

Temporal and spatial distribution of coral planulae, ichthyoplankton and fish eggs close to the cooling water intake system of EcoEléctrica and at a shelf-edge site in Guayanilla, Puerto Rico.

REPORT PREPARED BY

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Executive Summary

The zooplankton communities, specifically fish (ichthyoplankton, hereafter) and coral (planulae, hereafter) larvae, were examined at two stations, close to the EcoEléctrica's intake and at the shelf of Guayanilla. Samples were collected during both day and night at each station for up to three consecutive days during each sampling event. A total of five sampling events were performed from August 2016 to October 2018. Events were scheduled to coincide with the organisms' spawning season and thus maximize the catch of ESA listed coral and fish. Plankton samples (112 in total) were sorted in order to quantify the total amount of planulae, ichthyoplankton and fish eggs present. Additionally, ichthyoplankton were identified down to the lowest possible Sub Family and/or taxon based on morphological features.

A total of 7,413 larval fishes, representing 38 fish families and 4 orders were identified from the plankton samples. The most abundant fish families collected during the study were Pomacentridae, Gobiidae, and Gerridae. The overall mean abundance of ichtyoplankton was significantly higher at the Intake Station (72.4 ± 9.3 Ind/100m³) compared to Station 12 (67.4 ± 9.2 Ind/100m³) whereas the latter had a slightly more diverse taxonomic composition. This may be due to the fact it is located closer to the shelf-edge and its assemblage is comprised of both reef and oceanic larvae. Serranidae larvae were only collected during winter/spring and of these no Nassau grouper were identified.

Fish egg abundance was greater than the total ichthyoplankton and planulae abundance combined, with a total abundance of 24.3×10^5 eggs counted. Although there was no significant difference in egg abundance between months, there was a significant interaction between fish egg abundance and time sampled. The highest fish egg abundances were recorded at night for both stations.

Coral larval abundance was low compared to ichtyoplankton and fish egg abundance. Planulae were mostly collected during the day at Station 12.

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Introduction

As defined by the Environmental Protection Agency (EPA), entrainment is the entrapment of all forms of organisms trapped within the cooling water intake. These organisms can be harmed and killed by the heat, physical stress, and by chemicals used within the cooling system. Section 316(b) of the Clean Water Act requires EPA to issue regulations on the design, and operation of the intake structures to minimize the effects of entrainment ([www.epa.gov/cooling -water-intakes](http://www.epa.gov/cooling-water-intakes)). Facilities that are regulated by the EPA are designed to withdraw at least 2 million gallons per day from nearby waters.

As stated in Otero (2012) report, the average yearly flow of water at the intake of EcoEléctrica's cooling system is ~19.24 million m³. In 2012, Otero (2012) observed the mortality estimates from entrainment were close to 100% mortality of zooplankton and 92% mortality for phytoplankton. However, given the Guayanilla Bay's volume (4.43 x 10⁷m³, Garcia-Sais 2012), daily tidal volume 4.3 x 10⁶ m³ (Garcia 2012), and the daily inflow of EcoEléctrica's facilities (5.45 x 10⁴ m³, see Otero 2012), the effects to the marine animal populations of the cooling water system is minimal.

A more recent zooplankton study of Guayanilla Bay was carried out by Otero and Rodriguez (2013). Otero and Rodriguez (2013) observed a range of abundances of zooplankton, including mero- and holoplankton, within the bay, with abundances ranging from 477 Ind/m³ (shelf-edge station) to 8,688 Ind/m³ to the northwest inside the bay. Calanoid copepods were the most abundant zooplankton found in their samples, contributing 45% of the total zooplankton abundance. Plankton samples collected near the outfall and intake station at EcoEléctrica were characterized by coral planulae, chaetognaths, bivalves, sergestoids, and forams. As for ichthyoplankton, multispecific aggregations have been found near the shelf edge

off of Guayanilla Bay (Garcia et al 1995). During 2012, the entrainment rate for zooplankton, fish eggs, and fish larvae was low, representing <2.2%, 0.8%, and 4.6%, respectively (Otero and Rodriguez 2013).

The cooling water intake system of EcoEléctrica is surrounded by coral reef habitats that could include several coral and fish species listed under the Endangered Species Act (ESA). These ESA coral species include, *Acropora palmata*, *Acropora cervicornis*, *Orbicella annularis*, *Orbicella faveolata*, *Orbicella franksi*, *Dendrogyra cylindrus*, and *Mycetophyllum ferox*. In addition, the Nassau grouper (*Epinephelus striatus*) is listed as threatened under the ESA. The objective of this work is to quantify the abundance of planulae (coral larvae), ichthyoplankton, and fish eggs. Ichthyoplankton were enumerated and identified down to the lowest possible Sub Family and/or taxon based on morphological features. Ichthyoplankton that were less than 3mm were not identified but were counted.

Methods

Coastal Survey Solutions, LLC (hereafter CSS) conducted a series of plankton tows at two stations, Station 12 and close to the cool water intake system (hereafter Intake station), at EcoEléctrica (Figure 1). Plankton samples were collected for two to three consecutive days, approximately six days after the full moon in August (22, 23, 24), September (21, 22, 23) and October (20, 21) 2016, and in 2017, samples were collected in February (13, 14, 15), March (15, 16, 17), August (11, 12, 13), September (11, 12, 13), and October (9, 10, 11). Larvae were collected using a bongo net fitted with two conical 0.5 m i.d. / 2.5 m long / 300 µm mesh plankton nets. Flowmeters were attached to each net, which allowed us to determine the volume of each tow and aided us in calculating the total number of individuals per cubic meter. At each station, two, five-minute tows were taken at the surface during the day (14:00) and night (20:00). Eight samples per

day were collected and a total of 24 samples for three days of sampling per month, with the exception on October 10, 2017. Samples were not collected at night were collected on this day because of sea conditions. The volume of the water sampled ranged from 46.8 to 88.6 cubic meters, with a mean (\pm Standard Error) of 59.5 ± 1.3 cubic meters.

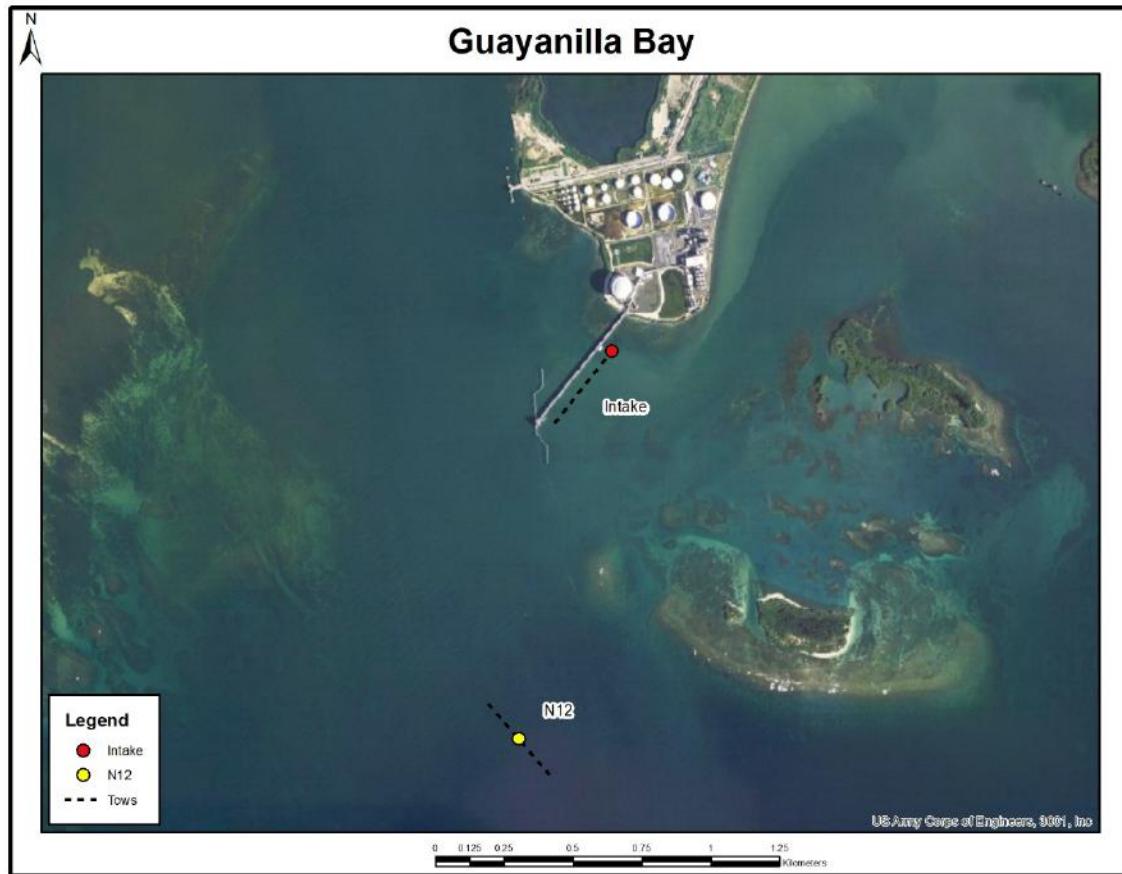


Figure 1. The geographical location of the plankton stations, Station 12 and Intake.

Plankton nets were washed after each tow and the samples were transferred to wide-mouth jars. The samples were immediately preserved with 70-95% denatured ethanol. Samples were taken back to the offices of CSS for further microscopic analysis. Coral planulae and ichthyoplankton were recorded in each sample. Ichthyoplankton were enumerated and identified

down to the lowest possible Sub Family and/or taxon based on morphological features. Ichthyoplankton less than 3mm were not identified but were counted. Given the high abundance, 10 ml aliquots were used to assess the abundance of fish eggs in each plankton sample. Entrainment estimates were calculated as stated in Rodríguez (2015) zooplankton study at EcoEléctrica. Estimates were calculated as:

$$Ezoo = C * Q * M$$

whereas, Ezoo is the estimate of zooplankton entrained (Ind/time), C is the abundance of zooplankton (Ind/volume), and Q represents the mean Cooling Water Intake System (CWIS) flow rate provided by EcoEléctrica (Appendix I) for 2014 ($4.04 \times 10^4 \text{ m}^3$). M is based on Otero (2013) study, a 100% mortality is assumed of all entrained larvae. As stated in Otero (2012), the proportion of plankton entrained (Esig) is the inverse proportion of daily plankton intake into CWIS to estimate of entire Guayanilla Bay plankton abundance. Proportion of entrained plankton was calculated as:

$$Esig = GBzoo / CWISzoo$$

Whereas, GBzoo= (Guayanilla Bay volume $4.43 \times 10^7 \text{ m}^3$ + tidal volume $4.3 \times 10^6 \text{ m}^3$) * (total plankton abundance Ind/m³), and CWISzoo= (daily water used at the CWIS, $5.44 \times 10^4 \text{ m}^3$) * (assumed plankton abundance at intake).

A three-way distance Permutational Analysis of Variance (PERMANOVA) test (Anderson 2001) was performed to examine changes in planulae, ichthyoplankton, fish eggs, and fish assemblages between stations, time of the day sampled (day and night, hereafter time), and sampling events (hereafter months). Time and months sampled were considered random factors, while stations were fixed. PERMANOVA analyses were carried out using either similarity or

dissimilarity matrices. For fish assemblages, PERMANOVA procedure was based on Bray-Curtis similarity measures, while abundance of planulae, ichthyoplankton, fish eggs was based on Euclidean distance measures, given that abundance is a univariate measure. Euclidean distance measures for univariate PERMANOVA analyses produce sums of squares estimates equivalent to a parametric ANOVA (Anderson 2001). SIMPER tests were run to identify which fish family contributed to the differences or similarities between factors.

Results and Discussion

Ichthyoplankton

A total of 7,413 larval fishes, representing 38 fish families and 4 orders were identified from the plankton sampling. An average (\pm Standard Error) of $24.5 \pm 5.62\%$ of the fish sampled were unidentifiable, signifying that they were too small to identify to the lowest taxon (<3mm). A significantly higher mean abundance of ichthyoplankton was observed at the Intake Station (72.4 ± 9.3 Ind/100m³) compared to Station 12 (67.4 ± 9.2 Ind/100m³) (Table 1).

There was a significant interaction in fish larval abundance between the station and time of day the samples were collected (Table 1). More fish larvae were collected at night at the Intake station (Night= 96.0 ± 15.8 Ind/100m³, Day= 49.9 ± 9.4 Ind/100m³), while at Station 12, more fish were collected during the day (Day= 85.9 ± 17.3 Ind/100m³, Night= 47.9 ± 4.2 Ind/100m³).

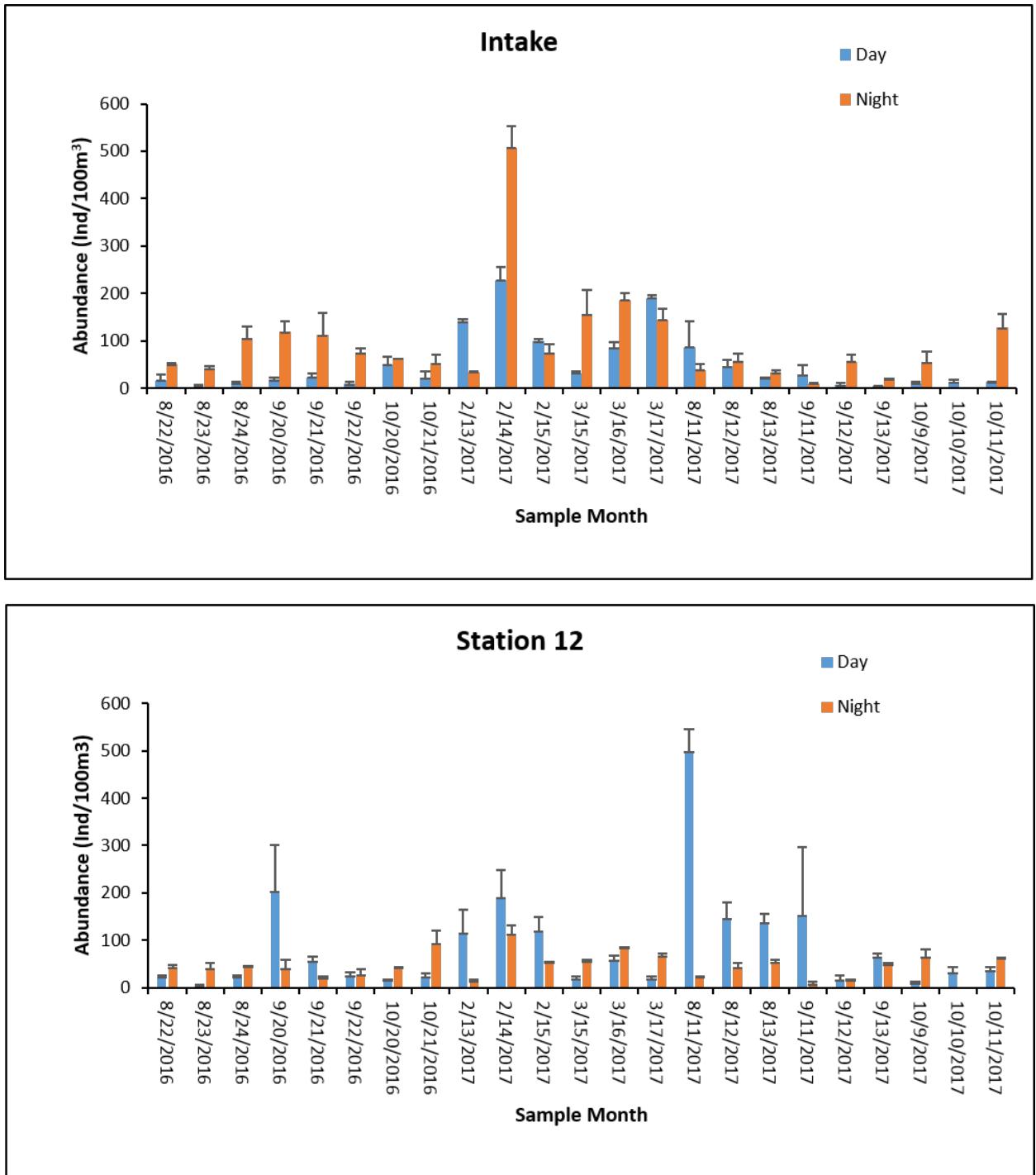


Figure 2. Mean abundance (Ind/100m³) of ichthyoplankton at each site (Station 12 and Intake) during the night and day at the different sampling months in Guayanilla, Puerto Rico. The bars represent standard errors.

Table 1. Results of a three-way Permutational Multivariate Analysis of Variance (PERMANOVA) procedure testing the variations of ichthyoplankton abundance (Ind/100m³) between sites (Si), time of collection (Ti), and sampling months (Mo) in Guayanilla, Puerto Rico.

Factor	df	SS	MS	Pseudo-F	p-value
Si	1	1802.3	1802.3	0.1022	0.999
Ti	1	166.6	166.6	0.0013	0.916
Mo	22	4.88E+05	22216	1.7745	0.09
Si x Ti	1	79328	79328	10.399	0.002
Si x Mo	22	2.54E+05	11579	1.5179	0.161
Ti x Mo	21	2.62E+05	12520	9.0844	0.001
Si x Ti x Mo	21	1.60E+05	7628.3	5.5351	0.001

There was not a significant variation of ichthyoplankton between sampling months. However, a higher abundance of ichthyoplankton was measured during the sampling dates in February and March, compared to the August, September, and October samples.

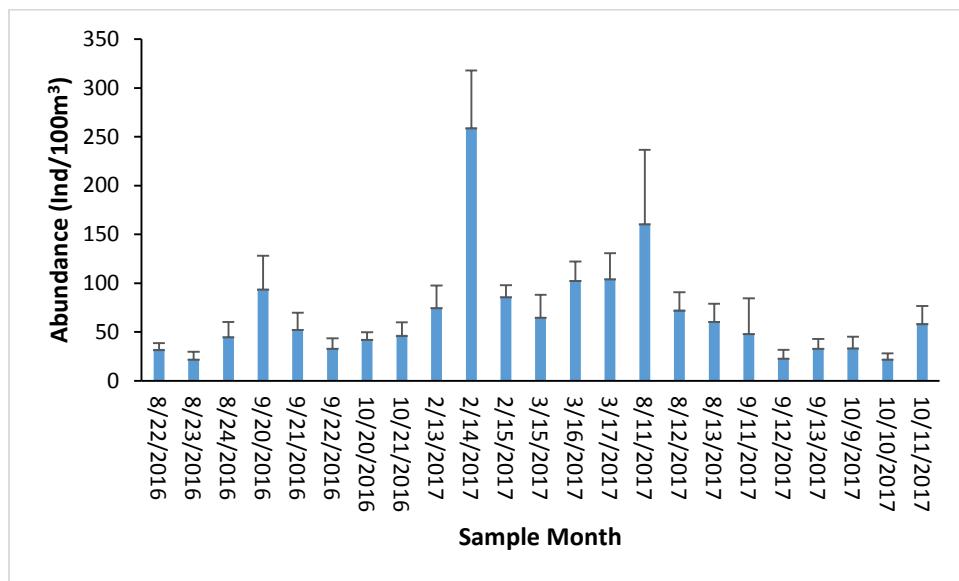


Figure 3. The mean abundance (Ind/100m³) of ichthyoplankton between the sampling months in Guayanilla, Puerto Rico. Bars represent standard errors.

Fish assemblages

The most abundant fish identified during the sampling events were the Pomacentridae with a mean abundance of 18.2 ± 5.0 Ind/100m³, followed by Gobiidae (8.0 ± 0.9 Ind/100m³) and

Gerreidae (4.7 ± 1.4 Ind/100m³) larvae. The fish assemblage varied significantly at the time of day sampled at each station, and at the different sampling events within each time of day sample and station (Table 2). There were no significant differences of fish assemblages between the stations.

Table 2. Results of a three-way Permutational Multivariate Analysis of Variance (PERMANOVA) procedure testing the variations of fish larval assemblage between sites (Si), time of collection (Ti), and sampling months (Mo), in Guayanilla, Puerto Rico.

Factors	df	SS	MS	Pseudo-F	p-value
St	1	14295	14295	1.2393	0.274
Ti	1	27757	27757	7.4983	0.001
Mo	13	67123	5163.3	1.3927	0.028
St x Ti	1	10676	10676	3.4447	0.004
St x Mo	13	43756	3365.8	1.0846	0.309
Ti x Mo	13	48197	3707.5	2.0088	0.001
St x Ti x Mo	13	40342	3103.2	1.6814	0.001

The fish assemblage at Station 12 was more diverse (34 families and orders) compared to the Intake station (29). The tows taken at Station 12 bordered the shelf-edge of Guayanilla, therefore the assemblages contained both reef and oceanic larvae. These findings are analogous with Garcia et al. (2003) study, which observed a higher diversity of ichthyoplankton at shelf-edge and offshore sites in La Parguera. At Station 12, more families and orders contributed to the total fish assemblage, for example the abundance of Pomacentridae larvae contributed 20.3% to the total fish abundance, followed by Gerreidae (11.5%), Gobiidae (9.8%), Clupeidae (8.1%), Haemulidae (4.5%), Serranidae (4.5%), and Sphyraenidae (2.6%) larvae. Serranidae larvae were more common at Station 12 (2.4 Ind/100m³), compared to the Intake station (1.82 Ind/100m³). ESA species, such as the nassau grouper (*Epinephelus striatus*) were not identified during any of the sampling events. Therefore, the Serranidae larvae collected were probably hamlets and/or seabasses such as the red hind, rock hind and coney. At the Intake station, fish assemblages were characterized by Pomacentridae (33.7%), Gobiidae (18.6% contribution), Serranidae (3.6%),

Clupeiformes (3.6%), and Gerreidae (2.9%) larvae (SIMPER, Appendix II and III). Eel larvae (Congridae and Muridae) were only collected at the Intake station.

Intake

Fish assemblage at the Intake station significantly varied between the time of the samples and sampling months (Table 3). The daytime samples were characterized by Gobiidae, Pomacentridae, Gobiidae, and Gerreidae larvae, while the nighttime samples were characterized by Gobiidae, Pomacentridae, and Serranidae larvae (SIMPER, Appendix II). Overall, the typical fish assemblage measured during the samplings months consisted mostly of Gobiidae, Gerreidae, Pomacentridae, Clupeiformes, and Serranidae larvae. A more diverse fish assemblage was observed during March sampling, additional families contributing to the overall assemblage were Serranidae, Holocentridae, Tripterygidae, Tetraodontiformes, and Sphyraenidae larvae. Serranidae larvae were also identified during August sampling.

