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# Seaweed Monitoring in the Great Bay Estuary: 2019 Annual Report

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## A Report to

The Piscataqua Region Estuaries Partnership

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## Executive Summary

As global warming increases temperature and nitrogen inputs change—either due to greater inputs associated with growing populations in the Great Bay or with nitrogen reductions at wastewater treatment plants—it is important to understand how these changes are impacting the estuary. To that end, the abundance and taxa of intertidal seaweeds have been assessed at fixed locations throughout the estuary since 2013. Seaweed abundance may be influenced by environmental conditions such as nutrient levels, water temperature, light availability, and invasive species. Therefore, seaweed communities can provide insights into the overall health of the estuary and signal ecological change. In 2019, abundance data (percent cover and biomass) were collected from five of the eight intertidal sampling locations and four subtidal locations. Two more sampling arrays were established at each subtidal site, making three replicates per site.

Data from 2013-2019 show appreciable cover and biomass of nuisance seaweeds (reds and greens), including several introduced species. Green seaweeds decreased in cover at the two intertidal sites that are sampled annually (Depot Road and Adams Point), and cover of red seaweed decreased at one site (Depot Road). However, there were no decreases at the other six sites, and results from 2019 still show high levels of nuisance seaweed at the lowest intertidal elevations.

In subtidal areas, percent cover assessments by snorkel appeared successful based on strong correlations between cover and biomass. Percent cover of seagrass measured by snorkel was very similar to independent measurements from underwater photos. The abundance of seaweed in association with eelgrass beds was ecologically significant and may have impacted eelgrass density and productivity. Further monitoring of seaweed and eelgrass is required to determine potential impacts to the estuary from emerging threats of increased nutrients from impervious surfaces and rising water temperatures due to global warming, as well as reduced nutrient threats from improvements to wastewater treatment plants and stormwater management. For example, the 2019 eelgrass survey showed an increase in area of eelgrass beds within Great and Little Bays which co-occurred with declines in nuisance seaweed at two of our stations in Great Bay.

## Introduction

Seaweed and eelgrass (*Zostera marina*) are important primary producers in estuaries. As such, they will be referred to as plants, though most biologists refer to seaweeds as protists due to their different evolutionary history. These photosynthetic organisms sequester carbon, capture nutrients, and provide habitat for fish and invertebrates. Tracking the abundance of seaweed and eelgrass is important for our understanding of how changes in environmental conditions affect the structure, function, and biodiversity of the estuary. Eelgrass forms a critical habitat in the Great Bay Estuary in New Hampshire, but the size of eelgrass beds has declined significantly (Beem and Short 2009, Short 2014). The loss of eelgrass or decreased ability of eelgrass to recover from other stressors (e.g., storms) may be related to nitrogen loading in the Great Bay Estuary, which can cause blooms of seaweed and phytoplankton that compete with eelgrass for light (Short et al. 1995; PREP 2017). Studies in other estuaries in New England show macroalgae can compete with and displace eelgrass (Short and Burdick 1996, Hauxwell et al. 2001, Vaudrey et al. 2010). Decomposing mats of seaweed can also increase soil hypoxia and sulfide concentrations, leading to reduced growth of eelgrass (reviewed by Han and Liu, 2014). Aerial surveys in 2019 did show an increase in areas of eelgrass meadows in the Little Bay (20 ac total, up 470% from 2017) and Great Bay (1450 ac, up 6% from 2017; Barker 2020)

Fluctuations in water quality can allow invasive species to outcompete others in the estuary that are less suited to the new conditions (Wallace and Gobler 2015). Red and green seaweeds especially require close monitoring because of their potential impacts to the ecosystem. Red seaweed includes one native species that has recently expanded its range northward into the Great Bay, *Agardhiella subulata* and two non-native, invasive species: *Dasysiphonia japonica* and *Agarophyton vermiculophyllum* (a taxon previously referred to as *Gracilaria vermiculophylla).* First documented in the Great Bay in 2003 by Nettleton et al. (2013), *A. vermiculophyllum* could impact local industries by fouling fishing nets and clogging intakes (Freshwater et al. 2006). The success of *A. vermiculophyllum* as an invader may be tied to its wide tolerance to environmental stresses such as light limitation, burial, and grazing (Thomsen and McGlathery 2007). Green algae should also be closely monitored because severe blooms of *Ulva*, the dominant green seaweed, have been shown to impair productivity in salt marshes (Watson et al. 2015) and seagrass beds (Schmidt et al. 2012). Additionally, one species of green seaweed found in the Great Bay, *Ulva australis*, is an exotic invasive and could impact native species (Lee et al. 2019).

Seaweed has been quantitatively sampled in the Estuary using reproducible methods by various researchers, but never over long time periods. The best historical quantitative data were collected from intertidal sampling grids as part of graduate student projects conducted under the direction of Arthur Mathieson: in 1978 (Hardwick-Whitman and Mathieson, 1983) and 2008-2010 (Nettleton et al. 2011). Most recently, Cianciola and Burdick (2014) reoccupied several historically assessed sites and used previous results to develop a standardized protocol for intertidal seaweed monitoring that has been used from 2013 to the present (Burdick et al. 2016).

## Project Goals and Objectives

Our goal is to monitor the abundance of seaweed in the Great Bay Estuary as conditions change over time due to factors such as global warming, nutrient loading, and invasive species. The reason for monitoring benthic vegetation is manifold. First, changes in vegetation could have bottom-up effects on the ecosystem because of its role as a source of food and habitat for fish and invertebrates. Second, blooms of seaweed can shade and smother eelgrass, depressing eelgrass biomass within meadows and the overall extent of meadows. Finally, seaweed can serve as an indicator of water quality and ecological health in the estuary, so changes in seaweed abundance can be coupled with other measures (e.g., area of eelgrass beds) to develop a better understanding of how the Estuary reacts to changes in management actions such as reduction of nitrogen inputs. Seaweeds grow both intertidally and subtidally. Monitoring intertidal areas is relatively simple during low tide and provides a valuable metric to track changes in seaweed abundance and composition. Subtidal assessment of seaweed is difficult but provides a direct measure of seaweed abundance to better understand interactions with eelgrass.

## Methods

To measure changes in seaweed abundance over time, eight intertidal monitoring sites were established in 2013 and 2014 from the mouth of the Piscataqua River to the southern end of Great Bay (Figure 1). Sites were intended to capture variability in nutrients, salinity, and shoreline exposure to wind and waves throughout the estuary. Three transects were created at each site (random distance apart but no closer than 10 m) along a 100 m length of shoreline

(Figure 2). Sampling stations were established at MLLW (Mean Lower Low Water) and every 0.5 m above until the shoreline (upper boundary of halophytes) was reached. Where MLLW could not be reached (Lubberland Creek, Depot Road and Sunset Hill Farm), stations were established relative to MHW (Mean High Water). Sampling for percent cover and biomass was scheduled to occur annually at two sites and biennially for six sites. Biennial intertidal sites monitored in 2019 included Four Tree Island, Hilton Park, and Sunset Hill Farm (Table 1). The two annual sites monitored were Adams Point and Depot Road. In 2018, a new sampling effort extended each of the four intertidal sites in Great Bay to the subtidal, where eelgrass was found. A single sample (composed of 9 subsamples) was collected at an extension of the central transect for each of four intertidal sites. In 2019, an additional sample was added to the subtidal end of each of the two remaining transects, making three replicates per site for each of the four Great Bay sampling sites (108 quadrats).

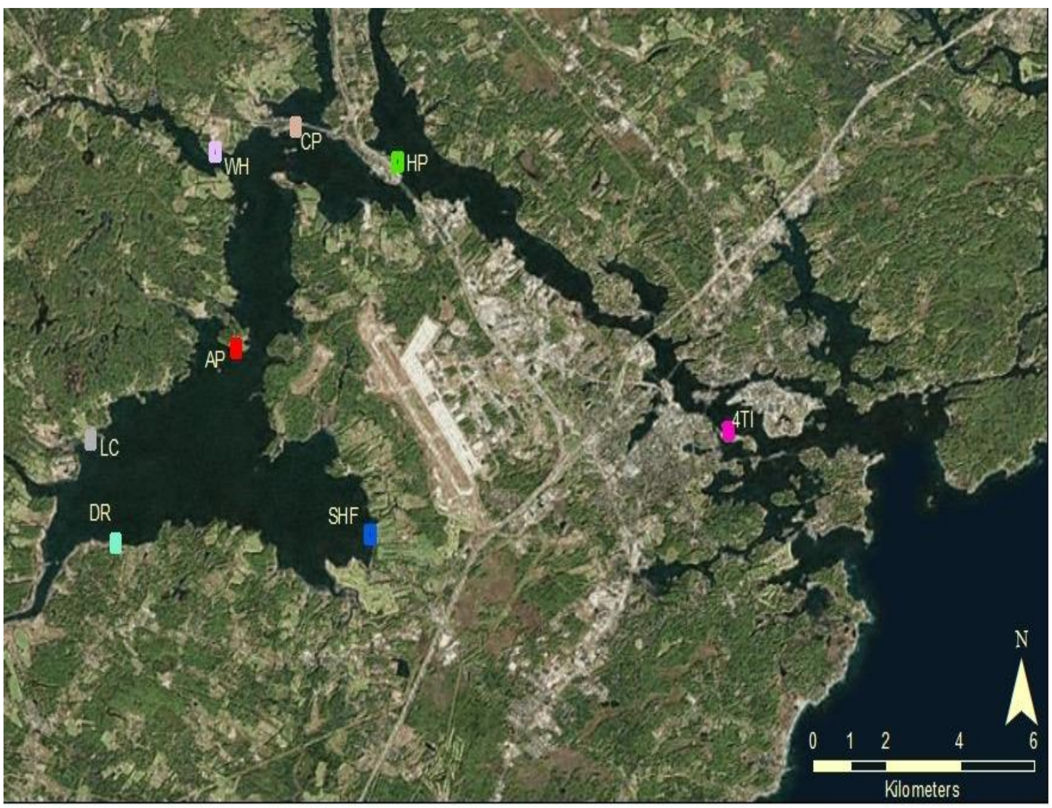



Figure 1. Vegetation sampling sites in the Great Bay Estuary, NH.

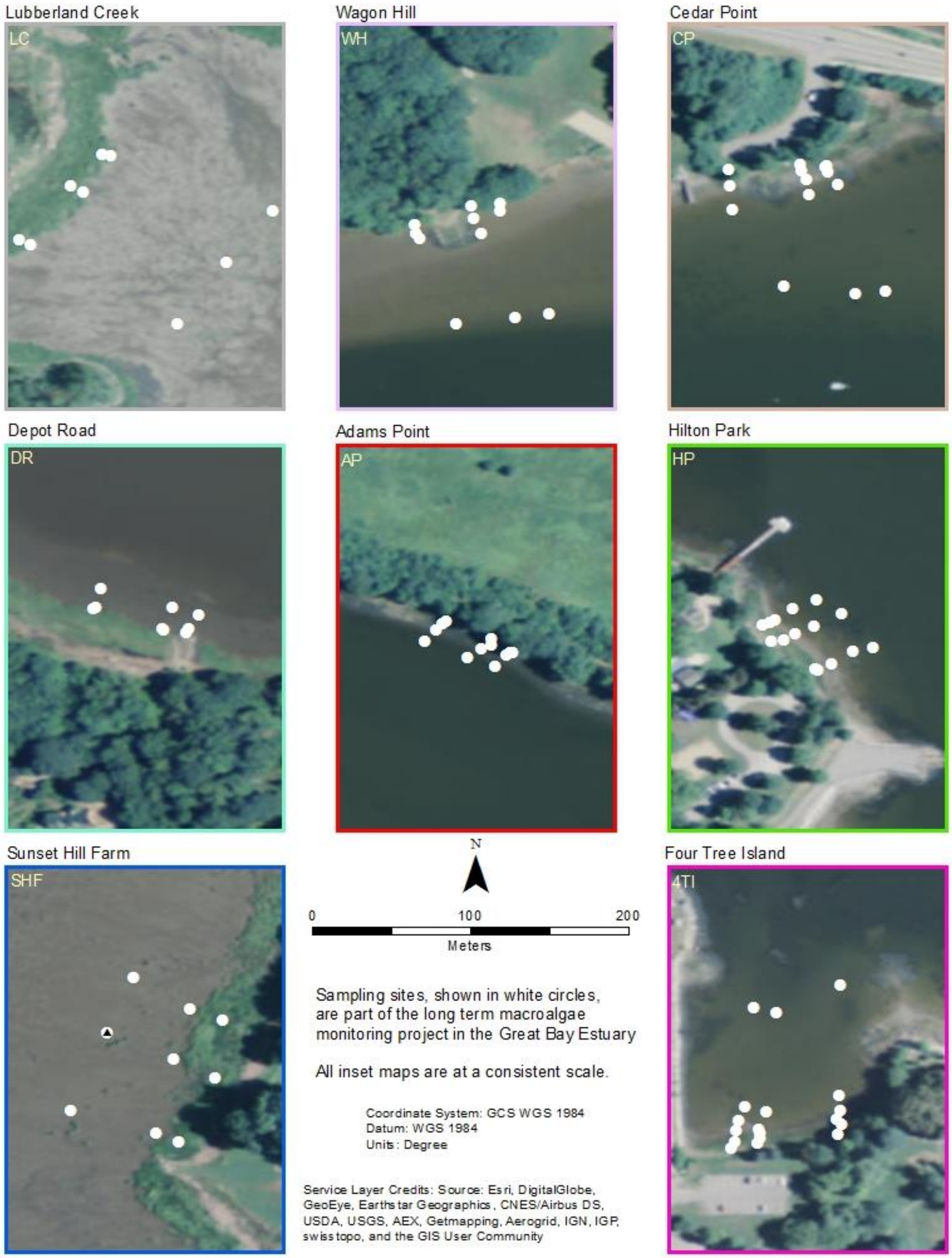



Figure 2. Intertidal sampling stations for seaweed at each site in the Great Bay Estuary. Locations were plotted using GPS coordinates.

Table 1. Site locations, sampling elevations, and sampling schedule for long-term macroalgae monitoring in Great Bay Estuary.

| **Site Name** | **Town** | **Location (Lat/Long)** | **Elevations (m above MLLW)** | **Years Sampled** |
|---|---|---|---|---|
| Four Tree Island | Portsmouth | 43.07536N 70.74701W | 0.0, 0.5, 1.0, 1.5, 2.0, 2.5 | 2014, 2016, 2019 |
| Hilton Park | Dover | 43.12292N 70.82786W | 0.0, 0.5, 1.0, 1.5, 2.0 | 2014, 2016, 2019 |
| Cedar Point | Durham | 43.12934N 70.85283W | 0.0, 0.5, 1.0, 1.5 | 2013, 2015, 2018 |
| Wagon Hill Farm | Durham | 43.12457N 70.87260W | 0.0, 0.5, 1.0, 1.5 | 2013, 2015, 2018 |
| Adams Point | Durham | 43.09019N 7086735W | Subtidal, 0.0, 0.5, 1.0, 1.5 | 2014, 2015, 2016, 2018, 2019 |
| Lubberland Creek | Newmarket | 43.07427N 70.90339W | Subtidal, 0.5, 1.0, 1.5 | 2013, 2015, 2018, 2019* |
| Depot Road | Greenland | 43.05611N 70.89682W | Subtidal, 0.5, 1.0, 1.5 | 2013-2016, 2018, 2019 |
| Sunset Hill Farm | Newington | 43.05751N 70.83443W | Subtidal, 0.75, 1.0, 1.5 | 2014, 2016, 2018*, 2019 |

*Subtidal only

Intertidal cover data for seaweeds and vascular plants were collected during a five-day period in July, August, and October 2019. Transects and plot locations were relocated using a handheld Garmin Geographic Positioning System (GPS) and PVC stakes that marked the seaward plot edges. Visual estimates of percent cover were made by species or genus in a 0.25 $m^2$ quadrat centered landward of each sampling point on each transect. A photograph was taken and archived for each plot sampled. To develop correlations between percent cover and biomass, vegetation samples were collected in separate plots during the August sampling event. For these samples, percent cover was estimated in a 0.0625 $m^2$ quadrat placed two meters to the right of each cover sampling point while facing the shore. A photograph was taken before all plant material in the quadrat was collected and placed in labeled plastic bags. Rooted plants and algae that were attached to rocks were clipped to the surface without removing algal holdfasts.

Subtidal sampling stations were first incorporated into the monitoring scheme in 2018. Subtidal sampling arrays were established at four sites: Adams Point, Lubberland Creek, Depot Road, and Sunset Hill Farm. Subtidal arrays were located on extensions of intertidal transects at an average elevation of -1.5 meters NAVD88. Each array consists of nine sampling stations – one central station surrounded by the others in eight directions (Figure 3). Stations at cardinal directions were six meters from the center, whereas stations at primary intercardinal directions were four meters from the center. In 2019, all subtidal sites were sampled for percent cover and biomass in August and October. At each site, the center of the array was located using a GPS. The locations of surrounding stations were found using a compass to determine the bearing and pre-measured PVC poles to find the distance of the station from the center of the array. At each station, percent cover in a 0.25m2 quadrat was recorded to the genus or species level through visual estimation using a mask and snorkel. All aboveground plant material within the quadrat was collected for each sampling event and placed in individual, labeled bags for processing at the lab. The measurement of canopy height, which was called for in the original sampling protocol, was not possible in the field due to currents that bent eelgrass stems to varying degrees, depending on current strength. Instead, the length of live (still green) eelgrass stems was measured in the lab until maximum totals of 10 vegetative and 10 reproductive stems were reached.

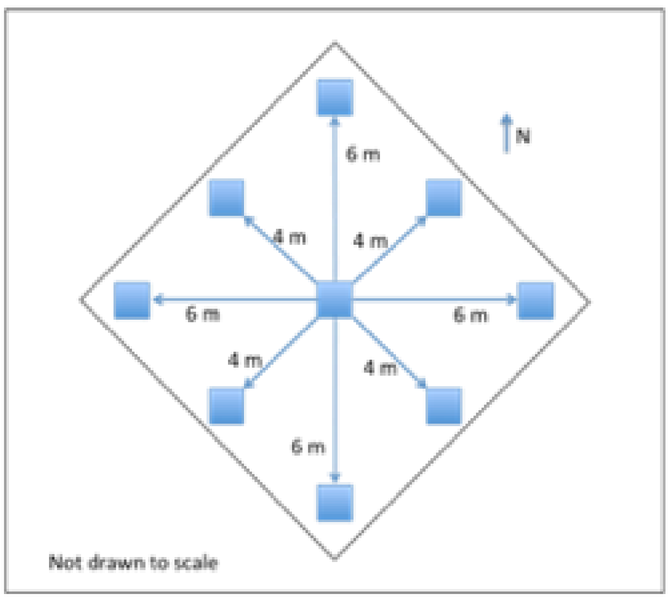



Figure 3. Subtidal sample arrangement of nine plots (0.5 by 0.5 m in size) that represent an area of 100 $m^2$.

Underwater photographs were collected in 2018 and 2019 to determine whether percent cover assessed from images was comparable to percent cover assessed in situ. Since underwater photographs taken by a hand-held camera were not consistently usable in 2018, we experimented with taking video grabs and integrated this method into the protocol for 2019. Using the same general pattern of subtidal sampling, we collected 9 video clips of the camera apparatus coming into contact with the bottom sediment. At the lab, a screenshot was taken from each video just as the bottom was hit, before a plume of fine-grain sediments was released by contact. Percent cover was assessed visually in each screenshot.

SeagrassNet collections were made at the long-term Great Bay site and a new site at Fort Foster at the mouth of the Piscataqua River in Maine. The sampling was performed in spring in Great Bay and in summer and fall for both sites using the SeagrassNet protocol (https://scholars.unh.edu/prep/420/) with the inclusion of collection of all seaweed (from each of 36 plots, 0.25$m^2$ in size), which were placed in marker gallon bags and cleaned, sorted by species and dried to constant weight to calculate biomass as an average of the 12 plots for each of three transects for each site.

Biomass assessment in the lab followed the same protocol for both intertidal and subtidal samples. Samples were cleaned of salts, sediment and detritus and sorted by species/genus. Any root material inadvertently collected was removed. Plant material was placed in marked foil envelopes and dried at 60°C in a drying oven for five days before it was weighed to 0.01g.

Species identifications were authenticated by Dr. Arthur Mathieson and nomenclature generally followed Villalard-Bohnsack (2003), with updates from Mathieson and Dawes (2017). Thus, some taxonomic changes were included. For example, the green seaweed *Enteromorpha intestinalis* was transferred to *Ulva intestinalis*, while the invasive red seaweed "*Heterosiphonia" japonica* was re-designated as *Dasysiphonia japonica.* Perhaps the most problematic change that has occurred recently was the reassignment of *Gracilaria vermiculophylla* to the new genus *Agarophyton* (Gurgel et al. 2018), so that the two species, *Gracilaria tikvahiae* and *Agarophyton vermiculophyllum*, which were not distinguished in field assessments, must be described using the Family *Gracilariaceae*.

The research team compiled the field percent cover estimates from all sampling periods and the biomass data in a Microsoft Excel spreadsheet. Data were reduced to means for elevations within sites and over all sites for taxa and by major taxonomic groups (red, green, brown, emergent salt marsh vegetation and eelgrass). Correlations were made between percent cover estimated using photos and on-site determinations using snorkel. Plant cover estimated in biomass sampling plots were regressed against plant weights after all zero cover/weight samples were removed.

Predictive equations of biomass from percentage cover were forced through zero, and strength of each relationship was reported as the $r^2$ value obtained from regressions. For each taxon analysis reported, outliers were excluded using the Huber robust fit method (K=4). Simple linear regression was used to determine changes in abundance over time and ANOVA was used to determine differences in seaweed abundance at different locations. The Shapiro-Wilk W test was used to determine whether residuals were normally distributed. The following transformations were made to meet assumptions of normality and heteroscedasticity: Green seaweed cover was log transformed to assess changes over time. Biomass data were all square root transformed (except for *D. japonica*) when regressed on percent cover. Nearly all the biomass vs percent cover residuals still did not pass Shapiro-Wilk W test after transformations despite the distribution appearing normal. All statistical analyses were performed in JMP Pro 14 (SAS Institute Inc. 2020).

## Results and Discussion

*Intertidal Abundance*

In 2019, average intertidal seaweed cover at the five sites sampled ranged from 12-34% (Figure 4). Four Tree Island had the highest percent cover, followed closely by Adams Point. Cover of green seaweed appeared highest at Hilton Park and lowest at Sunset Hill Farm, while reds appeared highest at the Great Bay sites: Depot Road and Sunset Hill Farm. Cover of brown seaweed was highest at Four Tree Island and Adams Point.

Species from the family *Gracilariaceae* (including the introduced *A. vermiculophyllum* and the native *Gracilaria tikvahieae*) accounted for 89% of the red seaweed cover. The similar morphologies between these species make it difficult to differentiate between the two in the field, but biomass analysis in the lab revealed that *A. vermiculophyllum* was clearly the dominant red seaweed in the intertidal, as it accounted for 94% of the total biomass of red seaweed in 2019. Another invasive red seaweed, *Dasysiphonia japonica* was recorded but only made up about 5% of the intertidal red seaweed cover observed in 2019. Brown seaweeds were composed of the native fucoids, *Ascophyllum nodosum* and *Fucus vesiculosus*, and green seaweeds were composed primarily of species from the genus *Ulva* (Figure 4). The invasive green seaweed, *Ulva australis* was not as widespread as in 2018 and was only recorded once at Adams Point.

With all sites combined, there were no clear trends in percent cover over time. However, significant trends were found for individual sites when percent cover was averaged over sampling month and elevation (Figure 5). Percent cover of green seaweed has decreased significantly over the study years at Adams Point ($r^2$=.70, p<.0001; Figure 6). At Depot Road, there was also a weak, but significant decrease in percent cover of both greens ($r^2$=.37, p<.01) and reds ($r^2$=.43, p<.01). These data indicate that the ostensibly damaging red and green seaweed blooms are decreasing at two sampling sites in Great Bay. Further, it is likely that the trends are well-founded due to the fact that these two locations were sampled every year.

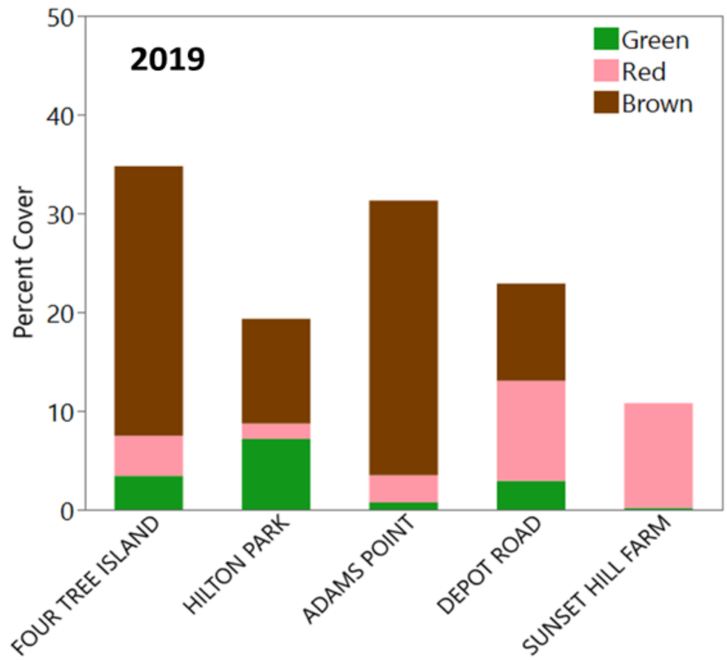



Figure 4. Cover of seaweed averaged over sampling elevations and three seasonal collection periods at the five intertidal sites sampled in 2019.

The 2019 eelgrass survey results showed greater eelgrass bed area in Little Bay (20 acres, a 470% increase) and Great Bay (1450 acres, a 6% increase) (Barker 2020). Since nuisance seaweeds compete with seagrass for light and nutrients, the decline in seaweed may result from greater seagrass area or vice versa. Historical accounts of seaweeds in the Estuary over the past 30 years suggest increases in nuisance and exotic species as seagrasses declined (Cianciola 2014, Nettleton et al. 2011, Beem and Short 2009, Short 2014). Coupled with increased nutrient

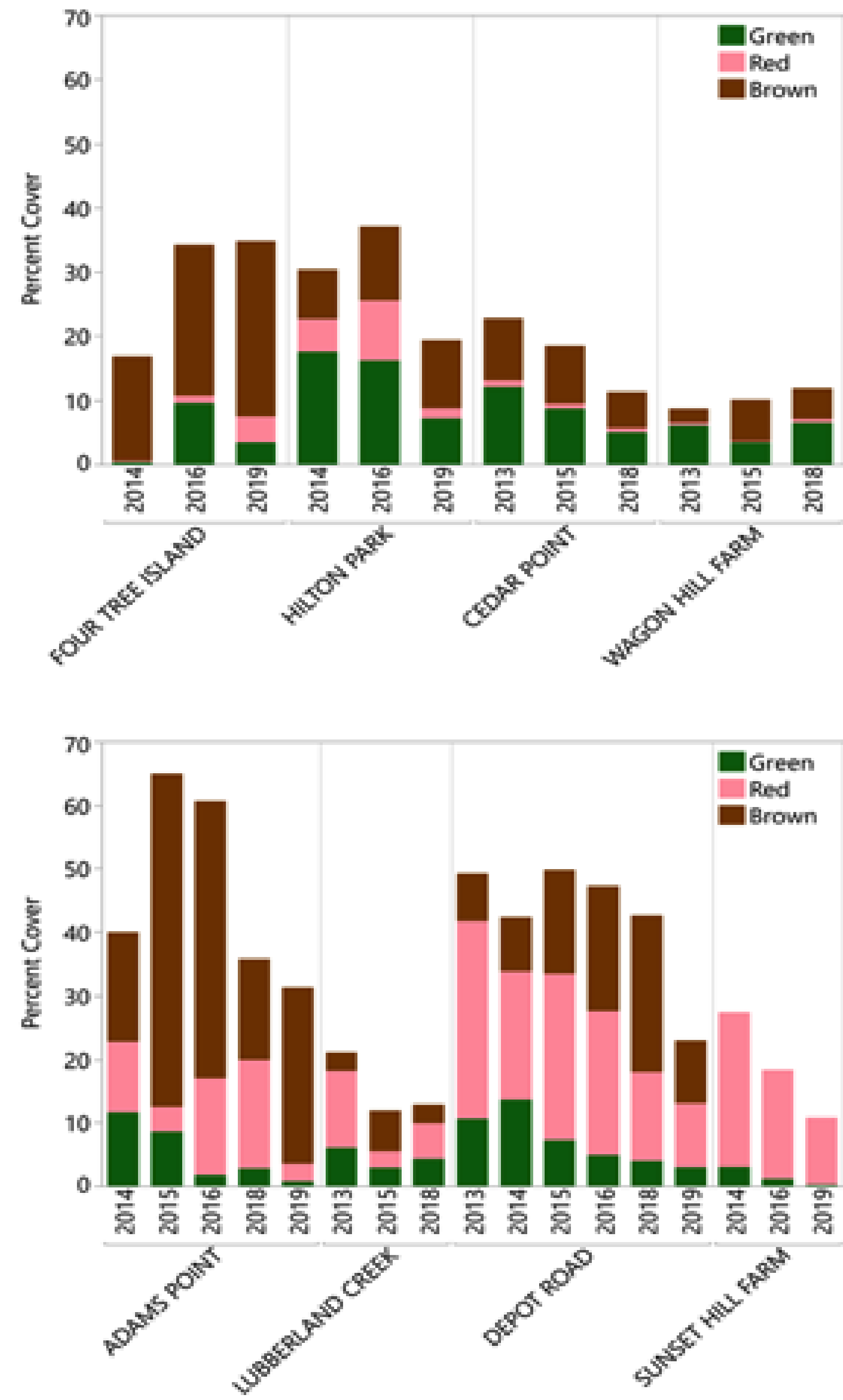



Figure 5. Percent cover of seaweed averaged over sampling elevations and collection periods for each site and year. Sites are arranged from the lower estuary (Four Tree Island) to Little Bay (upper panel) and four sites within the Great Bay (lower panel).

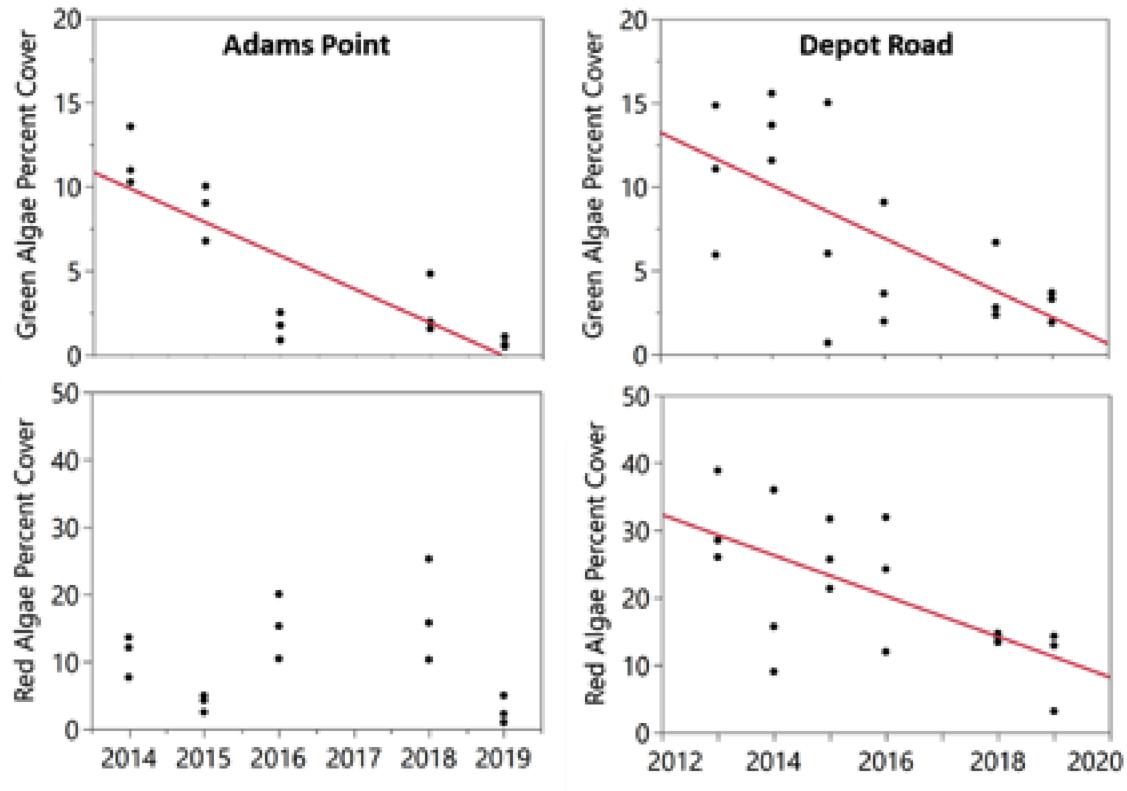



Figure 6. Percent cover of green and red algae over time at the two sites sampled annually: Adams Point and Depot Road. Data were averaged over elevation for each of the three transects per site

loading (PREP 2017), these data indicate an increase in the process of eutrophication and declining health of the Estuary. The monitoring of eelgrass and seaweeds in 2019 have found increases in eelgrass (Barker 2020) accompanied by declines in bloom-forming red and green seaweeds, suggesting improved conditions in the Estuary with respect to eutrophication (Wallace and Gobler 2015, Lee et al. 2019).

Seaweed abundance varied based on location in the estuary and elevation. Reds were most abundant at low elevations (≤1 m above MLLW), but greens occurred at all sampling elevations (Figure 7). Brown algae were scarce at MLLW (likely due to less exposed rocks available for holdfast attachment at the lowest intertidal elevations), but abundant at all other elevations and consistently dominated the 1.0 m and 1.5 m elevations at Adams Point and Four Tree Island. Red seaweed appeared to be more prevalent in Great Bay than other parts of the estuary.

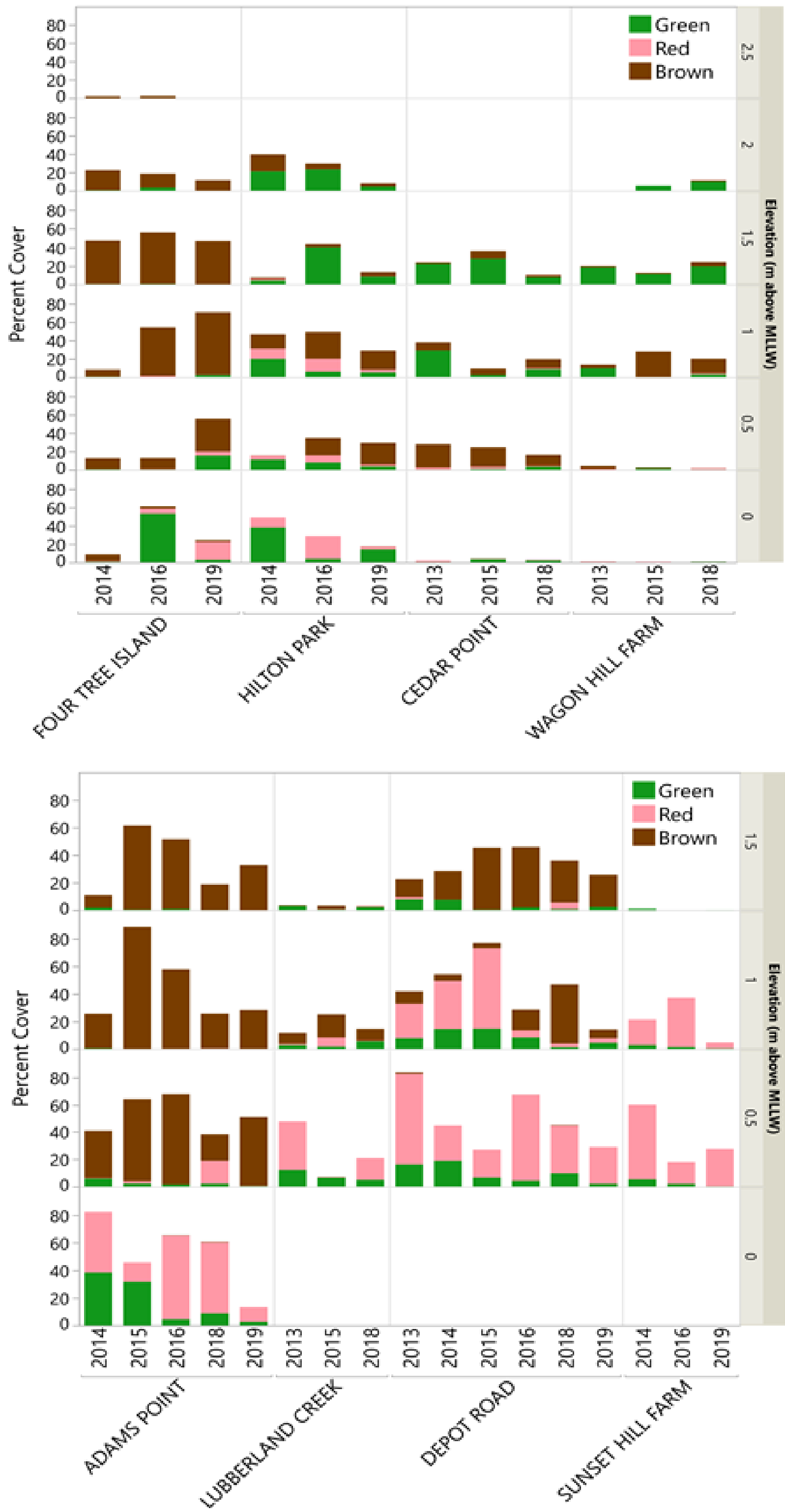



Figure 7. Percent cover of seaweed by elevation averaged over the three transects per site. Lowest sample elevation at Sunset Hill Farms was actually 0.75 m (not 0.5) above MLLW.

*Subtidal Seaweed and Eelgrass Abundance*

Subtidal monitoring was first integrated into the sampling scheme in 2018 and was expanded significantly in 2019 to include 3 replicate samples consisting of 9 subsamples each per site. In 2018, it was determined that subtidal photographs to capture the cover of algae and seagrass within quadrats would not work due to poor, unpredictable light conditions (Figure 9 a-b). Once the camera was close enough to make an estimate of cover, it was too close and only captured a portion of the 0.25m$_2$ sampling frame (Figure 9 c-f). In 2019, an alternative approach took photographs remotely at nine stations using a GoPro video camera and selecting frames just as the apparatus began to disturb the bottom, yielding an image of the benthic cover (Figure 10 a-i). These still images of the bottom flora cannot be compared with individual estimates of the quadrat cover by snorkel because they are in slightly different locations, but the averages of the nine subsamples can be compared.

