.67	9.3	0.9	4.9	3
10/25/1995	665.00	11.4	13.33	7.7	0.8	4.9	3
11/27/1995	1368.00	5.6	50.33	4.0	0.3	4.9	3
12/27/1995	285.00	6.4	12.67	3.8	0.2	4.9	3
1/23/1996	1567.50	7.0	59.00	3.5	0.2	4.9	4
2/23/1996	1596.00	7.1	68.00	2.8	0.3	4.9	4
3/22/1996	905.67	11.6	18.00	5.6	0.5	4.9	4

Appendix 4. Station D4L *Corbicula* Data							
Date	Total # of clams in sample (#/m^2)	Biomass (g/m^2)	recruit/0.05 m^2	mean size (mm)	GR ($m^3/m^2/d$)	Depth (m)	# Grabs
4/29/1996	142.50	1.3	6.50	3.2	0.1	4.9	4
5/17/1996	2337.00	13.9	83.50	3.8	1.2	4.9	4
7/18/1996	726.75	13.3	9.00	7.6	1.4	4.9	4
8/30/1996	916.75	27.4	2.50	10.7	2.9	4.9	4
9/13/1996	798.00	15.2	5.00	9.9	1.2	4.9	4
10/9/1996	570.00	5.2	2.00	7.2	0.3	4.9	4
11/15/1996	1073.50	9.2	34.00	5.4	0.4	4.9	4
12/12/1996	N/D	N/D	N/D	N/D	N/D	4.9	N/D
1/22/1997	1168.50	14.9	26.25	7.1	0.4	4.9	4
2/21/1997	1515.25	23.6	40.00	6.9	0.7	4.9	4
3/26/1997	1676.75	10.6	65.75	3.8	0.5	4.9	4
4/24/1997	994.33	23.0	23.00	7.7	1.5	4.9	4
5/23/1997	1178.00	29.7	22.00	8.4	2.8	4.9	4
6/20/1997	698.25	27.6	8.25	10.8	2.7	4.9	4
7/24/1997	1453.50	50.5	22.75	9.5	4.5	4.9	4
8/21/1997	703.00	31.5	4.50	10.9	3.1	4.9	4
9/18/1997	688.75	20.7	7.00	11.8	2.2	4.9	4
10/29/1997	1087.75	26.6	19.50	9.7	1.8	4.9	4
11/20/1997	1102.00	18.3	32.75	7.1	1.0	4.9	4
12/18/1997	470.25	9.5	13.75	7.4	0.3	4.9	4
1/15/1998	101.33	0.0	4.00	2.3	0.0	4.9	4
2/19/1998	639.67	9.3	9.67	8.2	0.3	4.9	4
3/17/1998	1912.67	20.8	79.33	4.0	0.7	4.9	4
4/16/1998	7631.67	50.2	350.33	3.2	2.6	4.9	4
5/13/1998	278.67	1.5	13.00	2.6	0.1	4.9	4
6/8/1998	2869.00	30.2	105.00	4.2	2.1	4.9	4
7/9/1998	1203.33	37.6	26.67	7.2	4.6	4.9	4
8/4/1998	614.33	2.3	22.00	3.3	0.3	4.9	4
9/16/1998	652.33	24.0	11.00	11.5	2.3	4.9	4
10/6/1998	779.00	26.4	22.00	8.3	1.5	4.9	4
11/4/1998	1298.33	21.9	49.67	5.6	0.9	4.9	4
12/21/1998	956.33	24.1	25.00	8.8	0.6	4.9	4
1/15/1999	1420.25	26.9	51.00	6.0	0.7	4.9	4
2/19/1999	1439.25	35.6	46.25	6.7	0.9	4.9	4
3/17/1999	313.50	18.4	4.00	12.2	0.5	4.9	4
4/16/1999	3329.75	33.2	146.25	3.4	1.1	4.9	4
5/20/1999	536.75	8.9	21.50	3.3	0.6	4.9	4
6/15/1999	703.00	0.4	35.25	1.7	0.0	4.9	4

Appendix 4. Station D4L *Corbicula* Data							
Date	Total # of clams in sample (#/m^2)	Biomass (g/m^2)	recruit/0.05 m^2	mean size (mm)	GR ($m^3/m^2/d$)	Depth (m)	# Grabs
7/15/1999	304.00	12.6	13.25	4.3	1.4	4.9	4
8/13/1999	437.00	0.9	19.75	2.3	0.1	4.9	4
9/24/1999	712.50	6.6	29.00	4.2	0.5	4.9	4
10/27/1999	665.00	33.7	12.75	11.3	2.3	4.9	4
11/9/1999	171.00	1.1	7.00	3.3	0.1	4.9	4
12/9/1999	80.75	1.6	1.25	7.9	0.0	4.9	4
1/7/2000	38.00	0.0	2.00	1.7	0.0	4.9	4
2/24/2000	399.00	16.2	8.33	9.3	0.5	4.9	4
3/24/2000	329.33	12.5	5.67	9.7	0.6	4.9	4
4/20/2000	2888.00	72.1	113.00	5.7	3.9	4.9	4
5/17/2000	405.33	1.4	15.33	2.6	0.1	4.9	4
6/15/2000	31.67	0.0	1.67	2.1	0.0	4.9	4
7/19/2000	411.67	2.5	15.33	3.1	0.3	4.9	4
8/15/2000	196.33	8.3	5.00	8.0	0.9	4.9	4
9/13/2000	981.67	45.1	16.00	12.3	3.6	4.9	4
10/12/2000	196.33	12.8	4.00	10.8	1.1	4.9	4
11/17/2000	69.67	0.9	2.67	4.9	0.0	4.9	4
12/13/2000	120.33	0.5	4.33	3.3	0.0	4.9	4
1/12/2001	42.75	0.0	1.75	1.9	0.0	4.9	4
2/7/2001	147.25	10.8	2.25	10.8	0.3	4.9	4
3/8/2001	66.50	0.6	2.75	3.6	0.0	4.9	4
4/5/2001	128.25	9.0	2.00	12.8	0.6	4.9	4
5/9/2001	579.50	58.3	5.00	16.5	4.1	4.9	4
6/19/2001	147.25	5.5	2.75	10.4	0.6	4.9	4
7/24/2001	52.25	0.0	2.25	2.1	0.0	4.9	4
8/22/2001	202.67	6.7	5.33	9.3	0.7	4.9	4
9/20/2001	57.00	0.0	2.25	2.4	0.0	4.9	4
10/19/2001	42.75	0.0	1.50	2.5	0.0	4.9	4
11/21/2001	85.50	0.6	3.75	3.5	0.0	4.9	4
12/14/2001	76.00	0.0	4.00	1.8	0.0	4.9	4
1/17/2002	76.00	0.0	3.67	1.9	0.0	4.9	4
2/14/2002	99.75	0.0	5.25	1.5	0.0	4.9	4
4/16/2002	101.33	0.0	5.33	1.4	0.0	4.9	4
5/15/2002	183.67	0.0	9.33	1.7	0.0	4.9	4
6/11/2002	337.25	3.0	15.25	3.4	0.3	4.9	4
7/9/2002	598.50	4.2	24.50	3.2	0.5	4.9	4
8/8/2002	85.50	0.0	3.25	2.4	0.0	4.9	4
9/11/2002	147.25	0.8	5.25	3.3	0.1	4.9	4

Appendix 4. Station D4L *Corbicula* Data							
Date	Total # of clams in sample (#/m^2)	Biomass (g/m^2)	recruit/0.05 m^2	mean size (mm)	GR ($m^3/m^2/d$)	Depth (m)	# Grabs
10/24/2002	90.25	0.0	3.25	2.4	0.0	4.9	4
11/6/2002	114.00	1.1	3.75	4.7	0.1	4.9	4
12/6/2002	66.50	0.0	3.25	2.0	0.0	4.9	4
1/21/2003	N/D	N/D	N/D	N/D	N/D	4.9	4
2/18/2003	N/D	N/D	N/D	N/D	N/D	4.9	4
3/18/2003	N/D	N/D	N/D	N/D	N/D	4.9	4
4/16/2003	N/D	N/D	N/D	N/D	N/D	4.9	4
5/14/2003	N/D	N/D	N/D	N/D	N/D	4.9	4
6/1/2003	N/D	N/D	N/D	N/D	N/D	4.9	4
7/14/2003	N/D	N/D	N/D	N/D	N/D	4.9	4
8/13/2003	N/D	N/D	N/D	N/D	N/D	4.9	4
9/18/2003	N/D	N/D	N/D	N/D	N/D	4.9	4
10/23/2003	N/D	N/D	N/D	N/D	N/D	4.9	4
1/8/2004	N/D	N/D	N/D	N/D	N/D	4.9	4
4/7/2004	N/D	N/D	N/D	N/D	N/D	4.9	4
7/15/2004	278.67	0.4	5.33	4.2	0.00	4.9	4
10/26/2004	1000.67	25.0	21.33	8.8	1.56	4.9	4
1/12/2005	633.33	15.7	5.33	11.2	0.4	4.9	4
4/8/2005	1076.67	14.5	41.00	4.5	0.8	4.9	4
7/25/2005	912.00	14.3	21.67	6.0	1.6	4.9	4
10/14/2005	861.33	7.9	28.67	4.7	0.6	4.9	4
11/9/2005	886.67	8.7	17.67	5.8	0.4	4.9	4
12/7/2005	962.67	14.3	15.67	5.9	0.4	4.9	4
1/12/2006	969.00	8.7	15.00	5.8	0.2	4.9	4
2/9/2006	1121.00	11.0	26.67	4.8	0.3	4.9	4
3/15/2006	905.67	9.5	18.00	5.6	0.3	4.9	4
4/26/2006	1171.67	9.1	38.33	4.2	0.4	4.9	4
5/25/2006	3996.33	54.5	115.00	4.8	3.7	4.9	4
6/5/2006	1355.33	10.2	27.67	5.2	1.2	4.9	4
7/10/2006	1811.33	26.8	16.33	7.2	3.1	4.9	4
8/10/2006	1064.00	14.3	16.00	7.2	1.3	4.9	4
9/25/2006	234.33	3.6	0.67	9.1	0.3	4.9	4
10/25/2006	1197.00	10.0	11.00	7.1	0.6	4.9	4
11/20/2006	N/D	N/D	N/D	N/D	N/D	4.9	N/D
12/20/2006	1070.33	20.0	13.67	8.9	0.6	4.9	4
1/23/2007	646.00	15.6	4.25	9.9	0.4	4.9	4
2/20/2007	475.00	6.1	4.75	8.2	0.2	4.9	4
3/20/2007	864.50	12.3	20.00	6.6	0.5	4.9	4

Appendix 4. Station D4L *Corbicula* Data							
Date	Total # of clams in sample (#/m^2)	Biomass (g/m^2)	recruit/0.05 m^2	mean size (mm)	GR ($m^3/m^2/d$)	Depth (m)	# Grabs
4/16/2007	893.00	17.1	6.75	9.3	0.8	4.9	4
5/16/2007	1572.25	37.7	9.75	10.6	2.3	4.9	4
6/20/2007	517.75	11.7	1.00	11.4	0.8	4.9	4
7/16/2007	646.00	16.1	0.50	11.7	1.4	4.9	4
8/15/2007	451.25	6.3	1.50	9.5	0.7	4.9	4
9/11/2007	422.75	8.3	2.00	10.2	0.7	4.9	4
10/3/2007	460.75	10.5	1.75	11.4	0.6	4.9	4
11/6/2007	555.75	6.4	3.75	8.8	0.3	4.9	4
12/10/2007	712.50	16.2	6.75	10.6	0.4	4.9	4
1/8/2008	769.50	16.4	1.50	11.6	0.4	4.9	4
2/6/2008	603.25	16.3	3.25	12.4	0.4	4.9	4
3/5/2008	356.25	9.1	1.00	11.8	0.4	4.9	4
4/2/2008	598.50	15.6	2.25	11.8	0.8	4.9	4
5/20/2008	864.50	23.3	8.50	10.1	1.4	4.9	4
6/17/2008	669.75	21.5	2.50	12.5	1.6	4.9	4
7/14/2008	527.25	27.0	0.75	13.4	2.6	4.9	4
8/13/2008	365.75	7.8	1.00	11.2	0.7	4.9	4
9/15/2008	541.50	17.3	2.50	12.6	1.7	4.9	4
10/28/2008	2598.25	20.8	100.50	4.5	1.7	4.9	4
11/18/2008	460.75	13.5	0.75	13.5	0.7	4.9	4
12/10/2008	294.50	9.1	2.25	12.0	0.3	4.9	4
1/12/2009	403.75	11.9	1.25	12.8	0.3	4.9	4
2/9/2009	399.00	10.8	1.00	12.9	0.3	4.9	4
3/11/2009	361.00	14.6	1.00	13.2	0.6	4.9	4
4/6/2009	228.00	8.8	2.00	12.2	0.4	4.9	4
5/5/2009	703.00	27.7	1.50	12.8	2.1	4.9	4
6/23/2009	399.00	14.5	1.00	13.1	1.1	4.9	4
7/21/2009	289.75	11.4	0.50	13.6	1.2	4.9	4
8/18/2009	380.00	10.1	3.50	11.7	1.0	4.9	4
9/16/2009	237.50	8.5	1.25	13.8	0.9	4.9	4
10/19/2009	171.00	6.2	0.25	14.3	0.4	4.9	4
11/16/2009	475.00	8.7	9.25	9.4	0.5	4.9	4
12/15/2009	313.50	7.8	2.75	12.2	0.2	4.9	4
1/13/2010	456.00	8.4	6.75	9.6	0.2	4.9	4
2/17/2010	237.50	4.3	3.25	10.1	0.1	4.9	4
3/15/2010	270.75	6.1	4.50	8.7	0.2	4.9	4
4/12/2010	332.50	7.8	5.50	8.7	0.4	4.9	4
5/19/2010	859.75	15.4	14.25	7.5	0.9	4.9	4

Appendix 4. Station D4L *Corbicula* Data							
Date	Total # of clams in sample (#/m^2)	Biomass (g/m^2)	recruit/0.05 m^2	mean size (mm)	GR ($m^3/m^2/d$)	Depth (m)	# Grabs
6/9/2010	527.25	15.4	7.75	8.7	1.1	4.9	4
7/6/2010	517.75	14.6	5.25	9.7	1.3	4.9	4
8/16/2010	399.00	10.9	5.75	9.6	0.9	4.9	4
9/7/2010	660.25	10.9	18.00	6.9	0.9	4.9	4
10/26/2010	237.50	5.2	1.75	10.1	0.4	4.9	4
11/22/2010	327.75	6.6	2.75	9.2	0.4	4.9	4
12/20/2010	270.75	7.9	2.00	10.4	0.3	4.9	4
1/18/2011	342.00	6.9	3.00	9.0	0.2	4.9	4
2/1/2011	375.25	8.1	6.00	8.1	0.2	4.9	4
3/7/2011	508.25	16.9	6.25	9.7	0.6	4.9	4
4/5/2011	1220.75	17.0	38.50	5.0	0.7	4.9	4
5/3/2011	1211.25	20.0	38.75	5.3	1.2	4.9	4
6/13/2011	1581.75	13.1	60.25	4.1	0.8	4.9	4
7/12/2011	1083.00	27.7	18.50	7.1	3.1	4.9	4
8/9/2011	489.25	13.1	8.75	7.7	1.2	4.9	4
9/7/2011	750.50	24.6	6.25	11.1	2.3	4.9	4
10/3/2011	337.25	6.2	3.75	8.3	0.5	4.9	4
11/8/2011	484.50	14.4	2.25	11.5	1.0	4.9	4
12/7/2011	565.25	13.1	3.25	10.9	0.9	4.9	4
1/9/2012	688.75	12.8	7.25	8.7	0.3	4.9	4
2/8/2012	389.50	11.9	1.00	11.6	0.4	4.9	4
3/6/2012	926.25	19.0	14.00	8.6	0.6	4.9	4
4/5/2012	413.25	13.8	2.75	11.4	0.6	4.9	4
5/21/2012	394.25	11.2	1.50	11.0	0.8	4.9	4
6/20/2012	289.75	8.4	1.00	12.2	0.6	4.9	4
7/17/2012	190.00	4.4	0.50	10.6	0.5	4.9	4
8/15/2012	299.25	10.5	0.50	13.6	1.1	4.9	4
9/25/2012	308.75	10.6	0.25	13.3	0.9	4.9	4
10/24/2012	313.50	12.8	0.75	13.1	0.9	4.9	4
11/14/2012	237.50	7.3	0.50	12.8	0.5	4.9	4
12/18/2012	470.25	13.4	1.25	11.9	0.5	4.9	4
09-Jan-13	275.50	9.7	2.00	12.2	0.3	4.9	4
05-Feb-13	327.75	9.6	0.75	12.3	0.3	4.9	4
13-Mar-13	456.00	16.9	2.75	11.7	0.8	4.9	4
10-Apr-13	726.75	17.7	16.25	8.2	1.0	4.9	4
5/7/2013	437.00	14.3	2.50	11.2	1.1	4.9	4
6/4/2013	342.00	10.4	2.00	11.5	0.9	4.9	4
7/8/2013	346.75	15.3	1.50	12.4	1.4	4.9	4

Appendix 4. Station D4L *Corbicula* Data							
Date	Total # of clams in sample (#/m^2)	Biomass (g/m^2)	recruit/0.05 m^2	mean size (mm)	GR ($m^3/m^2/d$)	Depth (m)	# Grabs
8/8/2013	N/D	N/D	N/D	N/D	N/D	4.9	N/D
9/4/2013	470.25	13.8	0.25	13.6	1.1	4.9	4
10/15/2013	821.75	17.2	4.25	11.0	1.0	4.9	4
11/19/2013	327.75	10.6	0.50	13.1	0.5	4.9	4
12/16/2013	180.50	5.1	1.00	12.4	0.1	4.9	4

Appendix 5. Station D4L *Potamocorbula* Data							
Date	Total # of clams in sample (#/m^2)	biomass (g/m^2)	rec/0.05m^2	mean size (mm)	GR ($m^3/m^2/d$)	Depth(M)	# Grabs
7/30/1987	3078.0	0.17	159.00	1.5	0.06	4.9	1
8/20/1987	4864.0	0.55	237.00	1.9	0.19	4.9	1
9/18/1987	1425.0	0.18	72.00	2.2	0.07	4.9	1
10/30/1987	1368.0	0.14	64.00	2.0	0.08	4.9	1
11/9/1987	836.0	0.48	30.00	3.0	0.13	4.9	1
12/17/1987	1881.0	2.64	45.00	4.1	0.54	4.9	1
1/15/1988	836.0	2.00	14.00	4.6	0.31	4.9	1
2/11/1988	2451.0	11.56	21.00	5.5	1.47	4.9	1
4/1/1988	171.0	0.72	0.00	6.2	0.12	4.9	1
5/27/1988	76.0	0.56	2.00	5.0	0.08	4.9	1
6/24/1988	133.0	4.41	0.00	12.5	0.49	4.9	1
7/22/1988	570.0	0.17	21.00	2.3	0.04	4.9	1
8/22/1988	418.0	0.11	16.00	2.6	0.04	4.9	1
9/22/1988	304.0	0.20	9.00	3.1	0.05	4.9	1
10/21/1988	133.0	0.04	3.00	3.2	0.02	4.9	1
11/17/1988	988.0	2.22	13.00	5.1	0.53	4.9	1
12/8/1988	76.0	0.10	2.00	4.0	0.02	4.9	1
1/20/1989	152.0	0.34	5.00	3.6	0.05	4.9	1
2/6/1989	304.0	0.16	9.50	2.8	0.04	4.9	1
2/28/1989	N/D	N/D	N/D	N/D	0.00	4.9	1
3/21/1989	N/D	N/D	N/D	N/D	0.00	4.9	1
5/4/1989	142.5	0.24	1.50	4.4	0.04	4.9	1
6/26/1989	N/D	N/D	N/D	N/D	0.19	4.9	1
7/24/1989	19.0	1.50	0.00	16.0	0.01	4.9	1
8/21/1989	47.5	0.01	1.50	2.9	0.01	4.9	1
9/19/1989	19.0	0.03	0.00	5.5	0.16	4.9	1
10/17/1989	57.0	1.35	1.00	10.2	N/D	4.9	1

Appendix 5. Station D4L *Potamocorbula* Data							
Date	Total # of clams in sample (#/m^2)	biomass (g/m^2)	rec/0.05m^2	mean size (mm)	GR ($m^3/m^2/d$)	Depth(M)	# Grabs
11/13/1989	62.7	N/D	N/D	N/D	0.00	4.9	1
12/12/1989	234.3	N/D	N/D	N/D	N/D	4.9	1
1/17/1990	0.0	0.00	0.00	N/D	0.08	4.9	3
2/27/1990	95.0	0.32	2.00	4.4	0.00	4.9	3
3/18/1990	0.0	0.00	0.00	N/D	0.00	4.9	3
4/20/1990	44.3	2.07	0.00	11.4	0.00	4.9	3
5/14/1990	62.7	N/D	N/D	N/D	0.00	4.9	3
6/26/1990	133.0	0.01	7.00	1.6	0.00	4.9	3
7/12/1990	25.3	0.00	1.33	2.0	0.00	4.9	3
8/8/1990	437.0	0.09	20.33	1.7	0.00	4.9	3
9/24/1990	1140.0	1.66	25.67	3.7	0.02	4.9	3
10/22/1990	82.3	0.02	4.00	2.1	0.54	4.9	3
11/6/1990	791.7	2.32	10.67	5.4	0.00	4.9	3
12/13/1990	133.0	0.90	5.33	3.2	0.17	4.9	3
1/7/1991	456.0	0.11	18.00	2.3	0.27	4.9	3
2/19/1991	95.0	0.04	3.00	2.9	0.03	4.9	3
3/5/1991	114.0	0.06	4.00	2.8	0.01	4.9	3
4/11/1991	3565.7	28.31	38.33	5.7	0.02	4.9	3
5/23/1991	348.3	1.73	0.67	6.0	3.50	4.9	3
6/4/1991	57.0	1.04	1.67	5.9	0.00	4.9	3
7/16/1991	1159.0	0.26	55.67	1.7	0.06	4.9	3
8/30/1991	728.3	0.40	16.67	3.2	0.01	4.9	3
9/12/1991	342.0	0.16	6.67	3.4	0.11	4.9	3
10/8/1991	133.0	0.02	6.50	2.5	0.01	4.9	3
11/12/1991	209.0	0.10	7.33	2.6	0.00	4.9	3
12/10/1991	114.0	0.01	5.00	2.0	0.00	4.9	3
1/17/1992	1165.3	4.88	7.33	6.4	0.44	4.9	3
2/25/1992	69.7	0.12	1.33	3.6	0.05	4.9	3
3/24/1992	25.3	0.01	0.67	3.0	0.00	4.9	3
4/6/1992	31.7	0.09	0.00	5.3	0.04	4.9	3
5/14/1992	88.7	0.78	0.00	7.9	0.16	4.9	3
6/17/1992	772.7	2.89	31.67	3.3	0.25	4.9	3
7/10/1992	1425.0	2.40	52.50	2.8	0.82	4.9	3
8/4/1992	145.7	0.27	5.67	3.0	0.01	4.9	3
9/1/1992	164.7	1.13	6.00	4.1	0.09	4.9	3
10/23/1992	563.7	0.49	27.33	2.0	0.30	4.9	3
11/5/1992	627.0	0.18	32.33	1.5	0.08	4.9	3
12/28/1992	152.0	1.29	6.00	4.0	0.12	4.9	3

Appendix 5. Station D4L *Potamocorbula* Data							
Date	Total # of clams in sample (#/m^2)	biomass (g/m^2)	rec/0.05m^2	mean size (mm)	GR ($m^3/m^2/d$)	Depth(M)	# Grabs
1/14/1993	1260.3	33.85	16.33	10.9	4.23	4.9	3
2/9/1993	57.0	1.01	1.00	7.5	0.01	4.9	3
3/11/1993	1570.7	90.41	10.33	11.6	0.28	4.9	3
4/19/1993	126.7	4.26	1.00	8.3	0.12	4.9	3
5/20/1993	114.0	2.97	0.00	8.2	0.12	4.9	3
6/16/1993	50.7	0.29	0.33	6.9	0.00	4.9	3
7/19/1993	595.3	45.79	0.00	14.8	17.18	4.9	3
8/19/1993	2166.0	151.72	0.00	15.1	10.41	4.9	3
9/16/1993	12.7	0.53	0.00	12.5	0.00	4.9	3
10/8/1993	6.3	0.31	0.00	18.5	0.19	4.9	3
11/16/1993	25.3	0.98	0.33	11.3	0.00	4.9	3
12/9/1993	6.3	0.74	0.00	19.5	0.22	4.9	3
1/18/1994	3800.0	209.90	0.00	16.6	21.43	4.9	3
2/8/1994	19.0	1.38	0.00	18.2	0.39	4.9	3
3/9/1994	0.0	0.00	0.00	N/D	0.00	4.9	3
4/12/1994	6.3	1.12	0.00	20.5	0.00	4.9	3
5/23/1994	0.0	0.00	0.00	N/D	0.22	4.9	3
6/9/1994	196.3	15.52	0.00	16.1	0.48	4.9	3
7/20/1994	0.0	0.00	0.00	N/D	0.00	4.9	3
8/9/1994	82.3	0.82	3.67	3.5	0.19	4.9	3
9/21/1994	38.0	0.39	1.67	3.7	0.00	4.9	3
10/19/1994	101.3	0.02	4.33	2.4	0.00	4.9	3
11/21/1994	57.0	0.51	2.33	3.8	0.00	4.9	3
12/16/1994	101.3	0.00	5.33	1.6	0.00	4.9	3
1/17/1995	209.0	1.73	6.33	5.1	0.06	4.9	3
2/15/1995	82.3	0.07	2.00	3.3	0.03	4.9	3
3/15/1995	152.0	2.92	3.00	5.3	0.31	4.9	3
4/27/1995	50.7	1.59	0.00	6.6	0.00	4.9	3
5/17/1995	12.7	0.03	0.00	5.0	0.01	4.9	3
6/27/1995	221.7	2.62	0.00	7.6	0.25	4.9	3
7/13/1995	114.0	0.77	0.00	7.6	0.02	4.9	3
8/24/1995	424.3	8.16	0.00	10.1	0.91	4.9	3
9/26/1995	335.7	6.96	0.33	10.7	1.88	4.9	3
10/25/1995	202.7	2.59	0.33	11.4	0.33	4.9	3
11/27/1995	19.0	1.21	0.00	14.2	0.61	4.9	3
12/27/1995	38.0	N/D	N/D	N/D	N/D	4.9	3
1/23/1996	57.0	1.17	0.00	12.4	N/D	4.9	4
2/23/1996	9.5	0.28	0.00	13.5	0.16	4.9	4

Appendix 5. Station D4L *Potamocorbula* Data							
Date	Total # of clams in sample (#/m^2)	biomass (g/m^2)	rec/0.05m^2	mean size (mm)	GR ($m^3/m^2/d$)	Depth(M)	# Grabs
3/21/1996	194.8	0.42	8.25	2.5	0.07	4.9	4
4/29/1996	4.8	0.21	0.00	13.5	0.00	4.9	4
5/17/1996	4.8	0.21	0.00	13.5	0.00	4.9	4
7/18/1996	9.5	0.43	35184.00	13.0	0.00	4.9	4
8/30/1996	28.5	1.48	35202.00	14.7	0.10	4.9	4
9/13/1996	23.8	1.74	0.00	16.3	0.00	4.9	4
10/9/1996	6.3	0.22	0.00	16.5	0.14	4.9	4
11/15/1996	23.8	1.35	0.50	11.5	0.00	4.9	4
12/12/1996	14.3	0.84	0.00	15.5	0.00	4.9	4
1/22/1997	14.3	1.34	0.00	17.5	0.10	4.9	4
2/21/1997	14.3	1.34	0.00	17.5	0.00	4.9	4
3/26/1997	0.0	0.00	0.00	N/D	0.00	4.9	4
4/24/1997	19.0	0.85	0.00	11.0	0.38	4.9	4
5/23/1997	4.8	0.40	0.00	17.5	0.00	4.9	4
6/20/1997	0.0	0.00	0.00	N/D	0.00	4.9	4
7/24/1997	4.8	0.57	0.00	19.5	0.00	4.9	4
8/21/1997	14.3	0.85	0.00	13.8	0.22	4.9	4
9/18/1997	223.3	1.31	9.75	2.5	0.00	4.9	4
10/29/1997	1002.3	0.08	44.50	2.4	0.28	4.9	4
11/20/1997	228.0	0.05	10.00	2.4	0.00	4.9	4
12/18/1997	0.0	0.00	0.00	N/D	N/D	4.9	4
1/15/1998	114.0	0.03	4.67	2.6	0.01	4.9	4
2/19/1998	418.0	0.46	13.33	3.2	0.00	4.9	4
3/17/1998	544.7	0.22	17.00	2.9	0.20	4.9	4
4/16/1998	690.3	2.58	4.67	4.6	0.08	4.9	4
5/13/1998	12.7	0.00	0.67	2.5	0.16	4.9	4
6/8/1998	247.0	0.26	2.67	4.3	0.07	4.9	4
7/9/1998	190.0	5.49	0.00	7.6	0.07	4.9	4
8/4/1998	0.0	0.00	0.00	0.0	0.07	4.9	4
9/16/1998	0.0	0.00	0.00	0.0	0.00	4.9	4
10/6/1998	12.7	0.03	0.00	6.5	0.00	4.9	4
11/4/1998	0.0	0.00	0.00	0.0	0.01	4.9	4
12/21/1998	0.0	0.00	0.00	0.0	0.00	4.9	4
1/13/1999	0.0	0.00	0.00	0.0	0.00	4.9	4
2/17/1999	0.0	0.00	0.00	0.0	0.00	4.9	4
3/16/1999	0.0	0.00	0.00	0.0	0.00	4.9	4
4/14/1999	0.0	0.00	0.00	0.0	0.00	4.9	4
5/18/1999	0.0	0.00	0.00	0.0	0.00	4.9	4

Appendix 5. Station D4L *Potamocorbula* Data							
Date	Total # of clams in sample (#/m^2)	biomass (g/m^2)	rec/0.05m^2	mean size (mm)	GR ($m^3/m^2/d$)	Depth(M)	# Grabs
6/14/1999	0.0	0.00	0.00	0.0	0.00	4.9	4
7/13/1999	0.0	0.00	0.00	0.0	0.00	4.9	4
8/11/1999	0.0	0.00	0.00	0.0	0.00	4.9	4
9/22/1999	19.0	0.03	0.00	5.0	0.00	4.9	4
10/27/1999	484.5	0.08	19.75	2.4	0.00	4.9	4
11/9/1999	375.3	0.06	15.50	2.5	0.03	4.9	4
12/8/1999	166.3	0.05	5.00	3.0	0.02	4.9	4
1/7/2000	50.7	0.00	2.67	1.9	0.01	4.9	4
2/24/2000	639.7	0.29	20.33	2.8	0.00	4.9	4
3/24/2000	114.0	0.15	1.67	4.1	0.00	4.9	4
4/20/2000	658.7	1.40	6.67	4.6	0.03	4.9	4
5/17/2000	82.3	0.23	0.33	5.1	0.43	4.9	4
6/15/2000	4.8	N/D	N/D	N/D	0.02	4.9	4
7/19/2000	4.8	N/D	N/D	N/D	0.01	4.9	4
8/15/2000	4.8	N/D	N/D	N/D	0.00	4.9	4
9/13/2000	6.3	0.05	0.00	9.5	0.00	4.9	4
10/12/2000	19.0	0.00	1.00	1.5	0.02	4.9	4
11/17/2000	443.3	0.02	22.00	1.5	0.00	4.9	4
12/13/2000	620.7	0.05	30.00	1.8	0.00	4.9	4
1/12/2001	361.0	0.05	16.00	2.1	0.02	4.9	4
2/7/2001	337.3	0.21	12.50	2.7	0.01	4.9	4
3/8/2001	80.8	0.02	3.75	2.1	0.03	4.9	4
4/5/2001	185.3	0.06	7.00	2.7	0.00	4.9	4
5/9/2001	104.5	0.15	1.00	4.3	0.02	4.9	4
6/19/2001	9.5	0.02	0.00	6.0	0.08	4.9	4
7/24/2001	95.0	0.03	3.25	2.7	0.01	4.9	4
8/22/2001	665.0	0.05	34.50	1.7	0.01	4.9	4
9/20/2001	1225.5	0.12	62.50	1.8	0.01	4.9	4
10/19/2001	346.8	0.02	18.00	1.8	0.05	4.9	4
11/21/2001	85.5	0.01	3.75	2.1	0.02	4.9	4
12/14/2001	80.8	0.01	4.00	2.0	0.01	4.9	4
1/17/2002	57.0	0.02	2.00	3.1	0.00	4.9	4
2/14/2002	33.3	0.01	1.25	2.6	0.01	4.9	4
3/12/2002	N/D	N/D	N/D	N/D	0.01	4.9	4
4/16/2002	101.3	0.00	5.33	1.4	0.00	4.9	4
5/15/2002	12.7	0.06	0.00	6.5	0.00	4.9	4
6/11/2002	9.5	N/D	N/D	N/D	0.00	4.9	4
7/9/2002	28.5	0.44	0.00	9.7	0.00	4.9	4

Appendix 5. Station D4L *Potamocorbula* Data							
Date	Total # of clams in sample (#/m^2)	biomass (g/m^2)	rec/0.05m^2	mean size (mm)	GR ($m^3/m^2/d$)	Depth(M)	# Grabs
8/8/2002	0.0	0.00	0.00	N/D	0.00	4.9	4
9/11/2002	484.5	0.31	23.50	2.1	0.00	4.9	4
10/24/2002	403.8	0.04	19.75	2.1	0.00	4.9	4
11/6/2002	753.7	0.06	36.33	2.0	0.02	4.9	4
12/6/2002	275.5	0.03	13.25	2.1	0.04	4.9	4
1/21/2003	N/D	N/D	N/D	N/D	0.01	4.9	4
2/18/2003	N/D	N/D	N/D	N/D	N/D	4.9	4
3/18/2003	N/D	N/D	N/D	N/D	N/D	4.9	4
4/16/2003	N/D	N/D	N/D	N/D	N/D	4.9	4
5/14/2003	N/D	N/D	N/D	N/D	N/D	4.9	4
6/1/2003	N/D	N/D	N/D	N/D	N/D	4.9	4
7/14/2003	N/D	N/D	N/D	N/D	N/D	4.9	4
8/13/2003	N/D	N/D	N/D	N/D	N/D	4.9	4
9/18/2003	N/D	N/D	N/D	N/D	N/D	4.9	4
10/23/2003	N/D	N/D	N/D	N/D	N/D	4.9	4
1/8/2004	270.8	N/D	N/D	N/D	N/D	4.9	4
4/7/2004	0.0	N/D	N/D	N/D	N/D	4.9	4
7/15/2004	120.3	1.19	1.67	7.4	N/D	4.9	4
10/26/2004	1418.7	7.66	52.33	4.5	N/D	4.9	4
1/12/2005	1102.0	14.56	30.33	6.9	1.15	4.9	4
4/8/2005	183.7	0.06	6.67	2.8	N/D	4.9	4
7/25/2005	19.0	0.39	0.00	10.2	0.04	4.9	4
10/14/2005	171.0	0.01	9.00	1.5	0.09	4.9	4
11/9/2005	266.0	0.29	13.00	2.4	0.00	4.9	4
12/7/2005	437.0	0.59	19.00	2.7	0.01	4.9	4
1/12/2006	259.7	1.92	5.00	5.3	0.00	4.9	4
2/9/2006	164.7	0.19	5.00	3.4	0.27	4.9	4
3/15/2006	202.7	1.30	5.67	3.9	N/D	4.9	4
4/26/2006	57.0	0.34	0.67	5.1	N/D	4.9	4
5/25/2006	95.0	0.25	0.00	5.4	0.03	4.9	4
6/5/2006	76.0	0.19	0.00	5.7	0.00	4.9	4
7/10/2006	44.3	0.53	0.00	8.8	0.13	4.9	4
8/10/2006	4.5	N/D	N/D	N/D	0.00	4.9	4
9/20/2006	0.0	0.00	0.00	N/D	0.00	4.9	4
10/25/2006	38.0	0.15	1.33	5.0	0.16	4.9	4
11/20/2006	44.3	0.33	1.67	5.1	0.00	4.9	4
12/20/2006	31.7	0.59	0.00	10.3	1.39	4.9	4
1/23/2007	14.3	0.00	0.75	1.8	0.10	4.9	4

Appendix 5. Station D4L *Potamocorbula* Data							
Date	Total # of clams in sample (#/m^2)	biomass (g/m^2)	rec/0.05m^2	mean size (mm)	GR ($m^3/m^2/d$)	Depth(M)	# Grabs
2/20/2007	52.3	0.25	1.25	4.7	0.16	4.9	4
3/20/2007	0.0	0.00	0.00	0.0	0.00	4.9	4
4/16/2007	31.7	0.48	0.00	7.7	0.00	4.9	4
5/16/2007	47.5	0.97	0.50	7.7	0.00	4.9	4
6/20/2007	19.0	0.84	0.00	13.2	0.00	4.9	4
7/16/2007	12.7	0.23	0.00	10.0	0.27	4.9	4
8/15/2007	14.3	0.29	0.00	11.2	0.09	4.9	4
9/11/2007	147.3	0.29	7.00	2.6	0.00	4.9	4
10/3/2007	190.0	0.01	10.00	1.6	0.27	4.9	4
11/6/2007	42.8	0.00	2.00	1.9	0.00	4.9	4
12/10/2007	926.3	0.32	46.00	2.1	0.10	4.9	4
1/8/2008	574.8	0.45	26.50	2.5	0.00	4.9	4
2/6/2008	574.8	0.29	27.75	2.3	0.00	4.9	4
3/5/2008	285.0	0.35	12.00	2.9	0.03	4.9	4
4/2/2008	185.3	0.29	6.25	3.1	0.14	4.9	4
5/20/2008	209.0	1.65	0.00	7.0	0.05	4.9	4
6/17/2008	61.8	0.57	0.25	7.1	0.05	4.9	4
7/14/2008	57.0	0.30	1.25	5.6	0.03	4.9	4
8/13/2008	14.3	0.22	0.25	8.2	0.07	4.9	4
9/15/2008	532.0	0.52	27.25	1.9	0.15	4.9	4
10/28/2008	1040.3	1.41	42.75	2.9	0.17	4.9	4
11/18/2008	446.5	0.80	21.75	2.4	0.02	4.9	4
12/10/2008	527.3	0.63	25.75	2.2	0.45	4.9	4
1/12/2009	484.5	0.87	21.75	2.8	0.08	4.9	4
2/9/2009	631.8	0.49	30.00	2.2	0.12	4.9	4
3/11/2009	190.0	0.13	6.50	3.1	0.01	4.9	4
4/6/2009	285.0	0.12	10.25	2.8	0.02	4.9	4
5/5/2009	156.8	0.40	1.00	4.7	0.09	4.9	4
6/23/2009	47.5	0.11	0.00	5.5	0.10	4.9	4
7/21/2009	42.8	0.63	0.25	7.9	0.08	4.9	4
8/18/2009	23.8	0.02	0.75	3.3	0.03	4.9	4
9/16/2009	28.5	0.00	1.50	1.8	0.00	4.9	4
10/19/2009	342.0	0.02	17.00	1.6	0.00	4.9	4
11/16/2009	375.3	0.02	19.50	1.8	0.00	4.9	4
12/15/2009	232.8	0.01	12.25	1.7	0.01	4.9	4
1/13/2010	318.3	0.11	15.75	2.0	0.00	4.9	4
2/17/2010	80.8	0.01	4.25	2.0	0.00	4.9	4
3/15/2010	57.0	0.01	2.25	2.4	0.01	4.9	4