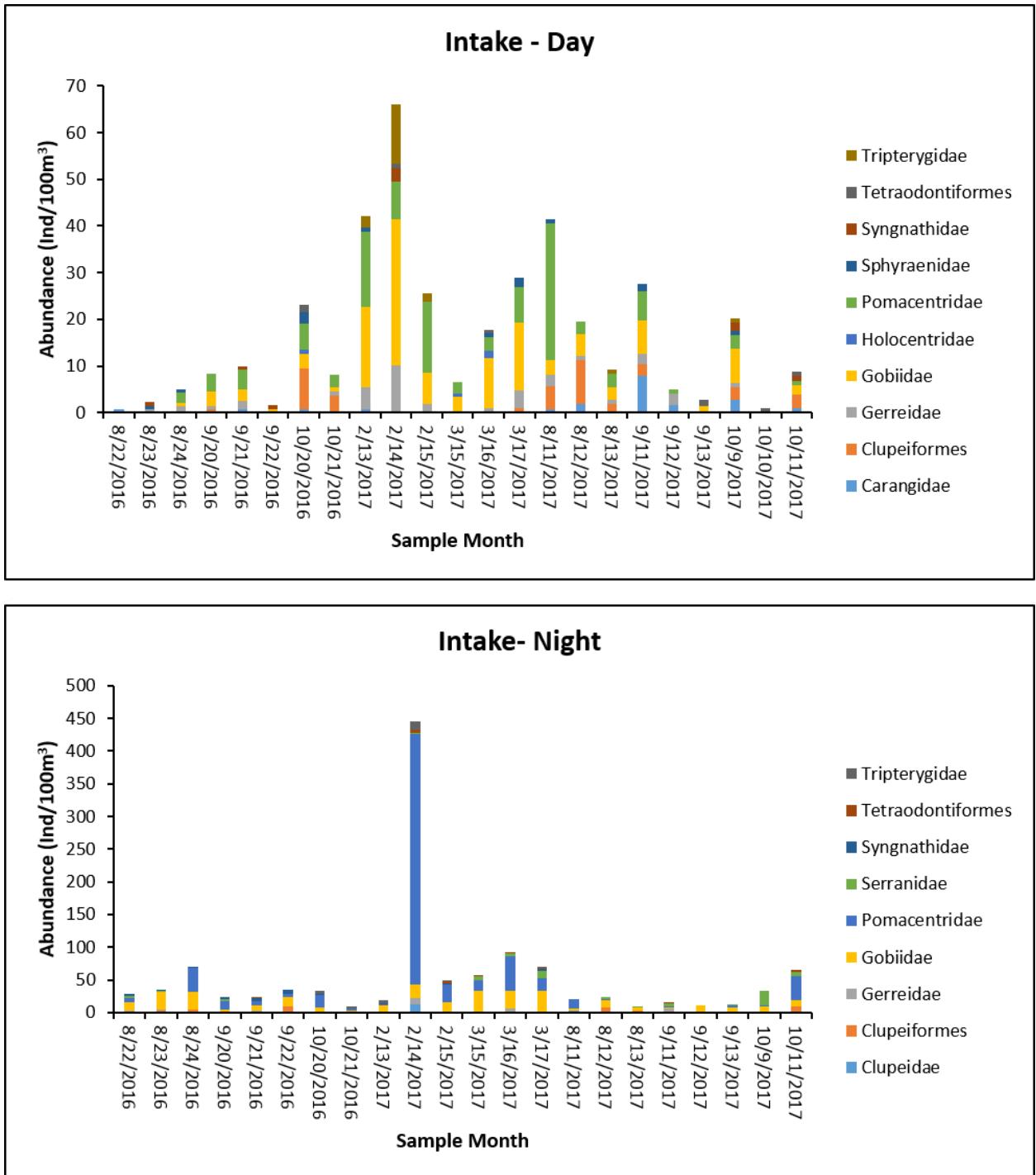


Figure 4. The mean abundance (Ind/100m³) of the most dominant fish families/orders at the Intake station during the sampling months in Guayanilla, Puerto Rico.

Table 3. Results of a three-way Permutational Multivariate Analysis of Variance (PERMANOVA) procedure testing the variations of fish larval composition between the time of collection (Ti) and sampling months (Mo) at the Intake station, Guayanilla, Puerto Rico.

Factors	df	SS	MS	Pseudo-F	p-value
Ti	1	16687	16687	7.8067	0.001
Mo	22	98955	4498	2.1043	0.001
Ti x Mo	21	64436	3068.4	1.4355	0.001

Station 12

Fish assemblage at the Station 12 significantly varied between the time of the samples and the months of sampling (Table 4). The day time samples were characterized by Pomacentridae, Gerreidae, Carangidae, Haemulidae, Gobiidae, Sphyraenidae, Clupeiformes, and Serranidae larvae, while the night samples were characterized by Gobiidae, Pomacentridae, Clupeidae, Serranidae, Clupeiformes, and Haemulidae larvae (SIMPER, Appendix III). Overall, the typical fish assemblage measured during the samplings months consisted of Pomacentridae, Gobiidae, Gerreidae, Carangidae, Haemulidae, Clupeidae, Serranidae, and Clupeiformes larvae. In contrast to the Intake to the Intake station, a more diverse fish assemblage was observed during August and September samplings, additional families contributing to the overall assemblage were Tripterygidae, Carangidae, Clupeiformes, Monacanthidae, Hemiramphidae, Mugilidae, Pomacentridae, Gobiidae, and Sphyraenidae larvae. Serranidae larvae were identified during August and March samplings, their abundance contributing between 3.6% and 32.4% to the total fish assemblage.

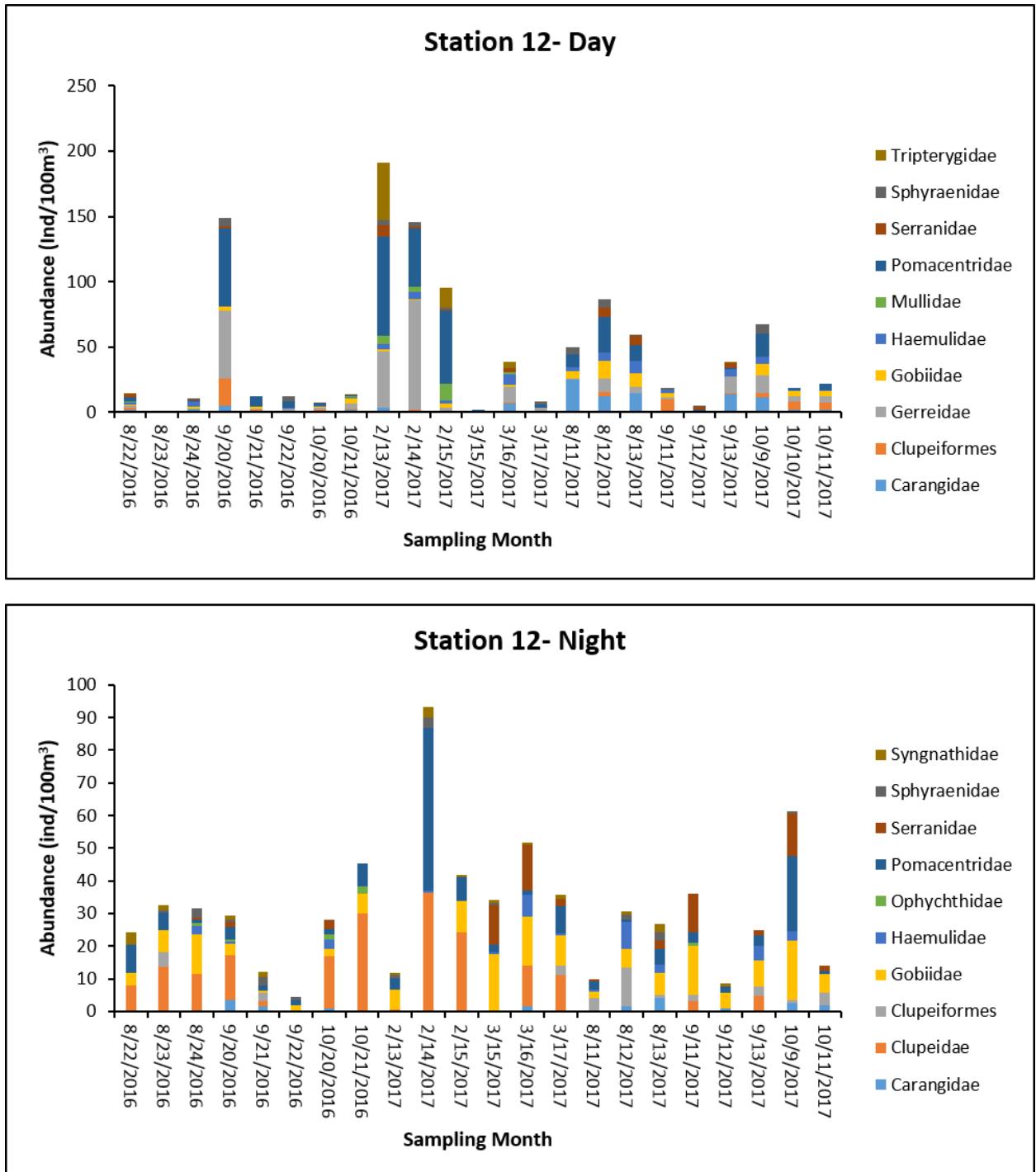


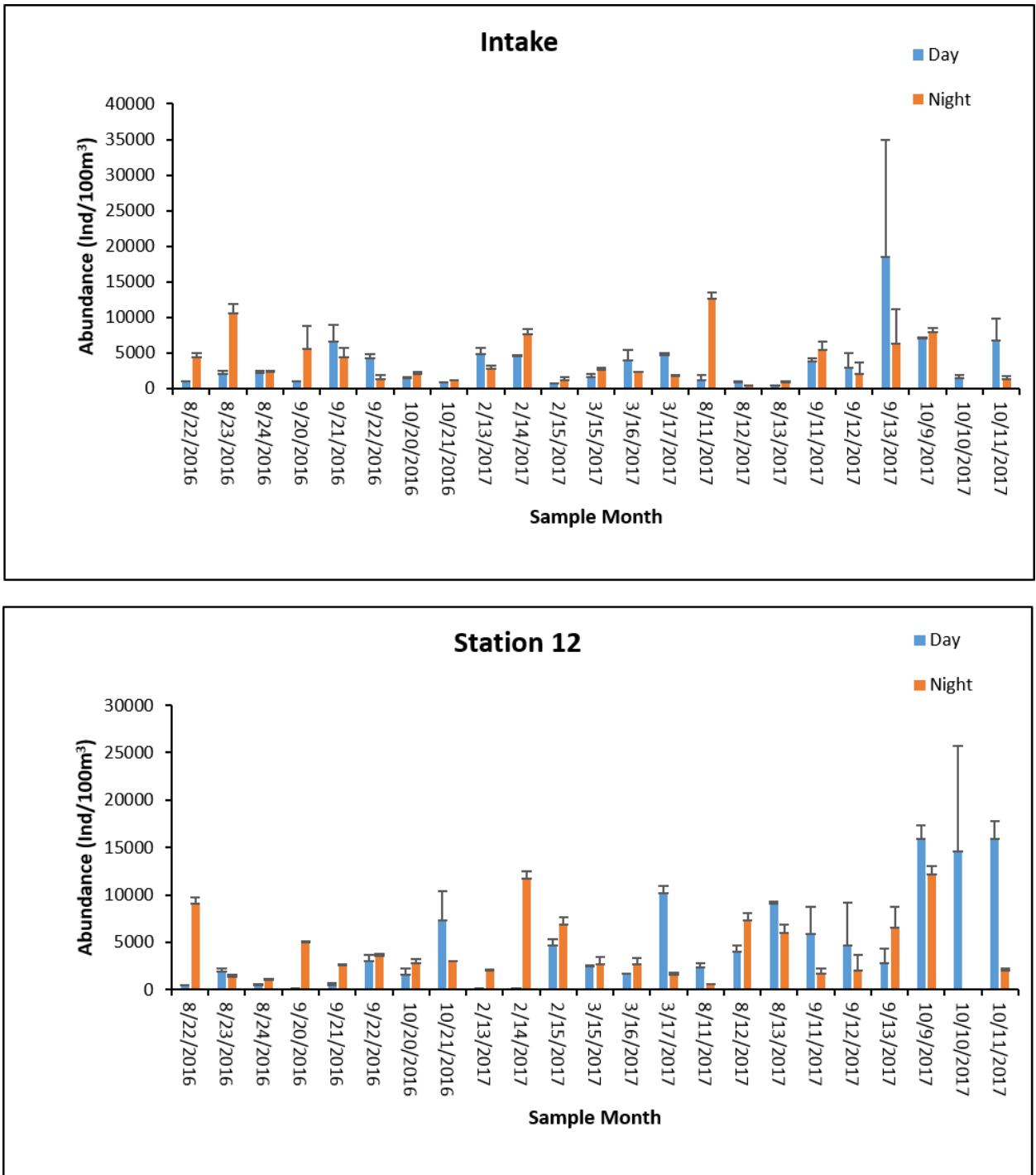
Figure 5. The mean abundance (Ind/100m³) of the most dominant fish families/orders at the Station 12 during the sampling months in Guayanilla, Puerto Rico.

Table 4. Results of a three-way Permutational Multivariate Analysis of Variance (PERMANOVA) procedure testing the variations of fish larval composition between the times of collection (Ti) and sampling months (Mo) at the Station 12, Guayanilla, Puerto Rico.

Factors	df	SS	MS	Pseudo-F	p-value
Ti	1	28352	28352	13.836	0.001
Mo	22	1.01E5	4613.7	2.2515	0.001
Ti x Mo	21	77033	3668.3	1.7901	0.001

Fish eggs

Fish eggs were the most abundant plankton component measured in the samples, with a total count of 24.3×10^5 eggs. Fish egg abundance did not significantly differ between stations, even though egg abundance was slightly greater at Station 12 (4519.8 ± 504.4 Ind/100m³), than at the Intake station (3766.0 ± 478.2 Ind/100m³) (Table 5).



The fish egg abundance was not significantly different between months and time the sample was collected (Table 5). However, as seen in Figure 6 and Table 5, there was a significant interaction of fish egg abundance between the time sampled and months. This interaction occurred at both stations (Table 5). The highest fish egg abundance was recorded during the day time on October 11, 2017 at Station 12, and at the Intake station at day on September 13, 2017 (Fig. 6).

Table 5. Results of a three-way Permutational Multivariate Analysis of Variance (PERMANOVA) procedure testing the variations of fish egg abundance (Ind/100m³) between sites (Si), time of collection (Ti), and sampling months (Mo), in Guayanilla, Puerto Rico.

Factor	df	SS	MS	Pseudo-F	p-value
Si	1	4.55E+07	4.55E+07	1.7813	0.299
Ti	1	5.49E+05	5.49E+05	0.0018	0.912
Mo	22	8.56E+08	3.89E+07	1.3008	0.31
Si x Ti	1	1.02E+06	1.02E+06	0.0049	0.841
Si x Mo	22	8.08E+08	3.67E+07	1.7694	0.100
Ti x Mo	21	6.28E+08	2.99E+07	2.5723	0.003
Si x Ti x Mo	21	4.35E+08	2.08E+07	1.7842	0.032

Planulae (Coral larvae)

Overall, the planulae abundance was lower than that of ichthyoplankton and fish eggs. The total number of planulae collected during the 28 sampling events was 3,479 larvae. Abundance was dependent on the station sampled, the time of day and the month the sample was collected (Table 6). We collected a significantly higher number of planulae at Station 12 (45.2 ± 9.4 Ind/100m³), than at the Intake station (19.2 ± 3.7 Ind/100m³). The average abundance of planulae collected during the day (40.7 ± 8.7 Ind/100m³) was almost double that collected at night (23.3 ± 5.1 Ind/100m³). This trend of greater planulae abundance during the day was detected at both sites.

Table 6. Results of a three-way Permutational Multivariate Analysis of Variance (PERMANOVA) procedure testing the variations of planulae abundance (Ind/100m³) between sites (Si), time of collection (Ti), and sampling months (Mo), in Guayanilla, Puerto Rico.

Factor	df	SS	MS	Pseudo-F	p-value
Si	1	28741	28741	3.7024	0.042
Ti	1	14574	14574	4.4189	0.027
Mo	22	1.59E05	7210	2.1862	0.057
Si x Ti	1	5545.3	5545.3	2.8875	0.096
Si x Mo	22	61252	2784.2	1.4498	0.156
Ti x Mo	21	69257	3298	6.5213	0.001
Si x Ti x Mo	21	40329	190.4	3.7974	0.001

Higher abundance of planulae occurred four and five days after the full moon. In summer/fall 2016, the highest abundance was observed during September 20 (100.4 ± 52.2 Ind/100m³) and 21 (43.8 ± 18.0 Ind/100m³) and in 2017 was observed on October 9 (102.7 ± 11.3 Ind/100m³). In winter/spring, the highest abundance was recorded in February ($13^{\text{th}} = 48.7 \pm 16.9$ Ind/100m³, $14^{\text{th}} = 79.6 \pm 19.2$ Ind/100m³) (Fig. 7). The abundance of planulae during night and day sampling significantly varied between the months (Fig. 7), and this occurred at both stations (Table 6). At the Intake station the abundance ranged from 0 larvae collected during the day on September 13, 2017 to 97.1 ± 13.6 Ind/100m³ collected at night on October 9, 2017 to 88.2 ± 0.9 Ind/100m³. For Station 12, again no larvae were collected on August 23, 2016, but the highest abundance was recorded during the day on September 20th, 2016 (324.4 ± 0.6 Ind/100m³).

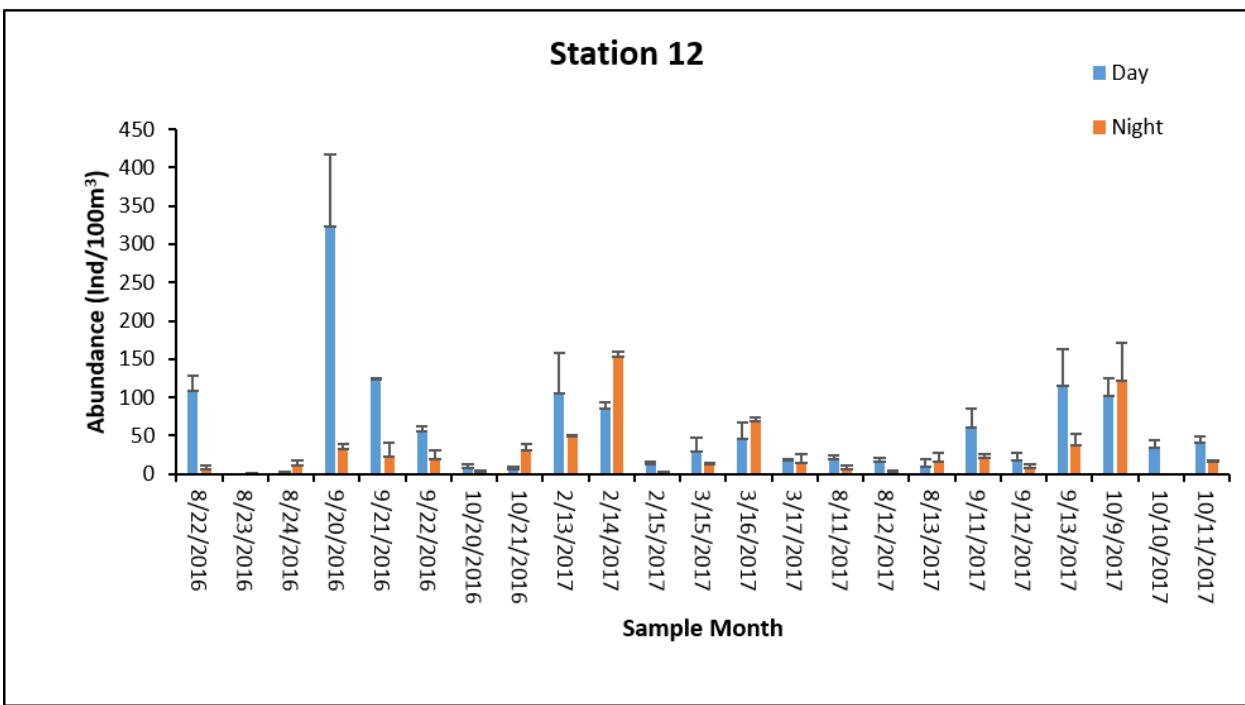
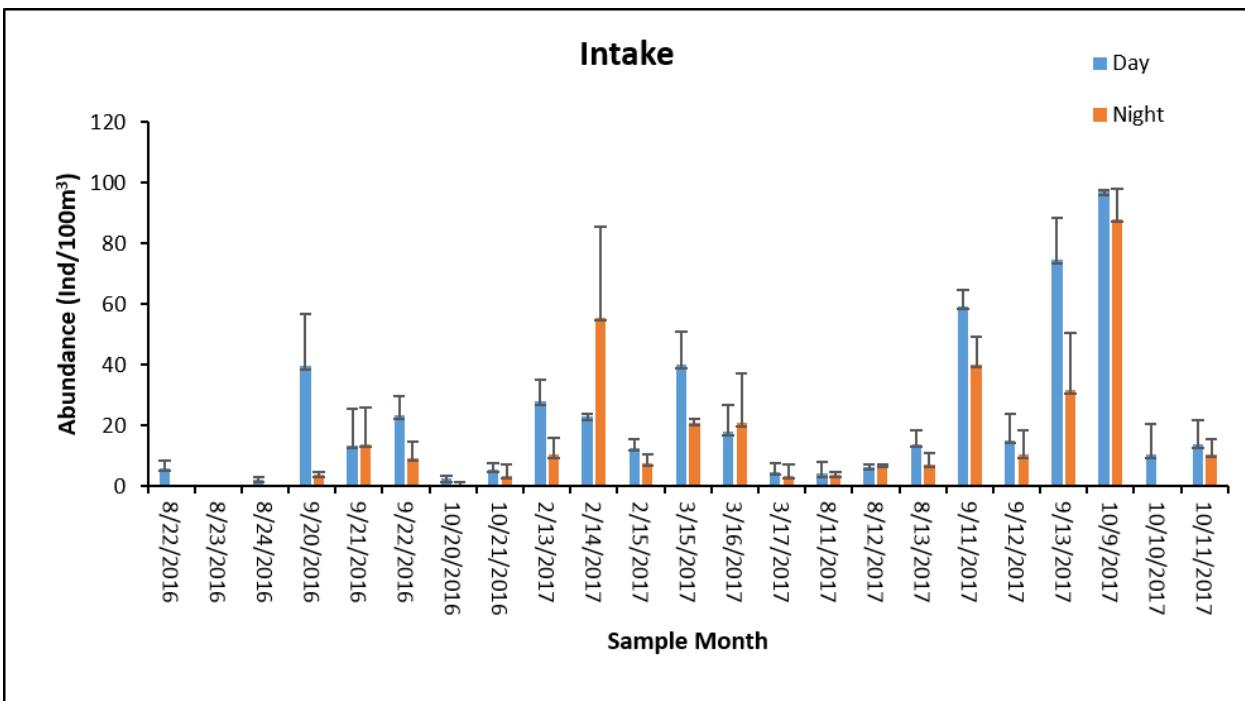


Figure 7. Mean abundance (Ind/100m³) of planulae at each site (Station 12 and Intake) during the night and day at the different sampling months in Guayanilla, Puerto Rico. The bars represent standard errors.