In 2019, red seaweed was the dominant group at Depot Road, but seagrass dominated all other subtidal sites (Figure 11). Green seaweed abundance was low at all sites in 2019 relative to previous observations (Cianciola 2014). Biomass (Figure 11a) and percent cover (Figure 11b) of eelgrass were greatest at Sunset Hill Farm and lowest at Depot Road. Total percent cover of all plants and seaweed at subtidal sites ranged from 15% at Adams Point to 68% at Sunset Hill Farm in 2019 (Figure 11b). Sites with the highest percent cover and biomass of red and green seaweed had the lowest abundance of eelgrass. Since 2018 had only one replicate per site, it is difficult to confidently assess differences between years, but Depot Road appeared to have less red and green seaweed in 2019. Stem length of eelgrass was higher for reproductive stems than vegetative stems, and overall length of stems appeared to be highest at Adams Point (Figure 11c).

Seaweed abundance was relatively low at SeagrassNet sites in 2019 (Figure 12) compared to our subtidal seaweed sampling areas. Total seaweed biomass was over 4.5 times higher at Fort Foster than at Great Bay, and red seaweed had the highest biomass out of all the groups at both sites. Clear water and holdfasts allowed long-lived brown seaweeds to be more common at Fort Foster (including kelps as well as *Ascophyllum* and *Fucus* species) than in Great Bay, which had only a tube-forming diatom, *Berkeleya rutilans,* and only in the spring. The red seaweed in Great Bay was dominated by the invasive *Agarophyton vermiculophyllum* while at Fort Foster it was the invasive *Dasysiphponia japonica*. When compared with the four subtidal seaweed collections in Great Bay, the SeagrassNet sites had similar amounts of seaweeds, with generally more red than green biomass (Figures 11 and 12). Note that both eelgrass and seaweed were more abundant (i.e., higher biomass per unit area) at Fort Foster compared to Great Bay. One possible explanation is that both eelgrass and seaweed are more light-limited in Great Bay.

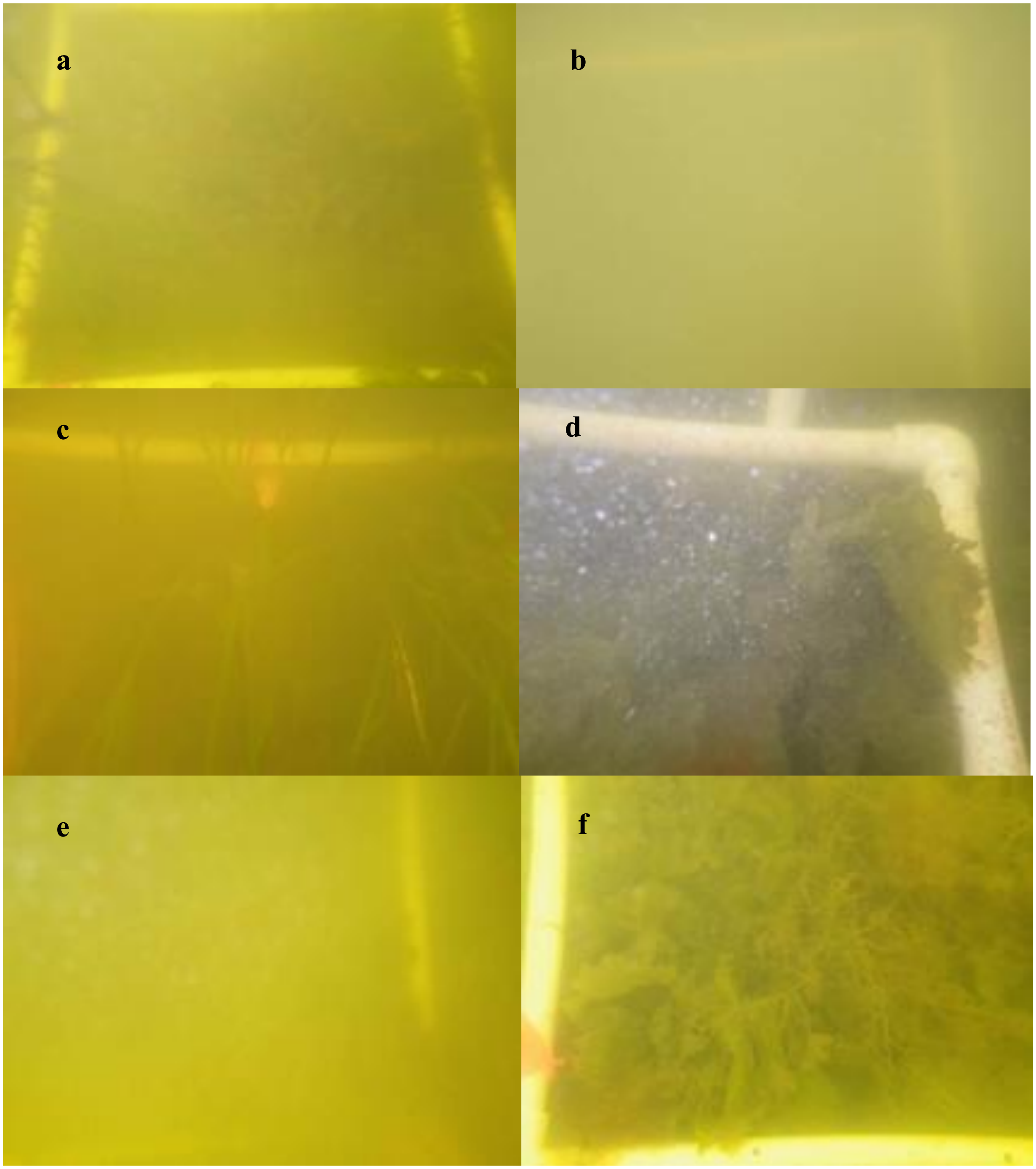



Figure 9. Subtidal quadrat photographs. At the whole quadrat level (0.5 by 0.5 meters) the frame is barely visible, much less the plants within (a, b). At the sub-quadrat level visibility is better, but assignment of percentage cover by species remains challenging, albeit more in some cases than in others (c-f).

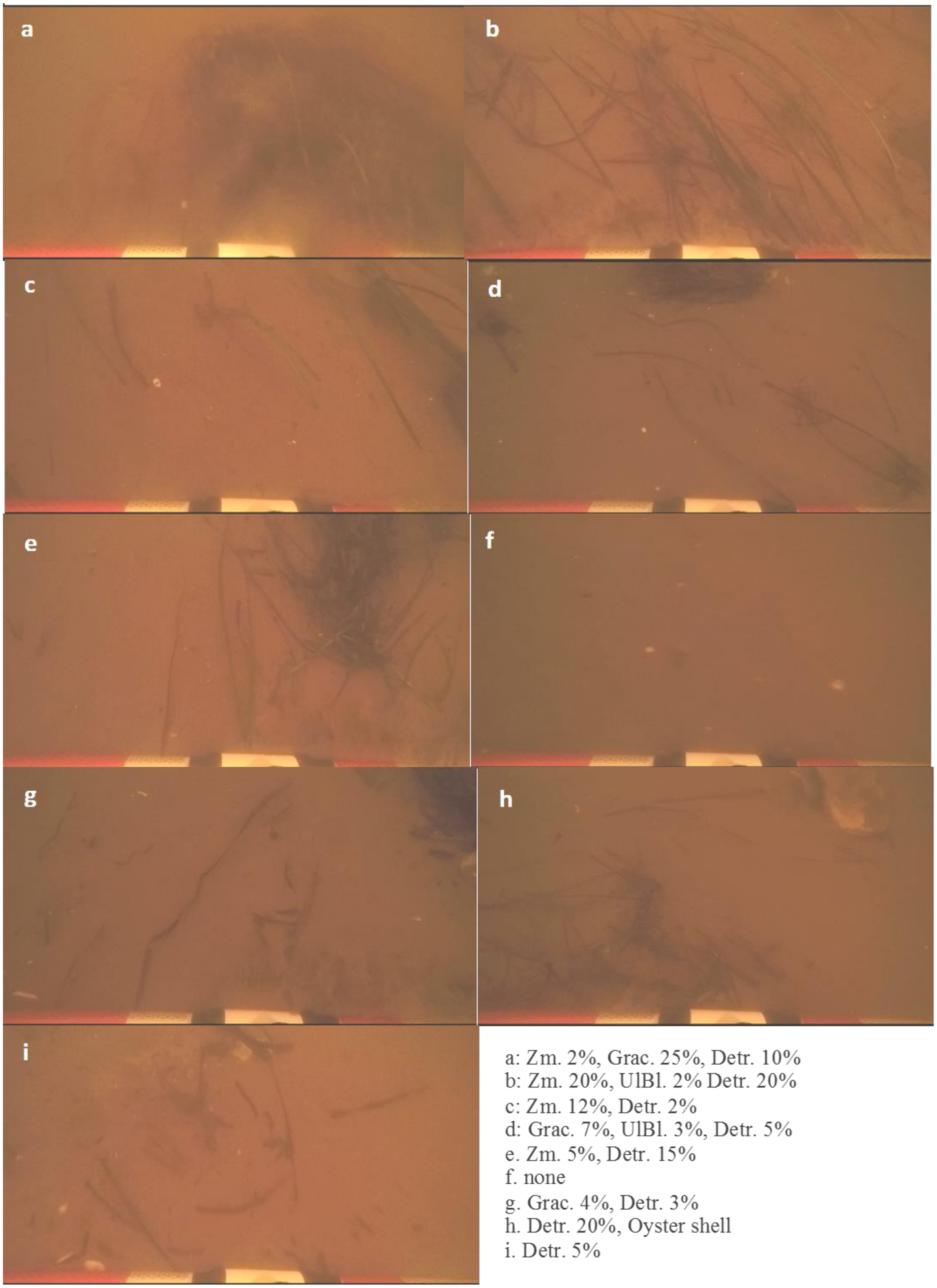



Figure 10. Underwater video grabs of the subtidal area at Adams Point, transect B. Key shows visual estimates of percentage cover for *Zostera marina* (Zm.), Gracilariaceae spp. (Grac.), *Ulva* blade forming species (UlBl.), and detritus (typically dead *Zostera*; abbreviated as Detr.).

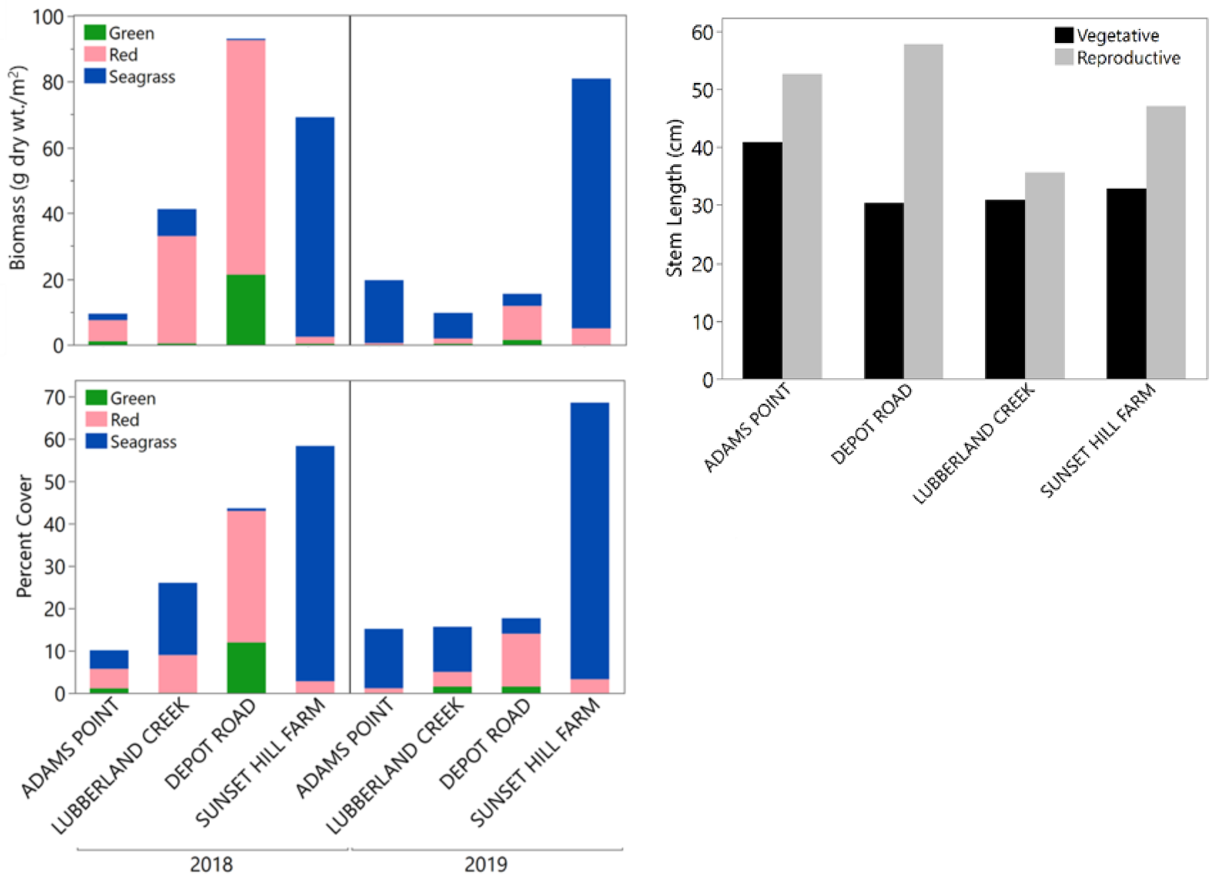



Figure 11. Subtidal biomass (a, Top left) and percent cover (b, Bottom) from 2018 showing the average of 9 quadrats per site (1 replicate) and 2019 showing the average of 27 quadrats per site (3 replicates). Data from August and October were averaged. Length of vegetative and reproductive stems in 2019 (c, Top, right).

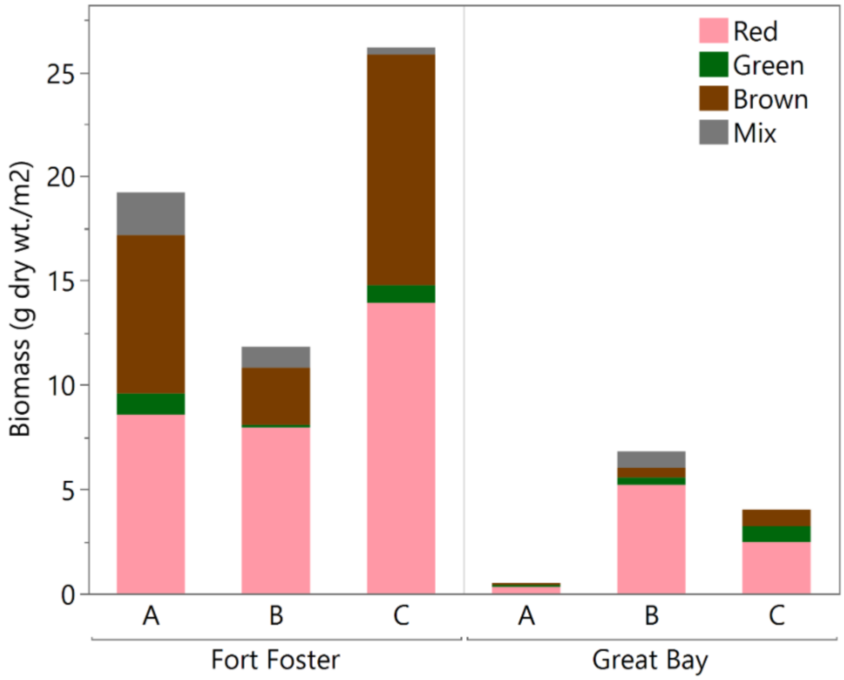
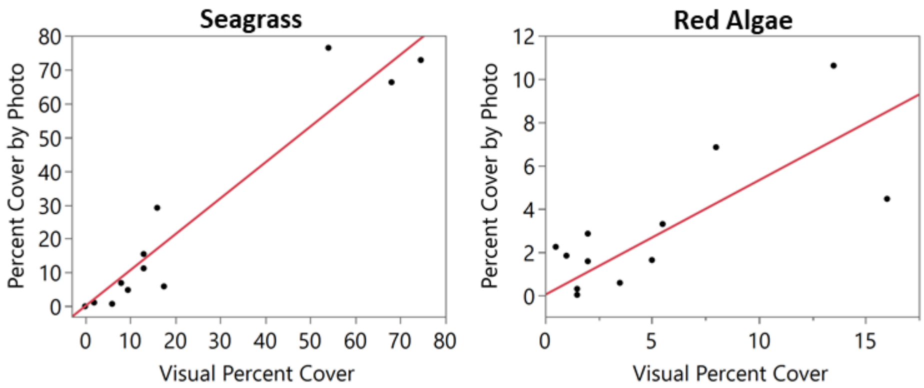



Figure 12. Biomass of seaweed collected from SeagrassNet plots at Fort Foster, Maine and Great Bay, New Hampshire in 2019. Weights were averaged over sampling period (spring, summer, fall in Great Bay; Summer and fall for Fort Foster) for each transect (A,B,C). "Mix" includes multiple types of seaweed that were entwined and could not be separated. Great Bay transect C could not be located and was not sampled for the fall sampling event.

*Photo vs In-situ Percent Cover*

A comparison of percent cover obtained from photographs with visual percent cover recorded in situ showed mixed results (Figure 13). For seagrass, there was a strong correlation and nearly a 1:1 relationship between the two methods (y=1.063x, $r^2$=0.951). There was also a strong correlation for red seaweed but percent cover by photo was only around half of visual percent cover ($r^2$=0.775, y=0.530x), suggesting a correction factor may need to be applied. There was no relationship between percent cover obtained from the two methods for green seaweed, probably because there were few observations and the average of most samples was 0-1% (Figure 13).



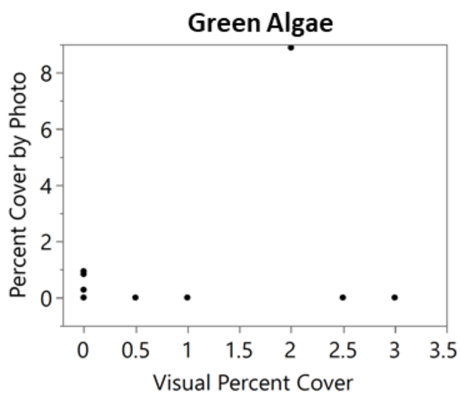
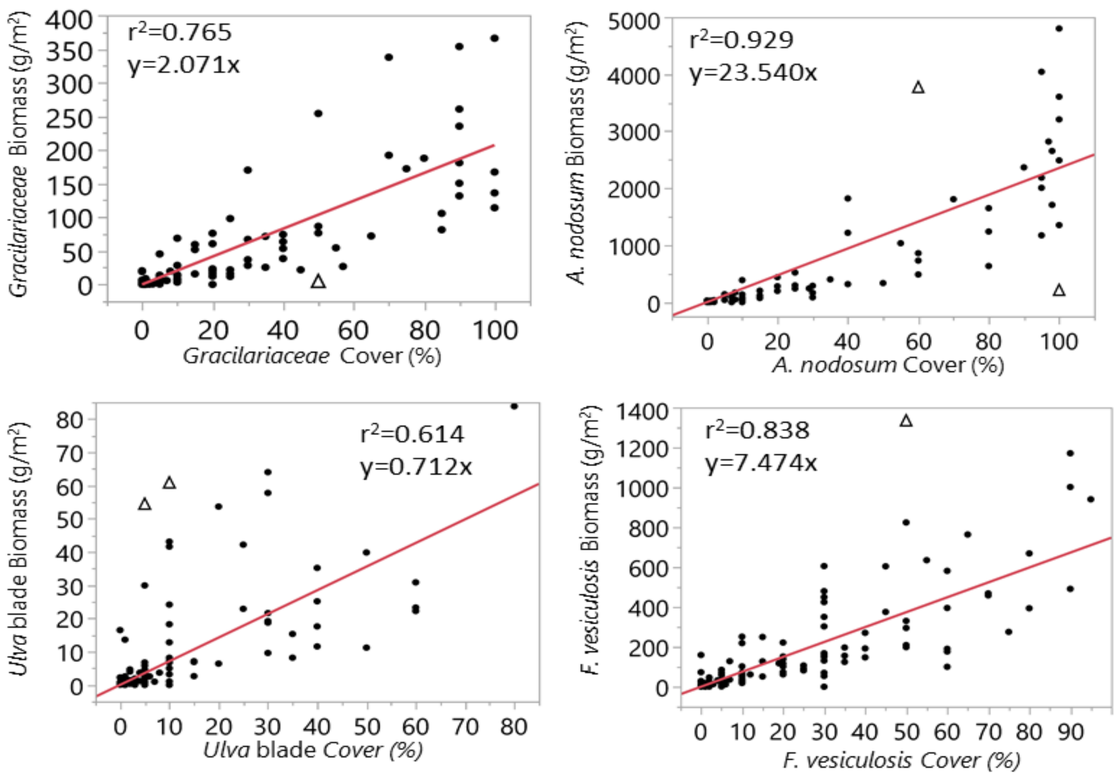




Figure 13. Visual percent cover recorded in situ by snorkel versus cover determined using underwater photos. Data from August and October were averaged.

*Percent Cover vs. Biomass*

Correlations were used to estimate plant biomass based on percent cover data. For samples collected from intertidal areas, we found strong correlations between percent cover and biomass for Gracilariaceae *spp*., *Ascophyllum nodosum*, and *Fucus vesiculosus* when outliers were removed (Figure 14). The correlation for *Ulva* blade was weaker ($r^2$ = .614), possibly because any sediment that had not been properly removed by rinsing would have a proportionally larger effect on *Ulva* biomass measurements than on some of the heavier species due to its flat, thin sheets. Although *D. japonica* sample size was small (n=13), there was a strong correlation between percent cover and biomass ($r^2$ = .746). While there is substantial variability, the high $r^2$ values indicate that percent cover can be used to estimate biomass. Correlations were also strong for subtidal samples, despite the difficulty associated with assessing percent cover while vegetation was submerged. Correlations were strong for the three dominant taxa: Gracilariaceae *spp*., *Z. marina*, and *Ulva* spp. (Figure 14). For less common species, more samples are necessary to correlate percent cover with biomass.



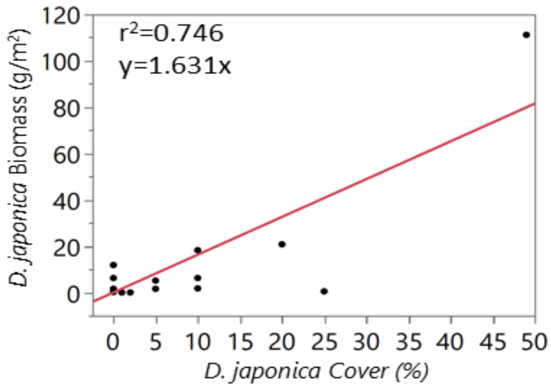
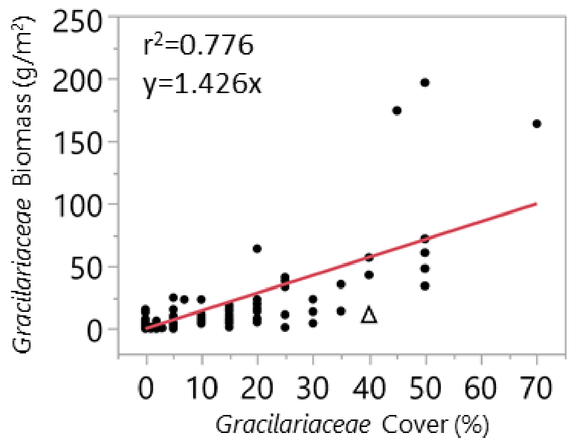
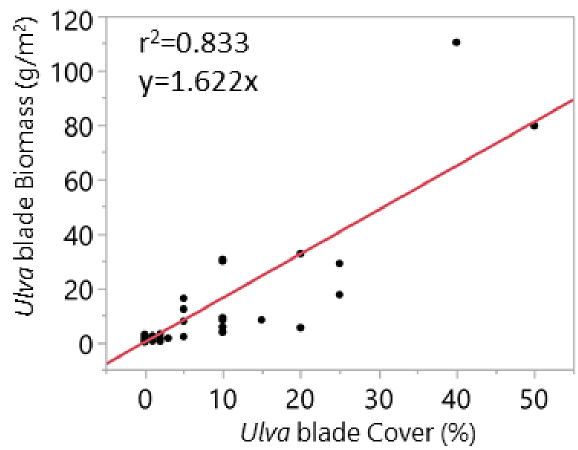




Figure 14. Correlations between intertidal percent cover and biomass (dry weight) from 0.0625 m2 quadrats for all sampling years. Gracilariaceae includes both *A. vermiculophylla* and *G. tikvahie*. Ulva blade includes *U. lactuca*, *U. australis*, and *U. rigida*. All biomass data were square root transformed for statistical analysis except for *Ulva* blade. Shown here are untransformed data. Triangles show outliers identified using Huber Robust Fit method (K=4; JMP 2018) that were excluded from the analysis. The number of outliers excluded for each group are: *Graciliaceae* = 2, *A. nodosum* =3, *Ulva* blade =4, *F. vesiculosis* =1, and *D. japonica* =0



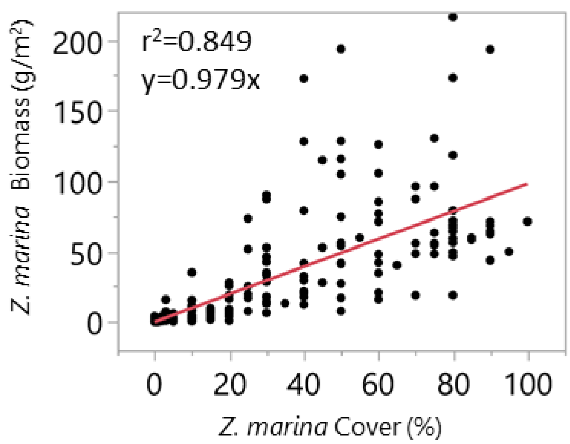




Figure 15. Correlations between subtidal percent cover and biomass (dry weight) from 0.25 m$_2$ quadrats for all sampling years. *Gracilariaceae* includes both *A. vermiculophyllum* and *G. tikvahie*. *Ulva* blade includes *U. lactuca*, *U. australis*, and *U. rigida*. All biomass data were square root transformed for statistical analysis but untransformed data are shown. Triangles show outliers identified using Huber Robust Fit method (K=4; JMP 2018) that were excluded from the analysis (3 outliers for *Gracilariaceae* only )

## Summary and Conclusions

Vegetation was assessed in 2019 at five intertidal sites and four subtidal locations by extending the center intertidal transect at all four sites in the Great Bay, to determine long-term trends in abundance. Within intertidal areas, we found that the percentage cover of green algae has decreased since 2014 at Adams Point and cover of both green and red algae has decreased at Depot Road. Substantial reductions in nitrogen released from wastewater treatment plants may have contributed to declines in seaweed observed at these two intertidal locations in Great Bay, but declines may also be related to annual changes in light, temperature or salinity for these areas. Percentage cover and biomass sampling at four subtidal sites in Great Bay showed moderate levels of seaweed compared to 2018 and an inverse correlation with eelgrass for both biomass and cover. Since many species of red and green algae are considered nuisance organisms because of their potential to contribute to eutrophication and foul fishing gear, continued decreases could benefit the fishing community and signal improvements in estuarine health. However, decreases in cover of reds and greens were only significant at 2 of the 8 sites. and additional monitoring is required to determine whether declines will continue as land use changes, water temperatures warm, and introduced species potentially become more established. In 2019 we collected and analyzed seaweed biomass from SeagrassNet sites, which was similar to seaweed abundance found in eelgrass beds at our four subtidal sampling sites in Great Bay.

Biomass data of algae and eelgrass were also collected in 2019 and added to the existing data set to strengthen correlations between percent cover and biomass. Subtidal sampling was piloted in 2018 and fully integrated into the sampling scheme in 2019. Our approach to subtidal sampling appeared highly successful based on the strong correlations between percent cover and biomass. Obtaining a photographic record of these subtidal quadrats proved difficult using a hand-held camera. Better results assessing a standardized area of bottom were obtained by video camera. Initial comparisons between percent cover of seaweed and seagrass determined on site using snorkel *versus* those recorded from photos showed that photos can be used to measure percent cover of seagrass. Continued sampling in subtidal areas will allow us to gain a more comprehensive understanding of changes in seaweed and eelgrass communities over time.

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## Appendices

Appendix A: Raw data of cover and biomass

Appendix B: List of photographic images by site and date

Appendix C: Site descriptions

Appendix D: Quality Assurance / Quality Control document

## Appendix A

Table A1. Intertidal plant cover (%) data measured in 0.25m2 quadrat.

| Date | Site | Transect | Elev | Agarophyton vermiculophyllum | ASNO f. scorpioides | Ascophyllum nodosum | Atriplex patula | Chondrus crispus | Callithamnion corymbosum | Chaetomorpha linum | Cladophora sericea | Dasysiphonia japonica | Ectocarpus fasciculatus | Fucus spiralis | Fucus vesiculosus | Unknown Gracilaria spp | Total Gracilariaceae | Hildenbrandia rubra | Juncus gerardii | Limonium nashii | Percursaria percusa | Pylaiella littoralis | Polysiphonia | Porphyra | Rhizoclonium riparium | Ruppia maritima | Spartina alterniflora | Spartina patens | Salicornia depressa | Suaeda linearis | Ulva Blade | Ulva intestinalis | Ulva prolifera | Ulva Tube | Vaucheria | Unk. Filamentous green | Unk. Red | Wrack | GREEN | RED | BROWN | Yellow-Green | MARSH PLANTS | Notes: |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 6/17/19 | 4TI | A | 0 |5|||||||||||1||5||||||||||||||1|||||||||0.5|5|1|0|0|FUVE detached|
| 6/17/19 | 4TI | A | 0.5 |3||5||||||||||88||3||||||||1|||||||||||||||||0|3.5|93|0|0||
| 6/17/19 | 4TI | A | 1 |||2||||||||||98||0|1||||||||||||||||||||||0|0.5|100|0|0||
| 6/17/19 | 4TI | A | 1.5 |||||||||||||25||0|||||||||||20||||||||||||||0|0|25|0|20||
| 6/17/19 | 4TI | A | 2 |||||||||||4||||0|||||||||||85||1|||||||||||0|0|4|0|86||
| 6/17/19 | 4TI | A | 2.5 ||||||||||||||||0||95||||||||||||||||||||5|0|0|0|0|95||
| 6/17/19 | 4TI | B | 0 |30|||||||||||1||30||||||||1||||||||10|||||1|||11|30.5|1|0|0||
| 6/17/19 | 4TI | B | 0.5 |3||||||||||||||3|||||||||||||||||77|77|||||77|3|0|0|0||
| 6/17/19 | 4TI | B | 1 ||25||||||20|||||20||0|||||||||||10|||||||||||||20|0|45|0|10||
| 6/17/19 | 4TI | B | 1.5 ||4|22|||||||||||40||0|||||||||||30|||||||||||||0|0|66|0|30||
| 6/17/19 | 4TI | B | 2 ||2|||||||||||2||0|||||||||||75||2|||||||||||0|0|4|0|77||
| 6/17/19 | 4TI | B | 2.5 ||||1|||||||||||0|||||||||||||||||||||||70|0|0|0|0|0.5||
| 6/17/19 | 4TI | C | 0 |3||||2|||||5||2||3|||||||||||||||||||||||0|5|7|0|0||
| 6/17/19 | 4TI | C | 0.5 |2|||||||||||45||2|||||||||||||||||||||||0|2|45|0|0||
| 6/17/19 | 4TI | C | 1 |1|||||||||||85||1|||||||||||10|||||||||||||0|1|85|0|10||
| 6/17/19 | 4TI | C | 1.5 ||22|3|||||||||||40||0|||||||||||30|||||||||||||0|0|65|0|30||
| 6/17/19 | 4TI | C | 2 ||15|||||||||||1||0|||3||||||||60||2||||||5||||0|0|16|5|65||
| 6/17/19 | 4TI | C | 2.5 ||||||||||||||||0||85|||||||||||||1|1||||||1||||0|0|0|1|86||
| 6/18/19 | HP | A | 0 ||||||||||||||||0|||||1|||||||||||1|||2|||||2.5|0|1|0|0||
| 6/18/19 | HP | A | 0.5 |||18||||||||||||0|||||1|||||||||||||1|1|2|||||2|0|19|0|0||
| 6/18/19 | HP | A | 1 |||75||||||2|||||7|0.5|0.5||||||||||||||||1|||||||||2.5|0.5|82|0|0||
| 6/18/19 | HP | A | 1.5 ||||||||||||||||0|||||3||||||||15|||||||||||10|||10|0|3|0|15||
| 6/18/19 | HP | A | 2 ||||||||||||||||0||||17||||||18||||10|||||||||||||35|0|0|0|10|data sheet says 35 fil. green, later ID'd as R|
| 6/18/19 | HP | B | 0 |1||||||||||||||1||||||||||||||||||40||||15|||1|||56|1|0|0|0||
| 6/18/19 | HP | B | 0.5 |1||||||||||||||1|||||||||||||||||||15|||||15|1|0|0|0||
| 6/18/19 | HP | B | 1 ||||||||||||||||0||||||||||||||||||1||||2|||||3|0|0|0|0||
| 6/18/19 | HP | B | 1.5 ||||||||||||||||0||||||||||60||||||||||||||||60|0|0|0|0|marsh scarp (eroded)|
| 6/18/19 | HP | B | 2 ||||||||||||||||0||||||||||5||||25|||||||||15||||5|0|0|15|25||
| 6/18/19 | HP | C | 0 |1||||||||||||||1||||||||||||||||||10||||30|||||40|1|0|0|0||
| 6/18/19 | HP | C | 0.5 |||3|||||||||||||0|||||||||||||||||||||5|5|||||5|0|3|0|0||
| 6/18/19 | HP | C | 1 |||||3|||||||3||0||||||||||||||||||4|5|25|30|||||34|3|3|0|0||
| 6/18/19 | HP | C | 1.5 ||||||||||||||||0||||||||||1||||2|||||||||||||1|0|0|0|2|most bare marsh edge|
| 6/18/19 | HP | C | 2 ||||||||||||||||0|||||||||||||80|||||||||10||||0|0|0|10|80||
| 6/17/19 | AP | A | 0 ||||||||||||||||0||||||||||||||||||1|||||||||1|0|0|0|0|says "seaward" on data sheet|
| 6/17/19 | AP | A | 0.5 |||13||||||||||65||0||||||||||||||||||2|||||||||2|0|78|0|0||
| 6/17/19 | AP | A | 1 |||||||||||||1||0|||||||||||||||||||||||||0|0|1|0|0||
| 6/17/19 | AP | A | 1.5 |||6||||||||||2||0|||||||||||42|||||||||||||0|0|8|0|42|boulder 10%.|
| 6/17/19 | AP | B | 0 |15|||||||10||||||||15||||||||||||||||||3|||||||||13|15|0|0|0||
| 6/17/19 | AP | B | 0.5 |||75||||||||||||0|||||||||||||||||||||||||0|0|75|0|0||
| 6/17/19 | AP | B | 1 |||1||||||||||1||0|||||||||||||||||||||||||0|0|1|0|0||