Appendix 5. Station D4L *Potamocorbula* Data							
Date	Total # of clams in sample (#/m^2)	biomass (g/m^2)	rec/0.05m^2	mean size (mm)	GR ($m^3/m^2/d$)	Depth(M)	# Grabs
4/12/2010	85.5	0.03	2.25	2.9	0.01	4.9	4
5/19/2010	204.3	0.81	0.00	6.2	0.00	4.9	4
6/9/2010	123.5	0.41	0.25	6.1	0.09	4.9	4
7/6/2010	61.8	0.42	0.00	7.5	0.17	4.9	4
8/16/2010	19.0	0.12	0.00	8.0	0.04	4.9	4
9/7/2010	19.0	0.10	0.25	5.8	0.04	4.9	4
10/26/2010	612.8	0.41	31.25	1.8	0.00	4.9	4
11/22/2010	1087.8	0.29	57.00	1.7	0.07	4.9	4
12/20/2010	850.3	0.05	43.25	1.8	0.13	4.9	4
1/18/2011	370.5	0.16	19.00	2.1	0.08	4.9	4
2/1/2011	494.0	0.26	25.50	1.5	0.00	4.9	4
3/7/2011	242.3	0.05	11.00	2.5	0.03	4.9	4
4/5/2011	365.8	0.19	15.25	2.7	0.06	4.9	4
5/3/2011	261.3	0.23	4.00	3.7	0.02	4.9	4
6/13/2011	52.3	0.12	0.75	4.7	0.05	4.9	4
7/12/2011	28.5	0.02	0.50	3.5	0.06	4.9	4
8/9/2011	38.0	0.51	0.00	9.5	0.03	4.9	4
9/7/2011	0.0	0.00	0.00	N/D	0.00	4.9	4
10/3/2011	0.0	0.00	0.00	N/D	0.02	4.9	4
11/8/2011	19.0	0.28	0.00	10.5	0.00	4.9	4
12/7/2011	19.0	0.63	0.00	13.5	0.00	4.9	4
1/9/2012	6.3	0.20	0.00	14.5	0.03	4.9	4
2/7/2012	0.0	0.00	0.00	N/D	0.03	4.9	4
3/6/2012	9.5	0.48	0.00	14.0	0.00	4.9	4
4/4/2012	0.0	0.00	0.00	11.4	0.00	4.9	4
5/23/2012	0.0	0.00	0.00	0.0	0.19	4.9	4
6/19/2012	0.0	0.00	0.00	0.0	8.10	4.9	4
7/17/2012	0.0	0.00	0.00	0.0	N/D	4.9	4
8/14/2012	0.0	0.00	0.00	0.0	N/D	4.9	4
9/25/2012	80.8	0.01	3.75	1.7	N/D	4.9	4
10/25/2012	275.5	0.02	13.75	1.9	N/D	4.9	4
11/13/2012	579.5	0.04	28.00	1.7	0.00	4.9	4
12/17/2012	323.0	0.06	13.75	2.5	0.01	4.9	4
1/9/2013	237.5	0.05	8.50	2.5	0.02	4.9	4
2/5/2013	156.8	0.12	4.00	3.3	0.02	4.9	4
3/13/2013	446.5	0.21	14.75	3.0	0.01	4.9	4
4/10/2013	313.5	0.45	4.25	4.2	0.05	4.9	4
5/7/2013	251.8	0.51	0.75	4.8	0.08	4.9	4

Appendix 5. Station D4L *Potamocorbula* Data							
Date	**Total # of clams in sample (#/m^2)**	**biomass (g/m^2)**	**rec/0.05m^2**	**mean size (mm)**	**GR (m^3/m^2/d)**	**Depth(M)**	**# Grabs**
6/4/2013	99.8	0.44	0.00	6.9	0.18	4.9	4
7/8/2013	76.0	0.57	0.25	7.8	0.20	4.9	4
8/8/2013	0.0	0.00	0.00	N/D	0.17	4.9	4
9/4/2013	422.8	2.11	15.00	4.5	0.22	4.9	4
10/15/2013	2104.3	2.18	102.00	2.3	N/D	4.9	4
11/19/2013	261.3	0.74	11.25	3.3	0.81	4.9	4
12/16/2013	555.8	0.13	27.50	2.1	0.81	4.9	4

Appendix 6. Station D4R *Corbicula* Data							
Date	**Total # of clams in sample (#/m^2)**	***Biomass* (g/m^2)**	**recruit/ 0.05 m^2**	**mean size (mm)**	**GR (m^3/m^2/d)**	**Depth (M)**	**# Grabs**
6/1/1977	323.00	0.10	12.00	2.6	0.00	4.5	1
10/13/1977	19.00	0.00	0.00	5.5	0.00	4.5	1
6/8/1978	133.00	0.10	2.00	3.5	0.00	4.5	1
10/4/1978	152.00	0.00	7.00	1.9	0.00	4.5	1
5/30/1979	456.00	0.20	12.00	2.9	0.00	4.5	1
9/17/1979	912.00	0.00	47.00	0.7	0.00	4.5	1
6/11/1980	76.00	0.00	2.00	3.5	0.00	4.5	1
7/18/1980	247.00	0.50	4.00	4.6	0.00	4.5	1
8/22/1980	133.00	0.00	5.00	2.4	0.00	4.5	1
9/19/1980	266.00	0.00	11.00	2.0	0.00	4.5	1
10/23/1980	874.00	0.40	38.00	2.5	0.00	4.5	1
11/20/1980	304.00	0.10	8.00	2.5	0.00	4.5	1
12/22/1980	494.00	0.10	23.00	1.4	0.00	4.5	1
1/14/1981	361.00	0.10	17.00	1.9	0.00	4.5	1
2/19/1981	1368.00	0.40	67.00	1.3	0.00	4.5	1
3/30/1981	361.00	5.40	16.00	3.8	0.20	4.5	1
4/16/1981	2109.00	0.10	106.00	1.5	0.00	4.5	1
5/15/1981	3515.00	0.60	125.00	2.5	0.00	4.5	1
6/12/1981	2546.00	1.40	58.00	3.1	0.10	4.5	1
7/10/1981	1862.00	1.50	23.00	4.0	0.20	4.5	1
8/26/1981	209.00	0.40	3.00	4.0	0.00	4.5	1
9/24/1981	741.00	1.00	27.00	2.7	0.10	4.5	1
10/13/1981	646.00	11.00	15.00	6.5	0.90	4.5	1
11/20/1981	760.00	0.90	21.00	3.1	0.00	4.5	1
12/11/1981	570.00	0.40	17.00	2.8	0.00	4.5	1

Appendix 6. Station D4R *Corbicula* Data							
Date	Total # of clams in sample (#/m^2)	*Biomass* (g/m^2)	recruit/ 0.05 m^2	mean size (mm)	GR ($m^3/m^2/d$)	Depth (M)	# Grabs
1/21/1982	152.00	0.10	3.00	3.1	0.00	4.5	1
2/22/1982	57.00	0.50	0.00	8.5	0.00	4.5	1
3/30/1982	1558.00	1.10	79.00	1.5	0.00	4.5	1
4/28/1982	1216.00	0.50	57.00	2.0	0.00	4.5	1
5/20/1982	494.00	0.60	16.00	3.5	0.10	4.5	1
6/25/1982	380.00	0.20	8.00	3.4	0.00	4.5	1
7/22/1982	418.00	3.30	8.00	5.3	0.30	4.5	1
8/30/1982	285.00	0.10	12.00	1.8	0.00	4.5	1
9/20/1982	437.00	3.10	20.00	2.9	0.40	4.5	1
10/28/1982	437.00	0.00	23.00	1	0.00	4.5	1
11/24/1982	722.00	0.10	37.00	1.4	0.00	4.5	1
12/15/1982	551.00	0.10	27.00	1.7	0.00	4.5	1
1/31/1983	323.00	1.40	12.00	3.2	0.00	4.5	1
2/8/1983	950.00	1.40	46.00	1.3	0.10	4.5	1
3/8/1983	3686.00	1.00	0.00	0.0	0.00	4.5	1
4/21/1983	1197.00	1.00	0.00	0.0	0.00	4.5	1
5/19/1983	665.00	0.70	25.00	2.8	0.00	4.5	1
6/6/1983	1273.00	0.20	0.00	0.0	0.00	4.5	1
7/5/1983	408.50	2.40	0.00	0.0	0.20	4.5	1
9/15/1983	1311.00	0.20	0.00	0.0	0.00	4.5	1
11/1/1983	494.00	0.70	23.00	2.2	0.10	4.5	1
11/30/1983	351.50	0.50	0.00	0.0	0.00	4.5	1
12/13/1983	418.00	0.10	0.00	0.0	0.00	4.5	1
1/31/1984	2565.00	0.10	133.00	0.6	0.00	4.5	1
2/27/1984	589.00	0.00	30.00	0.7	0.00	4.5	1
3/26/1984	1615.00	6.90	79.00	1.4	0.30	4.5	1
4/24/1984	3496.00	0.10	182.00	0.6	0.00	4.5	1
5/24/1984	1254.00	1.20	64.00	1.0	0.10	4.5	1
6/22/1984	551.00	0.70	27.00	1.6	0.10	4.5	1
7/23/1984	703.00	0.10	33.00	1.3	0.00	4.5	1
8/22/1984	684.00	0.10	30.00	1.4	0.00	4.5	1
9/18/1984	931.00	4.90	42.00	2.2	0.60	4.5	1
10/30/1984	266.00	0.00	14.00	0.6	0.00	4.5	1
11/29/1984	247.00	0.70	11.00	2.2	0.00	4.5	1
12/14/1984	1634.00	2.90	78.00	1.5	0.10	4.5	1
1/15/1985	266.00	6.00	9.00	6.8	0.20	4.5	1
2/26/1985	2128.00	0.10	106.00	1.0	0.00	4.5	1
3/18/1985	1748.00	2.10	88.00	1.3	0.10	4.5	1

Appendix 6. Station D4R *Corbicula* Data							
Date	Total # of clams in sample (#/m^2)	*Biomass* (g/m^2)	recruit/ 0.05 m^2	mean size (mm)	GR ($m^3/m^2/d$)	Depth (M)	# Grabs
4/10/1985	6080.00	0.50	316.00	0.7	0.00	4.5	1
5/31/1985	4921.00	2.90	241.00	1.7	0.20	4.5	1
6/14/1985	3952.00	0.90	178.00	1.8	0.10	4.5	1
8/30/1985	665.00	0.30	23.00	2.4	0.00	4.5	1
10/2/1985	304.00	2.90	14.00	2.4	0.30	4.5	1
10/24/1985	513.00	0.40	21.00	1.7	0.00	4.5	1
12/3/1985	1083.00	3.10	47.00	2.2	0.10	4.5	1
12/30/1985	665.00	4.70	28.00	3.0	0.10	4.5	1
1/16/1986	1064.00	2.30	50.00	1.9	0.10	4.5	1
2/6/1986	665.00	3.40	23.00	3.9	0.10	4.5	1
3/31/1986	3059.00	0.10	161.00	1.1	0.00	4.5	1
4/21/1986	1881.00	0.10	99.00	1.6	0.00	4.5	1
5/21/1986	209.00	0.10	4.00	3.4	0.00	4.5	1
6/30/1986	57.00	3.80	0.00	0.0	0.50	4.5	1
7/25/1986	304.00	3.20	10.00	4.3	0.30	4.5	1
8/29/1986	475.00	3.40	20.00	2.9	0.30	4.5	1
9/12/1986	1900.00	4.60	96.00	1.8	0.40	4.5	1
10/29/1986	608.00	2.20	28.00	2.5	0.10	4.5	1
11/14/1986	323.00	11.80	8.00	7.5	0.50	4.5	1
1/23/1987	38.00	3.10	4.00	4.8	0.10	4.5	1
2/26/1987	348.00	N/D	N/D	N/D	N/D	4.5	1
3/26/1987	513.00	1.80	26.00	1.9	0.10	4.5	1
4/24/1987	6745.00	2.30	349.00	1.4	0.20	4.5	1
5/22/1987	2426.00	N/D	N/D	N/D	N/D	4.5	1
6/9/1987	931.00	0.40	34.00	2.7	0.00	4.5	1
7/30/1987	171.00	5.70	5.00	7.5	0.60	4.5	1
8/20/1987	114.00	1.70	0.00	8.2	0.20	4.5	1
9/18/1987	38.00	2.00	0.00	12.5	0.20	4.5	1
10/30/1987	57.00	3.40	0.00	15.8	0.30	4.5	1
11/9/1987	57.00	0.20	2.00	4.5	0.00	4.5	1
12/17/1987	57.00	1.90	2.00	8.2	0.10	4.5	1
1/15/1988	1463.00	0.00	77.00	0.7	0.00	4.5	1
2/11/1988	57.00	5.70	0.00	22.5	0.20	4.5	1
3/1/1988	171.00	4.20	7.00	5.9	0.20	4.5	1
4/1/1988	6688.00	1.50	349.00	1.4	0.10	4.5	1
5/27/1988	6327.00	2.20	327.00	1.7	0.20	4.5	1
6/24/1988	817.00	5.80	19.00	4.1	0.50	4.5	1
7/22/1988	76.00	0.10	3.00	3.3	0.00	4.5	1

Appendix 6. Station D4R *Corbicula* Data							
Date	Total # of clams in sample (#/m^2)	*Biomass* (g/m^2)	recruit/ 0.05 m^2	mean size (mm)	GR ($m^3/m^2/d$)	Depth (M)	# Grabs
8/22/1988	76.00	3.60	1.00	12.0	0.40	4.5	1
9/22/1988	76.00	5.40	1.00	17.5	0.50	4.5	1
10/21/1988	95.00	0.20	2.00	4.7	0.00	4.5	1
11/17/1988	38.00	2.00	0.00	16.5	0.10	4.5	1
12/8/1988	133.00	8.00	0.00	15.6	0.30	4.5	1
1/20/1989	95.00	12.90	0.00	23.9	0.30	4.5	1
2/6/1989	38.00	4.30	0.00	23	0.10	4.5	1
5/4/1989	5.70	N/D	N/D	N/D	N/D	4.5	1
6/26/1989	95.00	3.80	1.00	8.0	0.30	4.5	1
7/24/1989	76.00	2.10	2.00	7.8	0.20	4.5	1
8/21/1989	114.00	9.70	3.00	10.7	1.10	4.5	1
9/19/1989	47.50	2.60	1.00	11.7	0.20	4.5	1
10/17/1989	19.00	0.10	0.00	9.5	0.00	4.5	1
11/13/1989	171.00	N/D	N/D	N/D	N/D	4.5	N/D
12/4/1989	285.00	N/D	N/D	N/D	N/D	4.5	N/D
1/16/1990	76.00	5.28	2.33	12	0.20	4.5	3
2/27/1990	1076.67	1.80	52.67	1.6	0.10	4.5	3
3/19/1990	196.33	1.37	7.67	3.4	0.10	4.5	3
4/20/1990	931.00	9.70	44.00	2.	0.60	4.5	3
5/14/1990	1368.00	19.09	63.67	2.4	1.50	4.5	3
6/26/1990	2337.00	0.43	112.67	1.6	0.00	4.5	3
7/12/1990	1311.00	9.66	59.00	2.3	1.10	4.5	3
8/8/1990	620.67	5.03	24.00	3.4	0.60	4.5	3
9/24/1990	259.67	6.28	4.00	6.6	0.60	4.5	3
10/22/1990	392.67	9.66	7.67	6.2	0.70	4.5	3
11/6/1990	342.00	2.60	5.00	4.7	0.10	4.5	3
12/13/1990	456.00	4.82	11.33	4.7	0.20	4.5	3
1/7/1991	278.70	7.70	2.30	8.2	0.20	4.5	3
2/21/1991	240.70	7.80	0.70	9.9	0.30	4.5	3
3/5/1991	44.30	4.70	0.30	13.4	0.20	4.5	3
4/11/1991	183.70	7.80	2.30	8.2	0.40	4.5	3
5/23/1991	76.00	1.90	1.00	7.3	0.10	4.5	3
6/4/1991	114.00	4.30	2.00	8.8	0.30	4.5	3
7/16/1991	114.00	5.40	2.70	7.1	0.50	4.5	3
8/30/1991	95.00	1.70	3.70	4.0	0.20	4.5	3
9/12/1991	101.30	5.90	1.30	11.4	0.60	4.5	3
10/8/1991	25.30	4.20	0.70	14.5	0.40	4.5	3
11/12/1991	44.30	4.50	0.30	16.1	0.30	4.5	3

Appendix 6. Station D4R *Corbicula* Data							
Date	Total # of clams in sample (#/m^2)	*Biomass* (g/m^2)	recruit/ 0.05 m^2	mean size (mm)	GR ($m^3/m^2/d$)	Depth (M)	# Grabs
12/10/1991	31.70	0.80	1.00	7.1	0.00	4.5	3
1/17/1992	12.70	N/D	N/D	N/D	N/D	N/D	N/D
2/25/1992	50.70	5.90	0.30	20.4	0.30	4.5	3
3/24/1992	88.70	3.70	2.00	8.0	0.20	4.5	3
4/6/1992	19.00	6.10	0.00	27.8	0.40	4.5	3
5/14/1992	19.00	0.00	0.00	6.0	0.00	4.5	3
6/17/1992	44.30	1.50	1.00	6.6	0.20	4.5	3
7/10/1992	12.70	0.00	0.30	4.0	0.00	4.5	3
8/4/1992	25.30	3.00	0.30	18.8	0.30	4.5	3
9/1/1992	76.00	2.10	0.70	8.0	0.20	4.5	3
10/23/1992	44.30	0.00	0.00	4.8	0.00	4.5	3
11/5/1992	12.70	0.00	0.30	4.0	0.00	4.5	3
12/28/1992	12.70	0.40	0.00	14.0	0.00	4.5	3
1/14/1993	19.00	0.65	0.00	11.0	0.00	4.5	3
2/9/1993	19.00	0.50	0.33	9.2	0.00	4.5	3
3/11/1993	57.00	8.76	0.33	17.4	0.60	4.5	3
4/19/1993	25.33	0.02	0.33	4.0	0.00	4.5	3
5/20/1993	19.00	2.14	0.00	15.2	0.20	4.5	3
6/16/1993	6.27	N/D	N/D	N/D	N/D	4.5	3
7/19/1993	12.67	0.29	0.00	12	0.00	4.5	3
8/19/1993	19.00	0.23	0.00	10.5	0.00	4.5	3
9/16/1993	63.33	4.46	0.33	11.2	0.50	4.5	3
10/8/1993	25.33	0.12	0.00	7.0	0.00	4.5	3
11/16/1993	0.00	0.00	0.00	0.00	0.00	4.5	3
12/9/1993	6.33	0.00	0.00	3.5	0.00	4.5	3
1/18/1994	6.30	0.00	0.00	3.5	0.00	4.5	3
2/8/1994	6.30	0.10	0.00	9.5	0.00	4.5	3
3/9/1994	0.00	0.00	0.00	0.0	0.00	4.5	3
4/12/1994	19.00	0.10	0.30	6.2	0.00	4.5	3
5/23/1994	44.30	6.90	0.00	18.5	0.50	4.5	3
6/9/1994	6.30	0.00	0.00	4.5	0.00	4.5	3
7/20/1994	12.70	0.10	0.00	7.5	0.00	4.5	3
8/9/1994	38.00	0.10	1.30	3.5	0.00	4.5	3
9/21/1994	31.70	0.10	0.00	5.9	0.00	4.5	3
10/19/1994	12.70	0.00	0.00	3.5	0.00	4.5	3
11/21/1994	12.70	0.20	0.30	8.5	0.00	4.5	3
12/16/1994	25.30	0.90	0.30	9.5	0.00	4.5	3
1/17/1995	19.00	0.00	0.00	3.8	0.00	4.5	3

Appendix 6. Station D4R *Corbicula* Data							
Date	**Total # of clams in sample (#/m²)**	***Biomass* (g/m²)**	**recruit/ 0.05 m²**	**mean size (mm)**	**GR (m³/m²/d)**	**Depth (M)**	**# Grabs**
2/15/1995	38.00	0.20	0.70	6.2	0.00	4.5	3
3/15/1995	6.30	0.00	0.00	3.5	0.00	4.5	3
4/27/1995	658.70	1.80	30.70	2.1	0.10	4.5	3
5/17/1995	899.30	0.20	41.70	1.9	0.00	4.5	3
6/27/1995	310.30	0.20	9.30	3.0	0.00	4.5	3
7/13/1995	202.70	0.10	2.00	3.8	0.00	4.5	3
8/24/1995	418.00	2.20	0.70	7.1	0.30	4.5	3
9/26/1995	190.00	0.90	3.30	6.1	0.10	4.5	3
10/25/1995	734.70	7.00	16.30	5.8	0.50	4.5	3
11/27/1995	82.30	0.40	0.00	6.9	0.00	4.5	3

Appendix 7. Station D4R *Potamocorbula* Data							
Date	**Total # of clams in sample (#/m²)**	**Biomass (g/m²)**	**rec/ 0.05m²**	**mean size (mm)**	**GR (m³/m²/d)**	**Depth (M)**	**# Grabs**
6/9/1987	418	0.26	12.00	3.14	0.1	4.5	1
7/30/1987	1672	0.18	85.00	1.70	0.07	4.5	1
8/20/1987	1767	0.44	77.00	2.56	0.16	4.5	1
9/18/1987	2242	0.44	105.00	2.35	0.16	4.5	1
10/30/1987	1615	0.54	63.00	2.63	0.20	4.5	1
11/9/1987	2622	1.06	72.00	3.04	0.39	4.5	1
12/17/1987	1026	0.60	13.00	3.67	0.23	4.5	1
1/15/1988	931	1.61	6.00	4.40	0.41	4.5	1
2/11/1988	1235	3.49	6.00	4.82	1.30	4.5	1
4/1/1988	741	3.49	0.00	6.35	1.31	4.5	1
5/27/1988	133	0.98	0.00	8.50	0.38	4.5	1
6/24/1988	114	0.89	1.00	6.67	0.35	4.5	1
7/22/1988	95	0.14	0.00	4.50	0.05	4.5	1
8/22/1988	494	0.05	22.00	2.12	0.02	4.5	1
9/22/1988	2356	1.30	63.00	3.04	0.48	4.5	1
10/21/1988	2546	2.26	67.00	3.44	0.83	4.5	1
11/17/1988	1729	2.58	23.00	4.27	0.95	4.5	1
12/8/1988	4655	14.38	29.00	5.36	4.92	4.5	1
1/20/1989	684	1.18	9.00	4.61	0.30	4.5	1
2/6/1989	1938	6.77	5.50	5.59	1.66	4.5	1
2/28/1989	N/D	N/D	N/D	N/D	N/D	4.5	1
3/21/1989	N/D	N/D	N/D	N/D	N/D	4.5	1

Appendix 7. Station D4R *Potamocorbula* Data							
Date	Total # of clams in sample (#/m^2)	Biomass (g/m^2)	rec/ 0.05m^2	mean size (mm)	GR ($m^3/m^2/d$)	Depth (M)	# Grabs
5/4/1989	133	0.84	0.50	6.93	0.33	4.5	1
6/26/1989	28.5	0.15	0.00	7.17	0.06	4.5	1
7/24/1989	104.5	2.12	0.00	10.23	0.82	4.5	1
8/21/1989	19	0.63	0.00	12.83	0.25	4.5	1
9/19/1989	76	0.38	0.00	6.63	0.15	4.5	1
10/17/1989	19	0.03	0.00	5.50	0.01	4.5	1
11/13/1989	43.7	0.00	0.00	N/D	N/D	4.5	1
12/12/1989	126.67	0.00	0.00	N/D	N/D	4.5	1
1/16/1990	57	3.96	0.00	14.50	1.04	4.5	3
2/27/1990	88.67	1.24	2.00	6.79	0.49	4.5	3
3/19/1990	82.33	0.59	1.33	5.19	0.23	4.5	3
4/20/1990	25.33	0.39	0.00	8.00	0.16	4.5	3
5/14/1990	12.67	0.69	0.00	12.00	0.27	4.5	3
6/26/1990	817	1.85	30.67	3.03	0.70	4.5	3
7/12/1990	291.33	0.24	8.00	3.33	0.09	4.5	3
8/8/1990	158.33	0.15	2.33	3.82	0.06	4.5	3
9/24/1990	582.67	1.02	3.33	4.45	0.39	4.5	3
10/22/1990	1811.33	5.33	5.67	6.40	1.92	4.5	3
11/6/1990	2159.67	17.76	6.00	7.60	6.24	4.5	3
12/13/1990	3350.33	18.37	68.67	5.56	6.44	4.5	3
1/7/1991	1754.33	14.39	33.67	6.78	3.51	4.5	3
2/19/1991	3369.33	22.63	62.67	6.10	7.85	4.5	3
3/5/1991	880.33	7.52	11.33	5.33	2.82	4.5	3
4/11/1991	3616.33	49.72	24.00	6.94	17.15	4.5	3
5/23/1991	1463.00	14.18	1.00	7.22	0.00	4.5	3
6/4/1991	2090.00	29.03	0.33	8.49	10.13	4.5	3
7/16/1991	1589.67	17.41	26.33	6.70	6.33	4.5	3
8/30/1991	2476.33	31.73	23.67	7.12	11.04	4.5	3
9/12/1991	3926.67	109.38	30.00	9.94	35.23	4.5	3
10/8/1991	456.00	2.19	2.00	6.75	0.83	4.5	3
11/12/1991	582.67	2.65	5.33	5.46	1.01	4.5	3
12/10/1991	969.00	10.11	2.00	7.60	2.51	4.5	3
1/17/1992	2685.33	35.35	10.67	8.86	8.17	4.5	3
2/25/1992	329.33	5.67	1.00	9.38	2.14	4.5	3
3/24/1992	2888.00	99.71	0.00	10.69	32.87	4.5	3
4/6/1992	405.33	11.31	0.33	10.23	4.22	4.5	3
5/14/1992	1513.67	54.90	0.00	11.45	18.88	4.5	3
6/17/1992	1152.67	43.57	9.00	11.49	15.3	4.5	3

Appendix 7. Station D4R *Potamocorbula* Data							
Date	Total # of clams in sample (#/m^2)	Biomass (g/m^2)	rec/ 0.05m^2	mean size (mm)	GR ($m^3/m^2/d$)	Depth (M)	# Grabs
7/10/1992	804.33	24.41	19.00	8.11	9.00	4.5	3
8/4/1992	563.67	16.59	9.67	9.16	6.14	4.5	3
9/1/1992	456.00	11.59	6.67	8.19	4.36	4.5	3
10/23/1992	3274.33	51.95	33.67	9.75	17.08	4.5	3
11/5/1992	633.33	22.78	5.00	11.58	8.28	4.5	3
12/28/1992	2704.33	97.46	20.33	11.34	31.68	4.5	3
1/14/1993	1304.67	32.89	10.00	10.54	7.83	4.5	3
2/9/1993	380.00	7.19	7.67	7.88	2.73	4.5	3
3/11/1993	95.00	5.32	1.00	11.7	2.05	4.5	3
4/19/1993	1532.67	79.96	0.67	12.01	27.27	4.5	3
5/20/1993	1235.00	68.84	0.67	12.86	23.89	4.5	3
6/16/1993	2229.33	126.62	0.33	14.52	0.00	4.5	3
7/19/1993	1336.33	103.29	0.00	15.52	34.39	4.5	3
8/19/1993	994.33	62.90	0.00	14.93	21.78	4.5	3
9/16/1993	278.67	19.71	0.00	15.18	0.00	4.5	3
10/8/1993	544.67	16.96	0.00	15.03	6.06	4.5	3
11/16/1993	1874.67	113.66	0.00	15.71	0.00	4.5	3
12/9/1993	1399.67	77.32	0.00	15.32	25.62	4.5	3
1/18/1994	842.33	31.40	0.00	14.75	7.43	4.5	3
2/8/1994	1285.67	58.98	0.00	15.56	13.31	4.5	3
3/9/1994	1513.67	96.22	0.00	14.12	0.00	4.5	3
4/12/1994	1697.33	129.29	0.00	15.51	0.00	4.5	3
5/23/1994	1627.67	127.89	0.00	15.60	41.7	4.5	3
6/9/1994	627.00	43.97	0.00	15.77	15.57	4.5	3
7/20/1994	418.00	31.22	0.00	15.38	0.00	4.5	3
8/9/1994	804.33	59.98	0.00	15.89	20.87	4.5	3
9/21/1994	1450.33	94.78	3.67	15.09	31.29	4.5	3
10/19/1994	354.67	7.47	2.33	10.39	2.80	4.5	3
11/21/1994	215.33	7.76	1.00	10.21	2.95	4.5	3
12/16/1994	690.33	35.81	3.33	13.30	8.63	4.5	3
1/17/1995	563.67	21.84	2.33	13.46	7.89	4.5	3
2/15/1995	665.00	27.43	0.00	13.79	9.82	4.5	3
3/15/1995	25.33	0.56	0.33	8.50	0.22	4.5	3
4/27/1995	101.33	6.56	0.00	13.5	2.52	4.5	3
5/17/1995	107.67	3.41	0.00	9.79	1.32	4.5	3
6/27/1995	44.33	1.74	0.00	12.64	0.68	4.5	3
7/13/1995	12.67	1.22	0.00	17.00	0.48	4.5	3
8/24/1995	82.33	6.72	0.00	16.19	2.57	4.5	3

Appendix 7. Station D4R *Potamocorbula* Data							
Date	Total # of clams in sample (#/m^2)	Biomass (g/m^2)	rec/ 0.05m^2	mean size (mm)	GR ($m^3/m^2/d$)	Depth (M)	# Grabs
9/26/1995	25.33	1.01	0.00	13.50	0.40	4.5	3
10/25/1995	95.00	4.43	0.00	17.90	1.68	4.5	3
11/27/1995	19.00	1.14	0.00	15.83	0.45	4.5	3
12/27/1995	19.00	1.40	.000	15.83	0.37	4.5	3

Appendix 8. Station D6 *Potamocorbula* Data							
Date	Total # of clams in sample (#/m^2)	biomass (g/m^2)	rec/ 0.05m^2	mean size (mm)	GR ($m^3/m^2/d$)	Depth (M)	# Grabs
1/23/2007	15931.50	7.80	365.30	3.30	1.67	7	4
2/20/2007	10236.30	9.80	205.00	3.50	3.27	7	4
3/20/2007	8911.00	14.30	74.80	4.30	4.67	7	4
4/16/2007	8768.50	21.20	15.80	5.10	6.80	7	4
5/16/2007	8524.70	20.50	18.70	5.10	6.58	7	4
6/20/2007	6555.00	13.00	7.80	5.30	4.31	7	4
7/16/2007	11461.80	38.90	2.30	5.70	12.01	7	4
8/13/2007	5491.00	15.70	2.00	5.80	5.27	7	4
9/11/2007	5453.00	6.80	49.80	4.40	2.32	7	4
10/2/2007	2166.00	2.20	24.00	4.40	0.81	7	4
11/7/2007	9181.80	8.20	39.00	4.30	2.65	7	4
12/10/2007	2883.30	3.80	20.50	4.70	1.35	7	4
1/8/2008	1035.50	0.80	19.00	3.80	0.21	7	4
2/6/2008	6759.25	12.90	29.80	4.80	4.32	7	4
3/5/2008	551.00	1.10	4.00	4.60	0.42	7	4
4/2/2008	798.00	2.20	8.00	5.00	0.82	7	4
5/21/2008	1021.25	3.30	4.50	5.40	1.22	7	4
6/18/2008	10036.75	16.30	273.50	3.80	5.45	7	4
7/15/2008	12886.75	34.10	213.00	4.30	10.59	7	4
8/14/2008	21517.50	11.30	633.00	3.20	3.44	7	4
9/16/2008	16287.75	21.60	228.00	4.00	6.47	7	4
10/27/2008	28922.75	15.30	431.30	3.60	4.42	7	4
11/18/2008	15266.50	26.60	71.00	4.70	8.05	7	4
12/10/2008	19038.00	19.80	147.80	4.20	5.78	7	4
1/12/2009	13846.25	12.80	116.80	4.10	2.65	7	4
2/9/2009	5643.00	8.50	13.00	4.50	2.90	7	4
3/11/2009	4921.00	4.60	47.00	3.80	1.65	7	4
4/6/2009	5947.00	14.10	4.50	5.10	4.72	7	4

Appendix 8. Station D6 *Potamocorbula* Data							
Date	Total # of clams in sample (#/m^2)	biomass (g/m^2)	rec/ $0.05m^2$	mean size (mm)	GR ($m^3/m^2/d$)	Depth (M)	# Grabs
5/4/2009	4104.00	16.80	1.30	6.20	5.72	7	4
6/24/2009	4455.50	21.80	13.30	6.90	7.39	7	4
7/21/2009	5842.50	20.40	128.50	4.90	6.95	7	4
8/18/2009	25654.75	16.10	945.50	3.10	4.74	7	4
9/16/2009	30143.50	22.40	886.50	3.30	6.43	7	4
10/19/2009	18914.50	8.40	717.30	2.80	2.66	7	4
11/16/2009	6464.75	14.50	116.00	4.60	4.87	7	4
12/16/2009	12516.25	13.60	212.50	3.90	2.99	7	4
1/14/2010	2864.25	1.90	44.00	3.60	0.46	7	4
2/18/2010	2702.75	3.70	37.50	4.00	1.31	7	4
3/15/2010	4579.00	5.20	48.50	4.00	1.79	7	4
4/12/2010	6797.25	12.90	11.30	4.80	4.33	7	4
5/18/2010	5153.75	25.00	23.80	6.10	8.35	7	4
6/9/2010	4588.50	13.40	53.50	5.30	4.59	7	4
7/6/2010	8649.75	31.50	85.30	5.30	10.11	7	4
8/17/2010	7519.25	27.40	50.30	5.70	8.94	7	4
9/7/2010	9775.50	10.20	144.50	4.00	3.28	7	4
10/25/2010	12449.75	19.20	88.50	4.90	5.99	7	4
11/22/2010	10245.75	13.00	45.50	4.60	4.15	7	4
12/20/2010	2018.75	4.50	10.80	5.10	1.61	7	4
1/19/2011	3966.25	5.20	32.80	4.30	1.23	7	4
2/2/2011	5448.25	11.20	31.00	4.70	3.82	7	4
3/8/2011	7590.50	21.40	17.00	5.20	6.96	7	4
4/6/2011	5315.25	15.60	11.30	5.20	5.26	7	4
5/2/2011	2731.25	5.20	17.30	4.70	1.87	7	4
6/14/2011	1102.00	6.70	0.00	7.60	2.45	7	4
7/13/2011	2071.00	20.50	11.80	7.90	7.21	7	4
8/9/2011	1382.25	14.40	1.30	8.90	5.16	7	4
9/7/2011	3866.50	29.90	57.30	6.50	10.27	7	4
10/3/2011	4075.50	13.60	44.50	5.70	4.69	7	4
11/8/2011	8958.50	41.90	45.80	5.60	13.39	7	4
12/7/2011	8811.25	29.50	81.00	5.00	6.37	7	4
1/9/2012	6692.75	12.40	47.50	4.60	2.80	7	4
2/8/2012	7823.25	18.80	39.80	4.80	6.22	7	4
3/6/2012	18225.75	61.50	53.80	5.30	17.53	7	4
4/5/2012	6873.25	36.60	27.50	5.80	12.07	7	4
5/21/2012	10374.00	41.30	39.80	5.50	12.93	7	4
6/20/2012	8464.50	28.70	29.50	5.70	9.24	7	4

Appendix 8. Station D6 *Potamocorbula* Data							
Date	**Total # of clams in sample (#/m^2)**	**biomass (g/m^2)**	**rec/ 0.05m^2**	**mean size (mm)**	**GR (m^3/m^2/d)**	**Depth (M)**	**# Grabs**
7/17/2012	5723.75	16.80	37.50	5.20	5.63	7	4
8/15/2012	5685.75	16.00	47.30	5.30	5.38	7	4
9/25/2012	4612.25	5.50	65.00	4.20	1.92	7	4
10/24/2012	4735.75	6.80	42.00	4.90	2.36	7	4
11/14/2012	845.50	2.40	4.80	5.50	0.91	7	4
12/18/2012	5966.00	9.90	25.30	4.90	3.36	7	4
1/9/2013	2688.50	5.10	9.80	5.10	1.22	7	4
2/5/2013	1486.75	4.10	4.30	5.30	1.49	7	4
3/13/2013	2840.50	9.00	9.30	5.50	3.18	7	4
4/10/2013	2869.00	14.10	18.00	6.10	4.96	7	4
5/7/2013	4108.75	17.90	23.00	6.00	6.09	7	4
6/4/2013	6127.50	11.80	190.30	3.80	4.13	7	4
7/8/2013	13190.75	23.50	493.50	3.40	7.64	7	4
8/8/2013	N/D	N/D	N/D	N/D	N/D	7	4
9/4/2013	21479.50	16.50	886.00	3.00	5.01	7	4
10/15/2013	22106.50	6.80	845.50	2.80	2.12	7	4
11/19/2013	7894.50	5.90	179.30	3.50	2.01	7	4
12/16/2013	8991.75	5.60	213.80	3.40	1.28	7	4