Entrainment

The average amount of ichthyoplankton collected during the sample period was 69.9 ± 8.5 Ind/100m³, with 52% of the total collected at the Intake station. The proportion of the ichthyoplankton entrained in the CWIS was low, ranged from 0.006 to 0.07%. Proportion of entrained larvae was calculated for the most common fish families, Gerreidae and Pomacentridae. Proportions of entrainment being relatively low for both families, 0.007% and 0.03%, respectively. In addition, entrainment estimates of Serranidae larvae was 0.02%. The proportion of fish eggs and planulae entrained was 0.04% and 0.02%, respectively. In conclusion, the amount of larvae entrained in relation to the total abundance in the bay was overall low (<1%). These values are similar to entrainment values collected by Otero (2012) and Rodriguez (2015).

Conclusions

- A total of 7,413 larval fishes, representing 38 fish families and 4 orders were identified from the plankton sampling. Approximately 25% of the ichthyoplankton were too small for identification.
- The average amount of ichthyoplankton collected during the sample period was 69.9 ± 8.5 Ind/100m³, with 52% of the total collected at the Intake station. These values were greater than ichthyoplankton abundances reported for Otero (2012) and Rodriguez (2015).
- There was a significant interaction in fish larval abundance between the station and time of day the samples were collected.
- More fish larvae were collected at night at the Intake station, while at Station 12, more fish were collected during the day.
- Fish larval abundance varied between the days sampled.
- Larval composition of fish was more diverse at Station 12 than at the Intake station. This could be due to the location of Station 12, which is close to the shelf edge. Composition of Station 12 encompassed both reef-dominant and oceanic larvae.
- The most abundant fish families collected during this study were Pomacentridae, Gobiidae, and Gerreidae.
- Serranidae larvae were collected mainly during the winter/spring.
- No Nassau grouper larvae were collected during this study.
- Fish egg abundance was greater than the total ichthyoplankton and planulae abundance combined, with a total abundance of 24.3×10^5 eggs counted.
- Coral larval abundance was low compared to fish larval and fish egg abundance. Planulae were mostly collected during the day at Station 12.

- The proportion of entrained larvae was low during this study (<1%).
- Only 0.05% of ichthyoplankton was estimated to be entrained in the CWIS system. The proportions were even lower for planulae (0.02%) and fish eggs (0.05%).

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Appendices

Appendix I: The average daily flow rate (m^3) for the Cooling Water Intake System at Ecoeléctrica during 2016 and 2017. Data provided by Ecoeléctrica.

2016												
Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
4.62E+04	4.49E+04	4.11E+04	4.04E+04	4.17E+04	3.74E+04	4.12E+04	3.94E+04	3.98E+04	4.30E+04	4.09E+04	4.18E+04	

2017		
Jan	Feb	Mar
3.60E+04	3.67E+04	3.55E+04

Appendix II: Similarity Percentages (SIMPER) of fish larval assemblage between sites (Sites), time of day (Time) and day (Month) the sample was collected at the Intake station in Guayanilla, Puerto Rico.

Intake					
Station					
Average similarity: 23.42					
Species	Av.Abund	Av.Sim	Sim/SD	Contrib%	Cum.%
Gobiidae	9.34	11.38	0.93	48.57	48.57
Pomacentridae	16.93	7.2	0.67	30.75	79.32
Clupeiformes	1.8	1.1	0.25	4.69	84.01
Gerreidae	1.46	1.04	0.29	4.46	88.47
Serranidae	1.82	0.64	0.25	2.75	91.22
Time					
Group Day					
Average similarity: 20.58					
Species	Av.Abund	Av.Sim	Sim/SD	Contrib%	Cum.%
Gobiidae	5.37	7.38	0.74	35.84	35.84
Pomacentridae	5.08	6.52	0.63	31.68	67.52
Gerreidae	1.61	2.55	0.43	12.37	79.88
Clupeiformes	1.66	1.56	0.27	7.59	87.47
Carangidae	0.83	0.57	0.17	2.79	90.27
Group Night					
Average similarity: 31.09					
Species	Av.Abund	Av.Sim	Sim/SD	Contrib%	Cum.%
Gobiidae	13.5	17.65	1.31	56.77	56.77
Pomacentridae	29.32	8.71	0.73	28.03	84.8

Serranidae	3.37	1.82	0.44	5.84	90.64
Groups Day & Night					
Average dissimilarity =					
78.71					
Species	Group Day Av.Abund	Group Night Av.Abund	Av.Diss	Diss/SD	Contrib% Cum.%
Pomacentridae	5.08	29.32	22.28	1.02	28.31 28.31
Gobiidae	5.37	13.5	21.32	1.26	27.09 55.4
Serranidae	0.33	3.37	5.88	0.53	7.47 62.86
Clupeiformes	1.66	1.95	5.77	0.66	7.33 70.19
Gerreidae	1.61	1.31	3.53	0.71	4.49 74.68
Syngnathidae	0.35	1.25	2.99	0.56	3.8 78.48
Tripterygidae	0.83	1.22	2.47	0.4	3.13 81.62
Achiridae	0.27	0.75	2.22	0.45	2.82 84.44
Sphyraenidae	0.47	0.64	1.69	0.64	2.14 86.58
Carangidae	0.83	0.22	1.64	0.52	2.09 88.67
Tetraodontiformes	0.28	0.9	1.63	0.55	2.07 90.74
Sampling month					
Group 8/22/2016					
Average similarity: 8.72					
Species	Av.Abund	Av.Sim	Sim/SD	Contrib%	Cum.%
Gobiidae	6.34	5.59	0.41	64.1	64.1
Serranidae	1.79	1.12	0.41	12.82	76.92
Clupeiformes	0.92	1.01	0.41	11.54	88.46
Syngnathidae	1.89	1.01	0.41	11.54	100
Group 8/23/2016					
Average similarity: 12.05					
Species	Av.Abund	Av.Sim	Sim/SD	Contrib%	Cum.%
Gobiidae	13.42	9.28	0.41	76.97	76.97
Gerreidae	0.8	1.39	0.41	11.52	88.48
Syngnathidae	1.66	1.39	0.41	11.52	100
Group 8/24/2016					
Average similarity: 18.46					
Species	Av.Abund	Av.Sim	Sim/SD	Contrib%	Cum.%
Pomacentridae	19.23	6.95	0.82	37.66	37.66
Gobiidae	13.49	6.8	0.56	36.86	74.53
Gerreidae	0.73	4.7	0.41	25.47	100

Group 9/20/2016
Average similarity: 45.30

Species	Av.Abund	Av.Sim	Sim/SD	Contrib%	Cum.%
Pomacentridae	8.64	26.22	1.68	57.88	57.88
Gobiidae	3.81	15.88	2.32	35.06	92.94

Group 9/21/2016
Average similarity: 43.83

Species	Av.Abund	Av.Sim	Sim/SD	Contrib%	Cum.%
Pomacentridae	5.08	17.46	2.44	39.85	39.85
Gobiidae	5.22	11.87	3.63	27.09	66.93
Syngnathidae	3.41	6.71	0.74	15.31	82.24
Gerreidae	1.32	6.63	0.89	15.12	97.36

Group 9/22/2016
Average similarity: 13.42

Species	Av.Abund	Av.Sim	Sim/SD	Contrib%	Cum.%
Gobiidae	7.4	7.09	0.71	52.81	52.81
Syngnathidae	3.25	3.68	0.79	27.44	80.25
Pomacentridae	2.36	1.63	0.41	12.11	92.36

Group 10/20/2016
Average similarity: 36.15

Species	Av.Abund	Av.Sim	Sim/SD	Contrib%	Cum.%
Pomacentridae	12.09	17.94	1.24	49.63	49.63
Gobiidae	4.71	9.97	3.92	27.58	77.21
Clupeiformes	4.37	5.7	0.41	15.77	92.98

Group 10/21/2016
Average similarity: 27.66

Species	Av.Abund	Av.Sim	Sim/SD	Contrib%	Cum.%
Pomacentridae	3.12	23.48	2.1	84.87	84.87
Gobiidae	1.79	4.19	0.41	15.13	100

Group 2/13/2017
Average similarity: 42.23

Species	Av.Abund	Av.Sim	Sim/SD	Contrib%	Cum.%
Gobiidae	14.46	29.96	3.31	70.95	70.95
Pomacentridae	8.79	7.92	0.75	18.76	89.71

Tripterygidae	3.18	2.78	0.41	6.58	96.29
Group 2/14/2017					
Average similarity: 34.68					
Species	Av.Abund	Av.Sim	Sim/SD	Contrib%	Cum.%
Pomacentridae	195.6	16.98	0.54	48.95	48.95
Gobiidae	25.64	9.86	0.95	28.43	77.38
Gerreidae	10.55	3.42	0.86	9.87	87.26
Tripterygidae	12.97	3.31	1.51	9.55	96.81
Group 2/15/2017					
Average similarity: 55.44					
Species	Av.Abund	Av.Sim	Sim/SD	Contrib%	Cum.%
Pomacentridae	21.27	33.4	3.5	60.25	60.25
Gobiidae	10.67	16.91	3.79	30.5	90.75
Group 3/15/2017					
Average similarity: 28.90					
Species	Av.Abund	Av.Sim	Sim/SD	Contrib%	Cum.%
Gobiidae	18.62	14.96	0.73	51.79	51.79
Pomacentridae	9	10.13	1.92	35.04	86.82
Serranidae	3.24	2.93	0.84	10.15	96.97
Group 3/16/2017					
Average similarity: 33.02					
Species	Av.Abund	Av.Sim	Sim/SD	Contrib%	Cum.%
Gobiidae	18.78	14.89	1.3	45.09	45.09
Pomacentridae	27.6	11.47	0.57	34.72	79.81
Gerreidae	3.54	1.65	0.87	5	84.81
Tetraodontiformes	1.47	1.51	0.87	4.58	89.39
Holocentridae	0.89	1.5	0.41	4.53	93.92
Group 3/17/2017					
Average similarity: 57.24					
Species	Av.Abund	Av.Sim	Sim/SD	Contrib%	Cum.%
Gobiidae	23.43	29.9	4.21	52.24	52.24
Pomacentridae	12.93	15.9	2.14	27.78	80.02
Serranidae	6.66	4.07	0.64	7.11	87.13
Sphyraenidae	2.06	3.67	2.1	6.42	93.55

Group 8/11/2017
Average similarity: 35.25

Species	Av.Abund	Av.Sim	Sim/SD	Contrib%	Cum.%
Pomacentridae	21.96	24.92	1.91	70.69	70.69
Gobiidae	3.67	7.39	1.88	20.97	91.66

Group 8/12/2017
Average similarity: 45.22

Species	Av.Abund	Av.Sim	Sim/SD	Contrib%	Cum.%
Clupeiformes	8.63	16.62	1.39	36.75	36.75
Gobiidae	7.65	15.58	1.85	34.46	71.21
Carangidae	1.38	3.82	0.88	8.45	79.66
Pomacentridae	2.74	3.34	0.85	7.38	87.05
Achiridae	3.99	3.31	0.41	7.31	94.36

Group 8/13/2017
Average similarity: 28.86

Species	Av.Abund	Av.Sim	Sim/SD	Contrib%	Cum.%
Gobiidae	3.61	17.23	3.4	59.69	59.69
Clupeiformes	2.26	4.52	0.41	15.65	75.33
Pomacentridae	1.38	2.57	0.41	8.9	84.23
Serranidae	1.34	2.38	0.41	8.23	92.46

Group 9/11/2017
Average similarity: 20.61

Species	Av.Abund	Av.Sim	Sim/SD	Contrib%	Cum.%
Serranidae	4.13	8.39	0.69	40.72	40.72
Gobiidae	4.63	7.18	1.52	34.83	75.55
Gerreidae	4.12	1.3	0.41	6.3	81.84
Pomacentridae	4.14	1.07	0.41	5.2	87.04
Blenniidae	4.04	0.54	0.41	2.6	89.64
Carangidae	4.44	0.54	0.41	2.6	92.24

Group 9/12/2017
Average similarity: 24.83

Species	Av.Abund	Av.Sim	Sim/SD	Contrib%	Cum.%
Carangidae	1.41	9.46	0.73	38.11	38.11
Gobiidae	5.29	7.73	0.41	31.15	69.26
Gerreidae	1.24	5.7	0.41	22.95	92.21

Group 9/13/2017
Average similarity: 16.19

Species	Av.Abund	Av.Sim	Sim/SD	Contrib%	Cum.%
Gobiidae	4.15	16.19	0.85	100	100

Group 10/9/2017
Average similarity: 26.75

Species	Av.Abund	Av.Sim	Sim/SD	Contrib%	Cum.%
Gobiidae	7.65	12.76	2.04	47.7	47.7
Clupeiformes	2.23	7.56	1.32	28.27	75.97
Achiriidae	0.92	3.02	0.41	11.28	87.25
Pomacentridae	1.77	2.32	0.8	8.67	95.92

Group 10/10/2017
Average similarity: 66.43

Species	Av.Abund	Av.Sim	Sim/SD	Contrib%	Cum.%
Achiriidae	1.87	66.43	#####	100	100

Group 10/11/2017
Average similarity: 11.94

Species	Av.Abund	Av.Sim	Sim/SD	Contrib%	Cum.%
Gobiidae	5.82	3.95	0.87	33.1	33.1
Clupeiformes	5.35	2.59	0.41	21.66	54.76
Achiriidae	2.89	2.23	0.75	18.66	73.42
Pomacentridae	18.41	2.19	0.86	18.32	91.73

Groups 8/22/2016 &
8/23/2016

Average dissimilarity =
85.33

Species	Group		Av.Diss	Diss/SD	Contrib%	Cum.%
	8/22/2016	8/23/2016				
Gobiidae	6.34	13.42	33.11	1.22	38.8	38.8
Syngnathidae	1.89	1.66	9.92	0.88	11.63	50.43
Sphyraenidae	0	0.37	9.9	0.37	11.6	62.03
Pomacentridae	3.05	0	5.73	0.53	6.71	68.74
Carangidae	0.41	0	5.52	0.39	6.47	75.21
Gerreidae	0.44	0.8	5.33	0.56	6.25	81.45

Serranidae	1.79	0.87	4.65	0.99	5.45	86.91
Achiriidae	0	0.37	4.21	0.43	4.93	91.84
Groups 8/22/2016 & 8/24/2016						
Average dissimilarity = 85.91						
	Group 8/22/2016	Group 8/24/2016				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Pomacentridae	3.05	19.23	29.68	1.21	34.54	34.54
Gobiidae	6.34	13.49	26.75	1.57	31.14	65.69
Gerreidae	0.44	0.73	7.43	0.66	8.65	74.33
Syngnathidae	1.89	0.5	4.92	0.64	5.73	80.06
Sphyraenidae	0	0.37	4.21	0.43	4.9	84.96
Clupeiformes	0.92	2.68	3.97	1.03	4.62	89.58
Serranidae	1.79	0	3.46	0.78	4.03	93.61
Groups 8/23/2016 & 8/24/2016						
Average dissimilarity = 78.24						
	Group 8/23/2016	Group 8/24/2016				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Gobiidae	13.42	13.49	29.61	1.18	37.85	37.85
Pomacentridae	0	19.23	25.28	1.11	32.31	70.16
Syngnathidae	1.66	0.5	4.9	0.78	6.26	76.42
Gerreidae	0.8	0.73	3.84	0.52	4.9	81.33
Clupeiformes	1.3	2.68	3.73	0.8	4.77	86.1
Sphyraenidae	0.37	0.37	3.11	0.5	3.97	90.07
Groups 8/22/2016 & 9/20/2016						
Average dissimilarity = 78.60						
	Group 8/22/2016	Group 9/20/2016				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Pomacentridae	3.05	8.64	31.68	1.53	40.31	40.31

Gobiidae	6.34	3.81	22.88	2.31	29.11	69.41
Syngnathidae	1.89	1.12	6.58	0.94	8.38	77.79
Serranidae	1.79	1.51	6.2	1.17	7.89	85.68
Clupeiformes	0.92	0.37	4.48	0.61	5.7	91.38

Groups 8/23/2016 &
9/20/2016

Average dissimilarity =
86.68

	Group 8/23/2016	Group 9/20/2016				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Gobiidae	13.42	3.81	32.81	2.11	37.85	37.85
Pomacentridae	0	8.64	28.24	1.53	32.58	70.43
Syngnathidae	1.66	1.12	5.68	1.09	6.56	76.99
Serranidae	0.87	1.51	4.51	0.91	5.21	82.2
Clupeiformes	1.3	0.37	4.44	0.72	5.13	87.33
Gerreidae	0.8	0.37	3.41	0.65	3.94	91.26

Groups 8/24/2016 &
9/20/2016

Average dissimilarity =
68.24

	Group 8/24/2016	Group 9/20/2016				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Pomacentridae	19.23	8.64	29.34	1.67	43	43
Gobiidae	13.49	3.81	21.57	1.87	31.62	74.61
Clupeiformes	2.68	0.37	4.07	0.77	5.96	80.57
Serranidae	0	1.51	3.58	0.78	5.25	85.82
Syngnathidae	0.5	1.12	2.84	0.83	4.16	89.98
Gerreidae	0.73	0.37	2.77	0.82	4.05	94.03

Groups 8/22/2016 &
9/21/2016

Average dissimilarity =
77.80

	Group 8/22/2016	Group 9/21/2016				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%

Gobiidae	6.34	5.22	22.81	2.02	29.31	29.31
Pomacentridae	3.05	5.08	21.14	1.9	27.17	56.48
Syngnathidae	1.89	3.41	10.85	0.99	13.95	70.43
Gerreidae	0.44	1.32	7.54	0.79	9.68	80.11
Carangidae	0.41	0.92	4.2	0.63	5.4	85.51
Serranidae	1.79	0	3.81	0.87	4.89	90.4

Groups 8/23/2016 &
9/21/2016

Average dissimilarity =
80.65

	Group 8/23/2016	Group 9/21/2016				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Gobiidae	13.42	5.22	31.59	1.82	39.16	39.16
Pomacentridae	0	5.08	16.89	1.62	20.94	60.11
Syngnathidae	1.66	3.41	9.51	1.1	11.79	71.89
Gerreidae	0.8	1.32	4.19	0.65	5.2	77.09
Clupeiformes	1.3	0.99	3.6	0.76	4.46	81.55
Sphyraenidae	0.37	0	2.8	0.44	3.47	85.02
Carangidae	0	0.92	2.61	0.79	3.24	88.26
Achiriidae	0.37	0	2.13	0.47	2.65	90.91

Groups 8/24/2016 &
9/21/2016

Average dissimilarity =
66.67

	Group 8/24/2016	Group 9/21/2016				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Pomacentridae	19.23	5.08	23.09	1.34	34.63	34.63
Gobiidae	13.49	5.22	20.92	1.54	31.38	66.02
Syngnathidae	0.5	3.41	7.99	0.94	11.98	77.99
Clupeiformes	2.68	0.99	3.66	0.81	5.49	83.49
Carangidae	0	0.92	2.23	0.75	3.35	86.84
Sphyraenidae	0.37	0	2.14	0.47	3.21	90.05

Groups 9/20/2016 &
9/21/2016

Average dissimilarity =
53.90

	Group 9/20/2016	Group 9/21/2016				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Pomacentridae	8.64	5.08	17.47	1.3	32.41	32.41
Gobiidae	3.81	5.22	10.87	1.24	20.17	52.58
Syngnathidae	1.12	3.41	8.71	1.22	16.16	68.74
Serranidae	1.51	0	3.91	0.91	7.26	75.99
Gerreidae	0.37	1.32	3.81	1.29	7.08	83.07
Clupeiformes	0.37	0.99	3.52	0.79	6.53	89.6
Carangidae	0	0.92	2.49	0.89	4.62	94.21
Groups 8/22/2016 & 9/22/2016						
Average dissimilarity = 83.50						
	Group 8/22/2016	Group 9/22/2016				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Gobiidae	6.34	7.4	28.45	1.16	34.07	34.07
Syngnathidae	1.89	3.25	13.05	0.93	15.62	49.7
Haemulidae	0	1.37	11.63	0.44	13.93	63.62
Clupeiformes	0.92	4.79	9.38	0.74	11.24	74.86
Pomacentridae	3.05	2.36	9.31	0.94	11.15	86.01
Carangidae	0.41	0	5.88	0.4	7.04	93.06
Groups 8/23/2016 & 9/22/2016						
Average dissimilarity = 82.23						
	Group 8/23/2016	Group 9/22/2016				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Gobiidae	13.42	7.4	34.42	1.27	41.86	41.86
Syngnathidae	1.66	3.25	9.64	1	11.72	53.58
Clupeiformes	1.3	4.79	8.65	0.69	10.52	64.1
Haemulidae	0	1.37	6.92	0.5	8.42	72.52
Sphyraenidae	0.37	0	5.53	0.4	6.72	79.24
Pomacentridae	0	2.36	4.6	0.87	5.6	84.84
Gerreidae	0.8	0	4.2	0.58	5.11	89.95
Achiridae	0.37	0.48	3.61	0.49	4.39	94.35