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 6/17/19 | AP | B | 1.5 | | | 22 | | | | | | | | | 3 | | 0 | | | | | | | | | | | | | | | | | | | | | | 0 | 0 | 25 | 0 | 0 | |
| 6/17/19 | AP | C | 0 | 1 | | | | | | 3 | | | | | | | 1 | | | | | | | | | | | | | 3 | | | | 1 | | | 1 | | 6 | 1 | 0 | 1 | 0 | |
| 6/17/19 | AP | C | 0.5 | | | | | | | 1 | | | | | 1 | | 0 | | | | | | | | | | | | | | | | | | | | | | 1 | 0 | 1 | 0 | 0 | |
| 6/17/19 | AP | C | 1 | 1 | | 61 | | | | | | | | | 3 | | 1 | | | | | | | | | | | | | | | | | | | | | | 0 | 1 | 64 | 0 | 0 | |
| 6/17/19 | AP | C | 1.5 | | | 87 | | | | | | | | | 3 | | 0 | | | | | | | | | | 5 | | | | | | | | | | | | 0 | 0 | 90 | 0 | 5 | |
| 6/17/19 | DR | A | 0.5 | | | | | | | | | | | | | 0.5 | 0.5 | | | | | | | | | | | | | | 5 | | | | | | | | 5 | 0.5 | 0 | 0 | 0 | |
| 6/17/19 | DR | A | 1 | | | 15 | | | | | | | | | | 1 | 1 | | | | | | | | | | | | | | 7 | | | | | | | | 7 | 1 | 15 | 0 | 0 | |
| 6/17/19 | DR | A | 1.5 | | | 30 | | | | | | | | | 15 | | 0 | | | | | | | | | | | | | | 2 | | | | | | | | 2 | 0 | 45 | 0 | 0 | |
| 6/17/19 | DR | B | 0.5 | | | | | | | | | | | | | 0.5 | 0.5 | | | | | | | | | | | | | | 3 | | | | | | | 0.5 | 3 | 0.5 | 0 | 0 | 0 | |
| 6/17/19 | DR | B | 1 | | | 1 | | | | | | | | | | 0.5 | 0.5 | | | | | | | | | | | | | | 2 | | | | | | | | 2 | 0.5 | 0.5 | 0 | 0 | |
| 6/17/19 | DR | B | 1.5 | | | | | | | | | | | 5 | | | 0 | | | | | | | | | | 69 | | | | 2 | | | 4 | | | | | 6 | 0 | 5 | 0 | 69 | |
| 6/17/19 | DR | C | 0.5 | | | | | | | | | | | | | 1 | 1 | | | | | | | | | | | | | | 1 | | | | | | | 0.5 | 1 | 1 | 0 | 0 | 0 | |
| 6/17/19 | DR | C | 1 | | | | | | | | | | | 6 | | | 0 | | | | | | | | | | 15 | | | | 3 | | 15 | 15 | | | | | 18 | 0 | 6 | 0 | 15 | |
| 6/17/19 | DR | C | 1.5 | | | | | | | | | | | 20 | | | 0 | | | | | | | | | | 53 | | | | 1 | | 1 | 1 | | | | | 2 | 0 | 20 | 0 | 53 | location estimated, based on other plots. PV |
| 6/19/19 | SHF | A | 0.75 | | | | | | | | | | | | | 3 | 3 | | | | | | | | | 1 | | | | | | | | | | | | | 0 | 3 | 0 | 0 | 0 | elevation: -.38 |
| 6/19/19 | SHF | A | 1.0 | | | | | | | | | | | | | 0.5 | 0.5 | | | | | | | | | | | | | | | | | | | | | | 0 | 0.5 | 0 | 0 | 0 | elevation: -.066 |
| 6/19/19 | SHF | A | 1.5 | | | | | | | | | | | | | | 0 | | | | | | | | | | 85 | | | | 1 | | | | | | | | 0.5 | 0 | 0 | 0 | 85 | elevation: .443 |
| 6/19/19 | SHF | B | 0.75 | | | | | | | | | | | | | 1 | 1 | | | | | | | | | 1 | | | | | | | | | | | | | 0 | 1 | 0 | 0 | 0 | elevation: -.378 |
| 6/19/19 | SHF | B | 1.0 | | | | | | | | | | | | | 1 | 1 | | | | | | | | | | | | | | | | | | | | | | 0 | 1 | 0 | 0 | 0 | el: -.047 |
| 6/19/19 | SHF | B | 1.5 | | | | | | | | | | | | | | 0 | | | | | | | | | | 90 | | | | | | | | | | | | 0 | 0 | 0 | 0 | 90 | el: .537 |
| 6/19/19 | SHF | C | 0.75 | | | | | | | | | | | | | 2 | 2 | | | | | | | | | | | | | | | | | | | | | | 0 | 2 | 0 | 0 | 0 | ele: -.376 |
| 6/19/19 | SHF | C | 1.0 | | | | | | | | | | | | | 5 | 5 | | | | | | | | | | | | | | 3 | | | | | | | | 3 | 5 | 0 | 0 | 0 | el: -.111 |
| 6/19/19 | SHF | C | 1.5 | | | | | | | | | | | | | | 0 | | | | | | | | | | 85 | | | | | | | | | | | | 0 | 0 | 0 | 0 | 85 | el: .410 |
| 8/1/19 | DR | A | 0.5 | | | | | | | | | | | | | 30 | 30 | | | | | | | | | | | | | | 1 | | | | | | | | 1 | 30 | 0 | 0 | 0 | |
| 8/1/19 | DR | A | 1 | | | 2 | | | | | | | | | | 1 | 1 | | | | | | | | | | | | | | | | | | | | | 3 | 0 | 1 | 2 | 0 | 0 | |
| 8/1/19 | DR | A | 1.5 | | | 25 | | | | | | | | | | | 0 | | | | | | | | | | | | | | | | | | | | | | 0 | 0 | 25 | 0 | 0 | |
| 8/1/19 | DR | B | 0.5 | | | | | | | | | | | | | 15 | 15 | | | | | | | | | | | | | | 7 | | | | | | | | 7 | 15 | 0 | 0 | 0 | |
| 8/1/19 | DR | B | 1 | | | | | | | | | | | | | 1 | 1 | | | | | | | | | | | | | | 1 | | | | | | | | 0.5 | 1 | 0 | 0 | 0 | |
| 8/1/19 | DR | B | 1.5 | | | | | | | | | | | | 17 | | 0 | | | | | | | | | | 30 | | | | 4 | | | 7 | | | | | 11 | 0 | 17 | 0 | 30 | |
| 8/1/19 | DR | C | 0.5 | | | | | | | | | | | | | | 0 | | | | | | | | | | | | | | | | | | | | | | 0 | 0 | 0 | 0 | 0 | |
| 8/1/19 | DR | C | 1 | | | | | | | | | | | | 7 | 13 | 13 | | | | | | | | | | 20 | | | | 2 | | | 10 | | | | | 12 | 13 | 7 | 0 | 20 | |
| 8/1/19 | DR | C | 1.5 | | | | | | | | | | | | 18 | | 0 | | | | | | | | | | 65 | | | | | | | | | | | 1 | 0 | 0 | 18 | 0 | 65 | |
| 8/1/19 | AP | A | 0 | | | | | | | | | | | | | 3 | 3 | | | | | | | | | | | | | | 3 | | | | | | | | 3 | 3 | 0 | 0 | 0 | |
| 8/1/19 | AP | A | 0.5 | | | | | | | | | | | | 3 | | 0 | | | | | | | | | | | | | | | | | | | | | | 0 | 0 | 3 | 0 | 0 | |
| 8/1/19 | AP | A | 1 | | | 85 | | | | | | | | | 5 | | 0 | | | | | | | | | | | | | | | | | | | | | 10 | 0 | 0 | 90 | 0 | 0 | |
| 8/1/19 | AP | A | 1.5 | | | 60 | | | | | | | | | | | 0 | | | | | | | | | | | | | | | | | | | | | | 0 | 0 | 60 | 0 | 0 | |
| 8/1/19 | AP | B | 0 | | | | | | | | | | | | | 25 | 25 | | | | | | | | | | | | | | | | | | | | | | 0 | 25 | 0 | 0 | 0 | |
| 8/1/19 | AP | B | 0.5 | | | 35 | | | | | | | | | 45 | | 0 | | | | | | | | | | | | | | | | | | | | | | 0 | 0 | 80 | 0 | 0 | |
| 8/1/19 | AP | B | 1 | | | 10 | | | | | | | | | | | 0 | | | | | | | | | | | | | | | | | | | | | | 0 | 0 | 10 | 0 | 0 | |
| 8/1/19 | AP | B | 1.5 | | | 10 | | | | | | | | | 20 | | 0 | | | | | | | | | | | | | | | | | | | | | | 0 | 0 | 30 | 0 | 0 | |
| 8/1/19 | AP | C | 0 | | | | | | | | | | | | | 4 | 4 | | | | | | | | | | | | | | 1 | | | | | | | | 0.5 | 4 | 0 | 0 | 0 | |
| 8/1/19 | AP | C | 0.5 | | | 3 | | | | | | | | | 40 | | 0 | | | | | | | | | | | | | | | | | | | | | | 0 | 0 | 43 | 0 | 0 | |
| 8/1/19 | AP | C | 1 | | | | | | | | | | | | 10 | | 0 | | | | | | | | | | | | | | | | | | | | | | 0 | 0 | 10 | 0 | 0 | |
| 8/1/19 | AP | C | 1.5 | | | | | | | | | | | | 1 | | 0 | | | | | | | | | | 15 | | | | | | | | | | | | 0 | 0 | 1 | 0 | 15 | |
| 8/1/19 | HP | A | 0 | | | | | | | | | | | | | | 0 | | | | | | | | | | | | | | 1 | | | | | | | 1 | 1 | 0 | 0 | 0 | 0 | |
| 8/1/19 | HP | A | 0.5 | | | 20 | | | | | | | | | | | 0 | | | | | | | | | | | | | | | | | | | 0.5 | | 0.5 | 0.5 | 0 | 20 | 0 | 0 | |

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 8/1/19 | HP | A | 1 | | 12 | | | 5 | 5 | 5 | | | | | | | 1 | | | | | 0.5 | 0.5 | 5 | 17 | 0 | 0 | |
| 8/1/19 | HP | A | 1.5 | | | | | | 1 | 1 | | | | 0.5 | | | 1 | | 2 | | | | 0.5 | 1 | 0 | 2 | 0.5 | |
| 8/1/19 | HP | A | 2 | | 1 | | | | | 0 | | | | 30 | | | | | 35 | | | | 0 | 0 | 0.5 | 35 | 30 | ASNO drift |
| 8/1/19 | HP | B | 0 | | | | | | 5 | 5 | | | | | | | 10 | 12 | | | | | 22 | 5 | 0 | 0 | 0 | |
| 8/1/19 | HP | B | 0.5 | | | | | | 3 | 3 | | | | | | | 3 | | | 3 | | 1 | 6 | 3 | 0 | 0 | 0 | |
| 8/1/19 | HP | B | 1 | | | | | 1 | 4 | 4 | | | | | | | 1 | | | 0.5 | 0.5 | 2 | 1.5 | 4.5 | 1 | 0 | 0 | unknown red either DAJA or CACO |
| 8/1/19 | HP | B | 1.5 | | | | | | 0.5 | 0.5 | | | | | | | | | | 0.5 | | | 0.5 | 0.5 | 0 | 0 | 0 | peat block 40% |
| 8/1/19 | HP | B | 2 | | 15 | | | 8 | | 0 | | | | 65 | | | | | 8 | | | 2 | 0 | 0 | 23 | 8 | 65 | |
| 8/1/19 | HP | C | 0 | | | 1 | | | 2 | 2 | | | | | | | 1 | | | 0.5 | 4 | | 1 | 7 | 0 | 0 | 0 | |
| 8/1/19 | HP | C | 0.5 | | 85 | | | | | 0 | | | | | | | | | | 1 | | 0.5 | 1 | 0 | 85 | 0 | 0 | Ulva and Grac buried |
| 8/1/19 | HP | C | 1 | | | | | | | 0 | | | | | | | 3 | | | | | 90 | 3 | 0 | 0 | 0 | 0 | |
| 8/1/19 | HP | C | 1.5 | | 20 | | | 4 | | 0 | | | | | | | 1 | | | 0.5 | | | 1 | 0 | 24 | 0 | 0 | |
| 8/1/19 | HP | C | 2 | 2 | | | | 3 | | 0 | | | | 90 | | | | | | 1 | | | 1 | 0 | 5 | 0 | 90 | |
| 8/6/19 | 4TI | A | 0 | | | 1 | | | | 0 | | | | | | | 1 | | | | | | 0.5 | 1 | 0 | 0 | 0 | |
| 8/6/19 | 4TI | A | 0.5 | | | | | 40 | 8 | 8 | | | | | | | | | | | | | 0 | 8 | 40 | 0 | 0 | |
| 8/6/19 | 4TI | A | 1 | | 7 | | | 90 | | 0 | | | | | | | | | | | | | 0 | 0 | 97 | 0 | 0 | Rock 1% |
| 8/6/19 | 4TI | A | 1.5 | | 10 | | | 12 | | 0 | | | | 60 | | | | | | | | | 0 | 0 | 22 | 0 | 60 | |
| 8/6/19 | 4TI | A | 2 | | 1 | | | 3 | | 0 | | | | 80 | | 1 | | | | | | 1 | 0 | 0 | 3.5 | 0 | 80.5 | |
| 8/6/19 | 4TI | A | 2.5 | | | | | | | 0 | 60 | | | | 20 | | | | | | | 20 | 0 | 0 | 0 | 0 | 80 | |
| 8/6/19 | 4TI | B | 0 | | | 4 | | | 25 | 25 | | 6 | | | | | 1 | | | | | | 0.5 | 35 | 0 | 0 | 0 | Porphyra drift |
| 8/6/19 | 4TI | B | 0.5 | | | | | | 15 | 15 | | | | | | | | | | 60 | | | 60 | 15 | 0 | 0 | 0 | |
| 8/6/19 | 4TI | B | 1 | | 3 | | | 5 | | 0 | | | | 10 | | | | | | | | | 0 | 0 | 8 | 0 | 10 | |
| 8/6/19 | 4TI | B | 1.5 | | 3 | | | 15 | | 0 | | | | 15 | | | | | | | | | 0 | 0 | 18 | 0 | 15 | |
| 8/6/19 | 4TI | B | 2 | | 5 | | | 5 | | 0 | | | | 60 | 20 | 1 | | | | | | | 0 | 0 | 10 | 0 | 81 | |
| 8/6/19 | 4TI | B | 2.5 | | | | | | | 0 | | | | | 1 | | | | | | | 2 | 0 | 0 | 0 | 0 | 1 | |
| 8/6/19 | 4TI | C | 0 | | | | | 1 | 0.5 | 0.5 | | | | | | | | | | 20 | | | 20 | 0.5 | 1 | 0 | 0 | |
| 8/6/19 | 4TI | C | 0.5 | | | | | 45 | 5 | 5 | | | | | | | | | | 0.5 | | | 0.5 | 5 | 45 | 0 | 0 | |
| 8/6/19 | 4TI | C | 1 | | 25 | | | 59 | | 0 | | | | 15 | | | | | | | | | 0 | 0 | 84 | 0 | 15 | buried ASNO underneath |
| 8/6/19 | 4TI | C | 1.5 | | 72 | | | 3 | | 0 | | | | 25 | | | | | | | | | 0 | 0 | 75 | 0 | 25 | amphipods, 3 green crabs |
| 8/6/19 | 4TI | C | 2 | | 30 | | | 8 | | 0 | | | | 59 | | 1 | | | | | | | 0 | 0 | 38 | 0 | 60 | |
| 8/6/19 | 4TI | C | 2.5 | | | | | | | 0 | 63 | | | | 7 | | | | | | | 30 | 0 | 0 | 0 | 0 | 70 | Juncus recorded at 65.Changed to 63 to tota |
| 8/9/19 | SHF | A | 0.75 | | | | | | 2 | 2 | | | 1 | | | | | | | | | 1 | 0 | 2 | 0 | 0 | 0 | |
| 8/9/19 | SHF | A | 1.0 | | | | | | 5 | 5 | | | 1 | | | | | | | | | 20 | 0 | 5 | 0 | 0 | 0 | |
| 8/9/19 | SHF | A | 1.5 | | | | | | | 0 | | | | 50 | | | | | | | | 50 | 0 | 0 | 0 | 0 | 50 | |
| 8/9/19 | SHF | B | 0.75 | | | | | | 20 | 20 | | | 1 | | | | 1 | | | | | 10 | 0.5 | 20 | 0 | 0 | 0 | |
| 8/9/19 | SHF | B | 1.0 | | | | | | | 0 | | | | 90 | | | | | | | | | 0 | 0 | 0 | 0 | 90 | |
| 8/9/19 | SHF | B | 1.5 | | | | | | | 0 | | | | 80 | | | | | | | | | 0 | 0 | 0 | 0 | 80 | |
| 8/9/19 | SHF | C | 0.75 | | | | | | 2 | 2 | | | | | | | | | | | | 2 | 0 | 2 | 0 | 0 | 0 | |
| 8/9/19 | SHF | C | 1.0 | | | | | | 2 | 2 | | | | | | | | | | | | 3 | 0 | 2 | 0 | 0 | 0 | |
| 8/9/19 | SHF | C | 1.5 | | | | | | | 0 | | | | 90 | | | | | | | | | 0 | 0 | 0 | 0 | 90 | |
| 9/30/19 | DR | A | 0.5 | | | | | | 93 | 93 | | | | | | | 2 | | | | | 5 | 2 | 93 | 0 | 0 | 0 | |
| 9/30/19 | DR | A | 1 | | | | | 1 | 3 | 3 | | | | | | | | | | | | 2 | 0 | 3 | 1 | 0 | 0 | |
| 9/30/19 | DR | A | 1.5 | | 25 | | | 10 | | 0 | | | | | | | | | | | | 2 | 0 | 0 | 35 | 0 | 0 | |
| 9/30/19 | DR | B | 0.5 | | | | | | 98 | 98 | | | 2 | | | | | | | | | | 0 | 98 | 0 | 0 | 0 | |
| 9/30/19 | DR | B | 1 | | | | | | 1 | 1 | | | | | | | | | | | | 1 | 0 | 1 | 0 | 0 | 0 | |
| 9/30/19 | DR | B | 1.5 | | | | 30 | | | 0 | | | | 30 | | | | | | | | | 0 | 0 | 30 | 0 | 30 | |
| 9/30/19 | DR | C | 0.5 | | | | | | 2 | 2 | | | | | | | | | | | 2 | 4 | 0 | 4 | 0 | 0 | 0 | |

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
|9/30/19|DR|C|1|||||||||||25||10|10||||||||||15|||||||||||2|0|10|25|0|15||
|9/30/19|DR|C|1.5|||||||||||15|||0||||||||||75||||||||||||0|0|15|0|75||
|10/1/19|4TI|A|0|||||||||25|||5|4|4||||||||||||||||||||||0|29|5|0|0||
|10/1/19|4TI|A|0.5|||5|||||||||55||0||||||||||||||||||||||0|0|60|0|0||
|10/1/19|4TI|A|1|||10|||||||||90||0||||||||||||||||||||||0|0|100|0|0||
|10/1/19|4TI|A|1.5|||5|||||||||25||0||||||||||40||||||||||||0|0|30|0|40||
|10/1/19|4TI|A|2||||||||||||15||0|||1|||||||70||1||||||||||0|0|15|0|71.5||
|10/1/19|4TI|A|2.5||||||||||||||0||35|||||||||15||||||||||15|0|0|0|0|50||
|10/1/19|4TI|B|0|||||||||10||||40|40|||||||15|||||||||||||||0|65|0|0|0||
|10/1/19|4TI|B|0.5||||||||||||1|2|2||||||||||||||||||||||0|2|0.5|0|0||
|10/1/19|4TI|B|1|||5|||||||||25||0||||||||||35||||||||||||0|0|30|0|35||
|10/1/19|4TI|B|1.5|||35|||||||||25||0||||||||||40||||||||||||0|0|60|0|40||
|10/1/19|4TI|B|2||||||||||||||0|||5|||||||25|50|2||||||||||0|0|0|0|82||
|10/1/19|4TI|B|2.5||||||||||||||0|||||||||||||||||||||80|0|0|0|0|0|no post. Guessed location from A|
|10/1/19|4TI|C|0|||||||||5|||||0|||||||||||||||||15|||||15|5|0|0|0||
|10/1/19|4TI|C|0.5|||2|||||||||35|3|3||||||||||||||||||||||0|3|37|0|0||
|10/1/19|4TI|C|1||15||||||||||50||0||||||||||30||||||||||||0|0|65|0|30||
|10/1/19|4TI|C|1.5||30||||||||||30||0||||||||||30||||||||||||0|0|60|0|30||
|10/1/19|4TI|C|2||10||||||||||3||0|||10|||||||40|5|20||||||5||||0|0|13|5|75||
|10/1/19|4TI|C|2.5||||||||||||||0||50|||||||||15||||||||||25|0|0|0|0|65|no post. Guessed location from A|
|10/2/19|SHF|A|0.75|||||||||||||95|95|||||||||||||||||||||5|0|95|0|0|0||
|10/2/19|SHF|A|1.0||||||||||||||0|||||||||||||||||||||15|0|0|0|0|0||
|10/2/19|SHF|A|1.5||||||||||||||0||||||||||88|||||||||||10|0|0|0|0|88||
|10/2/19|SHF|B|0.75|||||||||||||92|92|||||||||5|||||1|||||||2|1|92|0|0|0||
|10/2/19|SHF|B|1.0|||||||||||||25|25||||||||||50|||||||||||5|0|25|0|0|50||
|10/2/19|SHF|B|1.5||||||||||||||0||||||||||90||||||||||||0|0|0|0|90||
|10/2/19|SHF|C|0.75|||||||||||||30|30|||||||||10||||||||||||5|0|30|0|0|0||
|10/2/19|SHF|C|1.0|||||||||||||1|1|||||||||5||||||||||||2|0|1|0|0|0||
|10/2/19|SHF|C|1.5||||||||||||||0||||||||||80||||||||||||0|0|0|0|80||
|10/4/19|HP|A|0|||||||||1|||||0|||||||||||||||||1||||0.5|0.5|0.5|0|0|0||
|10/4/19|HP|A|0.5|||8|||||||||||0||||||||||||||1|||||||1|0.5|0|8|0|0||
|10/4/19|HP|A|1|||75||||||1|||6|0.5|0.5|||||||||||||||||||||1|0|1|81|0|0||
|10/4/19|HP|A|1.5||||||||||||||0||||||||||20|||||||1|50||||0.5|0|0|50|20||
|10/4/19|HP|A|2||||||||||||||0||||||||||25||||||||60|||1|0|0|0|60|25|No post. Guessed location based on B|
|10/4/19|HP|B|0||||||5|||||||4|4|||||||||||||||||3|||||3|9|0|0|0||
|10/4/19|HP|B|0.5|5|||||||||||||5|||||||||||||||||2||||1|2|5|0|0|0||
|10/4/19|HP|B|1|10||1|||||||||2||10|||||||||||||||||1||||1|0.5|10|3|0|0|FUVE and ASNO were detached|
|10/4/19|HP|B|1.5||||||||||||||0||||||||||1||||2||||15||||2|0|0|15|1||
|10/4/19|HP|B|2||0.5|1|||||||||||0||||||||||25||||||||50||||0|0|1.5|50|25|ASNO drift|
|10/4/19|HP|C|0||||||||||||2|2|2||||||1||||||||1|||1|||||1|3|2|0|0||
|10/4/19|HP|C|0.5|5||60||||||2|||||5|||||||||||||||||||||3|0|7|60|0|0||
|10/4/19|HP|C|1|2||||||||1|||||2|||||||||||||||||1|||||0.5|3|0|0|0||
|10/4/19|HP|C|1.5|||15|||||||||||0||||||||||8||||1||||40|||1|1|0|15|40|8||
|10/4/19|HP|C|2||0.5||||||||||||0||||||||||75||1||||||||||0|0|0.5|0|76||
|9/30/19|AP|A|0||||||3|||||||5|5||||||||||||||||||||||0|8|0|0|0||
|9/30/19|AP|A|0.5|1||30|||||||||45||1||||||||||||||||||||||0|1|75|0|0||
|9/30/19|AP|A|1||||||||||||1||0|||||||||||||||||||||0.5|0|0|1|0|0|98% rock|
|9/30/19|AP|A|1.5||||||||||||1||0||||||||||25|||||||||||5|0|0|1|0|25|8% rock|
|9/30/19|AP|B|0||||||10|||||||10|10||||||||||||||||||||||0|20|0|0|0||
|9/30/19|AP|B|0.5|||94|||||||||||0||||||||||||||||||||||0|0|94|0|0|oysters|
|9/30/19|AP|B|1||||||||||||5||0|||||||||||||||||||||0.5|0|0|5|0|0|no post. Lined up with other A|
|9/30/19|AP|B|1.5|||20|||||||||5||0|||||||||||||||||||||1|0|0|25|0|0|no post. Lined up with other A|
|9/30/19|AP|C|0||||||5|||||||15|15||||||||||||||||||||||0|20|0|0|0||
|9/30/19|AP|C|0.5||||||||||||4|1|1||||||||||||||||||||||0|1|4|0|0||
|9/30/19|AP|C|1|||70|||||||||1||0|||||||||||||||||||||0.5|0|0|71|0|0||
|9/30/19|AP|C|1.5|||55|||||||||||0||||||||||9|||||||||||1|0|0|55|0|9|Whole area dug up by clammers|

Table A2. Intertidal plant cover (%) and biomass (g dry weight) data collected from a 0.0625 m2 quadrat.

|Date|SITE|TRANSECT|ELEVATION|Agarophyton vermiculophyllum %|Agarophyton vermiculophyllum Bio|Ascophyllum nodosum %|Ascophyllum nodosum Bio|ASNO f. sorpioides %|ASNO f. sorpioides Bio|Callithomniom corymbosum %|Callithomniom corymbosum bio|Chondrus crispus %|Chondrus crispus Bio|Cladophora sericea %|Cladophora sericea Bio|Dazysiphonia japonica %|Dazysiphonia japonica Bio|Fucus vesiculosis %|Fucus vesiculosis Bio|Gracillaria tikvahiae %|Gracillaria tikvahiae Bio|Grac. Unknnown spp. %|Total Gracilariaceae %|Total Gracilariaceae Bio|
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
|8/1/19|AP|A|0.0|5|0.4||||||||||||||||||5|0.40|
|8/1/19|AP|A|0.5|||8|10.56||||||||||||||||||
|8/1/19|AP|A|1.0|||100|225.29||||||||||||||||||
|8/1/19|AP|A|1.5||0.02|2|1.30|||||||||||2|0.7|||||0.02|
|8/1/19|AP|B|0.0|2|||||||||||||||||||2||
|8/1/19|AP|B|0.5|2|0.06||||||0.005|||||||12|3.86||||2|0.06|
|8/1/19|AP|B|1.0|||7|0.005||||||||||||||||||
|8/1/19|AP|B|1.5|||||||||||||||30|28.09||||||
|8/1/19|AP|C|0.0|10|0.45||||||||||||||||||10|0.45|
|8/1/19|AP|C|0.5|||10|2.05|||||||||||2|2.69||||||
|8/1/19|AP|C|1.0||||||||||||||||||||||
|8/1/19|AP|C|1.5|||2|0.54|||||||||||10|3.17||||||
|8/1/19|DR|A|0.5||1.45||||||||||0.005||||||||20|1.45|
|8/1/19|DR|A|1.0|||95|252.7||||||||||||||||||
|8/1/19|DR|A|1.5||0.02|95|73.27||||||||0.005|||0|0.15|||||0.02|
|8/1/19|DR|B|0.5||0.03|||||||||||||||||1|1|0.03|
|8/1/19|DR|B|1.0||||||||||||||||||||||
|8/1/19|DR|B|1.5||||||||||||||||||||||
|8/1/19|DR|C|0.5||||||||||||||||||||||
|8/1/19|DR|C|1.0|||||||||||||||1|0.05||||||
|8/1/19|DR|C|1.5||||||||||||0.005|||0|0.02||||||
|8/6/19|4TI|A|0.0||||||||||||||||||||||
|8/6/19|4TI|A|0.5||0.09|||||||||||||70|28.63|||1|1|0.09|
|8/6/19|4TI|A|1.0|||||||||||||||95|58.75||||||
|8/6/19|4TI|A|1.5|||90|147.8|||||||||||5|4.41||||||
|8/6/19|4TI|A|2.0|||||||||||||||1|0.34||||||
|8/6/19|4TI|A|2.5|||||||||||||||0|0.1||||||
|8/6/19|4TI|B|0.0|||||||||||||||||||0.5|0.5||
|8/6/19|4TI|B|0.5||3.24|||||||||||||1|0.07|||15|15|3.24|
|8/6/19|4TI|B|1.0||0.54|||1|0.1|||||||||80|41.79|||||0.54|
|8/6/19|4TI|B|1.5|||||30|56.64|||||||||10|4.45||||||
|8/6/19|4TI|B|2.0||||2.27|12|5.32|||||||||1|1.15||||||
|8/6/19|4TI|B|2.5||||||||||||||||||||||
|8/6/19|4TI|C|0.0||||||||||||||||||||||
|8/6/19|4TI|C|0.5||0.32|||||||||||||||||5|5|0.32|
|8/6/19|4TI|C|1.0||||||4.4|||||||||90|73.17||||||
|8/6/19|4TI|C|1.5|||||10|24.35|||||||||60|36.32||||||
|8/6/19|4TI|C|2.0|||||0|0.02||||||||||||||||
|8/6/19|4TI|C|2.5||||||||||||||||||||||
|8/5/19|HP|A|0.0||||||||||||||||||||||
|8/5/19|HP|A|0.5||0.01|60|30.34||||||||||||||||0|0.01|
|8/5/19|HP|A|1.0|||15|4.5|||||||||||30|8.18||||||
|8/5/19|HP|A|1.5||||||||||||||||||||||
|8/5/19|HP|A|2.0|||0.5|0.005||||||||||||||||||
|8/5/19|HP|B|0.0|0.5|0.005||||||||||||||||||0.5|0.01|
|8/5/19|HP|B|0.5|||80|103.1||||||||||||||||||
|8/5/19|HP|B|1.0||||||||0.02|||||||1||||0.5|0.5|0.00|
|8/5/19|HP|B|1.5||||||||||||||||||||||
|8/5/19|HP|B|2.0|||2|1.16||||||||||||||||||
|8/5/19|HP|C|0.0|2|0.13||||||||||||||||||2|0.13|
|8/5/19|HP|C|0.5|1|0.1|||||2|||0.08||||0.005||||||1|0.10|
|8/5/19|HP|C|1.0||1.67|1|1.52|||||||||||4|1.98|||57|57|1.67|
|8/5/19|HP|C|1.5||||||||||||||||||||||
|8/5/19|HP|C|2.0|||10|24.16||6.01|||||||||10|3.54||||||
|8/9/19|SHF|A|0.75||0.39|||||||||||||||||5|5|0.39|
|8/9/19|SHF|A|1.00||0.36|||||||||||||||||7|7|0.36|
|8/9/19|SHF|A|1.50|||0|0.42||||||||||||||||||
|8/9/19|SHF|B|0.75||0.1|||||||||||||||||2|2|0.10|
|8/9/19|SHF|B|1.00||4.13||||||||||||||||0.1|30|30|4.18|
|8/9/19|SHF|B|1.50||||||||||||||||||||||
|8/9/19|SHF|C|0.75||0.04|||||||||||||||||1|1|0.04|
|8/9/19|SHF|C|1.00||0.81|||||||||||||||||10|10|0.81|
|8/9/19|SHF|C|1.50||||||||||||||||||||||

|Date|SITE|TRANSECT|ELEVATION|Juncus gerardii %|Juncus gerardii Bio|Limonium nashii %|Limonium nashii Bio|Mastocarpus stellatus %|Mastocarpus stellatus Bio|Melanothamnus harveyi|Melanothamnus harveyi Bio|Polysiphonia fucoides %|Polysiphonia fucoides Bio|Ruppia maritima %|Ruppia maritima|Salicornia depressa %|Salicornia depressa Bio|Spartina alterniflora %|Spartina alterniflora Bio|Spartina patens %|Spartina patens Bio|
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
|8/1/19|AP|A|0.0|||||||||||||||||||
|8/1/19|AP|A|0.5|||||||||||||||||||
|8/1/19|AP|A|1.0|||||||||||||||||||
|8/1/19|AP|A|1.5|||||||||||||||20|19.21|||
|8/1/19|AP|B|0.0||||||||0.03|||||||||||
|8/1/19|AP|B|0.5||||||||0.005|||||||||||
|8/1/19|AP|B|1.0|||||||||||||||||||
|8/1/19|AP|B|1.5|||||||||||||||||||
|8/1/19|AP|C|0.0|||||||||||||||||||
|8/1/19|AP|C|0.5|||||||||||||||||||
|8/1/19|AP|C|1.0|||||||||||||||||||
|8/1/19|AP|C|1.5|||||||||||||||3|0.28|||
|8/1/19|DR|A|0.5||||||||0.005|||||||||||
|8/1/19|DR|A|1.0|||||||||||||||||||
|8/1/19|DR|A|1.5|||||||||||||||||||
|8/1/19|DR|B|0.5|||||||||||||||||||
|8/1/19|DR|B|1.0|||||||||||||||||||
|8/1/19|DR|B|1.5|||||||||||||||||||
|8/1/19|DR|C|0.5|||||||||||||||||||
|8/1/19|DR|C|1.0|||||||||||||||||||
|8/1/19|DR|C|1.5|||||||||||||||25|9.07|||
|8/6/19|4TI|A|0.0|||||||||||||||||||
|8/6/19|4TI|A|0.5|||||||||||||||||||
|8/6/19|4TI|A|1.0|||||||||||||||||||
|8/6/19|4TI|A|1.5|||||||||||||||||||
|8/6/19|4TI|A|2.0||||||||||||||0.41|80|48.28|||
|8/6/19|4TI|A|2.5|5|2.02||||||||||||0.005|||5|0.55|
|8/6/19|4TI|B|0.0|||||||||||||||||||
|8/6/19|4TI|B|0.5|||||||||||||||||||
|8/6/19|4TI|B|1.0|||||||||||||||12|7.89|||
|8/6/19|4TI|B|1.5|||||||||||||||50|16.8|||
|8/6/19|4TI|B|2.0|||||||||||||2|0.62|65|22.94|10|2.01|
|8/6/19|4TI|B|2.5|||||||||||||||||||
|8/6/19|4TI|C|0.0|||||||||||||||||||
|8/6/19|4TI|C|0.5|||||||||||||||||||
|8/6/19|4TI|C|1.0|||||||||||||||10|2.73|||
|8/6/19|4TI|C|1.5|||||||||||||||30|18.35|||
|8/6/19|4TI|C|2.0|||1|0.44|||||||||1|1|80|28.92|||
|8/6/19|4TI|C|2.5|65|8.49|||||||||||||||||
|8/5/19|HP|A|0.0|||||||||||||||||||
|8/5/19|HP|A|0.5||||||||||0.08|||||||||
|8/5/19|HP|A|1.0|||||||||||||||||||
|8/5/19|HP|A|1.5|||||||||||||||||||
|8/5/19|HP|A|2.0|||||||||||||||45|11.15|||
|8/5/19|HP|B|0.0|||||||||||||||||||
|8/5/19|HP|B|0.5|||||||||||||||||||
|8/5/19|HP|B|1.0|||||||||||||||||||
|8/5/19|HP|B|1.5|||||||||||||||||||
|8/5/19|HP|B|2.0|||||||||||||||40|25.87|||
|8/5/19|HP|C|0.0||||||||||0.005|||||||||
|8/5/19|HP|C|0.5|||||5|0.7||||0.005|||||||||
|8/5/19|HP|C|1.0|||||||||||||||||||
|8/5/19|HP|C|1.5|||||||||||||||||||
|8/5/19|HP|C|2.0|||||||||||||||60|38.44|||
|8/9/19|SHF|A|0.75||||||||0.01|||1|0|||||||
|8/9/19|SHF|A|1.00|||||||||||||||||||
|8/9/19|SHF|A|1.50|||||||||||||||85|59.23|||
|8/9/19|SHF|B|0.75|||||||||||||||||||
|8/9/19|SHF|B|1.00|||||||||||0.5||||||||
|8/9/19|SHF|B|1.50|||||||||||||||50|17.6|||
|8/9/19|SHF|C|0.75|||||||||||||||||||
|8/9/19|SHF|C|1.00|||||||||||||||30|8.94|||
|8/9/19|SHF|C|1.50|||||||||||||||8|0.82|||

|Date|SITE|TRANSECT|ELEVATION|Ulva australis|Ulva lactuca %|Ulva lactuca|Ulva rigida|Blade Ulva %|BladeUlva Bio|Ulva compressa|Ulva intestinalis|Ulva prolifera|Ulva Tube %|Ulva Tube Bio|Vaucheria %|Vaucheria Bio|Green filamentous %|Wrack %|Notes|
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
|8/1/19|AP|A|0.0||2||0.03|2|0|||||||||||
|8/1/19|AP|A|0.5|||||||||||||||||
|8/1/19|AP|A|1.0|||||||||||||||||
|8/1/19|AP|A|1.5|||||||||||||||||
|8/1/19|AP|B|0.0||1||0.04|1|0||||||||||NEHA mixed w|
|8/1/19|AP|B|0.5||||||||||||||||FUVE ID'd in t|
|8/1/19|AP|B|1.0|||||||||||||||||
|8/1/19|AP|B|1.5|||||||||||||||||
|8/1/19|AP|C|0.0|0.42|10|||10|0.4|||||||||||
|8/1/19|AP|C|0.5|||||||||||||||||
|8/1/19|AP|C|1.0|||||||||||||||||
|8/1/19|AP|C|1.5|||||||||||||||||
|8/1/19|DR|A|0.5||||1.43|25|1.4|||||||||||
|8/1/19|DR|A|1.0|||||||||||||||||
|8/1/19|DR|A|1.5||||0.01||0|||||||||||
|8/1/19|DR|B|0.5|||||||||||||||||
|8/1/19|DR|B|1.0||||0.01|0.5|0|||||||||||
|8/1/19|DR|B|1.5||||0.04|5|0||0.04||8|0.04||||||
|8/1/19|DR|C|0.5|||||||||||||||||
|8/1/19|DR|C|1.0||||||||||2|0||||1||
|8/1/19|DR|C|1.5|||0.03||2|0|0.005||0.01|1|0.015||||||
|8/6/19|4TI|A|0.0|||||||||||||||0.5||
|8/6/19|4TI|A|0.5|||||||||||||||||
|8/6/19|4TI|A|1.0|||||||||||||||||
|8/6/19|4TI|A|1.5|||||||||||||||||
|8/6/19|4TI|A|2.0||||||||||||||||FUVE drift|
|8/6/19|4TI|A|2.5|||||||||||||||90|only collected|
|8/6/19|4TI|B|0.0||||||||||||||||No biomass c|
|8/6/19|4TI|B|0.5|||||||||0.56|70|0.56|||||U. prolifera re|
|8/6/19|4TI|B|1.0||||||||||||||||Gracilaria was|
|8/6/19|4TI|B|1.5||||||||||||||||8.49 g JUGE rec|
|8/6/19|4TI|B|2.0||||||||||||2|||||
|8/6/19|4TI|B|2.5|||||||||||||0.005||0.05||
|8/6/19|4TI|C|0.0||||||||||||||80||no biomass. G|
|8/6/19|4TI|C|0.5|||||||||||||||||
|8/6/19|4TI|C|1.0|||||||||||||||||
|8/6/19|4TI|C|1.5|||||||||||||||||
|8/6/19|4TI|C|2.0||||||||||||10|||||
|8/6/19|4TI|C|2.5|||||||||||||||30|JUGE biomass|
|8/5/19|HP|A|0.0|||||||||||||||||
|8/5/19|HP|A|0.5|||||||||0.07|5|0.07||||1|Ulva prolifera|
|8/5/19|HP|A|1.0|||||||||||||||||
|8/5/19|HP|A|1.5|||||||||||||||||
|8/5/19|HP|A|2.0||||||||||||50|1.54|||ASNO was det|
|8/5/19|HP|B|0.0|||0.01||1|0||0.04||5|0.04||||||
|8/5/19|HP|B|0.5|||||||||||||||||
|8/5/19|HP|B|1.0|||||0.5|||||0.5|0|||||FUVE drift|
|8/5/19|HP|B|1.5|||||0.5|||||||||0.5|1|No biomass c|
|8/5/19|HP|B|2.0||||||||||||50|||||
|8/5/19|HP|C|0.0|||||0.5|||0.02||1|0.02||||||
|8/5/19|HP|C|0.5|||||0.5|||||||||1|1|MAST recorded|
|8/5/19|HP|C|1.0|||0.06||5|0.1|||||||||30||
|8/5/19|HP|C|1.5|||||0.5||||||||||||
|8/5/19|HP|C|2.0||||0.03|0|0||||||10|||||
|8/9/19|SHF|A|0.75|||||||||||||||5||
|8/9/19|SHF|A|1.00|||||||||||||||15||
|8/9/19|SHF|A|1.50|||||||||||||||15||
|8/9/19|SHF|B|0.75|||||||||||||||2||
|8/9/19|SHF|B|1.00||||0.02|1|0|||||||||50||
|8/9/19|SHF|B|1.50|||||||||||||||30|90% of plot wa|
|8/9/19|SHF|C|0.75|||||||||||||||||
|8/9/19|SHF|C|1.00|||||||||||||||5||
|8/9/19|SHF|C|1.50|||||||||||||||92|elevation was|

Table A3. Subtidal cover and biomass data collected in 0.25 m2 quadrats.