Appendix 9. Station D7 *Corbicula* Data							
Date	**Total # of clams in sample (#/m^2)**	***Biomass* (g/m^2)**	**recruit/ 0.05 m^2**	**mean size (mm)**	**GR (m^3/m^2/d)**	**Depth (M)**	**# Grabs**
1/21/1981	38.00	0.00	2.00	1.50	0.00	1.7	1
2/19/1981	5.70	N/D	N/D	N/D	N/D	N/D	N/D
3/30/1981	N/D	N/D	N/D	N/D	N/D	N/D	N/D
4/16/1981	38.00	0.02	1.00	3.00	0.00	1.7	1
5/15/1981	N/D	N/D	N/D	N/D	N/D	N/D	N/D
6/12/1981	N/D	N/D	N/D	N/D	N/D	N/D	N/D
7/10/1981	N/D	N/D	N/D	N/D	N/D	N/D	N/D
8/26/1981	5.70	N/D	N/D	N/D	N/D	N/D	N/D
9/24/1981	N/D	N/D	N/D	N/D	N/D	N/D	N/D
10/13/1981	N/D	N/D	N/D	N/D	N/D	N/D	N/D
11/20/1981	N/D	N/D	N/D	N/D	N/D	N/D	N/D
12/11/1981	57.00	0.01	3.00	1.83	0.00	1.7	1
1/21/1982	N/D	N/D	N/D	N/D	N/D	N/D	N/D
2/22/1982	N/D	N/D	N/D	N/D	N/D	N/D	N/D

Appendix 9. Station D7 *Corbicula* Data							
Date	Total # of clams in sample (#/m^2)	*Biomass* (g/m^2)	recruit/ 0.05 m^2	mean size (mm)	GR ($m^3/m^2/d$)	Depth (M)	# Grabs
3/30/1982	N/D	N/D	N/D	N/D	N/D	N/D	N/D
4/28/1982	5.70	N/D	N/D	N/D	N/D	1.7	1
5/20/1982	N/D	N/D	N/D	N/D	N/D	N/D	N/D
6/25/1982	38.00	0.04	0.00	4.50	0.00	1.7	1
7/22/1982	N/D	N/D	N/D	N/D	N/D	N/D	N/D
8/30/1982	N/D	N/D	N/D	N/D	N/D	N/D	N/D
9/20/1982	38.00	0.61	0.00	11.00	0.06	1.7	1
10/28/1982	5.70	N/D	N/D	N/D	N/D	1.7	1
11/24/1982	19.00	0.05	0.00	6.50	0.00	1.7	1
12/15/1982	38.00	0.35	0.00	9.50	0.01	1.7	1
1/31/1983	57.00	0.00	3.00	1.17	0.00	1.7	1
2/8/1983	57.00	0.00	3.00	1.17	0.00	1.7	1
3/8/1983	57.00	0.01	3.00	2.17	0.00	1.7	1
4/26/1983	1007.00	0.25	48.00	2.07	0.01	1.7	1
5/19/1983	589.00	0.45	13.00	3.37	0.02	1.7	1
6/6/1983	437.00	0.38	9.00	3.67	0.03	1.7	1
7/5/1983	171.00	0.52	0.00	5.50	0.06	1.7	1
9/15/1983	969.00	0.53	48.00	1.93	0.05	1.7	1
11/1/1983	N/D	N/D	N/D	N/D	N/D	N/D	N/D
11/30/1983	874.00	3.57	28.00	3.99	0.20	1.7	1
12/13/1983	1197.00	5.00	53.00	3.18	0.16	1.7	1
1/31/1984	N/D	N/D	N/D	N/D	N/D	N/D	N/D
2/27/1984	7581.00	3.86	391.00	1.26	0.12	1.7	1
3/26/1984	6061.00	2.59	315.00	1.25	0.11	1.7	1
4/24/1984	4294.00	5.70	208.00	2.22	0.27	1.7	1
5/24/1984	3648.00	3.48	158.00	2.29	0.23	1.7	1
6/22/1984	3306.00	1.43	93.00	2.98	0.11	1.7	1
7/23/1984	1710.00	10.01	4.00	5.64	1.01	1.7	1
8/22/1984	722.00	22.63	0.00	10.79	2.19	1.7	1
9/18/1984	380.00	16.06	1.00	13.50	1.77	1.7	1
10/30/1984	171.00	7.55	3.00	10.83	0.59	1.7	1
11/29/1984	228.00	4.72	4.00	9.17	0.23	1.7	1
12/13/1984	399.00	8.08	11.00	8.21	0.22	1.7	1
1/15/1985	437.00	11.51	9.00	9.37	0.31	1.7	1
2/13/1985	399.00	12.46	6.00	10.98	0.33	1.7	1
3/13/1985	532.00	7.44	19.00	5.36	0.30	1.7	1
4/10/1985	475.00	6.82	20.00	4.54	0.39	1.7	1
5/31/1985	532.00	7.09	20.00	4.82	0.50	1.7	1

Appendix 9. Station D7 *Corbicula* Data							
Date	Total # of clams in sample (#/m^2)	*Biomass* (g/m^2)	recruit/ 0.05 m^2	mean size (mm)	GR ($m^3/m^2/d$)	Depth (M)	# Grabs
6/11/1985	171.00	4.91	1.00	11.39	0.47	1.7	1
8/30/1985	114.00	5.95	0.00	15.83	0.57	1.7	1
10/2/1985	133.00	7.57	0.00	16.64	0.40	1.7	1
10/22/1985	171.00	12.62	0.00	18.17	0.39	1.7	1
12/4/1985	190.00	14.56	0.00	19.50	0.36	1.7	1
12/30/1985	19.00	1.44	0.00	19.50	0.48	1.7	1
1/15/1986	152.00	8.55	0.00	17.38	0.04	1.7	1
2/12/1986	38.00	2.12	0.00	19.00	0.07	1.7	1
3/31/1986	38.00	4.27	0.00	20.00	0.15	1.7	1
4/21/1986	76.00	7.89	0.00	19.50	0.43	1.7	1
5/20/1986	57.00	7.68	0.00	21.50	0.53	1.7	1
6/30/1986	95.00	18.28	0.00	21.70	1.36	1.7	1
7/25/1986	76.00	9.03	0.00	20.25	0.76	1.7	1
8/26/1986	57.00	7.95	0.00	21.17	0.68	1.7	1
9/9/1986	12.73	N/D	N/D	N/D	N/D	N/D	N/D
10/29/1986	19.00	3.33	0.00	25.50	0.19	1.7	1
11/14/1986	19.00	1.43	0.00	19.50	0.07	1.7	1
12/15/1986	57.00	10.09	0.00	23.83	0.28	1.7	1
1/23/1987	38.00	5.23	0.00	21.00	0.15	1.7	1
2/26/1987	12.70	0.00	0.00	0.00	0.00	1.7	1
3/26/1987	12.70	0.00	0.00	0.00	0.00	1.7	1
4/24/1987	418.00	0.07	19.00	2.05	0.00	1.7	1
5/19/1987	12.70	0.00	0.00	0.00	0.00	1.7	1
6/9/1987	0.00	0.00	0.00	0.00	0.00	1.7	1
7/30/1987	19.00	0.01	0.00	3.50	0.00	1.7	1
8/20/1987	0.00	0.00	0.00	0.00	0.00	1.7	1
9/15/1987	5.70	0.00	0.00	0.00	0.00	1.7	1
10/27/1987	19.00	0.03	0.00	3.50	0.00	1.7	1
11/9/1987	19.00	0.02	0.00	4.50	0.00	1.7	1
12/16/1987	0.00	0.00	0.00	0.00	0.00	1.7	1
1/12/1988	0.00	0.00	0.00	0.00	0.00	1.7	1
2/10/1988	0.00	0.00	0.00	0.00	0.00	1.7	1
4/1/1988	0.00	0.00	0.00	0.00	0.00	1.7	1
4/25/1988	0.00	0.00	0.00	0.00	0.00	1.7	1
5/27/1988	0.00	0.00	0.00	0.00	0.00	1.7	1
6/21/1988	0.00	0.00	0.00	0.00	0.00	1.7	1
7/22/1988	0.00	0.00	0.00	0.00	0.00	1.7	1
8/17/1988	0.00	0.00	0.00	0.00	0.00	1.7	1

Appendix 9. Station D7 *Corbicula* Data							
Date	Total # of clams in sample (#/m^2)	*Biomass* (g/m^2)	recruit/ 0.05 m^2	mean size (mm)	GR ($m^3/m^2/d$)	Depth (M)	# Grabs
9/19/1988	0.00	0.00	0.00	0.00	0.00	1.7	1
10/18/1988	0.00	0.00	0.00	0.00	0.00	1.7	1
11/18/1988	0.00	0.00	0.00	0.00	0.00	1.7	1
12/5/1988	0.00	0.00	0.00	0.00	0.00	1.7	1
1/17/1989	0.00	0.00	0.00	0.00	0.00	1.7	1
2/1/1989	0.00	0.00	0.00	0.00	0.00	1.7	1
5/5/1989	0.00	0.00	0.00	0.00	0.00	1.7	1
7/25/1989	0.00	0.00	0.00	0.00	0.00	1.7	1
8/22/1989	0.00	0.00	0.00	0.00	0.00	1.7	1
9/20/1989	0.00	0.00	0.00	0.00	0.00	1.7	1
10/18/1989	0.00	0.00	0.00	0.00	0.00	1.7	1
11/7/1989	0.00	0.00	0.00	0.00	0.00	1.7	1
12/5/1989	0.00	0.00	0.00	0.00	0.00	1.7	1
1/17/1990	0.00	0.00	0.00	0.00	0.00	1.7	3
2/27/1990	0.00	0.00	0.00	0.00	0.00	1.7	3
3/19/1990	0.00	0.00	0.00	0.00	0.00	1.7	3
4/20/1990	0.00	0.00	0.00	0.00	0.00	1.7	3
5/14/1990	0.00	0.00	0.00	0.00	0.00	1.7	3
6/27/1990	0.00	0.00	0.00	0.00	0.00	1.7	3
7/27/1990	0.00	0.00	0.00	0.00	0.00	1.7	3
8/13/1990	0.00	0.00	0.00	0.00	0.00	1.7	3
9/25/1990	0.00	0.00	0.00	0.00	0.00	1.7	3
10/23/1990	0.00	0.00	0.00	0.00	0.00	1.7	3
11/7/1990	0.00	0.00	0.00	0.00	0.00	1.7	3
12/10/1990	0.00	0.00	0.00	0.00	0.00	1.7	3
1/8/1991	0.00	0.00	0.00	0.00	0.00	1.7	3
2/20/1991	0.00	0.00	0.00	0.00	0.00	1.7	3
3/6/1991	0.00	0.00	0.00	0.00	0.00	1.7	3
4/8/1991	0.00	0.00	0.00	0.00	0.00	1.7	3
5/20/1991	0.00	0.00	0.00	0.00	0.00	1.7	3
6/5/1991	0.00	0.00	0.00	0.00	0.00	1.7	3
8/20/1991	0.00	0.00	0.00	0.00	0.00	1.7	3
9/16/1991	0.00	0.00	0.00	0.00	0.00	1.7	3
10/1/1991	5.70	0.00	0.00	0.00	0.00	1.7	3
11/13/1991	0.00	0.00	0.00	0.00	0.00	1.7	3
12/11/1991	0.00	0.00	0.00	0.00	0.00	1.7	3
1/14/1992	0.00	0.00	0.00	0.00	0.00	1.7	3
2/26/1992	0.00	0.00	0.00	0.00	0.00	1.7	3

Appendix 9. Station D7 *Corbicula* Data							
Date	Total # of clams in sample (#/m^2)	*Biomass* (g/m^2)	recruit/ 0.05 m^2	mean size (mm)	GR ($m^3/m^2/d$)	Depth (M)	# Grabs
3/25/1992	0.00	0.00	0.00	0.00	0.00	1.7	3
4/7/1992	0.00	0.00	0.00	0.00	0.00	1.7	3
5/8/1992	0.00	0.00	0.00	0.00	0.00	1.7	3
6/22/1992	0.00	0.00	0.00	0.00	0.00	1.7	3
7/7/1992	0.00	0.00	0.00	0.00	0.00	1.7	3
8/5/1992	0.00	0.00	0.00	0.00	0.00	1.7	3
9/2/1992	0.00	0.00	0.00	0.00	0.00	1.7	3
10/2/1992	0.00	0.00	0.00	0.00	0.00	1.7	3
11/2/1992	0.00	0.00	0.00	0.00	0.00	1.7	3
12/28/1992	0.00	0.00	0.00	0.00	0.00	1.7	3
1/14/1993	0.00	0.00	0.00	0.00	0.00	1.7	3
2/9/1993	0.00	0.00	0.00	0.00	0.00	1.7	3
3/11/1993	0.00	0.00	0.00	0.00	0.00	1.7	3
4/19/1993	0.00	0.00	0.00	0.00	0.00	1.7	3
5/20/1993	0.00	0.00	0.00	0.00	0.00	1.7	3
6/16/1993	0.00	0.00	0.00	0.00	0.00	1.7	3
7/19/1993	0.00	0.00	0.00	0.00	0.00	1.7	3
8/19/1993	0.00	0.00	0.00	0.00	0.00	1.7	3
9/16/1993	0.00	0.00	0.00	0.00	0.00	1.7	3
10/8/1993	0.00	0.00	0.00	0.00	0.00	1.7	3
11/16/1993	0.00	0.00	0.00	0.00	0.00	1.7	3
12/9/1993	0.00	0.00	0.00	0.00	0.00	1.7	3
1/18/1994	0.00	0.00	0.00	0.00	0.00	1.7	3
2/8/1994	0.00	0.00	0.00	0.00	0.00	1.7	3
3/9/1994	0.00	0.00	0.00	0.00	0.00	1.7	3
4/12/1994	0.00	0.00	0.00	0.00	0.00	1.7	3
5/23/1994	0.00	0.00	0.00	0.00	0.00	1.7	3
6/9/1994	0.00	0.00	0.00	0.00	0.00	1.7	3
7/20/1994	0.00	0.00	0.00	0.00	0.00	1.7	3
8/9/1994	0.00	0.00	0.00	0.00	0.00	1.7	3
9/21/1994	0.00	0.00	0.00	0.00	0.00	1.7	3
10/19/1994	0.00	0.00	0.00	0.00	0.00	1.7	3
11/21/1994	0.00	0.00	0.00	0.00	0.00	1.7	3
12/16/1994	0.00	0.00	0.00	0.00	0.00	1.7	3
1/17/1995	0.00	0.00	0.00	0.00	0.00	1.7	3
2/15/1995	0.00	0.00	0.00	0.00	0.00	1.7	3
3/15/1995	0.00	0.00	0.00	0.00	0.00	1.7	3
4/27/1995	0.00	0.00	0.00	0.00	0.00	1.7	3

Appendix 9. Station D7 *Corbicula* Data							
Date	Total # of clams in sample (#/m^2)	*Biomass* (g/m^2)	recruit/ 0.05 m^2	mean size (mm)	GR ($m^3/m^2/d$)	Depth (M)	# Grabs
5/17/1995	0.00	0.00	0.00	0.00	0.00	1.7	3
6/27/1995	4.75	0.00	0.00	0.00	0.00	1.7	3
7/13/1995	0.00	0.00	0.00	0.00	0.00	1.7	3
8/24/1995	0.00	0.00	0.00	0.00	0.00	1.7	3
9/26/1995	4.75	0.00	0.00	0.00	0.00	1.7	3
10/25/1995	0.00	0.00	0.00	0.00	0.00	1.7	3
11/27/1995	0.00	0.00	0.00	0.00	0.00	1.7	3
12/27/1995	0.00	0.00	0.00	0.00	0.00	1.7	3
1/22/1996	0.00	0.00	0.00	0.00	0.00	1.7	4
2/21/1996	0.00	0.00	0.00	0.00	0.00	1.7	4
3/20/1996	0.00	0.00	0.00	0.00	0.00	1.7	4
4/29/1996	4.75	0.00	0.00	0.00	0.00	1.7	4
5/16/1996	0.00	0.00	0.00	0.00	0.00	1.7	4
6/18/1996	0.00	0.00	0.00	0.00	0.00	1.7	4
7/16/1996	4.75	0.00	0.00	0.00	0.00	1.7	4
8/28/1996	9.50	0.00	0.00	0.00	0.00	1.7	4
9/11/1996	4.75	0.00	0.00	0.00	0.00	1.7	4
10/8/1996	0.00	0.00	0.00	0.00	0.00	1.7	4
11/14/1996	0.00	0.00	0.00	0.00	0.00	1.7	4
12/11/1996	0.00	0.00	0.00	0.00	0.00	1.7	4
1/23/1997	4.75	0.00	0.00	0.00	0.00	1.7	4
2/20/1997	0.00	0.00	0.00	0.00	0.00	1.7	4
3/24/1997	0.00	0.00	0.00	0.00	0.00	1.7	4
4/22/1997	0.00	0.00	0.00	0.00	0.00	1.7	4
5/21/1997	0.00	0.00	0.00	0.00	0.00	1.7	4
6/18/1997	0.00	0.00	0.00	0.00	0.00	1.7	4
7/22/1997	0.00	0.00	0.00	0.00	0.00	1.7	4
8/19/1997	0.00	0.00	0.00	0.00	0.00	1.7	4
9/16/1997	0.00	0.00	0.00	0.00	0.00	1.7	4
10/28/1997	0.00	0.00	0.00	0.00	0.00	1.7	4
11/18/1997	0.00	0.00	0.00	0.00	0.00	1.7	4
12/16/1997	551.00	0.00	0.00	0.00	0.00	1.7	4
1/15/1998	0.00	0.00	0.00	0.00	0.00	1.7	4
2/19/1998	0.00	0.00	0.00	0.00	0.00	1.7	4
3/16/1998	0.00	0.00	0.00	0.00	0.00	1.7	4
4/15/1998	0.00	0.00	0.00	0.00	0.00	1.7	4
5/12/1998	9.50	0.00	0.00	0.00	0.00	1.7	4
6/8/1998	0.00	0.00	0.00	0.00	0.00	1.7	4

Appendix 9. Station D7 *Corbicula* Data							
Date	Total # of clams in sample (#/m^2)	*Biomass* (g/m^2)	recruit/ 0.05 m^2	mean size (mm)	GR ($m^3/m^2/d$)	Depth (M)	# Grabs
7/9/1998	0.00	0.00	0.00	0.00	0.00	1.7	4
8/5/1998	23.75	0.00	0.00	0.00	0.00	1.7	4
9/16/1998	14.25	0.00	0.00	0.00	0.00	1.7	4
10/6/1998	4.75	0.00	0.00	0.00	0.00	1.7	4
11/5/1998	4.75	0.00	0.00	0.00	0.00	1.7	4
12/21/1998	4.75	0.00	0.00	0.00	0.00	1.7	4
1/13/1999	0.00	0.00	0.00	0.00	0.00	1.7	4
2/17/1999	0.00	0.00	0.00	0.00	0.00	1.7	4
3/16/1999	4.75	0.00	0.00	0.00	0.00	1.7	4
4/14/1999	0.00	0.00	0.00	0.00	0.00	1.7	4
5/18/1999	0.00	0.00	0.00	0.00	0.00	1.7	4
6/14/1999	0.00	0.00	0.00	0.00	0.00	1.7	4
7/13/1999	14.25	0.00	0.00	0.00	0.00	1.7	4
8/11/1999	0.00	0.00	0.00	0.00	0.00	1.7	4
9/22/1999	4.75	0.00	0.00	0.00	0.00	1.7	4
10/26/1999	0.00	0.00	0.00	0.00	0.00	1.7	4
11/10/1999	0.00	0.00	0.00	0.00	0.00	1.7	4
12/8/1999	0.00	0.00	0.00	0.00	0.00	1.7	4
1/5/2000	4.75	0.00	0.00	0.00	0.00	1.7	4
2/23/2000	0.00	0.00	0.00	0.00	0.00	1.7	4
3/22/2000	0.00	0.00	0.00	0.00	0.00	1.7	4
4/19/2000	0.00	0.00	0.00	0.00	0.00	1.7	4
5/18/2000	0.00	0.00	0.00	0.00	0.00	1.7	4
6/14/2000	0.00	0.00	0.00	0.00	0.00	1.7	4
7/17/2000	0.00	0.00	0.00	0.00	0.00	1.7	4
8/15/2000	0.00	0.00	0.00	0.00	0.00	1.7	4
9/11/2000	0.00	0.00	0.00	0.00	0.00	1.7	4
10/10/2000	0.00	0.00	0.00	0.00	0.00	1.7	4
11/15/2000	0.00	0.00	0.00	0.00	0.00	1.7	4
12/12/2000	0.00	0.00	0.00	0.00	0.00	1.7	4

Appendix 10. Station D7 *Potamocorbula* Data							
Date	Total # of clams in sample (#/m^2)	biomass (g/m^2)	rec/ 0.05m^2	mean size (mm)	GR ($m^3/m^2/d$)	Depth (M)	# Grabs
5/20/1987	2166.00	0.40	103.00	1.80	0.14	1.7	1
6/9/1987	5339.00	0.50	267.00	1.90	0.18	1.7	1
7/30/1987	4370.00	5.60	45.00	4.40	1.94	1.7	1
8/18/1987	5529.00	8.00	34.00	5.00	2.70	1.7	1
9/16/1987	4579.00	8.50	9.00	5.50	2.91	1.7	1
10/28/1987	4047.00	9.20	9.00	6.10	3.16	1.7	1
11/19/1987	4199.00	10.00	10.00	5.90	2.33	1.7	1
12/14/1987	3249.00	9.30	8.00	6.40	2.19	1.7	1
1/13/1988	3059.00	10.70	7.00	6.40	2.51	1.7	1
2/11/1988	3344.00	4.50	105.00	3.40	1.10	1.7	1
4/1/1988	3819.00	3.40	150.00	3.30	1.21	1.7	1
4/26/1988	5586.00	6.00	142.00	3.60	2.12	1.7	1
5/25/1988	6593.00	9.80	40.00	4.40	3.28	1.7	1
6/22/1988	3268.00	6.20	1.00	5.50	2.18	1.7	1
7/20/1988	4161.00	9.10	19.00	5.60	3.13	1.7	1
8/18/1988	4921.00	10.00	38.00	5.70	3.39	1.7	1
9/20/1988	5434.00	13.90	31.00	6.20	4.63	1.7	1
10/19/1988	4921.00	13.20	35.00	6.00	4.42	1.7	1
11/17/1988	3534.00	10.10	20.00	6.20	2.36	1.7	1
12/6/1988	2964.00	11.50	19.00	6.40	2.72	1.7	1
1/18/1989	2071.00	3.00	53.00	3.80	0.75	1.7	1
2/2/1989	3344.00	5.90	105.00	3.50	1.44	1.7	1
5/4/1989	722.00	1.10	5.00	4.60	0.43	1.7	1
6/30/1989	1387.00	1.70	21.00	4.50	0.62	1.7	1
7/26/1989	2318.00	4.90	25.00	5.40	1.74	1.7	1
8/23/1989	3173.00	5.20	52.00	4.90	1.87	1.7	1
9/21/1989	4028.00	6.60	104.00	4.20	2.30	1.7	1
10/19/1989	3743.00	10.60	40.00	6.00	3.64	1.7	1
11/8/1989	2527.00	7.70	28.00	5.90	1.86	1.7	1
12/6/1989	2603.00	6.90	23.00	5.60	1.65	1.7	1
1/17/1989	2342.70	10.50	31.00	6.40	2.52	1.7	3
2/27/1990	1019.70	3.60	36.30	6.30	0.91	1.7	3
3/19/1990	1374.30	2.60	10.30	4.20	0.95	1.7	3
4/20/1990	1463.00	5.80	5.70	6.60	2.11	1.7	3
5/14/1990	1887.30	4.70	5.70	4.80	1.73	1.7	3
6/28/1990	1615.00	5.40	0.00	6.70	1.94	1.7	3
8/16/1990	1064.00	4.20	0.70	7.70	1.54	1.7	3
9/26/1990	1007.00	4.50	59.30	8.10	1.65	1.7	3

Appendix 10. Station D7 *Potamocorbula* Data							
Date	Total # of clams in sample (#/m^2)	biomass (g/m^2)	rec/ 0.05m^2	mean size (mm)	GR ($m^3/m^2/d$)	Depth (M)	# Grabs
10/24/1990	2406.70	6.60	131.00	5.40	2.37	1.7	3
11/8/1990	3622.70	7.60	11.30	4.20	1.82	1.7	3
12/11/1990	4249.70	8.50	159.00	4.00	2.00	1.7	3
1/7/1991	1811.30	6.20	50.00	5.00	1.53	1.7	3
2/6/1991	1092.50	4.40	33.00	4.60	1.10	1.7	3
3/6/1991	1722.70	1.90	47.70	3.50	0.73	1.7	3
4/8/1991	1399.70	1.60	50.30	3.10	0.60	1.7	3
5/20/1991	2267.30	1.90	61.70	3.30	0.68	1.7	3
6/5/1991	2102.70	2.10	33.70	3.90	0.77	1.7	3
8/20/1991	1475.70	2.00	31.00	4.30	0.73	1.7	3
9/16/1991	1615.00	3.60	20.70	5.50	1.32	1.7	3
10/1/1991	2039.30	5.00	33.30	5.60	1.81	1.7	3
11/13/1991	2546.00	7.50	37.70	5.60	2.33	1.7	3
12/11/1991	2197.70	6.70	28.00	5.90	1.48	1.7	3
1/14/1992	2463.70	6.80	48.70	4.80	1.61	1.7	3
2/26/1992	2517.50	6.50	68.70	3.70	2.30	1.7	3
3/25/1992	2679.00	5.10	72.30	4.10	1.81	1.7	3
4/8/1992	2134.30	3.00	59.30	3.80	1.10	1.7	3
5/10/1992	2527.00	5.90	18.30	5.20	2.05	1.7	3
6/22/1992	2539.70	4.60	43.30	4.60	1.60	1.7	3
7/7/1992	2318.00	4.20	49.00	4.60	1.48	1.7	3
8/5/1992	2400.30	4.90	36.30	5.30	1.73	1.7	3
9/2/1992	3135.00	8.30	48.30	5.80	2.80	1.7	3
10/4/1992	2926.00	8.40	35.70	6.10	2.88	1.7	3
11/2/1992	3078.00	12.20	36.30	6.40	3.75	1.7	3
12/28/1992	2292.70	11.10	19.70	7.40	3.61	1.7	3
1/27/1993	551.00	0.50	13.30	3.40	0.12	1.7	3
2/9/1993	427.50	0.20	12.30	2.80	0.09	1.7	3
3/17/1993	475.00	1.90	5.30	5.70	0.72	1.7	3
4/15/1993	88.70	0.90	0.00	8.40	0.35	1.7	3
5/20/1993	215.30	1.70	0.70	7.80	0.66	1.7	3
6/17/1993	240.70	1.10	2.00	7.10	0.42	1.7	3
7/19/1993	126.70	0.30	0.70	6.30	0.13	1.7	3
8/25/1993	107.70	1.20	0.00	12.40	0.47	1.7	3
9/15/1993	177.30	2.00	0.00	11.10	0.74	1.7	3
10/12/1993	164.70	4.40	0.00	13.50	1.63	1.7	3
11/16/1993	424.30	3.10	15.70	5.30	1.08	1.7	3
12/9/1993	665.00	4.40	25.70	4.90	1.45	1.7	3

Appendix 10. Station D7 *Potamocorbula* Data							
Date	Total # of clams in sample (#/m^2)	biomass (g/m^2)	rec/ $0.05m^2$	mean size (mm)	GR ($m^3/m^2/d$)	Depth (M)	# Grabs
1/18/1994	500.30	4.20	15.70	6.70	1.07	1.7	3
2/8/1994	1016.50	2.20	26.70	3.10	0.57	1.7	3
3/9/1994	842.30	0.80	22.00	3.20	0.32	1.7	3
4/13/1994	753.70	0.80	13.70	3.70	0.30	1.7	3
5/23/1994	956.30	1.40	9.00	4.30	0.53	1.7	3
6/9/1994	867.70	1.10	10.30	4.40	0.43	1.7	3
7/20/1994	2267.30	3.10	72.70	3.70	1.14	1.7	3
8/9/1994	950.00	0.70	38.00	2.80	0.27	1.7	3
9/21/1994	4104.00	4.80	137.30	3.60	1.71	1.7	3
10/19/1994	4325.70	4.30	153.30	3.30	1.55	1.7	3
11/28/1994	2052.00	3.10	63.70	3.90	0.92	1.7	3
12/12/1994	1931.70	3.60	46.70	4.40	0.74	1.7	3
1/17/1995	1608.70	2.00	45.30	3.80	0.75	1.7	3
2/15/1995	256.50	0.50	6.00	4.40	0.19	1.7	3
3/15/1995	196.30	0.10	7.00	3.80	0.06	1.7	3
4/27/1995	202.70	0.30	0.70	5.20	0.11	1.7	3
5/17/1995	183.70	0.40	0.00	7.40	0.15	1.7	3
6/27/1995	139.30	0.90	0.00	9.00	0.34	1.7	3
7/13/1995	145.70	1.50	1.30	9.70	0.56	1.7	3
8/24/1995	139.30	1.30	1.30	9.00	0.51	1.7	3
9/27/1995	576.30	0.30	25.00	2.60	0.13	1.7	3
10/26/1995	462.30	1.50	8.30	4.90	0.58	1.7	3
11/27/1995	196.30	0.90	3.00	5.70	0.33	1.7	3
1/23/1996	351.50	0.80	10.80	4.40	0.22	1.7	4
2/22/1996	432.30	1.20	12.00	5.60	0.45	1.7	4
3/21/1996	318.30	0.40	6.00	4.80	0.15	1.7	4
4/30/1996	266.00	0.40	0.50	5.90	0.16	1.7	4
5/17/1996	209.00	0.70	0.00	8.50	0.25	1.7	4
7/17/1996	190.00	1.60	0.00	10.00	0.59	1.7	4
8/29/1996	228.00	2.10	4.50	8.10	0.81	1.7	4
9/12/1996	793.30	3.40	24.50	5.30	1.28	1.7	4
10/10/1996	223.30	1.60	5.80	6.90	0.63	1.7	4
11/15/1996	1752.80	1.50	81.50	2.80	0.83	1.7	4
12/11/1996	1434.50	2.60	57.80	3.30	0.66	1.7	4
1/21/1997	37.06	0.27	79.00	1.95	0.07	1.7	4
2/23/1997	48.01	0.50	63.00	2.53	0.19	1.7	4
3/25/1997	53.66	0.37	37.50	2.82	0.14	1.7	4
4/22/1997	83.06	0.34	6.00	4.37	0.13	1.7	4

Appendix 10. Station D7 *Potamocorbula* Data							
Date	Total # of clams in sample (#/m^2)	biomass (g/m^2)	rec/ 0.05m^2	mean size (mm)	GR ($m^3/m^2/d$)	Depth (M)	# Grabs
5/21/1997	87.77	0.89	14.50	4.62	0.33	1.7	4
6/18/1997	94.40	2.77	21.25	4.97	1.00	1.7	4
7/22/1997	126.33	3.13	1.00	6.65	1.14	1.7	4
8/19/1997	141.79	4.72	4.75	7.46	1.69	1.7	4
9/16/1997	124.60	6.06	17.00	6.56	2.16	1.7	4
10/28/1997	93.84	10.72	99.00	4.94	3.34	1.7	4
11/18/1997	98.61	7.15	48.33	5.19	1.72	1.7	4
12/14/1997	105.64	9.73	77.00	5.56	3.32	1.7	4
1/12/1998	1187.50	1.67	36.25	3.72	0.42	1.7	4
2/17/1998	907.25	0.52	33.00	3.05	0.19	1.7	4
3/16/1998	593.75	0.27	18.00	3.16	0.10	1.7	4
4/13/1998	532.00	0.27	11.25	3.58	0.10	1.7	4
5/12/1998	356.25	0.28	1.75	5.07	0.11	1.7	4
6/8/1998	342.00	0.61	0.75	2.86	0.23	1.7	4
7/8/1998	335.67	1.35	0.00	6.52	0.51	1.7	4
8/3/1998	152.00	1.05	0.00	9.34	0.40	1.7	4
9/16/1998	323.00	1.87	8.50	6.54	0.71	1.7	4
10/6/1998	175.75	1.22	1.75	7.61	0.42	1.7	4
11/3/1998	266.00	0.93	9.25	4.57	0.36	1.7	4
12/21/1998	304.00	0.38	12.00	3.38	0.10	1.7	4
1/13/1999	812.30	0.20	32.50	2.40	0.06	1.7	4
2/17/1999	266.00	0.30	9.50	3.00	0.07	1.7	4
3/16/1999	166.30	0.00	4.50	3.00	0.01	1.7	4
4/14/1999	204.30	0.10	4.00	3.80	0.05	1.7	4
5/18/1999	95.00	0.50	0.00	6.50	0.20	1.7	4
6/14/1999	76.00	0.30	1.30	6.10	0.11	1.7	4
7/13/1999	522.50	1.60	16.00	4.50	0.60	1.7	4
8/11/1999	5353.30	3.30	160.50	3.20	1.14	1.7	4
9/22/1999	3562.50	3.70	97.80	3.70	1.29	1.7	4
10/27/1999	6517.00	8.12	159.80	3.80	2.25	1.7	4
11/9/1999	3819.00	5.30	84.80	4.10	1.84	1.7	4
12/8/1999	1334.80	1.30	10.00	4.40	0.33	1.7	4
1/5/2000	3147.70	2.80	70.00	3.70	0.68	1.7	4
2/23/2000	1190.70	0.40	45.30	2.60	0.17	1.7	4
3/22/2000	1000.70	0.70	36.70	2.90	0.25	1.7	4
4/19/2000	525.70	1.10	3.00	4.70	0.41	1.7	4
5/16/2000	690.30	1.30	14.70	4.10	0.48	1.7	4
6/14/2000	918.30	1.90	8.30	5.30	0.72	1.7	4

Appendix 10. Station D7 *Potamocorbula* Data							
Date	Total # of clams in sample (#/m^2)	biomass (g/m^2)	rec/ 0.05m^2	mean size (mm)	GR ($m^3/m^2/d$)	Depth (M)	# Grabs
7/17/2000	836.00	1.40	6.30	5.40	0.53	1.7	4
8/16/2000	1184.30	2.90	4.00	6.30	1.05	1.7	4
9/13/2000	1171.70	3.60	4.00	6.60	1.31	1.7	4
10/10/2000	532.00	3.20	1.30	7.90	0.88	1.7	4
11/15/2000	969.00	5.40	6.70	7.10	1.98	1.7	4
12/13/2000	1057.70	3.40	26.30	4.70	0.86	1.7	4
1/11/2001	1469.30	1.90	57.00	3.20	0.48	1.7	4
2/7/2001	2166.00	2.60	91.70	3.10	0.65	1.7	4
3/7/2001	1190.70	0.80	45.70	3.00	0.32	1.7	4
4/4/2001	734.70	0.80	19.00	3.70	0.31	1.7	4
5/9/2001	2413.00	1.20	93.00	2.40	0.43	1.7	4
6/5/2001	5054.00	2.40	204.70	2.80	0.86	1.7	4
7/24/2001	2653.70	8.40	2.30	7.00	2.92	1.7	4
8/22/2001	3014.70	5.90	10.70	5.60	2.08	1.7	4
9/18/2001	3578.30	8.10	13.70	5.90	2.80	1.7	4
10/16/2001	3382.00	8.45	11.00	6.20	2.98	1.7	4
11/19/2001	3458.00	10.90	25.00	6.30	3.73	1.7	4
12/11/2001	2058.30	0.80	72.00	2.70	0.31	1.7	4
1/15/2002	1722.70	1.40	62.00	2.80	0.51	1.7	4
2/14/2002	912.00	0.80	32.30	3.00	0.21	1.7	4
3/2/2002	373.70	0.40	7.70	3.70	0.14	1.7	4
4/15/2002	614.30	0.60	6.70	3.80	0.23	1.7	4
5/13/2002	2539.70	0.60	121.70	2.10	0.24	1.7	4
6/10/2002	5301.00	1.90	199.00	2.70	0.69	1.7	4
7/7/2002	3920.30	3.50	100.30	3.50	1.24	1.7	4
8/8/2002	5871.00	6.60	104.30	4.20	2.25	1.7	4
9/9/2002	4819.70	9.40	43.70	5.40	3.17	1.7	4
10/23/2002	4876.70	10.45	59.70	5.40	3.60	1.7	4
11/5/2002	5060.30	11.50	69.30	5.30	3.90	1.7	4
12/4/2002	3508.70	3.30	104.00	3.40	1.19	1.7	4
1/21/2003	1615.00	2.10	N/D	N/D	0.54	1.7	4
2/18/2003	1410.80	1.10	N/D	N/D	0.43	1.7	4
3/18/2003	937.30	0.80	N/D	N/D	0.31	1.7	4
4/16/2003	883.50	0.90	N/D	N/D	0.32	1.7	4
5/14/2003	5543.30	2.60	N/D	N/D	0.79	1.7	4
6/1/2003	10521.30	3.40	N/D	N/D	0.84	1.7	4
7/14/2003	3405.00	4.00	N/D	N/D	1.44	1.7	4
8/13/2003	3400.00	4.80	N/D	N/D	1.72	1.7	4