Groups 8/24/2016 &
9/22/2016

Average dissimilarity =
81.45

	Group 8/24/2016	Group 9/22/2016				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Pomacentridae	19.23	2.36	25	1.09	30.69	30.69
Gobiidae	13.49	7.4	24.96	1.2	30.64	61.34
Clupeiformes	2.68	4.79	7.67	0.65	9.42	70.76
Syngnathidae	0.5	3.25	6.78	0.94	8.33	79.09
Gerreidae	0.73	0	5.92	0.69	7.27	86.36
Haemulidae	0	1.37	4.69	0.57	5.76	92.12

Groups 9/20/2016 &
9/22/2016

Average dissimilarity =
76.18

	Group 9/20/2016	Group 9/22/2016				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Pomacentridae	8.64	2.36	26.39	1.29	34.63	34.63
Gobiidae	3.81	7.4	20.7	1.36	27.16	61.8
Clupeiformes	0.37	4.79	9.58	0.76	12.58	74.38
Syngnathidae	1.12	3.25	7.3	1.22	9.59	83.96
Haemulidae	0	1.37	4.44	0.73	5.83	89.8
Serranidae	1.51	0.48	4.34	0.87	5.69	95.49

Groups 9/21/2016 &
9/22/2016

Average dissimilarity =
73.30

	Group 9/21/2016	Group 9/22/2016				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Gobiidae	5.22	7.4	20.22	1.19	27.58	27.58
Pomacentridae	5.08	2.36	15.16	1.23	20.68	48.26
Syngnathidae	3.41	3.25	10.81	1.27	14.74	63
Clupeiformes	0.99	4.79	8.54	0.71	11.65	74.65
Gerreidae	1.32	0	6.65	0.92	9.07	83.72

Haemulidae	0	1.37	4.44	0.67	6.06	89.78
Carangidae	0.92	0	2.68	0.79	3.66	93.44

Groups 8/22/2016 &
10/20/2016

Average dissimilarity =
83.29

	Group 8/22/2016	Group 10/20/2016
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Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Pomacentridae	3.05	12.09	25.79	1.45	30.96	30.96
Gobiidae	6.34	4.71	14.45	2.61	17.35	48.31
Clupeiformes	0.92	4.37	13.03	0.9	15.65	63.96
Syngnathidae	1.89	0.83	4.23	0.8	5.07	69.04
Sphyraenidae	0	1.6	4.21	1.01	5.05	74.09
Tripterygidae	0	2.48	3.75	0.54	4.5	78.59
Clupeidae	0	0.95	3.44	0.51	4.13	82.71
Congridae	0	0.95	3.44	0.51	4.13	86.84
Serranidae	1.79	0	3.01	0.86	3.61	90.45

Groups 8/23/2016 &
10/20/2016

Average dissimilarity =
88.55

	Group 8/23/2016	Group 10/20/2016
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Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Pomacentridae	0	12.09	24.57	1.5	27.75	27.75
Gobiidae	13.42	4.71	23.67	1.73	26.73	54.48
Clupeiformes	1.3	4.37	11.68	0.85	13.19	67.67
Syngnathidae	1.66	0.83	3.78	1.01	4.27	71.94
Tripterygidae	0	2.48	3.51	0.54	3.97	75.91
Sphyraenidae	0.37	1.6	3.35	1.04	3.78	79.69
Clupeidae	0.43	0.95	3.33	0.57	3.77	83.45
Congridae	0	0.95	3.03	0.5	3.42	86.88
Tetraodontiformes	0	0.78	2.13	0.51	2.41	89.28
Gerreidae	0.8	0	1.94	0.86	2.19	91.47

Groups 8/24/2016 &
10/20/2016

Average dissimilarity =
73.82

	Group 8/24/2016	Group 10/20/2016				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Pomacentridae	19.23	12.09	25.05	1.51	33.94	33.94
Gobiidae	13.49	4.71	16.59	1.79	22.48	56.42
Clupeiformes	2.68	4.37	10.48	0.82	14.2	70.62
Tripterygidae	0	2.48	3.14	0.52	4.25	74.87
Sphyraenidae	0.37	1.6	2.88	0.95	3.9	78.77
Clupeidae	0	0.95	2.58	0.47	3.5	82.27
Congridae	0	0.95	2.58	0.47	3.5	85.77
Gerreidae	0.73	0	2.32	0.9	3.15	88.92
Tetraodontiformes	0	0.78	1.84	0.48	2.49	91.4

Groups 9/20/2016 &
10/20/2016

Average dissimilarity =
60.96

	Group 9/20/2016	Group 10/20/2016				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Pomacentridae	8.64	12.09	18.3	1.5	30.02	30.02
Clupeiformes	0.37	4.37	11.37	1.02	18.65	48.67
Gobiidae	3.81	4.71	5.68	1.62	9.31	57.99
Sphyraenidae	0	1.6	3.72	1.13	6.1	64.08
Tripterygidae	0	2.48	3.57	0.55	5.85	69.93
Serranidae	1.51	0	2.98	0.93	4.89	74.82
Clupeidae	0	0.95	2.88	0.54	4.72	79.54
Congridae	0	0.95	2.88	0.54	4.72	84.27
Syngnathidae	1.12	0.83	2.66	1.02	4.36	88.63
Tetraodontiformes	0	0.78	2.07	0.54	3.39	92.02

Groups 9/21/2016 &
10/20/2016

Average dissimilarity =
65.56

	Group 9/21/2016	Group 10/20/2016				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Pomacentridae	5.08	12.09	16.68	1.25	25.44	25.44
Clupeiformes	0.99	4.37	11.02	0.94	16.81	42.25

Gobiidae	5.22	4.71	7.74	1.11	11.8	54.05
Syngnathidae	3.41	0.83	6.55	1.21	10	64.05
Sphyraenidae	0	1.6	3.61	1.11	5.51	69.55
Tripterygidae	0	2.48	3.49	0.55	5.32	74.88
Gerreidae	1.32	0	3.37	1.47	5.14	80.02
Congridae	0.5	0.95	3.22	0.67	4.92	84.94
Clupeidae	0	0.95	2.79	0.53	4.26	89.19
Tetraodontiformes	0.5	0.78	2.51	0.72	3.82	93.02
Groups 9/22/2016 & 10/20/2016						
Average dissimilarity = 80.90						
	Group 9/22/2016	Group 10/20/2016				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Pomacentridae	2.36	12.09	22.73	1.3	28.09	28.09
Clupeiformes	4.79	4.37	15.16	1.09	18.74	46.83
Gobiidae	7.4	4.71	14.04	1.33	17.35	64.18
Syngnathidae	3.25	0.83	5.38	1.23	6.65	70.83
Sphyraenidae	0	1.6	3.88	1	4.79	75.63
Tripterygidae	0	2.48	3.55	0.54	4.39	80.02
Clupeidae	0	0.95	3.12	0.5	3.85	83.87
Congridae	0	0.95	3.12	0.5	3.85	87.72
Haemulidae	1.37	0	2.68	0.9	3.31	91.03
Groups 8/22/2016 & 10/21/2016						
Average dissimilarity = 89.89						
	Group 8/22/2016	Group 10/21/2016				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Gobiidae	6.34	1.79	24.71	1.38	27.49	27.49
Pomacentridae	3.05	3.12	24.69	1.38	27.47	54.96
Clupeiformes	0.92	1.84	10.5	0.6	11.68	66.64
Tripterygidae	0	1.31	7.6	0.47	8.45	75.09
Syngnathidae	1.89	0	6.01	0.69	6.68	81.77
Serranidae	1.79	0	4.44	0.91	4.94	86.71
Carangidae	0.41	0	3.99	0.53	4.43	91.15

Groups 8/23/2016 &
10/21/2016

Average dissimilarity =
92.18

	Group 8/23/2016	Group 10/21/2016				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Gobiidae	13.42	1.79	34.97	1.46	37.94	37.94
Pomacentridae	0	3.12	17.3	1.11	18.76	56.7
Clupeiformes	1.3	1.84	9.04	0.57	9.8	66.51
Tripterygidae	0	1.31	6.33	0.47	6.87	73.38
Syngnathidae	1.66	0	5.99	0.94	6.5	79.88
Gerreidae	0.8	0.46	4.23	0.82	4.58	84.46
Sphyraenidae	0.37	0	3.66	0.53	3.97	88.44
Achiriidae	0.37	0.46	3.65	0.68	3.96	92.39

Groups 8/24/2016 &
10/21/2016

Average dissimilarity =
76.37

	Group 8/24/2016	Group 10/21/2016				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Pomacentridae	19.23	3.12	25.43	1.39	33.3	33.3
Gobiidae	13.49	1.79	23.45	1.48	30.71	64
Clupeiformes	2.68	1.84	8	0.58	10.48	74.48
Tripterygidae	0	1.31	5.18	0.45	6.78	81.26
Gerreidae	0.73	0.46	4.81	0.89	6.3	87.56
Sphyraenidae	0.37	0	2.79	0.54	3.65	91.21

Groups 9/20/2016 &
10/21/2016

Average dissimilarity =
63.31

	Group 9/20/2016	Group 10/21/2016				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Pomacentridae	8.64	3.12	22.35	1.77	35.29	35.29
Gobiidae	3.81	1.79	11.97	1.57	18.91	54.2
Clupeiformes	0.37	1.84	8.45	0.73	13.35	67.56

Tripterygidae	0	1.31	5.49	0.53	8.67	76.22
Serranidae	1.51	0	4.66	0.96	7.36	83.58
Syngnathidae	1.12	0	3.4	0.9	5.37	88.95
Gerreidae	0.37	0.46	3.25	0.73	5.13	94.08

Groups 9/21/2016 &
10/21/2016

Average dissimilarity =
64.93

	Group 9/21/2016	Group 10/21/2016				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Gobiidae	5.22	1.79	14.34	1.39	22.08	22.08
Pomacentridae	5.08	3.12	10.83	1.47	16.68	38.76
Syngnathidae	3.41	0	10.72	1.25	16.51	55.27
Clupeiformes	0.99	1.84	7.97	0.64	12.28	67.55
Gerreidae	1.32	0.46	5.54	1.16	8.53	76.07
Tripterygidae	0	1.31	5.32	0.51	8.2	84.27
Carangidae	0.92	0	2.9	0.92	4.46	88.73
Labridae	0	0.45	1.96	0.5	3.01	91.75

Groups 9/22/2016 &
10/21/2016

Average dissimilarity =
83.27

	Group 9/22/2016	Group 10/21/2016				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Gobiidae	7.4	1.79	23.91	1.18	28.71	28.71
Pomacentridae	2.36	3.12	16.49	0.97	19.8	48.51
Clupeiformes	4.79	1.84	14.43	0.78	17.32	65.84
Syngnathidae	3.25	0	8.59	1.3	10.32	76.16
Tripterygidae	0	1.31	6.59	0.47	7.91	84.07
Haemulidae	1.37	0	5.54	0.78	6.66	90.73

Groups 10/20/2016 &
10/21/2016

Average dissimilarity =
71.46

	Group 10/20/2016	Group 10/21/2016
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Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Pomacentridae	12.09	3.12	21.03	1.59	29.43	29.43
Clupeiformes	4.37	1.84	12.85	0.98	17.98	47.41
Gobiidae	4.71	1.79	8.68	2.5	12.15	59.56
Tripterygidae	2.48	1.31	6.4	0.82	8.95	68.51
Sphyraenidae	1.6	0	4.25	1.16	5.94	74.45
Clupeidae	0.95	0	3.38	0.56	4.73	79.18
Congridae	0.95	0	3.38	0.56	4.73	83.91
Tetraodontiformes	0.78	0	2.39	0.56	3.34	87.25
Syngnathidae	0.83	0	1.29	0.56	1.81	89.06
Labridae	0	0.45	1.26	0.53	1.76	90.82

Groups 8/22/2016 &
2/13/2017

Average dissimilarity =
76.39

Species	Group 8/22/2016	Group 2/13/2017	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Gobiidae	6.34	14.46			28.93	1.31	37.88	37.88
Pomacentridae	3.05	8.79			18.35	1.29	24.02	61.9
Tripterygidae	0	3.18			8.71	0.78	11.4	73.29
Gerreidae	0.44	2.34			5.26	0.65	6.89	80.18
Syngnathidae	1.89	0.36			4.52	0.87	5.92	86.1
Serranidae	1.79	0			3.01	0.85	3.93	90.03

Groups 8/23/2016 &
2/13/2017

Average dissimilarity =
75.93

Species	Group 8/23/2016	Group 2/13/2017	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Gobiidae	13.42	14.46			32.54	1.83	42.85	42.85
Pomacentridae	0	8.79			16.57	1.19	21.82	64.67
Tripterygidae	0	3.18			7.86	0.77	10.35	75.02
Gerreidae	0.8	2.34			5.29	0.78	6.97	81.98
Syngnathidae	1.66	0.36			3.47	0.94	4.57	86.55
Sphyraenidae	0.37	0.76			1.96	0.83	2.58	89.13
Clupeiformes	1.3	0			1.82	0.55	2.39	91.52

Groups 8/24/2016 &
2/13/2017

Average dissimilarity =
68.52

	Group 8/24/2016	Group 2/13/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Gobiidae	13.49	14.46	25.89	1.57	37.79	37.79
Pomacentridae	19.23	8.79	22.47	1.44	32.79	70.58
Tripterygidae	0	3.18	6.81	0.72	9.94	80.52
Gerreidae	0.73	2.34	4.9	0.84	7.15	87.67
Clupeiformes	2.68	0	2.02	0.56	2.94	90.61

Groups 9/20/2016 &
2/13/2017

Average dissimilarity =
63.17

	Group 9/20/2016	Group 2/13/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Gobiidae	3.81	14.46	22.36	1.55	35.41	35.41
Pomacentridae	8.64	8.79	17.46	1.6	27.63	63.04
Tripterygidae	0	3.18	7.7	0.84	12.19	75.23
Gerreidae	0.37	2.34	5.06	0.76	8.02	83.25
Serranidae	1.51	0	2.98	0.91	4.71	87.96
Syngnathidae	1.12	0.36	2.51	0.99	3.97	91.93

Groups 9/21/2016 &
2/13/2017

Average dissimilarity =
65.54

	Group 9/21/2016	Group 2/13/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Gobiidae	5.22	14.46	23.13	1.63	35.29	35.29
Pomacentridae	5.08	8.79	14.39	1.64	21.96	57.25
Tripterygidae	0	3.18	7.48	0.82	11.41	68.66
Syngnathidae	3.41	0.36	6.44	1.31	9.82	78.49
Gerreidae	1.32	2.34	5.68	1.08	8.67	87.16
Sphyraenidae	0	0.76	2.05	0.86	3.13	90.29

Groups 9/22/2016 &

2/13/2017

Average dissimilarity =

74.42

	Group 9/22/2016	Group 2/13/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Gobiidae	7.4	14.46	26.57	1.35	35.71	35.71
Pomacentridae	2.36	8.79	15.98	1.18	21.47	57.18
Tripterygidae	0	3.18	8.03	0.76	10.78	67.96
Clupeiformes	4.79	0	5.97	0.55	8.02	75.98
Syngnathidae	3.25	0.36	4.92	1.08	6.61	82.59
Gerreidae	0	2.34	4.77	0.61	6.4	88.99
Haemulidae	1.37	0	2.72	0.86	3.65	92.65

Groups 10/20/2016 &

2/13/2017

Average dissimilarity =

65.58

	Group 10/20/2016	Group 2/13/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Gobiidae	4.71	14.46	17.13	1.53	26.12	26.12
Pomacentridae	12.09	8.79	16.51	1.55	25.17	51.3
Clupeiformes	4.37	0	8.51	0.91	12.98	64.28
Tripterygidae	2.48	3.18	6.86	1	10.45	74.73
Gerreidae	0	2.34	3.7	0.65	5.63	80.37
Sphyraenidae	1.6	0.76	2.21	1.1	3.37	83.73
Clupeidae	0.95	0	2.06	0.53	3.14	86.87
Congridae	0.95	0	2.06	0.53	3.14	90.02

Groups 10/21/2016 &

2/13/2017

Average dissimilarity =

74.11

	Group 10/21/2016	Group 2/13/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Gobiidae	1.79	14.46	30.27	2.17	40.84	40.84

Pomacentridae	3.12	8.79	15.91	1.54	21.46	62.31
Tripterygidae	1.31	3.18	9.09	0.93	12.27	74.57
Gerreidae	0.46	2.34	5.64	0.75	7.61	82.18
Clupeiformes	1.84	0	4.65	0.53	6.27	88.45
Sphyraenidae	0	0.76	2.47	0.91	3.33	91.78

Groups 8/22/2016 &
2/14/2017

Average dissimilarity =
87.22

	Group 8/22/2016	Group 2/14/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Pomacentridae	3.05	195.6	46.71	1.24	53.56	53.56
Gobiidae	6.34	25.64	17.5	0.95	20.07	73.63
Tripterygidae	0	12.97	8.47	1.01	9.71	83.34
Gerreidae	0.44	10.55	7.3	1.24	8.37	91.71

Groups 8/23/2016 &
2/14/2017

Average dissimilarity =
84.16

	Group 8/23/2016	Group 2/14/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Pomacentridae	0	195.6	46.84	1.26	55.66	55.66
Gobiidae	13.42	25.64	15.19	0.85	18.05	73.7
Tripterygidae	0	12.97	8.11	1.01	9.63	83.34
Gerreidae	0.8	10.55	6.59	1.27	7.83	91.16

Groups 8/24/2016 &
2/14/2017

Average dissimilarity =
78.47

	Group 8/24/2016	Group 2/14/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Pomacentridae	19.23	195.6	44.87	1.3	57.19	57.19
Gobiidae	13.49	25.64	13.84	0.82	17.64	74.83
Tripterygidae	0	12.97	7.43	0.98	9.47	84.3

Gerreidae	0.73	10.55	5.91	1.29	7.53	91.83
Groups 9/20/2016 & 2/14/2017						
Average dissimilarity = 82.70						
	Group 9/20/2016	Group 2/14/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Pomacentridae	8.64	195.6	43.78	1.12	52.94	52.94
Gobiidae	3.81	25.64	17.82	1.13	21.54	74.49
Tripterygidae	0	12.97	8.23	1.03	9.96	84.44
Gerreidae	0.37	10.55	6.97	1.36	8.43	92.87
Groups 9/21/2016 & 2/14/2017						
Average dissimilarity = 81.55						
	Group 9/21/2016	Group 2/14/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Pomacentridae	5.08	195.6	43.73	1.11	53.63	53.63
Gobiidae	5.22	25.64	16.87	1.05	20.68	74.31
Tripterygidae	0	12.97	8.11	1.03	9.94	84.25
Gerreidae	1.32	10.55	6.13	1.35	7.52	91.77
Groups 9/22/2016 & 2/14/2017						
Average dissimilarity = 85.93						
	Group 9/22/2016	Group 2/14/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Pomacentridae	2.36	195.6	45.54	1.19	52.99	52.99
Gobiidae	7.4	25.64	15.94	0.91	18.55	71.54
Tripterygidae	0	12.97	8.15	1.01	9.49	81.03
Gerreidae	0	10.55	7.24	1.28	8.43	89.46
Clupeiformes	4.79	0	2.56	0.44	2.98	92.44

Groups 10/20/2016 &

2/14/2017

Average dissimilarity =

81.81

	Group 10/20/2016	Group 2/14/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Pomacentridae	12.09	195.6	42.77	1.16	52.28	52.28
Gobiidae	4.71	25.64	15.05	1.09	18.4	70.68
Tripterygidae	2.48	12.97	6.83	1	8.35	79.03
Gerreidae	0	10.55	6.35	1.39	7.76	86.79
Clupeiformes	4.37	0	3.01	0.66	3.68	90.47

Groups 10/21/2016 &

2/14/2017

Average dissimilarity =

89.39

	Group 10/21/2016	Group 2/14/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Pomacentridae	3.12	195.6	45.78	1.17	51.22	51.22
Gobiidae	1.79	25.64	20.64	1.16	23.09	74.31
Tripterygidae	1.31	12.97	8.02	0.98	8.97	83.28
Gerreidae	0.46	10.55	7.44	1.32	8.32	91.6

Groups 2/13/2017 &

2/14/2017

Average dissimilarity =

69.74

	Group 2/13/2017	Group 2/14/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Pomacentridae	8.79	195.6	43.17	1.17	61.9	61.9
Gobiidae	14.46	25.64	10.33	0.95	14.81	76.72
Tripterygidae	3.18	12.97	6.12	0.96	8.78	85.49
Gerreidae	2.34	10.55	5.16	1.16	7.4	92.9

Groups 8/22/2016 &

2/15/2017

Average dissimilarity =
78.28

	Group 8/22/2016	Group 2/15/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Pomacentridae	3.05	21.27	38.77	1.95	49.53	49.53
Gobiidae	6.34	10.67	18.18	1.48	23.23	72.75
Gerreidae	0.44	1.33	3.51	0.8	4.48	77.23
Syngnathidae	1.89	0.37	3.45	0.7	4.41	81.65
Tripterygidae	0	1.73	3.29	0.88	4.2	85.85
Serranidae	1.79	0	2.7	0.83	3.45	89.3
Tetraodontiformes	0	1.53	2.44	0.92	3.11	92.41

Groups 8/23/2016 &
2/15/2017

Average dissimilarity =
82.23

	Group 8/23/2016	Group 2/15/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Pomacentridae	0	21.27	38.33	2.39	46.61	46.61
Gobiidae	13.42	10.67	24.38	2.03	29.65	76.26
Tripterygidae	0	1.73	3.05	0.87	3.7	79.97
Syngnathidae	1.66	0.37	3.03	0.83	3.69	83.65
Gerreidae	0.8	1.33	2.33	0.74	2.83	86.48
Tetraodontiformes	0	1.53	2.28	0.91	2.77	89.25
Clupeiformes	1.3	0	1.66	0.54	2.01	91.26