| DATE | SITE | TRANSECT | DIRECTION | Agardhiella subulata % | Agardhiella subulata Bio | Agarophyton vermiculophyllum % | Agarophyton vermiculophyllum Bio | Ahnfeltia plicata % | Ahnfeltia plicata Bio | Callithomniom corymbosum % | Callithomniom corymbosum Bio | Ceramium deslongchampsii % | Ceramium deslongchampsii Bio | Ceramium virgatum % | Ceramium virgatum Bio | Chaetomorpha picquotiana Bio | Chondria baileyana % | Chondria baileyana Bio | Cladophora sericea % | Cladophora sericea Bio | Dasya baulonova Bio | Dazysiphonia japonica % | Dazysiphonia japonica Bio | Ectocarpus siliculosis Bio | Fucus vesiculosis % | Fucus vesiculosis Bio | G. tikvahiae % | G. tikvahiae Bio | Grac. Spp % | Grac. Spp. Bio | Green filamentous % | Lomentaria clavellosa % | Lomentaria clavellosa Bio | Melanothamnus harveyi % | Melanothamnus harveyi Bio | Polysiphonia fucoides % | Polysiphonia elongata Bio | Polysiphonia fucoides Bio | Polysiphonia schneideri % | Polysiphonia schneideri Bio | Red filamentous % | Ulva Blade % | Ulva rigida Bio | Ulva Blade Bio | Ulva Tube % | Ulva prolifera Bio | Ulva Tube Bio | Wrack % | Wrack bio | Zostera marina % | Zostera marina Bio | Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 8/7/19 | AP | A | Center | | | | 1.72 | | | | | | | | | | | | | | | | | | | | | | 15 | 1.72 | | | | | 0.005 | | | | | | 1 | | | 0.005 | | | | | | | | |
| 8/7/19 | AP | A | N | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | Bare |
| 8/7/19 | AP | A | E | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | Bare |
| 8/7/19 | AP | A | S | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8/7/19 | AP | A | W | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | | | | | | | | | 3 | 0.88 | |
| 8/7/19 | AP | A | NE | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | Bare |
| 8/7/19 | AP | A | SE | | | | 0.02 | | | | | | | | | | | | | | | | | | | | | | 1 | 0.02 | | | | | | | | | | | | | | | | | | | | | 0.01 | |
| 8/7/19 | AP | A | SW | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 0.03 | with hydroids |
| 8/7/19 | AP | A | NW | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | bare |
| 8/7/19 | AP | B | Center | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | | | | | | | | 5 | 0.54 | |
| 8/7/19 | AP | B | N | | | | 0.66 | | | | | | | | | | | | | | | | | | | | | | 5 | 0.66 | | | | | 0.005 | | | | | | | | | | | | | | | | | |
| 8/7/19 | AP | B | E | | | | 2.07 | | | | | | | | | | | | | | | | | | | | | | 10 | 2.07 | | | | | | | | | | | | | | | | | | | | | | |
| 8/7/19 | AP | B | S | | | | | | | | | | | | 0.005 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 30 | 10.7 | |
| 8/7/19 | AP | B | W | | | | | | | | | | | | | | | | | | | 5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | 50 | 48.5 | |
| 8/7/19 | AP | B | NE | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 0.005 | | | | | | | | | | | | | | | 5 | 0.79 | with epiphytes |
| 8/7/19 | AP | B | SE | | | | 0.005 | | | | | | 0.01 | | | | | | | | | 0 | 0.005 | | | | | | 5 | 0.01 | | | | | | | | | | | | | | 0.005 | | | | | | 10 | 3.86 | |
| 8/7/19 | AP | B | SW | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | bare |
| 8/7/19 | AP | B | NW | 2 | 0.08 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | AGSU ID'd as Grac. In the f |
| 8/7/19 | AP | C | Center | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 10 | 0.75 | |
| 8/7/19 | AP | C | N | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1% hydroids |
| 8/7/19 | AP | C | E | | | | | | | | | | | | 0.06 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 45 | 28.7 | |
| 8/7/19 | AP | C | S | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 50 | 32.1 | |
| 8/7/19 | AP | C | W | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 15 | 1.87 | |
| 8/7/19 | AP | C | NE | | | | 0.06 | | | | | | | | | | | | | | | | | | | | | | 0 | 0.06 | | | | | | | | | | | | | | | | | | | | 40 | 43.2 | |
| 8/7/19 | AP | C | SE | | | | 0.3 | | | | | | | | | | | | | | | 5 | | | | | | | 2 | 0.30 | | | | | | | | | | | | | | 0.21 | | | | | | 15 | 1.81 | |
| 8/7/19 | AP | C | SW | | | | 0.03 | | | | 0.005 | | | | | | | | | | | | | | | | | 0.8 | 5 | 0.80 | | | | | | | | | | | | | | | | | | | | 25 | 6.31 | |
| 8/7/19 | AP | C | NW | | | | 0.21 | | | | | | | | | | | | | | | | | 0.01 | | | | | | | | | | | | | | | | | | 1 | | 0.34 | | | | | | | | no cover of ZM recorded o |
| 8/7/19 | DR | A | Center | | | | 4.87 | | | | 0.005 | | | | | | | | | | | | | | | | | | 15 | 4.87 | | | | | 0.02 | | | | | | 2 | | | | | | | | | | | |
| 8/7/19 | DR | A | N | | | | 3.52 | | | | | | | | | | | | | | | | | | | | | | 35 | 3.52 | | | | | | | | | | | | | | | | | | | | | | |
| 8/7/19 | DR | A | E | | | | 4.87 | | | | 0.005 | | | | | | | | | | | | | | | | | | 20 | 4.87 | | | | | 0.04 | | | | | | | 2 | | 0.09 | | | | | | | | |
| 8/7/19 | DR | A | S | | | | 5.76 | | | | 0.005 | | | | | | | | | 0.005 | | | | | | 0.1 | | 0.1 | 20 | 5.84 | | | | | 0.01 | | | | | | 3 | 5 | | 1.93 | | | | | | | | |
| 8/7/19 | DR | A | W | | | | 2.29 | | | | | | | | | | | | | | | | | | | | | 0.4 | 40 | 2.72 | | | | | 0.36 | | | 0.39 | | | | | | 0.3 | | | | | | 50 | 14 | NEHA mixed with CEVI |
| 8/7/19 | DR | A | NE | | | | 0.13 | | | | 0.005 | | | | | | | | | | | | | | | | | | 5 | 0.13 | | | | | 0.005 | | | | | | | | | | | | | | | | | |
| 8/7/19 | DR | A | SE | | | | 0.31 | | | | 0.005 | | | | | | | | | | | | | | | | | | 15 | 0.31 | | | | | 0.1 | | | | | | 1 | 1 | | 0.12 | | | | | | | | |
| 8/7/19 | DR | A | SW | | | | 15.18 | | | | | | | | | | | | | 0.74 | | | | | | | | | 50 | 15.18 | | | | | 0.09 | | | | | | 5 | | | | | | | | | 20 | 7 | |
| 8/7/19 | DR | A | NW | | | | 0.14 | | | | 0.005 | | | | | | | | | | | | | | | | | | 1 | 0.14 | | | | | 0.005 | | | | | | | | | | | | | | | | | |
| 8/7/19 | DR | B | Center | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | bare |
| 8/7/19 | DR | B | N | | | | 5.09 | | | | 0.005 | | | | | | | | | | | | | | | | | | 20 | 5.09 | | | | | 0.08 | | | | | | | | | 0.02 | | | | | | | | |
| 8/7/19 | DR | B | E | | | | 0.72 | | | | | | | | | | | | | | | | | | | | | | 5 | 0.72 | | | | | 0.005 | | | | | | | | | | | | | | | | | |
| 8/7/19 | DR | B | S | | | | 8.28 | | | | 0.005 | | | | | | | | | | | | | | | | | 7.7 | 20 | 15.99 | | | | | 0.09 | | | | | | | | | 0.04 | | | | | | | | |
| 8/7/19 | DR | B | W | | | | 10.63 | | | | 0.09 | | | | | | | | | | | | | | | | | 0.1 | 40 | 10.76 | | | | | 0.17 | | | | | | 5 | 15 | | 2.05 | | | | | | | | |
| 8/7/19 | DR | B | NE | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | bare |

| | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10/16/19 | DR | B | W | 0.78 | | 0.005 | | | 0.005 | | | | | 5 | 0.78 | | | | | | 0 | 0.31 | |
| 10/16/19 | DR | B | NE | 1.08 | | 0.005 | | | 0.06 | | 5 | | | 15 | 1.08 | | | | 2 | 0.9 | | | wrack bio recorded as ZM bi |
| 10/16/19 | DR | B | SE | 4.08 | | 0.01 | | | 0.005 | | | | | 20 | 4.08 | | | | | | 0 | 0.63 | |
| 10/16/19 | DR | B | SW | 3.5 | | 0.005 | | | 0.005 | | 2 | | | 20 | 3.50 | | | | | | | | |
| 10/16/19 | DR | B | NW | | | 0.005 | | | 0.02 | | 2 | | | 35 | 8.88 | | | | 5 | 0.5 | | | wrack bio recorded as ZM bi |
| 10/16/19 | DR | C | Center | | | | | | | | | | | | | | | | | | | | bare |
| 10/16/19 | DR | C | N | 0.73 | | 0.005 | | | | | | | 1.8 | 5 | 2.57 | | | | | | 15 | 1.99 | |
| 10/16/19 | DR | C | E | 2.07 | | | 0.005 | | | | | | | 20 | 2.07 | | | | | | 0 | 0.15 | |
| 10/16/19 | DR | C | S | 0.3 | | 0.005 | 0.005 | | | | | | | 5 | 0.30 | | | | | | 0 | 0.25 | |
| 10/16/19 | DR | C | W | 4.42 | | | | | 0.005 | | 5 | | 0.3 | 15 | 4.72 | | | | 5 | 0.4 | | | wrack bio recorded as ZM bi |
| 10/16/19 | DR | C | NE | 0.32 | | 0.005 | | | | | | | | 2 | 0.32 | | | | 2 | 0.3 | | | wrack bio recorded as ZM bi |
| 10/16/19 | DR | C | SE | 2.97 | | 0.005 | | | | | | | | 10 | 2.97 | | | | | | | | |
| 10/16/19 | DR | C | SW | 5.88 | | 0.005 | 0.005 | | | | 1 | 0.09 | | 30 | 5.88 | 0.04 | | 0.2 | 5 | 0.8 | | | wrack bio recorded as ZM bi |
| 10/16/19 | DR | C | NW | | | | | | | | | | | | | | | | | | | | bare |
| 10/15/19 | LC | A | Center | 0.1 | | | | | | | 5 | 0.005 | | 5 | 0.10 | | | | | | 50 | 10.3 | |
| 10/15/19 | LC | A | N | | | | | | | | | | | | | | | | | | | | bare |
| 10/15/19 | LC | A | E | | | | | | | | | | | | | | | | | | 2 | 0.18 | |
| 10/15/19 | LC | A | S | 8.55 | | | | | | 0.005 | | 0.08 | | 50 | 8.55 | | | | | | 20 | 1.54 | |
| 10/15/19 | LC | A | W | | | | | | | | | | | | | | | | | | | | bare |
| 10/15/19 | LC | A | NE | 0.05 | | 0.005 | | | | 0.005 | | | | | 0.05 | | | | | | 15 | 1.24 | |
| 10/15/19 | LC | A | SE | 2.15 | | | | | | | 1 | 0.05 | | 15 | 2.15 | | | | | | 60 | 8.68 | |
| 10/15/19 | LC | A | SW | | | | | | | | | | | | | | | | | | 2 | 0.23 | |
| 10/15/19 | LC | A | NW | | | | | | | | | | | | | | | | | | 1 | | ZM overhanging. Not collecte |
| 10/15/19 | LC | B | Center | 0.13 | | | | | | | | | | | 0.13 | | | | | | 10 | 0.15 | |
| 10/15/19 | LC | B | N | | | | | | | | | 0.005 | | | | | | | | | 30 | 3.61 | |
| 10/15/19 | LC | B | E | | | | | | | | | | | 2 | 0.00 | | | | 2 | 0.2 | | | |
| 10/15/19 | LC | B | S | | | | | | | | | | | | | | | | | | 3 | 0.6 | |
| 10/15/19 | LC | B | W | | | | | | | | | | | | | | | | | | 20 | 2.28 | |
| 10/15/19 | LC | B | NE | 0.49 | 0.01 | 0.005 | | | | | | | | 2 | 0.49 | | | | 2 | | | 0.11 | |
| 10/15/19 | LC | B | SE | 0.31 | | | | | | | | | | 2 | 0.31 | | | | | | 10 | 2.67 | |
| 10/15/19 | LC | B | SW | 3.5 | | | | | | | | | | 15 | 3.50 | | 0.01 | | | | 40 | 5.06 | |
| 10/15/19 | LC | B | NW | | | | | | | | | | | | | | | | | | | | bare |
| 10/15/19 | LC | C | Center | 0.01 | | | | | | | | | | 0 | 0.01 | | | | | | 15 | 0.81 | |
| 10/15/19 | LC | C | N | 0.08 | | | | | | | | | | 1 | 0.08 | | | | | | | 0.01 | |
| 10/15/19 | LC | C | E | | | | | | | | | | | | | | | | | | | | bare |
| 10/15/19 | LC | C | S | | | | | | | | | | | | | | | | | | | | bare |
| 10/15/19 | LC | C | W | | | | | | | | | | | | | | | | | | | | bare |
| 10/15/19 | LC | C | NE | | | | | | | | | | | | | | | | | | | | bare |
| 10/15/19 | LC | C | SE | | | | | | | | | | | | | | | | | | | | bare |
| 10/15/19 | LC | C | SW | | | | | | | | | | | | | | | | | | | | bare |
| 10/15/19 | LC | C | NW | 0.01 | | | | | | | 20 | 0.48 | | 0 | 0.01 | | | | | | 50 | 10.5 | |
| 10/15/19 | SHF | A | Center | 1.97 | | | | | | | 5 | 0 | | 0 | 1.97 | | | | | | 80 | 16.1 | |
| 10/15/19 | SHF | A | N | 0.84 | | | | | | | 10 | 1.14 | | 0 | 0.84 | | | | | | 80 | 14.8 | |
| 10/15/19 | SHF | A | E | 0.3 | | | | | | | | | | 0 | 0.30 | | | | | | 80 | 11.7 | |
| 10/15/19 | SHF | A | S | 0.7 | | | | | | 0.005 | | | | 0 | 0.70 | | | | | | 80 | 14.8 | |
| 10/15/19 | SHF | A | W | 0.26 | | | | | | | | | | 0 | 0.26 | | | | | | 90 | 15.9 | |
| 10/15/19 | SHF | A | NE | 2.02 | | 0.005 | | | | | 0 | 0.005 | | 0 | 2.02 | | | | | | 80 | 14.2 | |
| 10/15/19 | SHF | A | SE | 0.76 | | 0.005 | | | | | 5 | 0.23 | | 0 | 0.76 | | | | | | 75 | 13.6 | |
| 10/15/19 | SHF | A | SW | 0.97 | | 0.005 | | | | | 0 | 0.005 | | 0 | 0.97 | | | | | | 90 | 10.8 | gracilaria seen after collecti |
| 10/15/19 | SHF | A | NW | 0.6 | | | | | | 0.03 | 5 | 0.59 | | 0 | 0.60 | | | | | | 90 | 15.6 | |
| 10/15/19 | SHF | B | Center | 1.4 | | | | 0.01 | | | | | | 10 | 1.40 | | | | | | 45 | 6.99 | |
| 10/15/19 | SHF | B | N | 3.51 | | | | | | | | | | 0 | 3.51 | | 0.14 | | | | 80 | 17.3 | |
| 10/15/19 | SHF | B | E | 0.72 | | | | | | 0.005 | | | | 0 | 0.72 | | | | | | 95 | 12.5 | |
| 10/15/19 | SHF | B | S | 3.42 | | | | | | 0.005 | | | | 30 | 3.42 | | | | | | 60 | 19.2 | |
| 10/15/19 | SHF | B | W | 2.8 | | 0.005 | | | | 0.005 | 0 | 0.66 | | 25 | 2.80 | | | | | | 60 | 17.8 | |
| 10/15/19 | SHF | B | NE | 1.347 | | | | | | | | | | 0 | 1.35 | | | | | | 80 | 14.9 | |
| 10/15/19 | SHF | B | SE | 3.31 | | | | | | 0.005 | | | | 0 | 3.31 | | | | | | 90 | 17.8 | |
| 10/15/19 | SHF | B | SW | 1.09 | | | | | | 0.005 | 0 | 0.005 | | 15 | 1.09 | | | | | | 55 | 14.9 | |
| 10/15/19 | SHF | B | NW | 2.22 | | | | | | | | | | 5 | 2.22 | | | | | | 80 | 17.9 | |
| 10/15/19 | SHF | C | Center | 1.86 | | | | | | | | | | 0 | 1.86 | | | | | | 90 | 16.1 | |
| 10/15/19 | SHF | C | N | 1.13 | | | | | | | | | | 5 | 1.13 | | | | | | 75 | 14 | |
| 10/15/19 | SHF | C | E | 1.13 | | | | | | | | | | 0 | 1.13 | | | | | | 80 | 19.8 | |
| 10/15/19 | SHF | C | S | 3.83 | | | | | | 0.005 | | | | 5 | 3.83 | | | | | | 80 | 12.4 | |
| 10/15/19 | SHF | C | W | 0.74 | | | | | | | 0 | 0.005 | | 5 | 0.74 | | | | | | 90 | 11 | |
| 10/15/19 | SHF | C | NE | 1.31 | | | | | | | | | | 0 | 1.31 | | | | | | 80 | 16.8 | |
| 10/15/19 | SHF | C | SE | 0.85 | | | | | | | | | | 0 | 0.85 | | | | | | 70 | 12.1 | |
| 10/15/19 | SHF | C | SW | 0.46 | | | | | | | | | | 0 | 0.46 | | | | | | 90 | 17.1 | |
| 10/15/19 | SHF | C | NW | 6.22 | | | | | | | | | | 5 | 6.22 | | | | | | 75 | 12.1 | |

Table A4. Stem lengths of *Zostera marina* collected from subtidal plots.

| | | | | Vegetative Stems | | | | | | | | | | Reproductive Stems | | | | | | | | | | | | Average | Number of Stems Measured | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DATE | SITE | TRANSECT | DIRECTI | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | Veg avg | Repro avg | Stem Length | Veg | Repro | Total | Notes |
| 8/13/19 | AP | A | C | | | | | | | | | | | | | | | | | | | | | | | | 0 | 0 | 0 | |
| 8/13/19 | AP | A | N | | | | | | | | | | | | | | | | | | | | | | | | 0 | 0 | 0 | |
| 8/13/19 | AP | A | E | | | | | | | | | | | | | | | | | | | | | | | | 0 | 0 | 0 | |
| 8/13/19 | AP | A | S | | | | | | | | | | | | | | | | | | | | | | | | 0 | 0 | 0 | |
| 8/13/19 | AP | A | W | | | | | | | | | | | 41 | | | | | | | | | | | 41 | 41 | 0 | 1 | 1 | |
| 8/13/19 | AP | A | NE | | | | | | | | | | | | | | | | | | | | | | | | 0 | 0 | 0 | |
| 8/13/19 | AP | A | SE | | | | | | | | | | | | | | | | | | | | | | | | 0 | 0 | 0 | none |
| 8/13/19 | AP | A | SW | | | | | | | | | | | | | | | | | | | | | | | | 0 | 0 | 0 | none |
| 8/13/19 | AP | A | NW | | | | | | | | | | | | | | | | | | | | | | | | 0 | 0 | 0 | |
| 8/13/19 | AP | B | Cen | 24 | 40 | | | | | | | | | 10 | | | | | | | | | | 32 | 10 | 25 | 2 | 1 | 3 | |
| 8/13/19 | AP | B | N | | | | | | | | | | | | | | | | | | | | | | | | 0 | 0 | 0 | |
| 8/13/19 | AP | B | E | | | | | | | | | | | | | | | | | | | | | | | | 0 | 0 | 0 | none |
| 8/13/19 | AP | B | S | 35 | 18 | 40 | 44 | 38 | 49 | 41 | 28 | 51 | 58 | 84 | | | | | | | | | | 40 | 84 | 44 | 10 | 1 | 11 | |
| 8/13/19 | AP | B | W | 21 | | | | | | | | | | 129 | 84 | 102 | 61 | 68 | 105 | 79 | 85 | 69 | 124 | 21 | 91 | 84 | 1 | 10 | 11 | |
| 8/13/19 | AP | B | NE | | | | | | | | | | | 60 | | | | | | | | | | | 60 | 60 | 0 | 1 | 1 | |
| 8/13/19 | AP | B | SE | 55 | | | | | | | | | | 54 | 85 | | | | | | | | | 55 | 70 | 65 | 1 | 2 | 3 | |
| 8/13/19 | AP | B | SW | | | | | | | | | | | | | | | | | | | | | | | | 0 | 0 | 0 | |
| 8/13/19 | AP | B | NW | | | | | | | | | | | | | | | | | | | | | | | | 0 | 0 | 0 | |
| 8/13/19 | AP | C | Cen | 19 | | | | | | | | | | 44 | | | | | | | | | | 19 | 44 | 32 | 1 | 1 | 2 | |
| 8/7/19 | AP | C | N | | | | | | | | | | | | | | | | | | | | | | | | 0 | 0 | 0 | No stems, only hydroids |
| 8/12/19 | AP | C | E | 37 | 12 | 25 | 13 | | | | | | | 77 | 123 | 60 | 36 | 43 | 41 | 90 | 67 | 86 | 50 | 22 | 67 | 54 | 4 | 10 | 14 | |
| 8/13/19 | AP | C | S | 35 | 57 | 20 | 45 | 32 | 19 | 25 | 46 | 23 | 18 | 99 | 36 | 38 | 108 | 73 | 55 | 72 | 92 | 86 | 81 | 32 | 74 | 53 | 10 | 10 | 20 | |
| 8/13/19 | AP | C | W | 20 | 51 | 27 | | | | | | | | 24 | | | | | | | | | | 33 | 24 | 31 | 3 | 1 | 4 | |
| 8/13/19 | AP | C | NE | 52 | 55 | 43 | 56 | 24 | 40 | | | | | 90 | 35 | 46 | 84 | 76 | 112 | 70 | 26 | 79 | 87 | 45 | 71 | 61 | 6 | 10 | 16 | |
| 8/13/19 | AP | C | SE | 33 | 38 | | | | | | | | | 24 | | | | | | | | | | 36 | 24 | 32 | 2 | 1 | 3 | |
| 8/7/19 | AP | C | SW | 62 | 64 | 12 | | | | | | | | 34 | 49 | 67 | 44 | | | | | | | 46 | 49 | 47 | 3 | 4 | 7 | |
| 8/7/19 | AP | C | NW | | | | | | | | | | | | | | | | | | | | | | | | 0 | 0 | 0 | |
| 8/15/19 | DR | A | Cen | | | | | | | | | | | | | | | | | | | | | | | | 0 | 0 | 0 | |
| 8/15/19 | DR | A | N | | | | | | | | | | | | | | | | | | | | | | | | 0 | 0 | 0 | |
| 8/15/19 | DR | A | E | | | | | | | | | | | | | | | | | | | | | | | | 0 | 0 | 0 | |
| 8/15/19 | DR | A | S | | | | | | | | | | | | | | | | | | | | | | | | 0 | 0 | 0 | |
| 8/15/19 | DR | A | W | 18 | 61 | 45 | 59 | 25 | 21 | 25 | 51 | 17 | 27 | 57 | 39 | 31 | 80 | 108 | 41 | 51 | 41 | 81 | 31 | 35 | 56 | 45 | 10 | 10 | 20 | |
| 8/15/19 | DR | A | NE | | | | | | | | | | | | | | | | | | | | | | | | 0 | 0 | 0 | |
| 8/15/19 | DR | A | SE | | | | | | | | | | | | | | | | | | | | | | | | 0 | 0 | 0 | |
| 8/15/19 | DR | A | SW | 20 | 48 | 15 | 18 | | | | | | | 73 | 67 | 72 | 63 | 38 | | | | | | 25 | 63 | 46 | 4 | 5 | 9 | |
| 8/15/19 | DR | A | NW | | | | | | | | | | | | | | | | | | | | | | | | 0 | 0 | 0 | |
| 8/15/19 | DR | B | Cen | | | | | | | | | | | | | | | | | | | | | | | | 0 | 0 | 0 | |
| 8/15/19 | DR | B | N | | | | | | | | | | | | | | | | | | | | | | | | 0 | 0 | 0 | |
| 8/15/19 | DR | B | E | | | | | | | | | | | | | | | | | | | | | | | | 0 | 0 | 0 | |
| 8/15/19 | DR | B | S | | | | | | | | | | | | | | | | | | | | | | | | 0 | 0 | 0 | |
| 8/15/19 | DR | B | W | | | | | | | | | | | | | | | | | | | | | | | | 0 | 0 | 0 | |
| 8/15/19 | DR | B | NE | | | | | | | | | | | | | | | | | | | | | | | | 0 | 0 | 0 | |
| 8/15/19 | DR | B | SE | | | | | | | | | | | | | | | | | | | | | | | | 0 | 0 | 0 | |
| 8/15/19 | DR | B | SW | | | | | | | | | | | | | | | | | | | | | | | | 0 | 0 | 0 | |

| | | | | Vegetative Stems | | | | | | | | | | Reproductive Stems | | | | | | | | | | | | | Number of Stems Measured | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DATE | SITE | TRANSECT | DIRECTI | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | Veg avg | Repro avg | Average Stem Length | Veg | Repro | Total | Notes |
| 8/15/19 | DR | B | NW | | | | | | | | | | | | | | | | | | | | | | | | 0 | 0 | 0 | |
| 8/15/19 | DR | C | Cen | | | | | | | | | | | | | | | | | | | | | | | | 0 | 0 | 0 | |
| 8/15/19 | DR | C | N | | | | | | | | | | | | | | | | | | | | | | | | 0 | 0 | 0 | |
| 8/15/19 | DR | C | E | 45 | 23 | 16 | 24 | | | | | | | 88 | 37 | | | | | | | | | 27 | 63 | 39 | 4 | 2 | 6 | |
| 8/15/19 | DR | C | S | | | | | | | | | | | | | | | | | | | | | | | | 0 | 0 | 0 | |
| 8/15/19 | DR | C | W | | | | | | | | | | | | | | | | | | | | | | | | 0 | 0 | 0 | one broken shoot 11 cm |
| 8/15/19 | DR | C | NE | | | | | | | | | | | | | | | | | | | | | | | | 0 | 0 | 0 | |
| 8/15/19 | DR | C | SE | | | | | | | | | | | | | | | | | | | | | | | | 0 | 0 | 0 | |
| 8/15/19 | DR | C | SW | 34 | | | | | | | | | | | | | | | | | | | | 34 | | 34 | 1 | 0 | 1 | |
| 8/15/19 | DR | C | NW | 22 | | | | | | | | | | 57 | | | | | | | | | | 22 | 57 | 40 | 1 | 1 | 2 | |
| 8/13/19 | LC | A | Cen | 32 | 30 | | | | | | | | | 28 | 52 | 24 | 32 | 39 | 35 | 42 | 25 | 34 | | 31 | 35 | 34 | 2 | 9 | 11 | |
| 8/7/19 | LC | A | N | 24 | 35 | 30 | | | | | | | | 26 | | | | | | | | | | 30 | 26 | 29 | 3 | 1 | 4 | |
| 8/13/19 | LC | A | E | 30 | 34 | 28 | | | | | | | | | | | | | | | | | | 31 | | 31 | 3 | 0 | 3 | |
| 8/7/19 | LC | A | S | 31 | 29 | 23 | | | | | | | | 31 | 32 | 44 | 29 | 30 | | | | | | 28 | 33 | 31 | 3 | 5 | 8 | |
| 8/7/19 | LC | A | W | 42 | | | | | | | | | | | | | | | | | | | | 42 | | 42 | 1 | 0 | 1 | |
| 8/7/19 | LC | A | NE | | | | | | | | | | | 34 | | | | | | | | | | | 34 | 34 | 0 | 1 | 1 | |
| 8/7/19 | LC | A | SE | 37 | | | | | | | | | | | | | | | | | | | | 37 | | 37 | 1 | 0 | 1 | |
| 8/7/19 | LC | A | SW | 20 | 45 | 29 | 21 | 30 | 25 | 28 | 38 | 19 | 18 | 36 | 44 | 38 | 31 | | | | | | | 27 | 37 | 30 | 10 | 4 | 14 | |
| 8/7/19 | LC | A | NW | 37 | | | | | | | | | | | | | | | | | | | | 37 | | 37 | 1 | 0 | 1 | |
| 8/13/19 | LC | B | Cen | 19 | 20 | 21 | | | | | | | | 37 | 36 | 21 | 11 | | | | | | | 20 | 26 | 24 | 3 | 4 | 7 | |
| 8/13/19 | LC | B | N | | | | | | | | | | | | | | | | | | | | | | | | 0 | 0 | 0 | |
| 8/13/19 | LC | B | E | 30 | | | | | | | | | | 33 | | | | | | | | | | 30 | 33 | 32 | 1 | 1 | 2 | |
| 8/13/19 | LC | B | S | | | | | | | | | | | | | | | | | | | | | | | | 0 | 0 | 0 | |
| 8/13/19 | LC | B | W | | | | | | | | | | | | | | | | | | | | | | | | 0 | 0 | 0 | |
| 8/13/19 | LC | B | NE | 30 | 21 | 44 | | | | | | | | 44 | 27 | | | | | | | | | 32 | 36 | 33 | 3 | 2 | 5 | |
| 8/13/19 | LC | B | SE | 41 | 22 | 38 | 31 | 31 | 32 | 33 | 8 | 26 | | 34 | 16 | | | | | | | | | 29 | 25 | 28 | 9 | 2 | 11 | |
| 8/13/19 | LC | B | SW | 15 | 36 | 37 | 39 | 20 | 23 | 22 | | | | 60 | 49 | 48 | 65 | 50 | 49 | 27 | 29 | 31 | 46 | 27 | 45 | 38 | 7 | 10 | 17 | |
| 8/13/19 | LC | B | NW | | | | | | | | | | | | | | | | | | | | | | | | 0 | 0 | 0 | |
| 8/13/19 | LC | C | Cen | | | | | | | | | | | | | | | | | | | | | | | | 0 | 0 | 0 | |
| 8/13/19 | LC | C | N | 16 | | | | | | | | | | 29 | | | | | | | | | | 16 | 29 | 23 | 1 | 1 | 2 | |
| 8/13/19 | LC | C | E | | | | | | | | | | | | | | | | | | | | | | | | 0 | 0 | 0 | |
| 8/13/19 | LC | C | S | 31 | | | | | | | | | | 38 | 30 | | | | | | | | | 31 | 34 | 33 | 1 | 2 | 3 | |
| 8/13/19 | LC | C | W | 30 | 26 | 20 | 11 | 17 | | | | | | 38 | 42 | 35 | 38 | 47 | 22 | 22 | | | | 21 | 35 | 29 | 5 | 7 | 12 | |
| 8/13/19 | LC | C | NE | | | | | | | | | | | 28 | | | | | | | | | | | 28 | 28 | 0 | 1 | 1 | |
| 8/13/19 | LC | C | SE | | | | | | | | | | | | | | | | | | | | | | | | 0 | 0 | 0 | |
| 8/13/19 | LC | C | SW | | | | | | | | | | | | | | | | | | | | | | | | 0 | 0 | 0 | |
| 8/13/19 | LC | C | NW | | | | | | | | | | | | | | | | | | | | | | | | 0 | 0 | 0 | |
| 8/13/19 | | A | Cen | 26 | 15 | 9 | 34 | 18 | 41 | 18 | 38 | 13 | 17 | 62 | 53 | 62 | 47 | 36 | 47 | 40 | 59 | 58 | 25 | 23 | 49 | 36 | 10 | 10 | 20 | |
| 8/13/19 | SHF | A | N | 42 | 54 | 36 | 21 | 30 | 35 | 46 | 47 | 39 | 16 | 64 | 67 | 77 | 58 | 53 | 32 | 48 | 36 | 70 | | 37 | 56 | 46 | 10 | 9 | 19 | |
| 8/13/19 | SHF | A | E | 22 | 31 | 40 | 38 | 25 | 35 | 20 | 28 | 20 | 48 | 42 | 64 | 61 | 64 | 66 | 63 | 68 | 41 | 40 | 45 | 31 | 55 | 43 | 10 | 10 | 20 | |
| 8/12/19 | SHF | A | S | 30 | 19 | 12 | 44 | 27 | 28 | 34 | 28 | 33 | 46 | 77 | 39 | 84 | 39 | 58 | 54 | 74 | 40 | 32 | 45 | 30 | 54 | 42 | 10 | 10 | 20 | |
| 8/7/19 | SHF | A | W | 18 | 21 | 28 | 38 | 24 | 34 | 42 | 31 | 35 | 18 | 41 | 58 | 42 | 59 | 84 | 52 | 45 | 45 | 66 | 42 | 29 | 53 | 41 | 10 | 10 | 20 | |
| 8/12/19 | SHF | A | NE | 18 | 56 | 25 | 26 | 36 | 43 | 16 | 20 | 34 | 36 | 53 | 64 | 29 | 46 | 55 | 60 | 61 | 49 | 56 | 64 | 31 | 54 | 42 | 10 | 10 | 20 | |
| 8/12/19 | SHF | A | SE | 26 | 44 | 37 | 31 | 33 | 29 | 30 | 8 | 27 | 10 | 45 | 45 | 70 | 81 | 82 | 50 | 30 | 25 | 49 | 30 | 28 | 51 | 39 | 10 | 10 | 20 | |

| | | | | Vegetative Stems | | | | | | | | | | Reproductive Stems | | | | | | | | | | | | | Number of Stems Measured | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DATE | SITE | TRANSECT | DIRECTI | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | Veg avg | Repro avg | Average Stem Length | Veg | Repro | Total | Notes |
| 8/13/19 | SHF | A | SW | 26 | 34 | 51 | 36 | 16 | 17 | 28 | 21 | 18 | 13 | 38 | 43 | 38 | 49 | 49 | 65 | 61 | 65 | 49 | 65 | 26 | 52 | 39 | 10 | 10 | 20 | |
| 8/7/19 | SHF | A | NW | 55 | 46 | 53 | 49 | 44 | 53 | 39 | 40 | 49 | 48 | 46 | 51 | 67 | 51 | 52 | 49 | 51 | 57 | 59 | 69 | 48 | 55 | 51 | 10 | 10 | 20 | |
| 8/13/19 | SHF | B | Cen | 41 | 16 | 24 | 15 | 14 | 11 | 23 | 24 | 6 | 17 | 54 | 83 | 47 | 77 | 20 | 27 | 39 | 60 | 27 | 22 | 19 | 46 | 32 | 10 | 10 | 20 | |
| 8/7/19 | SHF | B | N | 20 | 22 | | | | | | | | | 54 | 50 | 55 | 36 | 62 | 52 | 39 | | | | 21 | 50 | 43 | 2 | 7 | 9 | |
| 8/7/19 | SHF | B | E | 24 | 50 | 21 | | | | | | | | 51 | 78 | 65 | 47 | 54 | 30 | 53 | 40 | 31 | 40 | 32 | 49 | 45 | 3 | 10 | 13 | |
| 8/7/19 | SHF | B | S | 52 | 88 | 55 | 55 | 48 | 32 | 36 | 55 | 41 | | 45 | 16 | 16 | 28 | 37 | 18 | 22 | 16 | 27 | | 51 | 25 | 38 | 9 | 9 | 18 | |
| 8/7/19 | SHF | B | W | 16 | 32 | 25 | 37 | 27 | 17 | 28 | 15 | 17 | | 76 | 75 | 57 | 59 | 69 | 44 | 44 | 37 | 54 | 37 | 24 | 55 | 40 | 9 | 10 | 19 | |
| 8/13/19 | SHF | B | NE | 25 | 30 | 18 | 30 | 50 | 38 | 21 | 39 | 12 | | 74 | 57 | 57 | 63 | 32 | 17 | 59 | 70 | 60 | 45 | 29 | 53 | 42 | 9 | 10 | 19 | |
| 8/7/19 | SHF | B | SE | 22 | 52 | 36 | 14 | 21 | | | | | | 48 | 61 | 34 | 84 | 60 | 65 | 61 | 46 | 67 | 67 | 29 | 59 | 49 | 5 | 10 | 15 | |
| 8/13/19 | SHF | B | SW | 35 | 18 | 40 | 41 | 17 | 23 | 44 | 10 | 17 | 47 | 88 | 27 | 88 | 52 | 47 | 40 | 46 | 22 | 52 | 48 | 29 | 51 | 40 | 10 | 10 | 20 | |
| 8/13/19 | SHF | B | NW | 44 | 44 | 33 | 21 | 14 | 21 | 17 | 34 | 42 | | 59 | 31 | 81 | 42 | 62 | 56 | 38 | 57 | 50 | 53 | 30 | 53 | 42 | 9 | 10 | 19 | |
| 8/7/19 | SHF | C | Cen | 40 | 28 | 23 | 14 | 34 | 19 | 16 | 21 | | | 60 | 67 | 74 | 61 | 43 | 78 | 60 | 47 | 45 | 37 | 24 | 57 | 43 | 8 | 10 | 18 | |
| 8/7/19 | SHF | C | N | 22 | 22 | 35 | | | | | | | | 60 | 41 | 51 | 29 | 39 | 34 | 30 | 52 | 49 | 33 | 26 | 42 | 38 | 3 | 10 | 13 | |
| 8/12/19 | SHF | C | E | 36 | 56 | 48 | 34 | 24 | 17 | 39 | 45 | 25 | 18 | 40 | 57 | 72 | 59 | 65 | 52 | 51 | 47 | 51 | 58 | 34 | 55 | 45 | 10 | 10 | 20 | |
| 8/13/19 | SHF | C | S | 47 | 30 | 48 | 27 | 12 | 17 | 18 | 25 | 23 | 31 | 53 | 82 | 32 | 54 | 31 | 33 | 38 | 57 | 37 | 66 | 28 | 48 | 38 | 10 | 10 | 20 | |
| 8/12/19 | SHF | C | W | 16 | 30 | 27 | 20 | 34 | 16 | 13 | 12 | 28 | 10 | 47 | 55 | 39 | 60 | 42 | 47 | 37 | 66 | 66 | 39 | 21 | 50 | 35 | 10 | 10 | 20 | |
| 8/12/19 | SHF | C | NE | 35 | 43 | 38 | 51 | 26 | 31 | 28 | 40 | 33 | 12 | 70 | 77 | 47 | 58 | 47 | 55 | 40 | 51 | 40 | 32 | 34 | 52 | 43 | 10 | 10 | 20 | |
| 8/7/19 | SHF | C | SE | 35 | 57 | 36 | 37 | 46 | | | | | | 42 | 34 | 41 | 40 | 41 | 46 | 40 | 38 | 24 | 42 | 42 | 39 | 40 | 5 | 10 | 15 | |
| 8/7/19 | SHF | C | SW | 36 | 37 | 16 | 19 | 31 | 35 | 13 | | | | 52 | 64 | 72 | 59 | 69 | 61 | 42 | 31 | 45 | 30 | 27 | 53 | 42 | 7 | 10 | 17 | |
| 8/13/19 | SHF | C | NW | 34 | 51 | 54 | 43 | 16 | 17 | 21 | 10 | 11 | | 39 | 57 | 57 | 26 | 51 | 67 | 83 | 47 | 66 | 82 | 29 | 58 | 44 | 9 | 10 | 19 | |
| 10/15/19 | AP | A | Cen | | | | | | | | | | | | | | | | | | | | | | | | 0 | 0 | 0 | |
| 10/15/19 | AP | A | N | | | | | | | | | | | | | | | | | | | | | | | | 0 | 0 | 0 | |
| 10/15/19 | AP | A | E | | | | | | | | | | | | | | | | | | | | | | | | 0 | 0 | 0 | |
| 10/15/19 | AP | A | S | 56 | 75 | 51 | 44 | 78 | 66 | 82 | 70 | 79 | 77 | 70 | 62 | 40 | 40 | 43 | | | | | | 68 | 51 | 62 | 10 | 5 | 15 | |
| 10/15/19 | AP | A | W | 24 | 31 | 50 | 66 | 55 | 26 | | | | | 45 | | | | | | | | | | 42 | 45 | 42 | 6 | 1 | 7 | |
| | AP | A | NE | | | | | | | | | | | | | | | | | | | | | | | | 0 | 0 | 0 | |
| 10/15/19 | AP | A | SE | 32 | 59 | 22 | 25 | 53 | 26 | 18 | 14 | 37 | 21 | 70 | | | | | | | | | | 31 | 70 | 34 | 10 | 1 | 11 | |
| 10/15/19 | AP | A | SW | 28 | 28 | 32 | 29 | 25 | | | | | | 60 | 48 | 53 | 42 | 27 | 25 | 34 | 26 | 19 | | 28 | 37 | 34 | 5 | 9 | 14 | |
| 10/15/19 | AP | A | NW | | | | | | | | | | | | | | | | | | | | | | | | 0 | 0 | 0 | |
| 10/15/19 | AP | B | Cen | 54 | 41 | 51 | 46 | 47 | 49 | 35 | 38 | 31 | | 84 | 39 | 30 | | | | | | | | 44 | 51 | 45 | 9 | 3 | 12 | |
| 10/15/19 | AP | B | N | | | | | | | | | | | | | | | | | | | | | | | | 0 | 0 | 0 | |
| 10/15/19 | AP | B | E | | | | | | | | | | | | | | | | | | | | | | | | 0 | 0 | 0 | |
| 10/15/19 | AP | B | S | 52 | 66 | 69 | 83 | 54 | 49 | 64 | 61 | 46 | 41 | 80 | 69 | 90 | 51 | 90 | 48 | 52 | 95 | 69 | 38 | 59 | 68 | 63 | 10 | 10 | 20 | |
| 10/15/19 | AP | B | W | 51 | 45 | 44 | 69 | 45 | 46 | 60 | 45 | 50 | 40 | 56 | 42 | 28 | 22 | 69 | | | | | | 50 | 43 | 47 | 10 | 5 | 15 | |
| 10/15/19 | AP | B | NE | | | | | | | | | | | | | | | | | | | | | | | | 0 | 0 | 0 | |
| 10/15/19 | AP | B | SE | | | | | | | | | | | 51 | | | | | | | | | | | 51 | 51 | 0 | 1 | 1 | |
| 10/15/19 | AP | B | SW | 47 | 57 | 22 | 56 | 24 | 40 | 38 | 29 | 33 | 32 | 62 | 46 | 20 | 30 | | | | | | | 38 | 40 | 38 | 10 | 4 | 14 | |
| 10/15/19 | AP | B | NW | | | | | | | | | | | | | | | | | | | | | | | | 0 | 0 | 0 | |
| 10/15/19 | AP | C | Cen | | | | | | | | | | | | | | | | | | | | | | | | 0 | 0 | 0 | |
| 10/15/19 | AP | C | N | | | | | | | | | | | | | | | | | | | | | | | | 0 | 0 | 0 | |
| 10/15/19 | AP | C | E | | | | | | | | | | | | | | | | | | | | | | | | 0 | 0 | 0 | |
| 10/15/19 | AP | C | S | 55 | 51 | 71 | 53 | 65 | 67 | 51 | 61 | 62 | 31 | 55 | 71 | 32 | 35 | 58 | 32 | 25 | 37 | | | 57 | 43 | 51 | 10 | 8 | 18 | |
| 10/15/19 | AP | C | W | | | | | | | | | | | | | | | | | | | | | | | | 0 | 0 | 0 | |
| 10/15/19 | AP | C | NE | | | | | | | | | | | | | | | | | | | | | | | | 0 | 0 | 0 | ZM fragments only |