Appendix 10. Station D7 *Potamocorbula* Data							
Date	Total # of clams in sample (#/m^2)	biomass (g/m^2)	rec/ 0.05m^2	mean size (mm)	GR ($m^3/m^2/d$)	Depth (M)	# Grabs
9/18/2003	3395.00	6.60	N/D	N/D	2.35	1.7	4
10/23/2003	6530.00	11.80	N/D	N/D	3.95	1.7	4
1/8/2004	2147.00	2.90	N/D	N/D	0.69	1.7	4
4/7/2004	868.00	0.70	N/D	N/D	0.26	1.7	4
7/14/2004	4294.00	3.70	90.00	4.00	1.30	1.7	4
10/25/2002	3420.00	11.10	41.00	5.70	3.85	1.7	4
1/10/2005	1615.00	1.80	29.70	4.60	0.55	1.7	4
4/5/2005	950.00	0.40	35.70	2.80	0.23	1.7	4
7/19/2005	956.30	2.20	0.70	6.90	0.96	1.7	4
10/12/2005	5408.70	8.90	144.30	4.00	3.78	1.7	4
11/6/2005	4883.00	7.70	126.30	4.10	3.93	1.7	4
12/4/2005	3489.70	9.30	60.30	5.20	4.52	1.7	4
1/11/2006	1583.30	0.40	67.70	2.40	0.11	1.7	4
2/8/2006	291.30	0.10	13.00	2.70	0.02	1.7	4
4/26/2006	544.70	0.40	9.00	4.20	0.15	1.7	4
5/25/2006	266.00	0.90	0.00	7.00	0.36	1.7	4
6/6/2006	240.70	0.70	0.30	7.40	0.27	1.7	4
7/10/2006	367.30	2.90	0.00	9.50	1.09	1.7	4
8/10/2006	13439.30	3.30	656.00	1.90	1.08	1.7	4
9/20/2006	14427.30	4.20	631.70	2.40	1.33	1.7	4
10/25/2006	13091.00	5.30	364.70	3.20	1.65	1.7	4
11/20/2006	8752.70	7.10	233.70	3.40	2.31	1.7	4
12/20/2006	7156.70	8.10	173.30	3.80	2.63	1.7	4
1/23/2007	2786.70	1.40	78.00	3.40	0.35	1.7	4
2/20/2007	1969.70	0.80	55.70	3.40	0.30	1.7	4
3/20/2007	1254.00	0.50	33.70	3.50	0.18	1.7	4
4/16/2007	1241.30	0.90	17.00	4.20	0.34	1.7	4
5/16/2007	1672.00	0.60	45.00	3.20	0.24	1.7	4
6/1/2007	3863.30	1.30	141.30	2.70	0.47	1.7	4
7/16/2007	3914.00	2.30	137.30	3.40	0.80	1.7	4
8/13/2007	7954.70	3.50	282.70	2.80	1.16	1.7	4
9/11/2007	7137.70	5.80	200.70	3.60	1.93	1.7	4
10/2/2007	7530.30	7.02	170.70	3.90	2.63	1.7	4
11/7/2007	4477.70	4.40	84.30	4.10	1.52	1.7	4
12/10/2007	3356.70	1.60	91.00	3.30	0.38	1.7	4
1/8/2008	3002.00	1.20	95.00	3.00	0.28	1.7	4
2/6/2008	3576.80	0.90	129.30	2.60	0.33	1.7	4
3/5/2008	1551.70	0.30	61.00	2.30	0.10	1.7	4

Appendix 10. Station D7 *Potamocorbula* Data							
Date	Total # of clams in sample (#/m^2)	biomass (g/m^2)	rec/ 0.05m^2	mean size (mm)	GR ($m^3/m^2/d$)	Depth (M)	# Grabs
4/2/2008	1019.70	0.30	41.70	2.80	0.13	1.7	4
5/19/2008	9354.30	1.20	407.70	2.20	0.39	1.7	4
6/17/2008	17917.00	5.00	660.70	2.60	1.53	1.7	4
7/14/2008	15231.70	9.70	354.00	3.60	2.92	1.7	4
8/13/2008	13426.70	16.20	163.70	4.50	4.67	1.7	4
9/15/2008	14465.30	22.50	118.30	4.90	6.29	1.7	4
10/27/2008	14547.70	23.63	102.70	5.20	6.60	1.7	4
11/18/2008	9139.00	14.00	66.70	5.20	4.25	1.7	4
12/10/2008	4648.70	3.20	58.00	4.30	1.07	1.7	4
1/12/2009	2831.00	2.00	30.70	4.30	0.47	1.7	4
2/9/2009	3078.00	2.20	66.30	3.60	0.79	1.7	4
3/11/2009	1665.70	0.50	50.00	3.10	0.17	1.7	4
4/6/2009	1602.30	1.40	39.00	3.50	0.52	1.7	4
5/4/2009	717.30	0.40	8.80	4.10	0.14	1.7	4
6/24/2009	26568.30	4.50	1301.70	2.00	1.33	1.7	4
7/21/2009	24345.30	5.90	991.70	2.50	1.70	1.7	4
8/18/2009	15067.00	7.80	350.00	3.30	2.37	1.7	4
9/16/2009	17530.70	11.70	343.00	3.70	3.31	1.7	4
10/19/2009	13675.30	5.89	356.80	3.50	1.87	1.7	4
11/16/2009	7517.70	3.40	209.00	3.20	1.14	1.7	4
12/16/2009	4085.00	1.40	103.70	3.40	0.33	1.7	4
1/14/2010	4370.00	1.60	110.30	3.50	0.38	1.7	4
2/18/2010	1159.00	0.30	24.70	3.70	0.13	1.7	4
3/15/2010	760.00	0.30	19.70	3.40	0.11	1.7	4
4/12/2010	500.30	0.40	10.70	3.90	0.16	1.7	4
5/18/2010	6694.30	1.20	320.00	2.30	0.43	1.7	4
6/9/2010	7967.30	3.40	237.30	3.00	1.12	1.7	4
7/6/2010	9082.00	4.40	238.00	3.40	1.41	1.7	4
8/17/2010	7695.00	6.10	114.00	4.30	1.94	1.7	4
9/7/2010	7821.70	8.10	91.30	4.70	2.55	1.7	4
10/25/2010	6184.50	19.11	27.00	6.50	4.81	1.7	4
11/22/2010	6225.70	18.10	41.30	6.40	5.63	1.7	4
12/20/2010	2894.30	3.40	35.00	5.00	1.17	1.7	4
1/19/2011	962.70	0.90	11.70	4.80	0.23	1.7	4
2/2/2011	931.00	0.50	18.50	4.00	0.19	1.7	4
3/8/2011	487.70	0.40	4.70	4.40	0.14	1.7	4
4/6/2011	266.00	0.30	1.70	4.60	0.12	1.7	4
5/2/2011	313.50	0.40	0.50	5.50	0.15	1.7	4

Appendix 10. Station D7 *Potamocorbula* Data							
Date	Total # of clams in sample (#/m^2)	biomass (g/m^2)	rec/ 0.05m^2	mean size (mm)	GR ($m^3/m^2/d$)	Depth (M)	# Grabs
6/14/2011	166.30	1.00	0.00	8.60	0.40	1.7	4
7/13/2011	137.80	1.20	0.00	10.50	0.46	1.7	4
8/9/2011	161.50	1.60	0.80	10.00	0.62	1.7	4
9/7/2011	3287.00	2.40	130.00	2.70	0.86	1.7	4
10/3/2011	5529.00	4.65	197.00	2.90	1.72	1.7	4
11/8/2011	3443.80	5.10	86.50	4.20	1.74	1.7	4
12/7/2011	1814.50	4.90	21.00	6.10	1.18	1.7	4
1/9/2012	3135.00	3.20	110.50	3.40	0.78	1.7	4
2/8/2012	4170.50	2.10	183.00	2.40	0.73	1.7	4
3/6/2012	3695.50	1.10	163.80	2.60	0.38	1.7	4
4/5/2012	2085.30	0.80	88.80	2.60	0.29	1.7	4
5/21/2012	869.30	0.70	12.80	4.10	0.27	1.7	4
6/20/2012	3771.50	2.20	159.30	2.60	0.77	1.7	4
7/17/2012	5353.30	4.10	196.00	3.10	1.39	1.7	4
8/15/2012	4659.80	4.60	107.50	3.80	1.58	1.7	4
9/25/2012	4545.80	6.10	67.00	4.60	2.03	1.7	4
10/24/2012	3310.80	4.74	38.00	5.10	1.60	1.7	4
11/14/2012	4227.50	7.10	27.00	5.50	2.37	1.7	4
12/18/2012	1581.80	1.60	20.00	4.40	0.58	1.7	4
1/9/2013	916.80	0.40	18.50	3.60	0.09	1.7	4
2/5/2013	584.30	0.20	16.00	3.30	0.08	1.7	4
3/13/2013	261.30	0.10	6.30	3.40	0.06	1.7	4
4/10/2013	161.50	0.20	0.30	5.10	0.09	1.7	4
5/7/2013	20011.80	1.10	1037.00	1.40	0.30	1.7	4
6/4/2013	16648.80	2.80	758.00	2.30	0.86	1.7	4
7/8/2013	11514.00	2.60	494.00	2.50	0.82	1.7	4
9/4/2013	12853.50	6.80	207.00	3.70	1.33	1.7	4
10/15/2013	12706.30	10.69	179.50	4.00	2.03	1.7	4
11/19/2013	4954.30	3.20	69.30	3.80	0.70	1.7	4
12/16/2013	3434.30	2.30	88.00	3.60	0.35	1.7	4

Appendix 11. Station D11 *Corbicula* Data							
Date	Total # of clams in sample (#/m^2)	biomass (g/m^2)	recruit/ 0.05 m^2	mean size (mm)	GR ($m^3/m^2/d$)	Depth (M)	# Grabs
6/2/1977	19.00	0.00	1.00	0.50	0.00	3	1
10/11/1977	361.00	0.00	19.00	0.58	0.00	3	1
6/8/1978	95.00	0.01	5.00	1.90	0.00	3	1
10/4/1978	1957.00	0.01	103.00	0.62	0.00	3	1
5/30/1979	76.00	0.01	4.00	2.50	0.00	3	1
9/17/1979	95.00	0.00	5.00	0.70	0.00	3	1
6/11/1980	152.00	0.02	7.00	2.50	0.00	3	1
7/18/1980	380.00	0.08	17.00	1.45	0.01	3	1
8/22/1980	57.00	0.05	1.00	4.17	0.01	3	1
9/19/1980	342.00	0.02	17.00	0.94	0.00	3	1
10/23/1980	912.00	0.01	48.00	0.79	0.00	3	1
11/20/1980	570.00	0.01	30.00	0.80	0.00	3	1
12/22/1980	418.00	0.01	22.00	0.82	0.00	3	1
1/14/1981	1292.00	0.02	67.00	1.03	0.00	3	1
2/19/1981	1273.00	0.03	67.00	1.22	0.00	3	1
3/30/1981	1862.00	0.06	97.00	1.36	0.00	3	1
4/16/1981	1026.00	0.07	51.00	1.61	0.00	3	1
5/15/1981	1539.00	0.64	38.00	3.27	0.05	3	1
6/12/1981	209.00	0.08	6.00	2.59	0.01	3	1
7/10/1981	399.00	0.08	18.00	2.07	0.01	3	1
8/26/1981	798.00	0.03	41.00	1.45	0.00	3	1
9/24/1981	779.00	0.03	40.00	1.30	0.00	3	1
10/13/1981	608.00	0.07	29.00	1.59	0.01	3	1
11/20/1981	874.00	0.03	46.00	1.37	0.00	3	1
12/11/1981	1691.00	0.09	87.00	1.15	0.00	3	1
1/21/1982	836.00	0.06	44.00	1.61	0.00	3	1
2/22/1982	1995.00	0.08	105.00	1.32	0.00	3	1
3/30/1982	475.00	0.06	22.00	2.06	0.00	3	1
4/28/1982	532.00	0.14	25.00	2.11	0.01	3	1
5/20/1982	760.00	0.18	32.00	2.33	0.01	3	1
6/25/1982	114.00	0.09	2.00	3.67	0.01	3	1
7/22/1982	133.00	0.02	5.00	2.36	0.00	3	1
8/30/1982	494.00	0.00	26.00	0.65	0.00	3	1
9/20/1982	741.00	0.02	39.00	0.76	0.00	3	1
10/28/1982	285.00	0.00	15.00	1.03	0.00	3	1
11/24/1982	1330.00	0.03	70.00	1.23	0.00	3	1
12/15/1982	494.00	0.01	26.00	1.08	0.00	3	1
1/31/1983	1615.00	0.05	85.00	1.14	0.00	3	1

Appendix 11. Station D11 *Corbicula* Data							
Date	Total # of clams in sample (#/m^2)	biomass (g/m^2)	recruit/ 0.05 m^2	mean size (mm)	GR ($m^3/m^2/d$)	Depth (M)	# Grabs
2/8/1983	817.00	0.02	43.00	1.29	0.00	3	1
3/8/1983	722.00	0.04	38.00	1.42	0.00	3	1
4/21/1983	1729.00	0.54	74.00	1.97	0.02	3	1
5/19/1983	1425.00	0.34	61.00	2.31	0.02	3	1
6/6/1983	722.00	0.36	21.00	2.92	0.04	3	1
7/5/1983	323.00	0.11	9.00	3.03	0.01	3	1
9/15/1983	399.00	0.11	18.00	1.69	0.01	3	1
11/1/1983	323.00	0.01	17.00	1.50	0.00	3	1
11/30/1983	1387.00	0.03	73.00	1.13	0.00	3	1
12/13/1983	817.00	0.02	43.00	1.34	0.00	3	1
1/31/1984	152.00	0.01	8.00	1.50	0.00	3	1
2/27/1984	1615.00	0.05	85.00	1.21	0.00	3	1
3/26/1984	2660.00	0.08	140.00	1.13	0.00	3	1
4/24/1984	1995.00	0.29	100.00	1.52	0.02	3	1
5/24/1984	589.00	0.13	24.00	2.27	0.01	3	1
6/22/1984	247.00	0.02	12.00	1.50	0.00	3	1
7/23/1984	228.00	0.02	11.00	1.67	0.00	3	1
8/22/1984	228.00	0.03	10.00	1.92	0.00	3	1
9/18/1984	1729.00	0.12	91.00	1.18	0.01	3	1
10/30/1984	513.00	0.07	23.00	1.57	0.01	3	1
11/29/1984	266.00	0.01	14.00	1.07	0.00	3	1
12/14/1984	1178.00	0.03	62.00	1.10	0.00	3	1
1/15/1985	608.00	0.02	31.00	1.19	0.00	3	1
2/26/1985	2071.00	0.07	108.00	1.20	0.00	3	1
3/18/1985	2603.00	0.07	136.00	1.09	0.00	3	1
4/10/1985	2204.00	0.10	112.00	1.40	0.00	3	1
5/31/1985	475.00	0.03	23.00	1.66	0.00	3	1
6/14/1985	912.00	0.09	47.00	1.50	0.01	3	1
8/30/1985	722.00	0.07	36.00	1.37	0.01	3	1
10/2/1985	3971.00	0.07	207.00	0.73	0.01	3	1
10/24/1985	3287.00	0.44	172.00	0.89	0.03	3	1
12/3/1985	4142.00	0.14	214.00	0.79	0.01	3	1
12/30/1985	3420.00	0.12	178.00	0.91	0.00	3	1
1/16/1986	1938.00	0.11	101.00	1.10	0.00	3	1
2/6/1986	1273.00	0.07	65.00	0.99	0.00	3	1
3/31/1986	817.00	0.12	38.00	1.87	0.01	3	1
4/21/1986	361.00	0.03	18.00	1.82	0.00	3	1
5/21/1986	494.00	0.14	22.00	2.42	0.01	3	1

Appendix 11. Station D11 *Corbicula* Data							
Date	Total # of clams in sample (#/m^2)	biomass (g/m^2)	recruit/ 0.05 m^2	mean size (mm)	GR ($m^3/m^2/d$)	Depth (M)	# Grabs
6/30/1986	57.00	0.00	3.00	1.17	0.00	3	1
7/25/1986	342.00	0.01	18.00	1.44	0.00	3	1
8/29/1986	456.00	0.00	24.00	1.29	0.00	3	1
9/12/1986	342.00	0.00	18.00	1.17	0.00	3	1
10/29/1986	380.00	0.03	20.00	1.50	0.00	3	1
11/14/1986	266.00	0.01	14.00	1.29	0.00	3	1
12/11/1986	608.00	0.02	31.00	1.22	0.00	3	1
1/23/1987	228.00	0.01	12.00	1.67	0.00	3	1
2/26/1987	304.00	0.02	15.00	1.69	0.00	3	1
3/26/1987	532.00	0.04	26.00	1.68	0.00	3	1
4/24/1987	893.00	0.10	41.00	1.84	0.01	3	1
5/22/1987	361.00	0.04	14.00	2.24	0.00	3	1
6/9/1987	N/D	N/D	N/D	N/D	N/D	N/D	N/D
7/30/1987	2109.00	0.02	111.00	1.09	0.00	3	1
8/20/1987	2109.00	0.08	111.00	1.11	0.01	3	1
9/18/1987	2470.00	2.34	128.00	1.40	0.23	3	1
10/30/1987	2033.00	0.61	106.00	1.43	0.05	3	1
11/9/1987	1292.00	0.14	67.00	1.72	0.01	3	1
12/17/1987	1197.00	0.08	63.00	1.40	0.00	3	1
1/15/1988	1330.00	0.06	70.00	1.40	0.00	3	1
2/11/1988	456.00	0.03	24.00	1.42	0.00	3	1
4/1/1988	462.00	N/D	N/D	N/D	N/D	N/D	N/D
5/27/1988	418.00	0.15	9.00	3.14	0.01	3	1
6/24/1988	342.00	0.10	11.00	2.67	0.01	3	1
7/22/1988	133.00	0.02	6.00	1.93	0.00	3	1
8/22/1988	1273.00	0.06	67.00	1.31	0.01	3	1
9/22/1988	304.00	0.11	16.00	1.50	0.01	3	1
10/21/1988	152.00	0.03	7.00	1.88	0.00	3	1
11/17/1988	399.00	0.05	21.00	1.40	0.00	3	1
12/8/1988	475.00	2.37	24.00	2.30	0.09	3	1
1/20/1989	171.00	0.02	8.00	1.72	0.00	3	1
2/6/1989	551.00	0.03	29.00	1.29	0.00	3	1
5/4/1989	266.00	0.05	9.00	2.43	0.00	3	1
6/26/1989	89.00	N/D	N/D	N/D	N/D	N/D	N/D
7/24/1989	266.00	N/D	N/D	N/D	N/D	N/D	N/D
8/21/1989	475.00	N/D	N/D	N/D	N/D	N/D	N/D
9/19/1989	2166.00	N/D	N/D	N/D	N/D	N/D	N/D
10/17/1989	3648.00	0.02	192.00	1.38	0.00	3	1

Appendix 11. Station D11 *Corbicula* Data							
Date	Total # of clams in sample (#/m^2)	biomass (g/m^2)	recruit/ 0.05 m^2	mean size (mm)	GR ($m^3/m^2/d$)	Depth (M)	# Grabs
11/13/1989	513.00	1.22	24.00	2.91	0.08	3	1
12/4/1989	4655.00	0.95	243.50	1.45	0.04	3	1
1/16/1990	4129.33	1.27	211.00	1.35	0.04	3	3
2/27/1990	1748.00	0.19	88.00	1.38	0.01	3	3
3/19/1990	2014.00	2.15	102.67	1.33	0.11	3	3
4/20/1990	2831.00	6.99	141.00	1.34	0.44	3	3
5/14/1990	3426.33	1.63	170.00	1.38	0.13	3	3
6/26/1990	1235.00	4.47	59.00	1.98	0.50	3	3
7/12/1990	1412.33	3.14	58.67	2.64	0.39	3	3
8/8/1990	525.67	0.12	20.67	2.38	0.02	3	3
9/24/1990	1570.67	0.95	79.33	1.41	0.11	3	3
10/22/1990	4104.00	1.44	213.33	0.96	0.11	3	3
11/6/1990	3071.67	0.30	160.33	0.91	0.02	3	3
12/13/1990	7498.67	2.31	387.33	1.29	0.07	3	3
1/7/1991	7840.67	0.82	396.00	1.71	0.02	3	3
2/21/1991	6878.00	1.30	358.67	1.36	0.05	3	3
3/5/1991	5079.33	1.04	262.00	1.49	0.04	3	3
4/11/1991	5883.67	0.54	301.33	1.41	0.03	3	3
5/23/1991	2805.67	5.52	129.00	2.36	0.38	3	3
6/4/1991	2799.33	1.82	123.33	2.42	0.17	3	3
7/16/1991	1089.33	1.85	39.67	2.80	0.18	3	3
8/30/1991	411.67	2.83	8.00	4.32	0.28	3	3
9/12/1991	532.00	1.02	22.67	2.11	0.12	3	3
10/8/1991	829.67	1.91	37.00	2.55	0.19	3	3
11/12/1991	139.33	1.52	3.00	6.59	0.07	3	3
12/10/1991	1051.33	5.44	49.33	2.86	0.16	3	3
1/17/1992	1482.00	3.68	70.33	2.06	0.10	3	3
2/25/1992	1475.67	3.10	75.00	1.92	0.14	3	3
3/24/1992	1254.00	3.94	61.00	2.01	0.22	3	3
4/6/1992	1007.00	1.38	49.67	2.01	0.11	3	3
5/14/1992	557.33	4.36	19.67	3.73	0.44	3	3
6/17/1992	240.67	3.83	8.67	4.11	0.44	3	3
7/10/1992	196.33	1.25	8.67	3.05	0.16	3	3
8/4/1992	399.00	2.29	18.67	2.63	0.29	3	3
9/1/1992	259.67	6.20	7.00	8.40	0.75	3	3
10/23/1992	133.00	7.79	0.67	15.88	0.66	3	3
11/5/1992	76.00	2.64	0.67	13.50	0.21	3	3
12/28/1992	44.33	1.98	0.67	14.36	0.08	3	3

Appendix 11. Station D11 *Corbicula* Data							
Date	Total # of clams in sample (#/m^2)	biomass (g/m^2)	recruit/ 0.05 m^2	mean size (mm)	GR ($m^3/m^2/d$)	Depth (M)	# Grabs
1/14/1993	63.33	2.12	0.67	13.20	0.06	3	3
2/9/1993	107.67	4.03	2.00	12.79	0.13	3	3
3/11/1993	82.33	1.87	3.00	6.58	0.12	3	3
4/19/1993	76.00	5.83	0.67	15.58	0.29	3	3
5/20/1993	114.00	9.88	1.33	15.00	0.76	3	3
6/16/1993	114.00	4.78	2.00	8.67	0.48	3	3
7/19/1993	126.67	7.51	2.00	11.80	0.82	3	3
8/19/1993	601.67	6.31	28.67	2.98	0.71	3	3
9/16/1993	164.67	8.39	4.33	10.00	0.91	3	3
10/8/1993	126.67	2.88	4.33	6.55	0.26	3	3
11/16/1993	101.33	3.58	3.00	9.44	0.23	3	3
12/9/1993	126.67	10.27	1.67	15.65	0.32	3	3
1/18/1994	88.67	4.07	3.67	6.50	0.12	3	3
2/8/1994	145.67	11.36	2.33	14.20	0.35	3	3
3/9/1994	145.67	4.37	5.00	7.41	0.25	3	3
4/12/1994	823.33	7.14	39.67	3.04	0.20	3	3
5/23/1994	1437.67	9.32	66.67	2.61	0.66	3	3
6/9/1994	3489.67	3.75	174.33	1.57	0.37	3	3
7/20/1994	1608.67	8.72	76.67	2.36	0.85	3	3
8/9/1994	437.00	5.19	18.00	4.25	0.72	3	3
9/21/1994	817.00	2.05	35.33	2.47	0.23	3	3
10/19/1994	2609.33	5.30	115.67	2.05	0.36	3	3
11/21/1994	1906.33	5.72	86.67	2.44	0.20	3	3
12/16/1994	4313.00	6.91	207.00	1.96	0.18	3	3
1/17/1995	1513.67	6.81	66.33	2.44	0.22	3	3
2/15/1995	1418.67	1.29	63.67	1.89	0.05	3	3
3/15/1995	760.00	5.99	36.67	2.78	0.25	3	3
4/27/1995	1463.00	12.69	47.00	3.64	0.63	3	3
5/17/1995	1235.00	21.08	25.67	5.04	1.00	3	3
6/27/1995	924.67	15.16	1.33	6.99	1.36	3	3
7/13/1995	804.33	9.25	0.67	7.54	0.84	3	3
8/24/1995	905.67	16.48	11.33	7.84	2.06	3	3
9/26/1995	1083.00	13.18	25.33	6.72	1.33	3	3
10/25/1995	1102.00	13.84	22.67	7.21	0.98	3	3
11/27/1995	956.33	13.71	8.33	9.29	0.75	3	3
12/27/1995	829.67	12.65	12.67	8.35	0.41	3	3

Appendix 12. Station D11 *Potamocorbula* Data							
Date	Total # of clams in sample (#/m^2)	biomass (g/m^2)	rec/ 0.05m^2	mean size (mm)	GR ($m^3/m^2/d$)	Depth (M)	# Grabs
6/9/1987	N/D	N/D	N/D	N/D	N/D	N/D	N/D
7/30/1987	38.00	0.01	0.00	2.50	0.00	3	1
8/20/1987	0.00	0.00	0.00	N/D	0.00	3	1
9/18/1987	114.00	0.01	0.00	2.30	0.00	3	1
10/30/1987	19.00	0.00	0.00	1.50	0.00	3	1
11/9/1987	171.00	0.05	0.00	2.90	0.02	3	1
12/17/1987	19.00	0.00	0.00	2.50	0.00	3	1
1/15/1988	19.00	0.00	0.00	2.00	0.00	3	1
2/11/1988	19.00	0.00	0.00	2.50	0.00	3	1
4/1/1988	0.00	0.00	0.00	0.00	0.00	3	1
5/27/1988	0.00	0.00	0.00	0.00	0.00	3	1
6/24/1988	0.00	0.00	0.00	0.00	0.00	3	1
7/22/1988	0.00	0.00	0.00	0.00	0.00	3	1
8/22/1988	19.00	0.00	0.00	1.50	0.00	3	1
9/22/1988	0.00	0.00	0.00	0.00	0.00	3	1
10/21/1988	19.00	0.00	0.00	1.50	0.00	3	1
11/17/1988	0.00	0.00	0.00	0.00	0.00	3	1
12/8/1988	0.00	0.00	0.00	0.00	0.00	3	1
1/20/1989	0.00	0.00	0.00	0.00	0.00	3	1
2/6/1989	0.00	0.00	0.00	0.00	0.00	3	1
2/28/1989	0.00	0.00	0.00	0.00	0.00	3	1
3/21/1989	0.00	0.00	0.00	0.00	0.00	3	1
5/4/1989	19.00	0.02	0.00	4.50	0.01	3	1
6/26/1989	0.00	0.00	0.00	0.00	0.00	3	1
7/24/1989	0.00	0.00	0.00	0.00	0.00	3	1
8/21/1989	0.00	0.00	0.00	0.00	0.00	3	1
9/19/1989	0.00	0.00	0.00	0.00	0.00	3	1
10/17/1989	0.00	0.00	0.00	0.00	0.00	3	1
11/13/1989	0.00	0.00	0.00	0.00	0.00	3	1
12/12/1989	0.00	0.00	0.00	0.00	0.00	3	1
1/16/1990	0.00	0.00	0.00	0.00	0.00	3	3
2/27/1990	0.00	0.00	0.00	0.00	0.00	3	3
3/19/1990	0.00	0.00	0.00	0.00	0.00	3	3
4/20/1990	0.00	0.00	0.00	0.00	0.00	3	3
5/14/1990	0.00	0.00	0.00	0.00	0.00	3	3
6/26/1990	0.00	0.00	0.00	0.00	0.00	3	3
7/12/1990	0.00	0.00	0.00	0.00	0.00	3	3
8/8/1990	0.00	0.00	0.00	0.00	0.00	3	3

Appendix 12. Station D11 *Potamocorbula* Data							
Date	Total # of clams in sample (#/m^2)	biomass (g/m^2)	rec/ $0.05m^2$	mean size (mm)	GR ($m^3/m^2/d$)	Depth (M)	# Grabs
9/24/1990	0.00	0.00	0.00	0.00	0.00	3	3
10/22/1990	0.00	0.00	0.00	0.00	0.00	3	3
11/6/1990	57.00	0.01	0.00	2.50	0.00	3	3
12/13/1990	44.33	0.00	0.00	2.20	0.00	3	3
1/7/1991	82.33	0.01	0.00	2.00	0.00	3	3
2/19/1991	19.00	0.02	0.00	4.20	0.01	3	3
3/5/1991	19.00	0.01	0.00	2.80	0.00	3	3
4/11/1991	6.33	0.00	0.00	2.50	0.00	3	3
5/23/1991	0.00	0.00	0.00	0.00	0.00	3	3
6/4/1991	0.00	0.00	0.00	0.00	0.00	3	3
7/16/1991	0.00	0.00	0.00	0.00	0.00	3	3
8/30/1991	19.00	0.00	0.00	2.20	0.00	3	3
9/12/1991	12.67	0.24	0.00	7.50	0.10	3	3
10/8/1991	0.00	0.00	0.00	0.00	0.00	3	3
11/12/1991	0.00	0.00	0.00	0.00	0.00	3	3
12/10/1991	0.00	0.00	0.00	0.00	0.00	3	3
1/17/1992	0.00	0.00	0.00	0.00	0.00	3	3
2/25/1992	0.00	0.00	0.00	0.00	0.00	3	3
3/24/1992	0.00	0.00	0.00	0.00	0.00	3	3
4/6/1992	0.00	0.00	0.00	0.00	0.00	3	3
5/14/1992	0.00	0.00	0.00	0.00	0.00	3	3
6/17/1992	0.00	0.00	0.00	0.00	0.00	3	3
7/10/1992	0.00	0.00	0.00	0.00	0.00	3	3
8/4/1992	6.33	1.20	0.00	21.50	0.47	3	3
9/1/1992	31.67	0.00	0.00	1.30	0.00	3	3
10/23/1992	0.00	0.00	0.00	0.00	0.00	3	3
11/5/1992	0.00	0.00	0.00	0.00	0.00	3	3
12/28/1992	0.00	0.00	0.00	0.00	0.00	3	3
1/14/1993	6.33	0.01	0.00	6.00	0.00	3	3
2/9/1993	0.00	0.00	0.00	0.00	0.00	3	3
3/11/1993	0.00	0.00	0.00	0.00	0.00	3	3
4/19/1993	0.00	0.00	0.00	0.00	0.00	3	3
5/20/1993	0.00	0.00	0.00	0.00	0.00	3	3
6/16/1993	0.00	0.00	0.00	0.00	0.00	3	3
7/19/1993	0.00	0.00	0.00	0.00	0.00	3	3
8/19/1993	0.00	0.00	0.00	0.00	0.00	3	3
9/16/1993	0.00	0.00	0.00	0.00	0.00	3	3
10/8/1993	0.00	0.00	0.00	0.00	0.00	3	3

Appendix 12. Station D11 *Potamocorbula* Data							
Date	Total # of clams in sample (#/m^2)	biomass (g/m^2)	rec/ 0.05m^2	mean size (mm)	GR ($m^3/m^2/d$)	Depth (M)	# Grabs
11/16/1993	0.00	0.00	0.00	0.00	0.00	3	3
12/9/1993	0.00	0.00	0.00	0.00	0.00	3	3
1/18/1994	0.00	0.00	0.00	0.00	0.00	3	3
2/8/1994	0.00	0.00	0.00	0.00	0.00	3	3
3/9/1994	0.00	0.00	0.00	0.00	0.00	3	3
4/12/1994	0.00	0.00	0.00	0.00	0.00	3	3
5/23/1994	0.00	0.00	0.00	0.00	0.00	3	3
6/9/1994	0.00	0.00	0.00	0.00	0.00	3	3
7/20/1994	0.00	0.00	0.00	0.00	0.00	3	3
8/9/1994	0.00	0.00	0.00	0.00	0.00	3	3
9/21/1994	0.00	0.00	0.00	0.00	0.00	3	3
10/19/1994	6.33	0.00	0.00	8.50	0.01	3	3
11/21/1994	0.00	0.00	0.00	0.00	0.00	3	3
12/16/1994	0.00	0.00	0.00	0.00	0.00	3	3
1/17/1995	0.00	0.00	0.00	0.00	0.00	3	3
2/15/1995	0.00	0.00	0.00	0.00	0.00	3	3
3/15/1995	0.00	0.00	0.00	0.00	0.00	3	3
4/27/1995	0.00	0.00	0.00	0.00	0.00	3	3
5/17/1995	0.00	0.00	0.00	0.00	0.00	3	3
6/27/1995	0.00	0.00	0.00	0.00	0.00	3	3
7/13/1995	0.00	0.00	0.00	0.00	0.00	3	3
8/24/1995	0.00	0.00	0.00	0.00	0.00	3	3
9/26/1995	0.00	0.00	0.00	0.00	0.00	3	3
10/25/1995	0.00	0.00	0.00	0.00	0.00	3	3
11/27/1995	0.00	0.00	0.00	0.00	0.00	3	3

Appendix 13. Station D16 *Corbicula* Data							
Date	Total # of clams in sample (#/$m^{2)}$	biomass (g/m^2)	rec/0.05m^2	mean size (mm)	GR ($m^3/m^2/d$)	Depth (M)	# Grabs
1/23/1996	23.75	0.32	1.00	4.70	0.01	3.38	4
2/22/1996	47.50	0.05	2.25	1.90	0.00	3.38	4
3/21/1996	237.50	2.07	11.00	3.46	0.09	3.38	4
4/30/1996	76.00	1.54	2.00	7.38	0.10	3.38	4
5/17/1996	574.75	18.08	13.50	9.79	1.17	3.38	4
6/15/1996	N/D	N/D	N/D	N/D	N/D	N/D	N/D
7/17/1996	133.00	2.93	3.00	8.61	0.37	3.38	4
8/29/1996	218.50	4.19	8.00	6.41	0.37	3.38	4
9/12/1996	180.50	8.29	1.25	15.24	0.55	3.38	4
10/10/1996	161.50	7.62	1.75	14.68	0.32	3.38	4
11/15/1996	399.00	19.94	4.75	14.38	0.63	3.38	4
12/11/1996	950.00	35.35	17.75	11.82	1.02	3.38	4
1/21/1997	584.25	33.56	4.00	15.56	0.88	3.38	4
2/23/1997	394.25	21.89	4.25	14.75	0.77	3.38	4
3/25/1997	2085.25	95.26	49.50	11.29	3.37	3.38	4
4/22/1997	256.50	0.48	13.00	1.80	0.04	3.38	4
5/21/1997	848.67	34.81	21.00	10.75	2.94	3.38	4
6/18/1997	1292.00	27.44	44.67	0.00	3.40	3.38	4
7/22/1997	1665.67	82.54	37.67	12.06	9.06	3.38	4
8/19/1997	190.00	3.95	6.00	7.67	0.44	3.38	4
9/16/1997	715.67	29.40	10.33	13.00	1.92	3.38	4
10/28/1997	437.00	14.14	10.33	10.08	0.83	3.38	4
11/18/1997	329.33	13.60	5.67	12.77	0.45	3.38	4
12/14/1997	316.67	12.27	6.00	12.20	0.32	3.38	4
1/12/1998	422.75	13.31	14.25	8.11	0.41	3.38	4
2/17/1998	278.67	12.91	4.67	12.89	0.43	3.38	4
3/16/1998	696.67	49.75	5.33	17.33	1.91	3.38	4
4/13/1998	N/D	N/D	N/D	N/D	N/D	N/D	N/D
5/12/1998	405.33	25.70	6.33	14.53	1.99	3.38	4
6/8/1998	1494.67	40.38	54.00	7.09	4.28	3.38	4
7/8/1998	760.00	25.03	23.67	8.67	2.80	3.38	4
8/3/1998	272.33	7.74	8.00	8.48	0.00	3.38	4
9/16/1998	1640.33	88.43	31.33	13.69	3.88	3.38	4
10/6/1998	2634.67	89.63	77.33	9.08	2.61	3.38	4
11/3/1998	1222.33	41.21	33.33	9.59	0.98	3.38	4
12/21/1998	1045.00	19.26	34.33	6.42	0.50	3.38	4
1/13/1999	1045.00	63.33	15.67	14.15	1.35	3.38	4
2/17/1999	1798.67	75.22	47.00	9.83	1.68	3.38	4

Appendix 13. Station D16 *Corbicula* Data							
Date	Total # of clams in sample (#/$m^{2)}$	biomass (g/m^2)	rec/0.05m^2	mean size (mm)	GR ($m^3/m^2/d$)	Depth (M)	# Grabs
3/16/1999	722.00	26.12	19.33	8.34	0.85	3.38	4
4/14/1999	2666.33	58.54	106.33	5.74	3.23	3.38	4
5/18/1999	3907.67	80.01	149.00	5.58	5.20	3.38	4
6/14/1999	2565.00	38.46	97.33	4.94	3.84	3.38	4
7/13/1999	1697.33	48.25	46.33	7.81	3.60	3.38	4
8/11/1999	728.33	22.89	14.33	9.80	1.81	3.38	4
9/22/1999	753.67	29.86	13.33	11.01	2.25	3.38	4
10/27/1999	848.67	56.91	8.00	15.93	2.44	3.38	4
11/9/1999	551.00	33.89	6.67	15.18	0.80	3.38	4
12/8/1999	557.33	36.61	5.67	15.48	0.86	3.38	4
1/5/2000	427.50	22.79	6.00	11.59	0.67	3.38	4
2/23/2000	565.25	45.92	2.75	17.10	1.31	3.38	4
3/22/2000	152.00	12.20	0.75	17.38	0.72	3.38	4
4/19/2000	722.00	36.72	9.00	11.80	2.00	3.38	4
5/16/2000	437.00	26.60	5.00	14.11	2.04	3.38	4
6/14/2000	665.00	31.47	10.75	11.84	3.02	3.38	4
7/17/2000	959.50	41.96	20.50	10.71	4.37	3.38	4
8/16/2000	760.00	27.38	18.75	9.68	2.11	3.38	4
9/13/2000	807.50	65.77	0.25	19.85	4.00	3.38	4
10/10/2000	503.50	38.67	4.25	16.62	1.61	3.38	4
11/15/2000	1168.50	56.56	20.50	12.35	1.25	3.38	4
12/13/2000	650.75	57.94	0.00	20.76	1.18	3.38	4
1/11/2001	23.75	3.72	0.00	24.30	0.11	3.38	4
2/7/2001	28.50	0.51	0.50	6.50	0.02	3.38	4
3/7/2001	278.67	20.33	1.67	16.59	0.92	3.38	4
4/4/2001	924.67	57.51	6.67	15.02	3.81	3.38	4
5/9/2001	253.33	19.46	1.33	16.83	1.72	3.38	4
6/5/2001	147.25	13.81	1.00	19.40	1.25	3.38	4
7/24/2001	418.00	31.12	3.33	16.83	2.91	3.38	4
8/22/2001	1323.67	45.80	47.67	7.99	3.83	3.38	4
9/18/2001	1469.33	48.57	48.00	8.26	3.22	3.38	4
10/16/2001	874.00	21.70	31.00	7.45	1.26	3.38	4
11/19/2001	47.50	2.88	0.25	16.30	0.08	3.38	4
12/11/2001	76.00	0.39	3.50	2.94	0.01	3.38	4
1/15/2002	475.00	15.30	11.00	8.62	0.41	3.38	4
2/14/2002	85.50	1.37	3.50	3.94	0.08	3.38	4
3/12/2002	570.00	14.80	17.75	7.23	0.79	3.38	4
4/15/2002	1102.00	23.72	32.00	6.31	2.13	3.38	4