Groups 8/24/2016 &
2/15/2017

Average dissimilarity =
63.95

	Group 8/24/2016	Group 2/15/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Pomacentridae	19.23	21.27	31.73	1.88	49.61	49.61
Gobiidae	13.49	10.67	18.75	2.01	29.31	78.92
Tripterygidae	0	1.73	2.69	0.82	4.21	83.13
Tetraodontiformes	0	1.53	2.03	0.86	3.17	86.3
Clupeiformes	2.68	0	1.91	0.55	2.98	89.28

Gerreidae	0.73	1.33	1.54	1.28	2.42	91.7
Groups 9/20/2016 & 2/15/2017						
Average dissimilarity = 54.57						
	Group 9/20/2016	Group 2/15/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Pomacentridae	8.64	21.27	25.32	1.56	46.4	46.4
Gobiidae	3.81	10.67	12.73	1.5	23.33	69.73
Tripterygidae	0	1.73	3.07	0.92	5.62	75.34
Serranidae	1.51	0	2.65	0.88	4.85	80.2
Gerreidae	0.37	1.33	2.55	1.12	4.67	84.87
Tetraodontiformes	0	1.53	2.31	0.95	4.23	89.1
Syngnathidae	1.12	0.37	2	0.89	3.66	92.76
Groups 9/21/2016 & 2/15/2017						
Average dissimilarity = 60.93						
	Group 9/21/2016	Group 2/15/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Pomacentridae	5.08	21.27	27.51	1.67	45.16	45.16
Gobiidae	5.22	10.67	13.8	1.56	22.64	67.8
Syngnathidae	3.41	0.37	5.78	1.09	9.49	77.29
Tripterygidae	0	1.73	2.99	0.91	4.91	82.2
Tetraodontiformes	0.5	1.53	2.52	1.06	4.13	86.33
Carangidae	0.92	0	1.61	0.86	2.64	88.97
Clupeiformes	0.99	0	1.45	0.53	2.38	91.35
Groups 9/22/2016 & 2/15/2017						
Average dissimilarity = 78.01						
	Group 9/22/2016	Group 2/15/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Pomacentridae	2.36	21.27	35.74	1.84	45.82	45.82

Gobiidae	7.4	10.67	16.96	1.35	21.74	67.56
Clupeiformes	4.79	0	5.48	0.54	7.03	74.59
Syngnathidae	3.25	0.37	4.52	1	5.79	80.38
Gerreidae	0	1.33	3.46	0.91	4.44	84.82
Tripterygidae	0	1.73	3.09	0.87	3.96	88.79
Haemulidae	1.37	0	2.41	0.8	3.09	91.87

Groups 10/20/2016 &
2/15/2017

Average dissimilarity =
56.98

	Group 10/20/2016	Group 2/15/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Pomacentridae	12.09	21.27	20.05	1.55	35.18	35.18
Gobiidae	4.71	10.67	9.77	1.29	17.15	52.33
Clupeiformes	4.37	0	7.58	0.88	13.3	65.63
Tripterygidae	2.48	1.73	4.33	1.04	7.59	73.23
Gerreidae	0	1.33	2.36	1.23	4.14	77.37
Tetraodontiformes	0.78	1.53	2.26	0.87	3.97	81.34
Sphyraenidae	1.6	0.77	2.1	0.92	3.69	85.03
Clupeidae	0.95	0.39	2.05	0.62	3.59	88.62
Congridae	0.95	0	1.82	0.52	3.2	91.81

Groups 10/21/2016 &
2/15/2017

Average dissimilarity =
73.04

	Group 10/21/2016	Group 2/15/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Pomacentridae	3.12	21.27	34.71	2.56	47.52	47.52
Gobiidae	1.79	10.67	17.87	2.12	24.46	71.98
Tripterygidae	1.31	1.73	4.83	0.86	6.62	78.59
Clupeiformes	1.84	0	4.07	0.5	5.57	84.16
Gerreidae	0.46	1.33	3.14	0.95	4.3	88.46
Tetraodontiformes	0	1.53	2.52	0.96	3.45	91.92

Groups 2/13/2017 &
2/15/2017

Average dissimilarity =
50.12

	Group 2/13/2017	Group 2/15/2017					
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%	
Pomacentridae	8.79	21.27	22.26	1.55	44.42	44.42	
Gobiidae	14.46	10.67	12.37	1.24	24.67	69.09	
Tripterygidae	3.18	1.73	5.2	0.95	10.38	79.47	
Gerreidae	2.34	1.33	4	1.01	7.98	87.46	
Tetraodontiformes	0.36	1.53	2.14	1.16	4.26	91.72	
Groups 2/14/2017 & 2/15/2017							
Average dissimilarity = 70.47							
	Group 2/14/2017	Group 2/15/2017					
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%	
Pomacentridae	195.6	21.27	43.43	1.31	61.64	61.64	
Gobiidae	25.64	10.67	10.8	0.92	15.33	76.97	
Tripterygidae	12.97	1.73	5.89	0.89	8.36	85.32	
Gerreidae	10.55	1.33	5.08	1.38	7.22	92.54	
Groups 8/22/2016 & 3/15/2017							
Average dissimilarity = 81.89							
	Group 8/22/2016	Group 3/15/2017					
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%	
Gobiidae	6.34	18.62	32.51	1.58	39.7	39.7	
Pomacentridae	3.05	9	22.1	1.28	26.99	66.69	
Serranidae	1.79	3.24	6.22	1.33	7.6	74.29	
Holocentridae	0	0.4	4.28	0.43	5.23	79.52	
Syngnathidae	1.89	0	4.21	0.6	5.14	84.66	
Mullidae	0	0.85	4.01	0.49	4.9	89.55	
Carangidae	0.41	0	2.6	0.39	3.18	92.73	
Groups 8/23/2016 & 3/15/2017							
Average dissimilarity = 81.06							

	Group 8/23/2016	Group 3/15/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Gobiidae	13.42	18.62	33.55	1.37	41.38	41.38
Pomacentridae	0	9	18.05	1.28	22.27	63.65
Serranidae	0.87	3.24	5.48	1.38	6.76	70.42
Syngnathidae	1.66	0	4.14	0.74	5.11	75.53
Mullidae	0	0.85	3.43	0.48	4.24	79.76
Holocentridae	0	0.4	3.16	0.43	3.9	83.66
Sphyraenidae	0.37	0.81	2.85	0.47	3.52	87.18
Gerreidae	0.8	0	2.58	0.61	3.18	90.36

Groups 8/24/2016 &
3/15/2017

Average dissimilarity =
72.10

	Group 8/24/2016	Group 3/15/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Gobiidae	13.49	18.62	27.71	1.41	38.43	38.43
Pomacentridae	19.23	9	22.52	1.43	31.23	69.66
Serranidae	0	3.24	4.77	1.24	6.62	76.28
Gerreidae	0.73	0	3.4	0.66	4.71	80.99
Mullidae	0	0.85	2.87	0.46	3.98	84.97
Holocentridae	0	0.4	2.36	0.43	3.27	88.24
Sphyraenidae	0.37	0.81	2.18	0.52	3.02	91.26

Groups 9/20/2016 &
3/15/2017

Average dissimilarity =
66.36

	Group 9/20/2016	Group 3/15/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Gobiidae	3.81	18.62	28.02	1.8	42.22	42.22
Pomacentridae	8.64	9	18.38	1.46	27.69	69.92
Serranidae	1.51	3.24	5.66	1.54	8.53	78.44
Mullidae	0	0.85	3.11	0.53	4.69	83.13
Syngnathidae	1.12	0	2.4	0.77	3.62	86.75
Holocentridae	0	0.4	2.29	0.5	3.45	90.2

Groups 9/21/2016 &

3/15/2017

Average dissimilarity =

72.20

	Group 9/21/2016	Group 3/15/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Gobiidae	5.22	18.62	28.5	1.94	39.48	39.48
Pomacentridae	5.08	9	12.45	1.36	17.24	56.72
Syngnathidae	3.41	0	7.52	0.99	10.41	67.13
Serranidae	0	3.24	5.22	1.48	7.23	74.36
Gerreidae	1.32	0	4.31	0.96	5.98	80.34
Mullidae	0	0.85	3.02	0.52	4.18	84.52
Holocentridae	0	0.4	2.25	0.48	3.12	87.64
Carangidae	0.92	0	2.03	0.77	2.81	90.45

Groups 9/22/2016 &

3/15/2017

Average dissimilarity =

80.85

	Group 9/22/2016	Group 3/15/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Gobiidae	7.4	18.62	31.67	1.58	39.16	39.16
Pomacentridae	2.36	9	16.98	1.12	21	60.16
Syngnathidae	3.25	0	6.16	0.97	7.62	67.78
Clupeiformes	4.79	0	6.1	0.53	7.54	75.32
Serranidae	0.48	3.24	5.4	1.31	6.67	81.99
Haemulidae	1.37	0	3.82	0.58	4.72	86.71
Mullidae	0	0.85	3.55	0.48	4.4	91.11

Groups 10/20/2016 &

3/15/2017

Average dissimilarity =

72.74

	Group 10/20/2016	Group 3/15/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Gobiidae	4.71	18.62	22.2	1.65	30.52	30.52

Pomacentridae	12.09	9	16.79	1.33	23.08	53.6
Clupeiformes	4.37	0	9.35	0.81	12.85	66.45
Serranidae	0	3.24	4.26	1.46	5.85	72.3
Tripterygidae	2.48	0	3.04	0.53	4.18	76.48
Sphyraenidae	1.6	0.81	2.65	0.82	3.64	80.12
Clupeidae	0.95	0	2.33	0.48	3.21	83.33
Congridae	0.95	0	2.33	0.48	3.21	86.54
Tetraodontiformes	0.78	0.81	2.11	0.67	2.91	89.45
Mullidae	0	0.85	2.09	0.54	2.88	92.33

Groups 10/21/2016 &
3/15/2017
Average dissimilarity =
75.44

	Group 10/21/2016	Group 3/15/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Gobiidae	1.79	18.62	32.23	1.75	42.72	42.72
Pomacentridae	3.12	9	12.55	1.26	16.63	59.35
Serranidae	0	3.24	5.98	1.6	7.92	67.27
Clupeiformes	1.84	0	5.61	0.46	7.43	74.7
Tripterygidae	1.31	0	4.44	0.45	5.89	80.59
Mullidae	0	0.85	3.74	0.55	4.96	85.55
Holocentridae	0	0.4	2.93	0.54	3.88	89.44
Labridae	0.45	0	1.63	0.44	2.17	91.6

Groups 2/13/2017 &
3/15/2017
Average dissimilarity =
62.86

	Group 2/13/2017	Group 3/15/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Gobiidae	14.46	18.62	25.34	1.59	40.31	40.31
Pomacentridae	8.79	9	14.06	1.34	22.37	62.69
Tripterygidae	3.18	0	6.31	0.74	10.03	72.72
Serranidae	0	3.24	4.25	1.44	6.76	79.49
Gerreidae	2.34	0	3.88	0.59	6.18	85.66
Mullidae	0	0.85	2.1	0.53	3.35	89.01
Sphyraenidae	0.76	0.81	1.72	0.76	2.74	91.75

Groups 2/14/2017 &

3/15/2017

Average dissimilarity =

77.50

	Group 2/14/2017	Group 3/15/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Pomacentridae	195.6	9	43.03	1.17	55.52	55.52
Gobiidae	25.64	18.62	12.86	0.87	16.59	72.11
Tripterygidae	12.97	0	7.32	1	9.44	81.55
Gerreidae	10.55	0	6.4	1.29	8.26	89.81
Serranidae	0.51	3.24	1.71	0.88	2.21	92.02

Groups 2/15/2017 &

3/15/2017

Average dissimilarity =

63.04

	Group 2/15/2017	Group 3/15/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Pomacentridae	21.27	9	23.84	1.39	37.82	37.82
Gobiidae	10.67	18.62	21.12	1.88	33.5	71.32
Serranidae	0	3.24	3.88	1.38	6.15	77.47
Gerreidae	1.33	0	2.64	0.93	4.18	81.66
Tripterygidae	1.73	0	2.57	0.85	4.07	85.73
Tetraodontiformes	1.53	0.81	2.08	1.06	3.3	89.02
Mullidae	0	0.85	1.84	0.51	2.92	91.95

Groups 8/22/2016 &

3/16/2017

Average dissimilarity =

83.32

	Group 8/22/2016	Group 3/16/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Pomacentridae	3.05	27.6	28.45	1.27	34.14	34.14
Gobiidae	6.34	18.78	25.07	1.5	30.09	64.23
Holocentridae	0	0.89	4.54	0.61	5.45	69.69
Tetraodontiformes	0	1.47	4.45	0.61	5.34	75.02
Gerreidae	0.44	3.54	3.75	1.41	4.5	79.53

Serranidae	1.79	2.58	3.64	1.07	4.36	83.89
Scorpaenidae	0	0.44	3.49	0.45	4.19	88.08
Syngnathidae	1.89	0	3.27	0.56	3.93	92.01

Groups 8/23/2016 &
3/16/2017

Average dissimilarity =
80.73

	Group 8/23/2016	Group 3/16/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Pomacentridae	0	27.6	26.47	1.14	32.79	32.79
Gobiidae	13.42	18.78	25.98	1.29	32.17	64.96
Gerreidae	0.8	3.54	3.93	1.18	4.87	69.83
Holocentridae	0	0.89	3.72	0.62	4.61	74.44
Tetraodontiformes	0	1.47	3.68	0.63	4.55	78.99
Syngnathidae	1.66	0	3.12	0.68	3.86	82.85
Scorpaenidae	0	0.44	2.76	0.45	3.41	86.27
Serranidae	0.87	2.58	2.66	1.03	3.29	89.56
Sphyraenidae	0.37	1.48	2.5	0.6	3.1	92.65

Groups 8/24/2016 &
3/16/2017

Average dissimilarity =
70.01

	Group 8/24/2016	Group 3/16/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Pomacentridae	19.23	27.6	28.53	1.35	40.76	40.76
Gobiidae	13.49	18.78	20.34	1.19	29.06	69.82
Gerreidae	0.73	3.54	3.93	1.05	5.62	75.43
Holocentridae	0	0.89	3	0.62	4.29	79.72
Tetraodontiformes	0	1.47	3	0.65	4.29	84.01
Scorpaenidae	0	0.44	2.16	0.44	3.09	87.1
Serranidae	0	2.58	2.06	0.9	2.94	90.04

Groups 9/20/2016 &
3/16/2017

Average dissimilarity =
74.43

	Group 9/20/2016	Group 3/16/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Pomacentridae	8.64	27.6	31.22	1.85	41.94	41.94
Gobiidae	3.81	18.78	20.9	1.73	28.08	70.02
Gerreidae	0.37	3.54	3.96	1.3	5.32	75.34
Serranidae	1.51	2.58	3.58	1.08	4.81	80.15
Holocentridae	0	0.89	3.15	0.77	4.23	84.39
Tetraodontiformes	0	1.47	3.13	0.81	4.21	88.59
Scorpaenidae	0	0.44	2.19	0.51	2.95	91.54

Groups 9/21/2016 &
3/16/2017

Average dissimilarity =
74.75

	Group 9/21/2016	Group 3/16/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Pomacentridae	5.08	27.6	27.68	1.5	37.03	37.03
Gobiidae	5.22	18.78	19.81	1.39	26.5	63.53
Syngnathidae	3.41	0	5.85	0.9	7.83	71.36
Gerreidae	1.32	3.54	4.11	1.15	5.5	76.86
Holocentridae	0	0.89	3.07	0.73	4.11	80.97
Tetraodontiformes	0.5	1.47	2.71	0.7	3.62	84.59
Serranidae	0	2.58	2.26	0.95	3.02	87.62
Scorpaenidae	0	0.44	2.14	0.49	2.86	90.48

Groups 9/22/2016 &
3/16/2017

Average dissimilarity =
81.18

	Group 9/22/2016	Group 3/16/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Pomacentridae	2.36	27.6	26.34	1.18	32.45	32.45
Gobiidae	7.4	18.78	22.13	1.19	27.26	59.71
Clupeiformes	4.79	0	5.1	0.51	6.28	65.99
Syngnathidae	3.25	0	4.76	0.89	5.86	71.84
Holocentridae	0	0.89	3.87	0.62	4.77	76.61
Tetraodontiformes	0	1.47	3.82	0.63	4.7	81.32
Gerreidae	0	3.54	3.66	1.4	4.5	85.82

Scorpaenidae	0	0.44	2.89	0.45	3.56	89.38
Haemulidae	1.37	0.52	2.78	0.59	3.42	92.81
Groups 10/20/2016 & 3/16/2017						
Average dissimilarity = 73.48						
	Group 10/20/2016	Group 3/16/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Pomacentridae	12.09	27.6	27.06	1.77	36.82	36.82
Gobiidae	4.71	18.78	16.73	1.62	22.76	59.58
Clupeiformes	4.37	0	7.33	0.74	9.98	69.56
Gerreidae	0	3.54	3.17	1.39	4.31	73.87
Tripterygidae	2.48	0	2.55	0.51	3.47	77.34
Tetraodontiformes	0.78	1.47	2.3	1.07	3.13	80.47
Serranidae	0	2.58	2.04	0.95	2.78	83.25
Sphyraenidae	1.6	1.48	1.94	0.73	2.64	85.89
Clupeidae	0.95	0	1.8	0.45	2.45	88.34
Congridae	0.95	0	1.8	0.45	2.45	90.78
Groups 10/21/2016 & 3/16/2017						
Average dissimilarity = 85.16						
	Group 10/21/2016	Group 3/16/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Pomacentridae	3.12	27.6	30.22	1.47	35.49	35.49
Gobiidae	1.79	18.78	24.84	1.76	29.17	64.66
Clupeiformes	1.84	0	4.19	0.43	4.91	69.57
Gerreidae	0.46	3.54	4.07	1.4	4.78	74.35
Holocentridae	0	0.89	3.83	0.8	4.5	78.85
Tetraodontiformes	0	1.47	3.74	0.83	4.4	83.25
Tripterygidae	1.31	0	3.26	0.42	3.83	87.08
Scorpaenidae	0	0.44	2.75	0.55	3.23	90.31
Groups 2/13/2017 & 3/16/2017						
Average dissimilarity = 63.66						

	Group 2/13/2017	Group 3/16/2017					
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%	
Pomacentridae	8.79	27.6	25.58	1.59	40.18	40.18	
Gobiidae	14.46	18.78	17.65	1.35	27.73	67.91	
Tripterygidae	3.18	0	4.99	0.69	7.84	75.75	
Gerreidae	2.34	3.54	4.37	0.9	6.86	82.61	
Holocentridae	0	0.89	2.07	0.82	3.26	85.87	
Serranidae	0	2.58	2.04	0.95	3.2	89.07	
Tetraodontiformes	0.36	1.47	1.77	1.1	2.78	91.85	
Groups 2/14/2017 & 3/16/2017							
Average dissimilarity = 71.83							
	Group 2/14/2017	Group 3/16/2017					
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%	
Pomacentridae	195.6	27.6	44.66	1.49	62.18	62.18	
Gobiidae	25.64	18.78	9.4	0.74	13.09	75.27	
Tripterygidae	12.97	0	6.44	0.98	8.96	84.22	
Gerreidae	10.55	3.54	4.33	0.98	6.02	90.25	
Groups 2/15/2017 & 3/16/2017							
Average dissimilarity = 59.22							
	Group 2/15/2017	Group 3/16/2017					
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%	
Pomacentridae	21.27	27.6	28.66	1.86	48.39	48.39	
Gobiidae	10.67	18.78	14.54	1.48	24.55	72.94	
Gerreidae	1.33	3.54	2.95	1.19	4.98	77.92	
Tetraodontiformes	1.53	1.47	2.12	1	3.58	81.5	
Tripterygidae	1.73	0	2.11	0.8	3.55	85.05	
Serranidae	0	2.58	1.92	0.94	3.25	88.3	
Holocentridae	0	0.89	1.82	0.77	3.08	91.38	
Groups 3/15/2017 & 3/16/2017							

Average dissimilarity =
66.15

	Group 3/15/2017	Group 3/16/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Pomacentridae	9	27.6	25.45	1.49	38.48	38.48
Gobiidae	18.62	18.78	22.69	1.41	34.3	72.78
Serranidae	3.24	2.58	3.78	1.18	5.71	78.5
Gerreidae	0	3.54	3.2	1.33	4.84	83.34
Tetraodontiformes	0.81	1.47	2.28	0.58	3.44	86.78
Mullidae	0.85	0	1.88	0.43	2.85	89.63
Scorpaenidae	0	0.44	1.79	0.43	2.71	92.34

Groups 8/22/2016 &
3/17/2017

Average dissimilarity =
72.73

	Group 8/22/2016	Group 3/17/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Gobiidae	6.34	23.43	28.46	1.52	39.14	39.14
Pomacentridae	3.05	12.93	18.16	1.84	24.97	64.11
Serranidae	1.79	6.66	8.55	1.3	11.76	75.87
Gerreidae	0.44	1.92	4.8	0.86	6.59	82.46
Sphyraenidae	0	2.06	3.9	1.92	5.36	87.82
Syngnathidae	1.89	1.08	3.12	0.82	4.29	92.12

Groups 8/23/2016 &
3/17/2017

Average dissimilarity =
72.52

	Group 8/23/2016	Group 3/17/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Gobiidae	13.42	23.43	28.5	1.74	39.31	39.31
Pomacentridae	0	12.93	18.67	2.45	25.74	65.05
Serranidae	0.87	6.66	8.21	1.24	11.32	76.36
Gerreidae	0.8	1.92	4.01	0.96	5.54	81.9
Clupeiformes	1.3	1.19	2.76	1.03	3.81	85.71
Sphyraenidae	0.37	2.06	2.73	1.63	3.76	89.47