| | | | | Vegetative Stems | | | | | | | | | | Reproductive Stems | | | | | | | | | | | | Average | Number of Stems Measured | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DATE | SITE | TRANSECT | DIRECTI | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | Veg avg | Repro avg | Stem Length | Veg | Repro | Total | Notes |
| 10/15/19 | AP | C | SE | 61 | 55 | 33 | 60 | 50 | 56 | 29 | 56 | 54 | 31 | 77 | 61 | 51 | 48 | | | | | | | 52 | | | 10 | 4 | 14 | |
| 10/15/19 | AP | C | SW | 55 | 41 | 58 | 42 | 57 | 63 | 47 | 46 | 53 | 33 | 75 | 33 | 53 | 61 | 61 | | | | | | 50 | 57 | 52 | 10 | 5 | 15 | |
| 10/15/19 | AP | C | NW | | | | | | | | | | | | | | | | | | | | | | | | 0 | 0 | 0 | |
| 10/15/19 | DR | A | Cen | | | | | | | | | | | | | | | | | | | | | | | | 0 | 0 | 0 | |
| 10/15/19 | DR | A | N | | | | | | | | | | | | | | | | | | | | | | | | 0 | 0 | 0 | |
| 10/15/19 | DR | A | E | | | | | | | | | | | | | | | | | | | | | | | | 0 | 0 | 0 | |
| 10/15/19 | DR | A | S | | | | | | | | | | | | | | | | | | | | | | | | 0 | 0 | 0 | |
| 10/15/19 | DR | A | W | 29 | 25 | 24 | 23 | 33 | 36 | 43 | 16 | 28 | | | | | | | | | | | | 29 | | 29 | 9 | 0 | 9 | |
| 10/15/19 | DR | A | NE | | | | | | | | | | | | | | | | | | | | | | | | 0 | 0 | 0 | ZM fragments only |
| 10/15/19 | DR | A | SE | | | | | | | | | | | | | | | | | | | | | | | | 0 | 0 | 0 | |
| 10/15/19 | DR | A | SW | 41 | 51 | 33 | 31 | 34 | 38 | 35 | 53 | 38 | 27 | 72 | 28 | | | | | | | | | 38 | 50 | 40 | 10 | 2 | 12 | |
| 10/15/19 | DR | A | NW | | | | | | | | | | | | | | | | | | | | | | | | 0 | 0 | 0 | |
| 10/15/19 | DR | B | Cen | | | | | | | | | | | | | | | | | | | | | | | | 0 | 0 | 0 | |
| 10/15/19 | DR | B | N | | | | | | | | | | | | | | | | | | | | | | | | 0 | 0 | 0 | |
| 10/15/19 | DR | B | E | | | | | | | | | | | | | | | | | | | | | | | | 0 | 0 | 0 | |
| 10/15/19 | DR | B | S | | | | | | | | | | | | | | | | | | | | | | | | 0 | 0 | 0 | |
| 10/15/19 | DR | B | W | | | | | | | | | | | | | | | | | | | | | | | | 0 | 0 | 0 | |
| 10/15/19 | DR | B | NE | | | | | | | | | | | | | | | | | | | | | | | | 0 | 0 | 0 | |
| 10/15/19 | DR | B | SE | | | | | | | | | | | | | | | | | | | | | | | | 0 | 0 | 0 | |
| 10/15/19 | DR | B | SW | | | | | | | | | | | | | | | | | | | | | | | | 0 | 0 | 0 | |
| 10/15/19 | DR | B | NW | | | | | | | | | | | | | | | | | | | | | | | | 0 | 0 | 0 | |
| 10/21/19 | DR | C | Cen | | | | | | | | | | | | | | | | | | | | | | | | 0 | 0 | 0 | |
| 10/21/19 | DR | C | N | 21 | 31 | 47 | 58 | 31 | 25 | 29 | 23 | 22 | 47 | | | | | | | | | | | 33 | | 33 | 10 | 0 | 10 | |
| 10/21/19 | DR | C | E | | | | | | | | | | | | | | | | | | | | | | | | 0 | 0 | 0 | |
| 10/21/19 | DR | C | S | | | | | | | | | | | | | | | | | | | | | | | | 0 | 0 | 0 | |
| 10/21/19 | DR | C | W | | | | | | | | | | | | | | | | | | | | | | | | 0 | 0 | 0 | |
| 10/21/19 | DR | C | NE | | | | | | | | | | | | | | | | | | | | | | | | 0 | 0 | 0 | |
| 10/21/19 | DR | C | SE | | | | | | | | | | | | | | | | | | | | | | | | 0 | 0 | 0 | |
| 10/21/19 | DR | C | SW | | | | | | | | | | | | | | | | | | | | | | | | 0 | 0 | 0 | |
| 10/21/19 | DR | C | NW | | | | | | | | | | | | | | | | | | | | | | | | 0 | 0 | 0 | |
| 10/22/19 | LC | A | Cen | 40 | 64 | 36 | 46 | 54 | 25 | 32 | 15 | 34 | 12 | 59 | 63 | 54 | 40 | 67 | 36 | 26 | 45 | 31 | 39 | 36 | 46 | 41 | 10 | 10 | 20 | |
| 10/22/19 | LC | A | N | | | | | | | | | | | | | | | | | | | | | | | | 0 | 0 | 0 | |
| 10/22/19 | LC | A | E | | | | | | | | | | | | | | | | | | | | | | | | 0 | 0 | 0 | ZM fragments only |
| 10/22/19 | LC | A | S | 19 | 15 | | | | | | | | | 63 | 30 | 22 | 31 | | | | | | | 17 | 37 | 30 | 2 | 4 | 6 | |
| 10/22/19 | LC | A | W | | | | | | | | | | | | | | | | | | | | | | | | 0 | 0 | 0 | |
| 10/22/19 | LC | A | NE | 22 | | | | | | | | | | 53 | 31 | | | | | | | | | 22 | 42 | 35 | 1 | 2 | 3 | |
| 10/22/19 | LC | A | SE | 61 | 56 | 9 | 51 | 17 | 36 | 19 | 43 | 26 | 35 | 61 | 42 | 63 | 30 | 20 | 38 | | | | | 35 | 42 | 38 | 10 | 6 | 16 | |
| 10/22/19 | LC | A | SW | 49 | | | | | | | | | | | | | | | | | | | | 49 | | 49 | 1 | 0 | 1 | |
| 10/22/19 | LC | A | NW | | | | | | | | | | | | | | | | | | | | | | | | 0 | 0 | 0 | |
| 10/29/19 | LC | B | Cen | | | | | | | | | | | | | | | | | | | | | | | | 0 | 0 | 0 | |
| 10/29/19 | LC | B | N | 42 | 52 | 34 | 32 | 50 | 41 | 54 | 52 | 48 | 49 | 63 | 56 | | | | | | | | | 45 | 60 | 48 | 10 | 2 | 12 | |
| 10/29/19 | LC | B | E | 26 | 15 | 18 | | | | | | | | 26 | 45 | 20 | 37 | | | | | | | 20 | 32 | 27 | 3 | 4 | 7 | |
| 10/29/19 | LC | B | S | 32 | | | | | | | | | | 27 | 36 | 28 | | | | | | | | 32 | 30 | 31 | 1 | 3 | 4 | |
| 10/28/19 | LC | B | W | 11 | 36 | 37 | 43 | 36 | 23 | 38 | 37 | 53 | 41 | | | | | | | | | | | 36 | | 36 | 10 | 0 | 10 | |

| | | | | Vegetative Stems | | | | | | | | | | Reproductive Stems | | | | | | | | | | | | | Number of Stems Measured | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DATE | SITE | TRANSECT | DIRECTI | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | Veg avg | Repro avg | Average Stem Length | Veg | Repro | Total | Notes |
| 10/29/19 | LC | B | NE | | | | | | | | | | | | | | | | | | | | | | | | 0 | 0 | 0 | |
| 10/29/19 | LC | B | SE | 40 | 36 | | | | | | | | | 51 | 32 | 62 | 33 | | | | | | | 38 | 45 | 42 | 2 | 4 | 6 | |
| 10/29/19 | LC | B | SW | 27 | 53 | 11 | 45 | 46 | 15 | 26 | 34 | 36 | 11 | 40 | 48 | 10 | 43 | 20 | 40 | 42 | 17 | 44 | 43 | 30 | 35 | 33 | 10 | 10 | 20 | |
| 10/28/19 | LC | B | NW | | | | | | | | | | | | | | | | | | | | | | | | 0 | 0 | 0 | |
| 10/28/19 | LC | C | Cen | 38 | 65 | 31 | 16 | 21 | 26 | 36 | 17 | 16 | | 37 | 21 | | | | | | | | | 30 | 29 | 29 | 9 | 2 | 11 | |
| 10/28/19 | LC | C | N | | | | | | | | | | | | | | | | | | | | | | | | 0 | 0 | 0 | |
| 10/28/19 | LC | C | E | | | | | | | | | | | | | | | | | | | | | | | | 0 | 0 | 0 | |
| 10/28/19 | LC | C | S | | | | | | | | | | | | | | | | | | | | | | | | 0 | 0 | 0 | |
| 10/28/19 | LC | C | W | | | | | | | | | | | | | | | | | | | | | | | | 0 | 0 | 0 | |
| 10/28/19 | LC | C | NE | | | | | | | | | | | | | | | | | | | | | | | | 0 | 0 | 0 | |
| 10/28/19 | LC | C | SE | | | | | | | | | | | | | | | | | | | | | | | | 0 | 0 | 0 | |
| 10/28/19 | LC | C | SW | | | | | | | | | | | | | | | | | | | | | | | | 0 | 0 | 0 | |
| 10/28/19 | LC | C | NW | 44 | 33 | 49 | 18 | 9 | 41 | 48 | 27 | 45 | 43 | 35 | 22 | 32 | 41 | 53 | 31 | 28 | 39 | 48 | 45 | 36 | 37 | 37 | 10 | 10 | 20 | |
| 10/29/19 | SHF | A | Cen | 46 | 53 | 29 | 44 | 38 | 48 | 24 | 32 | 30 | 42 | 64 | 38 | 45 | 58 | 53 | 50 | 57 | 58 | 50 | 47 | 39 | 52 | 45 | 10 | 10 | 20 | |
| 10/29/19 | SHF | A | N | 51 | 29 | 30 | 18 | 27 | 28 | 42 | 17 | 21 | 9 | 42 | 32 | 38 | 20 | 57 | 20 | 20 | 21 | 21 | 36 | 27 | 31 | 29 | 10 | 10 | 20 | |
| 10/29/19 | SHF | A | E | 27 | 32 | 21 | 24 | 39 | 41 | 53 | 27 | 14 | 66 | 66 | 31 | 33 | 25 | 64 | 31 | 33 | 56 | 57 | 48 | 34 | 44 | 39 | 10 | 10 | 20 | |
| 10/29/19 | SHF | A | S | 34 | 62 | 21 | 22 | 50 | 14 | 58 | 29 | 33 | 30 | 46 | 29 | 41 | 25 | 30 | 26 | 34 | 26 | 19 | 25 | 35 | 30 | 33 | 10 | 10 | 20 | |
| 10/29/19 | SHF | A | W | 30 | 25 | 49 | 39 | 44 | 29 | 12 | 13 | 23 | 17 | 55 | 42 | 41 | 27 | 56 | 18 | 36 | 67 | 24 | 28 | 28 | 39 | 34 | 10 | 10 | 20 | |
| 10/29/19 | SHF | A | NE | 12 | 19 | 41 | 39 | 27 | 40 | 23 | 15 | 22 | 27 | 56 | 41 | 28 | 29 | 51 | 42 | 37 | 43 | 45 | 51 | 27 | 42 | 34 | 10 | 10 | 20 | |
| 10/29/19 | SHF | A | SE | 15 | 8 | 41 | 26 | 23 | 27 | 10 | 25 | 17 | 31 | 45 | 53 | 33 | 23 | 51 | 46 | 32 | 11 | 17 | 20 | 22 | 33 | 28 | 10 | 10 | 20 | |
| 10/29/19 | SHF | A | SW | 36 | 39 | 41 | 50 | 33 | 42 | 45 | 54 | 17 | 48 | 32 | 61 | 53 | 54 | 64 | 38 | 59 | 51 | 35 | | 41 | 50 | 45 | 10 | 9 | 19 | |
| 10/29/19 | SHF | A | NW | 31 | 48 | 62 | 54 | 38 | 44 | 27 | 26 | 27 | 38 | 40 | 47 | 50 | 38 | 38 | 62 | | | | | 40 | 46 | 42 | 10 | 6 | 16 | |
| 10/29/19 | SHF | B | Cen | 23 | 9 | 46 | 65 | 35 | 32 | 27 | 45 | 14 | 36 | 41 | 51 | 37 | 48 | 15 | 40 | 34 | | | | 33 | 38 | 35 | 10 | 7 | 17 | |
| 10/29/19 | SHF | B | N | 41 | 42 | 8 | 31 | 41 | 16 | 33 | 50 | 33 | 26 | 61 | 74 | 26 | 59 | 34 | 64 | 40 | 33 | 52 | 55 | 32 | 50 | 41 | 10 | 10 | 20 | |
| 10/29/19 | SHF | B | E | 24 | 43 | 41 | 45 | 34 | 40 | 43 | 53 | 50 | 55 | 54 | 55 | 40 | 47 | 62 | 56 | 47 | 41 | | | 43 | 50 | 46 | 10 | 8 | 18 | |
| 10/29/19 | SHF | B | S | 32 | 35 | 28 | 35 | 40 | 41 | 36 | 40 | 32 | 48 | 30 | 35 | 39 | 35 | 44 | 33 | 50 | 44 | 19 | 36 | 37 | 37 | 37 | 10 | 10 | 20 | |
| 10/29/19 | SHF | B | W | 44 | 50 | 47 | 44 | 21 | 37 | 25 | 47 | 35 | 28 | 31 | 58 | 39 | 50 | 49 | 37 | 41 | 44 | 34 | | 38 | 43 | 40 | 10 | 9 | 19 | |
| 10/29/19 | SHF | B | NE | 42 | 28 | 36 | 42 | 27 | 47 | 31 | 20 | 66 | 76 | 43 | 33 | 54 | 60 | 62 | 69 | 70 | 53 | 34 | 47 | 42 | 53 | 47 | 10 | 10 | 20 | |
| 10/29/19 | SHF | B | SE | 19 | 19 | 20 | 28 | 58 | 18 | 42 | 40 | 24 | 35 | 64 | 46 | 33 | 21 | 29 | 21 | 52 | 55 | 57 | 26 | 30 | 40 | 35 | 10 | 10 | 20 | |
| 10/29/19 | SHF | B | SW | 32 | 73 | 17 | 33 | 20 | 16 | 15 | 19 | 26 | 10 | 56 | 28 | 41 | 73 | 39 | 48 | 49 | 26 | 26 | 17 | 26 | 40 | 33 | 10 | 10 | 20 | |
| 10/29/19 | SHF | B | NW | 61 | 68 | 51 | 75 | 65 | 55 | 50 | 62 | 60 | 46 | 48 | 58 | 36 | 46 | 48 | 48 | 49 | 67 | 58 | 51 | 59 | 51 | 55 | 10 | 10 | 20 | |
| 10/30/19 | SHF | C | Cen | 49 | 44 | 53 | 39 | 45 | 43 | 36 | 71 | 42 | 35 | 75 | 34 | 70 | 35 | 48 | 58 | 48 | 57 | | | 46 | 53 | 49 | 10 | 8 | 18 | |
| 10/30/19 | SHF | C | N | 45 | 34 | 32 | 24 | 10 | 26 | 35 | 45 | 50 | 27 | 37 | 50 | 43 | 45 | 34 | 44 | 50 | 50 | 20 | | 33 | 41 | 37 | 10 | 9 | 19 | |
| 10/30/19 | SHF | C | E | 53 | 37 | 61 | 64 | 20 | 16 | 28 | 40 | 28 | 29 | 43 | 55 | 41 | 68 | 55 | 39 | 15 | 58 | 21 | 41 | 38 | 44 | 41 | 10 | 10 | 20 | |
| 10/30/19 | SHF | C | S | 23 | 29 | 29 | 37 | 31 | 46 | 42 | 25 | 34 | 61 | 38 | 30 | 36 | 46 | 31 | 46 | 44 | 41 | | | 36 | 39 | 37 | 10 | 8 | 18 | |
| 10/30/19 | SHF | C | W | 40 | 68 | 46 | 25 | 31 | 20 | 24 | 56 | 9 | 37 | 45 | 63 | 42 | 48 | 30 | 34 | 43 | 60 | 42 | 28 | 36 | 44 | 40 | 10 | 10 | 20 | |
| 10/30/19 | SHF | C | NE | 42 | 49 | 20 | 52 | 36 | 26 | 35 | 25 | 28 | 59 | 46 | 39 | 29 | 62 | 56 | 40 | 45 | 36 | 73 | 39 | 37 | 47 | 42 | 10 | 10 | 20 | |
| 10/30/19 | SHF | C | SE | 35 | 33 | 45 | 35 | 52 | 27 | 31 | 29 | 25 | 15 | 31 | 35 | 35 | 33 | 44 | 58 | 39 | 25 | 41 | 70 | 33 | 41 | 37 | 10 | 10 | 20 | |
| 10/30/19 | SHF | C | SW | 26 | 56 | 41 | 30 | 50 | 29 | 46 | 47 | 57 | 30 | 41 | 56 | 36 | 31 | 66 | 39 | 37 | 44 | 41 | 74 | 41 | 47 | 44 | 10 | 10 | 20 | |
| 10/30/19 | SHF | C | NW | 41 | 28 | 22 | 30 | 33 | 47 | 35 | 23 | 19 | 27 | 47 | 41 | 47 | 64 | 41 | 45 | 47 | 33 | 33 | | 31 | 44 | 37 | 10 | 9 | 19 | |

Table A6. Seaweed biomass collected at SeagrassNet sites in $0.25 m^2$ quadrats.

| Collection Date | Season | Site | Tran-sect | Quadrat Distance | Plot | Species | Type | Total Wet Wt. (no foil) *use when taking subsamples | Foil weight (g) | Wet weight (w/ foil) | Dry Wt. (w/ foil) | Dry Wt. (no foil) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 4/20/19 | Spring | Great Bay | A | | 1 | Agarophyton vermiculophyllum | Red | 6.85 | 1.35 | 3.56 | 1.89 | 1.674 |
| 4/20/19 | Spring | Great Bay | A | | 1 | Ulva rigida | Green | 0.70 | 0.88 | 1.56 | 0.99 | 0.110 |
| 4/20/19 | Spring | Great Bay | A | | 1 | Berkeleya rutilans | Brown | | 0.69 | 0.73 | 0.70 | 0.010 |
| 4/20/19 | Spring | Great Bay | A | | 2 | Callithamnion corymbosum | Red | 0.00 | | | | 0.005 |
| 4/20/19 | Spring | Great Bay | A | | 2 | Berkeleya rutilans | Brown | | 0.75 | 0.95 | 0.80 | 0.050 |
| 4/20/19 | Spring | Great Bay | A | | 3 | Berkeleya rutilans | Brown | | 0.96 | 1.33 | 1.09 | 0.130 |
| 4/20/19 | Spring | Great Bay | A | | 4 | Berkeleya rutilans | Brown | | 1.12 | 1.54 | 1.25 | 0.130 |
| 4/20/19 | Spring | Great Bay | A | | 5 | Berkeleya rutilans | Brown | | 0.50 | 0.74 | 0.57 | 0.070 |
| 4/20/19 | Spring | Great Bay | A | | 6 | Berkeleya rutilans | Brown | | 0.86 | 0.96 | 0.89 | 0.030 |
| 4/20/19 | Spring | Great Bay | A | | 7 | Berkeleya rutilans | Brown | | 0.84 | 1.12 | 0.93 | 0.090 |
| 4/20/19 | Spring | Great Bay | A | | 8 | Berkeleya rutilans | Brown | | 1.14 | 1.61 | 1.29 | 0.150 |
| 4/20/19 | Spring | Great Bay | A | | 9 | Berkeleya rutilans | Brown | | 0.72 | 0.79 | 0.74 | 0.020 |
| 4/20/19 | Spring | Great Bay | A | | 10 | Berkeleya rutilans | Brown | | 0.80 | 0.87 | 0.83 | 0.030 |
| 4/20/19 | Spring | Great Bay | A | | 11 | Berkeleya rutilans | Brown | | 0.72 | 0.87 | 0.76 | 0.040 |
| 4/20/19 | Spring | Great Bay | A | | 12 | Berkeleya rutilans | Brown | | 1.01 | 1.41 | 1.14 | 0.130 |
| 4/18/19 | Spring | Great Bay | B | | 1 | No algae | | | | | | |
| 4/18/19 | Spring | Great Bay | B | | 2 | No algae | | | | | | |
| 4/18/19 | Spring | Great Bay | B | | 3 | Ulva lactuca | Green | 0.00 | | | | 0.000 |
| 4/18/19 | Spring | Great Bay | B | | 4 | Berkeleya rutilans | Brown | | 2.37 | 11.90 | 6.03 | 3.660 |
| 4/18/19 | Spring | Great Bay | B | | 4 | Ceramium virgatum | Red | | 0.84 | 1.04 | 0.90 | 0.060 |
| 4/18/19 | Spring | Great Bay | B | | 4 | Agarophyton vermiculophyllum | Red | | 1.88 | 2.96 | 2.10 | 0.220 |
| 4/18/19 | Spring | Great Bay | B | | 4 | Melosira nummuloides | Diatom | 0.00 | | | | 0.000 |
| 4/18/19 | Spring | Great Bay | B | | 4 | Callithamnion corymbosum | Red | 0.00 | | | | 0.000 |
| 4/18/19 | Spring | Great Bay | B | | 5 | Agarophyton vermiculophyllum | Red | | 2.13 | 2.27 | 2.16 | 0.030 |
| 4/18/19 | Spring | Great Bay | B | | 5 | Berkeleya rutilans | Brown | | 2.37 | 3.46 | 2.79 | 0.420 |
| 4/18/19 | Spring | Great Bay | B | | 6 | No algae | | | | | | |
| 4/18/19 | Spring | Great Bay | B | | 7 | Monostroma grevillei | Green | 0.01 | 0.79 | 0.80 | 0.79 | 0.000 |
| 4/18/19 | Spring | Great Bay | B | | 8 | No algae | | | | | | |
| 4/18/19 | Spring | Great Bay | B | | 9 | No algae | | | | | | |
| 4/18/19 | Spring | Great Bay | B | | 10 | No algae | | | | | | |
| 4/18/19 | Spring | Great Bay | B | | 11 | No algae | | | | | | |
| 4/18/19 | Spring | Great Bay | B | | 12 | No algae | | | | | | |
| 4/19/19 | Spring | Great Bay | C | | 1 | No algae | | | | | | |
| 4/19/19 | Spring | Great Bay | C | | 2 | Agarophyton vermiculophyllum | Red | | 0.92 | 1.14 | 0.96 | 0.040 |
| 4/19/19 | Spring | Great Bay | C | | 2 | Berkeleya rutilans | Brown | | 1.19 | 5.17 | 2.13 | 0.940 |

| Collection Date | Season | Site | Tran-sect | Quadrat Distance | Plot | Species | Type | Total Wet Wt. (no foil) *use when taking subsamples | Foil weight (g) | Wet weight (w/ foil) | Dry Wt. (w/ foil) | Dry Wt. (no foil) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 4/19/19 | Spring | Great Bay | C | | 3 | No algae | | | | | | |
| 4/19/19 | Spring | Great Bay | C | | 4 | Monostroma grevillei | Green | 0.01 | | | | 0.000 |
| 4/19/19 | Spring | Great Bay | C | | 4 | Callithamnion corymbosum | Red | <0.01 | | | | 0.000 |
| 4/19/19 | Spring | Great Bay | C | | 4 | Ceramium virgatum | Red | | 1.36 | 1.47 | 1.39 | 0.030 |
| 4/19/19 | Spring | Great Bay | C | | 4 | Berkeleya rutilans | Brown | | 1.46 | 9.19 | 3.27 | 1.810 |
| 4/19/19 | Spring | Great Bay | C | | 4 | Agarophyton vermiculophyllum | Red | | 1.41 | 1.79 | 1.48 | 0.070 |
| 4/19/19 | Spring | Great Bay | C | | 5 | Agarophyton vermiculophyllum | Red | | 1.09 | 1.80 | 1.22 | 0.130 |
| 4/19/19 | Spring | Great Bay | C | | 5 | Berkeleya rutilans | Brown | | 1.18 | 9.85 | 3.31 | 2.130 |
| 4/19/19 | Spring | Great Bay | C | | 5 | Chondria baileyana | Red | | 0.76 | 0.77 | 0.76 | 0.000 |
| 4/19/19 | Spring | Great Bay | C | | 5 | Ulva enteromorpha | Green | <0.01 | | | | |
| 4/19/19 | Spring | Great Bay | C | | 6 | No algae | | | | | | |
| 4/19/19 | Spring | Great Bay | C | | 7 | Ceramium virgatum | Red | | 1.41 | 1.43 | 1.41 | 0.000 |
| 4/19/19 | Spring | Great Bay | C | | 7 | Berkeleya rutilans | Brown | | 2.02 | 4.27 | 2.62 | 0.600 |
| 4/19/19 | Spring | Great Bay | C | | 7 | Callithamnion corymbosum | Red | <0.01 | | | | 0.000 |
| 4/19/19 | Spring | Great Bay | C | | 7 | Agarophyton vermiculophyllum | Red | | 2.56 | 3.87 | 2.77 | 0.210 |
| 4/19/19 | Spring | Great Bay | C | | 8 | No algae | | | | | | |
| 4/19/19 | Spring | Great Bay | C | | 9 | No algae | | | | | | |
| 4/19/19 | Spring | Great Bay | C | | 10 | No algae | | | | | | |
| 4/19/19 | Spring | Great Bay | C | | 11 | Berkeleya rutilans | Brown | | 1.45 | 3.11 | 1.94 | 0.490 |
| 4/19/19 | Spring | Great Bay | C | | 11 | Agarophyton vermiculophyllum | Red | | 1.35 | 1.62 | 1.40 | 0.050 |
| 4/19/19 | Spring | Great Bay | C | | 12 | Berkeleya rutilans | Brown | | 2.39 | 5.59 | 3.21 | 0.820 |
| 4/19/19 | Spring | Great Bay | C | | 12 | Agarophyton vermiculophyllum | Red | | 2.33 | 3.48 | 2.54 | 0.210 |
| 4/19/19 | Spring | Great Bay | C | | 12 | Callithamnion corymbosum | Red | 0.00 | | | | 0.000 |
| 4/19/19 | Spring | Great Bay | C | | 12 | Ceramium virgatum | Red | <0.01 | | | | 0.000 |
| 4/19/19 | Spring | Great Bay | C"1" bag did not have a plot number | | | | | | | | | |
| 4/19/19 | Spring | Great Bay | C | | "1" | Agarophyton vermiculophyllum | Red | | 1.33 | 1.39 | 1.34 | 0.010 |
| 4/19/19 | Spring | Great Bay | C | | "1" | Ceramium virgatum | Red | 0.01 | | | | 0.000 |
| 4/19/19 | Spring | Great Bay | C | | "1" | Ulva lactuca | Green | 0.00 | | | | 0.000 |
| 4/19/19 | Spring | Great Bay | C | | "1" | Berkeleya rutilans | Brown | | 1.16 | 2.61 | 1.54 | 0.380 |
| 4/19/19 | Spring | Great Bay | C | | "1" | Halosiphon tomentosus | Brown | | 1.27 | 1.48 | 1.29 | 0.020 |
| 7/25/19 | Summer | Fort Foster | A | 2 | 1 | Quadrat not suveyed | | | | | | |
| 7/25/19 | Summer | Fort Foster | A | 7 | 2 | Ulva rigida | Green | | 0.58 | 0.67 | 0.60 | 0.020 |
| 7/25/19 | Summer | Fort Foster | A | 7 | 2 | Polysiphonia schneideri | Red | | 1.45 | 5.55 | 1.93 | 0.480 |
| 7/25/19 | Summer | Fort Foster | A | 7 | 2 | Corallina officinalis | Red | | 0.61 | 0.82 | 0.74 | 0.130 |
| 7/25/19 | Summer | Fort Foster | A | 7 | 2 | Vertebrata lanosa | Red | | 0.55 | 0.68 | 0.59 | 0.040 |
| 7/25/19 | Summer | Fort Foster | A | 7 | 2 | Chondrus crispus | Red | | 1.81 | 4.14 | 2.35 | 0.540 |
| 7/25/19 | Summer | Fort Foster | A | 7 | 2 | Fucus vesiculosus | Brown | | 1.69 | 4.29 | 2.53 | 0.840 |
| 7/25/19 | Summer | Fort Foster | A | 7 | 2 | Polysiphonia fucoides | Red | | 0.50 | 0.61 | 0.52 | 0.020 |
| 7/25/19 | Summer | Fort Foster | A | 7 | 2 | Dasysiphonia japonica | Red | | 1.92 | 27.03 | 6.70 | 4.780 |
| 7/25/19 | Summer | Fort Foster | A | 7 | 2 | Phyllophora pseudoceranoides | Red | | 0.66 | 1.02 | 0.79 | 0.130 |
| 7/25/19 | Summer | Fort Foster | A | 7 | 2 | Chaetomorpha picquotiana | Green | | 0.71 | 0.76 | 0.74 | 0.030 |
| 7/25/19 | Summer | Fort Foster | A | 8 | 3 | Ascophyllum nodosum | Brown | | 2.63 | 12.82 | 5.46 | 2.830 |
| 7/25/19 | Summer | Fort Foster | A | 8 | 3 | Vertebrata lanosa | Red | | 1.16 | 3.92 | 1.75 | 0.590 |

| Collection Date | Season | Site | Tran-sect | Quadrat Distance | Plot | Species | Type | Total Wet Wt. (no foil) *use when taking subsamples | Foil weight (g) | Wet weight (w/ foil) | Dry Wt. (w/ foil) | Dry Wt. (no foil) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/25/19 | Summer | Fort Foster | A | 8 | 3 | Chordaria flagelliformis | Brown | | 1.10 | 2.11 | 1.27 | 0.170 |
| 7/25/19 | Summer | Fort Foster | A | 8 | 3 | Fucus vesiculosus | Brown | | 4.31 | 26.40 | 8.62 | 4.310 |
| 7/25/19 | Summer | Fort Foster | A | 8 | 3 | Ceramium virgatum | Red | | 0.82 | 2.61 | 1.17 | 0.350 |
| 7/25/19 | Summer | Fort Foster | A | 8 | 3 | Coccotylus truncatus | Red | | 2.19 | 5.74 | 3.09 | 0.900 |
| 7/25/19 | Summer | Fort Foster | A | 8 | 3 | Chaetomorpha picquotiana | Green | | 0.68 | 0.96 | 0.74 | 0.060 |
| 7/25/19 | Summer | Fort Foster | A | 8 | 3 | Dasysiphonia japonica | Red | | 1.66 | 7.05 | 2.85 | 1.190 |
| 7/25/19 | Summer | Fort Foster | A | 8 | 3 | Chondrus crispus | Red | | 3.29 | 20.15 | 7.08 | 3.790 |
| 7/25/19 | Summer | Fort Foster | A | 16 | 4 | Saccharina latissima | Brown | | 1.14 | 4.62 | 1.59 | 0.450 |
| 7/25/19 | Summer | Fort Foster | A | 16 | 4 | Ceramium virgatum | Red | | 0.53 | 0.58 | 0.54 | 0.010 |
| 7/25/19 | Summer | Fort Foster | A | 16 | 4 | Agarophyton vermiculophyllum | Red | | 0.48 | 0.50 | 0.48 | 0.000 |
| 7/25/19 | Summer | Fort Foster | A | 16 | 4 | Dasysiphonia japonica | Red | | 1.87 | 25.56 | 6.45 | 4.580 |
| 7/25/19 | Summer | Fort Foster | A | 16 | 4 | Ulva rigida | Green | | 0.52 | 0.55 | 0.54 | 0.020 |
| 7/25/19 | Summer | Fort Foster | A | 16 | 4 | Chaetomorpha picquotiana | Green | | 0.52 | 0.54 | 0.53 | 0.010 |
| 7/25/19 | Summer | Fort Foster | A | 16 | 4 | Polysiphonia fucoides | Red | | 0.66 | 2.20 | 1.03 | 0.370 |
| 7/25/19 | Summer | Fort Foster | A | 16 | 4 | Ulva prolifera | Green | | 0.55 | 0.86 | 0.60 | 0.050 |
| 7/25/19 | Summer | Fort Foster | A | 18 | 5 | Chondrus crispus | Red | | 2.75 | 11.67 | 4.62 | 1.870 |
| 7/25/19 | Summer | Fort Foster | A | 18 | 5 | Chordaria flagelliformis | Brown | | 0.63 | 0.65 | 0.63 | 0.000 |
| 7/25/19 | Summer | Fort Foster | A | 18 | 5 | Ulva australis | Green | | 0.45 | 0.50 | 0.46 | 0.010 |
| 7/25/19 | Summer | Fort Foster | A | 18 | 5 | Dasysiphonia japonica | Red | | 1.10 | 12.20 | 3.58 | 2.480 |
| 7/25/19 | Summer | Fort Foster | A | 18 | 5 | Ulva prolifera | Green | | 0.69 | 1.01 | 0.71 | 0.020 |
| 7/25/19 | Summer | Fort Foster | A | 18 | 5 | Ascophyllum nodosum | Brown | | 0.62 | 1.09 | 0.77 | 0.150 |
| 7/25/19 | Summer | Fort Foster | A | 18 | 5 | Ceramium virgatum | Red | | 0.44 | 0.60 | 0.47 | 0.030 |
| 7/25/19 | Summer | Fort Foster | A | 18 | 5 | Chaetomorpha picquotiana | Green | | 0.46 | 0.49 | 0.47 | 0.010 |
| 7/25/19 | Summer | Fort Foster | A | 18 | 5 | Vertebrata lanosa | Red | | 0.54 | 0.93 | 0.61 | 0.070 |
| 7/25/19 | Summer | Fort Foster | A | 25 | 6 | No seaweed | | | | | | 0.000 |
| 7/25/19 | Summer | Fort Foster | A | 26 | 7 | Dasysiphonia japonica | Red | | 0.92 | 2.70 | 1.27 | 0.350 |
| 7/25/19 | Summer | Fort Foster | A | 26 | 7 | Ulvaria obscura | Green | | 0.82 | 0.99 | 0.85 | 0.030 |
| 7/25/19 | Summer | Fort Foster | A | 33 | 8 | Polysiphonia fucoides | Red | | 0.69 | 0.82 | 0.72 | 0.030 |
| 7/25/19 | Summer | Fort Foster | A | 33 | 8 | Chaetomorpha picquotiana | Green | | 0.41 | 0.43 | 0.42 | 0.010 |
| 7/25/19 | Summer | Fort Foster | A | 33 | 8 | Ulva australis | Green | | 0.80 | 0.97 | 0.84 | 0.040 |
| 7/25/19 | Summer | Fort Foster | A | 33 | 8 | Ceramium virgatum | Red | | 0.94 | 1.21 | 0.97 | 0.030 |
| 7/25/19 | Summer | Fort Foster | A | 33 | 8 | Dasysiphonia japonica | Red | | 1.28 | 5.00 | 2.01 | 0.730 |
| 7/25/19 | Summer | Fort Foster | A | 38 | 9 | Phyllophora pseudoceranoides | Red | | 0.51 | 0.51 | 0.51 | 0.000 |
| 7/25/19 | Summer | Fort Foster | A | 38 | 9 | Mastocarpus stellatus | Red | | 0.93 | 1.64 | 1.15 | 0.220 |
| 7/25/19 | Summer | Fort Foster | A | 38 | 9 | Ulva australis | Green | | 1.35 | 6.44 | 2.34 | 0.990 |
| 7/25/19 | Summer | Fort Foster | A | 38 | 9 | Chaetomorpha picquotiana | Green | | 0.48 | 0.48 | 0.48 | 0.000 |
| 7/25/19 | Summer | Fort Foster | A | 38 | 9 | Cystoclonium purpureum | Red | | 0.40 | 0.41 | 0.40 | 0.000 |
| 7/25/19 | Summer | Fort Foster | A | 38 | 9 | Chondrus crispus | Red | | 1.70 | 6.33 | 2.73 | 1.030 |
| 7/25/19 | Summer | Fort Foster | A | 38 | 9 | Fucus distichus (ssp evanescens) | Brown | | 0.93 | 2.01 | 1.21 | 0.280 |
| 7/25/19 | Summer | Fort Foster | A | 38 | 9 | Ceramium virgatum | Red | | 1.90 | 7.73 | 2.70 | 0.800 |
| 7/25/19 | Summer | Fort Foster | A | 38 | 9 | Chordaria flagelliformis | Brown | | 0.47 | 0.49 | 0.49 | 0.020 |
| 7/25/19 | Summer | Fort Foster | A | 38 | 9 | Saccharina latissima | Brown | | 0.92 | 4.84 | 1.45 | 0.530 |
| 7/25/19 | Summer | Fort Foster | A | 38 | 9 | Fucus vesiculosus | Brown | | 2.35 | 21.45 | 5.32 | 2.970 |