Appendix 13. Station D16 *Corbicula* Data							
Date	Total # of clams in sample (#/$m^{2)}$	biomass (g/m^2)	rec/0.05m^2	mean size (mm)	GR ($m^3/m^2/d$)	Depth (M)	# Grabs
5/13/2002	1097.25	29.87	31.25	7.34	3.29	3.38	4
6/10/2002	484.50	20.18	5.50	11.37	2.01	3.38	4
7/7/2002	399.00	12.12	11.25	7.64	1.30	3.38	4
8/8/2002	399.00	9.23	10.75	6.90	0.80	3.38	4
9/9/2002	950.00	22.96	33.50	6.69	1.08	3.38	4
10/23/2002	399.00	5.55	15.00	5.21	0.20	3.38	4
11/5/2002	475.00	9.42	13.00	7.02	0.26	3.38	4
12/4/2002	237.50	11.67	4.25	12.98	0.31	3.38	4
1/21/2003	N/D	N/D	N/D	N/D	N/D	N/D	N/D
2/18/2003	N/D	N/D	N/D	N/D	N/D	N/D	N/D
3/18/2003	N/D	N/D	N/D	N/D	N/D	N/D	N/D
4/16/2003	N/D	N/D	N/D	N/D	N/D	N/D	N/D
5/14/2003	N/D	N/D	N/D	N/D	N/D	N/D	N/D
6/1/2003	N/D	N/D	N/D	N/D	N/D	N/D	N/D
7/14/2003	N/D	N/D	N/D	N/D	N/D	N/D	N/D
8/13/2003	N/D	N/D	N/D	N/D	N/D	N/D	N/D
9/18/2003	N/D	N/D	N/D	N/D	N/D	N/D	N/D
10/23/2003	N/D	N/D	N/D	N/D	N/D	N/D	N/D
7/15/2004	23.75	0.02	1.00	3.10	0.00	3.38	4
10/26/2004	76.00	2.98	1.75	10.44	0.22	3.38	4
1/11/2005	33.25	2.13	0.00	15.79	0.06	3.38	4
4/6/2005	19.00	0.02	0.00	3.50	0.00	3.38	4
7/20/2005	33.25	0.90	0.00	9.79	0.12	3.38	4
10/13/2005	57.00	1.10	0.00	6.33	0.08	3.38	4
11/7/2005	19.00	0.01	0.00	2.50	0.00	3.38	4
12/5/2005	118.75	0.63	0.00	4.90	0.02	3.38	4
1/12/2006	33.25	0.02	1.25	2.79	0.00	3.38	4
2/8/2006	42.75	0.74	1.00	5.50	0.03	3.38	4
3/15/2006	104.50	1.37	3.00	6.00	0.05	3.38	4
4/26/2006	38.00	1.55	0.00	13.38	0.07	3.38	4
5/25/2006	9.50	0.03	0.00	7.00	0.00	3.38	4
6/6/2006	9.50	0.00	0.50	1.50	0.00	3.38	4
7/10/2006	19.00	0.44	0.00	12.50	0.06	3.38	4
8/10/2006	47.50	0.23	1.25	5.00	0.03	3.38	4
9/20/2006	19.00	0.06	0.25	5.75	0.01	3.38	4
10/25/2006	14.25	0.00	0.75	2.17	0.00	3.38	4
11/20/2006	61.75	1.34	2.00	6.19	0.08	3.38	4
12/20/2006	38.00	0.01	1.00	3.00	0.00	3.38	4

Appendix 13. Station D16 *Corbicula* Data							
Date	Total # of clams in sample (#/$m^{2)}$	biomass (g/m^2)	rec/0.05m^2	mean size (mm)	GR ($m^3/m^2/d$)	Depth (M)	# Grabs
1/23/2007	66.50	3.02	0.75	10.86	0.09	3.38	4
2/20/2007	95.00	0.40	2.75	5.00	0.01	3.38	4
3/20/2007	28.50	0.05	0.75	3.83	0.00	3.38	4
4/16/2007	66.50	0.20	2.00	4.21	0.01	3.38	4
5/16/2007	9.50	0.21	0.25	8.50	0.02	3.38	4
6/20/2007	28.50	1.90	0.25	14.33	0.15	3.38	4
7/16/2007	14.25	0.03	0.25	5.50	0.00	3.38	4
8/13/2007	0.00	0.00	0.00	0.00	0.00	3.38	4
9/11/2007	9.50	0.01	0.25	3.50	0.00	3.38	4
10/2/2007	23.75	0.04	0.75	4.50	0.00	3.38	4
11/7/2007	660.25	13.89	10.50	9.65	0.70	3.38	4
12/10/2007	213.75	1.76	6.75	4.28	0.05	3.38	4
1/8/2008	9.50	0.01	0.00	3.50	0.00	3.38	4
2/6/2008	19.00	0.50	0.00	10.00	0.01	3.38	4
3/5/2008	14.25	0.26	0.50	6.50	0.01	3.38	4
4/2/2008	28.50	1.84	0.00	16.83	0.10	3.38	4
5/21/2008	9.50	0.02	0.25	4.50	0.00	3.38	4
6/18/2008	23.75	1.37	0.25	14.50	0.13	3.38	4
7/15/2008	14.25	0.00	0.50	2.83	0.00	3.38	4
8/14/2008	498.75	7.67	5.75	7.87	0.81	3.38	4
9/16/2008	52.25	0.00	2.75	1.23	0.00	3.38	4
10/27/2008	38.00	0.04	1.75	3.00	0.00	3.38	4
11/18/2008	38.00	0.05	1.25	3.38	0.00	3.38	4
12/10/2008	66.50	0.76	1.50	6.21	0.03	3.38	4
1/12/2009	57.00	2.05	1.00	8.17	0.06	3.38	4
2/9/2009	19.00	0.21	0.67	5.50	0.01	3.38	4
3/11/2009	31.67	1.10	0.33	11.50	0.05	3.38	4
4/6/2009	47.50	1.32	0.50	11.10	0.07	3.38	4
5/4/2009	38.00	2.49	0.33	14.67	0.20	3.38	4
6/24/2009	85.50	1.49	2.00	7.22	0.14	3.38	4
7/21/2009	12.67	1.07	0.00	19.00	0.12	3.38	4
8/18/2009	133.00	0.00	7.00	1.50	0.00	3.38	4
9/16/2009	71.25	0.07	3.50	2.57	0.01	3.38	4
10/19/2009	1401.25	2.06	58.50	2.66	0.16	3.38	4
11/16/2009	52.25	0.07	1.50	3.68	0.00	3.38	4
12/16/2009	655.50	1.53	12.25	4.25	0.04	3.38	4
1/14/2010	23.75	0.04	0.50	4.10	0.00	3.38	4
2/18/2010	479.75	5.46	1.75	7.10	0.15	3.38	4

Appendix 13. Station D16 *Corbicula* Data							
Date	Total # of clams in sample (#/$m^{2)}$	biomass (g/m^2)	rec/0.05m^2	mean size (mm)	GR ($m^3/m^2/d$)	Depth (M)	# Grabs
3/15/2010	494.00	3.05	1.75	6.73	0.11	3.38	4
4/12/2010	19.00	0.01	0.50	3.00	0.00	3.38	4
5/18/2010	351.50	3.53	1.75	7.49	0.22	3.38	4
6/9/2010	4.75	0.03	0.00	7.50	0.00	3.38	4
7/6/2010	19.00	0.61	0.00	11.75	0.07	3.38	4
8/17/2010	893.00	2.76	33.00	3.96	0.27	3.38	4
9/7/2010	38.00	0.08	1.25	4.13	0.01	3.38	4
10/25/2010	66.50	0.37	3.00	3.50	0.03	3.38	4
11/22/2010	636.50	1.08	9.50	4.30	0.06	3.38	4
12/20/2010	76.00	0.83	1.25	6.50	0.03	3.38	4
1/19/2011	612.75	4.74	8.00	6.03	0.13	3.38	4
2/2/2011	14.25	0.37	0.25	8.17	0.01	3.38	4
3/8/2011	19.00	0.01	0.25	3.25	0.00	3.38	4
4/6/2011	346.75	1.18	4.25	4.93	0.06	3.38	4
5/2/2011	551.00	3.74	6.25	6.34	0.26	3.38	4
6/14/2011	261.25	1.56	2.75	6.10	0.10	3.38	4
7/13/2011	19.00	0.02	0.75	3.25	0.00	3.38	4
8/9/2011	47.50	0.18	1.50	4.10	0.02	3.38	4
9/7/2011	223.25	0.10	10.50	1.93	0.01	3.38	4
10/3/2011	945.25	1.29	39.50	2.65	0.10	3.38	4
11/8/11	332.50	1.64	8.50	4.80	0.08	3.38	4
12/7/11	456.00	2.69	3.75	6.88	0.07	3.38	4
1/9/2012	622.25	5.00	7.00	6.28	0.14	3.38	4
2/8/2012	118.75	0.40	3.50	3.70	0.01	3.38	4
3/15/2012	285.00	2.55	5.00	6.32	0.10	3.38	4
4/5/2012	498.75	2.24	9.75	4.50	0.11	3.38	4
5/23/2012	152.00	1.68	1.50	6.81	0.14	3.38	4
6/18/2012	80.75	0.30	1.25	5.50	0.03	3.38	4
7/17/2012	166.25	0.75	4.25	4.70	0.10	3.38	4
8/15/2012	152.00	0.33	4.25	3.97	0.04	3.38	4
9/25/2012	318.25	1.67	3.75	6.23	0.18	3.38	4
10/25/2012	323.00	2.16	10.75	4.34	0.22	3.38	4
11/14/2012	251.75	0.43	10.00	3.05	0.03	3.38	4
12/17/2012	137.75	1.40	0.50	8.67	0.06	3.38	4
1/10/2013	351.50	4.12	3.00	8.26	0.11	3.38	4
2/5/2013	57.00	0.58	0.25	8.08	0.02	3.38	4
3/13/2013	161.50	3.49	0.50	10.47	0.17	3.38	4
4/10/2013	61.75	1.06	1.50	7.35	0.06	3.38	4

Appendix 13. Station D16 *Corbicula* Data							
Date	**Total # of clams in sample (#/m$^{2)}$**	**biomass (g/m^2)**	**rec/0.05m^2**	**mean size (mm)**	**GR (m^3/m^2/d)**	**Depth (M)**	**# Grabs**
5/7/2013	28.50	0.18	0.50	6.67	0.02	3.38	4
6/4/2013	76.00	0.56	1.75	5.75	0.06	3.38	4
7/9/2013	85.50	0.35	2.00	5.06	0.05	3.38	4
8/7/2013	N/D	N/D	N/D	N/D	N/D	N/D	N/D
9/4/2013	289.75	0.37	11.75	2.93	0.04	3.38	4
10/16/2013	527.25	0.97	22.25	2.93	0.07	3.38	4
11/19/2013	313.50	2.69	5.00	7.09	0.13	3.38	4
12/16/2013	90.25	1.02	1.50	7.55	0.03	3.38	4

Appendix 14. Station D19C *Corbicula* Data							
Date	**Total # of clams in sample (#/m^2)**	**biomass (g/m^2)**	**recruit/ 0.05 m^2**	**mean size (mm)**	**GR (m^3/m^2/d)**	**Depth (M)**	**# Grabs**
3/3/1977	10988.00	N/D	N/D	N/D	N/D	N/D	N/D
6/2/1977	3521.00	N/D	N/D	N/D	N/D	N/D	N/D
10/11/1977	1501.00	N/D	N/D	N/D	N/D	N/D	N/D
6/8/1978	760.00	7.10	34.00	2.80	0.70	3	1
10/4/1978	57.00	2.30	2.00	7.20	0.30	3	1
5/30/1979	2926.00	4.60	153.00	1.10	0.30	3	1
9/17/1979	1767.00	12.00	90.00	1.40	1.70	3	1
6/11/1980	2552.00	N/D	N/D	N/D	N/D	N/D	N/D
7/18/1980	5586.00	N/D	N/D	N/D	N/D	N/D	N/D
8/22/1980	361.00	12.20	14.00	6.10	1.30	3	1
9/19/1980	342.00	17.70	14.00	6.30	1.90	3	1
10/23/1980	1127.00	N/D	N/D	N/D	N/D	N/D	N/D
11/20/1980	2394.00	N/D	N/D	N/D	N/D	N/D	N/D
12/22/1980	1045.00	47.60	34.00	8.40	1.20	3	1
1/14/1981	931.00	4.00	47.00	1.80	0.10	3	1
2/19/1981	3724.00	16.20	193.00	1.50	0.60	3	1
3/30/1981	3724.00	11.60	191.00	1.70	0.50	3	1
4/16/1981	4560.00	7.50	230.00	1.90	0.70	3	1
5/15/1981	2109.00	52.70	85.00	4.20	4.30	3	1
6/12/1981	2945.00	40.20	131.00	3.00	5.70	3	1
7/10/1981	2375.00	36.10	95.00	3.50	4.20	3	1
8/26/1981	4237.00	39.40	194.00	2.70	5.10	3	1
9/24/1981	1976.00	36.20	92.00	3.40	3.40	3	1
10/13/1981	1653.00	16.20	78.00	2.90	1.40	3	1

Appendix 14. Station D19C *Corbicula* Data							
Date	Total # of clams in sample (#/m^2)	biomass (g/m^2)	recruit/ 0.05 m^2	mean size (mm)	GR ($m^3/m^2/d$)	Depth (M)	# Grabs
11/20/1981	1805.00	11.80	87.00	2.20	0.60	3	1
12/11/1981	475.00	12.10	16.00	5.30	0.40	3	1
1/21/1982	1064.00	18.20	44.00	3.60	0.50	3	1
2/22/1982	152.00	0.00	4.00	2.90	0.00	3	1
3/30/1982	2318.00	7.40	114.00	1.40	0.30	3	1
4/28/1982	7543.00	0.50	382.00	1.40	0.00	3	1
5/20/1982	10431.00	9.20	497.00	1.90	0.40	3	1
6/25/1982	4389.00	17.00	162.00	2.80	1.80	3	1
7/22/1982	5491.00	17.80	253.00	2.20	2.00	3	1
8/30/1982	1729.00	7.20	84.00	2.00	0.90	3	1
9/20/1982	1900.00	13.80	98.00	1.90	1.60	3	1
10/28/1982	1235.00	0.90	61.00	1.70	0.10	3	1
11/24/1982	684.00	16.60	32.00	3.50	0.70	3	1
12/15/1982	2508.00	11.60	123.00	2.20	0.40	3	1
1/31/1983	741.00	40.60	31.00	5.20	1.10	3	1
2/8/1983	2964.00	17.80	140.00	1.90	0.70	3	1
3/8/1983	2907.00	11.90	143.00	1.40	0.50	3	1
4/21/1983	2945.00	9.70	149.00	1.20	0.50	3	1
5/19/1983	2565.00	9.80	116.00	2.40	0.50	3	1
6/6/1983	5358.00	4.20	259.00	1.60	0.40	3	1
7/5/1983	3059.00	5.20	112.00	2.70	0.60	3	1
9/15/1983	2109.00	24.90	51.00	4.40	2.30	3	1
11/1/1983	2765.00	5.50	108.00	2.50	0.50	3	1
11/30/1983	2223.00	24.70	35.00	4.90	1.10	3	1
12/13/1983	779.00	3.10	13.50	4.90	0.10	3	1
1/31/1984	1558.00	5.50	54.00	3.30	0.20	3	1
2/27/1984	1378.00	7.50	32.00	4.80	0.30	3	1
3/26/1984	2565.00	5.00	111.50	2.10	0.20	3	1
4/24/1984	2632.00	33.30	23.00	6.60	1.40	3	1
5/24/1984	3325.00	19.70	148.50	2.50	1.50	3	1
6/22/1984	3002.00	9.20	127.00	3.00	0.80	3	1
7/23/1984	2575.00	3.50	122.50	1.90	0.50	3	1
8/22/1984	1216.00	12.10	33.00	5.30	1.80	3	1
9/18/1984	380.00	12.00	5.00	10.50	1.40	3	1
10/30/1984	1216.00	51.30	29.00	9.30	3.80	3	1
11/29/1984	1463.00	33.90	51.00	5.90	1.60	3	1
12/14/1984	1121.00	3.10	52.00	2.50	0.10	3	1
1/15/1985	1140.00	36.20	39.00	6.40	0.90	3	1

Appendix 14. Station D19C *Corbicula* Data							
Date	Total # of clams in sample (#/m^2)	biomass (g/m^2)	recruit/ 0.05 m^2	mean size (mm)	GR ($m^3/m^2/d$)	Depth (M)	# Grabs
2/26/1985	1786.00	19.90	69.00	4.80	0.50	3	1
3/18/1985	1121.00	27.70	34.00	6.90	1.00	3	1
4/10/1985	399.00	39.60	11.00	10.60	1.90	3	1
5/31/1985	874.00	37.10	30.00	7.40	3.00	3	1
6/14/1985	855.00	11.50	28.00	5.90	1.40	3	1
8/30/1985	836.00	42.20	30.00	6.80	4.40	3	1
10/2/1985	1121.00	45.20	26.00	9.60	3.80	3	1
10/24/1985	722.00	31.50	16.00	9.90	1.80	3	1
12/3/1985	393.00	N/D	N/D	N/D	N/D	N/D	N/D
12/30/1985	690.00	N/D	N/D	N/D	N/D	N/D	N/D
1/16/1986	722.00	45.90	5.00	14.80	1.10	3	1
2/6/1986	551.00	65.00	9.00	14.40	2.00	3	1
3/31/1986	532.00	40.70	2.00	15.80	2.10	3	1
4/21/1986	247.00	9.80	5.00	10.00	0.60	3	1
5/21/1986	1349.00	45.50	3.00	13.20	2.60	3	1
6/30/1986	684.00	54.60	0.00	16.90	4.70	3	1
7/25/1986	285.00	20.00	0.00	17.20	2.40	3	1
8/29/1986	4389.00	185.30	5.00	14.00	9.00	3	1
9/12/1986	418.00	36.10	2.00	16.70	3.40	3	1
10/29/1986	589.00	59.50	1.00	17.20	3.00	3	1
11/14/1986	798.00	45.20	1.00	15.90	1.60	3	1
12/9/1986	475.00	30.00	5.00	14.50	N/D	3	1
1/23/1987	722.00	42.20	5.00	14.80	1.00	3	1
2/26/1987	798.00	36.80	2.00	14.80	0.90	3	1
3/26/1987	627.00	29.20	18.00	9.00	1.10	3	1
4/24/1987	475.00	25.10	9.00	12.10	1.60	3	1
5/22/1987	874.00	29.70	24.00	9.10	2.90	3	1
6/9/1987	N/D	N/D	N/D	N/D	N/D	N/D	N/D
7/30/1987	570.00	17.60	18.00	7.70	2.00	3	1
8/20/1987	513.00	19.00	12.00	9.20	2.40	3	1
9/18/1987	1273.00	15.40	53.00	3.90	2.10	3	1
10/30/1987	1368.00	35.70	56.00	5.00	2.90	3	1
11/9/1987	1387.00	14.80	61.00	3.50	0.70	3	1
12/17/1987	2052.00	16.50	94.00	2.80	0.60	3	1
1/15/1988	836.00	32.10	28.00	7.40	0.80	3	1
2/11/1988	798.00	22.20	25.00	7.30	0.70	3	1
4/1/1988	627.00	15.40	24.00	5.90	1.20	3	1
5/27/1988	456.00	19.00	11.00	10.10	1.70	3	1

Appendix 14. Station D19C *Corbicula* Data							
Date	Total # of clams in sample (#/m^2)	biomass (g/m^2)	recruit/ 0.05 m^2	mean size (mm)	GR ($m^3/m^2/d$)	Depth (M)	# Grabs
6/24/1988	1672.00	32.40	71.00	4.40	3.80	3	1
7/22/1988	931.00	41.60	10.00	9.70	4.90	3	1
8/22/1988	456.00	27.30	7.00	12.50	2.70	3	1
9/22/1988	418.00	38.10	5.00	14.60	2.90	3	1
10/21/1988	2147.00	20.40	103.00	2.70	1.80	3	1
11/17/1988	2033.00	36.60	86.00	4.40	2.10	3	1
12/8/1988	3097.00	25.10	147.00	2.50	0.80	3	1
1/20/1989	5700.00	51.60	274.00	2.40	1.30	3	1
2/6/1989	2109.00	26.20	97.00	3.40	0.70	3	1
5/4/1989	2527.00	20.80	120.00	2.80	1.60	3	1
6/26/1989	N/D	N/D	N/D	N/D	N/D	N/D	N/D
7/24/1989	N/D	N/D	N/D	N/D	N/D	N/D	N/D
8/21/1989	969.00	25.40	36.00	6.00	2.60	3	1
9/19/1989	2147.00	6.20	105.00	1.60	0.60	3	1
10/17/1989	1501.00	39.80	65.00	4.70	3.30	3	1
11/13/1989	665.00	47.10	8.70	14.20	2.20	3	1
12/4/1989	4376.00	10.20	223.70	1.40	0.40	3	1
1/16/1990	2084.00	16.80	103.00	2.30	0.50	3	3
2/27/1990	2907.00	26.70	140.30	2.80	0.70	3	3
3/19/1990	2723.00	28.90	128.00	3.20	1.50	3	3
4/20/1990	1393.00	67.30	25.70	11.80	3.70	3	3
5/14/1990	2027.00	10.50	101.70	1.80	0.90	3	3
6/26/1990	513.00	14.20	15.30	6.20	1.90	3	3
7/12/1990	760.00	19.70	23.00	6.30	2.50	3	3
8/8/1990	399.00	24.00	6.00	11.10	2.70	3	3
9/24/1990	906.00	43.90	27.30	8.90	4.30	3	3
10/22/1990	456.00	8.70	20.30	4.00	0.70	3	3
11/6/1990	1545.00	79.60	22.70	12.70	2.60	3	3
12/13/1990	754.00	N/D	N/D	N/D	N/D	N/D	N/D
1/7/1991	513.00	26.40	13.30	10.10	0.70	3	3
2/21/1991	874.00	44.10	27.00	9.00	1.60	3	3
3/5/1991	817.00	10.80	39.00	3.00	0.40	3	3
4/11/1991	722.00	36.00	20.70	9.50	1.80	3	3
5/23/1991	1393.00	19.40	63.30	3.80	1.30	3	3
6/4/1991	2166.00	N/D	N/D	N/D	N/D	N/D	N/D
7/16/1991	1900.00	36.90	77.70	4.70	4.20	3	3
8/30/1991	956.00	30.50	32.00	6.90	3.10	3	3
9/12/1991	1146.00	17.20	49.00	4.20	2.00	3	3

Appendix 14. Station D19C *Corbicula* Data							
Date	Total # of clams in sample (#/m^2)	biomass (g/m^2)	recruit/ 0.05 m^2	mean size (mm)	GR ($m^3/m^2/d$)	Depth (M)	# Grabs
10/8/1991	431.00	23.00	11.00	10.30	2.60	3	3
11/12/1991	785.00	24.00	28.30	6.50	1.10	3	3
12/10/1991	906.00	38.00	25.30	9.30	0.90	3	3
1/17/1992	652.00	25.30	21.70	7.20	0.70	3	3
2/25/1992	792.00	30.00	27.30	7.10	1.20	3	3
3/24/1992	855.00	14.80	33.30	4.00	0.70	3	3
4/6/1992	1305.00	41.40	46.30	6.10	2.60	3	3
5/14/1992	1406.00	21.80	58.30	4.00	2.30	3	3
6/17/1992	2001.00	35.30	53.30	5.10	3.90	3	3
7/10/1992	621.00	9.10	18.30	5.00	1.20	3	3
8/4/1992	697.00	35.00	12.00	9.80	4.30	3	3
9/1/1992	722.00	16.10	16.00	5.90	1.70	3	3
10/23/1992	944.00	39.70	15.70	9.80	2.70	3	3
11/5/1992	918.00	48.80	16.70	11.80	2.90	3	3
12/28/1992	690.00	23.40	18.30	8.10	0.80	3	3
1/14/1993	716.00	19.30	23.00	5.90	0.50	3	3
2/9/1993	684.00	34.20	13.30	11.10	1.00	3	3
3/11/1993	1026.00	23.70	36.70	5.50	1.30	3	3
4/19/1993	519.00	20.00	13.00	8.60	1.10	3	3
5/20/1993	513.00	9.40	17.70	4.90	0.70	3	3
6/16/1993	773.00	14.00	29.70	4.80	1.50	3	3
7/19/1993	1039.00	12.40	40.30	4.10	1.50	3	3
8/19/1993	735.00	25.30	18.30	7.70	2.60	3	3
9/16/1993	500.00	16.10	16.30	6.90	2.10	3	3
10/8/1993	450.00	16.10	14.30	7.50	1.40	3	3
11/16/1993	659.00	15.00	23.00	6.10	0.90	3	3
12/9/1993	665.00	18.40	18.70	7.00	0.50	3	3
1/18/1994	1102.00	32.70	36.00	6.40	0.90	3	3
2/8/1994	836.00	58.60	7.00	15.10	1.40	3	3
3/9/1994	817.00	61.50	6.30	15.80	2.40	3	3
4/12/1994	804.00	47.10	14.30	11.60	2.20	3	3
5/23/1994	1989.00	25.00	75.70	4.10	2.00	3	3
6/9/1994	2527.00	28.30	107.30	3.50	2.90	3	3
7/20/1994	1191.00	21.00	38.00	5.20	2.40	3	3
8/9/1994	703.00	17.50	16.30	6.40	3.20	3	3
9/21/1994	576.00	13.80	14.00	6.70	1.50	3	3
10/19/1994	1184.00	29.70	32.70	6.40	1.90	3	3
11/21/1994	1172.00	37.30	38.70	6.40	1.10	3	3

Appendix 14. Station D19C *Corbicula* Data							
Date	Total # of clams in sample (#/m^2)	biomass (g/m^2)	recruit/ 0.05 m^2	mean size (mm)	GR ($m^3/m^2/d$)	Depth (M)	# Grabs
12/16/1994	336.00	9.60	4.30	8.30	0.30	3	3
1/17/1995	1507.00	8.40	66.00	2.40	0.30	3	3
2/15/1995	481.00	31.60	2.70	13.20	1.00	3	3
3/15/1995	412.00	30.00	7.30	13.10	1.10	3	3
4/27/1995	513.00	19.00	10.00	9.00	0.80	3	3
5/17/1995	2350.00	29.00	103.30	3.80	2.20	3	3
6/27/1995	969.00	11.90	35.70	4.80	0.90	3	3
7/13/1995	1349.00	21.40	33.30	5.50	2.00	3	3
8/24/1995	1267.00	14.10	47.70	4.00	1.90	3	3
9/26/1995	5333.00	20.50	253.00	2.00	1.90	3	3
10/25/1995	4414.00	37.20	194.30	3.20	2.60	3	3
11/27/1995	1577.00	16.30	56.30	3.80	0.90	3	3
12/27/1995	6251.00	17.40	302.70	2.30	0.60	3	3

Appendix 15. Station D24 *Corbicula* Data							
Date	Total # of clams in sample (#/m^2)	biomass (g/m^2)	rec/0.05m^2	mean size (mm)	GR ($m^3/m^2/d$)	Depth (M)	# Grabs
1/23/1996	1811.33	34.77	70.00	5.30	0.90	8.26	4
2/23/1996	95.00	3.58	2.70	9.60	0.10	8.26	4
3/22/1996	867.67	15.84	32.70	5.10	0.50	8.26	4
4/29/1996	1608.67	58.10	47.30	7.60	2.00	8.26	4
5/17/1996	722.00	73.74	10.30	11.30	4.00	8.26	4
7/18/1996	392.67	23.12	0.30	11.60	2.30	8.26	4
8/30/1996	1368.00	46.55	35.70	7.70	5.00	8.26	4
9/13/1996	1564.33	27.29	57.70	5.00	2.20	8.26	4
10/9/1996	823.33	24.85	31.00	5.50	1.70	8.26	4
11/15/1996	1203.33	42.45	37.30	7.60	1.50	8.26	4
12/12/1996	1684.67	51.62	52.70	7.00	1.80	8.26	4
1/22/1997	532.00	51.00	0.30	18.30	1.30	8.26	4
2/21/1997	342.00	21.08	1.00	15.60	0.50	8.26	4
3/26/1997	475.00	30.68	10.70	11.30	1.40	8.26	4
4/24/1997	256.50	0.08	11.30	2.10	0.00	8.26	4
5/23/1997	2356.00	39.19	107.00	3.00	3.30	8.26	4
6/20/1997	690.33	22.84	21.70	5.80	2.20	8.26	4
7/24/1997	3192.00	12.06	159.70	1.90	1.30	8.26	4
8/21/1997	2178.67	34.17	91.00	3.80	3.60	8.26	4

Appendix 15. Station D24 *Corbicula* Data							
Date	Total # of clams in sample (#/m^2)	biomass (g/m^2)	rec/0.05m^2	mean size (mm)	GR ($m^3/m^2/d$)	Depth (M)	# Grabs
9/18/1997	2178.67	29.96	106.00	2.70	3.20	8.26	4
10/29/1997	2204.00	2.58	109.00	1.90	0.20	8.26	4
11/20/1997	943.67	21.56	40.70	4.20	1.20	8.26	4
12/18/1997	874.00	25.75	29.30	5.50	1.00	8.26	4
1/15/1998	1450.33	43.50	57.30	5.40	1.10	8.26	4
2/19/1998	335.67	13.58	11.30	7.70	0.40	8.26	4
3/17/1998	475.00	57.98	5.30	16.00	2.20	8.26	4
4/16/1998	741.00	50.46	10.00	11.50	1.60	8.26	4
5/13/1998	874.00	56.19	32.70	6.20	2.70	8.26	4
6/8/1998	1235.00	47.11	49.80	5.20	2.80	8.26	4
7/9/1998	291.33	3.08	12.70	3.10	0.40	8.26	4
8/4/1998	888.25	0.35	35.00	1.80	0.00	8.26	4
9/16/1998	1456.67	15.01	64.70	2.60	1.70	8.26	4
10/6/1998	2273.67	65.49	102.00	3.60	1.80	8.26	4
11/4/1998	1059.25	11.91	49.80	2.70	0.40	8.26	4
12/21/1998	5408.67	27.21	274.70	2.00	0.70	8.26	4
1/15/1999	6498.00	15.34	321.30	1.80	0.40	8.26	4
2/19/1999	5668.33	9.54	280.00	1.90	0.30	8.26	4
3/17/1999	2736.00	6.69	137.00	1.90	0.20	8.26	4
4/16/1999	6035.67	20.57	289.00	2.10	0.70	8.26	4
5/20/1999	1311.00	23.89	59.00	2.80	1.20	8.26	4
6/15/1999	601.67	16.44	23.30	3.70	1.20	8.26	4
7/15/1999	639.67	0.81	31.30	2.00	0.10	8.26	4
8/13/1999	544.67	0.51	27.00	2.00	0.10	8.26	4
9/24/1999	1045.00	45.29	37.30	6.60	3.70	8.26	4
10/27/1999	826.50	20.99	37.50	3.20	1.30	8.26	4
11/9/1999	570.00	0.40	21.70	2.70	0.00	8.26	4
12/9/1999	943.67	12.74	34.00	3.30	0.40	8.26	4
1/7/2000	456.00	3.73	14.50	3.60	0.10	8.26	4
2/24/2000	2527.00	16.26	119.80	2.10	0.50	8.26	4
3/24/2000	1429.75	6.92	67.80	2.30	0.20	8.26	4
4/20/2000	1776.50	45.05	81.50	3.00	2.20	8.26	4
5/17/2000	1201.75	164.07	42.50	7.50	9.20	8.26	4
6/15/2000	2398.75	48.71	115.50	5.50	4.20	8.26	4
7/19/2000	570.00	27.50	25.80	2.40	2.50	8.26	4
8/15/2000	2213.50	24.63	109.50	1.50	2.40	8.26	4
9/13/2000	1358.50	6.88	63.30	2.10	0.50	8.26	4
10/12/2000	1083.00	10.89	49.30	2.00	0.80	8.26	4

Appendix 15. Station D24 *Corbicula* Data							
Date	Total # of clams in sample (#/m^2)	biomass (g/m^2)	rec/0.05m^2	mean size (mm)	GR ($m^3/m^2/d$)	Depth (M)	# Grabs
11/17/2000	945.25	2.29	41.30	2.10	0.10	8.26	4
12/13/2000	1021.25	18.43	46.00	2.60	0.50	8.26	4
1/12/2001	513.00	11.87	17.30	4.00	0.30	8.26	4
2/7/2001	1786.00	3.41	86.30	1.80	0.10	8.26	4
3/8/2001	1241.33	4.80	57.00	2.20	0.10	8.26	4
4/5/2001	1790.75	34.25	86.00	2.70	2.20	8.26	4
5/9/2001	449.67	3.23	22.70	2.40	0.20	8.26	4
6/19/2001	2365.50	14.78	121.50	1.80	1.50	8.26	4
7/24/2001	2854.75	31.20	144.80	1.90	3.80	8.26	4
8/22/2001	1729.00	22.52	87.50	2.20	2.50	8.26	4
9/20/2001	1982.33	19.37	101.30	2.10	1.90	8.26	4
10/19/2001	1127.33	5.90	56.00	2.20	0.50	8.26	4
11/21/2001	1564.33	4.25	76.70	2.20	0.20	8.26	4
12/14/2001	190.00	2.81	7.80	4.20	0.10	8.26	4
1/17/2002	1710.00	27.39	80.00	5.90	0.70	8.26	4
2/14/2002	902.50	2.42	45.00	1.00	0.10	8.26	4
3/12/2002	2066.25	12.92	101.30	1.10	0.40	8.26	4
4/16/2002	1667.25	8.88	78.80	2.40	0.50	8.26	4
5/15/2002	1909.50	25.46	77.80	1.60	1.60	8.26	4
6/11/2002	921.50	14.82	34.30	1.90	1.50	8.26	4
7/9/2002	970.92	27.08	45.80	2.40	2.70	8.26	4
8/8/2002	7215.00	6.15	377.80	1.20	0.60	8.26	4
9/11/2002	2689.00	6.33	135.50	2.00	0.50	8.26	4
10/24/2002	2385.00	3.06	119.00	1.60	0.20	8.26	4
11/6/2002	1302.00	2.81	57.30	2.60	0.10	8.26	4
12/6/2002	2280.00	1.73	111.80	1.70	0.10	8.26	4
1/21/2003	N/D	N/D	N/D	N/D	N/D	N/D	N/D
2/18/2003	N/D	N/D	N/D	N/D	N/D	N/D	N/D
3/18/2003	N/D	N/D	N/D	N/D	N/D	N/D	N/D
4/16/2003	N/D	N/D	N/D	N/D	N/D	N/D	N/D
5/14/2003	N/D	N/D	N/D	N/D	N/D	N/D	N/D
6/1/2003	N/D	N/D	N/D	N/D	N/D	N/D	N/D
7/14/2003	N/D	N/D	N/D	N/D	N/D	N/D	N/D
8/13/2003	N/D	N/D	N/D	N/D	N/D	N/D	N/D
9/18/2003	N/D	N/D	N/D	N/D	N/D	N/D	N/D
10/23/2003	N/D	N/D	N/D	N/D	N/D	N/D	N/D
1/8/2004	N/D	N/D	N/D	N/D	N/D	N/D	N/D
4/7/2004	N/D	N/D	N/D	N/D	N/D	N/D	N/D

Appendix 15. Station D24 *Corbicula* Data							
Date	Total # of clams in sample (#/m^2)	biomass (g/m^2)	rec/0.05m^2	mean size (mm)	GR ($m^3/m^2/d$)	Depth (M)	# Grabs
7/15/2004	1222.00	7.88	59.70	2.50	0.90	8.26	4
10/26/2004	1172.00	9.63	19.00	4.90	0.90	8.26	4
1/12/2005	251.75	1.39	7.80	3.70	0.00	8.26	4
4/8/2005	2007.67	9.01	63.70	4.00	0.40	8.26	4
7/25/2005	2267.33	16.43	107.00	2.50	1.10	8.26	4
10/14/2005	1336.33	8.63	33.30	4.20	0.50	8.26	4
11/9/2005	1089.33	6.06	22.30	4.90	0.30	8.26	4
12/7/2005	595.33	6.29	7.70	5.30	0.20	8.26	4
1/12/2006	251.75	3.00	3.00	6.80	0.10	8.26	4
2/9/2006	413.25	11.11	4.80	3.70	0.40	8.26	4
3/15/2006	498.75	1.95	17.80	1.50	0.10	8.26	4
4/26/2006	285.00	4.39	5.70	3.10	0.10	8.26	4
5/25/2006	840.75	36.89	10.80	8.30	2.10	8.26	4
6/5/2006	1130.50	10.34	19.80	2.60	0.80	8.26	4
7/10/2006	532.00	15.36	14.30	5.70	1.30	8.26	4
8/10/2006	1724.25	37.57	58.50	2.80	3.70	8.26	4
9/25/2006	2099.50	9.27	71.00	3.60	0.80	8.26	4
10/25/2006	1738.50	17.06	52.30	0.30	1.00	8.26	4
11/20/2006	1406.00	11.98	42.80	4.80	0.50	8.26	4
12/20/2006	1472.50	57.44	30.30	0.30	1.70	8.26	4
1/23/2007	2322.75	46.51	73.00	5.80	1.20	8.26	4
2/20/2007	665.00	8.19	20.70	2.20	0.20	8.26	4
3/20/2007	1178.00	34.52	29.70	3.30	1.10	8.26	4
4/16/2007	2242.00	96.11	56.50	7.50	3.90	8.26	4
5/16/2007	845.50	21.68	13.80	3.20	1.40	8.26	4
6/20/2007	646.00	43.50	1.80	5.40	3.20	8.26	4
7/16/2007	779.00	48.18	0.00	6.50	4.00	8.26	4
8/15/2007	1230.25	46.50	26.30	4.10	4.40	8.26	4
9/11/2007	603.25	22.87	5.50	11.10	1.80	8.26	4
10/3/2007	945.25	42.87	8.80	11.90	2.00	8.26	4
11/6/2007	228.00	7.70	2.00	9.40	0.40	8.26	4
12/10/2007	1235.00	59.82	5.30	13.10	1.30	8.26	4
1/8/2008	308.75	5.42	4.30	8.50	0.20	8.26	4
2/6/2008	489.25	9.85	10.30	3.50	0.30	8.26	4
3/5/2008	821.75	50.11	2.50	7.10	1.90	8.26	4
4/2/2008	931.00	52.93	1.80	6.90	2.60	8.26	4
5/20/2008	669.75	38.48	0.50	7.30	2.50	8.26	4
6/17/2008	608.00	25.85	0.50	6.70	2.40	8.26	4