Syngnathidae	1.66	1.08	2.68	0.95	3.69	93.16
Groups 8/24/2016 & 3/17/2017						
Average dissimilarity = 64.65						
	Group 8/24/2016	Group 3/17/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Gobiidae	13.49	23.43	24.55	1.55	37.98	37.98
Pomacentridae	19.23	12.93	19.1	1.54	29.54	67.52
Serranidae	0	6.66	7.48	1.12	11.57	79.09
Gerreidae	0.73	1.92	3.3	1.16	5.11	84.2
Clupeiformes	2.68	1.19	3.09	1.05	4.78	88.97
Sphyraenidae	0.37	2.06	2.37	1.41	3.66	92.64
Groups 9/20/2016 & 3/17/2017						
Average dissimilarity = 61.40						
	Group 9/20/2016	Group 3/17/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Gobiidae	3.81	23.43	27.4	2.71	44.62	44.62
Pomacentridae	8.64	12.93	11.88	1.48	19.35	63.98
Serranidae	1.51	6.66	8.07	1.39	13.15	77.12
Gerreidae	0.37	1.92	4.12	1.05	6.7	83.83
Sphyraenidae	0	2.06	3.58	2.36	5.83	89.66
Syngnathidae	1.12	1.08	1.89	1.02	3.08	92.74
Groups 9/21/2016 & 3/17/2017						
Average dissimilarity = 65.72						
	Group 9/21/2016	Group 3/17/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Gobiidae	5.22	23.43	25.98	2.01	39.52	39.52
Pomacentridae	5.08	12.93	12.31	1.82	18.73	58.25
Serranidae	0	6.66	8.27	1.24	12.58	70.83

Syngnathidae	3.41	1.08	4.68	1.1	7.13	77.96
Sphyraenidae	0	2.06	3.49	2.27	5.31	83.27
Gerreidae	1.32	1.92	3.49	1.53	5.31	88.58
Clupeiformes	0.99	1.19	2.42	1.04	3.68	92.26

Groups 9/22/2016 &

3/17/2017

Average dissimilarity =
72.83

	Group 9/22/2016	Group 3/17/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Gobiidae	7.4	23.43	25.98	1.47	35.67	35.67
Pomacentridae	2.36	12.93	16.39	1.69	22.51	58.18
Serranidae	0.48	6.66	8.22	1.17	11.28	69.46
Clupeiformes	4.79	1.19	6.28	0.79	8.63	78.08
Gerreidae	0	1.92	4.55	0.85	6.25	84.33
Syngnathidae	3.25	1.08	3.8	1	5.22	89.55
Sphyraenidae	0	2.06	3.64	1.86	5	94.56

Groups 10/20/2016 &

3/17/2017

Average dissimilarity =
64.11

	Group 10/20/2016	Group 3/17/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Gobiidae	4.71	23.43	21.91	2.09	34.18	34.18
Pomacentridae	12.09	12.93	11.91	1.7	18.58	52.75
Serranidae	0	6.66	7.12	1.21	11.11	63.87
Clupeiformes	4.37	1.19	6.33	1.07	9.87	73.74
Gerreidae	0	1.92	3.37	0.93	5.26	79
Tripterygidae	2.48	0.35	2.64	0.6	4.11	83.11
Clupeidae	0.95	0	1.52	0.52	2.37	85.48
Congridae	0.95	0	1.52	0.52	2.37	87.85
Sphyraenidae	1.6	2.06	1.52	1.07	2.36	90.21

Groups 10/21/2016 &

3/17/2017

Average dissimilarity =
79.01

	Group 10/21/2016	Group 3/17/2017					
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%	
Gobiidae	1.79	23.43	33.58	4.03	42.5	42.5	
Pomacentridae	3.12	12.93	15.07	2.13	19.07	61.58	
Serranidae	0	6.66	9.16	1.28	11.59	73.17	
Gerreidae	0.46	1.92	4.73	0.99	5.99	79.16	
Clupeiformes	1.84	1.19	4.43	0.87	5.61	84.77	
Sphyraenidae	0	2.06	3.99	2.45	5.05	89.83	
Tripterygidae	1.31	0.35	2.65	0.57	3.35	93.18	
Groups 2/13/2017 & 3/17/2017							
Average dissimilarity = 49.54							
	Group 2/13/2017	Group 3/17/2017					
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%	
Gobiidae	14.46	23.43	15.08	1.57	30.45	30.45	
Pomacentridae	8.79	12.93	11.64	1.54	23.49	53.94	
Serranidae	0	6.66	7.11	1.21	14.35	68.28	
Tripterygidae	3.18	0.35	4.44	0.84	8.97	77.25	
Gerreidae	2.34	1.92	4.3	1.2	8.68	85.93	
Sphyraenidae	0.76	2.06	1.74	1.4	3.52	89.45	
Clupeiformes	0	1.19	1.51	0.89	3.05	92.5	
Groups 2/14/2017 & 3/17/2017							
Average dissimilarity = 67.22							
	Group 2/14/2017	Group 3/17/2017					
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%	
Pomacentridae	195.6	12.93	40.03	1.11	59.55	59.55	
Gobiidae	25.64	23.43	7.59	0.9	11.3	70.85	
Tripterygidae	12.97	0.35	6.22	1.01	9.25	80.09	
Gerreidae	10.55	1.92	4.3	1.49	6.4	86.49	
Serranidae	0.51	6.66	3.16	0.83	4.7	91.19	
Groups 2/15/2017 & 3/17/2017							

Average dissimilarity =
48.02

	Group 2/15/2017	Group 3/17/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Gobiidae	10.67	23.43	14.73	1.27	30.68	30.68
Pomacentridae	21.27	12.93	13.97	1.25	29.1	59.78
Serranidae	0	6.66	6.58	1.18	13.7	73.48
Gerreidae	1.33	1.92	2.54	1.58	5.29	78.76
Tripterygidae	1.73	0.35	1.99	0.95	4.15	82.91
Sphyraenidae	0.77	2.06	1.83	1.14	3.82	86.73
Tetraodontiformes	1.53	0.73	1.66	1.16	3.46	90.19

Groups 3/15/2017 &
3/17/2017

Average dissimilarity =
56.83

	Group 3/15/2017	Group 3/17/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Gobiidae	18.62	23.43	23.76	1.81	41.82	41.82
Pomacentridae	9	12.93	12.11	1.55	21.3	63.12
Serranidae	3.24	6.66	6.88	1.32	12.1	75.23
Gerreidae	0	1.92	3.62	0.82	6.36	81.59
Sphyraenidae	0.81	2.06	2.27	1.03	3.99	85.58
Clupeiformes	0	1.19	1.6	0.8	2.81	88.39
Mullidae	0.85	0	1.5	0.52	2.64	91.03

Groups 3/16/2017 &
3/17/2017

Average dissimilarity =
56.19

	Group 3/16/2017	Group 3/17/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Pomacentridae	27.6	12.93	21.95	1.9	39.07	39.07
Gobiidae	18.78	23.43	15.78	1.15	28.08	67.15
Serranidae	2.58	6.66	5.98	1.14	10.65	77.8
Gerreidae	3.54	1.92	3.3	1.01	5.87	83.67
Holocentridae	0.89	0	1.47	0.83	2.62	86.3

Tetraodontiformes	1.47	0.73	1.34	0.87	2.38	88.68
Sphyraenidae	1.48	2.06	1.33	0.68	2.36	91.04
Groups 8/22/2016 & 8/11/2017						
Average dissimilarity = 85.22						
	Group 8/22/2016	Group 8/11/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Pomacentridae	3.05	21.96	42.23	1.78	49.55	49.55
Gobiidae	6.34	3.67	15.76	1.81	18.5	68.04
Clupeiformes	0.92	2.42	6.88	0.7	8.07	76.11
Syngnathidae	1.89	0	4.19	0.63	4.91	81.03
Clupeidae	0	1.22	3.95	0.83	4.63	85.66
Serranidae	1.79	0	3.24	0.82	3.8	89.46
Haemulidae	0	0.8	2.93	0.57	3.43	92.9
Groups 8/23/2016 & 8/11/2017						
Average dissimilarity = 91.63						
	Group 8/23/2016	Group 8/11/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Pomacentridae	0	21.96	39.48	1.81	43.09	43.09
Gobiidae	13.42	3.67	24.94	1.39	27.22	70.31
Clupeiformes	1.3	2.42	6.41	0.76	7	77.31
Syngnathidae	1.66	0	3.95	0.81	4.31	81.62
Clupeidae	0.43	1.22	3.48	0.84	3.8	85.41
Gerreidae	0.8	1.22	3.24	0.98	3.54	88.95
Haemulidae	0	0.8	2.47	0.58	2.69	91.64
Groups 8/24/2016 & 8/11/2017						
Average dissimilarity = 70.91						
	Group 8/24/2016	Group 8/11/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%

Pomacentridae	19.23	21.96	33.81	1.58	47.68	47.68
Gobiidae	13.49	3.67	16.53	1.31	23.31	70.98
Clupeiformes	2.68	2.42	6.09	0.86	8.59	79.57
Gerreidae	0.73	1.22	3.76	1	5.3	84.87
Clupeidae	0	1.22	2.96	0.77	4.17	89.05
Haemulidae	0	0.8	2.04	0.57	2.87	91.92

Groups 9/20/2016 &
8/11/2017

Average dissimilarity =
57.16

	Group 9/20/2016	Group 8/11/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Pomacentridae	8.64	21.96	29.76	1.63	52.07	52.07
Gobiidae	3.81	3.67	6.24	1.06	10.92	62.99
Clupeiformes	0.37	2.42	5.25	1.07	9.19	72.18
Clupeidae	0	1.22	3.28	0.91	5.74	77.92
Serranidae	1.51	0	3.28	0.85	5.74	83.66
Gerreidae	0.37	1.22	2.56	0.77	4.48	88.14
Syngnathidae	1.12	0	2.4	0.8	4.2	92.34

Groups 9/21/2016 &
8/11/2017

Average dissimilarity =
65.79

	Group 9/21/2016	Group 8/11/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Pomacentridae	5.08	21.96	28.46	1.4	43.26	43.26
Gobiidae	5.22	3.67	8.22	0.95	12.49	55.75
Syngnathidae	3.41	0	7.47	1.07	11.36	67.11
Clupeiformes	0.99	2.42	5.44	0.86	8.26	75.37
Gerreidae	1.32	1.22	4.63	1.45	7.04	82.41
Clupeidae	0	1.22	3.19	0.89	4.84	87.26
Haemulidae	0	0.8	2.11	0.66	3.21	90.46

Groups 9/22/2016 &
8/11/2017

Average dissimilarity =
80.16

	Group 9/22/2016	Group 8/11/2017					
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%	
Pomacentridae	2.36	21.96	37.24	1.52	46.45	46.45	
Gobiidae	7.4	3.67	14.69	1	18.32	64.77	
Clupeiformes	4.79	2.42	10.89	0.94	13.58	78.36	
Syngnathidae	3.25	0	5.89	1.07	7.35	85.71	
Clupeidae	0	1.22	3.57	0.82	4.45	90.16	

Groups 10/20/2016 &

8/11/2017

Average dissimilarity =

59.71

	Group 10/20/2016	Group 8/11/2017					
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%	
Pomacentridae	12.09	21.96	24.08	1.5	40.32	40.32	
Clupeiformes	4.37	2.42	9.1	1.03	15.24	55.56	
Gobiidae	4.71	3.67	5.34	1.57	8.94	64.5	
Clupeidae	0.95	1.22	3.26	0.88	5.46	69.96	
Tripterygidae	2.48	0	3.08	0.54	5.16	75.12	
Sphyraenidae	1.6	0.41	2.89	0.95	4.83	79.95	
Congridae	0.95	0	2.31	0.51	3.87	83.83	
Tetraodontiformes	0.78	0	1.68	0.51	2.82	86.65	
Haemulidae	0	0.8	1.47	0.76	2.46	89.11	
Gerreidae	0	1.22	1.14	0.55	1.91	91.02	

Groups 10/21/2016 &

8/11/2017

Average dissimilarity =

69.10

	Group 10/21/2016	Group 8/11/2017					
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%	
Pomacentridae	3.12	21.96	33.93	1.66	49.1	49.1	
Clupeiformes	1.84	2.42	8.9	0.92	12.88	61.98	
Gobiidae	1.79	3.67	8.26	1.31	11.96	73.93	
Tripterygidae	1.31	0	4.24	0.49	6.14	80.07	
Clupeidae	0	1.22	3.83	0.95	5.54	85.61	
Haemulidae	0	0.8	2.6	0.7	3.76	89.37	
Gerreidae	0.46	1.22	2.5	0.8	3.62	92.99	

Groups 2/13/2017 &

8/11/2017

Average dissimilarity =
68.36

	Group 2/13/2017	Group 8/11/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Pomacentridae	8.79	21.96	24.79	1.45	36.27	36.27
Gobiidae	14.46	3.67	19.76	1.33	28.91	65.18
Tripterygidae	3.18	0	6.33	0.78	9.26	74.43
Gerreidae	2.34	1.22	4.38	0.71	6.4	80.83
Clupeiformes	0	2.42	3.72	0.87	5.44	86.27
Clupeidae	0	1.22	2.38	0.89	3.48	89.76
Sphyraenidae	0.76	0.41	1.71	0.82	2.5	92.26

Groups 2/14/2017 &

8/11/2017

Average dissimilarity =
82.41

	Group 2/14/2017	Group 8/11/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Pomacentridae	195.6	21.96	44.92	1.33	54.51	54.51
Gobiidae	25.64	3.67	16.05	1.07	19.47	73.98
Tripterygidae	12.97	0	7.4	1.01	8.98	82.96
Gerreidae	10.55	1.22	6	1.18	7.28	90.24

Groups 2/15/2017 &

8/11/2017

Average dissimilarity =
55.14

	Group 2/15/2017	Group 8/11/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Pomacentridae	21.27	21.96	25.15	1.61	45.62	45.62
Gobiidae	10.67	3.67	11.75	1.36	21.31	66.93
Clupeiformes	0	2.42	3.33	0.84	6.05	72.98
Gerreidae	1.33	1.22	3.07	1.29	5.57	78.55
Tripterygidae	1.73	0	2.6	0.87	4.71	83.26

Clupeidae	0.39	1.22	2.09	0.88	3.79	87.05
Tetraodontiformes	1.53	0	1.99	0.9	3.6	90.66
Groups 3/15/2017 & 8/11/2017						
Average dissimilarity = 72.02						
	Group 3/15/2017	Group 8/11/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Pomacentridae	9	21.96	25.56	1.29	35.49	35.49
Gobiidae	18.62	3.67	23.44	1.44	32.55	68.04
Serranidae	3.24	0	4.52	1.36	6.27	74.31
Clupeiformes	0	2.42	4.33	0.7	6.01	80.32
Clupeidae	0	1.22	2.68	0.79	3.72	84.05
Mullidae	0.85	0	2.45	0.5	3.4	87.44
Haemulidae	0	0.8	1.78	0.59	2.48	89.92
Holocentridae	0.4	0	1.69	0.47	2.34	92.26
Groups 3/16/2017 & 8/11/2017						
Average dissimilarity = 71.35						
	Group 3/16/2017	Group 8/11/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Pomacentridae	27.6	21.96	31.1	1.52	43.59	43.59
Gobiidae	18.78	3.67	17.71	1.36	24.82	68.41
Gerreidae	3.54	1.22	3.38	1.4	4.74	73.15
Clupeiformes	0	2.42	3.36	0.67	4.71	77.86
Tetraodontiformes	1.47	0	2.49	0.8	3.5	81.35
Holocentridae	0.89	0	2.45	0.72	3.43	84.79
Clupeidae	0	1.22	2.08	0.72	2.92	87.71
Serranidae	2.58	0	2.06	0.93	2.89	90.6
Groups 3/17/2017 & 8/11/2017						
Average dissimilarity = 65.39						
	Group 3/17/2017	Group 8/11/2017				

Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Gobiidae	23.43	3.67	24.32	2.02	37.19	37.19
Pomacentridae	12.93	21.96	17.73	1.3	27.12	64.31
Serranidae	6.66	0	7.34	1.17	11.22	75.53
Gerreidae	1.92	1.22	3.72	0.9	5.69	81.22
Clupeiformes	1.19	2.42	2.92	1.24	4.47	85.68
Sphyraenidae	2.06	0.41	2.71	1.44	4.15	89.83
Clupeidae	0	1.22	1.78	0.85	2.72	92.56

Groups 8/22/2016 &

8/12/2017

Average dissimilarity =
77.40

Species	Group 8/22/2016	Group 8/12/2017	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Clupeiformes	0.92		8.63		21.17	1.32	27.35	27.35
Gobiidae	6.34		7.65		17.62	1.66	22.76	50.11
Achiriidae	0		3.99		9.11	0.83	11.76	61.88
Pomacentridae	3.05		2.74		8.83	1.29	11.41	73.28
Serranidae	1.79		1.33		4.43	1.04	5.72	79
Syngnathidae	1.89		0		3.89	0.67	5.03	84.03
Carangidae	0.41		1.38		3.57	0.87	4.62	88.65
Gerreidae	0.44		0.46		2.79	0.53	3.6	92.25

Groups 8/23/2016 &

8/12/2017

Average dissimilarity =
81.65

Species	Group 8/23/2016	Group 8/12/2017	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Gobiidae	13.42		7.65		26.43	2.22	32.37	32.37
Clupeiformes	1.3		8.63		19.16	1.33	23.46	55.83
Achiriidae	0.37		3.99		8.69	0.96	10.64	66.47
Pomacentridae	0		2.74		5.5	1.13	6.74	73.21
Carangidae	0		1.38		4.17	1.01	5.11	78.31
Syngnathidae	1.66		0		3.57	0.84	4.37	82.69
Serranidae	0.87		1.33		3.25	0.83	3.98	86.66
Gerreidae	0.8		0.46		2.5	0.69	3.06	89.72
Lutjanidae	0		0.92		2.03	0.87	2.48	92.21

Groups 8/24/2016 &

8/12/2017

Average dissimilarity =

78.11

	Group 8/24/2016	Group 8/12/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Gobiidae	13.49	7.65	19.3	2.24	24.71	24.71
Pomacentridae	19.23	2.74	18.45	1.04	23.62	48.33
Clupeiformes	2.68	8.63	16.95	1.26	21.7	70.03
Achiriidae	0	3.99	7.29	0.77	9.33	79.36
Carangidae	0	1.38	3.53	0.97	4.52	83.87
Serranidae	0	1.33	2.51	0.7	3.21	87.08
Gerreidae	0.73	0.46	2.02	1.14	2.59	89.67
Lutjanidae	0	0.92	1.77	0.81	2.26	91.93

Groups 9/20/2016 &

8/12/2017

Average dissimilarity =

70.53

	Group 9/20/2016	Group 8/12/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Clupeiformes	0.37	8.63	18.38	1.86	26.07	26.07
Pomacentridae	8.64	2.74	15.61	1.27	22.14	48.2
Gobiidae	3.81	7.65	10.81	1.75	15.33	63.53
Achiriidae	0	3.99	8.28	0.89	11.74	75.27
Carangidae	0	1.38	3.88	1.28	5.51	80.78
Serranidae	1.51	1.33	3.79	1.02	5.38	86.16
Syngnathidae	1.12	0	2.25	0.85	3.19	89.35
Gerreidae	0.37	0.46	2.02	0.75	2.86	92.21

Groups 9/21/2016 &

8/12/2017

Average dissimilarity =

68.83

	Group 9/21/2016	Group 8/12/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%

Clupeiformes	0.99	8.63	17.89	1.58	25.99	25.99
Gobiidae	5.22	7.65	12.15	1.56	17.65	43.64
Pomacentridae	5.08	2.74	8.13	1.2	11.81	55.45
Achiriidae	0	3.99	8.06	0.88	11.71	67.16
Syngnathidae	3.41	0	6.95	1.16	10.1	77.26
Serranidae	0	1.33	2.77	0.78	4.03	81.29
Carangidae	0.92	1.38	2.7	0.83	3.92	85.21
Gerreidae	1.32	0.46	2.54	1.45	3.69	88.9
Lutjanidae	0	0.92	1.95	0.93	2.84	91.74

Groups 9/22/2016 &
8/12/2017

Average dissimilarity =
76.47

	Group 9/22/2016	Group 8/12/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Clupeiformes	4.79	8.63	21.8	1.61	28.5	28.5
Gobiidae	7.4	7.65	16.91	1.36	22.11	50.61
Achiriidae	0.48	3.99	8.53	0.85	11.15	61.76
Pomacentridae	2.36	2.74	5.8	1.14	7.59	69.35
Syngnathidae	3.25	0	5.44	1.1	7.11	76.46
Carangidae	0	1.38	4.29	1.01	5.61	82.07
Serranidae	0.48	1.33	3	0.77	3.92	86
Haemulidae	1.37	0	2.89	0.8	3.77	89.77
Gerreidae	0	0.46	2.23	0.47	2.91	92.68

Groups 10/20/2016 &
8/12/2017

Average dissimilarity =
66.63

	Group 10/20/2016	Group 8/12/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Pomacentridae	12.09	2.74	16.2	1.29	24.31	24.31
Clupeiformes	4.37	8.63	11.64	1.82	17.48	41.79
Gobiidae	4.71	7.65	8.25	1.66	12.39	54.17
Achiriidae	0	3.99	6.48	0.89	9.72	63.89
Tripterygidae	2.48	0	3.03	0.55	4.55	68.45
Sphyraenidae	1.6	0.44	2.66	1.04	3.99	72.43
Carangidae	0.39	1.38	2.28	1.21	3.42	75.86
Serranidae	0	1.33	2.22	0.8	3.33	79.18

Clupeidae	0.95	0	2.13	0.53	3.2	82.38
Congridae	0.95	0	2.13	0.53	3.2	85.58
Tetraodontiformes	0.78	0	1.58	0.54	2.36	87.94
Lutjanidae	0	0.92	1.56	0.94	2.34	90.28
Groups 10/21/2016 & 8/12/2017						
Average dissimilarity = 72.55						
	Group 10/21/2016	Group 8/12/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Clupeiformes	1.84	8.63	20.3	1.83	27.98	27.98
Gobiidae	1.79	7.65	15.2	2.12	20.94	48.92
Achiridae	0.46	3.99	9.57	1	13.18	62.11
Pomacentridae	3.12	2.74	6.9	0.96	9.51	71.62
Carangidae	0	1.38	4.56	1.33	6.28	77.9
Tripterygidae	1.31	0	3.73	0.51	5.14	83.04
Serranidae	0	1.33	3.22	0.8	4.43	87.48
Gerreidae	0.46	0.46	2.54	0.66	3.5	90.98
Groups 2/13/2017 & 8/12/2017						
Average dissimilarity = 69.80						
	Group 2/13/2017	Group 8/12/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Clupeiformes	0	8.63	14.77	1.78	21.16	21.16
Gobiidae	14.46	7.65	14.44	1.15	20.68	41.85
Pomacentridae	8.79	2.74	12.09	1.23	17.32	59.17
Achiridae	0	3.99	6.46	0.89	9.26	68.43
Tripterygidae	3.18	0	5.98	0.83	8.56	76.99
Gerreidae	2.34	0.46	4.19	0.8	6.01	83
Carangidae	0.35	1.38	2.51	1.17	3.6	86.6
Serranidae	0	1.33	2.21	0.79	3.17	89.77
Sphyraenidae	0.76	0.44	1.62	0.92	2.32	92.08
Groups 2/14/2017 & 8/12/2017						
Average dissimilarity = 86.31						