| Collection Date | Season | Site | Tran-sect | Quadrat Distance | Plot | Species | Type | Total Wet Wt. (no foil) *use when taking subsamples | Foil weight (g) | Wet weight (w/ foil) | Dry Wt. (w/ foil) | Dry Wt. (no foil) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/25/19 | Summer | Fort Foster | A | 38 | 9 | Vertebrata lanosa | Red | | 1.08 | 2.29 | 1.34 | 0.260 |
| 7/25/19 | Summer | Fort Foster | A | 38 | 9 | Polysiphonia fucoides | Red | | 0.53 | 0.68 | 0.57 | 0.040 |
| 7/25/19 | Summer | Fort Foster | A | 38 | 9 | Dasysiphonia japonica | Red | | 1.10 | 7.04 | 2.37 | 1.270 |
| 7/25/19 | Summer | Fort Foster | A | 40 | 10 | Ceramium virgatum | Red | | 0.60 | 1.17 | 0.66 | 0.060 |
| 7/25/19 | Summer | Fort Foster | A | 40 | 10 | Dasysiphonia japonica | Red | | 1.22 | 5.39 | 2.13 | 0.910 |
| 7/25/19 | Summer | Fort Foster | A | 40 | 10 | Chondrus crispus | Red | | 0.99 | 2.22 | 1.27 | 0.280 |
| 7/25/19 | Summer | Fort Foster | A | 40 | 10 | Fucus distichus (sub sp evanescens) | Brown | | 0.97 | 1.93 | 1.18 | 0.210 |
| 7/25/19 | Summer | Fort Foster | A | 40 | 10 | Ulva australis | Green | | 1.70 | 6.38 | 2.64 | 0.940 |
| 7/25/19 | Summer | Fort Foster | A | 44 | 11 | Polysiphonia elongata | Red | | 0.57 | 0.91 | 0.58 | 0.010 |
| 7/25/19 | Summer | Fort Foster | A | 44 | 11 | Chordaria flagelliformis | Brown | | 1.01 | 1.87 | 1.10 | 0.090 |
| 7/25/19 | Summer | Fort Foster | A | 44 | 11 | Ahnfeltia plicata | Red | | 0.63 | 0.70 | 0.65 | 0.020 |
| 7/25/19 | Summer | Fort Foster | A | 44 | 11 | Chondrus crispus | Red | | 1.57 | 3.43 | 1.97 | 0.400 |
| 7/25/19 | Summer | Fort Foster | A | 44 | 11 | Ceramium virgatum | Red | | 0.82 | 4.12 | 1.18 | 0.360 |
| 7/25/19 | Summer | Fort Foster | A | 44 | 11 | Polysiphonia fucoides | Red | | 1.01 | 3.32 | 1.39 | 0.380 |
| 7/25/19 | Summer | Fort Foster | A | 44 | 11 | Chaetomorpha picquotiana | Green | | 0.57 | 0.64 | 0.58 | 0.010 |
| 7/25/19 | Summer | Fort Foster | A | 44 | 11 | Saccharina latissima | Brown | | 4.48 | 19.71 | 6.62 | 2.140 |
| 7/25/19 | Summer | Fort Foster | A | 44 | 11 | Dasysiphonia japonica | Red | | 1.75 | 14.72 | 4.13 | 2.380 |
| 7/25/19 | Summer | Fort Foster | A | 44 | 11 | Chaetomorpha ligustica | Green | | 0.51 | 0.59 | 0.54 | 0.030 |
| 7/25/19 | Summer | Fort Foster | A | 46 | 12 | Fucus vesiculosus | Brown | | 0.97 | 1.85 | 1.24 | 0.270 |
| 7/25/19 | Summer | Fort Foster | A | 46 | 12 | Ceramium virgatum | Red | | 0.59 | 0.66 | 0.59 | 0.000 |
| 7/25/19 | Summer | Fort Foster | A | 46 | 12 | Dasysiphonia japonica | Red | | 0.98 | 1.86 | 1.14 | 0.160 |
| 7/25/19 | Summer | Fort Foster | A | 46 | 12 | Polysiphonia fucoides | Red | | 0.83 | 0.90 | 0.84 | 0.010 |
| 7/25/19 | Summer | Fort Foster | A | 46 | 12 | Chaetomorpha picquotiana | Green | | 0.73 | 0.75 | 0.74 | 0.010 |
| 7/24/19 | Summer | Fort Foster | B | 9 | 1 | Dasysiphonia japonica | Red | | 0.94 | 3.61 | 1.41 | 0.470 |
| 7/24/19 | Summer | Fort Foster | B | 9 | 1 | Polysiphonia fucoides | Red | | 0.74 | 1.20 | 0.85 | 0.110 |
| 7/24/19 | Summer | Fort Foster | B | 9 | 1 | Saccharina latissima | Brown | | 0.54 | 0.80 | 0.58 | 0.040 |
| 7/24/19 | Summer | Fort Foster | B | 9 | 1 | Punctaria plantaginea | Brown | | 0.57 | 0.67 | 0.59 | 0.020 |
| 7/24/19 | Summer | Fort Foster | B | 9 | 1 | Polysiphonia stricta | Red | | 0.50 | 0.55 | 0.52 | 0.020 |
| 7/24/19 | Summer | Fort Foster | B | 9 | 1 | Chaetomorpha picquotiana + ligustic | Green | | 0.53 | 0.59 | 0.54 | 0.010 |
| 7/24/19 | Summer | Fort Foster | B | 9 | 1 | Ulva australis | Green | | 0.46 | 0.48 | 0.46 | 0.000 |
| 7/24/19 | Summer | Fort Foster | B | 9 | 1 | Cystoclonium purpureum | Red | | 0.43 | 0.47 | 0.44 | 0.010 |
| 7/24/19 | Summer | Fort Foster | B | 9 | 1 | Phyllophora pseudoceranoides | Red | | 0.53 | 0.58 | 0.56 | 0.030 |
| 7/24/19 | Summer | Fort Foster | B | 9 | 1 | Ceramium virgatum | Red | | 0.53 | 0.67 | 0.55 | 0.020 |
| 7/24/19 | Summer | Fort Foster | B | 9 | 1 | Euthora cristata | Red | | 0.46 | 0.47 | 0.47 | 0.010 |
| 7/24/19 | Summer | Fort Foster | B | 10 | 2 | Vertebrata lanosa | Red | | 0.76 | 0.92 | 0.78 | 0.020 |
| 7/24/19 | Summer | Fort Foster | B | 10 | 2 | Ceramium virgatum | Red | | 0.56 | 0.56 | 0.55 | 0.000 |
| 7/24/19 | Summer | Fort Foster | B | 10 | 2 | Polysiphonia elongata | Red | | 0.83 | 0.93 | 0.85 | 0.020 |
| 7/24/19 | Summer | Fort Foster | B | 10 | 2 | Fucus vesiculosus | Brown | | 0.87 | 1.84 | 1.22 | 0.350 |
| 7/24/19 | Summer | Fort Foster | B | 10 | 2 | Chondrus crispus | Red | | 2.00 | 6.54 | 3.04 | 1.040 |
| 7/24/19 | Summer | Fort Foster | B | 10 | 2 | Saccharina latissima | Brown | | 1.55 | 15.57 | 3.40 | 1.850 |
| 7/24/19 | Summer | Fort Foster | B | 10 | 2 | Dasysiphonia japonica | Red | | 1.57 | 11.40 | 4.24 | 2.670 |
| 7/24/19 | Summer | Fort Foster | B | 15 | 3 | Bonnemaisonia hamifera | Red | | 0.62 | 0.62 | 0.63 | 0.010 |
| 7/24/19 | Summer | Fort Foster | B | 15 | 3 | Chordaria flagelliformis | Brown | | 0.62 | 0.77 | 0.66 | 0.040 |

| Collection Date | Season | Site | Tran-sect | Quadrat Distance | Plot | Species | Type | Total Wet Wt. (no foil) *use when taking subsamples | Foil weight (g) | Wet weight (w/ foil) | Dry Wt. (w/ foil) | Dry Wt. (no foil) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/24/19 | Summer | Fort Foster | B | 15 | 3 | Chaetomorpha picquotiana | Green | | 0.47 | 0.48 | 0.48 | 0.010 |
| 7/24/19 | Summer | Fort Foster | B | 15 | 3 | Saccharina latissima | Brown | | 0.93 | 2.14 | 1.11 | 0.180 |
| 7/24/19 | Summer | Fort Foster | B | 15 | 3 | Dasysiphonia japonica | Red | | 1.81 | 20.17 | 5.25 | 3.440 |
| 7/24/19 | Summer | Fort Foster | B | 17 | 4 | Polysiphonia elongata | Red | | 0.71 | 1.95 | 0.95 | 0.240 |
| 7/24/19 | Summer | Fort Foster | B | 17 | 4 | Coccotylus truncatus | Red | | 1.16 | 2.34 | 1.46 | 0.300 |
| 7/24/19 | Summer | Fort Foster | B | 17 | 4 | Dasysiphonia japonica | Red | | 1.75 | 18.20 | 5.30 | 3.550 |
| 7/24/19 | Summer | Fort Foster | B | 17 | 4 | Ascophyllum nodosum | Brown | | 1.85 | 5.45 | 3.05 | 1.200 |
| 7/24/19 | Summer | Fort Foster | B | 17 | 4 | Saccharina latissima | Brown | | 1.61 | 5.38 | 2.09 | 0.480 |
| 7/24/19 | Summer | Fort Foster | B | 17 | 4 | Ceramium virgatum | Red | | 0.60 | 0.65 | 0.61 | 0.010 |
| 7/24/19 | Summer | Fort Foster | B | 17 | 4 | Polysiphonia fucoides | Red | | 0.80 | 1.18 | 0.88 | 0.080 |
| 7/24/19 | Summer | Fort Foster | B | 17 | 4 | Chondrus crispus | Red | | 1.46 | 3.12 | 1.85 | 0.390 |
| 7/24/19 | Summer | Fort Foster | B | 17 | 4 | Ulva australis | Green | | 0.48 | 0.48 | 0.47 | 0.000 |
| 7/24/19 | Summer | Fort Foster | B | 17 | 4 | Chaetomorpha picquotiana | Green | | 0.39 | 0.40 | 0.40 | 0.010 |
| 7/24/19 | Summer | Fort Foster | B | 17 | 4 | Vertebrata lanosa | Red | | 1.17 | 7.85 | 2.73 | 1.560 |
| 7/24/19 | Summer | Fort Foster | B | 22 | 5 | Chaetomorpha picquotiana | Green | | 0.54 | 0.56 | 0.54 | 0.000 |
| 7/24/19 | Summer | Fort Foster | B | 22 | 5 | Dasysiphonia japonica | Red | | 2.08 | 14.82 | 4.28 | 2.200 |
| 7/24/19 | Summer | Fort Foster | B | 22 | 5 | Fucus vesiculosus | Brown | | 2.48 | 4.58 | 3.17 | 0.690 |
| 7/24/19 | Summer | Fort Foster | B | 22 | 5 | Saccharina latissima | Brown | | 1.15 | 2.28 | 1.28 | 0.130 |
| 7/24/19 | Summer | Fort Foster | B | 22 | 5 | Euthora cristata | Red | | 0.64 | 0.72 | 0.65 | 0.010 |
| 7/24/19 | Summer | Fort Foster | B | 22 | 5 | Chordaria flagelliformis | Brown | | 0.78 | 0.94 | 0.81 | 0.030 |
| 7/24/19 | Summer | Fort Foster | B | 22 | 5 | Polysiphonia fucoides | Red | | 0.80 | 1.05 | 0.85 | 0.050 |
| 7/24/19 | Summer | Fort Foster | B | 22 | 5 | Polysiphonia elongata | Red | | 0.74 | 1.29 | 0.86 | 0.120 |
| 7/24/19 | Summer | Fort Foster | B | 22 | 5 | Agarophyton vermiculophyllum | Red | | 0.67 | 0.69 | 0.67 | 0.000 |
| 7/24/19 | Summer | Fort Foster | B | 25 | 6 | Polysiphonia fucoides | Red | | 0.80 | 1.17 | 0.90 | 0.100 |
| 7/24/19 | Summer | Fort Foster | B | 25 | 6 | Polysiphonia pseudoceranoides | Red | | 0.97 | 1.66 | 1.18 | 0.210 |
| 7/24/19 | Summer | Fort Foster | B | 25 | 6 | Dasysiphonia japonica | Red | | 0.95 | 4.48 | 1.82 | 0.870 |
| 7/24/19 | Summer | Fort Foster | B | 25 | 6 | Lomentaria clavelosa | Red | | 1.69 | 10.70 | 2.71 | 1.020 |
| 7/24/19 | Summer | Fort Foster | B | 25 | 6 | Chaetomorpha picquotiana | Green | | 0.70 | 0.78 | 0.73 | 0.030 |
| 7/24/19 | Summer | Fort Foster | B | 25 | 6 | Saccharina latissima | Brown | | 2.21 | 10.67 | 3.26 | 1.050 |
| 7/24/19 | Summer | Fort Foster | B | 28 | 7 | Desmarestia aculeata | Brown | | 2.00 | 3.26 | 2.39 | 0.390 |
| 7/24/19 | Summer | Fort Foster | B | 28 | 7 | Chaetomorpha picquotiana | Green | | 0.56 | 0.71 | 0.58 | 0.020 |
| 7/24/19 | Summer | Fort Foster | B | 28 | 7 | Polysiphonia fucoides | Red | | 0.80 | 1.71 | 1.09 | 0.290 |
| 7/24/19 | Summer | Fort Foster | B | 28 | 7 | Lomentaria clavelosa | Red | | 0.78 | 2.74 | 1.25 | 0.470 |
| 7/24/19 | Summer | Fort Foster | B | 28 | 7 | Saccharina latissima | Brown | | 2.62 | 18.04 | 4.83 | 2.210 |
| 7/24/19 | Summer | Fort Foster | B | 28 | 7 | Dasysiphonia japonica | Red | | 2.10 | 38.23 | 11.92 | 9.820 |
| 7/24/19 | Summer | Fort Foster | B | 31 | 8 | Ceramium virgatum | Red | | 0.59 | 0.66 | 0.60 | 0.010 |
| 7/24/19 | Summer | Fort Foster | B | 31 | 8 | Polysiphonia fucoides | Red | | 0.65 | 1.50 | 0.79 | 0.140 |
| 7/24/19 | Summer | Fort Foster | B | 31 | 8 | Dasysiphonia japonica | Red | | 0.93 | 3.54 | 1.22 | 0.290 |
| 7/24/19 | Summer | Fort Foster | B | 31 | 8 | Saccharina latissima | Brown | | 2.33 | 8.90 | 3.18 | 0.850 |
| 7/24/19 | Summer | Fort Foster | B | 31 | 8 | Polysiphonia elongata | Red | | 2.01 | 3.26 | 2.26 | 0.250 |
| 7/24/19 | Summer | Fort Foster | B | 31 | 8 | Chaetomorpha picquotiana | Green | | 0.58 | 0.59 | 0.57 | 0.000 |
| 7/24/19 | Summer | Fort Foster | B | 35 | 9 | Phyllophora crispa | Red | | 0.53 | 0.59 | 0.54 | 0.010 |
| 7/24/19 | Summer | Fort Foster | B | 35 | 9 | Phycodrys fimbriata | Red | | 1.48 | 4.28 | 2.09 | 0.610 |

| Collection Date | Season | Site | Tran-sect | Quadrat Distance | Plot | Species | Type | Total Wet Wt. (no foil) *use when taking subsamples | Foil weight (g) | Wet weight (w/ foil) | Dry Wt. (w/ foil) | Dry Wt. (no foil) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/24/19 | Summer | Fort Foster | B | 35 | 9 | Chaetomorpha picquotiana | Green | | 0.64 | 0.72 | 0.66 | 0.020 |
| 7/24/19 | Summer | Fort Foster | B | 35 | 9 | Ceramium virgatum | Red | | 1.40 | 4.30 | 1.84 | 0.440 |
| 7/24/19 | Summer | Fort Foster | B | 35 | 9 | Dasysiphonia japonica | Red | | 1.36 | 5.04 | 2.34 | 0.980 |
| 7/24/19 | Summer | Fort Foster | B | 35 | 9 | Palmaria palmata | Red | | 1.81 | 13.80 | 3.59 | 1.780 |
| 7/24/19 | Summer | Fort Foster | B | 37 | 10 | Saccharina latissima | Brown | | 3.05 | 24.79 | 5.89 | 2.840 |
| 7/24/19 | Summer | Fort Foster | B | | 10 | Phycodrys fimbriata | Red | | 0.84 | 1.16 | 0.92 | 0.080 |
| 7/24/19 | Summer | Fort Foster | B | | 10 | Vertebrata lanosa | Red | | 0.76 | 1.21 | 0.90 | 0.140 |
| 7/24/19 | Summer | Fort Foster | B | | 10 | Chaetomorpha picquotiana | Green | | 0.55 | 0.55 | 0.55 | 0.000 |
| 7/24/19 | Summer | Fort Foster | B | | 10 | Dasysiphonia japonica | Red | | 2.33 | 15.62 | 5.39 | 3.060 |
| 7/24/19 | Summer | Fort Foster | B | | 10 | Agarophyton vermiculophyllum | Red | | 0.49 | 0.51 | 0.50 | 0.010 |
| 7/24/19 | Summer | Fort Foster | B | | 10 | Bonnemaisonia hamifera | Red | | 0.47 | 0.55 | 0.47 | 0.000 |
| 7/24/19 | Summer | Fort Foster | B | | 10 | Lomentaria clavelosa | Red | | 1.29 | 4.90 | 1.79 | 0.500 |
| 7/24/19 | Summer | Fort Foster | B | 39 | 11 | Chaetomorpha picquotiana | Green | | 0.70 | 0.87 | 0.73 | 0.030 |
| 7/24/19 | Summer | Fort Foster | B | 39 | 11 | Lomentaria clavelosa | Red | | 0.46 | 1.07 | 0.54 | 0.080 |
| 7/24/19 | Summer | Fort Foster | B | 39 | 11 | Dasysiphonia japonica | Red | | 1.90 | 11.54 | 4.26 | 2.360 |
| 7/24/19 | Summer | Fort Foster | B | 39 | 11 | Bonnemaisonia hamifera | Red | | 1.12 | 2.19 | 1.35 | 0.230 |
| 7/24/19 | Summer | Fort Foster | B | 45 | 12 | Ceramium virgatum | Red | | 0.94 | 1.17 | 0.96 | 0.020 |
| 7/24/19 | Summer | Fort Foster | B | 45 | 12 | Euthora cristata | Red | | 0.98 | 1.80 | 1.10 | 0.120 |
| 7/24/19 | Summer | Fort Foster | B | 45 | 12 | Dasysiphonia japonica | Red | | 3.74 | 25.10 | 8.03 | 4.290 |
| 7/24/19 | Summer | Fort Foster | B | 45 | 12 | Saccharina latissima | Brown | | 4.43 | 27.27 | 7.18 | 2.750 |
| 7/26/19 | Summer | Fort Foster | C | 5 | 1 | Ptilota serrata | Red | | 1.11 | 1.49 | 1.24 | 0.130 |
| 7/26/19 | Summer | Fort Foster | C | 5 | 1 | Euthora cristata | Red | | 0.52 | 0.61 | 0.55 | 0.030 |
| 7/26/19 | Summer | Fort Foster | C | 5 | 1 | Dasysiphonia japonica | Red | | 1.69 | 16.76 | 4.74 | 3.050 |
| 7/26/19 | Summer | Fort Foster | C | 5 | 1 | Phycodrys fimbriata | Red | | 0.58 | 0.73 | 0.62 | 0.040 |
| 7/26/19 | Summer | Fort Foster | C | 5 | 1 | Desmarestia aculeata | Brown | | 0.71 | 0.74 | 0.72 | 0.010 |
| 7/26/19 | Summer | Fort Foster | C | 5 | 1 | Polysiphonia fucoides | Red | | 0.78 | 0.93 | 0.81 | 0.030 |
| 7/26/19 | Summer | Fort Foster | C | 5 | 1 | Chaetomorpha picquotiana | Green | | 0.70 | 0.98 | 0.75 | 0.050 |
| 7/26/19 | Summer | Fort Foster | C | 7 | 2 | Polysiphonia fucoides | Red | | 0.65 | 1.15 | 0.80 | 0.150 |
| 7/26/19 | Summer | Fort Foster | C | 7 | 2 | Cystoclonium purpureum | Red | | 0.54 | 0.56 | 0.54 | 0.000 |
| 7/26/19 | Summer | Fort Foster | C | 7 | 2 | Coccotylus truncatus | Red | | 0.97 | 1.56 | 1.18 | 0.210 |
| 7/26/19 | Summer | Fort Foster | C | 7 | 2 | Ceramium virgatum | Red | | 0.95 | 1.12 | 0.99 | 0.040 |
| 7/26/19 | Summer | Fort Foster | C | 7 | 2 | Dasysiphonia japonica | Red | | 0.95 | 12.03 | 4.17 | 3.220 |
| 7/26/19 | Summer | Fort Foster | C | 7 | 2 | Phycodrys fimbriata | Red | | 0.64 | 0.78 | 0.70 | 0.060 |
| 7/26/19 | Summer | Fort Foster | C | 7 | 2 | Chaetomorpha picquotiana | Green | | 0.61 | 0.61 | 0.61 | 0.000 |
| 7/26/19 | Summer | Fort Foster | C | 7 | 2 | Saccharina latissima | Brown | | 0.71 | 2.07 | 0.89 | 0.180 |
| 7/26/19 | Summer | Fort Foster | C | 10 | 3 | Polysiphonia fucoides | Red | | 0.55 | 0.97 | 0.69 | 0.140 |
| 7/26/19 | Summer | Fort Foster | C | 10 | 3 | Palmaria palmata | Red | | 2.00 | 21.20 | 4.59 | 2.590 |
| 7/26/19 | Summer | Fort Foster | C | 10 | 3 | Cystoclonium purpureum | Red | | 1.36 | 1.64 | 1.41 | 0.050 |
| 7/26/19 | Summer | Fort Foster | C | 10 | 3 | Dasysiphonia japonica | Red | | 1.20 | 14.61 | 5.31 | 4.110 |
| 7/26/19 | Summer | Fort Foster | C | 10 | 3 | Phycodrys fimbriata | Red | | 1.18 | 1.70 | 1.31 | 0.130 |
| 7/26/19 | Summer | Fort Foster | C | 10 | 3 | Desmarestia aculeata | Brown | | 0.70 | 0.70 | 0.71 | 0.010 |
| 7/26/19 | Summer | Fort Foster | C | 10 | 3 | Saccharina latissima | Brown | | 4.24 | 33.57 | 8.29 | 4.050 |
| 7/26/19 | Summer | Fort Foster | C | 18 | 4 | Saccharina latissima | Brown | | 3.43 | 24.42 | 6.08 | 2.650 |

| Collection Date | Season | Site | Tran-sect | Quadrat Distance | Plot | Species | Type | Total Wet Wt. (no foil) *use when taking subsamples | Foil weight (g) | Wet weight (w/ foil) | Dry Wt. (w/ foil) | Dry Wt. (no foil) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/26/19 | Summer | Fort Foster | C | 18 | 4 | Dasysiphonia japonica | Red | | 0.65 | 1.27 | 0.78 | 0.130 |
| 7/26/19 | Summer | Fort Foster | C | 18 | 4 | Polysiphonia fucoides | Red | | 0.58 | 1.04 | 0.66 | 0.080 |
| 7/26/19 | Summer | Fort Foster | C | 18 | 4 | Desmarestia aculeata | Brown | | 1.10 | 1.94 | 1.33 | 0.230 |
| 7/26/19 | Summer | Fort Foster | C | 18 | 4 | Chaetomorpha picquotiana | Green | | 0.33 | 0.37 | 0.34 | 0.010 |
| 7/26/19 | Summer | Fort Foster | C | 18 | 4 | Ulva rigida | Green | | 3.16 | 15.97 | 5.57 | 2.410 |
| 7/26/19 | Summer | Fort Foster | C | 19 | 5 | Chondrus crispus | Red | | 2.71 | 30.02 | 9.11 | 6.400 |
| 7/26/19 | Summer | Fort Foster | C | 19 | 5 | Desmarestia aculeata | Brown | | 0.94 | 1.74 | 1.27 | 0.330 |
| 7/26/19 | Summer | Fort Foster | C | 19 | 5 | Chaetomorpha picquotiana | Green | | 0.61 | 0.65 | 0.62 | 0.010 |
| 7/26/19 | Summer | Fort Foster | C | 19 | 5 | Palmaria palmata | Red | | 2.18 | 18.70 | 5.12 | 2.940 |
| 7/26/19 | Summer | Fort Foster | C | 19 | 5 | Saccharina latissima | Brown | | 1.35 | 6.18 | 2.16 | 0.810 |
| 7/26/19 | Summer | Fort Foster | C | 19 | 5 | Cystoclonium purpureum | Red | | 0.96 | 14.05 | 2.78 | 1.820 |
| 7/26/19 | Summer | Fort Foster | C | 19 | 5 | Dasysiphonia japonica | Red | | 0.98 | 2.63 | 1.18 | 0.200 |
| 7/26/19 | Summer | Fort Foster | C | 19 | 5 | Phyllophora pseudoceranoides | Red | | 2.82 | 18.48 | 7.14 | 4.320 |
| 7/26/19 | Summer | Fort Foster | C | 22 | 6 | Dasysiphonia japonica | Red | | 0.99 | 3.85 | 1.71 | 0.720 |
| 7/26/19 | Summer | Fort Foster | C | 22 | 6 | Polysiphonia fucoides | Red | | 0.60 | 0.66 | 0.62 | 0.020 |
| 7/26/19 | Summer | Fort Foster | C | 22 | 6 | Cystoclonium purpureum | Red | | 0.58 | 1.00 | 0.65 | 0.070 |
| 7/26/19 | Summer | Fort Foster | C | 22 | 6 | Bonnemaisonia hamifera | Red | | 0.57 | 1.06 | 0.60 | 0.030 |
| 7/26/19 | Summer | Fort Foster | C | 22 | 6 | Chaetomorpha picquotiana | Green | | 0.34 | 0.37 | 0.36 | 0.020 |
| 7/26/19 | Summer | Fort Foster | C | 22 | 6 | Saccharina latissima | Brown | | 5.91 | 61.85 | 13.47 | 7.560 |
| 7/26/19 | Summer | Fort Foster | C | 26 | 7 | Chaetomorpha picquotiana | Green | | 0.93 | 0.95 | 0.94 | 0.010 |
| 7/26/19 | Summer | Fort Foster | C | 26 | 7 | Ceramium virgatum | Red | | 1.13 | 2.63 | 1.39 | 0.260 |
| 7/26/19 | Summer | Fort Foster | C | 26 | 7 | Palmaria palmata | Red | | 0.53 | 0.56 | 0.54 | 0.010 |
| 7/26/19 | Summer | Fort Foster | C | 26 | 7 | Dasysiphonia japonica | Red | | 1.22 | 7.53 | 3.23 | 2.010 |
| 7/26/19 | Summer | Fort Foster | C | 34 | 8 | Palmaria palmata | Red | | 0.52 | 0.75 | 0.60 | 0.080 |
| 7/26/19 | Summer | Fort Foster | C | 34 | 8 | Dasysiphonia japonica | Red | | 1.02 | 4.70 | 1.86 | 0.840 |
| 7/26/19 | Summer | Fort Foster | C | 34 | 8 | Saccharina latissima | Brown | | 1.18 | 2.48 | 1.45 | 0.270 |
| 7/26/19 | Summer | Fort Foster | C | 35 | 9 | Chaetomorpha picquotiana | Green | | 0.37 | 0.39 | 0.38 | 0.010 |
| 7/26/19 | Summer | Fort Foster | C | 35 | 9 | Dasysiphonia japonica | Red | | 1.11 | 9.50 | 3.46 | 2.350 |
| 7/26/19 | Summer | Fort Foster | C | 35 | 9 | Saccharina latissima | Brown | | 1.13 | 8.61 | 2.14 | 1.010 |
| 7/26/19 | Summer | Fort Foster | C | 35 | 9 | Polysiphonia elongata | Red | | 0.48 | 0.49 | 0.48 | 0.000 |
| 7/26/19 | Summer | Fort Foster | C | 35 | 9 | Cystoclonium purpureum | Red | | 0.49 | 0.61 | 0.53 | 0.040 |
| 7/26/19 | Summer | Fort Foster | C | 38 | 10 | Saccharina latissima | Brown | | 5.01 | 96.98 | 20.07 | 15.060 |
| 7/26/19 | Summer | Fort Foster | C | 38 | 10 | Dasysiphonia japonica | Red | | 2.00 | 10.51 | 3.87 | 1.870 |
| 7/26/19 | Summer | Fort Foster | C | 38 | 10 | Chaetomorpha picquotiana | Green | | 0.40 | 0.40 | 0.40 | 0.000 |
| 7/26/19 | Summer | Fort Foster | C | 38 | 10 | Ceramium virgatum | Red | | 1.04 | 1.38 | 1.08 | 0.040 |
| 7/26/19 | Summer | Fort Foster | C | 43 | 11 | Palmaria palmata | Red | | 3.38 | 24.16 | 6.39 | 3.010 |
| 7/26/19 | Summer | Fort Foster | C | 43 | 11 | Dasysiphonia japonica | Red | | 0.74 | 1.25 | 0.90 | 0.160 |
| 7/26/19 | Summer | Fort Foster | C | 43 | 11 | Polysiphonia fucoides | Red | | 0.68 | 0.77 | 0.71 | 0.030 |
| 7/26/19 | Summer | Fort Foster | C | 43 | 11 | Chaetomorpha picquotiana | Green | | 0.68 | 0.71 | 0.70 | 0.020 |
| 7/26/19 | Summer | Fort Foster | C | 43 | 11 | Saccharina latissima | Brown | | 3.08 | 10.55 | 4.08 | 1.000 |
| 7/26/19 | Summer | Fort Foster | C | 43 | 11 | Chaetomorpha ligustica | Green | | 0.50 | 0.51 | 0.50 | 0.000 |
| 7/26/19 | Summer | Fort Foster | C | 44 | 12 | Polysiphonia elongata | Red | | 0.39 | 0.39 | 0.39 | 0.000 |
| 7/26/19 | Summer | Fort Foster | C | 44 | 12 | Polysiphonia fucoides | Red | | 0.59 | 0.62 | 0.59 | 0.000 |

| Collection Date | Season | Site | Tran-sect | Quadrat Distance | Plot | Species | Type | Total Wet Wt. (no foil) *use when taking subsamples | Foil weight (g) | Wet weight (w/ foil) | Dry Wt. (w/ foil) | Dry Wt. (no foil) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7/26/19 | Summer | Fort Foster | C | 44 | 12 | Coccotylus truncatus | Red | | 0.51 | 0.56 | 0.54 | 0.030 |
| 7/26/19 | Summer | Fort Foster | C | 44 | 12 | Ceramium virgatum | Red | | 0.78 | 1.96 | 1.11 | 0.330 |
| 7/26/19 | Summer | Fort Foster | C | 44 | 12 | Saccharina latissima | Brown | | 0.62 | 0.88 | 0.65 | 0.030 |
| 7/26/19 | Summer | Fort Foster | C | 44 | 12 | Dasysiphonia japonica + Chaetomorpha ligusta + Polysiphonia fucoides | Mix | | 0.77 | 3.59 | 1.77 | 1.000 |
| 8/2/19 | Summer | Great Bay | A | | 1 | No algae | | | | | | 0.000 |
| 8/2/19 | Summer | Great Bay | A | | 2 | No algae | | | | | | 0.000 |
| 8/2/19 | Summer | Great Bay | A | | 3 | No algae | | | | | | 0.000 |
| 8/2/19 | Summer | Great Bay | A | | 4 | No algae | | | | | | 0.000 |
| 8/2/19 | Summer | Great Bay | A | | 5 | No algae | | | | | | 0.000 |
| 8/2/19 | Summer | Great Bay | A | | 6 | No algae | | | | | | 0.000 |
| 8/2/19 | Summer | Great Bay | A | | 7 | No algae | | | | | | 0.000 |
| 8/2/19 | Summer | Great Bay | A | | 8 | No algae | | | | | | 0.000 |
| 8/2/19 | Summer | Great Bay | A | | 9 | No algae | | | | | | 0.000 |
| 8/2/19 | Summer | Great Bay | A | | 10 | No algae | | | | | | 0.000 |
| 8/2/19 | Summer | Great Bay | A | | 11 | Cladophora sericea | Green | | 1.05 | 1.39 | 1.14 | 0.090 |
| 8/2/19 | Summer | Great Bay | A | | 12 | No algae | | | | | | 0.000 |
| 8/3/19 | Summer | Great Bay | B | | 1 | No algae | | | | | | 0.000 |
| 8/3/19 | Summer | Great Bay | B | | 2 | Agarophyton vermiculophyllum | Red | | 0.79 | 1.36 | 0.86 | 0.070 |
| 8/3/19 | Summer | Great Bay | B | | 3 | Cladophora sericea | Green | | 0.69 | 0.73 | 0.70 | 0.010 |
| 8/3/19 | Summer | Great Bay | B | | 3 | Agarophyton vermiculophyllum | Red | | 1.40 | 4.10 | 1.95 | 0.550 |
| 8/3/19 | Summer | Great Bay | B | | 4 | No algae | | | | | | 0.000 |
| 8/3/19 | Summer | Great Bay | B | | 5 | Cladophora sericea | Green | | 0.67 | 3.77 | 1.22 | 0.550 |
| 8/3/19 | Summer | Great Bay | B | | 5 | Agarophyton vermiculophyllum | Red | | 1.99 | 12.20 | 3.88 | 1.890 |
| 8/3/19 | Summer | Great Bay | B | | 6 | Cladophora sericea | Green | | 0.45 | 0.65 | 0.49 | 0.040 |
| 8/3/19 | Summer | Great Bay | B | | 7 | Cladophora sericea | Green | | 0.66 | 1.10 | 0.75 | 0.090 |
| 8/3/19 | Summer | Great Bay | B | | 7 | Agarophyton vermiculophyllum | Red | | 0.80 | 2.98 | 1.23 | 0.430 |
| 8/3/19 | Summer | Great Bay | B | | 8 | Gracilaria tikvahiae | Red | | 0.72 | 1.54 | 0.78 | 0.060 |
| 8/3/19 | Summer | Great Bay | B | | 8 | Cladophora sericea | Green | | 0.64 | 0.93 | 0.70 | 0.060 |
| 8/3/19 | Summer | Great Bay | B | | 8 | Agarophyton vermiculophyllum | Red | | 0.60 | 0.63 | 0.60 | 0.000 |
| 8/3/19 | Summer | Great Bay | B | | 9 | Agarophyton vermiculophyllum | Red | | 0.42 | 0.54 | 0.46 | 0.040 |
| 8/3/19 | Summer | Great Bay | B | | 9 | Cladophora sericea | Green | | 0.64 | 2.04 | 0.93 | 0.290 |
| 8/3/19 | Summer | Great Bay | B | | 10 | Cladophora sericea | Green | | 1.13 | 4.23 | 1.58 | 0.450 |
| 8/3/19 | Summer | Great Bay | B | | 10 | Agarophyton vermiculophyllum | Red | | 1.58 | 6.96 | 2.58 | 1.000 |
| 8/3/19 | Summer | Great Bay | B | | 11 | Cladophora sericea | Green | | 0.73 | 1.02 | 0.79 | 0.060 |
| 8/3/19 | Summer | Great Bay | B | | 11 | Agarophyton vermiculophyllum | Red | | 1.61 | 5.57 | 2.32 | 0.710 |
| 8/3/19 | Summer | Great Bay | B | | 12 | Cladophora sericea | Green | | 0.38 | 0.48 | 0.40 | 0.020 |
| 8/3/19 | Summer | Great Bay | B | | 12 | Agarophyton vermiculophyllum | Red | | 0.84 | 1.27 | 0.91 | 0.070 |
| 8/2/19 | Summer | Great Bay | C | | 1 | No algae | | | | | | 0.000 |
| 8/2/19 | Summer | Great Bay | C | | 2 | No algae | | | | | | 0.000 |
| 8/2/19 | Summer | Great Bay | C | | 3 | Agarophyton vermiculophyllum | Red | | 0.70 | 1.69 | 0.87 | 0.170 |
| 8/2/19 | Summer | Great Bay | C | | 3 | Cladophora sericea | Green | | 0.36 | 0.39 | 0.36 | 0.000 |
| 8/2/19 | Summer | Great Bay | C | | 4 | Agarophyton vermiculophyllum | Red | | 2.50 | 17.20 | 4.82 | 2.320 |