Appendix 15. Station D24 *Corbicula* Data							
Date	Total # of clams in sample (#/m^2)	biomass (g/m^2)	rec/0.05m^2	mean size (mm)	GR ($m^3/m^2/d$)	Depth (M)	# Grabs
7/14/2008	1111.50	71.90	1.00	15.50	5.70	8.26	4
8/13/2008	2968.75	36.99	118.50	2.30	3.90	8.26	4
9/15/2008	755.25	19.50	8.80	5.20	1.70	8.26	4
10/28/2008	916.75	21.76	16.30	8.60	1.10	8.26	4
11/18/2008	988.00	40.10	4.50	13.10	1.60	8.26	4
12/10/2008	513.00	10.18	4.30	10.00	0.30	8.26	4
1/12/2009	1154.25	54.88	1.80	14.70	1.10	8.26	4
2/9/2009	674.50	28.74	2.30	5.50	0.80	8.26	4
3/11/2009	703.00	36.87	1.00	7.10	1.20	8.26	4
4/6/2009	1021.25	61.56	1.50	7.00	2.50	8.26	4
5/5/2009	1073.50	53.86	2.30	7.10	4.30	8.26	4
6/23/2009	788.50	33.13	1.80	7.00	3.00	8.26	4
7/21/2009	745.75	29.77	0.50	13.60	2.70	8.26	4
8/18/2009	1302.00	69.43	7.50	7.00	6.00	8.26	4
9/16/2009	936.00	30.04	8.00	6.00	3.10	8.26	4
10/19/2009	922.00	17.03	7.00	11.00	0.70	8.26	4
11/16/2009	1126.00	36.29	6.30	12.10	1.10	8.26	4
12/15/2009	846.00	16.05	8.50	8.80	0.40	8.26	4
1/13/2010	1040.00	35.33	3.80	12.30	0.80	8.26	4
2/17/2010	855.00	17.44	4.80	10.10	0.50	8.26	4
3/15/2010	1020.00	32.31	8.70	10.90	1.40	8.26	4
4/12/2010	1226.00	51.16	5.80	13.20	1.70	8.26	4
5/19/2010	1112.00	43.28	4.80	12.20	2.10	8.26	4
6/9/2010	865.00	25.46	4.80	11.30	1.70	8.26	4
7/6/2010	1406.00	60.92	5.00	13.20	4.30	8.26	4
8/16/2010	1411.00	46.26	8.00	12.20	3.40	8.26	4
9/7/2010	1268.00	38.25	15.80	10.90	2.40	8.26	4
10/26/2010	1244.50	22.16	14.30	8.90	1.10	8.26	4
11/22/2010	1539.00	50.14	12.30	10.50	1.70	8.26	4
12/20/2010	2337.00	90.06	22.80	9.90	2.10	8.26	4
1/18/2011	1543.75	51.21	9.00	11.70	1.10	8.26	4
2/1/2011	1458.25	40.60	10.50	10.50	0.90	8.26	4
3/7/2011	1724.25	58.18	15.00	5.10	1.70	8.26	4
4/5/2011	1334.75	56.02	4.50	6.10	2.50	8.26	4
5/3/2011	1847.75	92.88	16.80	5.30	5.00	8.26	4
6/13/2011	1653.00	92.04	10.50	5.90	6.00	8.26	4
7/12/2011	1505.75	117.17	3.00	13.40	7.30	8.26	4
8/9/2011	1040.25	61.02	0.80	6.90	6.20	8.26	4

Appendix 15. Station D24 *Corbicula* Data							
Date	Total # of clams in sample (#/m^2)	biomass (g/m^2)	rec/0.05m^2	mean size (mm)	GR ($m^3/m^2/d$)	Depth (M)	# Grabs
9/7/2011	1762.25	84.27	20.30	11.70	5.40	8.26	4
10/3/2011	1952.25	108.55	18.30	12.40	5.30	8.26	4
11/8/2011	2337.00	71.72	27.80	10.10	1.80	8.26	4
12/7/2011	1638.75	95.86	12.50	13.30	1.90	8.26	4
1/9/2012	1833.50	91.58	10.30	12.30	1.80	8.26	4
2/8/2012	1976.00	108.47	20.30	12.00	2.10	8.26	4
3/6/2012	2075.75	90.61	26.80	5.20	2.60	8.26	4
4/5/2012	3268.00	132.45	66.50	4.50	5.30	8.26	4
5/21/2012	3439.00	144.46	33.50	5.10	9.60	8.26	4
6/20/2012	3301.25	173.06	17.50	5.60	16.10	8.26	4
7/17/2012	2394.00	144.80	0.80	13.20	8.70	8.26	4
8/15/2012	2189.75	111.65	1.30	6.30	8.30	8.26	4
9/25/2012	1648.25	116.83	5.30	13.70	7.10	8.26	4
10/24/2012	2337.00	129.36	3.80	13.90	7.00	8.26	4
11/14/2012	731.50	31.74	4.30	12.10	1.30	8.26	4
12/18/2012	2199.25	114.06	4.30	13.80	3.20	8.26	4
1/9/2013	1515.25	98.95	1.80	15.00	1.80	8.26	4
2/5/2013	1686.25	118.44	1.50	15.40	2.10	8.26	4
3/13/2013	1672.00	158.32	2.50	15.50	3.20	8.26	4
4/10/2013	1752.75	169.32	0.50	15.90	3.40	8.26	4
5/7/2013	1211.25	73.65	0.80	14.00	2.10	8.26	4
6/4/2013	1482.00	103.53	1.30	14.10	3.20	8.26	4
7/8/2013	1268.25	117.89	0.80	15.80	4.60	8.26	4
9/4/2013	1068.75	84.70	0.30	15.80	4.90	8.26	4
10/15/2013	1159.00	35.63	17.50	10.70	1.30	8.26	4
11/19/2013	1244.50	75.89	3.50	15.80	1.90	8.26	4
12/16/2013	1805.00	122.75	1.00	16.60	2.60	8.26	4

Appendix 16. Station D28 *Corbicula* Data							
Date	Total # of clams in sample (#/m^2)	biomass (g/m^2)	recruit/ 0.05 m^2	mean size (mm)	GR ($m^3/m^2/d$)	Depth (M)	# Grabs
6/8/1976	2318.00	0.63	105.00	2.40	0.05	3.78	1
6/2/1977	627.00	0.00	32.00	1.30	0.01	3.78	1
10/11/1977	342.00	1.80	16.00	2.90	0.19	3.78	1
5/30/1979	2736.00	0.20	138.00	1.70	0.01	3.78	1
9/18/1979	361.00	0.10	17.00	2.30	0.01	3.78	1
6/11/1980	2983.00	9.60	141.00	2.40	1.14	3.78	1
7/18/1980	4199.00	12.10	208.00	1.90	1.46	3.78	1
8/22/1980	3040.00	0.30	149.00	1.60	0.04	3.78	1
9/19/1980	3135.00	0.20	162.00	1.40	0.02	3.78	1
10/23/1980	5871.00	4.00	301.00	1.20	0.31	3.78	1
11/20/1980	1805.00	4.80	83.00	2.50	0.24	3.78	1
12/22/1980	4047.00	0.60	211.00	1.40	0.02	3.78	1
1/21/1981	1672.00	4.20	75.00	2.20	0.12	3.78	1
2/19/1981	665.00	44.20	21.00	8.60	1.64	3.78	1
3/30/1981	931.00	53.20	33.00	5.70	2.30	3.78	1
4/16/1981	798.00	0.10	38.00	1.60	0.01	3.78	1
5/15/1981	950.00	3.00	42.00	2.70	0.30	3.78	1
6/12/1981	1045.00	29.00	46.00	4.10	5.42	3.78	1
7/10/1981	3724.00	1.50	171.00	2.20	0.20	3.78	1
8/26/1981	2147.00	5.90	83.00	2.80	0.80	3.78	1
9/24/1981	684.00	39.90	26.00	6.10	5.83	3.78	1
10/13/1981	2375.00	6.30	117.00	2.20	0.49	3.78	1
11/20/1981	1634.00	65.40	69.00	5.00	3.36	3.78	1
12/11/1981	3192.00	7.90	147.00	2.30	0.24	3.78	1
1/21/1982	513.00	4.40	21.00	3.30	0.13	3.78	1
2/22/1982	4617.00	8.60	213.00	2.20	0.33	3.78	1
3/30/1982	950.00	0.70	35.00	2.60	0.03	3.78	1
4/28/1982	5947.00	21.80	296.00	2.00	1.01	3.78	1
5/20/1982	26942.00	10.90	1221.00	2.30	0.69	3.78	1
6/25/1982	5890.00	5.50	244.00	2.70	0.62	3.78	1
7/22/1982	5890.00	7.50	255.00	2.40	0.93	3.78	1
8/30/1982	1862.00	4.50	85.00	2.50	0.76	3.78	1
9/20/1982	1577.00	16.70	68.00	4.00	1.55	3.78	1
10/28/1982	1463.00	7.30	65.00	3.40	0.57	3.78	1
11/24/1982	361.00	14.40	10.00	12.60	0.83	3.78	1
12/15/1982	2660.00	23.10	122.00	3.50	0.70	3.78	1
1/31/1983	418.00	8.50	13.00	6.70	0.24	3.78	1
2/8/1983	817.00	4.10	34.00	3.50	0.13	3.78	1

Appendix 16. Station D28 *Corbicula* Data							
Date	Total # of clams in sample (#/m^2)	biomass (g/m^2)	recruit/ 0.05 m^2	mean size (mm)	GR ($m^3/m^2/d$)	Depth (M)	# Grabs
3/8/1983	741.00	5.50	32.00	3.60	0.22	3.78	1
4/26/1983	9006.00	10.80	440.00	1.90	0.45	3.78	1
5/19/1983	9595.00	1.50	446.00	2.20	0.07	3.78	1
6/6/1983	5776.00	33.90	187.00	3.50	3.23	3.78	1
7/5/1983	1919.00	10.90	18.00	5.30	1.21	3.78	1
9/15/1983	304.00	15.90	3.00	10.40	1.66	3.78	1
11/1/1983	323.00	0.90	9.00	4.70	0.09	3.78	1
11/30/1983	228.00	2.10	4.00	6.80	0.12	3.78	1
12/13/1983	1254.00	14.30	46.00	4.50	0.44	3.78	1
1/31/1984	1444.00	44.40	56.00	4.60	1.20	3.78	1
2/27/1984	1558.00	6.60	67.00	3.00	0.23	3.78	1
3/26/1984	1539.00	42.90	53.00	5.50	1.78	3.78	1
4/24/1984	323.00	13.80	4.00	11.20	0.65	3.78	1
5/24/1984	589.00	23.90	15.00	6.80	2.03	3.78	1
6/22/1984	570.00	38.90	6.00	12.20	3.73	3.78	1
7/23/1984	1748.00	34.50	31.00	9.10	4.65	3.78	1
8/22/1984	589.00	33.50	10.80	10.80	4.12	3.78	1
9/18/1984	285.00	20.10	16.40	16.40	2.74	3.78	1
10/30/1984	114.00	0.90	5.30	5.30	0.05	3.78	1
11/29/1984	1292.00	58.40	12.90	12.90	1.43	3.78	1
12/13/1984	627.00	23.70	10.20	10.20	0.60	3.78	1
1/15/1985	190.00	6.20	6.00	8.00	0.18	3.78	1
2/13/1985	513.00	29.10	7.00	11.40	0.74	3.78	1
3/13/1985	627.00	53.90	7.00	14.00	1.80	3.78	1
4/10/1985	798.00	28.30	15.00	9.40	2.21	3.78	1
5/31/1985	171.00	0.00	8.00	2.10	0.00	3.78	1
6/11/1985	171.00	10.30	0.00	15.70	1.49	3.78	1
8/30/1985	551.00	18.70	11.00	10.10	2.59	3.78	1
9/18/1985	1178.00	69.90	17.00	12.10	5.32	3.78	1
10/21/1985	152.00	7.20	1.00	11.10	0.45	3.78	1
12/4/1985	171.00	9.00	3.00	12.60	0.28	3.78	1
12/30/1985	228.00	17.30	5.00	11.80	0.53	3.78	1
1/15/1986	133.00	18.80	1.00	18.60	0.50	3.78	1
2/12/1986	2698.00	86.10	78.00	8.20	1.84	3.78	1
3/31/1986	190.00	12.10	0.00	17.80	0.62	3.78	1
4/21/1986	76.00	6.50	0.00	11.80	0.13	3.78	1
5/20/1986	304.00	11.70	9.00	7.30	1.02	3.78	1
6/30/1986	950.00	75.50	17.00	13.70	7.31	3.78	1

Appendix 16. Station D28 *Corbicula* Data							
Date	Total # of clams in sample (#/m^2)	biomass (g/m^2)	recruit/ 0.05 m^2	mean size (mm)	GR ($m^3/m^2/d$)	Depth (M)	# Grabs
7/25/1986	475.00	73.00	0.00	17.80	9.16	3.78	1
8/26/1986	342.00	35.20	0.00	19.60	3.59	3.78	1
9/9/1986	665.00	63.40	3.00	18.00	5.26	3.78	1
10/29/1986	57.00	4.50	0.00	15.80	0.32	3.78	1
11/14/1986	95.00	10.40	0.00	20.90	0.62	3.78	1
1/23/1987	1691.00	70.30	41.00	10.30	1.53	3.78	1
2/26/1987	133.00	9.20	1.00	15.20	0.25	3.78	1
3/26/1987	95.00	12.20	0.00	20.30	0.52	3.78	1
4/24/1987	209.00	19.40	1.00	15.30	1.59	3.78	1
5/19/1987	171.00	17.40	0.00	18.50	1.76	3.78	1
6/9/1987	285.00	16.20	4.00	11.90	1.69	3.78	1
7/30/1987	532.00	0.00	28.00	1.30	0.00	3.78	1
8/20/1987	3876.00	42.20	172.00	3.50	5.23	3.78	1
9/15/1987	1349.00	45.30	45.00	7.90	5.41	3.78	1
10/27/1987	779.00	32.10	27.00	7.80	2.62	3.78	1
11/9/1987	589.00	8.30	26.00	4.40	0.59	3.78	1
12/16/1987	589.00	13.90	23.00	5.80	0.49	3.78	1
1/12/1988	1976.00	81.20	70.00	7.50	1.91	3.78	1
2/10/1988	1387.00	26.60	50.00	6.10	0.96	3.78	1
4/1/1988	1558.00	30.40	44.00	7.50	1.17	3.78	1
4/25/1988	3287.00	70.70	110.00	7.30	3.76	3.78	1
5/27/1988	5358.00	64.10	238.00	3.40	5.51	3.78	1
6/21/1988	6137.00	84.40	242.00	4.90	9.32	3.78	1
7/22/1988	95.00	0.00	5.00	2.10	0.00	3.78	1
8/17/1988	874.00	25.90	22.00	6.90	3.31	3.78	1
9/19/1988	38.00	0.00	2.00	0.50	0.00	3.78	1
10/18/1988	95.00	5.60	1.00	13.70	0.49	3.78	1
11/18/1988	456.00	7.10	19.00	4.30	0.46	3.78	1
12/5/1988	57.00	1.30	1.00	9.80	0.04	3.78	1
1/17/1989	114.00	2.30	4.00	7.70	0.07	3.78	1
2/1/1989	722.00	2.20	30.00	2.60	0.07	3.78	1
5/5/1989	20463.00	60.90	1035.00	1.80	4.59	3.78	1
7/25/1989	190.00	10.10	4.00	11.50	1.51	3.78	1
8/22/1989	779.00	30.20	17.00	9.10	3.67	3.78	1
9/20/1989	3287.00	30.00	159.00	2.70	3.17	3.78	1
10/18/1989	190.00	15.60	4.00	14.30	1.30	3.78	1
11/7/1989	285.00	29.60	6.00	12.90	1.40	3.78	1
12/5/1989	418.00	14.30	13.00	8.40	0.49	3.78	1

Appendix 16. Station D28 *Corbicula* Data							
Date	Total # of clams in sample (#/m^2)	biomass (g/m^2)	recruit/ 0.05 m^2	mean size (mm)	GR ($m^3/m^2/d$)	Depth (M)	# Grabs
1/17/1990	3895.00	10.70	192.00	2.10	0.29	3.78	3
2/27/1990	6555.00	53.80	312.00	3.20	1.30	3.78	3
3/19/1990	12217.00	30.40	623.00	1.80	1.55	3.78	3
4/20/1990	171.00	11.50	0.00	19.40	0.82	3.78	3
5/14/1990	9709.00	39.30	465.00	2.40	3.00	3.78	3
6/27/1990	2793.00	20.30	119.00	3.70	2.59	3.78	3
7/27/1990	228.00	9.30	4.00	9.30	1.57	3.78	3
8/13/1990	1045.00	14.20	35.00	4.80	2.11	3.78	3
9/25/1990	114.00	2.40	5.00	5.20	0.31	3.78	3
10/23/1990	342.00	7.10	9.00	6.20	0.50	3.78	3
11/7/1990	2223.00	46.30	98.00	4.20	1.92	3.78	3
12/10/1990	1273.00	5.30	58.00	2.70	0.15	3.78	3
1/8/1991	1146.33	12.60	40.00	5.60	0.34	3.78	3
2/20/1991	6206.67	5.90	317.33	1.10	0.23	3.78	3
3/6/1991	3204.67	19.40	149.00	2.50	0.75	3.78	3
4/8/1991	1906.33	11.80	85.00	2.90	0.65	3.78	3
5/20/1991	1836.67	12.20	80.67	2.50	0.95	3.78	3
6/5/1991	3097.00	27.90	111.33	4.20	2.73	3.78	3
8/20/1991	703.00	6.60	25.33	4.10	0.90	3.78	3
9/16/1991	367.33	3.10	12.67	3.50	0.40	3.78	3
10/1/1991	475.00	6.10	18.33	4.00	0.68	3.78	3
11/13/1991	671.33	10.20	27.67	3.90	0.58	3.78	3
12/11/1991	646.00	10.80	24.00	5.40	0.30	3.78	3
1/14/1992	988.00	20.90	29.00	8.50	0.52	3.78	3
2/26/1992	551.00	13.80	16.00	7.30	0.73	3.78	3
3/25/1992	234.33	5.30	5.33	7.00	0.30	3.78	3
4/7/1992	202.67	3.00	5.00	5.30	0.24	3.78	3
5/8/1992	1621.33	6.40	64.67	2.80	0.79	3.78	3
6/22/1992	1076.67	18.30	18.00	7.60	2.52	3.78	3
7/7/1992	1722.67	85.40	23.67	10.70	10.00	3.78	3
8/5/1992	652.33	13.80	16.67	6.60	1.80	3.78	3
9/2/1992	3318.67	21.10	150.67	2.90	2.49	3.78	3
10/2/1992	1026.00	8.80	34.33	4.00	0.85	3.78	3
11/2/1992	1456.67	26.40	53.67	4.40	1.98	3.78	3
12/28/1992	2938.67	45.00	113.00	4.90	1.29	3.78	3
1/14/1993	3812.67	42.90	166.33	3.60	1.11	3.78	3
2/9/1993	1418.67	34.80	38.00	7.50	1.08	3.78	3
3/11/1993	5567.00	35.50	261.33	2.70	2.07	3.78	3

Appendix 16. Station D28 *Corbicula* Data							
Date	Total # of clams in sample (#/m^2)	biomass (g/m^2)	recruit/ 0.05 m^2	mean size (mm)	GR ($m^3/m^2/d$)	Depth (M)	# Grabs
4/19/1993	4382.67	59.70	176.00	4.70	2.85	3.78	3
5/20/1993	4161.00	54.60	185.67	3.50	4.33	3.78	3
6/16/1993	8379.00	65.80	383.00	3.30	5.94	3.78	3
7/19/1993	2356.00	67.50	71.67	6.20	7.72	3.78	3
8/19/1993	937.33	53.20	12.33	11.70	6.76	3.78	3
9/16/1993	481.33	20.70	7.33	10.20	2.59	3.78	3
10/8/1993	2191.33	79.00	74.00	7.60	5.67	3.78	3
11/16/1993	525.67	12.90	12.00	7.10	0.78	3.78	3
12/9/1993	183.67	15.10	4.33	12.20	0.41	3.78	3
1/18/1994	969.00	47.40	16.00	10.90	1.14	3.78	3
2/8/1994	145.67	5.50	1.67	9.80	0.16	3.78	3
3/9/1994	715.67	14.50	25.33	4.70	1.02	3.78	3
4/12/1994	665.00	46.90	10.67	11.70	2.58	3.78	3
5/23/1994	1133.67	39.40	31.00	7.10	3.10	3.78	3
6/9/1994	1450.33	62.40	30.67	9.10	8.74	3.78	3
7/20/1994	1412.33	5.60	54.00	2.90	0.86	3.78	3
8/9/1994	576.33	15.50	16.67	7.00	2.25	3.78	3
9/21/1994	506.67	3.40	19.33	3.50	0.42	3.78	3
10/19/1994	785.33	18.50	21.33	6.30	1.23	3.78	3
11/21/1994	798.00	16.10	28.33	5.10	0.44	3.78	3
12/16/1994	297.67	8.90	9.00	6.90	0.25	3.78	3
1/17/1995	139.33	1.00	4.33	3.50	0.03	3.78	3
2/15/1995	31.67	1.00	0.67	9.10	0.04	3.78	3
3/15/1995	728.33	36.30	12.67	9.40	1.31	3.78	3
4/27/1995	1114.67	26.60	29.00	5.80	1.27	3.78	3
5/17/1995	3128.67	50.10	115.67	4.60	2.82	3.78	3
6/27/1995	1095.67	30.90	8.00	8.30	2.65	3.78	3
7/13/1995	1906.33	67.30	34.00	8.30	6.66	3.78	3
8/24/1995	1912.67	35.10	68.33	5.00	4.86	3.78	3
9/26/1995	335.67	2.90	13.33	3.50	0.36	3.78	3
10/25/1995	665.00	26.00	12.33	10.10	1.82	3.78	3
11/27/1995	272.33	18.30	3.00	13.60	0.95	3.78	3
12/27/1995	791.67	14.60	32.00	4.50	0.58	3.78	3
1/22/1996	318.25	0.70	16.25	1.60	0.02	3.78	4
2/21/1996	874.00	1.30	43.25	1.50	0.06	3.78	4
3/20/1996	280.25	4.80	10.00	4.00	0.22	3.78	4
4/29/1996	1928.50	16.70	91.00	2.30	1.30	3.78	4
5/16/1996	223.25	5.70	8.00	5.80	0.58	3.78	4

Appendix 16. Station D28 *Corbicula* Data							
Date	Total # of clams in sample (#/m^2)	biomass (g/m^2)	recruit/ 0.05 m^2	mean size (mm)	GR ($m^3/m^2/d$)	Depth (M)	# Grabs
6/18/1996	313.50	11.50	10.00	6.80	1.75	3.78	4
7/16/1996	1529.50	60.50	48.75	7.80	7.97	3.78	4
8/28/1996	1410.75	60.20	41.75	8.20	7.79	3.78	4
9/11/1996	665.00	41.30	13.25	11.20	3.53	3.78	4
10/8/1996	1045.00	39.60	34.25	8.10	2.74	3.78	4
11/14/1996	90.25	8.30	1.75	14.70	0.37	3.78	4
12/11/1996	232.75	3.60	9.25	4.50	0.13	3.78	4
1/23/1997	660.25	20.70	28.50	4.90	0.83	3.78	4
2/20/1997	1225.50	25.80	38.00	6.10	0.84	3.78	4
3/24/1997	456.00	18.00	11.25	7.30	0.87	3.78	4
4/22/1997	204.25	19.00	4.00	12.20	1.16	3.78	4
5/21/1997	28.50	0.00	1.25	2.50	0.00	3.78	4
6/18/1997	437.00	33.80	3.25	14.60	3.62	3.78	4
7/22/1997	14.25	1.60	0.00	16.80	0.00	3.78	4
8/19/1997	1876.25	58.30	65.75	6.90	7.72	3.78	4
9/16/1997	2926.00	43.90	135.25	3.40	5.59	3.78	4
10/28/1997	964.25	51.00	26.75	10.20	3.05	3.78	4
11/18/1997	118.75	7.60	3.25	11.00	0.48	3.78	4
12/16/1997	356.25	3.00	17.25	2.30	0.10	3.78	4
1/15/1998	342.00	35.05	7.67	14.00	0.91	3.78	4
2/19/1998	456.00	16.21	17.00	6.30	0.51	3.78	4
3/16/1998	1108.33	18.19	44.00	4.30	0.71	3.78	4
4/15/1998	399.00	1.26	15.00	2.90	0.08	3.78	4
5/12/1998	734.67	4.74	29.67	3.30	0.27	3.78	4
6/8/1998	2723.33	90.88	52.70	7.30	7.83	3.78	4
7/9/1998	665.00	39.40	4.33	10.50	6.00	3.78	4
8/5/1998	443.33	26.52	12.00	9.70	3.81	3.78	4
9/16/1998	1748.00	80.31	71.00	6.30	9.57	3.78	4
10/6/1998	1279.33	26.18	59.00	4.20	1.78	3.78	4
11/5/1998	3065.33	67.03	126.67	5.10	2.31	3.78	4
12/21/1998	2907.00	70.04	121.00	4.80	1.78	3.78	4
1/13/1999	1268.25	17.60	55.00	3.30	0.49	3.78	4
2/17/1999	1425.00	20.90	63.75	3.70	0.58	3.78	4
3/16/1999	1581.75	24.30	74.00	2.80	0.87	3.78	4
4/14/1999	2118.50	39.70	92.50	3.50	1.36	3.78	4
5/18/1999	1154.25	33.90	51.00	4.60	2.89	3.78	4
6/14/1999	2911.75	42.80	122.50	3.80	3.91	3.78	4
7/13/1999	817.00	6.10	28.00	4.00	0.92	3.78	4

Appendix 16. Station D28 *Corbicula* Data							
Date	Total # of clams in sample (#/m^2)	biomass (g/m^2)	recruit/ 0.05 m^2	mean size (mm)	GR ($m^3/m^2/d$)	Depth (M)	# Grabs
8/11/1999	1192.25	5.50	47.25	2.90	0.62	3.78	4
9/22/1999	399.00	47.80	5.50	16.90	3.60	3.78	4
10/26/1999	1301.50	38.10	53.50	5.60	3.14	3.78	4
11/10/1999	622.25	37.00	13.75	10.60	1.85	3.78	4
12/8/1999	945.25	62.30	19.50	11.50	1.47	3.78	4
1/5/2000	798.00	76.00	8.67	14.20	1.72	3.78	4
2/23/2000	658.67	13.70	21.33	6.10	0.47	3.78	4
3/22/2000	709.33	59.90	9.67	11.50	2.32	3.78	4
4/19/2000	278.67	13.00	2.33	10.60	0.88	3.78	4
5/18/2000	101.33	6.40	1.67	11.40	0.50	3.78	4
6/14/2000	791.67	70.70	9.00	13.80	5.65	3.78	4
7/17/2000	494.00	35.90	4.67	13.30	3.85	3.78	4
8/15/2000	589.00	4.30	24.00	3.40	0.67	3.78	4
9/11/2000	475.00	35.10	11.00	11.10	2.80	3.78	4
10/10/2000	1577.00	62.10	48.00	7.80	5.85	3.78	4
11/15/2000	380.00	31.40	5.67	13.50	1.42	3.78	4
12/12/2000	867.67	24.10	29.67	6.60	0.64	3.78	4
1/10/2001	351.50	32.80	5.00	13.90	0.84	3.78	4
2/9/2001	498.75	16.50	16.75	6.70	0.46	3.78	4
3/7/2001	175.75	9.90	3.75	9.00	0.44	3.78	4
4/6/2001	484.50	31.10	9.25	10.20	1.44	3.78	4
5/9/2001	308.75	20.90	5.00	9.00	2.22	3.78	4
6/7/2001	304.00	19.70	2.50	10.10	2.31	3.78	4
7/23/2001	147.25	0.00	7.00	1.40	0.00	3.78	4
8/21/2001	636.50	4.70	30.00	3.10	0.65	3.78	4
9/18/2001	356.25	5.70	14.25	4.40	0.64	3.78	4
10/18/2001	484.50	0.60	19.25	2.60	0.05	3.78	4
11/19/2001	931.00	0.90	46.25	1.60	0.06	3.78	4
12/13/2001	1121.00	9.80	52.75	2.90	0.32	3.78	4
1/15/2002	1230.25	7.90	54.00	2.30	0.23	3.78	4
2/13/2002	973.75	0.30	42.75	2.10	0.01	3.78	4
3/12/2002	769.50	8.60	25.00	4.90	0.38	3.78	4
4/15/2002	156.75	0.70	3.75	4.53	0.05	3.78	4
5/13/2002	907.25	10.60	32.50	4.20	0.66	3.78	4
6/10/2002	437.00	8.50	12.50	6.36	1.14	3.78	4
7/9/2002	460.75	11.50	11.00	7.13	1.69	3.78	4
8/7/2002	1710.00	36.10	55.75	5.89	4.51	3.78	4
9/9/2002	470.25	4.50	15.75	5.07	0.55	3.78	4

Appendix 16. Station D28 *Corbicula* Data							
Date	Total # of clams in sample (#/m^2)	biomass (g/m^2)	recruit/ 0.05 m^2	mean size (mm)	GR ($m^3/m^2/d$)	Depth (M)	# Grabs
10/23/2002	783.75	3.40	35.50	2.68	0.31	3.78	4
11/19/2002	465.50	9.30	14.75	5.90	0.33	3.78	4
12/4/2002	361.00	1.40	16.00	3.18	0.05	3.78	4
1/21/2003	N/D	N/D	N/D	N/D	N/D	N/D	N/D
2/21/2003	N/D	N/D	N/D	N/D	N/D	N/D	N/D
3/18/2003	N/D	N/D	N/D	N/D	N/D	N/D	N/D
4/16/2003	N/D	N/D	N/D	N/D	N/D	N/D	N/D
5/14/2003	N/D	N/D	N/D	N/D	N/D	N/D	N/D
6/3/2003	N/D	N/D	N/D	N/D	N/D	N/D	N/D
7/15/2003	N/D	N/D	N/D	N/D	N/D	N/D	N/D
8/12/2003	N/D	N/D	N/D	N/D	N/D	N/D	N/D
9/25/2003	N/D	N/D	N/D	N/D	N/D	N/D	N/D
10/22/2003	N/D	N/D	N/D	N/D	N/D	N/D	N/D
1/7/2004	N/D	N/D	N/D	N/D	N/D	N/D	N/D
4/6/2004	N/D	N/D	N/D	N/D	N/D	N/D	N/D
7/14/2004	270.75	1.30	11.50	3.10	0.19	3.78	4
10/25/2004	346.75	8.80	13.00	4.90	0.63	3.78	4
1/10/2005	498.75	6.70	20.00	3.80	0.19	3.78	4
4/7/2005	346.75	1.00	12.50	2.90	0.05	3.78	4
7/21/2005	764.75	3.00	39.00	2.00	0.48	3.78	4
10/12/2005	251.75	2.10	11.25	3.10	0.15	3.78	4
11/8/2005	441.75	0.30	22.75	1.80	0.02	3.78	4
12/6/2005	494.00	3.00	25.00	2.20	0.09	3.78	4
1/11/2006	498.75	0.50	23.25	2.10	0.02	3.78	4
2/7/2006	199.50	2.80	6.75	3.98	0.09	3.78	4
3/14/2006	1102.00	0.31	43.00	2.42	0.01	3.78	4
4/27/2006	1439.25	0.41	62.50	2.26	0.02	3.78	4
5/24/2006	1966.50	0.80	87.50	2.30	0.07	3.78	4
6/7/2006	4883.00	9.10	139.33	3.40	1.10	3.78	4
7/11/2006	294.50	1.10	9.75	3.60	0.17	3.78	4
8/11/2006	1178.00	0.60	58.25	1.80	0.08	3.78	4
9/21/2006	2189.75	28.40	86.00	4.70	2.88	3.78	4
10/26/2006	465.50	0.70	23.75	1.90	0.05	3.78	4
11/21/2006	1444.00	11.30	62.50	3.50	0.70	3.78	4
12/21/2006	522.50	1.40	25.25	2.20	0.04	3.78	4
1/22/2007	1311.00	0.40	66.75	1.60	0.01	3.78	4
2/21/2007	954.75	2.30	37.25	2.90	0.07	3.78	4
3/19/2007	734.67	10.30	27.67	4.80	0.37	3.78	4

Appendix 16. Station D28 *Corbicula* Data							
Date	Total # of clams in sample (#/m^2)	biomass (g/m^2)	recruit/ 0.05 m^2	mean size (mm)	GR ($m^3/m^2/d$)	Depth (M)	# Grabs
4/17/2007	1396.50	6.00	57.50	2.80	0.38	3.78	4
5/15/2007	693.50	13.90	15.75	7.50	1.03	3.78	4
6/19/2007	152.00	2.10	6.75	3.80	0.20	3.78	4
7/17/2007	259.67	3.10	9.00	5.30	0.34	3.78	4
8/14/2007	1102.00	8.50	37.75	4.40	1.01	3.78	4
9/12/2007	375.25	3.00	17.75	3.10	0.30	3.78	4
10/4/2007	574.75	14.70	16.75	7.50	0.99	3.78	4
11/6/2007	608.00	1.70	29.50	2.20	0.09	3.78	4
12/11/2007	247.00	1.80	11.00	3.10	0.05	3.78	4
1/9/2008	2142.25	20.80	88.50	3.50	0.56	3.78	4
2/7/2008	1078.25	15.70	29.50	7.00	0.40	3.78	4
3/6/2008	712.50	11.50	15.75	8.20	0.48	3.78	4
4/3/2008	318.25	2.30	10.75	4.70	0.12	3.78	4
5/27/2008	750.50	10.00	15.75	5.60	0.77	3.78	4
6/18/2008	722.00	11.10	13.75	7.10	1.01	3.78	4
7/15/2008	137.75	2.20	1.50	7.70	0.31	3.78	4
8/14/2008	413.25	4.10	16.25	4.20	0.51	3.78	4
9/16/2008	166.25	0.40	6.75	3.40	0.06	3.78	4
10/29/2008	1097.25	4.60	31.75	3.90	0.45	3.78	4
11/19/2008	603.25	0.20	26.75	2.30	0.01	3.78	4
12/11/2008	299.25	0.50	9.75	3.40	0.02	3.78	4
1/13/2009	380.00	0.50	17.50	2.40	0.01	3.78	4
2/10/2009	793.25	14.50	17.50	7.10	0.38	3.78	4
3/12/2009	517.75	4.90	17.50	4.40	0.22	3.78	4
4/7/2009	475.00	11.90	5.25	8.60	0.57	3.78	4
5/6/2009	484.50	4.30	7.25	5.50	0.38	3.78	4
6/23/2009	90.25	2.00	1.25	7.60	0.23	3.78	4
7/22/2009	893.00	3.40	32.25	3.10	0.38	3.78	4
8/19/2009	1919.00	9.60	86.50	2.80	1.17	3.78	4
9/17/2009	1643.50	3.70	73.50	3.00	0.39	3.78	4
10/22/2009	1249.25	9.00	40.25	4.30	0.61	3.78	4
11/17/2009	1482.00	7.40	55.50	3.70	0.41	3.78	4
12/15/2009	2546.00	14.40	96.00	3.90	0.39	3.78	4
1/13/2010	152.00	0.50	4.50	3.60	0.01	3.78	4
2/18/2010	1534.25	1.30	66.75	2.40	0.04	3.78	4
3/16/2010	536.75	2.10	12.50	4.20	0.08	3.78	4
4/13/2010	1505.75	2.90	38.50	3.50	0.13	3.78	4
5/17/2010	1239.75	11.90	5.25	7.00	0.74	3.78	4

Appendix 16. Station D28 *Corbicula* Data							
Date	Total # of clams in sample (#/m^2)	biomass (g/m^2)	recruit/ 0.05 m^2	mean size (mm)	GR ($m^3/m^2/d$)	Depth (M)	# Grabs
6/10/2010	722.00	11.90	3.00	8.60	0.96	3.78	4
7/7/2010	631.75	6.90	7.50	6.90	0.90	3.78	4
8/16/2010	304.00	2.20	14.75	2.50	0.26	3.78	4
9/8/2010	4759.50	18.70	205.25	3.30	1.83	3.78	4
10/28/2010	209.00	0.30	10.25	2.10	0.02	3.78	4
11/23/2010	52.25	0.50	1.75	4.60	0.03	3.78	4
12/21/2010	1045.00	4.60	48.50	3.00	0.16	3.78	4
1/19/2011	736.25	5.30	26.75	4.50	0.15	3.78	4
2/2/2011	608.00	2.30	26.00	3.20	0.07	3.78	4
3/8/2011	413.25	3.80	9.50	5.90	0.15	3.78	4
4/6/2011	237.50	2.00	4.75	6.00	0.10	3.78	4
5/5/2011	631.75	3.90	11.25	5.30	0.27	3.78	4
6/14/2011	133.00	2.10	2.00	7.40	0.15	3.78	4
7/13/2011	104.50	2.60	3.25	7.90	0.41	3.78	4
8/8/2011	1339.50	5.70	58.25	3.00	0.77	3.78	4
9/8/2011	142.50	1.30	6.25	3.90	0.17	3.78	4
10/5/2011	1738.50	13.10	68.00	4.30	1.09	3.78	4
11/8/2011	90.25	1.20	3.00	5.90	0.06	3.78	4
12/7/2011	204.25	1.70	6.75	4.90	0.05	3.78	4
1/10/2012	821.75	11.70	22.50	6.70	0.31	3.78	4
2/8/2012	874.00	3.10	37.75	3.20	0.10	3.78	4
3/7/2012	33.25	0.70	0.75	7.60	0.03	3.78	4
4/4/2012	641.25	4.70	24.25	4.10	0.24	3.78	4
5/21/2012	755.25	5.90	13.75	5.30	0.56	3.78	4
6/19/2012	33.25	1.00	0.75	9.40	0.09	3.78	4
7/17/2012	19.00	0.00	1.00	0.80	0.00	3.78	4
8/15/2012	33.25	0.20	1.50	3.20	0.02	3.78	4
9/26/2012	161.50	0.70	7.50	2.80	0.10	3.78	4
10/24/2012	223.25	2.50	8.25	5.10	0.25	3.78	4
11/14/2012	294.50	2.90	10.75	4.80	0.21	3.78	4
12/18/2012	432.25	1.50	19.75	3.20	0.06	3.78	4
1/10/2013	175.75	0.00	9.00	1.60	0.00	3.78	4
2/5/2013	346.75	0.10	15.75	2.10	0.00	3.78	4
3/13/2013	38.00	0.00	2.00	1.60	0.00	3.78	4
4/11/2013	574.75	10.60	10.50	7.20	0.56	3.78	4
5/8/2013	1192.25	2.30	54.50	2.30	0.25	3.78	4
6/1/2013	560.50	4.00	16.25	4.30	0.45	3.78	4
7/8/2013	848.67	0.00	44.67	1.30	0.00	3.78	4