	Group 2/14/2017	Group 8/12/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Pomacentridae	195.6	2.74	43.55	1.14	50.46	50.46
Gobiidae	25.64	7.65	13.38	1.01	15.51	65.96
Tripterygidae	12.97	0	7.37	1.03	8.54	74.5
Gerreidae	10.55	0.46	6.05	1.41	7.01	81.51
Clupeiformes	0	8.63	5.48	1	6.34	87.86
Achiriidae	0	3.99	2.48	0.66	2.88	90.73

Groups 2/15/2017 &
8/12/2017

Average dissimilarity =
72.41

	Group 2/15/2017	Group 8/12/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Pomacentridae	21.27	2.74	26.85	1.92	37.08	37.08
Clupeiformes	0	8.63	13.26	1.64	18.31	55.39
Gobiidae	10.67	7.65	9.3	1.25	12.84	68.23
Achiriidae	0	3.99	5.83	0.86	8.05	76.28
Tripterygidae	1.73	0	2.52	0.91	3.48	79.76
Carangidae	0	1.38	2.46	1.27	3.4	83.17
Serranidae	0	1.33	1.99	0.78	2.75	85.92
Tetraodontiformes	1.53	0	1.95	0.94	2.69	88.61
Gerreidae	1.33	0.46	1.83	1.18	2.52	91.13

Groups 3/15/2017 &
8/12/2017

Average dissimilarity =
76.05

	Group 3/15/2017	Group 8/12/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Gobiidae	18.62	7.65	22.94	1.82	30.16	30.16
Clupeiformes	0	8.63	16.19	1.43	21.29	51.45
Pomacentridae	9	2.74	10.46	1.14	13.76	65.21
Achiriidae	0	3.99	6.85	0.8	9.01	74.21
Serranidae	3.24	1.33	4.37	1.37	5.75	79.96
Carangidae	0	1.38	3.17	1.02	4.17	84.13

Mullidae	0.85	0	2.19	0.52	2.88	87.02
Lutjanidae	0	0.92	1.66	0.84	2.18	89.2
Gerreidae	0	0.46	1.52	0.45	1.99	91.19

Groups 3/16/2017 &
8/12/2017

Average dissimilarity =
78.67

	Group 3/16/2017	Group 8/12/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Pomacentridae	27.6	2.74	23.44	1.2	29.8	29.8
Gobiidae	18.78	7.65	16.52	1.63	21	50.8
Clupeiformes	0	8.63	12.82	1.25	16.29	67.09
Achiriidae	0	3.99	5.52	0.75	7.01	74.1
Gerreidae	3.54	0.46	3.37	1.21	4.29	78.39
Serranidae	2.58	1.33	2.91	1.06	3.69	82.08
Carangidae	0	1.38	2.44	0.93	3.11	85.19
Tetraodontiformes	1.47	0	2.25	0.91	2.86	88.05
Holocentridae	0.89	0	2.17	0.79	2.76	90.81

Groups 3/17/2017 &
8/12/2017

Average dissimilarity =
67.00

	Group 3/17/2017	Group 8/12/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Gobiidae	23.43	7.65	18.53	1.48	27.66	27.66
Pomacentridae	12.93	2.74	12.71	1.83	18.97	46.63
Clupeiformes	1.19	8.63	9.94	1.46	14.84	61.48
Serranidae	6.66	1.33	6.88	1.31	10.27	71.74
Achiriidae	0	3.99	5.06	0.87	7.55	79.3
Gerreidae	1.92	0.46	3.17	1.11	4.73	84.02
Sphyraenidae	2.06	0.44	2.45	1.5	3.66	87.68
Carangidae	0	1.38	2.06	1.35	3.08	90.76

Groups 8/11/2017 &
8/12/2017

Average dissimilarity =
72.44

	Group 8/11/2017	Group 8/12/2017					
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%	
Pomacentridae	21.96	2.74	26.37	1.38	36.4	36.4	
Clupeiformes	2.42	8.63	13.41	1.41	18.52	54.92	
Gobiidae	3.67	7.65	9.21	1.25	12.71	67.63	
Achiriidae	0.42	3.99	7	0.89	9.66	77.28	
Carangidae	0.41	1.38	2.91	1.02	4.01	81.3	
Clupeidae	1.22	0	2.46	0.88	3.39	84.69	
Serranidae	0	1.33	2.37	0.75	3.27	87.96	
Gerreidae	1.22	0.46	2.35	0.77	3.25	91.21	

Groups 8/22/2016 &
8/13/2017

Average dissimilarity =
82.40

	Group 8/22/2016	Group 8/13/2017					
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%	
Gobiidae	6.34	3.61	24.54	1.91	29.78	29.78	
Pomacentridae	3.05	1.38	12.59	0.97	15.28	45.06	
Clupeiformes	0.92	2.26	10.93	0.8	13.26	58.32	
Serranidae	1.79	1.34	8.11	0.93	9.84	68.16	
Syngnathidae	1.89	0	5.48	0.69	6.65	74.81	
Achiriidae	0	0.91	4.29	0.8	5.21	80.01	
Carangidae	0.41	0.44	3.82	0.68	4.64	84.65	
Gerreidae	0.44	0.46	3.36	0.54	4.08	88.73	
Haemulidae	0	0.46	2.96	0.47	3.59	92.32	

Groups 8/23/2016 &
8/13/2017

Average dissimilarity =
84.23

	Group 8/23/2016	Group 8/13/2017					
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%	
Gobiidae	13.42	3.61	34.96	2.09	41.51	41.51	
Clupeiformes	1.3	2.26	9.65	0.78	11.45	52.96	
Pomacentridae	0	1.38	6.61	0.64	7.85	60.81	
Serranidae	0.87	1.34	6.12	0.77	7.27	68.08	
Syngnathidae	1.66	0	5.25	0.94	6.23	74.31	

Achiriidae	0.37	0.91	3.87	0.86	4.59	78.9
Gerreidae	0.8	0.46	3.78	0.79	4.49	83.39
Sphyraenidae	0.37	0.45	3.36	0.69	3.98	87.37
Haemulidae	0	0.46	2.42	0.46	2.88	90.25

Groups 8/24/2016 &

8/13/2017

Average dissimilarity =
79.55

	Group 8/24/2016	Group 8/13/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Pomacentridae	19.23	1.38	23.74	1.25	29.85	29.85
Gobiidae	13.49	3.61	23	1.76	28.92	58.76
Clupeiformes	2.68	2.26	9.06	0.87	11.4	70.16
Serranidae	0	1.34	4.76	0.67	5.98	76.14
Gerreidae	0.73	0.46	3.68	1	4.63	80.76
Achiriidae	0	0.91	3.06	0.74	3.85	84.61
Sphyraenidae	0.37	0.45	2.75	0.68	3.45	88.07
Haemulidae	0	0.46	1.96	0.45	2.46	90.53

Groups 9/20/2016 &

8/13/2017

Average dissimilarity =
65.48

	Group 9/20/2016	Group 8/13/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Pomacentridae	8.64	1.38	24.02	1.89	36.68	36.68
Gobiidae	3.81	3.61	8.86	1.18	13.52	50.2
Clupeiformes	0.37	2.26	8.53	1.08	13.03	63.23
Serranidae	1.51	1.34	6.04	1.03	9.22	72.46
Achiriidae	0	0.91	3.32	0.9	5.08	77.53
Syngnathidae	1.12	0	3.12	0.9	4.77	82.3
Gerreidae	0.37	0.46	2.89	0.79	4.41	86.72
Haemulidae	0	0.46	2.05	0.52	3.13	89.84
Sphyraenidae	0	0.45	1.71	0.53	2.61	92.45

Groups 9/21/2016 &

8/13/2017

Average dissimilarity =
68.15

	Group 9/21/2016	Group 8/13/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Pomacentridae	5.08	1.38	12.74	1.9	18.69	18.69
Gobiidae	5.22	3.61	11.64	1.09	17.08	35.77
Syngnathidae	3.41	0	9.77	1.27	14.34	50.11
Clupeiformes	0.99	2.26	8.25	0.86	12.1	62.21
Serranidae	0	1.34	4.97	0.79	7.29	69.5
Gerreidae	1.32	0.46	4.42	1.31	6.49	75.99
Achiriidae	0	0.91	3.22	0.87	4.73	80.72
Carangidae	0.92	0.44	3.04	0.91	4.46	85.18
Haemulidae	0	0.46	1.99	0.5	2.92	88.1
Sphyraenidae	0	0.45	1.66	0.52	2.43	90.53

Groups 9/22/2016 &
8/13/2017

Average dissimilarity =
78.58

	Group 9/22/2016	Group 8/13/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Gobiidae	7.4	3.61	22.27	1.3	28.34	28.34
Clupeiformes	4.79	2.26	15.35	1.09	19.53	47.87
Pomacentridae	2.36	1.38	8.6	0.85	10.94	58.81
Syngnathidae	3.25	0	7.61	1.3	9.69	68.5
Serranidae	0.48	1.34	5.98	0.72	7.61	76.11
Haemulidae	1.37	0.46	4.78	0.96	6.09	82.19
Achiriidae	0.48	0.91	3.86	0.8	4.91	87.1
Gerreidae	0	0.46	2.53	0.46	3.22	90.32

Groups 10/20/2016 &
8/13/2017

Average dissimilarity =
72.12

	Group 10/20/2016	Group 8/13/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Pomacentridae	12.09	1.38	22.7	1.67	31.47	31.47
Clupeiformes	4.37	2.26	11.69	1.2	16.21	47.69
Gobiidae	4.71	3.61	6.3	1.4	8.73	56.42

Tripterygidae	2.48	0.46	4.49	0.73	6.22	62.64
Sphyraenidae	1.6	0.45	3.58	1.12	4.96	67.6
Serranidae	0	1.34	3.4	0.83	4.71	72.31
Clupeidae	0.95	0	3.06	0.56	4.24	76.55
Congridae	0.95	0	3.06	0.56	4.24	80.79
Achiriidae	0	0.91	2.24	0.92	3.1	83.89
Tetraodontiformes	0.78	0	2.19	0.56	3.04	86.93
Carangidae	0.39	0.44	1.68	0.75	2.33	89.27
Gerreidae	0	0.46	1.28	0.53	1.78	91.05

Groups 10/21/2016 &
8/13/2017

Average dissimilarity =
67.95

	Group 10/21/2016	Group 8/13/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Gobiidae	1.79	3.61	13.15	1.37	19.35	19.35
Clupeiformes	1.84	2.26	13.14	1.06	19.34	38.68
Pomacentridae	3.12	1.38	10.43	1.38	15.35	54.04
Tripterygidae	1.31	0.46	6.84	0.71	10.06	64.1
Serranidae	0	1.34	6.2	0.86	9.13	73.23
Achiriidae	0.46	0.91	4.13	0.97	6.08	79.32
Gerreidae	0.46	0.46	3.33	0.72	4.9	84.22
Haemulidae	0	0.46	2.53	0.55	3.72	87.94
Labridae	0.45	0	2.13	0.56	3.13	91.07

Groups 2/13/2017 &
8/13/2017

Average dissimilarity =
73.30

	Group 2/13/2017	Group 8/13/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Gobiidae	14.46	3.61	23.67	1.68	32.29	32.29
Pomacentridae	8.79	1.38	15.94	1.33	21.75	54.04
Tripterygidae	3.18	0.46	8.18	0.94	11.15	65.19
Clupeiformes	0	2.26	5.64	0.86	7.69	72.89
Gerreidae	2.34	0.46	5.39	0.78	7.35	80.24
Serranidae	0	1.34	3.42	0.81	4.66	84.9
Sphyraenidae	0.76	0.45	2.27	0.99	3.1	88
Achiriidae	0	0.91	2.25	0.89	3.06	91.06

Groups 2/14/2017 &

8/13/2017

Average dissimilarity =

90.32

	Group 2/14/2017	Group 8/13/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Pomacentridae	195.6	1.38	46.7	1.22	51.7	51.7
Gobiidae	25.64	3.61	18.53	1.14	20.51	72.21
Tripterygidae	12.97	0.46	8.12	0.99	8.99	81.21
Gerreidae	10.55	0.46	7.15	1.35	7.92	89.13
Syngnathidae	1.89	0	1.82	1.09	2.01	91.14

Groups 2/15/2017 &

8/13/2017

Average dissimilarity =

75.79

	Group 2/15/2017	Group 8/13/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Pomacentridae	21.27	1.38	36.54	3	48.21	48.21
Gobiidae	10.67	3.61	13.75	1.63	18.14	66.34
Clupeiformes	0	2.26	4.94	0.81	6.51	72.86
Tripterygidae	1.73	0.46	3.37	1.07	4.45	77.31
Serranidae	0	1.34	2.99	0.76	3.94	81.25
Gerreidae	1.33	0.46	2.73	1.03	3.61	84.85
Tetraodontiformes	1.53	0	2.41	0.96	3.18	88.03
Achiridae	0	0.91	1.97	0.84	2.6	90.63

Groups 3/15/2017 &

8/13/2017

Average dissimilarity =

76.54

	Group 3/15/2017	Group 8/13/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Gobiidae	18.62	3.61	29.66	1.86	38.75	38.75
Pomacentridae	9	1.38	13.95	1.38	18.23	56.99
Clupeiformes	0	2.26	6.76	0.72	8.83	65.82

Serranidae	3.24	1.34	6.26	1.23	8.17	73.99
Mullidae	0.85	0	3.31	0.56	4.32	78.32
Achiridae	0	0.91	2.69	0.75	3.51	81.83
Holocentridae	0.4	0	2.38	0.55	3.12	84.94
Sphyraenidae	0.81	0.45	1.95	0.68	2.54	87.48
Gerreidae	0	0.46	1.66	0.45	2.17	89.65
Haemulidae	0	0.46	1.66	0.45	2.17	91.82

Groups 3/16/2017 &
8/13/2017

Average dissimilarity =
81.72

	Group 3/16/2017	Group 8/13/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Pomacentridae	27.6	1.38	28.25	1.29	34.57	34.57
Gobiidae	18.78	3.61	21.74	1.66	26.6	61.17
Clupeiformes	0	2.26	5.06	0.65	6.19	67.36
Serranidae	2.58	1.34	4.2	0.89	5.13	72.5
Gerreidae	3.54	0.46	4.02	1.29	4.93	77.42
Holocentridae	0.89	0	3.32	0.84	4.06	81.48
Tetraodontiformes	1.47	0	3.27	0.89	4.01	85.49
Scorpaenidae	0.44	0	2.31	0.55	2.83	88.32
Sphyraenidae	1.48	0.45	2.09	0.87	2.55	90.87

Groups 3/17/2017 &
8/13/2017

Average dissimilarity =
73.60

	Group 3/17/2017	Group 8/13/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Gobiidae	23.43	3.61	28.75	3.07	39.05	39.05
Pomacentridae	12.93	1.38	17.03	2.41	23.14	62.19
Serranidae	6.66	1.34	8.33	1.41	11.31	73.51
Gerreidae	1.92	0.46	4.34	1.03	5.89	79.4
Clupeiformes	1.19	2.26	4.07	1.14	5.52	84.93
Sphyraenidae	2.06	0.45	3	1.57	4.07	89
Haemulidae	1.1	0.46	1.79	0.91	2.44	91.44

Groups 8/11/2017 &
8/13/2017

Average dissimilarity =
71.54

	Group 8/11/2017	Group 8/13/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Pomacentridae	21.96	1.38	35.75	1.84	49.98	49.98
Clupeiformes	2.42	2.26	7.38	1.07	10.32	60.29
Gobiidae	3.67	3.61	6.94	0.91	9.7	69.99
Serranidae	0	1.34	4.01	0.74	5.6	75.59
Clupeidae	1.22	0	3.47	0.96	4.85	80.44
Gerreidae	1.22	0.46	2.66	0.77	3.72	84.16
Achiriidae	0.42	0.91	2.64	0.83	3.69	87.85
Haemulidae	0.8	0.46	2.56	0.82	3.58	91.43

Groups 8/12/2017 &
8/13/2017

Average dissimilarity =
62.63

	Group 8/12/2017	Group 8/13/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Clupeiformes	8.63	2.26	16.44	1.61	26.24	26.24
Gobiidae	7.65	3.61	11.33	1.53	18.09	44.33
Achiriidae	3.99	0.91	9.18	1.17	14.65	58.99
Pomacentridae	2.74	1.38	5.75	1.13	9.19	68.17
Serranidae	1.33	1.34	4.14	0.93	6.62	74.79
Carangidae	1.38	0.44	3.33	1.1	5.31	80.1
Gerreidae	0.46	0.46	2.22	0.7	3.54	83.64
Lutjanidae	0.92	0	2.12	0.96	3.38	87.03
Labridae	0.91	0	1.83	0.95	2.92	89.95
Sphyraenidae	0.44	0.45	1.6	0.68	2.55	92.5

Groups 8/22/2016 &
9/11/2017

Average dissimilarity =
85.17

	Group 8/22/2016	Group 9/11/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Gobiidae	6.34	4.63	16.27	1.81	19.1	19.1

Serranidae	1.79	4.13	15.76	0.7	18.5	37.59
Pomacentridae	3.05	4.14	8.29	0.94	9.73	47.32
Gerreidae	0.44	4.12	8.11	0.68	9.52	56.84
Clupeiformes	0.92	1.19	7.21	0.55	8.46	65.31
Carangidae	0.41	4.44	6.35	0.91	7.46	72.77
Blenniidae	0	4.04	4.64	0.77	5.44	78.21
Haemulidae	0	3.65	4.25	0.79	4.99	83.2
Syngnathidae	1.89	0	4.17	0.62	4.89	88.09
Sphyraenidae	0	0.79	2.59	0.58	3.04	91.13

Groups 8/23/2016 &
9/11/2017

Average dissimilarity =
88.80

	Group 8/23/2016	Group 9/11/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Gobiidae	13.42	4.63	24.87	1.35	28	28
Serranidae	0.87	4.13	13.71	0.72	15.44	43.44
Gerreidae	0.8	4.12	8.46	0.84	9.52	52.96
Clupeiformes	1.3	1.19	6.32	0.55	7.12	60.09
Pomacentridae	0	4.14	5.04	0.89	5.68	65.76
Carangidae	0	4.44	4.76	0.74	5.36	71.12
Blenniidae	0	4.04	4.39	0.75	4.94	76.06
Haemulidae	0	3.65	4.01	0.77	4.52	80.58
Syngnathidae	1.66	0	3.95	0.79	4.44	85.03
Sphyraenidae	0.37	0.79	2.5	0.63	2.82	87.85
Scombridae	0	1.67	2.15	0.91	2.42	90.26

Groups 8/24/2016 &
9/11/2017

Average dissimilarity =
84.80

	Group 8/24/2016	Group 9/11/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Pomacentridae	19.23	4.14	19.92	1.09	23.49	23.49
Gobiidae	13.49	4.63	16.38	1.27	19.32	42.81
Serranidae	0	4.13	11.79	0.75	13.9	56.71
Gerreidae	0.73	4.12	8.13	0.93	9.59	66.3
Clupeiformes	2.68	1.19	6.04	0.61	7.13	73.42
Carangidae	0	4.44	4.3	0.7	5.07	78.5

Blenniidae	0	4.04	3.96	0.72	4.67	83.17
Haemulidae	0	3.65	3.62	0.74	4.27	87.44
Sphyraenidae	0.37	0.79	2.08	0.62	2.45	89.89
Scombridae	0	1.67	1.92	0.86	2.26	92.15

Groups 9/20/2016 &

9/11/2017

Average dissimilarity =
74.82

	Group 9/20/2016	Group 9/11/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Pomacentridae	8.64	4.14	19.02	1.25	25.42	25.42
Serranidae	1.51	4.13	10.58	0.81	14.14	39.56
Gerreidae	0.37	4.12	8.09	0.82	10.81	50.37
Gobiidae	3.81	4.63	7.13	1.55	9.53	59.9
Clupeiformes	0.37	1.19	5.25	0.68	7.01	66.92
Carangidae	0	4.44	4.83	0.75	6.46	73.37
Blenniidae	0	4.04	4.45	0.76	5.95	79.32
Haemulidae	0	3.65	4.07	0.79	5.44	84.76
Syngnathidae	1.12	0	2.39	0.79	3.19	87.95
Scombridae	0	1.67	2.16	0.95	2.89	90.85

Groups 9/21/2016 &

9/11/2017

Average dissimilarity =
78.29

	Group 9/21/2016	Group 9/11/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Serranidae	0	4.13	12.17	0.9	15.54	15.54
Pomacentridae	5.08	4.14	11.65	1.52	14.89	30.43
Gerreidae	1.32	4.12	9.08	1.14	11.6	42.02
Gobiidae	5.22	4.63	7.96	0.89	10.17	52.19
Syngnathidae	3.41	0	7.44	1.05	9.5	61.69
Carangidae	0.92	4.44	5.54	0.96	7.07	68.77
Clupeiformes	0.99	1.19	5.3	0.6	6.77	75.54
Blenniidae	0	4.04	4.37	0.76	5.58	81.11
Haemulidae	0	3.65	3.99	0.78	5.1	86.21
Tetraodontiformes	0.5	0.98	2.75	0.75	3.51	89.72
Scombridae	0	1.67	2.12	0.94	2.71	92.43

Groups 9/22/2016 &

9/11/2017

Average dissimilarity =

85.46

	Group 9/22/2016	Group 9/11/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Gobiidae	7.4	4.63	14.94	1	17.48	17.48
Serranidae	0.48	4.13	14.55	0.75	17.02	34.5
Clupeiformes	4.79	1.19	10.93	0.77	12.79	47.29
Gerreidae	0	4.12	7.39	0.64	8.65	55.94
Pomacentridae	2.36	4.14	6.58	1.23	7.7	63.64
Haemulidae	1.37	3.65	5.97	1.1	6.98	70.62
Syngnathidae	3.25	0	5.88	1.05	6.88	77.5
Carangidae	0	4.44	4.8	0.74	5.62	83.12
Blenniidae	0	4.04	4.42	0.75	5.18	88.3
Sphyraenidae	0	0.79	2.29	0.58	2.68	90.98