| Collection Date | Season | Site | Tran-sect | Quadrat Distance | Plot | Species | Type | Total Wet Wt. (no foil) *use when taking subsamples | Foil weight (g) | Wet weight (w/ foil) | Dry Wt. (w/ foil) | Dry Wt. (no foil) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 8/2/19 | Summer | Great Bay | C | | 4 | Cladophora sericea | Green | | 0.36 | 0.54 | 0.39 | 0.030 |
| 8/2/19 | Summer | Great Bay | C | | 5 | Cladophora sericea | Green | | 1.05 | 1.38 | 1.13 | 0.080 |
| 8/2/19 | Summer | Great Bay | C | | 5 | Agarophyton vermiculophyllum | Red | | 2.52 | 15.82 | 4.94 | 2.420 |
| 8/2/19 | Summer | Great Bay | C | | 5 | Ulva australis | Green | | 1.00 | 1.84 | 1.22 | 0.220 |
| 8/2/19 | Summer | Great Bay | C | | 6 | Agarophyton vermiculophyllum | Red | | 1.27 | 3.79 | 1.71 | 0.440 |
| 8/2/19 | Summer | Great Bay | C | | 6 | Cladophora sericea | Green | | 0.58 | 0.67 | 0.61 | 0.030 |
| 8/2/19 | Summer | Great Bay | C | | 7 | Dasysiphonia japonica | Red | | 0.71 | 0.71 | 0.71 | 0.000 |
| 8/2/19 | Summer | Great Bay | C | | 7 | Cladophora sericea | Green | | 0.88 | 0.94 | 0.87 | 0.000 |
| 8/2/19 | Summer | Great Bay | C | | 7 | Agarophyton vermiculophyllum | Red | | 3.13 | 14.91 | 5.03 | 1.900 |
| 8/2/19 | Summer | Great Bay | C | | 8 | Ulva australis | Green | | 0.70 | 1.09 | 0.81 | 0.110 |
| 8/2/19 | Summer | Great Bay | C | | 8 | Agarophyton vermiculophyllum | Red | | 0.69 | 1.54 | 0.82 | 0.130 |
| 8/2/19 | Summer | Great Bay | C | | 8 | Cladophora sericea | Green | | 0.44 | 0.46 | 0.44 | 0.000 |
| 8/2/19 | Summer | Great Bay | C | | 8 | Polysiphonia schneideri | Red | | 0.32 | 0.38 | 0.32 | 0.000 |
| 8/2/19 | Summer | Great Bay | C | | 9 | Cladophora sericea | Green | | 0.58 | 0.58 | 0.58 | 0.000 |
| 8/2/19 | Summer | Great Bay | C | | 9 | Ulva australis | Green | | 3.12 | 11.16 | 5.09 | 1.970 |
| 8/2/19 | Summer | Great Bay | C | | 9 | Agarophyton vermiculophyllum | Red | | 1.48 | 15.74 | 4.67 | 3.190 |
| 8/2/19 | Summer | Great Bay | C | | 10 | Agarophyton vermiculophyllum | Red | | 1.51 | 2.71 | 1.68 | 0.170 |
| 8/2/19 | Summer | Great Bay | C | | 11 | Agarophyton vermiculophyllum | Red | | 0.54 | 0.76 | 0.56 | 0.020 |
| 8/2/19 | Summer | Great Bay | C | | 12 | No algae | | | | | | |
| 10/29/19 | Fall | Great Bay | A | | 1 | No algae | | | | | | |
| 10/29/19 | Fall | Great Bay | A | | 2 | No algae | | | | | | |
| 10/29/19 | Fall | Great Bay | A | | 3 | No algae | | | | | | |
| 10/29/19 | Fall | Great Bay | A | | 4 | Agarophyton vermiculophyllum | Red | | | | | 0.005 |
| 10/29/19 | Fall | Great Bay | A | | 4 | Dasya baillouviana | Red | | 1.21 | 9.69 | 2.01 | 0.800 |
| 10/29/19 | Fall | Great Bay | A | | 4 | Dasysiphonia japonica | Red | | 1.03 | 1.47 | 1.08 | 0.050 |
| 10/29/19 | Fall | Great Bay | A | | 5 | Agarophyton vermiculophyllum | Red | | 2.53 | 7.7 | 3.23 | 0.700 |
| 10/29/19 | Fall | Great Bay | A | | 6 | Ulva rigida | Green | | 1.24 | 2.89 | 1.56 | 0.320 |
| 10/29/19 | Fall | Great Bay | A | | 6 | Ulva lactuca | Green | | 1.29 | 2.72 | 1.54 | 0.250 |
| 10/29/19 | Fall | Great Bay | A | | 6 | Agarophyton vermiculophyllum | Red | | 0.66 | 1.37 | 0.75 | 0.090 |
| 10/29/19 | Fall | Great Bay | A | | 7 | Dasysiphonia japonica | Red | | 0.62 | 0.75 | 0.65 | 0.030 |
| 10/29/19 | Fall | Great Bay | A | | 8 | Dasysiphonia japonica | Red | | 1.29 | 1.54 | 1.35 | 0.060 |
| 10/29/19 | Fall | Great Bay | A | | 8 | Palmaria palmata | Red | | | | | 0.005 |
| 10/29/19 | Fall | Great Bay | A | | 9 | Dasysiphonia japonica | Red | | 1.44 | 3.15 | 1.97 | 0.530 |
| 10/29/19 | Fall | Great Bay | A | | 9 | Agarophyton vermiculophyllum | Red | | 1.09 | 1.24 | 1.11 | 0.020 |
| 10/29/19 | Fall | Great Bay | A | | 10 | No algae | | | | | | |
| 10/29/19 | Fall | Great Bay | A | | 11 | No algae | | | | | | |
| 10/29/19 | Fall | Great Bay | A | | 12 | No algae | | | | | | |
| 10/28/19 | Fall | Great Bay | B | | 1 | No algae | | | | | | |
| 10/28/19 | Fall | Great Bay | B | | 2 | No algae | | | | | | |
| 10/28/19 | Fall | Great Bay | B | | 3 | Chaetomorpha picquotiana | Green | | 1.00 | 1.03 | 1.01 | 0.010 |
| 10/28/19 | Fall | Great Bay | B | | 3 | Neosiphonia harveyi | Red | | 0.95 | 0.98 | 0.93 | 0.005 |
| 10/28/19 | Fall | Great Bay | B | | 3 | Polysiphonia fucoides | Red | | 1.25 | 2.41 | 1.46 | 0.210 |
| 10/28/19 | Fall | Great Bay | B | | 3 | Dasysiphonia japonica | Red | | 1.17 | 13.24 | 3.54 | 2.370 |

| Collection Date | Season | Site | Tran-sect | Quadrat Distance | Plot | Species | Type | Total Wet Wt. (no foil) *use when taking subsamples | Foil weight (g) | Wet weight (w/ foil) | Dry Wt. (w/ foil) | Dry Wt. (no foil) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10/28/19 | Fall | Great Bay | B | | 3 | Agarophyton vermiculophyllum | Red | | 5.18 | 47.82 | 10.92 | 5.740 |
| 10/28/19 | Fall | Great Bay | B | | 3 | Ulva rigida | Green | | 1.32 | 3.21 | 1.76 | 0.440 |
| 10/28/19 | Fall | Great Bay | B | | 3 | Desmarestia aculeata | Brown | | | | | 0.005 |
| 10/28/19 | Fall | Great Bay | B | | 3 | Ceramium virgatum | Red | | | | | 0.005 |
| 10/28/19 | Fall | Great Bay | B | | 4 | Dasysiphonia japonica | Red | | | | | 0.005 |
| 10/28/19 | Fall | Great Bay | B | | 4 | Agarophyton vermiculophyllum | Red | | 0.95 | 2.87 | 1.21 | 0.260 |
| 10/28/19 | Fall | Great Bay | B | | 5 | Polysiphonia fucoides | Red | | 0.75 | 1.45 | 0.90 | 0.150 |
| 10/28/19 | Fall | Great Bay | B | | 5 | Phyllophora pseudoceranoides | Red | | 1.15 | 1.59 | 1.27 | 0.120 |
| 10/28/19 | Fall | Great Bay | B | | 5 | Ulva rigida | Green | | 2.19 | 6.80 | 3.14 | 0.950 |
| 10/28/19 | Fall | Great Bay | B | | 5 | Palmaria palmata | Red | | 2.58 | 6.86 | 3.16 | 0.580 |
| 10/28/19 | Fall | Great Bay | B | | 5 | Gracilaria tikvahiae | Red | | 1.38 | 4.77 | 1.82 | 0.440 |
| 10/28/19 | Fall | Great Bay | B | | 5 | Agarophyton vermiculophyllum | Red | | 3.10 | 51.34 | 9.88 | 6.780 |
| 10/28/19 | Fall | Great Bay | B | | 5 | Callithamnion corymbosum | Red | | 0.79 | 0.87 | 0.82 | 0.030 |
| 10/28/19 | Fall | Great Bay | B | | 5 | Dasysiphonia japonica | Red | | 1.48 | 15.75 | 4.61 | 3.130 |
| 10/28/19 | Fall | Great Bay | B | | 5 Combined | Combined sample | Mix | | | | | |
| 10/28/19 | Fall | Great Bay | B | | 5 Combined | Dasysiphonia japonica | | | 0.59 | 0.76 | 0.63 | 0.040 |
| 10/28/19 | Fall | Great Bay | B | | 5 Combined | Polysiphonia fucoides | | | 0.71 | 0.75 | 0.72 | 0.010 |
| 10/28/19 | Fall | Great Bay | B | | 5 Combined | Agarophyton vermiculophyllum | | | 1.05 | 1.91 | 1.18 | 0.130 |
| 10/28/19 | Fall | Great Bay | B | | 5 Combined | Zostera marina | | | 2.42 | 7.34 | 2.93 | 0.510 |
| 10/28/19 | Fall | Great Bay | B | | 5 Combined | Ulva rigida | | | | | | 0.005 |
| 10/28/19 | Fall | Great Bay | B | | 5 Combined | Subsample total | Mix | | 3.06 | 66.58 | 10.24 | 7.180 |
| 10/28/19 | Fall | Great Bay | B | | 6 | Agardhiella subulata | Red | | 2.47 | 15.09 | 3.28 | 0.810 |
| 10/28/19 | Fall | Great Bay | B | | 6 | Agarophyton vermiculophyllum | Red | | 2.87 | 20.09 | 5.21 | 2.340 |
| 10/28/19 | Fall | Great Bay | B | | 6 | Polysiphonia elongata | Red | | 2.38 | 13.06 | 5.10 | 2.720 |
| 10/28/19 | Fall | Great Bay | B | | 6 | Ulva rigida | Green | | 0.62 | 0.81 | 0.67 | 0.050 |
| 10/28/19 | Fall | Great Bay | B | | 6 | Dasysiphonia japonica | Red | | 1.86 | 7.32 | 3.10 | 1.240 |
| 10/28/19 | Fall | Great Bay | B | | 6 | Palmaria palmata | Red | | | | | 0.005 |
| 10/28/19 | Fall | Great Bay | B | | 6 | Callithamnion corymbosum | Red | | | | | 0.005 |
| 10/28/19 | Fall | Great Bay | B | | 6 | Desmarestia aculeata | Brown | | | | | 0.005 |
| 10/28/19 | Fall | Great Bay | B | | 6 | Chaetomorpha picquotiana | Green | | | | | 0.005 |
| 10/28/19 | Fall | Great Bay | B | | 7 | Agarophyton vermiculophyllum | Red | | 2.58 | 11.79 | 3.98 | 1.400 |
| 10/28/19 | Fall | Great Bay | B | | 7 | Dasysiphonia japonica | Red | | 1.35 | 4.92 | 2.10 | 0.750 |
| 10/28/19 | Fall | Great Bay | B | | 7 | Chaetomorpha picquotiana | Green | | | | | 0.005 |
| 10/28/19 | Fall | Great Bay | B | | 8 | Ulva rigida | Green | | | | | 0.005 |
| 10/28/19 | Fall | Great Bay | B | | 8 | Agarophyton vermiculophyllum | Red | | 1.80 | 5.48 | 2.32 | 0.520 |
| 10/28/19 | Fall | Great Bay | B | | 8 | Dasysiphonia japonica | Red | | 1.39 | 3.44 | 1.83 | 0.440 |
| 10/28/19 | Fall | Great Bay | B | | 8 | Agardhiella subulata | Red | | 2.17 | 8.30 | 2.59 | 0.420 |
| 10/28/19 | Fall | Great Bay | B | | 9 | Dasysiphonia japonica | Red | | 0.75 | 0.90 | 0.77 | 0.020 |
| 10/28/19 | Fall | Great Bay | B | | 9 | Agarophyton vermiculophyllum | Red | | 0.68 | 1.49 | 0.85 | 0.170 |
| 10/28/19 | Fall | Great Bay | B | | 9 | Callithamnion corymbosum | Red | | | | | 0.005 |
| 10/28/19 | Fall | Great Bay | B | | 10 | Polysiphonia fucoides | Red | | | | | 0.005 |
| 10/28/19 | Fall | Great Bay | B | | 10 | Ulva rigida | Green | | 0.84 | 1.34 | 0.96 | 0.120 |
| 10/28/19 | Fall | Great Bay | B | | 10 | Agarophyton vermiculophyllum | Red | | 2.44 | 5.65 | 3.07 | 0.630 |

| Collection Date | Season | Site | Tran-sect | Quadrat Distance | Plot | Species | Type | Total Wet Wt. (no foil) *use when taking subsamples | Foil weight (g) | Wet weight (w/ foil) | Dry Wt. (w/ foil) | Dry Wt. (no foil) | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10/28/19 | Fall | Great Bay | B | | 10 | Dasysiphonia japonica | Red | | 0.89 | 1.41 | 1.01 | 0.120 | |
| 10/28/19 | Fall | Great Bay | B | | 11 | Agarophyton vermiculophyllum | Red | | 1.21 | 1.82 | 1.31 | 0.100 | |
| 10/28/19 | Fall | Great Bay | B | | 12 | Palmaria palmata | Red | | | | | 0.005 | |
| 10/28/19 | Fall | Great Bay | B | | 12 | Polysiphonia fucoides | Red | | 1.41 | 1.83 | 1.50 | 0.090 | |
| 10/28/19 | Fall | Great Bay | B | | 12 | Dasysiphonia japonica | Red | | 1.54 | 13.91 | 4.53 | 2.990 | |
| 10/28/19 | Fall | Great Bay | B | | 12 | Agarophyton vermiculophyllum | Red | | 5.25 | 55.42 | 12.11 | 6.860 | |
| 10/28/19 | Fall | Great Bay | B | | 12 | Gracilaria tikvahiae | Red | | 1.26 | 2.90 | 1.50 | 0.240 | |
| 10/29/19 | Fall | Great Bay | C | | 1 | Dasysiphonia japonica | Red | | 0.71 | 1.89 | 0.90 | 0.190 | |
| 10/29/19 | Fall | Great Bay | C | | 1 | Agarophyton vermiculophyllum | Red | | | | | 0.005 | |
| 10/29/19 | Fall | Great Bay | C | | 2 | Dasysiphonia japonica | Red | | 1.46 | 2.01 | 1.57 | 0.110 | |
| 10/29/19 | Fall | Great Bay | C | | 2 | Polysiphonia elongata | Red | | 0.55 | 0.60 | 0.55 | 0.005 | |
| 10/29/19 | Fall | Great Bay | C | | 2 | Polysiphonia fucoides | Red | | 0.53 | 0.67 | 0.56 | 0.030 | |
| 10/29/19 | Fall | Great Bay | C | | 2 | Agarophyton vermiculophyllum | Red | | 1.52 | 2.66 | 1.71 | 0.190 | |
| 10/29/19 | Fall | Great Bay | C | | 2 | Cladophora sericea | Green | | | | | 0.005 | |
| 10/29/19 | Fall | Great Bay | C | | 3 | Chaetomorpha picquotiana | Green | | | | | 0.005 | |
| 10/29/19 | Fall | Great Bay | C | | 3 | Neosiphonia harveyi | Red | | | | | 0.005 | |
| 10/29/19 | Fall | Great Bay | C | | 3 | Dasysiphonia japonica | Red | | 1.45 | 3.70 | 1.95 | 0.500 | |
| 10/29/19 | Fall | Great Bay | C | | 3 | Agarophyton vermiculophyllum | Red | | 1.58 | 6.92 | 2.50 | 0.920 | |
| 10/29/19 | Fall | Great Bay | C | | 3 | Ulva rigida | Green | | 1.35 | 5.99 | 2.60 | 1.250 | |
| 10/29/19 | Fall | Great Bay | C | | 3 | Callithamnion corymbosum | Red | | | | | 0.005 | |
| 10/29/19 | Fall | Great Bay | C | | 4 | Agarophyton vermiculophyllum | Red | | 1.29 | 5.96 | 2.21 | 0.920 | |
| 10/29/19 | Fall | Great Bay | C | | 4 | Dasysiphonia japonica | Red | | 0.76 | 3.54 | 1.22 | 0.460 | |
| 10/29/19 | Fall | Great Bay | C | | 4 | Chaetomorpha picquotiana | Green | | | | | 0.005 | |
| 10/29/19 | Fall | Great Bay | C | | 4 | Neosiphonia harveyi | Red | | | | | 0.005 | |
| 10/29/19 | Fall | Great Bay | C | | 4 | Polysiphonia fucoides | Red | | | | | 0.005 | |
| 10/29/19 | Fall | Great Bay | C | | 4 | Cladophora sericea | Green | | | | | 0.005 | |
| 10/29/19 | Fall | Great Bay | C | | 4 | Ceramium deslongchampsii | Red | | | | | 0.005 | |
| 10/29/19 | Fall | Great Bay | C | | 5 | Dasysiphonia japonica | Red | | 1.05 | 5.48 | 1.93 | 0.880 | |
| 10/29/19 | Fall | Great Bay | C | | 5 | Agarophyton vermiculophyllum | Red | | 1.88 | 5.68 | 2.73 | 0.850 | |
| 10/29/19 | Fall | Great Bay | C | | 5 | Ulva rigida | Green | | 1.44 | 2.94 | 1.78 | 0.340 | |
| 10/29/19 | Fall | Great Bay | C | | 6 | Dasysiphonia japonica | Red | | 0.59 | 2.02 | 0.92 | 0.330 | |
| 10/29/19 | Fall | Great Bay | C | | 6 | Neosiphonia harveyi | Red | | | | | 0.005 | |
| 43767 | Fall | Great Bay | C | | 6 | Grateloupia turuturu (subsample) | Red | 33.5 | 2.410 | 11.640 | 3.120 | 2.577 | subsample taken to calculate dry wt |
| 10/29/19 | Fall | Great Bay | C | | 7 | Ulva rigida | Green | | 3.45 | 18.93 | 6.19 | 2.740 | |
| 10/29/19 | Fall | Great Bay | C | | 7 | Dasysiphonia japonica | Red | | 1.37 | 4.08 | 1.76 | 0.390 | |
| 10/29/19 | Fall | Great Bay | C | | 7 | Agarophyton vermiculophyllum | Red | | 1.50 | 3.46 | 1.83 | 0.330 | |
| 10/29/19 | Fall | Great Bay | C | | 8 | No algae | | | | | | | |
| 10/29/19 | Fall | Great Bay | C | | 9 | Dasysiphonia japonica | Red | | 1.10 | 2.83 | 1.45 | 0.350 | |
| 10/29/19 | Fall | Great Bay | C | | 9 | Agarophyton vermiculophyllum | Red | | 1.39 | 3.06 | 1.66 | 0.270 | |
| 10/29/19 | Fall | Great Bay | C | | 9 | Cladophora sericea | Green | | 1.19 | 1.27 | 1.21 | 0.020 | |
| 10/29/19 | Fall | Great Bay | C | | 9 | Polysiphonia fucoides | Red | | 1.13 | 1.20 | 1.15 | 0.020 | |
| 10/29/19 | Fall | Great Bay | C | | 10 | Agarophyton vermiculophyllum | Red | | 1.54 | 3.10 | 1.85 | 0.310 | |
| 10/29/19 | Fall | Great Bay | C | | 10 | Dasysiphonia japonica | Red | | 0.88 | 1.37 | 0.98 | 0.100 | |

| Collection Date | Season | Site | Tran-sect | Quadrat Distance | Plot | Species | Type | Total Wet Wt. (no foil) *use when taking subsamples | Foil weight (g) | Wet weight (w/ foil) | Dry Wt. (w/ foil) | Dry Wt. (no foil) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10/29/19 | Fall | Great Bay | C | | 11 | Cladophora sericea | Green | | | | | 0.005 |
| 10/29/19 | Fall | Great Bay | C | | 11 | Dasysiphonia japonica | Red | | 0.68 | 3.26 | 1.03 | 0.350 |
| 10/29/19 | Fall | Great Bay | C | | 11 | Agarophyton vermiculophyllum | Red | | 0.73 | 0.94 | 0.77 | 0.040 |
| 10/29/19 | Fall | Great Bay | C | | 11 | Ceramium virgatum | Red | | | | | 0.005 |
| 10/29/19 | Fall | Great Bay | C | | 12 | Ceramium virgatum | Red | | | | | 0.005 |
| 10/29/19 | Fall | Great Bay | C | | 12 | Dasysiphonia japonica | Red | | 0.73 | 1.94 | 0.79 | 0.060 |
| 10/29/19 | Fall | Great Bay | C | | 12 | Agarophyton vermiculophyllum | Red | | 2.36 | 5.31 | 2.75 | 0.390 |
| 10/20/19 | Fall | Fort Foster | A | | 1 | Polysiphonia fucoides | Red | | 0.78 | 0.91 | 0.80 | 0.020 |
| 10/20/19 | Fall | Fort Foster | A | | 1 | Vertebrata lanosa | Red | | 0.96 | 1.06 | 0.98 | 0.020 |
| 10/20/19 | Fall | Fort Foster | A | | 1 | Euthora cristata | Red | | 0.83 | 1.09 | 0.87 | 0.040 |
| 10/20/19 | Fall | Fort Foster | A | | 1 | Agarum clathratum | Brown | | 1.10 | 1.28 | 1.13 | 0.030 |
| 10/20/19 | Fall | Fort Foster | A | | 1 | Dasysiphonia japonica | Red | | 1.31 | 1.47 | 1.33 | 0.020 |
| 10/20/19 | Fall | Fort Foster | A | | 1 | Desmarestia aculeata | Brown | | 0.82 | 0.91 | 0.84 | 0.020 |
| 10/20/19 | Fall | Fort Foster | A | | 1 combined | Combined sample | Mix | | 0.94 | | 1.53 | 0.590 |
| 10/20/19 | Fall | Fort Foster | A | | 1 combined | Ulvaria obscura | Green | | | | | |
| 10/20/19 | Fall | Fort Foster | A | | 1 combined | Coralina officinalis | Red | | | | | |
| 10/20/19 | Fall | Fort Foster | A | | 1 combined | Coccotylus truncatus | Red | | | | | |
| 10/20/19 | Fall | Fort Foster | A | | 1 combined | Chaetomorpha picquotiana | Green | | | | | |
| 10/20/19 | Fall | Fort Foster | A | | 1 combined | Membranoptera alata | Red | | | | | |
| 10/20/19 | Fall | Fort Foster | A | | 1 combined | Phycodrys fimbriata | Red | | | | | |
| 10/20/19 | Fall | Fort Foster | A | | 1 combined | Bonnemaisonia hamifera | Red | | | | | |
| 10/20/19 | Fall | Fort Foster | A | | 1 combined | Dasysiphonia japonica | Red | | | | | |
| 10/20/19 | Fall | Fort Foster | A | | 1 combined | Ptilota serrata | Red | | | | | |
| 10/20/19 | Fall | Fort Foster | A | | 1 combined | Neosiphonia harveyi | Red | | | | | |
| 10/20/19 | Fall | Fort Foster | A | | 1 combined | Callithamnion tetragonum | Red | | | | | |
| 10/20/19 | Fall | Fort Foster | A | | 1 combined | Chaetomorpha linum | Green | | | | | |
| 10/20/19 | Fall | Fort Foster | A | | 1 combined | Euthora cristata | Red | | | | | |
| 10/20/19 | Fall | Fort Foster | A | | 1 combined | Desmarestia aculeata | Brown | | | | | |
| 10/20/19 | Fall | Fort Foster | A | | 1 combined | Cystoclonium purpureum | Red | | | | | |
| 10/20/19 | Fall | Fort Foster | A | | 1 combined | Polysiphonia fucoides | Red | | | | | |
| 10/20/19 | Fall | Fort Foster | A | | 1 combined | Ahnfeltia plicata | Red | | | | | |
| 10/20/19 | Fall | Fort Foster | A | | 1 combined | Hydroids | Animal | | | | | |
| 10/20/19 | Fall | Fort Foster | A | | 2 | No algae | | | | | | |
| 10/21/19 | Fall | Fort Foster | A | | 3 | Ceramium virgatum | Red | | | | | 0.005 |
| 10/21/19 | Fall | Fort Foster | A | | 3 | Ptilota serrata | Red | | | | | 0.005 |
| 10/21/19 | Fall | Fort Foster | A | | 3 | Polysiphonia fucoides | Red | | 0.65 | 0.70 | 0.67 | 0.020 |
| 10/21/19 | Fall | Fort Foster | A | | 3 | Desmarestia aculeata | Brown | | 3.16 | 5.58 | 3.83 | 0.670 |
| 10/21/19 | Fall | Fort Foster | A | | 3 | Palmaria palmata | Red | | 2.67 | 8.87 | 3.43 | 0.760 |
| 10/21/19 | Fall | Fort Foster | A | | 3 | Agarum clathratum | Brown | | 2.79 | 7.69 | 3.89 | 1.100 |
| 10/21/19 | Fall | Fort Foster | A | | 3 | Dasysiphonia japonica | Red | | 0.56 | 0.70 | 0.59 | 0.030 |
| 10/21/19 | Fall | Fort Foster | A | | 3 | Phyllophora pseudoceranoides | Red | | 0.78 | 0.96 | 0.85 | 0.070 |
| 10/21/19 | Fall | Fort Foster | A | | 3 | Coccotylus truncatus | Red | | 0.80 | 1.20 | 0.92 | 0.120 |
| 10/21/19 | Fall | Fort Foster | A | | 3 | Vertebrata lanosa | Red | | 0.80 | 0.84 | 0.81 | 0.010 |

| Collection Date | Season | Site | Tran-sect | Quadrat Distance | Plot | Species | Type | Total Wet Wt. (no foil) *use when taking subsamples | Foil weight (g) | Wet weight (w/ foil) | Dry Wt. (w/ foil) | Dry Wt. (no foil) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10/21/19 | Fall | Fort Foster | A | | 3 | Phycodrys fimbriata | Red | | 0.84 | 1.23 | 0.92 | 0.080 |
| 10/21/19 | Fall | Fort Foster | A | | 3 | Euthora cristata | Red | | 0.89 | 1.10 | 0.92 | 0.030 |
| 10/21/19 | Fall | Fort Foster | A | | 3 | Ulva rigida | Green | | 0.93 | 0.97 | 0.94 | 0.010 |
| 10/21/19 | Fall | Fort Foster | A | | 3 | Chondrus crispus | Red | | 0.86 | 1.09 | 0.92 | 0.060 |
| 10/21/19 | Fall | Fort Foster | A | | 3 | Chaetomorpha picquotiana | Green | | 0.92 | 1.24 | 0.98 | 0.060 |
| 10/21/19 | Fall | Fort Foster | A | | 4 | Rhodomela confervoides | Red | | 0.68 | 0.70 | 0.69 | 0.010 |
| 10/21/19 | Fall | Fort Foster | A | | 4 | Palmaria palmata | Red | | 1.38 | 2.51 | 1.55 | 0.170 |
| 10/21/19 | Fall | Fort Foster | A | | 4 | Desmarestia aculeata | Brown | | 0.96 | 1.27 | 1.03 | 0.070 |
| 10/21/19 | Fall | Fort Foster | A | | 4 | Phyllophora pseudoceranoides | Red | | 0.74 | 0.97 | 0.79 | 0.050 |
| 10/21/19 | Fall | Fort Foster | A | | 4 | Polysiphonia fucoides | Red | | 0.79 | 0.88 | 0.81 | 0.020 |
| 10/21/19 | Fall | Fort Foster | A | | 4 | Euthora cristata | Red | | 0.88 | 1.05 | 0.91 | 0.030 |
| 10/21/19 | Fall | Fort Foster | A | | 4 | Dasysiphonia japonica | Red | | 0.71 | 0.82 | 0.75 | 0.040 |
| 10/21/19 | Fall | Fort Foster | A | | 4 | Fredericqia deveauniensis | Red | | 0.69 | 0.73 | 0.70 | 0.010 |
| 10/21/19 | Fall | Fort Foster | A | | 4 combined | Combined sample | Mix | | 0.73 | 1.02 | 0.81 | 0.080 |
| 10/21/19 | Fall | Fort Foster | A | | 4 combined | Chaetomorpha picquotiana | Green | | | | | |
| 10/21/19 | Fall | Fort Foster | A | | 4 combined | Vertebrata lanosa | Red | | | | | |
| 10/21/19 | Fall | Fort Foster | A | | 4 combined | Dasysiphonia japonica | Red | | | | | |
| 10/21/19 | Fall | Fort Foster | A | | 4 combined | Callithamnion tetragonum | Red | | | | | |
| 10/21/19 | Fall | Fort Foster | A | | 4 combined | Ceramium virgatum | Red | | | | | |
| 10/21/19 | Fall | Fort Foster | A | | 4 combined | Polysiphonia stricta | Red | | | | | |
| 10/21/19 | Fall | Fort Foster | A | | 4 combined | Ahnfeltia plicata | Red | | | | | |
| 10/21/19 | Fall | Fort Foster | A | | 4 combined | Euthora cristata | Red | | | | | |
| 10/21/19 | Fall | Fort Foster | A | | 4 combined | Ptilota serrata | Red | | | | | |
| 10/21/19 | Fall | Fort Foster | A | | 5 | [illegible]hora cristata | Red | | 0.67 | 0.75 | 0.68 | 0.010 |
| 10/21/19 | Fall | Fort Foster | A | | 5 | Dasysiphonia japonica | Red | | 0.83 | 1.29 | 0.96 | 0.130 |
| 10/21/19 | Fall | Fort Foster | A | | 5 | Chaetomorpha picquotiana | Green | | 0.65 | 0.95 | 0.70 | 0.050 |
| 10/21/19 | Fall | Fort Foster | A | | 5 | Desmarestia aculeata | Brown | | 0.75 | 0.85 | 0.77 | 0.020 |
| 10/21/19 | Fall | Fort Foster | A | | 5 Combined | Combined sample | Mix | | 0.80 | 2.67 | 1.27 | 0.470 |
| 10/21/19 | Fall | Fort Foster | A | | 5 Combined | Dasysiphonia japonica | Red | | | | | |
| 10/21/19 | Fall | Fort Foster | A | | 5 Combined | Callithamnion tetragonum | Red | | | | | |
| 10/21/19 | Fall | Fort Foster | A | | 5 Combined | Chaetomorpha picquotiana | Green | | | | | |
| 10/21/19 | Fall | Fort Foster | A | | 5 Combined | Desmarestia aculeata | Brown | | | | | |
| 10/21/19 | Fall | Fort Foster | A | | 5 Combined | Euthora cristata | Red | | | | | |
| 10/21/19 | Fall | Fort Foster | A | | 5 Combined | Ahnfeltia plicata | Red | | | | | |
| 10/21/19 | Fall | Fort Foster | A | | 5 Combined | Polysiphonia fucoides | Red | | | | | |
| 10/21/19 | Fall | Fort Foster | A | | 5 Combined | Cystoclonium purpureum | Red | | | | | |
| 10/21/19 | Fall | Fort Foster | A | | 5 Combined | Phycodrys fimbriata | Red | | | | | |
| 10/21/19 | Fall | Fort Foster | A | | 5 Combined | Vertebrata lanosa | Red | | | | | |
| 10/21/19 | Fall | Fort Foster | A | | 5 Combined | Polyides rotunda | Red | | | | | |
| 10/21/19 | Fall | Fort Foster | A | | 6 | No algae | | | | | | |
| 10/21/19 | Fall | Fort Foster | A | | 7 | No algae | | | | | | |
| 10/21/19 | Fall | Fort Foster | A | | 8 | Euthora cristata | Red | | 0.90 | 1.13 | 0.95 | 0.050 |
| 10/21/19 | Fall | Fort Foster | A | | 8 | Polysiphonia fucoides | Red | | 0.77 | 0.98 | 0.82 | 0.050 |

| Collection Date | Season | Site | Tran-sect | Quadrat Distance | Plot | Species | Type | Total Wet Wt. (no foil) *use when taking subsamples | Foil weight (g) | Wet weight (w/ foil) | Dry Wt. (w/ foil) | Dry Wt. (no foil) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10/21/19 | Fall | Fort Foster | A | | 8 | Chondrus crispus | Red | | 0.93 | 1.46 | 1.08 | 0.150 |
| 10/21/19 | Fall | Fort Foster | A | | 8 | Ptilota serrata | Red | | 0.82 | 0.93 | 0.84 | 0.020 |
| 10/21/19 | Fall | Fort Foster | A | | 8 | Desmarestia aculeata | Brown | | 0.91 | 1.54 | 1.05 | 0.140 |
| 10/21/19 | Fall | Fort Foster | A | | 8 | Dasysiphonia japonica | Red | | 1.95 | 4.46 | 2.76 | 0.810 |
| 10/21/19 | Fall | Fort Foster | A | | 8 combined | Combined sample | Mix | | 2.17 | 5.90 | 3.05 | 0.880 |
| 10/21/19 | Fall | Fort Foster | A | | 8 combined | Chaetomorpha ligustica | Green | | | | | |
| 10/21/19 | Fall | Fort Foster | A | | 8 combined | Chaetomorpha picquotiana | Green | | | | | |
| 10/21/19 | Fall | Fort Foster | A | | 8 combined | Coccotylus truncatus | Red | | | | | |
| 10/21/19 | Fall | Fort Foster | A | | 8 combined | Desmarestia aculeata | Brown | | | | | |
| 10/21/19 | Fall | Fort Foster | A | | 8 combined | Phycodrys fimbriata | Red | | | | | |
| 10/21/19 | Fall | Fort Foster | A | | 8 combined | Callithamnion tetragonum | Red | | | | | |
| 10/21/19 | Fall | Fort Foster | A | | 8 combined | Dasysiphonia japonica | Red | | | | | |
| 10/21/19 | Fall | Fort Foster | A | | 8 combined | Euthora cristata | Red | | | | | |
| 10/21/19 | Fall | Fort Foster | A | | 8 combined | Vertebrata lanosa | Red | | | | | |
| 10/21/19 | Fall | Fort Foster | A | | 8 combined | Ahnfeltia plicata | Red | | | | | |
| 10/21/19 | Fall | Fort Foster | A | | 8 combined | Polyides rotunda | Red | | | | | |
| 10/21/19 | Fall | Fort Foster | A | | 8 combined | Ptilota serrata | Red | | | | | |
| 10/21/19 | Fall | Fort Foster | A | | 9 | No algae | | | | | | |
| 10/21/19 | Fall | Fort Foster | A | | 10 | Palmaria palmata | Red | | 6.75 | 69.63 | 17.46 | 10.710 |
| 10/21/19 | Fall | Fort Foster | A | | 10 | Chaetomorpha picquotiana | Green | | 4.05 | 19.95 | 7.53 | 3.480 |
| 10/21/19 | Fall | Fort Foster | A | | 10 | Desmarestia aculeata | Brown | | 5.95 | 43.56 | 16.45 | 10.500 |
| 10/21/19 | Fall | Fort Foster | A | | 10 | Ascophyllum nodosum | Brown | | 3.22 | 20.34 | 7.00 | 3.780 |
| 10/21/19 | Fall | Fort Foster | A | | 10 | Saccharina latissima | Brown | | 1.47 | 9.18 | 2.49 | 1.020 |
| 10/21/19 | Fall | Fort Foster | A | | 10 | Ceramium virgatum | Red | | 1.42 | 2.30 | 1.52 | 0.100 |
| 10/21/19 | Fall | Fort Foster | A | | 10 | Ulvaria obscura | Green | | 1.35 | 1.40 | 1.37 | 0.020 |
| 10/21/19 | Fall | Fort Foster | A | | 10 | Fucus distichus subsp. evanescens | Brown | | 1.32 | 2.14 | 1.53 | 0.210 |
| 10/21/19 | Fall | Fort Foster | A | | 10 | Ahnfeltia plicata | Red | | 0.86 | 1.17 | 1.00 | 0.140 |
| 10/21/19 | Fall | Fort Foster | A | | 10 | Phyllophora pseudoceranoides | Red | | 1.16 | 2.68 | 1.55 | 0.390 |
| 10/21/19 | Fall | Fort Foster | A | | 10 | Chondria baileyana | Red | | 0.85 | 1.12 | 0.87 | 0.020 |
| 10/21/19 | Fall | Fort Foster | A | | 10 | Ulva rigida | Green | | 0.69 | 0.73 | 0.70 | 0.010 |
| 10/21/19 | Fall | Fort Foster | A | | 10 | Ptilota serrata | Red | | 0.81 | 0.88 | 0.82 | 0.010 |
| 10/21/19 | Fall | Fort Foster | A | | 10 | Bonnemaisonia hamifera | Red | | 0.72 | 0.80 | 0.73 | 0.010 |
| 10/21/19 | Fall | Fort Foster | A | | 10 | Dasysiphonia japonica | Red | | 1.26 | 1.91 | 1.36 | 0.100 |
| 10/21/19 | Fall | Fort Foster | A | | 10 | Vertebrata lanosa | Red | | 1.38 | 2.02 | 1.55 | 0.170 |
| 10/21/19 | Fall | Fort Foster | A | | 10 | Rhodomela confervoides | Red | | 1.61 | 5.86 | 2.20 | 0.590 |
| 10/21/19 | Fall | Fort Foster | A | | 10 | Polyides rotunda | Red | | 1.46 | 6.48 | 2.49 | 1.030 |
| 10/21/19 | Fall | Fort Foster | A | | 10 | Cystoclonium purpureum | Red | | 0.83 | 0.86 | 0.83 | 0.005 |
| 10/21/19 | Fall | Fort Foster | A | | 10 | Callithamnion tetragonum | Red | | 0.91 | 1.04 | 0.93 | 0.020 |
| 10/21/19 | Fall | Fort Foster | A | | 10 | Fucus vesiculosus | Brown | | 0.99 | 1.10 | 1.02 | 0.030 |
| 10/21/19 | Fall | Fort Foster | A | | 10 | Membranoptera alata | Red | | 0.90 | 0.93 | 0.91 | 0.010 |
| 10/21/19 | Fall | Fort Foster | A | | 10 | Polysiphonia fucoides | Red | | 1.48 | 1.54 | 1.50 | 0.020 |
| 10/21/19 | Fall | Fort Foster | A | | 10 | Coccotylus truncatus | Red | | 2.72 | 5.05 | 3.29 | 0.570 |
| 10/21/19 | Fall | Fort Foster | A | | 10 | Phycodrys fimbriata | Red | | 1.38 | 3.72 | 1.83 | 0.450 |