Appendix 16. Station D28 *Corbicula* Data							
Date	**Total # of clams in sample (#/m^2)**	**biomass (g/m^2)**	**recruit/ 0.05 m^2**	**mean size (mm)**	**GR (m^3/m^2/d)**	**Depth (M)**	**# Grabs**
8/8/2013	N/D	N/D	N/D	N/D	N/D	N/D	N/D
9/4/2013	228.00	0.00	10.75	2.00	0.00	3.78	4
10/15/2013	33.25	0.00	1.75	1.50	0.00	3.78	4
11/19/2013	1586.50	9.90	67.00	4.00	0.42	3.78	4
12/16/2013	133.00	0.00	5.75	2.10	0.00	3.78	4

Appendix 17. Station D41A *Potamocorbula* Data							
Date	**Total # of clams in sample (#/m^2)**	**biomass (g/m^2)**	**rec/0.05m^2**	**mean size (mm)**	**GR (m^3/m^2/d)**	**Depth (M)**	**# Grabs**
6/8/1987	76.00	0.00	2.30	2.30	0.01	2.5	4
7/23/1987	210.00	0.20	6.00	3.40	0.07	2.5	4
9/28/1987	628.00	0.70	24.80	3.00	0.26	2.5	4
11/10/1987	1060.00	2.50	15.40	4.90	0.93	2.5	4
1/12/1988	1212.20	1.70	32.40	3.70	0.44	2.5	4
3/14/1988	817.00	1.90	14.40	4.10	0.73	2.5	4
5/31/1988	9747.00	11.50	297.00	3.00	3.84	2.5	4
7/25/1988	7007.20	11.50	74.00	4.90	3.83	2.5	4
9/13/1988	7463.20	22.60	39.00	6.00	7.26	2.5	4
11/1/1988	3120.00	13.60	9.20	6.90	4.71	2.5	4
1/31/1989	576.33	0.70	11.00	4.10	0.18	2.5	3
3/21/1989	551.00	1.40	9.70	3.90	0.54	2.5	3
7/13/1989	23759.50	21.80	411.50	3.80	6.53	2.5	3
9/8/1989	27265.00	38.00	288.00	4.20	10.67	2.5	3
11/9/1989	14433.67	27.40	95.30	4.90	8.59	2.5	3
1/19/1990	5660.00	12.00	31.00	5.10	2.75	2.5	3
3/22/1990	3400.00	10.10	21.30	4.90	3.58	2.5	3
5/31/1990	947.00	4.30	0.00	7.70	1.57	2.5	3
8/29/1990	1280.00	6.50	0.30	7.70	2.35	2.5	3
10/25/1990	1046.67	10.20	7.30	9.80	3.63	2.5	3
2/22/1991	2786.67	1.30	116.30	2.20	0.48	2.5	3
4/24/1991	2020.00	1.30	78.30	1.80	0.50	2.5	3
6/7/1991	6240.00	2.50	215.00	2.50	0.89	2.5	3
8/19/1991	4080.00	21.70	0.70	8.00	7.13	2.5	3
10/3/1991	3973.33	24.70	0.30	8.70	8.14	2.5	3
11/20/1991	1720.00	11.10	0.70	8.30	3.92	2.5	3
12/13/1991	973.33	3.60	3.70	6.50	1.34	2.5	3

Appendix 17. Station D41A *Potamocorbula* Data							
Date	Total # of clams in sample (#/m^2)	biomass (g/m^2)	rec/0.05m^2	mean size (mm)	GR ($m^3/m^2/d$)	Depth (M)	# Grabs
1/16/1992	506.67	2.40	2.30	6.90	0.61	2.5	3
2/28/1992	418.00	1.20	7.00	5.10	0.45	2.5	3
3/27/1992	202.67	1.10	1.00	5.80	0.44	2.5	3
4/10/1992	5054.00	0.80	257.30	1.60	0.31	2.5	3
5/12/1992	2628.33	4.10	82.30	3.10	1.51	2.5	3
6/24/1992	2856.33	4.10	54.70	4.30	1.47	2.5	3
7/9/1992	1127.33	2.40	9.70	5.30	0.89	2.5	3
8/7/1992	703.00	1.70	8.00	5.50	0.66	2.5	3
9/8/1992	969.00	3.20	2.30	6.20	1.18	2.5	3
10/6/1992	1741.67	6.00	2.70	6.50	2.15	2.5	3
11/4/1992	798.00	2.50	5.70	6.00	0.94	2.5	3
2/10/1993	304.00	0.70	3.30	5.10	0.26	2.5	3
3/18/1993	481.33	1.00	9.70	3.90	0.38	2.5	3
4/16/1993	28633.00	5.90	1447.70	1.70	1.96	2.5	3
5/21/1993	5364.33	1.80	67.00	4.20	0.64	2.5	3
6/18/1993	11001.00	10.30	124.70	4.10	3.33	2.5	3
7/20/1993	2077.33	5.80	12.00	5.90	2.08	2.5	3
8/23/1993	8258.67	17.00	15.30	6.00	5.38	2.5	3
9/17/1993	10291.67	32.20	16.30	5.90	10.10	2.5	3
10/13/1993	5478.33	21.40	8.70	6.30	7.11	2.5	3
11/17/1993	1786.00	4.70	0.70	5.80	1.71	2.5	3
12/10/1993	1323.67	4.40	1.30	6.00	1.62	2.5	3
1/19/1994	722.00	1.70	3.70	5.20	0.62	2.5	3
2/9/1994	513.00	1.20	0.70	5.30	0.47	2.5	3
3/10/1994	367.46	1.30	1.70	5.10	0.48	2.5	3
4/14/1994	228.19	0.80	2.70	4.60	0.30	2.5	3
5/24/1994	817.00	2.70	28.30	3.60	1.05	2.5	3
6/10/1994	373.73	0.70	11.30	4.00	0.26	2.5	3
7/21/1994	741.00	2.00	16.30	5.00	0.74	2.5	3
8/10/1994	658.73	1.60	14.00	4.90	0.62	2.5	3
9/22/1994	918.46	2.40	21.70	4.70	0.89	2.5	3
10/20/1994	962.73	2.00	24.00	4.40	0.74	2.5	3
11/30/1994	886.54	1.10	17.70	4.00	0.43	2.5	3
12/14/1994	519.08	0.90	9.30	4.20	0.33	2.5	3
1/18/1995	380.00	0.30	6.00	4.00	0.13	2.5	3
2/16/1995	246.81	0.20	3.70	4.20	0.08	2.5	3
3/16/1995	126.35	0.10	0.30	4.30	0.04	2.5	3
4/28/1995	633.08	0.50	17.70	3.30	0.19	2.5	3

Appendix 17. Station D41A *Potamocorbula* Data							
Date	Total # of clams in sample (#/m^2)	biomass (g/m^2)	rec/0.05m^2	mean size (mm)	GR ($m^3/m^2/d$)	Depth (M)	# Grabs
5/19/1995	1931.54	3.40	27.30	4.90	1.25	2.5	3
6/28/1995	1152.92	6.40	3.70	7.50	2.34	2.5	3
7/14/1995	937.08	6.30	1.70	9.50	2.28	2.5	3
8/25/1995	1729.00	11.10	19.70	8.80	3.94	2.5	3
9/28/1995	1222.46	10.80	19.30	8.70	3.89	2.5	3
10/27/1995	949.81	11.90	3.00	12.00	4.21	2.5	3
11/28/1995	285.00	3.20	0.00	11.70	1.19	2.5	3
12/28/1995	798.00	2.90	19.30	5.60	1.08	2.5	3
1/23/1996	593.75	0.60	17.80	3.70	0.24	2.5	4
2/22/1996	760.00	1.40	11.00	4.60	0.52	2.5	4
3/21/1996	978.50	0.70	20.30	3.50	0.26	2.5	4
4/30/1996	2897.50	0.90	114.00	2.60	0.34	2.5	4
5/17/1996	2588.75	4.50	16.50	5.10	1.60	2.5	4
7/17/1996	3971.00	7.10	44.30	5.40	2.46	2.5	4
8/29/1996	4360.50	11.30	23.50	6.10	3.84	2.5	4
9/12/1996	3168.25	9.30	11.00	6.50	3.24	2.5	4
10/10/1996	1491.50	4.20	11.30	6.40	1.53	2.5	4
11/14/1996	755.25	1.70	8.50	5.70	0.63	2.5	4
12/12/1996	1244.50	1.30	30.30	4.00	0.48	2.5	4
2/24/1997	646.00	0.30	18.50	3.30	0.13	2.5	4
3/26/1997	1011.75	0.20	43.30	2.20	0.08	2.5	4
4/23/1997	7144.00	1.70	347.30	1.80	0.62	2.5	4
5/22/1997	4621.75	1.70	151.00	3.30	0.60	2.5	4
6/19/1997	5476.75	7.60	164.80	3.80	2.67	2.5	4
7/23/1997	4517.25	6.90	83.80	4.70	2.40	2.5	4
8/20/1997	5761.75	14.60	57.30	6.00	4.81	2.5	4
9/17/1997	3496.00	9.90	25.00	6.20	3.44	2.5	4
10/29/1997	1534.25	2.40	13.00	5.20	0.86	2.5	4
11/19/1997	688.75	2.10	1.50	6.70	0.79	2.5	4
12/15/1997	888.25	1.20	5.30	4.80	0.44	2.5	4
1/13/1998	261.25	0.20	3.30	4.10	0.08	2.5	4
2/18/1998	270.75	0.30	2.00	4.90	0.13	2.5	4
3/17/1998	351.50	0.30	8.00	4.00	0.12	2.5	4
4/14/1998	821.75	0.10	40.00	1.80	0.05	2.5	4
5/13/1998	1249.25	1.00	42.30	3.20	0.37	2.5	4
6/9/1998	8901.50	4.80	343.30	2.90	1.65	2.5	4
7/9/1998	4526.75	6.40	16.80	5.10	2.21	2.5	4
8/4/1998	1767.00	5.00	12.00	6.40	1.82	2.5	4

Appendix 17. Station D41A *Potamocorbula* Data							
Date	Total # of clams in sample (#/m^2)	biomass (g/m^2)	rec/0.05m^2	mean size (mm)	GR ($m^3/m^2/d$)	Depth (M)	# Grabs
9/17/1998	4042.25	13.10	2.30	7.20	4.35	2.5	4
10/7/1998	6137.00	20.30	1.80	7.60	6.45	2.5	4
11/4/1998	2983.00	8.70	15.00	6.60	3.05	2.5	4
12/22/1998	731.50	1.50	6.00	5.70	0.56	2.5	4
1/14/1999	1909.50	1.10	75.50	2.90	0.27	2.5	4
2/18/1999	836.00	0.40	31.50	2.90	0.10	2.5	4
3/17/1999	475.00	0.40	9.80	3.70	0.15	2.5	4
4/15/1999	522.50	0.30	9.30	3.60	0.10	2.5	4
5/19/1999	745.75	0.50	22.30	3.10	0.19	2.5	4
6/15/1999	2968.75	3.40	67.30	3.90	1.23	2.5	4
7/14/1999	5837.75	5.50	113.30	4.20	1.88	2.5	4
8/12/1999	1757.50	4.50	17.50	6.20	1.64	2.5	4
9/23/1999	4764.25	10.60	24.50	6.10	3.56	2.5	4
10/27/1999	2451.00	5.60	9.30	5.80	2.01	2.5	4
11/9/1999	1814.50	5.30	2.30	6.50	1.93	2.5	4
12/9/1999	579.50	2.00	0.30	7.00	0.75	2.5	4
1/6/2000	253.33	0.40	0.67	5.70	0.16	2.5	4
2/24/2000	171.00	0.30	1.67	4.70	0.11	2.5	4
3/23/2000	177.33	0.30	1.00	4.10	0.10	2.5	4
4/20/2000	7378.33	0.50	376.67	1.60	0.20	2.5	4
5/17/2000	38836.00	2.80	1984.00	1.80	0.87	2.5	4
6/15/2000	17727.00	13.40	464.67	3.50	4.20	2.5	4
7/18/2000	13927.00	14.40	258.67	4.10	4.43	2.5	4
8/17/2000	13661.00	16.10	217.33	4.50	4.96	2.5	4
9/14/2000	12888.33	24.20	141.67	4.70	7.52	2.5	4
10/11/2000	7701.33	28.80	24.00	6.00	9.20	2.5	4
11/16/2000	1741.67	2.50	21.33	4.20	0.92	2.5	4
12/14/2000	969.00	1.40	17.00	4.00	0.51	2.5	4
1/11/2001	519.33	0.40	13.00	3.10	0.14	2.5	4
2/8/2001	234.33	0.20	6.33	3.40	0.09	2.5	4
3/8/2011	266.00	0.20	7.33	3.10	0.09	2.5	4
4/5/2001	69.67	0.00	1.00	4.00	0.02	2.5	4
5/10/2001	380.00	0.40	12.67	3.00	0.17	2.5	4
6/6/2001	4902.00	4.30	161.33	3.30	1.54	2.5	4
7/25/2001	1425.00	5.80	12.67	6.60	2.11	2.5	4
8/23/2001	1260.33	5.60	8.67	7.10	2.05	2.5	4
9/19/2001	2052.00	10.50	8.00	7.40	3.71	2.5	4
10/17/2001	1697.33	10.90	6.00	7.10	3.89	2.5	4

Appendix 17. Station D41A *Potamocorbula* Data							
Date	Total # of clams in sample (#/m^2)	biomass (g/m^2)	rec/0.05m^2	mean size (mm)	GR ($m^3/m^2/d$)	Depth (M)	# Grabs
11/20/2001	424.33	0.90	3.33	5.10	0.35	2.5	4
12/12/2001	209.00	0.70	2.00	5.80	0.27	2.5	4
1/16/2002	164.67	0.30	3.00	4.30	0.12	2.5	4
3/13/2002	82.33	0.20	1.33	3.90	0.06	2.5	4
5/14/2002	1589.67	1.00	64.67	2.50	0.38	2.5	4
6/11/2002	4135.67	4.90	81.67	4.20	1.71	2.5	4
7/8/2002	3983.67	9.80	41.33	5.60	3.40	2.5	4
8/8/2002	2197.67	8.10	8.67	6.90	2.91	2.5	4
9/10/2002	2729.67	20.70	1.00	9.60	6.94	2.5	4
10/24/2002	240.67	3.20	0.00	10.60	1.21	2.5	4
11/6/2002	69.67	1.10	0.00	12.20	0.44	2.5	4
12/5/2002	6.33	0.00	0.00	3.50	0.00	2.5	4
1/22/2003	0.00	0.00	0.00	0.00	0.00	2.5	4
2/19/2003	5.00	0.00	0.00	0.00	0.00	2.5	4
3/19/2003	80.00	0.07	0.00	0.00	0.03	2.5	4
4/17/2003	920.00	0.20	0.00	0.00	0.08	2.5	4
5/15/2003	4115.00	4.40	N/D	N/D	1.48	2.5	4
6/2/2003	5875.00	5.40	N/D	N/D	1.70	2.5	4
7/14/2003	5740.00	5.60	N/D	N/D	1.77	2.5	4
8/13/2003	5210.00	14.00	N/D	N/D	4.41	2.5	4
9/18/2003	4600.00	13.00	N/D	N/D	4.33	2.5	4
10/23/2003	3520.00	7.00	N/D	N/D	2.39	2.5	4
1/8/2004	195.00	0.40	N/D	N/D	0.16	2.5	4
4/7/2004	2130.00	0.10	N/D	N/D	0.04	2.5	4
7/15/2004	720.00	1.13	17.00	4.10	0.43	2.5	4
10/26/2004	633.30	2.94	0.70	6.90	1.11	2.5	4
1/11/2005	82.33	0.20	0.33	6.50	0.07	2.5	4
4/5/2005	988.00	0.10	51.00	1.70	0.05	2.5	4
7/19/2005	956.33	1.80	17.33	4.00	0.67	2.5	4
10/13/2005	620.67	0.90	2.00	5.70	0.34	2.5	4
9/7/2005	468.67	1.10	2.00	5.60	0.40	2.5	4
12/5/2005	304.00	0.60	0.67	5.80	0.23	2.5	4
1/12/2006	133.00	0.20	0.67	5.70	0.09	2.5	4
2/8/2006	171.00	0.20	2.30	4.20	0.07	2.5	4
3/15/2006	N/D	N/D	N/D	N/D	N/D	N/D	N/D
4/25/2006	487.67	0.40	7.67	3.80	0.14	2.5	4
5/25/2006	563.67	1.30	0.33	6.40	0.51	2.5	4
6/6/2006	399.00	1.50	0.00	7.90	0.56	2.5	4

Appendix 17. Station D41A *Potamocorbula* Data							
Date	Total # of clams in sample (#/m^2)	biomass (g/m^2)	rec/0.05m^2	mean size (mm)	GR ($m^3/m^2/d$)	Depth (M)	# Grabs
7/10/2006	633.33	3.40	4.33	8.60	1.26	2.5	4
8/10/2006	544.67	3.90	2.33	9.70	1.45	2.5	4
9/20/2006	943.67	3.90	17.00	6.50	1.45	2.5	4
10/25/2006	1545.33	6.80	21.00	6.80	2.46	2.5	4
11/20/2006	2033.33	3.30	60.00	4.10	1.20	2.5	4
12/20/2006	1006.67	0.80	28.33	3.60	0.30	2.5	4
1/23/2007	1051.33	0.60	35.00	3.20	0.16	2.5	4
2/20/2007	468.67	0.20	12.33	3.30	0.09	2.5	4
3/20/2007	266.00	0.20	1.33	4.20	0.09	2.5	4
4/16/2007	202.67	0.10	2.33	4.50	0.04	2.5	4
5/17/2007	1773.33	1.40	48.33	3.40	0.52	2.5	4
6/20/2007	1064.00	3.20	11.67	6.30	1.18	2.5	4
7/16/2007	386.33	3.50	0.00	10.50	1.33	2.5	4
8/13/2007	12.67	0.30	0.00	15.00	0.12	2.5	4
9/11/2007	31.67	0.00	1.00	2.50	0.00	2.5	4
10/2/2007	0.00	0.00	0.00	0.00	0.00	2.5	4
11/7/2007	0.00	0.00	0.00	0.00	0.00	2.5	4
12/10/2007	0.00	0.00	0.00	0.00	0.00	2.5	4
1/8/2007	0.00	0.00	0.00	0.00	0.00	2.5	4
2/6/2008	6.33	0.00	0.30	1.50	0.00	2.5	4
3/5/2008	6.33	0.00	0.00	4.50	0.00	2.5	4
4/2/2008	12.67	0.00	0.00	5.00	0.00	2.5	4
5/19/2008	6.33	0.00	0.00	7.50	0.01	2.5	4
6/17/2008	6.33	0.00	0.00	3.50	0.00	2.5	4
7/14/2008	19.00	0.00	1.00	2.20	0.00	2.5	4
8/13/2008	0.00	0.00	0.00	0.00	0.00	2.5	4
9/15/2008	19.00	0.00	1.00	2.20	0.00	2.5	4
10/27/2008	6.33	0.00	0.00	4.50	0.00	2.5	4
11/18/2008	6.33	0.10	0.00	12.50	0.03	2.5	4
12/10/2008	0.00	0.00	0.00	0.00	0.00	2.5	4
1/12/2009	0.00	0.00	0.00	0.00	0.00	2.5	4
2/9/2009	0.00	0.00	0.00	0.00	0.00	2.5	4
3/11/2009	0.00	0.00	0.00	0.00	0.00	2.5	4
4/6/2009	0.00	0.00	0.00	0.00	0.00	2.5	4
5/4/2009	31.67	0.00	0.30	6.70	0.01	2.5	4
6/24/2009	0.00	0.00	0.00	0.00	0.00	2.5	4
7/21/2009	6.33	0.10	0.00	14.50	0.05	2.5	4
8/18/2009	0.00	0.00	0.00	0.00	0.00	2.5	4

Appendix 17. Station D41A *Potamocorbula* Data							
Date	Total # of clams in sample (#/m^2)	biomass (g/m^2)	rec/0.05m^2	mean size (mm)	GR ($m^3/m^2/d$)	Depth (M)	# Grabs
9/16/2009	0.00	0.00	0.00	0.00	0.00	2.5	4
10/19/2009	6.33	0.00	0.30	2.50	0.00	2.5	4
11/16/2009	0.00	0.00	0.00	0.00	0.00	2.5	4
12/16/2009	0.00	0.00	0.00	0.00	0.00	2.5	4
1/14/2010	0.00	0.00	0.00	0.00	0.00	2.5	4
2/18/2010	0.00	0.00	0.00	0.00	0.00	2.5	4
3/15/2010	0.00	0.00	0.00	0.00	0.00	2.5	4
4/12/2010	202.67	0.00	11.00	1.30	0.00	2.5	4
5/18/2010	2085.25	0.40	91.30	2.20	0.13	2.5	4
6/9/2010	6529.67	2.80	239.00	2.70	0.98	2.5	4
7/6/2010	7498.67	9.50	128.00	4.40	3.14	2.5	4
8/17/2010	6656.33	12.20	68.00	5.20	4.02	2.5	4
9/7/2010	8195.33	14.70	55.00	5.30	4.76	2.5	4
10/25/2010	4161.00	13.50	4.80	7.00	4.50	2.5	4
11/22/2010	709.33	2.90	0.00	7.70	1.06	2.5	4
12/20/2010	348.33	1.50	0.30	7.90	0.59	2.5	4
1/19/2011	367.33	0.80	7.30	5.20	0.30	2.5	4
2/2/2011	215.33	0.40	9.70	5.90	0.16	2.5	4
3/8/2011	544.67	0.30	21.30	2.70	0.13	2.5	4
4/6/2011	361.00	0.10	8.00	3.60	0.02	2.5	4
5/2/2011	1049.75	0.20	45.30	2.30	0.08	2.5	4
6/14/2011	5771.25	1.80	252.80	2.40	0.66	2.5	4
7/13/2011	14425.75	8.60	407.00	3.40	2.76	2.5	4
8/9/2011	9338.50	6.80	140.30	4.00	2.20	2.5	4
9/7/2011	13855.75	17.40	1085.30	4.50	5.35	2.5	4
10/3/2011	12117.25	14.90	85.00	4.60	4.67	2.5	4
11/8/2011	7310.25	11.90	27.30	5.20	3.90	2.5	4
12/7/2011	6374.50	8.80	40.80	4.80	2.01	2.5	4
1/9/2012	2968.75	3.70	22.00	4.60	0.89	2.5	4
2/8/2012	2441.50	2.20	40.30	3.90	0.80	2.5	4
3/6/2012	912.00	0.80	10.00	4.10	0.31	2.5	4
4/5/2012	888.25	0.30	22.50	3.10	0.11	2.5	4
5/21/2012	12145.75	7.30	317.50	3.30	2.39	2.5	4
6/20/2012	9395.50	10.00	168.00	4.20	3.25	2.5	4
7/17/2012	6797.25	13.00	44.75	5.60	4.30	2.5	4
8/15/2012	6422.00	23.10	20.50	6.70	7.55	2.5	4
9/25/2012	1976.00	13.20	1.80	8.70	4.64	2.5	4
10/24/2012	579.50	3.80	1.30	8.90	1.41	2.5	4

Appendix 17. Station D41A *Potamocorbula* Data							
Date	Total # of clams in sample (#/m^2)	biomass (g/m^2)	rec/0.05m^2	mean size (mm)	GR ($m^3/m^2/d$)	Depth (M)	# Grabs
11/14/2012	460.75	1.70	9.80	6.10	0.66	2.5	4
12/18/2012	555.75	0.50	23.80	2.70	0.21	2.5	4
1/9/2013	688.75	0.30	34.30	2.10	0.08	2.5	4
2/5/2013	760.00	0.20	36.80	2.20	0.07	2.5	4
3/13/2013	722.00	0.30	24.00	2.70	0.13	2.5	4
4/10/2013	451.25	0.10	17.00	2.80	0.04	2.5	4
5/7/2013	460.75	0.10	21.80	1.80	0.03	2.5	4
6/4/2013	171.00	0.10	5.80	2.90	0.03	2.5	4
7/8/2013	2090.00	6.70	14.00	6.20	2.40	2.5	4
8/8/2013	N/D	N/D	N/D	N/D	N/D	N/D	N/D
9/4/2013	489.25	5.20	0.80	10.00	1.93	2.5	4
10/15/2013	232.75	0.10	11.00	2.40	0.02	2.5	4
11/19/2013	28.50	0.00	1.50	1.70	0.00	2.5	4
12/16/2013	57.00	0.00	2.30	2.70	0.00	2.5	4

Appendix 18. Station D41C *Potamocorbula* Data							
Date	Total # of clams in sample (#/$m^{2)}$	biomass ($g/m^{2)}$	recruit/0.05 m^2	mean size (mm)	GR ($m^3/m^2/d$)	Depth (M)	# Grabs
1/23/1996	2888.00	20.42	3.75	11.23	6.59	4.9	4
2/22/1996	2626.75	14.28	2.75	8.86	4.90	4.9	4
3/21/1996	4436.50	23.94	3.25	8.61	7.80	4.9	4
4/30/1996	4232.25	14.00	13.25	9.38	4.47	4.9	4
5/17/1996	3705.00	21.16	27.50	8.92	7.03	4.9	4
7/17/1996	2997.25	23.29	8.75	10.04	7.64	4.9	4
8/29/1996	6792.50	31.03	58.25	7.51	9.73	4.9	4
9/12/1996	4089.75	26.38	1.75	8.70	8.67	4.9	4
10/10/1996	1876.25	8.95	0.75	8.18	3.15	4.9	4
11/14/1996	3652.75	13.88	0.00	9.95	4.51	4.9	4
12/12/1996	4821.25	21.77	0.00	7.97	7.03	4.9	4
2/24/1997	769.50	1.60	0.25	6.02	0.60	4.9	4
3/26/1997	375.25	1.28	0.00	7.18	0.49	4.9	4
4/23/1997	437.00	0.67	9.75	4.40	0.26	4.9	4
5/22/1997	627.00	0.67	5.50	5.57	0.25	4.9	4
6/19/1997	9058.25	10.84	220.75	3.84	3.66	4.9	4
7/23/1997	2626.75	5.62	22.50	5.59	2.00	4.9	4
8/20/1997	6564.50	32.91	28.33	11.25	9.32	4.9	4

Appendix 18. Station D41C *Potamocorbula* Data							
Date	Total # of clams in sample (#/$m^{2)}$	biomass ($g/m^{2)}$	recruit/0.05 m^2	mean size (mm)	GR ($m^3/m^2/d$)	Depth (M)	# Grabs
9/17/1997	2280.00	12.39	2.25	8.43	4.30	4.9	4
10/29/1997	2109.00	17.10	0.25	10.77	5.81	4.9	4
11/19/1997	109.25	1.37	1.25	11.11	0.53	4.9	4
12/15/1997	38.00	0.45	0.25	12.00	0.18	4.9	4
1/13/1998	0.00	0.00	0.00	0.00	0.00	4.9	4
2/18/1998	0.00	0.00	0.00	0.00	0.00	4.9	4
3/17/1998	0.00	0.00	0.00	0.00	0.00	4.9	4
4/14/1998	313.50	0.08	14.25	2.21	0.03	4.9	4
5/13/1998	8151.00	6.91	193.75	3.47	2.36	4.9	4
6/9/1998	1306.25	0.99	40.50	3.50	0.37	4.9	4
7/9/1998	1754.33	1.81	34.67	4.60	0.67	4.9	4
8/4/1998	8550.00	35.40	4.00	9.02	10.09	4.9	4
9/17/1998	3749.33	8.41	7.33	6.71	2.89	4.9	4
10/7/1998	5674.67	9.25	9.33	6.32	3.06	4.9	4
11/4/1998	3667.00	11.04	6.00	7.71	3.72	4.9	4
12/22/1998	365.75	1.58	2.00	7.62	0.60	4.9	4
1/14/1999	361.00	0.85	3.25	6.28	0.22	4.9	4
2/18/1999	171.00	0.33	2.00	5.61	0.09	4.9	4
3/17/1999	555.75	0.59	11.75	4.17	0.22	4.9	4
4/15/1999	128.25	0.11	1.25	5.57	0.04	4.9	4
5/19/1999	584.25	0.48	18.50	2.99	0.18	4.9	4
6/15/1999	1315.75	1.55	30.00	4.00	0.57	4.9	4
7/14/1999	1325.25	0.97	48.00	3.21	0.37	4.9	4
8/12/1999	4.75	0.00	0.00	3.50	0.00	4.9	4
9/23/1999	90.25	0.27	1.00	5.50	0.11	4.9	4
10/27/1999	47.50	0.24	0.00	7.90	0.09	4.9	4
11/9/1999	57.00	0.25	0.50	7.25	0.10	4.9	4
12/9/1999	0.00	0.00	0.00	0.00	0.00	4.9	4
1/6/2000	0.00	0.00	0.00	0.00	0.00	4.9	4
2/24/2000	0.00	0.00	0.00	0.00	0.00	4.9	4
3/23/2000	0.00	0.00	0.00	0.00	0.00	4.9	4
4/20/2000	161.50	0.06	5.75	2.79	0.02	4.9	4
5/17/2000	12345.25	3.55	375.25	2.95	1.16	4.9	4
6/15/2000	1173.25	1.28	29.50	3.82	0.48	4.9	4
7/18/2000	2816.75	4.46	24.00	4.76	1.60	4.9	4
8/17/2000	13249.33	22.72	113.00	5.27	6.86	4.9	4
9/14/2000	21945.00	38.31	333.00	5.20	10.49	4.9	4
10/11/2000	39779.67	81.91	287.00	5.78	18.86	4.9	4

Appendix 18. Station D41C *Potamocorbula* Data							
Date	Total # of clams in sample (#/$m^{2)}$	biomass ($g/m^{2)}$	recruit/0.05 m^2	mean size (mm)	GR ($m^3/m^2/d$)	Depth (M)	# Grabs
11/16/2000	2489.00	8.24	2.00	7.33	2.87	4.9	4
12/14/2000	1486.75	4.39	3.50	7.12	1.58	4.9	4
1/11/2001	0.00	0.00	0.00	0.00	0.00	4.9	4
2/7/2001	0.00	0.00	0.00	0.00	0.00	4.9	4
3/7/2001	61.75	0.02	1.00	3.27	0.01	4.9	4
4/4/2001	0.00	0.00	0.00	0.00	0.00	4.9	4
5/9/2001	164.67	0.02	7.50	2.29	0.01	4.9	4
6/5/2001	0.00	0.00	0.00	0.00	0.00	4.9	4
7/24/2001	0.00	0.00	0.00	0.00	0.00	4.9	4
8/22/2001	14.25	0.05	0.00	7.17	0.02	4.9	4
9/18/2001	0.00	0.00	0.00	0.00	0.00	4.9	4
10/16/2001	0.00	0.00	0.00	0.00	0.00	4.9	4
11/19/2001	0.00	0.00	0.00	0.00	0.00	4.9	4
12/11/2001	0.00	0.00	0.00	0.00	0.00	4.9	4
1/15/2002	0.00	0.00	0.00	0.00	0.00	4.9	4
2/14/2002	223.25	0.21	5.00	3.67	0.08	4.9	4
3/12/2002	0.00	0.00	0.00	0.00	0.00	4.9	4
4/15/2002	137.75	0.01	5.25	2.67	0.01	4.9	4
5/13/2002	0.00	0.00	0.00	0.00	0.00	4.9	4
6/10/2002	0.00	0.00	0.00	0.00	0.00	4.9	4
7/7/2002	0.00	0.00	0.00	0.00	0.00	4.9	4
8/8/2002	0.00	0.00	0.00	0.00	0.00	4.9	4
9/9/2002	0.00	0.00	0.00	0.00	0.00	4.9	4
10/23/2002	0.00	0.00	0.00	0.00	0.00	4.9	4
11/5/2002	0.00	0.00	0.00	0.00	0.00	4.9	4
12/4/2002	0.00	0.00	0.00	0.00	0.00	4.9	4
1/21/2003	N/D	N/D	N/D	N/D	N/D	N/D	N/D
2/18/2003	N/D	N/D	N/D	N/D	N/D	N/D	N/D
3/18/2003	N/D	N/D	N/D	N/D	N/D	N/D	N/D
4/16/2003	N/D	N/D	N/D	N/D	N/D	N/D	N/D
5/14/2003	N/D	N/D	N/D	N/D	N/D	N/D	N/D
6/1/2003	N/D	N/D	N/D	N/D	N/D	N/D	N/D
7/14/2003	N/D	N/D	N/D	N/D	N/D	N/D	N/D
8/13/2003	N/D	N/D	N/D	N/D	N/D	N/D	N/D
9/18/2003	N/D	N/D	N/D	N/D	N/D	N/D	N/D
10/23/2003	N/D	N/D	N/D	N/D	N/D	N/D	N/D
1/8/2004	N/D	N/D	N/D	N/D	N/D	N/D	N/D
4/7/2004	N/D	N/D	N/D	N/D	N/D	N/D	N/D

Appendix 18. Station D41C *Potamocorbula* Data							
Date	Total # of clams in sample (#/$m^{2)}$	biomass ($g/m^{2)}$	recruit/0.05 m^2	mean size (mm)	GR ($m^3/m^2/d$)	Depth (M)	# Grabs
7/15/2004	0.00	0.00	0.00	0.00	0.00	4.9	4
10/26/2004	0.00	0.00	0.00	0.00	0.00	4.9	4
1/11/2005	0.00	0.00	0.00	0.00	0.00	4.9	4
4/6/2005	0.00	0.00	0.00	0.00	0.00	4.9	4
7/20/2005	19.00	0.19	0.00	11.17	0.08	4.9	4
10/13/2005	12.67	0.10	0.00	12.00	0.04	4.9	4
11/7/2005	0.00	0.00	0.00	0.00	0.00	4.9	4
12/5/2005	0.00	0.00	0.00	0.00	0.00	4.9	4
1/12/2006	0.00	0.00	0.00	0.00	0.00	4.9	4
2/8/2006	0.00	0.00	0.00	0.00	0.00	4.9	4
3/15/2006	0.00	0.00	0.00	0.00	0.00	4.9	4
4/26/2006	4275.00	1.83	113.00	3.19	0.66	4.9	4
5/25/2006	4129.33	8.79	18.33	5.73	3.04	4.9	4
6/6/2006	4306.67	20.49	1.33	8.04	6.70	4.9	4
7/10/2006	6175.00	42.69	1.00	9.50	12.90	4.9	4
8/10/2006	5364.33	39.24	0.00	9.82	12.12	4.9	4
9/20/2006	2926.00	25.53	0.00	10.47	8.40	4.9	4
10/25/2006	1108.33	10.75	0.00	11.01	3.79	4.9	4
11/20/2006	1120.00	9.05	0.00	10.47	2.18	4.9	4
12/20/2006	1020.00	9.15	0.33	10.89	3.28	4.9	4
1/23/2007	80.75	0.46	0.00	8.91	0.18	4.9	4
2/20/2007	133.00	1.26	0.00	11.00	0.48	4.9	4
3/20/2007	52.25	0.42	0.00	10.23	0.16	4.9	4
4/16/2007	4.75	0.00	0.25	2.50	0.00	4.9	4
5/16/2007	9.50	0.02	0.25	4.50	0.01	4.9	4
6/20/2007	9.50	0.08	0.00	10.50	0.03	4.9	4
7/16/2007	14.25	0.12	0.00	10.50	0.05	4.9	4
8/13/2007	4.75	0.11	0.00	15.50	0.04	4.9	4
9/11/2007	0.00	0.00	0.00	0.00	0.00	4.9	4
10/2/2007	0.00	0.00	0.00	0.00	0.00	4.9	4
11/7/2007	0.00	0.00	0.00	0.00	0.00	4.9	4
12/10/2007	0.00	0.00	0.00	0.00	0.00	4.9	4
1/8/2008	0.00	0.00	0.00	0.00	0.00	4.9	4
2/6/2008	0.00	0.00	0.00	0.00	0.00	4.9	4
3/5/2008	0.00	0.00	0.00	0.00	0.00	4.9	4
4/2/2008	0.00	0.00	0.00	0.00	0.00	4.9	4
5/21/2008	0.00	0.00	0.00	0.00	0.00	4.9	4
6/18/2008	0.00	0.00	0.00	0.00	0.00	4.9	4

Appendix 18. Station D41C *Potamocorbula* Data							
Date	Total # of clams in sample (#/$m^{2)}$	biomass ($g/m^{2)}$	recruit/0.05 m^2	mean size (mm)	GR ($m^3/m^2/d$)	Depth (M)	# Grabs
7/15/2008	0.00	0.00	0.00	0.00	0.00	4.9	4
8/14/2008	0.00	0.00	0.00	0.00	0.00	4.9	4
9/16/2008	0.00	0.00	0.00	0.00	0.00	4.9	4
10/27/2008	0.00	0.00	0.00	0.00	0.00	4.9	4
11/18/2008	0.00	0.00	0.00	0.00	0.00	4.9	4
12/10/2008	0.00	0.00	0.00	0.00	0.00	4.9	4
1/12/2009	0.00	0.00	0.00	0.00	0.00	4.9	4
2/9/2009	0.00	0.00	0.00	0.00	0.00	4.9	4
3/11/2009	361.00	0.50	1.33	4.83	0.19	4.9	4
4/6/2009	0.00	0.00	0.00	0.00	0.00	4.9	4
5/4/2009	0.00	0.00	0.00	0.00	0.00	4.9	4
6/24/2009	0.00	0.00	0.00	0.00	0.00	4.9	4
7/21/2009	0.00	0.00	0.00	0.00	0.00	4.9	4
8/18/2009	0.00	0.00	0.00	0.00	0.00	4.9	4
9/16/2009	0.00	0.00	0.00	0.00	0.00	4.9	4
10/19/2009	0.00	0.00	0.00	0.00	0.00	4.9	4
11/16/2009	0.00	0.00	0.00	0.00	0.00	4.9	4
12/16/2009	0.00	0.00	0.00	0.00	0.00	4.9	4
1/14/2010	0.00	0.00	0.00	0.00	0.00	4.9	4
2/18/2010	0.00	0.00	0.00	0.00	0.00	4.9	4
3/15/2010	0.00	0.00	0.00	0.00	0.00	4.9	4
4/12/2010	0.00	0.00	0.00	0.00	0.00	4.9	4
5/18/2010	0.00	0.00	0.00	0.00	0.00	4.9	4
6/9/2010	0.00	0.00	0.00	0.00	0.00	4.9	4
7/6/2010	0.00	0.00	0.00	0.00	0.00	4.9	4
8/17/2010	0.00	0.00	0.00	0.00	0.00	4.9	4
9/7/2010	0.00	0.00	0.00	0.00	0.00	4.9	4
10/25/2010	0.00	0.00	0.00	0.00	0.00	4.9	4
11/22/2010	0.00	0.00	0.00	0.00	0.00	4.9	4
12/20/2010	0.00	0.00	0.00	0.00	0.00	4.9	4
1/19/2011	0.00	0.00	0.00	0.00	0.00	4.9	4
2/2/2011	0.00	0.00	0.00	0.00	0.00	4.9	4
3/8/2011	0.00	0.00	0.00	0.00	0.00	4.9	4
4/6/2011	6.33	0.04	0.00	9.50	0.02	4.9	4
5/2/2011	0.00	0.00	0.00	0.00	0.00	4.9	4
6/14/2011	0.00	0.00	0.00	0.00	0.00	4.9	4
7/13/2011	0.00	0.00	0.00	0.00	0.00	4.9	4
8/9/2011	0.00	0.00	0.00	0.00	0.00	4.9	4

Appendix 18. Station D41C *Potamocorbula* Data							
Date	Total # of clams in sample (#/$m^{2)}$	biomass ($g/m^{2)}$	recruit/0.05 m^2	mean size (mm)	GR ($m^3/m^2/d$)	Depth (M)	# Grabs
9/7/2011	147.25	0.05	5.00	2.73	0.02	4.9	4
10/3/2011	0.00	0.00	0.00	0.00	0.00	4.9	4
11/8/2011	9.50	0.02	0.00	6.00	0.00	4.9	4
12/7/2011	0.00	0.00	0.00	0.00	0.00	4.9	4
1/9/2012	10.00	0.05	0.00	9.00	0.02	4.9	4
2/8/2012	0.00	0.00	0.00	0.00	0.00	4.9	4
3/6/2012	0.00	0.00	0.00	0.00	0.00	4.9	4
4/5/2012	0.00	0.00	0.00	0.00	0.00	4.9	4
5/21/2012	0.00	0.00	0.00	0.00	0.00	4.9	4
6/20/2012	0.00	0.00	0.00	0.00	0.00	4.9	4
7/17/2012	0.00	0.00	0.00	0.00	0.00	4.9	4
8/15/2012	0.00	0.00	0.00	0.00	0.00	4.9	4
9/25/2012	0.00	0.00	0.00	0.00	0.00	4.9	4
10/24/2012	0.00	0.00	0.00	0.00	0.00	4.9	4
11/14/2012	0.00	0.00	0.00	0.00	0.00	4.9	4
12/18/2012	0.00	0.00	0.00	0.00	0.00	4.9	4
1/9/2013	0.00	0.00	0.00	0.00	0.00	4.9	4
2/5/2013	0.00	0.00	0.00	0.00	0.00	4.9	4
3/13/2013	5.00	0.00	0.00	3.50	0.00	4.9	4
4/10/2013	0.00	0.00	0.00	0.00	0.00	4.9	4
5/7/2013	0.00	0.00	0.00	0.00	0.00	4.9	4
6/4/2013	0.00	0.00	0.00	0.00	0.00	4.9	4
7/8/2013	0.00	0.00	0.00	0.00	0.00	4.9	4
8/8/2013	0.00	0.00	0.00	0.00	0.00	4.9	4
9/4/2013	0.00	0.00	0.00	0.00	0.00	4.9	4
10/15/2013	0.00	0.00	0.00	0.00	0.00	4.9	4
11/19/2013	0.00	0.00	0.00	0.00	0.00	4.9	4
12/16/2013	0.00	0.00	0.00	0.00	0.00	4.9	4

Appendix 19. Station P8 *Corbicula* Data							
Date	Total # of clams in sample (#/m^2)	biomass (g/m^2)	rec/0.05m^2	mean size (mm)	GR ($m^3/m^2/d$)	Depth (M)	# Grabs
1/23/1996	973.75	7.63	46.75	2.28	0.22	3.3	4
2/23/1996	N/D	N/D	N/D	N/D	N/D	N/D	N/D
3/22/1996	926.25	5.53	41.50	2.40	0.25	3.3	4
4/29/1996	622.25	14.53	27.00	3.23	1.04	3.3	4
5/17/1996	356.25	12.34	14.25	3.71	1.12	3.3	4
6/15/1996	323.00	8.53	12.25	3.47	1.52	3.3	4
7/18/1996	2118.50	5.78	109.00	1.50	1.01	3.3	4
8/30/1996	2242.00	7.23	112.50	1.71	1.26	3.3	4
9/13/1996	2308.50	1.72	118.50	1.37	0.19	3.3	4
10/9/1996	845.50	0.42	43.50	1.38	0.03	3.3	4
11/15/1996	1178.00	5.50	59.75	1.70	0.26	3.3	4
12/12/1996	356.25	6.92	16.75	3.38	0.26	3.3	4
1/22/1997	1833.50	1.00	93.75	1.48	0.04	3.3	4
2/21/1997	1710.00	0.20	86.75	1.61	0.01	3.3	4
3/26/1997	451.25	26.16	19.75	4.30	1.34	3.3	4
4/24/1997	228.00	1.01	11.00	2.50	0.08	3.3	4
5/23/1997	90.25	5.31	1.75	5.45	0.55	3.3	4
6/20/1997	532.00	9.82	25.25	2.74	1.39	3.3	4
7/24/1997	1140.00	9.49	50.50	2.29	1.47	3.3	4
8/21/1997	1738.50	110.60	67.50	6.93	16.54	3.3	4
9/18/1997	289.75	4.24	13.00	3.29	0.68	3.3	4
10/29/1997	574.75	2.98	27.50	2.38	0.27	3.3	4
11/20/1997	456.00	0.02	23.75	1.38	0.00	3.3	4
12/18/1997	275.50	3.71	13.00	2.91	0.14	3.3	4
1/15/1998	323.00	6.81	15.00	2.75	0.20	3.3	4
2/19/1998	373.67	2.40	18.33	2.33	0.08	3.3	4
3/17/1998	190.00	0.34	6.00	3.30	0.00	3.3	4
4/16/1998	133.00	0.08	5.33	2.60	0.01	3.3	4
5/13/1998	177.33	3.32	6.33	5.00	0.22	3.3	4
6/8/1998	76.00	10.01	1.00	11.75	1.00	3.3	4
7/9/1998	291.33	4.86	13.33	2.89	0.70	3.3	4
8/4/1998	1095.67	3.23	53.33	2.08	0.45	3.3	4
9/16/1998	753.67	3.20	36.00	2.39	0.36	3.3	4
10/6/1998	741.00	3.40	36.33	2.24	0.20	3.3	4
11/4/1998	310.33	2.30	14.33	2.64	0.09	3.3	4
12/21/1998	506.67	4.15	25.33	2.49	0.12	3.3	4
1/15/1999	1007.00	10.29	51.25	1.95	0.30	3.3	4
2/19/1999	608.00	7.59	31.25	2.28	0.25	3.3	4

Appendix 19. Station P8 *Corbicula* Data							
Date	Total # of clams in sample (#/m^2)	biomass (g/m^2)	rec/0.05m^2	mean size (mm)	GR ($m^3/m^2/d$)	Depth (M)	# Grabs
3/17/1999	180.50	4.83	9.00	3.18	0.16	3.3	4
4/16/1999	223.25	15.13	9.00	4.27	0.56	3.3	4
5/20/1999	266.00	2.83	11.75	2.61	0.08	3.3	4
6/15/1999	147.25	4.47	7.25	3.37	0.58	3.3	4
7/15/1999	1553.25	5.03	80.00	1.37	0.79	3.3	4
8/13/1999	1135.25	6.46	57.25	1.78	0.91	3.3	4
9/24/1999	983.25	7.51	47.25	2.32	0.94	3.3	4
10/27/1999	503.50	1.89	24.00	2.03	0.19	3.3	4
11/9/1999	266.00	1.72	12.50	2.36	0.11	3.3	4
12/9/1999	270.75	2.02	12.25	2.61	0.06	3.3	4
1/7/2000	202.67	3.21	10.33	2.34	0.10	3.3	4
2/24/2000	418.00	0.08	20.67	1.74	0.00	3.3	4
3/24/2000	266.00	0.07	12.33	2.17	0.00	3.3	4
4/20/2000	392.67	0.06	20.33	1.85	0.01	3.3	4
5/17/2000	196.33	2.60	8.67	3.21	0.17	3.3	4
6/15/2000	342.00	0.11	15.67	2.11	0.01	3.3	4
7/19/2000	456.00	3.88	14.00	3.21	0.61	3.3	4
8/15/2000	633.33	0.12	26.33	2.28	0.03	3.3	4
9/13/2000	361.00	0.03	17.33	1.97	0.00	3.3	4
10/12/2000	221.67	0.06	7.33	2.73	0.01	3.3	4
11/17/2000	291.33	0.37	13.00	2.48	0.02	3.3	4
12/13/2000	386.33	0.17	14.67	2.60	0.00	3.3	4
1/12/2001	707.75	2.24	35.75	1.65	0.07	3.3	4
2/7/2001	361.00	N/D	N/D	N/D	N/D	N/D	N/D
3/8/2001	541.00	N/D	N/D	N/D	N/D	N/D	N/D
4/5/2001	427.50	0.08	19.00	2.04	0.00	3.3	4
5/9/2001	365.75	0.06	15.00	2.06	0.01	3.3	4
6/19/2001	560.50	6.60	26.25	2.02	0.93	3.3	4
7/24/2001	684.00	1.55	27.50	2.44	0.27	3.3	4
8/22/2001	470.25	0.17	19.25	2.26	0.03	3.3	4
9/20/2001	437.00	0.09	19.00	2.18	0.01	3.3	4
10/19/2001	346.75	0.07	14.25	2.09	0.01	3.3	4
11/21/2001	978.50	0.06	50.00	1.40	0.00	3.3	4
12/14/2001	707.75	0.08	34.00	1.92	0.00	3.3	4
1/17/2002	1697.33	0.34	83.67	1.92	0.01	3.3	4
2/14/2002	1121.00	0.27	54.33	2.01	0.01	3.3	4
3/12/2002	988.00	0.16	47.75	2.05	N/D	3.3	4
4/16/2002	318.25	0.12	10.75	2.65	N/D	3.3	4

Appendix 19. Station P8 *Corbicula* Data							
Date	Total # of clams in sample (#/m^2)	biomass (g/m^2)	rec/0.05m^2	mean size (mm)	GR ($m^3/m^2/d$)	Depth (M)	# Grabs
5/15/2002	399.00	0.12	16.25	2.30	0.01	3.3	4
6/11/2002	660.25	1.94	33.50	2.03	0.01	3.3	4
7/9/2002	595.33	0.14	25.33	2.27	0.27	3.3	4
8/8/2002	867.67	0.62	43.67	1.15	0.03	3.3	4
9/11/2002	373.67	0.13	14.00	2.57	0.11	3.3	4
10/24/2002	332.50	0.06	15.75	2.13	0.02	3.3	4
11/6/2002	373.67	0.10	17.00	2.09	0.01	3.3	4
12/6/2002	1249.25	0.06	63.75	1.62	0.01	3.3	4
1/21/2003	N/D	N/D	N/D	N/D	N/D	N/D	N/D
2/18/2003	N/D	N/D	N/D	N/D	N/D	N/D	N/D
3/18/2003	N/D	N/D	N/D	N/D	N/D	N/D	N/D
4/16/2003	N/D	N/D	N/D	N/D	N/D	N/D	N/D
5/14/2003	N/D	N/D	N/D	N/D	N/D	N/D	N/D
6/1/2003	N/D	N/D	N/D	N/D	N/D	N/D	N/D
7/14/2003	N/D	N/D	N/D	N/D	N/D	N/D	N/D
8/13/2003	N/D	N/D	N/D	N/D	N/D	N/D	N/D
9/18/2003	N/D	N/D	N/D	N/D	N/D	N/D	N/D
10/23/2003	N/D	N/D	N/D	N/D	N/D	N/D	N/D
1/8/2004	N/D	N/D	N/D	N/D	N/D	N/D	N/D
4/7/2004	N/D	N/D	N/D	N/D	N/D	N/D	N/D
7/15/2004	753.67	0.21	30.67	2.29	0.04	3.3	4
10/26/2004	627.00	0.08	30.33	1.93	0.01	3.3	4
1/12/2005	1292.00	0.09	66.33	1.27	0.00	3.3	4
4/8/2005	361.00	0.61	14.33	2.82	0.03	3.3	4
7/25/2005	361.00	1.88	16.67	2.54	0.27	3.3	4
10/14/2005	145.67	0.08	5.67	2.50	0.01	3.3	4
11/9/2005	291.33	3.47	12.33	3.37	0.16	3.3	4
12/7/2005	703.00	1.48	34.00	2.13	0.04	3.3	4
1/12/2006	1089.33	0.19	54.00	1.69	0.01	3.3	4
2/9/2006	690.33	0.18	31.67	1.99	0.01	3.3	4
3/15/2006	798.00	0.32	34.50	2.30	0.01	3.3	4
4/26/2006	855.00	5.26	38.33	2.56	0.27	3.3	4
5/25/2006	361.00	0.06	16.67	2.04	0.01	3.3	4
6/5/2006	164.67	0.05	6.00	2.69	0.01	3.3	4
7/10/2006	304.00	1.58	14.00	2.69	0.23	3.3	4
8/10/2006	1152.67	1.04	45.67	2.88	0.13	3.3	4
9/25/2006	95.00	0.03	3.00	2.70	0.00	3.3	4
10/25/2006	164.67	0.31	7.00	2.81	0.03	3.3	4

Appendix 19. Station P8 *Corbicula* Data							
Date	Total # of clams in sample (#/m^2)	biomass (g/m^2)	rec/0.05m^2	mean size (mm)	GR ($m^3/m^2/d$)	Depth (M)	# Grabs
11/20/2006	443.33	0.07	20.67	2.19	0.00	3.3	4
12/20/2006	867.67	0.33	44.00	1.76	0.01	3.3	4
1/23/2007	731.50	3.82	33.25	2.79	0.11	3.3	4
2/20/2007	897.75	0.10	45.25	1.52	0.00	3.3	4
3/20/2007	232.75	0.06	11.00	2.32	0.00	3.3	4
4/16/2007	204.25	6.34	7.50	3.85	0.47	3.3	4
5/16/2007	118.75	1.89	3.00	4.54	0.13	3.3	4
6/20/2007	1743.25	2.01	86.75	1.79	0.20	3.3	4
7/16/2007	679.25	2.29	26.25	2.59	0.36	3.3	4
8/15/2007	318.25	1.36	13.25	2.43	0.19	3.3	4
9/11/2007	546.25	1.03	27.75	2.13	0.15	3.3	4
10/3/2007	66.50	1.99	2.50	6.21	0.15	3.3	4
11/6/2007	451.25	1.88	21.25	2.57	0.11	3.3	4
12/10/2007	712.50	0.09	37.25	1.51	0.00	3.3	4
1/8/2008	798.00	1.59	37.75	2.19	0.05	3.3	4
2/6/2008	1790.75	0.38	87.25	1.99	0.01	3.3	4
3/5/2008	560.50	0.65	27.25	2.60	0.03	3.3	4
4/2/2008	655.50	1.29	27.75	2.70	0.07	3.3	4
5/20/2008	323.00	0.92	10.00	3.54	0.07	3.3	4
6/17/2008	247.00	0.81	10.25	3.35	0.08	3.3	4
7/14/2008	247.00	2.78	9.50	5.00	0.44	3.3	4
8/13/2008	869.25	1.36	45.00	1.89	0.24	3.3	4
9/15/2008	1002.25	0.90	49.25	2.09	0.14	3.3	4
10/28/2008	175.75	1.41	8.00	2.91	0.16	3.3	4
11/18/2008	598.50	5.48	28.00	2.49	0.32	3.3	4
12/10/2008	408.50	0.56	18.00	2.37	0.02	3.3	4
1/12/2009	1168.50	9.18	54.00	2.64	0.26	3.3	4
2/9/2009	503.50	3.75	23.00	2.53	0.13	3.3	4
3/11/2009	1173.25	0.57	60.75	1.69	0.03	3.3	4
4/6/2009	270.75	0.67	12.00	2.80	0.04	3.3	4
5/5/2009	779.00	0.43	33.25	2.50	0.04	3.3	4
6/23/2009	247.00	13.23	5.75	8.21	1.61	3.3	4
7/21/2009	1040.25	0.60	52.25	2.08	0.09	3.3	4
8/18/2009	1463.00	3.43	74.00	2.13	0.59	3.3	4
9/16/2009	123.50	0.69	5.50	2.96	0.10	3.3	4
10/19/2009	304.00	17.59	11.00	8.59	1.35	3.3	4
11/16/2009	57.00	0.03	1.50	2.92	0.00	3.3	4
12/15/2009	61.75	0.01	2.50	2.12	0.00	3.3	4

Appendix 19. Station P8 *Corbicula* Data							
Date	Total # of clams in sample (#/m^2)	biomass (g/m^2)	rec/0.05m^2	mean size (mm)	GR ($m^3/m^2/d$)	Depth (M)	# Grabs
1/13/2010	80.75	0.07	3.25	2.50	0.00	3.3	4
2/17/2010	204.25	6.97	10.25	2.69	0.21	3.3	4
3/15/2010	247.00	0.09	11.50	2.12	0.00	3.3	4
4/12/2010	441.75	0.06	21.75	1.79	0.00	3.3	4
5/19/2010	237.50	0.03	12.00	1.82	0.00	3.3	4
6/9/2010	218.50	0.23	10.50	2.52	0.02	3.3	4
7/6/2010	152.00	0.04	6.50	2.31	0.01	3.3	4
8/16/2010	1567.50	0.18	79.75	1.81	0.03	3.3	4
9/7/2010	788.50	0.15	37.00	2.33	0.02	3.3	4
10/26/2010	123.50	0.03	5.25	2.04	0.00	3.3	4
11/22/2010	52.25	0.01	2.25	1.77	0.00	3.3	4
12/20/2010	85.50	0.64	4.00	3.06	0.02	3.3	4
1/18/2011	123.50	1.76	6.25	2.23	0.05	3.3	4
2/1/2011	133.00	4.18	5.25	3.64	0.14	3.3	4
3/7/2011	289.75	5.12	13.00	3.09	0.22	3.3	4
4/5/2011	356.25	0.11	16.75	1.93	0.01	3.3	4
5/3/2011	508.25	0.04	25.75	1.65	0.00	3.3	4
6/13/2011	142.50	2.78	3.25	5.17	0.16	3.3	4
7/12/2011	251.75	2.48	9.50	3.27	0.35	3.3	4
8/9/2011	517.75	0.54	26.00	1.85	0.06	3.3	4
9/7/2011	745.75	0.07	36.50	1.84	0.01	3.3	4
10/3/2011	688.75	0.07	32.25	1.78	0.01	3.3	4
11/8/2011	479.75	1.75	8.00	3.91	0.08	3.3	4
12/7/2011	228.00	1.04	8.50	3.31	0.03	3.3	4
1/9/2012	313.50	0.58	5.75	3.58	0.02	3.3	4
2/8/2012	128.25	1.57	2.25	4.31	0.06	3.3	4
3/6/2012	242.25	5.85	2.75	5.26	0.24	3.3	4
4/5/2012	342.00	0.74	8.75	3.75	0.04	3.3	4
5/21/2012	285.00	2.63	10.50	3.27	0.24	3.3	4
6/20/2012	261.25	0.31	12.75	2.28	0.04	3.3	4
7/17/2012	128.25	0.43	3.75	4.09	0.07	3.3	4
8/15/2012	128.25	4.31	5.25	4.35	0.69	3.3	4
9/25/2012	42.75	0.92	0.25	10.50	0.13	3.3	4
10/24/2012	104.50	3.33	0.25	10.68	0.41	3.3	4
11/14/2012	23.75	1.37	0.25	11.10	0.10	3.3	4
12/18/2012	33.25	1.04	0.00	12.79	0.05	3.3	4
1/9/2013	28.50	0.50	0.00	9.67	0.01	3.3	4
2/5/2013	38.00	1.50	0.00	13.25	0.05	3.3	4

Appendix 19. Station P8 *Corbicula* Data							
Date	Total # of clams in sample (#/m^2)	biomass (g/m^2)	rec/0.05m^2	mean size (mm)	GR ($m^3/m^2/d$)	Depth (M)	# Grabs
3/13/2013	28.50	0.42	0.25	9.00	0.02	3.3	4
4/10/2013	247.00	4.69	10.25	4.77	0.31	3.3	4
5/7/2013	133.00	0.24	6.00	2.46	0.02	3.3	4
6/4/2013	85.50	1.94	2.75	4.44	0.28	3.3	4
7/8/2013	171.00	2.51	7.25	3.78	0.45	3.3	4
8/8/2013	N/D	N/D	N/D	N/D	N/D	N/D	N/D
9/4/2013	536.75	0.81	25.50	2.29	0.10	3.3	4
10/15/2013	61.75	0.02	2.50	2.50	0.00	3.3	4
11/19/2013	128.25	1.36	5.00	4.69	0.07	3.3	4
12/16/2013	61.75	1.64	1.75	5.96	0.05	3.3	4

Appendix 20. Station C9 *Corbicula* Data							
Date	Total # of clams in sample (#/m^2)	biomass (g/m^2)	rec/ 0.05m^2	mean size (mm)	GR ($m^3/m^2/d$)	Depth (M)	# Grabs
1/23/1996	728.33	4.92	32.33	2.61	0.14	3.16	4
2/23/1996	1567.50	4.18	74.75	2.30	0.17	3.16	4
3/22/1996	3928.25	0.44	192.25	1.38	0.02	3.16	4
4/29/1996	403.75	2.27	16.25	2.70	0.19	3.16	4
5/17/1996	164.67	7.07	1.33	7.65	0.70	3.16	4
6/15/1996	299.25	22.39	6.75	8.60	3.35	3.16	4
7/18/1996	147.25	34.81	3.50	16.44	5.05	3.16	4
8/30/1996	242.25	29.20	7.50	7.26	4.47	3.16	4
9/13/1996	175.75	60.74	1.75	16.26	5.57	3.16	4
10/9/1996	52.25	32.28	0.50	26.77	2.43	3.16	4
11/15/1996	228.00	43.51	6.00	16.21	1.78	3.16	4
12/12/1996	256.50	33.40	7.75	11.65	1.14	3.16	4
1/22/1997	N/D	N/D	N/D	N/D	N/D	N/D	N/D
2/21/1997	118.75	7.37	5.50	4.94	0.28	3.16	4
3/26/1997	560.50	25.81	19.50	5.06	1.29	3.16	4
4/24/1997	532.00	33.70	18.25	4.33	2.15	3.16	4
5/23/1997	185.25	27.54	3.75	10.96	3.30	3.16	4
6/20/1997	1306.25	45.36	60.50	3.30	5.49	3.16	4
7/24/1997	1178.00	18.39	58.00	2.77	0.00	3.16	4
8/21/1997	380.00	0.87	14.25	2.96	0.14	3.16	4
9/18/1997	114.00	78.20	0.75	28.71	9.38	3.16	4
10/29/1997	237.50	84.25	5.75	16.58	5.41	3.16	4

Appendix 20. Station C9 *Corbicula* Data							
Date	Total # of clams in sample (#/m^2)	biomass (g/m^2)	rec/ $0.05m^2$	mean size (mm)	GR ($m^3/m^2/d$)	Depth (M)	# Grabs
11/20/1997	403.75	5.44	18.00	3.11	0.35	3.16	4
12/18/1997	147.25	5.33	4.25	5.60	0.18	3.16	4
1/15/1998	327.75	0.57	16.25	1.80	0.02	3.16	4
2/19/1998	N/D	N/D	N/D	N/D	N/D	N/D	N/D
3/17/1998	897.75	32.35	36.25	4.44	1.28	3.16	4
4/16/1998	736.25	122.60	23.25	8.07	7.08	3.16	4
5/13/1998	443.33	72.98	11.67	12.17	3.66	3.16	4
6/8/1998	394.25	15.61	10.50	6.05	1.69	3.16	4
7/9/1998	517.75	109.73	10.00	15.13	15.76	3.16	4
8/4/1998	323.00	17.03	14.25	4.96	2.64	3.16	4
9/16/1998	707.75	81.63	25.25	7.32	10.42	3.16	4
10/6/1998	266.00	16.45	10.75	4.93	1.20	3.16	4
11/4/1998	367.33	16.18	12.33	6.55	0.65	3.16	4
12/21/1998	266.00	12.39	11.00	5.02	0.36	3.16	4
1/15/1999	541.50	0.07	25.75	1.75	0.00	3.16	4
2/19/1999	650.75	26.97	29.00	4.40	0.77	3.16	4
3/17/1999	655.50	14.72	31.50	3.07	0.53	3.16	4
4/16/1999	888.25	72.54	39.25	4.52	2.55	3.16	4
5/20/1999	413.25	0.09	18.75	2.19	0.01	3.16	4
6/15/1999	114.00	0.02	4.75	2.08	0.00	3.16	4
7/15/1999	38.00	0.01	1.50	2.00	0.00	3.16	4
8/13/1999	152.00	21.82	5.75	8.31	2.43	3.16	4
9/24/1999	4.75	0.00	0.25	2.50	0.00	3.16	4
10/27/1999	N/D	N/D	N/D	N/D	N/D	N/D	N/D
11/9/1999	128.25	0.07	3.75	2.76	0.00	3.16	4
12/9/1999	104.50	0.02	5.00	1.86	0.00	3.16	4
1/7/2000	76.00	4.68	1.75	7.25	0.14	3.16	4
2/24/2000	223.25	6.80	9.75	3.88	0.25	3.16	4
3/24/2000	541.50	0.15	22.00	2.25	0.01	3.16	4
4/20/2000	741.00	23.70	28.75	4.13	1.66	3.16	4
5/17/2000	171.00	0.07	6.25	2.64	0.01	3.16	4
6/15/2000	95.00	0.01	5.00	1.95	0.00	3.16	4
7/19/2000	137.75	3.90	5.75	3.53	0.51	3.16	4
8/15/2000	437.00	0.69	10.00	3.77	0.11	3.16	4
9/13/2000	85.50	0.02	3.75	2.11	0.00	3.16	4
10/12/2000	247.00	17.73	10.75	4.42	2.02	3.16	4
11/17/2000	90.25	0.01	4.50	1.66	0.00	3.16	4
12/13/2000	109.25	0.05	4.50	2.33	0.00	3.16	4

Appendix 20. Station C9 *Corbicula* Data							
Date	Total # of clams in sample (#/m^2)	biomass (g/m^2)	rec/ $0.05m^2$	mean size (mm)	GR ($m^3/m^2/d$)	Depth (M)	# Grabs
1/12/2001	1121.00	46.07	45.00	3.53	1.30	3.16	4
2/7/2001	161.50	4.03	6.25	3.21	0.12	3.16	4
3/8/2001	180.50	2.94	8.25	2.87	0.14	3.16	4
4/5/2001	145.67	8.75	6.33	4.20	0.46	3.16	4
5/9/2001	147.25	12.10	2.75	6.76	1.37	3.16	4
6/19/2001	342.00	144.63	10.50	7.67	17.45	3.16	4
7/24/2001	612.75	0.11	27.75	2.09	0.01	3.16	4
8/22/2001	133.00	2.09	3.50	4.61	0.30	3.16	4
9/20/2001	185.25	1.85	6.50	3.99	0.21	3.16	4
10/19/2001	137.75	0.02	6.00	2.16	0.00	3.16	4
11/21/2001	769.50	15.45	33.25	3.14	0.99	3.16	4
12/14/2001	194.75	0.07	7.75	2.16	0.00	3.16	4
1/17/2002	126.67	0.11	4.00	3.20	0.00	3.16	4
2/14/2002	50.67	0.01	2.00	2.38	0.00	3.16	4
3/12/2002	291.33	0.15	11.00	2.37	0.01	3.16	4
4/16/2002	166.25	0.57	7.25	2.67	0.02	3.16	4
5/15/2002	63.33	0.02	2.33	2.40	0.00	3.16	4
6/11/2002	3413.67	16.61	175.67	1.66	1.05	3.16	4
7/9/2002	665.00	44.17	33.75	2.99	5.51	3.16	4
8/8/2002	346.75	1.61	13.00	2.99	0.26	3.16	4
9/11/2002	456.00	14.57	15.75	4.35	2.02	3.16	4
10/24/2002	275.50	0.26	12.25	2.55	0.03	3.16	4
11/6/2002	126.67	0.01	5.67	2.05	0.00	3.16	4
12/6/2002	N/D	N/D	N/D	N/D	N/D	N/D	N/D
1/21/2003	N/D	N/D	N/D	N/D	N/D	N/D	N/D
2/18/2003	N/D	N/D	N/D	N/D	N/D	N/D	N/D
3/18/2003	N/D	N/D	N/D	N/D	N/D	N/D	N/D
4/16/2003	N/D	N/D	N/D	N/D	N/D	N/D	N/D
5/14/2003	N/D	N/D	N/D	N/D	N/D	N/D	N/D
6/1/2003	N/D	N/D	N/D	N/D	N/D	N/D	N/D
7/14/2003	N/D	N/D	N/D	N/D	N/D	N/D	N/D
8/13/2003	N/D	N/D	N/D	N/D	N/D	N/D	N/D
9/18/2003	N/D	N/D	N/D	N/D	N/D	N/D	N/D
10/23/2003	N/D	N/D	N/D	N/D	N/D	N/D	N/D
1/8/2004	N/D	N/D	N/D	N/D	N/D	N/D	N/D
4/7/2004	N/D	N/D	N/D	N/D	N/D	N/D	N/D
7/15/2004	1862.00	1.08	86.00	2.20	0.15	3.16	4
10/26/2004	76.00	9.30	2.25	8.25	0.68	3.16	4

Appendix 20. Station C9 *Corbicula* Data							
Date	Total # of clams in sample (#/m^2)	biomass (g/m^2)	rec/ $0.05m^2$	mean size (mm)	GR ($m^3/m^2/d$)	Depth (M)	# Grabs
1/12/2005	57.00	0.02	2.25	2.50	0.00	3.16	4
4/8/2005	N/D	N/D	N/D	N/D	N/D	N/D	N/D
7/25/2005	166.25	0.67	6.50	2.99	0.11	3.16	4
10/14/2005	128.25	13.74	4.50	6.43	1.00	3.16	4
11/9/2005	323.00	0.10	14.33	2.34	0.01	3.16	4
12/7/2005	508.25	1.57	19.50	2.72	0.05	3.16	4
1/12/2006	460.75	2.04	19.00	2.80	0.06	3.16	4
2/9/2006	869.25	1.17	37.00	2.29	0.04	3.16	4
3/15/2006	1225.50	12.10	45.50	3.14	0.43	3.16	4
4/26/2006	565.25	4.80	9.25	4.47	0.27	3.16	4
5/25/2006	356.25	12.20	3.75	5.86	1.09	3.16	4
6/5/2006	574.75	2.82	8.50	4.94	0.39	3.16	4
7/10/2006	156.75	5.52	2.00	7.62	0.86	3.16	4
8/10/2006	33.25	0.02	1.50	2.21	0.00	3.16	4
9/25/2006	66.50	0.23	3.25	2.29	0.03	3.16	4
10/25/2006	109.25	0.01	5.50	1.63	0.00	3.16	4
11/20/2006	14.25	0.00	0.75	1.50	0.00	3.16	4
12/20/2006	47.50	0.01	2.50	1.80	0.00	3.16	4
1/23/2007	42.75	6.35	1.50	9.72	0.19	3.16	4
2/20/2007	1130.50	0.05	59.50	1.44	0.00	3.16	4
3/20/2007	551.00	0.31	25.25	2.18	0.01	3.16	4
4/16/2007	280.25	2.32	9.75	3.14	0.15	3.16	4
5/16/2007	175.75	1.11	3.75	4.77	0.09	3.16	4
6/20/2007	90.25	0.14	2.00	4.50	0.01	3.16	4
7/16/2007	175.75	5.54	6.75	4.01	0.64	3.16	4
8/15/2007	152.00	0.59	4.00	4.13	0.08	3.16	4
9/11/2007	123.50	0.26	3.00	4.04	0.03	3.16	4
10/3/2007	137.75	2.94	4.00	4.57	0.22	3.16	4
11/6/2007	199.50	0.14	9.50	1.98	0.01	3.16	4
12/10/2007	408.50	0.27	18.50	2.17	0.01	3.16	4
1/8/2008	285.00	0.49	9.00	3.43	0.01	3.16	4
2/6/2008	85.50	2.93	2.25	6.50	0.09	3.16	4
3/5/2008	465.50	3.64	16.50	3.22	0.17	3.16	4
4/2/2008	270.75	0.45	6.25	3.34	0.02	3.16	4
5/20/2008	1007.00	40.67	17.00	6.42	2.96	3.16	4
6/17/2008	299.25	11.02	2.75	6.99	1.07	3.16	4
7/14/2008	403.75	23.24	4.50	7.70	3.09	3.16	4
8/13/2008	133.00	3.82	4.50	5.36	0.49	3.16	4

Appendix 20. Station C9 *Corbicula* Data							
Date	Total # of clams in sample (#/m^2)	biomass (g/m^2)	rec/ $0.05m^2$	mean size (mm)	GR ($m^3/m^2/d$)	Depth (M)	# Grabs
9/15/2008	156.75	0.35	6.75	3.32	0.04	3.16	4
10/28/2008	161.50	5.13	5.75	5.15	0.52	3.16	4
11/18/2008	38.00	5.07	0.75	14.38	0.26	3.16	4
12/10/2008	128.25	3.23	3.50	5.20	0.14	3.16	4
1/12/2009	52.25	6.66	1.50	9.50	0.20	3.16	4
2/9/2009	71.25	0.03	1.75	2.90	0.00	3.16	4
3/11/2009	261.25	5.92	8.50	5.17	0.27	3.16	4
4/6/2009	261.25	1.42	10.75	3.25	0.07	3.16	4
5/5/2009	71.25	3.61	1.25	9.83	0.33	3.16	4
6/23/2009	769.50	38.47	8.25	7.52	3.92	3.16	4
7/21/2009	194.75	9.36	5.00	6.38	1.05	3.16	4
8/18/2009	218.50	4.30	9.25	3.87	0.55	3.16	4
9/16/2009	261.25	14.01	9.50	6.50	1.55	3.16	4
10/19/2009	215.33	10.62	9.00	5.76	0.77	3.16	4
11/16/2009	460.75	0.37	15.50	2.80	0.02	3.16	4
12/15/2009	142.50	6.89	4.25	7.80	0.20	3.16	4
1/13/2010	247.00	5.91	7.75	4.73	0.03	3.16	4
2/17/2010	52.25	7.60	1.25	10.05	0.02	3.16	4
3/15/2010	665.00	10.89	21.75	3.79	0.07	3.16	4
4/12/2010	114.00	2.81	0.75	8.46	0.11	3.16	4
5/19/2010	142.50	10.91	0.75	7.80	0.22	3.16	4
6/9/2010	142.50	10.95	0.75	7.80	0.20	3.16	4
7/6/2010	90.25	4.91	0.75	10.76	0.90	3.16	4
8/16/2010	389.50	1.64	17.75	2.73	0.57	3.16	4
9/7/2010	907.25	7.93	45.25	2.38	0.37	3.16	4
10/26/2010	294.50	10.88	13.50	4.15	0.12	3.16	4
11/22/2010	289.75	4.58	11.25	4.60	0.12	3.16	4
12/20/2010	166.25	2.32	7.50	3.79	0.12	3.16	4
1/18/2011	422.75	6.93	14.25	4.68	0.05	3.16	4
2/1/2011	142.50	1.83	5.00	5.17	0.04	3.16	4
3/7/2011	109.25	3.29	0.25	9.33	0.09	3.16	4
4/5/2011	299.25	16.06	2.50	8.23	0.17	3.16	4
5/3/2011	256.50	5.79	7.75	6.17	0.46	3.16	4
6/13/2011	209.00	7.04	4.50	7.75	0.54	3.16	4
7/12/2011	52.25	5.26	0.00	14.95	1.83	3.16	4
8/9/2011	351.50	7.50	13.00	5.41	1.08	3.16	4
9/7/2011	109.25	24.10	1.50	17.28	1.02	3.16	4
10/3/2011	261.25	12.64	9.25	7.34	0.79	3.16	4

Appendix 20. Station C9 *Corbicula* Data							
Date	**Total # of clams in sample (#/m^2)**	**biomass (g/m^2)**	**rec/ $0.05m^2$**	**mean size (mm)**	**GR ($m^3/m^2/d$)**	**Depth (M)**	**# Grabs**
11/8/2011	99.75	5.63	3.00	9.21	0.13	3.16	4
12/7/2011	33.25	8.06	0.00	26.36	0.09	3.16	4
1/9/2012	47.50	12.08	0.25	18.20	0.34	3.16	4
2/8/2012	33.25	3.25	0.50	14.50	0.11	3.16	4
3/6/2012	1121.00	9.85	46.25	3.44	0.39	3.16	4
4/5/2012	1121.00	9.74	42.75	3.38	0.49	3.16	4
5/21/2012	308.75	17.64	8.50	7.65	1.71	3.16	4
6/20/2012	137.75	68.05	0.25	21.71	5.45	3.16	4
7/17/2012	85.50	25.93	0.00	21.61	3.36	3.16	4
8/15/2012	194.75	3.73	7.00	7.33	0.41	3.16	4
9/25/2012	47.50	5.14	0.25	23.00	0.62	3.16	4
10/24/2012	19.00	0.81	0.25	15.00	0.08	3.16	4
11/14/2012	52.25	9.29	0.00	20.77	0.65	3.16	4
12/18/2012	14.25	2.22	0.00	21.83	0.09	3.16	4
1/9/2013	N/D	N/D	N/D	N/D	N/D	N/D	N/D
2/5/2013	66.50	17.36	0.00	23.43	0.53	3.16	4
3/13/2013	85.50	12.84	0.25	21.17	0.68	3.16	4
4/10/2013	66.50	3.57	1.25	10.86	0.21	3.16	4
5/7/2013	133.00	7.52	3.25	11.68	0.82	3.16	4
6/4/2013	228.00	23.32	7.25	7.54	2.57	3.16	4
7/8/2013	133.00	2.11	6.00	3.86	0.31	3.16	4
8/8/2013	N/D	N/D	N/D	N/D	N/D	N/D	N/D
9/4/2013	80.75	1.34	2.50	6.62	0.14	3.16	4
10/15/2013	52.25	0.01	2.00	2.59	0.00	3.16	4
11/19/2013	118.75	2.84	3.75	6.74	0.13	3.16	4
12/16/2013	323.00	1.99	12.50	3.85	0.06	3.16	4