| Collection Date | Season | Site | Tran-sect | Quadrat Distance | Plot | Species | Type | Total Wet Wt. (no foil) *use when taking subsamples | Foil weight (g) | Wet weight (w/ foil) | Dry Wt. (w/ foil) | Dry Wt. (no foil) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10/21/19 | Fall | Fort Foster | A | | 10 | Euthora cristata | Red | | 1.99 | 5.55 | 2.55 | 0.560 |
| 10/21/19 | Fall | Fort Foster | A | | 10 | Agarum clathratum | Brown | | 8.76 | 55.00 | 20.42 | 11.660 |
| 10/21/19 | Fall | Fort Foster | A | | 10 combined A | Combined sample | Mix | | 3.35 | 14.93 | 6.76 | 3.410 |
| 10/21/19 | Fall | Fort Foster | A | | 10 combined A | Chaetomorpha picquotiana | Green | | | | | |
| 10/21/19 | Fall | Fort Foster | A | | 10 combined A | Mastocarpus stellatus | Red | | | | | |
| 10/21/19 | Fall | Fort Foster | A | | 10 combined A | Hydroids | Animal | | | | | |
| 10/21/19 | Fall | Fort Foster | A | | 10 combined B | Combined sample | Mix | | 2.67 | 15.23 | 5.24 | 2.570 |
| 10/21/19 | Fall | Fort Foster | A | | 10 combined B | Chaetomorpha picquotiana | Green | | | | | |
| 10/21/19 | Fall | Fort Foster | A | | 10 combined B | Saccharina latissima | Brown | | | | | |
| 10/21/19 | Fall | Fort Foster | A | | 10 combined B | Desmarestia aculeata | Brown | | | | | |
| 10/21/19 | Fall | Fort Foster | A | | 10 combined B | Fucus vesiculosus | Brown | | | | | |
| 10/21/19 | Fall | Fort Foster | A | | 10 combined B | Euthora cristata | Red | | | | | |
| 10/21/19 | Fall | Fort Foster | A | | 10 combined B | Ahnfeltia plicata | Red | | | | | |
| 10/21/19 | Fall | Fort Foster | A | | 10 combined B | Coccotylus truncatus | Red | | | | | |
| 10/21/19 | Fall | Fort Foster | A | | 10 combined B | Coralina officinalis | Red | | | | | |
| 10/21/19 | Fall | Fort Foster | A | | 10 combined B | Palmaria palmata | Red | | | | | |
| 10/21/19 | Fall | Fort Foster | A | | 10 combined B | Polyides rotunda | Red | | | | | |
| 10/21/19 | Fall | Fort Foster | A | | 10 combined B | Phycodrys fimbriata | Red | | | | | |
| 10/21/19 | Fall | Fort Foster | A | | 10 combined B | Dasysiphonia japonica | Red | | | | | |
| 10/21/19 | Fall | Fort Foster | A | | 10 combined B | Rhodomela confervoides | Red | | | | | |
| 10/21/19 | Fall | Fort Foster | A | | 10 combined B | Vertebrata lanosa | Red | | | | | |
| 10/21/19 | Fall | Fort Foster | A | | 10 combined B | Zostera marina | Plant | | | | | |
| 10/21/19 | Fall | Fort Foster | A | | 10 combined B | Hydroids | Animal | | | | | |
| 10/21/19 | Fall | Fort Foster | A | | 10 combined C | Combined sample | Mix | | 2.97 | 17.87 | 6.96 | 3.990 |
| 10/21/19 | Fall | Fort Foster | A | | 10 combined C | Chondrus crispus | Red | | | | | |
| 10/21/19 | Fall | Fort Foster | A | | 10 combined C | Hydroids | Animal | | | | | |
| 10/21/19 | Fall | Fort Foster | A | | 11 | Agarum clathratum | Brown | | 2.83 | 5.77 | 3.44 | 0.610 |
| 10/21/19 | Fall | Fort Foster | A | | 11 | Palmaria palmata | Red | | 0.95 | 1.58 | 1.01 | 0.060 |
| 10/21/19 | Fall | Fort Foster | A | | 11 | Chaetomorpha picquotiana | Green | | 0.87 | 1.80 | 1.01 | 0.140 |
| 10/21/19 | Fall | Fort Foster | A | | 11 | Dasysiphonia japonica | Red | | 1.01 | 1.65 | 1.17 | 0.160 |
| 10/21/19 | Fall | Fort Foster | A | | 11 | Vertebrata lanosa | Red | | 1.11 | 1.30 | 1.16 | 0.050 |
| 10/21/19 | Fall | Fort Foster | A | | 11 | Desmarestia aculeata | Brown | | 1.23 | 1.66 | 1.33 | 0.100 |
| 10/21/19 | Fall | Fort Foster | A | | 11 | Phycodrys fimbriata | Red | | 1.41 | 1.77 | 1.48 | 0.070 |
| 10/21/19 | Fall | Fort Foster | A | | 11 | Ascophyllum nodosum | Brown | | 0.74 | 0.85 | 0.77 | 0.030 |
| 10/21/19 | Fall | Fort Foster | A | | 11 combined | Combined sample | Mix | | 0.98 | 1.44 | 1.15 | 0.170 |
| 10/21/19 | Fall | Fort Foster | A | | 11 combined | Coralina officinalis | Red | | | | | |
| 10/21/19 | Fall | Fort Foster | A | | 11 combined | Polysiphonia fucoides | Red | | | | | |
| 10/21/19 | Fall | Fort Foster | A | | 11 combined | Cystoclonium purpureum | Red | | | | | |
| 10/21/19 | Fall | Fort Foster | A | | 11 combined | Dasysiphonia japonica | Red | | | | | |
| 10/21/19 | Fall | Fort Foster | A | | 11 combined | Callithamnion tetragonum | Red | | | | | |
| 10/21/19 | Fall | Fort Foster | A | | 11 combined | Euthora cristata | Red | | | | | |
| 10/21/19 | Fall | Fort Foster | A | | 11 combined | Chaetomorpha picquotiana | Green | | | | | |
| 10/21/19 | Fall | Fort Foster | A | | 11 combined | Ptilota serrata | Red | | | | | |

| Collection Date | Season | Site | Tran-sect | Quadrat Distance | Plot | Species | Type | Total Wet Wt. (no foil) *use when taking subsamples | Foil weight (g) | Wet weight (w/ foil) | Dry Wt. (w/ foil) | Dry Wt. (no foil) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10/21/19 | Fall | Fort Foster | A | | 12 | Desmarestia aculeata | Brown | | 0.82 | 1.54 | 1.04 | 0.220 |
| 10/21/19 | Fall | Fort Foster | A | | 12 | Mastocarpus stellatus | Red | | 0.74 | 1.19 | 0.86 | 0.120 |
| 10/21/19 | Fall | Fort Foster | A | | 12 | Saccharina latissima | Brown | | 0.70 | 1.05 | 0.76 | 0.060 |
| 10/21/19 | Fall | Fort Foster | A | | 12 | Coccotylus truncatus | Red | | 0.66 | 1.18 | 0.79 | 0.130 |
| 10/21/19 | Fall | Fort Foster | A | | 12 | Euthora cristata | Red | | 0.59 | 0.89 | 0.64 | 0.050 |
| 10/21/19 | Fall | Fort Foster | A | | 12 | Phycodrys fimbriata | Red | | 0.60 | 0.84 | 0.65 | 0.050 |
| 10/21/19 | Fall | Fort Foster | A | | 12 | Chondrus crispus with hydroids | Red | | 1.10 | 4.23 | 1.84 | 0.740 |
| 10/21/19 | Fall | Fort Foster | A | | 12 | Dasysiphonia japonica | Red | | 1.00 | 1.53 | 1.17 | 0.170 |
| 10/21/19 | Fall | Fort Foster | A | | 12 combined | Combined sample | Mix | | 0.83 | 1.45 | 0.97 | 0.140 |
| 10/21/19 | Fall | Fort Foster | A | | 12 combined | Chaetomorpha picquotiana | Green | | | | | |
| 10/21/19 | Fall | Fort Foster | A | | 12 combined | Ceramium virgatum | Red | | | | | |
| 10/21/19 | Fall | Fort Foster | A | | 12 combined | Dasysiphonia japonica | Red | | | | | |
| 10/21/19 | Fall | Fort Foster | A | | 12 combined | Euthora cristata | Red | | | | | |
| 10/21/19 | Fall | Fort Foster | A | | 12 combined | Cystoclonium purpureum | Red | | | | | |
| 10/21/19 | Fall | Fort Foster | A | | 12 combined | Desmarestia aculeata | Brown | | | | | |
| 10/21/19 | Fall | Fort Foster | A | | 12 combined | Coccotylus truncatus | Red | | | | | |
| 10/21/19 | Fall | Fort Foster | A | | 12 combined | Phyllophora pseudoceranoides | Red | | | | | |
| 10/21/19 | Fall | Fort Foster | A | | 12 combined | Phycodrys fimbriata | Red | | | | | |
| 10/21/19 | Fall | Fort Foster | A | | 12 combined | Polysiphonia fucoides | Red | | | | | |
| 10/21/19 | Fall | Fort Foster | B | | 1 | Phyllophora pseudoceranoides | Red | | 0.90 | 1.11 | 0.96 | 0.060 |
| 10/21/19 | Fall | Fort Foster | B | | 1 | Chondrus crispus | Red | | 0.95 | 1.11 | 1.00 | 0.050 |
| 10/21/19 | Fall | Fort Foster | B | | 1 | Devaleraea ramentacea | Red | | 0.81 | 0.88 | 0.83 | 0.020 |
| 10/21/19 | Fall | Fort Foster | B | | 1 | Chaetomorpha picquotiana | Green | | 0.62 | 0.72 | 0.65 | 0.030 |
| 10/21/19 | Fall | Fort Foster | B | | 1 | Dasysiphonia japonica | Red | | 0.92 | 3.68 | 1.57 | 0.650 |
| 10/21/19 | Fall | Fort Foster | B | | 1 combined | Combined sample | Mix | | 0.62 | 2.53 | 1.02 | 0.400 |
| 10/21/19 | Fall | Fort Foster | B | | 1 combined | Chaetomorpha picquotiana | Green | | | | | |
| 10/21/19 | Fall | Fort Foster | B | | 1 combined | Coccotylus truncatus | Red | | | | | |
| 10/21/19 | Fall | Fort Foster | B | | 1 combined | Dasysiphonia japonica | Red | | | | | |
| 10/21/19 | Fall | Fort Foster | B | | 1 combined | Desmarestia aculeata | Brown | | | | | |
| 10/21/19 | Fall | Fort Foster | B | | 1 combined | Ptilota serrata | Red | | | | | |
| 10/21/19 | Fall | Fort Foster | B | | 1 combined | Polysiphonia fucoides | Red | | | | | |
| 10/21/19 | Fall | Fort Foster | B | | 1 combined | Callithamnion tetragonum | Red | | | | | |
| 10/21/19 | Fall | Fort Foster | B | | 1 combined | Euthora cristata | Red | | | | | |
| 10/21/19 | Fall | Fort Foster | B | | 1 combined | Cystoclonium purpureum | Red | | | | | |
| 10/21/19 | Fall | Fort Foster | B | | 2 | Euthora cristata | Red | | 0.76 | 0.89 | 0.78 | 0.020 |
| 10/21/19 | Fall | Fort Foster | B | | 2 | Dasysiphonia japonica | Red | | 0.80 | 1.64 | 0.92 | 0.120 |
| 10/21/19 | Fall | Fort Foster | B | | 2 | Chaetomorpha picquotiana | Green | | 0.92 | 1.41 | 1.04 | 0.120 |
| 10/21/19 | Fall | Fort Foster | B | | 2 combined | Combined sample | Mix | | 0.77 | 5.16 | 1.87 | 1.100 |
| 10/21/19 | Fall | Fort Foster | B | | 2 combined | Dasysiphonia japonica | Red | | | | | |
| 10/21/19 | Fall | Fort Foster | B | | 2 combined | Chaetomorpha picquotiana | Green | | | | | |
| 10/21/19 | Fall | Fort Foster | B | | 2 combined | Bonnemaisonia hamifera | Red | | | | | |
| 10/21/19 | Fall | Fort Foster | B | | 2 combined | Callithamnion tetragonum | Red | | | | | |
| 10/21/19 | Fall | Fort Foster | B | | 2 combined | Ceramium virgatum | Red | | | | | |

| Collection Date | Season | Site | Tran-sect | Quadrat Distance | Plot | Species | Type | Total Wet Wt. (no foil) *use when taking subsamples | Foil weight (g) | Wet weight (w/ foil) | Dry Wt. (w/ foil) | Dry Wt. (no foil) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10/21/19 | Fall | Fort Foster | B | | 2 combined | Ptilota serrata | Red | | | | | |
| 10/21/19 | Fall | Fort Foster | B | | 2 combined | Zostera marina | Plant | | | | | |
| 10/21/19 | Fall | Fort Foster | B | | 3 | Dasysiphonia japonica | Red | | 0.84 | 1.77 | 1.06 | 0.220 |
| 10/21/19 | Fall | Fort Foster | B | | 3 | Phycodrys fimbriata | Red | | 0.64 | 0.76 | 0.67 | 0.030 |
| 10/21/19 | Fall | Fort Foster | B | | 3 | Fucus vesiculosus | Brown | | 0.62 | 0.76 | 0.66 | 0.040 |
| 10/21/19 | Fall | Fort Foster | B | | 3 combined | Combined sample | Mix | | 0.99 | 3.88 | 1.52 | 0.530 |
| 10/21/19 | Fall | Fort Foster | B | | 3 combined | Dasysiphonia japonica | Red | | | | | |
| 10/21/19 | Fall | Fort Foster | B | | 3 combined | Ptilota serrata | Red | | | | | |
| 10/21/19 | Fall | Fort Foster | B | | 3 combined | Chaetomorpha picquotiana | Green | | | | | |
| 10/21/19 | Fall | Fort Foster | B | | 3 combined | Euthora cristata | Red | | | | | |
| 10/21/19 | Fall | Fort Foster | B | | 3 combined | Bonnemaisonia hamifera | Red | | | | | |
| 10/21/19 | Fall | Fort Foster | B | | 3 combined | Callithamnion tetragonum | Red | | | | | |
| 10/21/19 | Fall | Fort Foster | B | | 3 combined | Coccotylus truncatus | Red | | | | | |
| 10/21/19 | Fall | Fort Foster | B | | 3 combined | Desmarestia aculeata | Brown | | | | | |
| 10/21/19 | Fall | Fort Foster | B | | 3 combined | Ahnfeltia plicata | Red | | | | | |
| 10/21/19 | Fall | Fort Foster | B | | 3 combined | Phyllophora pseudoceranoides | Red | | | | | |
| 10/21/19 | Fall | Fort Foster | B | | 3 combined | Ceramium virgatum | Red | | | | | |
| 10/21/19 | Fall | Fort Foster | B | | 4 | No algae | | | | | | |
| 10/19/19 | Fall | Fort Foster | B | | 5 | Chaetomorpha picquotiana | Green | | 0.67 | 0.95 | 0.73 | 0.060 |
| 10/19/19 | Fall | Fort Foster | B | | 5 | Phycodrys fimbriata | Red | | 0.61 | 1.18 | 0.74 | 0.130 |
| 10/19/19 | Fall | Fort Foster | B | | 5 | Ptilota serrata | Red | | 0.49 | 0.51 | 0.50 | 0.010 |
| 10/19/19 | Fall | Fort Foster | B | | 5 | Polysiphonia fucoides | Red | | 0.49 | 0.51 | 0.50 | 0.010 |
| 10/19/19 | Fall | Fort Foster | B | | 5 | Euthora cristata and Callithamnion te | Mix | | 0.68 | 0.73 | 0.69 | 0.010 |
| 10/19/19 | Fall | Fort Foster | B | | 5 | Dasysiphonia japonica | Red | | 0.54 | 0.84 | 0.61 | 0.070 |
| 10/19/19 | Fall | Fort Foster | B | | 5 | Callithamnion tetragonum and Dasys | Red | | 0.51 | 0.52 | 0.51 | 0.005 |
| 10/19/19 | Fall | Fort Foster | B | | 5 | Agarophyton vermiculophyllum | Red | | 0.59 | 0.59 | 0.59 | 0.005 |
| 10/19/19 | Fall | Fort Foster | B | | 5 | Callithamnion tetragonum | Red | | 0.65 | 0.69 | 0.66 | 0.010 |
| 10/19/19 | Fall | Fort Foster | B | | 5 | Bonnemaisonia hamifera | Red | | 0.67 | 1.16 | 0.73 | 0.060 |
| 10/19/19 | Fall | Fort Foster | B | | 5 | Ahnfeltia plicata | Red | | 0.53 | 0.54 | 0.53 | 0.005 |
| 10/19/19 | Fall | Fort Foster | B | | 5 combined | Combined sample | Mix | | 0.40 | 1.10 | 0.66 | 0.260 |
| 10/19/19 | Fall | Fort Foster | B | | 5 combined | Vertebrata lanosa | Red | | | | | |
| 10/19/19 | Fall | Fort Foster | B | | 5 combined | Bonnemaisonia hamifera | Red | | | | | |
| 10/19/19 | Fall | Fort Foster | B | | 5 combined | Euthora cristata | Red | | | | | |
| 10/19/19 | Fall | Fort Foster | B | | 5 combined | Dasysiphonia japonica | Red | | | | | |
| 10/19/19 | Fall | Fort Foster | B | | 5 combined | Callithamnion tetragonum | Red | | | | | |
| 10/19/19 | Fall | Fort Foster | B | | 5 combined | Ptilota serrata | Red | | | | | |
| 10/19/19 | Fall | Fort Foster | B | | 5 combined | Chaetomorpha picquotiana | Green | | | | | |
| 10/19/19 | Fall | Fort Foster | B | | 5 combined | Phycodrys fimbriata | Red | | | | | |
| 10/19/19 | Fall | Fort Foster | B | | 5 combined | Zostera marina | Plant | | | | | |
| 10/19/19 | Fall | Fort Foster | B | | 6 | Chaetomorpha picquotiana | Green | | 0.60 | 0.98 | 0.68 | 0.080 |
| 10/19/19 | Fall | Fort Foster | B | | 6 | Dasysiphonia japonica | Red | | 0.77 | 2.72 | 1.05 | 0.280 |
| 10/19/19 | Fall | Fort Foster | B | | 6 combined | Combined sample | Mix | | 1.63 | 8.55 | 3.79 | 2.160 |
| 10/19/19 | Fall | Fort Foster | B | | 6 combined | Dasysiphonia japonica | Red | | | | | |

| Collection Date | Season | Site | Tran-sect | Quadrat Distance | Plot | Species | Type | Total Wet Wt. (no foil) *use when taking subsamples | Foil weight (g) | Wet weight (w/ foil) | Dry Wt. (w/ foil) | Dry Wt. (no foil) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10/19/19 | Fall | Fort Foster | B | | 6 combined | Callithamnion tetragonum | Red | | | | | |
| 10/19/19 | Fall | Fort Foster | B | | 6 combined | Ptilota serrata | Red | | | | | |
| 10/19/19 | Fall | Fort Foster | B | | 6 combined | Ceramium virgatum | Red | | | | | |
| 10/19/19 | Fall | Fort Foster | B | | 6 combined | Chaetomorpha picquotiana | Green | | | | | |
| 10/19/19 | Fall | Fort Foster | B | | 6 combined | Zostera marina | Plant | | | | | |
| 10/19/19 | Fall | Fort Foster | B | | 6 combined | Hydroids | Animal | | | | | |
| 10/19/19 | Fall | Fort Foster | B | | 6 combined | Euthora cristata | Red | | | | | |
| 10/19/19 | Fall | Fort Foster | B | | 6 combined | Coccotylus truncatus | Red | | | | | |
| 10/19/19 | Fall | Fort Foster | B | | 6 combined | Coralina officinalis | Red | | | | | |
| 10/19/19 | Fall | Fort Foster | B | | 6 combined | Polysiphonia fucoides | Red | | | | | |
| 10/19/19 | Fall | Fort Foster | B | | 7 | Chaetomorpha picquotiana | Green | | 0.35 | 0.46 | 0.38 | 0.030 |
| 10/19/19 | Fall | Fort Foster | B | | 7 | Phycodrys fimbriata | Red | | 0.52 | 0.55 | 0.53 | 0.010 |
| 10/19/19 | Fall | Fort Foster | B | | 7 | Coccotylus truncatus | Red | | 0.56 | 0.6 | 0.57 | 0.010 |
| 10/19/19 | Fall | Fort Foster | B | | 7 | Dasysiphonia japonica | Red | | 0.56 | 1.21 | 0.72 | 0.160 |
| 10/19/19 | Fall | Fort Foster | B | | 7 | Vertebrata lanosa | Red | | 0.51 | 0.51 | 0.51 | 0.005 |
| 10/19/19 | Fall | Fort Foster | B | | 7 | Callithamnion tetragonum | Red | | 0.53 | 0.58 | 0.55 | 0.020 |
| 10/19/19 | Fall | Fort Foster | B | | 7 combined | Combined sample | Mix | | 0.62 | 1.03 | 0.77 | 0.150 |
| 10/19/19 | Fall | Fort Foster | B | | 7 combined | Callithamnion tetragonum | Red | | | | | |
| 10/19/19 | Fall | Fort Foster | B | | 7 combined | Polysiphonia schneideri (needs upd | Red | | | | | |
| 10/19/19 | Fall | Fort Foster | B | | 7 combined | Dasysiphonia japonica | Red | | | | | |
| 10/19/19 | Fall | Fort Foster | B | | 7 combined | Euthora cristata | Red | | | | | |
| 10/19/19 | Fall | Fort Foster | B | | 7 combined | Agarophyton vermiculophyllum | Red | | | | | |
| 10/19/19 | Fall | Fort Foster | B | | 7 combined | Chaetomorpha picquotiana | Green | | | | | |
| 10/19/19 | Fall | Fort Foster | B | | 7 combined | Zostera marina | Plant | | | | | |
| 10/19/19 | Fall | Fort Foster | B | | 8 | Chaetomorpha picquotiana | Green | | 0.35 | 0.38 | 0.36 | 0.010 |
| 10/19/19 | Fall | Fort Foster | B | | 8 | Phycodrys fimbriata | Red | | 0.59 | 0.60 | 0.60 | 0.010 |
| 10/19/19 | Fall | Fort Foster | B | | 8 | Callithamnion tetragonum and Dasy | Red | | 0.59 | 0.73 | 0.59 | 0.005 |
| 10/19/19 | Fall | Fort Foster | B | | 8 | Callithamnion tetragonum | Red | | 0.57 | 0.63 | 0.60 | 0.030 |
| 10/19/19 | Fall | Fort Foster | B | | 8 | Dasysiphonia japonica | Red | | 0.70 | 1.80 | 0.88 | 0.180 |
| 10/19/19 | Fall | Fort Foster | B | | 8 | Desmarestia aculeata | Brown | | | | | 0.005 |
| 10/19/19 | Fall | Fort Foster | B | | 8 | Polysiphonia stricta | Red | | | | | 0.005 |
| 10/19/19 | Fall | Fort Foster | B | | 8 | Vertebrata lanosa | Red | | | | | 0.005 |
| 10/19/19 | Fall | Fort Foster | B | | 9 | Chaetomorpha picquotiana | Green | | 0.55 | 1.23 | 0.68 | 0.130 |
| 10/19/19 | Fall | Fort Foster | B | | 9 | Phycodrys fimbriata | Red | | 0.54 | 0.72 | 0.57 | 0.030 |
| 10/19/19 | Fall | Fort Foster | B | | 9 | Euthora cristata | Red | | 0.60 | 0.80 | 0.63 | 0.030 |
| 10/19/19 | Fall | Fort Foster | B | | 9 | Rhodomela confervoides | Red | | 0.61 | 0.73 | 0.64 | 0.030 |
| 10/19/19 | Fall | Fort Foster | B | | 9 | Desmarestia aculeata | Brown | | 0.57 | 0.60 | 0.58 | 0.010 |
| 10/19/19 | Fall | Fort Foster | B | | 9 | Dasysiphonia japonica | Red | | 0.43 | 0.81 | 0.49 | 0.060 |
| 10/19/19 | Fall | Fort Foster | B | | 9 combined | Combined sample | Mix | | 0.45 | 1.13 | 0.63 | 0.180 |
| 10/19/19 | Fall | Fort Foster | B | | 9 combined | Callithamnion tetragonum | Red | | | | | |
| 10/19/19 | Fall | Fort Foster | B | | 9 combined | Ceramium virgatum | Red | | | | | |
| 10/19/19 | Fall | Fort Foster | B | | 9 combined | Cystoclonium purpureum | Red | | | | | |
| 10/19/19 | Fall | Fort Foster | B | | 9 combined | Bonnemaisonia hamifera | Red | | | | | |

| Collection Date | Season | Site | Tran-sect | Quadrat Distance | Plot | Species | Type | Total Wet Wt. (no foil) *use when taking subsamples | Foil weight (g) | Wet weight (w/ foil) | Dry Wt. (w/ foil) | Dry Wt. (no foil) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10/19/19 | Fall | Fort Foster | B | | 9 combined | Agarophyton vermiculophyllum | Red | | | | | |
| 10/19/19 | Fall | Fort Foster | B | | 9 combined | Vertebrata lanosa | Red | | | | | |
| 10/19/19 | Fall | Fort Foster | B | | 9 combined | Zostera marina | Plant | | | | | |
| 10/19/19 | Fall | Fort Foster | B | | 10 | Chaetomorpha picquotiana | Green | | 0.62 | 0.83 | 0.65 | 0.030 |
| 10/19/19 | Fall | Fort Foster | B | | 10 | Desmarestia aculeata | Brown | | 0.54 | 0.69 | 0.56 | 0.020 |
| 10/19/19 | Fall | Fort Foster | B | | 10 | Ptilota serrata | Red | | 0.59 | 0.60 | 0.58 | 0.005 |
| 10/19/19 | Fall | Fort Foster | B | | 10 | Phycodrys fimbriata | Red | | 0.62 | 0.81 | 0.66 | 0.040 |
| 10/19/19 | Fall | Fort Foster | B | | 10 | Coralina officinalis | Red | | 0.53 | 0.98 | 0.78 | 0.250 |
| 10/19/19 | Fall | Fort Foster | B | | 10 | Ulva rigida | Green | | 0.51 | 0.57 | 0.53 | 0.020 |
| 10/19/19 | Fall | Fort Foster | B | | 10 | Dasysiphonia japonica | Red | | 0.98 | 1.34 | 1.08 | 0.100 |
| 10/19/19 | Fall | Fort Foster | B | | 10 combined | Combined sample | Mix | | 0.97 | 3.61 | 1.62 | 0.650 |
| 10/19/19 | Fall | Fort Foster | B | | 10 combined | Euthora cristata | Red | | | | | |
| 10/19/19 | Fall | Fort Foster | B | | 10 combined | Chaetomorpha ligustica | Green | | | | | |
| 10/19/19 | Fall | Fort Foster | B | | 10 combined | Callithamnion tetragonum | Red | | | | | |
| 10/19/19 | Fall | Fort Foster | B | | 10 combined | Ahnfeltia plicata | Red | | | | | |
| 10/19/19 | Fall | Fort Foster | B | | 10 combined | Ptilota serrata | Red | | | | | |
| 10/19/19 | Fall | Fort Foster | B | | 10 combined | Dasysiphonia japonica | Red | | | | | |
| 10/19/19 | Fall | Fort Foster | B | | 10 combined | Chaetomorpha picquotiana | Green | | | | | |
| 10/19/19 | Fall | Fort Foster | B | | 10 combined | Bonnemaisonia hamifera | Red | | | | | |
| 10/19/19 | Fall | Fort Foster | B | | 10 combined | Zostera marina | Plant | | | | | |
| 10/19/19 | Fall | Fort Foster | B | | 11 | Dasysiphonia japonica | Red | | 0.40 | 0.66 | 0.47 | 0.070 |
| 10/19/19 | Fall | Fort Foster | B | | 11 | Euthora cristata | Red | | 0.42 | 0.58 | 0.45 | 0.030 |
| 10/19/19 | Fall | Fort Foster | B | | 11 | Ceramium virgatum | Red | | 0.46 | 0.56 | 0.47 | 0.010 |
| 10/19/19 | Fall | Fort Foster | B | | 11 | Rhodomela confervoides | Red | | 0.41 | 0.43 | 0.42 | 0.010 |
| 10/19/19 | Fall | Fort Foster | B | | 11 | Chondrus crispus | Red | | 0.47 | 0.84 | 0.57 | 0.100 |
| 10/19/19 | Fall | Fort Foster | B | | 11 | Chaetomorpha picquotiana | Green | | 0.41 | 0.61 | 0.45 | 0.040 |
| 10/19/19 | Fall | Fort Foster | B | | 11 | Callithamnion tetragonum | Red | | 0.47 | 0.51 | 0.47 | 0.005 |
| 10/19/19 | Fall | Fort Foster | B | | 11 combined | Combined sample | Mix | | 0.44 | 0.87 | 0.58 | 0.140 |
| 10/19/19 | Fall | Fort Foster | B | | 11 combined | Vertebrata lanosa | Red | | | | | |
| 10/19/19 | Fall | Fort Foster | B | | 11 combined | Agarophyton vermiculophyllum | Red | | | | | |
| 10/19/19 | Fall | Fort Foster | B | | 11 combined | Bonnemaisonia hamifera | Red | | | | | |
| 10/19/19 | Fall | Fort Foster | B | | 11 combined | Phycodrys fimbriata | Red | | | | | |
| 10/19/19 | Fall | Fort Foster | B | | 11 combined | Ptilota serrata | Red | | | | | |
| 10/20/19 | Fall | Fort Foster | B | | 12 | Ascophyllum nodosum | Brown | | 1.36 | 4.71 | 2.15 | 0.790 |
| 10/20/19 | Fall | Fort Foster | B | | 12 | Desmarestia aculeata | Brown | | 1.26 | 3.21 | 1.75 | 0.490 |
| 10/20/19 | Fall | Fort Foster | B | | 12 | Chaetomorpha picquotiana | Green | | 0.59 | 0.71 | 0.62 | 0.030 |
| 10/20/19 | Fall | Fort Foster | B | | 12 | Ptilota serrata | Red | | 0.62 | 0.83 | 0.66 | 0.040 |
| 10/20/19 | Fall | Fort Foster | B | | 12 | Euthora cristata | Red | | 0.49 | 0.83 | 0.54 | 0.050 |
| 10/20/19 | Fall | Fort Foster | B | | 12 | Fredericqia deveauniensis | Red | | 0.56 | 0.58 | 0.56 | 0.005 |
| 10/20/19 | Fall | Fort Foster | B | | 12 | Dasysiphonia japonica | Red | | 0.97 | 1.50 | 1.09 | 0.120 |
| 10/20/19 | Fall | Fort Foster | B | | 12 combined | Combined sample | Mix | | 0.92 | 2.60 | 1.35 | 0.430 |
| 10/20/19 | Fall | Fort Foster | B | | 12 combined | Ptilota serrata | Red | | | | | |
| 10/20/19 | Fall | Fort Foster | B | | 12 combined | Dasysiphonia japonica | Red | | | | | |

| Collection Date | Season | Site | Tran-sect | Quadrat Distance | Plot | Species | Type | Total Wet Wt. (no foil) *use when taking subsamples | Foil weight (g) | Wet weight (w/ foil) | Dry Wt. (w/ foil) | Dry Wt. (no foil) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10/20/19 | Fall | Fort Foster | B | | 12 combined | Callithamnion tetragonum | Red | | | | | |
| 10/20/19 | Fall | Fort Foster | B | | 12 combined | Chaetomorpha picquotiana | Green | | | | | |
| 10/20/19 | Fall | Fort Foster | B | | 12 combined | Ceramium virgatum | Red | | | | | |
| 10/20/19 | Fall | Fort Foster | B | | 12 combined | Coccotylus truncatus | Red | | | | | |
| 10/20/19 | Fall | Fort Foster | B | | 12 combined | Hydroids | Animal | | | | | |
| 10/20/19 | Fall | Fort Foster | B | | 12 combined | Euthora cristata | Red | | | | | |
| 10/20/19 | Fall | Fort Foster | B | | 12 combined | Zostera marina | Plant | | | | | |

## Appendix B: List of photographic images by site and date for 2019 season. Photographs may be accessed at the UNH Scholars Repository (see Below)

**Intertidal Sampling: https://scholars.unh.edu/jel/158/**

June
June 17: Four Tree Island, Adams Point, Depot Road
June 18: Hilton Park
June 19: Sunset Hill Farm

August
August 1: Adams Point, Depot Road
August 5: Hilton Park
August 6: Four Tree Island
August 9: Sunset Hill Farm

October
September 30: Adams Point, Depot Road
October 1: Four Tree Island
October 2: Sunset Hill Farm
October 4: Hilton Park

**Subtidal Sampling: https://scholars.unh.edu/jel/159/**

August
August 7: Adams Point, Sunset Hill Farm
August 8: Depot Road, Lubberland Creek

October
October 15: Adams Point, Sunset Hill Farm A and B
October 16: Sunset Hill Farm C, Depot Road
October 21: Lubberland Creek

## Appendix C.  Site Descriptions

The macroalgal sampling site at Four Tree Island lies east of the causeway between boulder fields on the island and a point on Peirce Island to the east.  Access is provided by the adjacent parking lot.  The water depth shallows above mean lower low water (MLLW, 0.0 m elevation) into a broad mudflat with coarsening sediments as elevations rise above 0.5 m elevation and flats begin to grade into a low marsh with *Spartina alterniflora* at 1.0 m.  Low marsh dominated the next two elevation at 1.5 and 2.0 m, and then high marsh dominated by *Spartina patens* (2.5 m) occurred at the uppermost samples.

The sampling area at Dover Point lies on the northeast side of the point on the Piscataqua River, approximately 200 meters north of the boat launch about 50 meters north of the northernmost portion of Hilton Park and its parking area.  The shore is characterized by subtidal boulders (0.0 m) grading into a narrow intertidal mudflat (0.5 and 1.0 m) with scattered rocks before a short step (at 1.5 m) up to low marsh (sampled at 2.0 m).  Since trees shade out the uppermost portion of a fringing marsh that adjoins vertical rocky outcrop, only unvegetated areas were evident at 2.5 m and so this elevation was not sampled.

The transects at Cedar Point lie on the south side with their upper elevations close to the parking lot (southwest corner of the Scammel Bridge), which is above a steep bedrock embankment (access to the shore is provided by stairs).  Subtidal mud bottom slopes steeply up to the edge of the intertidal at 0.0 m elevation MLLW and the mudflats continue at 0.5 and 1.0 elevations, where the sediments coarsen as a narrow band of low marsh is approached.  The marsh is sampled at 1.5 meters in elevation.  A rocky outcrop extends shore-normal between the second and third transects that is colonized by fucoid algae.

The sampling site at Wagon Hill Farm lies just north of the artificial beach created and maintained by the Town of Durham as part of the park.  Access to the site from the main lot occurs by heading eastward across several fields to the shore.  The transects run across a wide mudflat from intertidal elevations (0.0, 0.5 and 1.0 m MLLW) to a narrow fringing marsh (1.5 m) that is shaded by overhanging trees and shows strong signs of erosion.  The third, northernmost, transects runs into a derelict pier characterized as a crib-construction and filled by cobble and larger rock, with fucoid algae attached to some of the exposed rock.

Along the southern shoreline of Adams Point lies the three sampling transects that extend south toward the Footman Islands.  Access to the site is provided by state-maintained walking trails and wooden steps constructed along the steep embankment of shale bedrock.  Fringing marsh is discontinuous at the site, occurring between coarse shale 'beach'.  The edge of the intertidal is characterized by small boulders and rocks (at 0.0 m elevation) that grade up into mudflat interspersed with rocks (0.5 and 1.0 m), often colonized by fucoid algae (primarily *Fucus vesiculosus*).  At 1.5 m there can either be a fringing marsh or unconsolidated shale.

Land holdings of The Nature Conservancy (TNC) extend from the middle of Lubberland Creek north through the extensive salt marsh and several points and islands.  The sampling location is accessed through a TNC trail that begins on the opposite side of Bay Road from their trail head parking lot.  As the trail approaches the shoreline and salt marsh, strike off toward the shore and continue along the shore until a large mowed field extending to the marsh edge is reached. Three transects extend across the marsh into a broad very flat mudflat that extends into the Bay between a point and island. One sample set is collected from the mudflat (0.5 m elevation), another just as the low marsh is reached (1.0 m), and a final set is located in the low marsh (1.5 m). An osprey platform with active nest is located in the adjacent upland field and so sampling should be restricted to mid-July or later to avoid disrupting any fledglings.

The Great Bay National Estuarine Research Reserve (GBNERR) has as its headquarters at the Sandy Point Discovery Center located on the southern shore of Great Bay. The transects are located from the GBNERR kayak launch extending westward and accessed by the adjacent parking lot. The mud flats are flat and broad, and the 0.0 m elevation could not be accessed by walking across the mudflat (beyond 1 km), and so the three transects began at 0.05 m elevation where the mudflat began to slope upward. The 1.0 elevation was also in mudflat but within 10 meters of a fringing marsh and the 1.5 m elevation was in low marsh at the two western transects and on a rock pile adjacent to the launch for the eastern transect.

On the eastern shore of Great Bay, extensive mudflats grade into fringing salt marsh before the land rises into uplands that were historically farmed. One farm (Sunset Hill) in Newington has been set aside for conservation by the NH Fish and Game. This site has shorelines adjacent to mown fields and knobs of bedrock that show rocky outcrops along the shoreline. The private site is accessed by permission from NH Fish and Game and the first transect has its highest elevation near a derelict crib construction pier. The remaining two shore normal transects are found to the north. Similar to the Lubberland Creek and Depot Road sites, mean low water could not be reached on foot and the lowest elevation was chosen at 0.75 above MLLW, approximately 100 m seaward of the continuous edge of the low marsh (tiny marsh islands were common, but very few extended lower than 0.75 m elevation). The sampling sites at 1.0 m elevation were also in mudflat, but close to the continuous low marsh, where the 1.5 m samples were collected.

**APPENDIX D**

**QA/QC MEMORANDUM**

From: Dr. Kalle Matso, PREP

Date: April 2020

Re: Quality Assurance of 2019 Seaweed Monitoring

**PURPOSE**

The purpose of this memorandum is to document the results of quality assurance checks on the 2019 Great Bay Estuary Seaweed Monitoring led by David Burdick of the University of New Hampshire (UNH) Jackson Estuarine Laboratory (JEL).

In 2019, abundance data (percent cover and biomass) were collected from five of the eight intertidal sampling locations and four subtidal locations in the Great Bay Estuary. Two more sampling arrays were established at each subtidal site, making three replicates per site.

The following table contains assessments of the data quality objectives of the project. Supporting tables and figures are also provided.

For more information on data quality objectives, please see the published Quality Assurance Project Plan (QAPP) at: https://scholars.unh.edu/prep/422/

With questions or comments, please contact Kalle Matso at (kalle.matso@unh.edu)

| Data Quality Objective | Criteria | Protocol | Data Quality Objective Status |
|---|---|---|---|
| Precision | Biomass measurements should be maintained to 1/100 of a gram. | Field assessment team will measure biomass with a Sartorius Balance (Type = E2000D). | **Achieved** |
| Bias | Percent cover estimates should be comparable across members of the field assessment team within ±10% | Field assessment team members will "calibrate" their visual interpretations of percent cover prior to field work by reviewing published examples of visual representations of different percent covers (REF). Field estimates will then be made by consensus of the field team. The field assessment team will also review photographs and associated percent cover estimates from previous years before the field season begins. | **Achieved** |
| Spatial accuracy | GPS units should have a reported accuracy less than or equal to 2 meters. | Plots will be established using a highly accurate real-time kinematic (RTK) GPS. Plot locations will then be staked in the field using lengths of 0.5inch PVC pipe. The minimum accuracy tolerance of the unit will be set to reject saving of waypoints with spatial accuracy less than 0.03m, thereby assuring spatial accuracy requirements met or exceeded. | **Achieved** |
| Comparability | Field and laboratory data should be collected using standardized methods. | Check that protocols from the QAPP were used for field observations. The QA Manager should use filtering functions to check the field assessment team's spreadsheets for data entry errors. All percent cover values should fall into one of the categories specified in the sampling methods. A minimum of 10% of field observations should be checked against electronic spreadsheets. | **Achieved** |
| Completeness | Field observations should be made for seaweed cover at all pre-determined elevations at each site (for example: 0.0 to 2.5m, with 0.5m intervals). | Check field observations for completeness by elevation. Document reasons for any deviations from sampling protocol. | **Achieved** |