Groups 10/20/2016 &

9/11/2017

Average dissimilarity =

78.56

	Group 10/20/2016	Group 9/11/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Pomacentridae	12.09	4.14	18.21	1.26	23.18	23.18
Clupeiformes	4.37	1.19	9.04	0.99	11.5	34.68
Serranidae	0	4.13	8.32	1.05	10.59	45.27
Gerreidae	0	4.12	5.81	0.69	7.4	52.67
Gobiidae	4.71	4.63	5.32	1.33	6.77	59.44
Carangidae	0.39	4.44	4.49	0.82	5.71	65.16
Blenniidae	0	4.04	3.83	0.74	4.88	70.03
Haemulidae	0	3.65	3.49	0.76	4.45	74.48
Tripterygidae	2.48	0	3.05	0.53	3.89	78.36
Tetraodontiformes	0.78	0.98	2.59	0.72	3.3	81.66
Sphyraenidae	1.6	0.79	2.49	0.91	3.18	84.84
Clupeidae	0.95	0	2.3	0.5	2.93	87.77
Congridae	0.95	0	2.3	0.5	2.93	90.7

Groups 10/21/2016 &

9/11/2017

Average dissimilarity =
84.47

	Group 10/21/2016	Group 9/11/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Serranidae	0	4.13	15.12	0.99	17.9	17.9
Pomacentridae	3.12	4.14	11.48	1.41	13.59	31.48
Clupeiformes	1.84	1.19	8.86	0.74	10.49	41.97
Gerreidae	0.46	4.12	8.75	0.79	10.35	52.33
Gobiidae	1.79	4.63	8.62	1.65	10.21	62.53
Carangidae	0	4.44	5.19	0.76	6.14	68.67
Blenniidae	0	4.04	4.78	0.78	5.66	74.34
Haemulidae	0	3.65	4.38	0.8	5.19	79.52
Tripterygidae	1.31	0	4.25	0.48	5.03	84.55
Sphyraenidae	0	0.79	2.38	0.7	2.81	87.36
Scombridae	0	1.67	2.36	0.97	2.8	90.16

Groups 2/13/2017 &
9/11/2017

Average dissimilarity =
79.54

	Group 2/13/2017	Group 9/11/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Gobiidae	14.46	4.63	20.57	1.46	25.86	25.86
Pomacentridae	8.79	4.14	13.26	1.14	16.67	42.53
Serranidae	0	4.13	8.38	1.01	10.53	53.06
Gerreidae	2.34	4.12	7.38	0.87	9.27	62.34
Tripterygidae	3.18	0	6.29	0.77	7.9	70.24
Carangidae	0.35	4.44	4.28	0.77	5.38	75.62
Blenniidae	0	4.04	3.82	0.74	4.8	80.42
Haemulidae	0	3.65	3.49	0.76	4.38	84.8
Clupeiformes	0	1.19	3.17	0.52	3.99	88.79
Tetraodontiformes	0.36	0.98	2.23	0.79	2.8	91.59

Groups 2/14/2017 &
9/11/2017

Average dissimilarity =
87.34

	Group 2/14/2017	Group 9/11/2017		
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Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Pomacentridae	195.6	4.14	43.57	1.16	49.88	49.88
Gobiidae	25.64	4.63	15.74	1.02	18.02	67.9
Tripterygidae	12.97	0	7.34	1	8.4	76.3
Gerreidae	10.55	4.12	5.11	1.02	5.85	82.15
Serranidae	0.51	4.13	2.69	0.77	3.08	85.23
Carangidae	0	4.44	1.97	0.56	2.25	87.48
Blenniidae	0.46	4.04	1.88	0.63	2.15	89.63
Haemulidae	0	3.65	1.64	0.59	1.87	91.5

Groups 2/15/2017 &
9/11/2017

Average dissimilarity =
79.64

Species	Group 2/15/2017	Group 9/11/2017	Av.Diss	Diss/SD	Contrib%	Cum.%
Pomacentridae	21.27	4.14	28.31	1.62	35.55	35.55
Gobiidae	10.67	4.63	12.11	1.42	15.21	50.76
Serranidae	0	4.13	7.39	0.95	9.28	60.03
Gerreidae	1.33	4.12	6.25	1.04	7.85	67.89
Carangidae	0	4.44	3.88	0.71	4.87	72.76
Blenniidae	0	4.04	3.56	0.73	4.47	77.23
Haemulidae	0	3.65	3.25	0.75	4.08	81.3
Clupeiformes	0	1.19	2.77	0.5	3.47	84.78
Tripterygidae	1.73	0	2.57	0.86	3.23	88.01
Tetraodontiformes	1.53	0.98	2.5	0.92	3.15	91.16

Groups 3/15/2017 &
9/11/2017

Average dissimilarity =
79.99

Species	Group 3/15/2017	Group 9/11/2017	Av.Diss	Diss/SD	Contrib%	Cum.%
Gobiidae	18.62	4.63	23.88	1.52	29.85	29.85
Pomacentridae	9	4.14	12.87	1.35	16.1	45.95
Serranidae	3.24	4.13	8.61	0.68	10.76	56.71
Gerreidae	0	4.12	6.08	0.64	7.6	64.31
Carangidae	0	4.44	4.2	0.71	5.26	69.56
Clupeiformes	0	1.19	3.92	0.45	4.9	74.47

Blenniidae	0	4.04	3.87	0.73	4.84	79.3
Haemulidae	0	3.65	3.53	0.75	4.42	83.72
Mullidae	0.85	0	2.44	0.49	3.06	86.78
Tetraodontiformes	0.81	0.98	2.19	0.73	2.73	89.51
Scombridae	0	1.67	1.85	0.89	2.32	91.83

Groups 3/16/2017 &
9/11/2017

Average dissimilarity =
79.68

	Group 3/16/2017	Group 9/11/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Pomacentridae	27.6	4.14	23.63	1.17	29.66	29.66
Gobiidae	18.78	4.63	17.2	1.25	21.59	51.25
Serranidae	2.58	4.13	7.06	0.64	8.87	60.11
Gerreidae	3.54	4.12	5.88	0.81	7.38	67.49
Carangidae	0	4.44	3.61	0.68	4.53	72.02
Blenniidae	0	4.04	3.32	0.69	4.16	76.18
Haemulidae	0.52	3.65	3.1	0.75	3.88	80.06
Tetraodontiformes	1.47	0.98	2.91	0.88	3.65	83.71
Clupeiformes	0	1.19	2.9	0.42	3.63	87.35
Holocentridae	0.89	0	2.45	0.71	3.08	90.43

Groups 3/17/2017 &
9/11/2017

Average dissimilarity =
72.15

	Group 3/17/2017	Group 9/11/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Gobiidae	23.43	4.63	23.98	1.84	33.24	33.24
Pomacentridae	12.93	4.14	13.49	1.49	18.7	51.94
Serranidae	6.66	4.13	7.53	1.58	10.44	62.38
Gerreidae	1.92	4.12	5.89	1.1	8.16	70.53
Carangidae	0	4.44	3.53	0.7	4.9	75.43
Haemulidae	1.1	3.65	3.37	0.93	4.67	80.1
Blenniidae	0	4.04	3.24	0.71	4.49	84.59
Clupeiformes	1.19	1.19	2.79	0.85	3.87	88.46
Sphyraenidae	2.06	0.79	2	1.13	2.78	91.24

Groups 8/11/2017 &

9/11/2017

Average dissimilarity =

79.46

	Group 8/11/2017	Group 9/11/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Pomacentridae	21.96	4.14	28.98	1.39	36.47	36.47
Serranidae	0	4.13	9.82	0.87	12.36	48.83
Gerreidae	1.22	4.12	6.38	0.7	8.03	56.86
Clupeiformes	2.42	1.19	5.38	0.85	6.77	63.63
Gobiidae	3.67	4.63	5.08	1.24	6.39	70.02
Carangidae	0.41	4.44	4.33	0.75	5.45	75.47
Haemulidae	0.8	3.65	4.32	0.96	5.44	80.91
Blenniidae	0	4.04	3.92	0.73	4.93	85.84
Clupeidae	1.22	0	2.64	0.82	3.32	89.16
Scombridae	0	1.67	1.87	0.9	2.36	91.52

Groups 8/12/2017 &

9/11/2017

Average dissimilarity =

74.36

	Group 8/12/2017	Group 9/11/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Clupeiformes	8.63	1.19	13.65	1.46	18.36	18.36
Gobiidae	7.65	4.63	9.75	1.38	13.12	31.47
Serranidae	1.33	4.13	7.54	0.87	10.14	41.62
Achiriidae	3.99	0	6.85	0.82	9.22	50.83
Gerreidae	0.46	4.12	6.63	0.85	8.92	59.75
Pomacentridae	2.74	4.14	6.14	1.42	8.26	68.01
Carangidae	1.38	4.44	5.48	1.1	7.37	75.38
Blenniidae	0	4.04	3.88	0.74	5.21	80.6
Haemulidae	0	3.65	3.54	0.76	4.76	85.35
Lutjanidae	0.92	0.79	1.95	1.04	2.63	87.98
Scombridae	0	1.67	1.84	0.93	2.47	90.45

Groups 8/13/2017 &

9/11/2017

Average dissimilarity =

70.97

	Group 8/13/2017	Group 9/11/2017					
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%	
Serranidae	1.34	4.13	10.87	0.98	15.31	15.31	
Gerreidae	0.46	4.12	8.44	0.82	11.89	27.2	
Pomacentridae	1.38	4.14	7.46	1.17	10.5	37.7	
Clupeiformes	2.26	1.19	7.4	0.83	10.43	48.13	
Gobiidae	3.61	4.63	7.36	1.04	10.37	58.5	
Carangidae	0.44	4.44	5.63	0.89	7.93	66.42	
Blenniidae	0.46	4.04	5.18	0.91	7.3	73.72	
Haemulidae	0.46	3.65	5.01	0.95	7.06	80.78	
Achiridae	0.91	0	2.61	0.8	3.68	84.46	
Sphyraenidae	0.45	0.79	2.41	0.78	3.39	87.85	
Scombridae	0	1.67	2.25	0.97	3.18	91.03	

Groups 8/22/2016 &
9/12/2017

Average dissimilarity =
80.48

	Group 8/22/2016	Group 9/12/2017					
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%	
Gobiidae	6.34	5.29	24.43	1.01	30.36	30.36	
Gerreidae	0.44	1.24	12.7	0.67	15.78	46.14	
Pomacentridae	3.05	0.41	9.13	0.79	11.35	57.48	
Carangidae	0.41	1.41	8.03	0.63	9.98	67.46	
Syngnathidae	1.89	0	5.74	0.66	7.13	74.59	
Serranidae	1.79	0	4.26	0.89	5.29	79.88	
Sphyraenidae	0	1.17	4.17	0.82	5.18	85.06	
Scombridae	0	1.15	3.57	0.51	4.43	89.49	
Clupeiformes	0.92	0	2.5	0.85	3.1	92.6	

Groups 8/23/2016 &
9/12/2017

Average dissimilarity =
83.12

	Group 8/23/2016	Group 9/12/2017					
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%	
Gobiidae	13.42	5.29	34.7	1.34	41.75	41.75	
Carangidae	0	1.41	8.34	0.85	10.03	51.78	

Gerreidae	0.8	1.24	8.01	0.65	9.63	61.41
Syngnathidae	1.66	0	5.87	0.87	7.06	68.48
Sphyraenidae	0.37	1.17	5.85	0.71	7.04	75.52
Scombridae	0	1.15	3.19	0.51	3.84	79.36
Achiridae	0.37	0	2.8	0.49	3.36	82.72
Pomacentridae	0	0.41	2.68	0.44	3.22	85.94
Clupeiformes	1.3	0	2.38	0.55	2.86	88.81
Callionymidae	0.43	0.58	2.22	0.7	2.67	91.48

Groups 8/24/2016 &
9/12/2017

Average dissimilarity =
80.36

	Group 8/24/2016	Group 9/12/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Gobiidae	13.49	5.29	26.57	1.54	33.07	33.07
Pomacentridae	19.23	0.41	25.68	1.27	31.95	65.02
Carangidae	0	1.41	6.32	0.89	7.86	72.88
Gerreidae	0.73	1.24	4.78	0.97	5.94	78.83
Sphyraenidae	0.37	1.17	4.39	0.78	5.46	84.29
Scombridae	0	1.15	2.75	0.48	3.42	87.7
Clupeiformes	2.68	0	2.32	0.56	2.89	90.59

Groups 9/20/2016 &
9/12/2017

Average dissimilarity =
81.82

	Group 9/20/2016	Group 9/12/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Pomacentridae	8.64	0.41	27.66	1.74	33.8	33.8
Gobiidae	3.81	5.29	20.18	1.96	24.67	58.47
Carangidae	0	1.41	6.32	1.23	7.73	66.2
Gerreidae	0.37	1.24	5.87	0.97	7.17	73.37
Serranidae	1.51	0	4.45	0.92	5.44	78.8
Sphyraenidae	0	1.17	3.49	0.91	4.27	83.08
Syngnathidae	1.12	0	3.25	0.87	3.97	87.05
Scombridae	0	1.15	3.09	0.54	3.78	90.82

Groups 9/21/2016 &
9/12/2017

Average dissimilarity =
73.19

	Group 9/21/2016	Group 9/12/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Gobiidae	5.22	5.29	20.8	1.71	28.42	28.42
Pomacentridae	5.08	0.41	15.52	1.83	21.2	49.62
Syngnathidae	3.41	0	10.25	1.18	14.01	63.62
Carangidae	0.92	1.41	4.84	0.81	6.61	70.24
Gerreidae	1.32	1.24	4.78	1.24	6.53	76.77
Sphyraenidae	0	1.17	3.39	0.89	4.63	81.4
Scombridae	0	1.15	3	0.54	4.1	85.5
Clupeiformes	0.99	0	2.21	0.55	3.02	88.52
Monacanthidae	0	0.6	1.89	0.53	2.58	91.1

Groups 9/22/2016 &
9/12/2017

Average dissimilarity =
87.84

	Group 9/22/2016	Group 9/12/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Gobiidae	7.4	5.29	26.58	1.14	30.26	30.26
Gerreidae	0	1.24	9.95	0.68	11.32	41.58
Carangidae	0	1.41	8.76	0.86	9.98	51.56
Syngnathidae	3.25	0	8.49	1.14	9.67	61.22
Clupeiformes	4.79	0	7.58	0.55	8.63	69.85
Pomacentridae	2.36	0.41	6.73	1.05	7.66	77.51
Haemulidae	1.37	0	5.78	0.65	6.58	84.09
Sphyraenidae	0	1.17	3.78	0.81	4.31	88.39
Scombridae	0	1.15	3.27	0.51	3.72	92.11

Groups 10/20/2016 &
9/12/2017

Average dissimilarity =
84.39

	Group 10/20/2016	Group 9/12/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Pomacentridae	12.09	0.41	25.04	1.64	29.68	29.68

Gobiidae	4.71	5.29	13.34	2.05	15.81	45.49
Clupeiformes	4.37	0	12.63	0.92	14.97	60.46
Gerreidae	0	1.24	3.91	0.84	4.63	65.09
Tripterygidae	2.48	0	3.75	0.55	4.45	69.54
Sphyraenidae	1.6	1.17	3.72	1.05	4.41	73.94
Clupeidae	0.95	0	3.22	0.54	3.82	77.76
Congridae	0.95	0	3.22	0.54	3.82	81.58
Carangidae	0.39	1.41	3.16	1.23	3.74	85.32
Scombridae	0	1.15	2.28	0.54	2.71	88.03
Tetraodontiformes	0.78	0	2.28	0.54	2.7	90.73

Groups 10/21/2016 &
9/12/2017

Average dissimilarity =
85.71

	Group 10/21/2016	Group 9/12/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Gobiidae	1.79	5.29	22.54	1.35	26.29	26.29
Pomacentridae	3.12	0.41	14.51	1.26	16.93	43.22
Gerreidae	0.46	1.24	8.28	0.89	9.66	52.88
Clupeiformes	1.84	0	8.03	0.53	9.37	62.25
Carangidae	0	1.41	7.91	1.39	9.23	71.48
Tripterygidae	1.31	0	6.47	0.52	7.55	79.03
Sphyraenidae	0	1.17	4.1	0.94	4.78	83.81
Scombridae	0	1.15	3.57	0.56	4.17	87.98
Labridae	0.45	0	2.41	0.51	2.82	90.79

Groups 2/13/2017 &
9/12/2017

Average dissimilarity =
74.27

	Group 2/13/2017	Group 9/12/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Gobiidae	14.46	5.29	26.47	1.46	35.64	35.64
Pomacentridae	8.79	0.41	17.11	1.29	23.04	58.68
Tripterygidae	3.18	0	8.42	0.83	11.34	70.02
Gerreidae	2.34	1.24	6.78	1.03	9.13	79.15
Carangidae	0.35	1.41	3.56	1.17	4.79	83.94
Sphyraenidae	0.76	1.17	3.06	1.2	4.11	88.06
Scombridae	0	1.15	2.28	0.54	3.07	91.13

Groups 2/14/2017 &

9/12/2017

Average dissimilarity =

89.59

	Group 2/14/2017	Group 9/12/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Pomacentridae	195.6	0.41	47.52	1.26	53.05	53.05
Gobiidae	25.64	5.29	17.75	1.02	19.81	72.86
Tripterygidae	12.97	0	8.52	1.03	9.51	82.36
Gerreidae	10.55	1.24	6.55	1.35	7.31	89.67
Syngnathidae	1.89	0	1.83	1.08	2.05	91.72

Groups 2/15/2017 &

9/12/2017

Average dissimilarity =

78.44

	Group 2/15/2017	Group 9/12/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Pomacentridae	21.27	0.41	39.75	3.12	50.67	50.67
Gobiidae	10.67	5.29	16.67	1.49	21.25	71.92
Carangidae	0	1.41	3.37	1.19	4.29	76.21
Tripterygidae	1.73	0	3.27	0.92	4.17	80.38
Gerreidae	1.33	1.24	2.9	1.3	3.69	84.08
Tetraodontiformes	1.53	0	2.44	0.94	3.11	87.18
Sphyraenidae	0.77	1.17	2.36	1.02	3.01	90.19

Groups 3/15/2017 &

9/12/2017

Average dissimilarity =

83.74

	Group 3/15/2017	Group 9/12/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Gobiidae	18.62	5.29	32.1	1.68	38.33	38.33
Pomacentridae	9	0.41	16.6	1.42	19.82	58.15
Serranidae	3.24	0	5.77	1.52	6.89	65.04
Gerreidae	0	1.24	5.69	0.64	6.79	71.83

Carangidae	0	1.41	5.23	0.89	6.24	78.07
Mullidae	0.85	0	3.59	0.53	4.28	82.35
Sphyraenidae	0.81	1.17	2.95	0.85	3.52	85.88
Holocentridae	0.4	0	2.93	0.49	3.5	89.38
Scombridae	0	1.15	2.52	0.49	3.01	92.38

Groups 3/16/2017 &
9/12/2017

Average dissimilarity =
83.46

	Group 3/16/2017	Group 9/12/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Pomacentridae	27.6	0.41	28.21	1.22	33.81	33.81
Gobiidae	18.78	5.29	24.65	1.68	29.53	63.34
Gerreidae	3.54	1.24	5.38	0.85	6.45	69.79
Carangidae	0	1.41	3.73	0.81	4.47	74.26
Holocentridae	0.89	0	3.73	0.73	4.47	78.73
Tetraodontiformes	1.47	0	3.66	0.75	4.39	83.12
Scorpaenidae	0.44	0	2.7	0.51	3.23	86.34
Sphyraenidae	1.48	1.17	2.42	0.82	2.91	89.25
Serranidae	2.58	0	2.37	0.95	2.84	92.09

Groups 3/17/2017 &
9/12/2017

Average dissimilarity =
75.02

	Group 3/17/2017	Group 9/12/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Gobiidae	23.43	5.29	27.58	1.71	36.76	36.76
Pomacentridae	12.93	0.41	19.08	2.86	25.43	62.18
Serranidae	6.66	0	8.87	1.26	11.83	74.01
Gerreidae	1.92	1.24	3.82	1.17	5.09	79.1
Carangidae	0	1.41	2.64	1.33	3.52	82.62
Sphyraenidae	2.06	1.17	2.63	1.16	3.51	86.13
Clupeiformes	1.19	0	2.04	0.86	2.72	88.85
Scombridae	0	1.15	1.72	0.53	2.29	91.14

Groups 8/11/2017 &
9/12/2017

Average dissimilarity =
87.95

	Group 8/11/2017	Group 9/12/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Pomacentridae	21.96	0.41	39.96	2.04	45.44	45.44
Gobiidae	3.67	5.29	14.78	1.36	16.8	62.24
Clupeiformes	2.42	0	5.93	0.78	6.75	68.99
Gerreidae	1.22	1.24	5.7	0.86	6.48	75.47
Carangidae	0.41	1.41	4.53	1.01	5.15	80.62
Clupeidae	1.22	0	3.67	0.91	4.17	84.8
Sphyraenidae	0.41	1.17	2.85	0.86	3.24	88.03
Scombridae	0	1.15	2.52	0.51	2.86	90.89

Groups 8/12/2017 &
9/12/2017

Average dissimilarity =
74.17

	Group 8/12/2017	Group 9/12/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Clupeiformes	8.63	0	21.62	1.85	29.15	29.15
Gobiidae	7.65	5.29	15.62	1.4	21.05	50.21
Achiriidae	3.99	0	8.94	0.88	12.05	62.26
Pomacentridae	2.74	0.41	5.74	1.27	7.74	70
Gerreidae	0.46	1.24	3.67	1.05	4.95	74.95
Serranidae	1.33	0	3.08	0.79	4.16	79.11
Sphyraenidae	0.44	1.17	2.7	0.96	3.64	82.75
Scombridae	0	1.15	2.35	0.53	3.17	85.92
Lutjanidae	0.92	0	2.18	0.94	2.93	88.85
Carangidae	1.38	1.41	2	1.06	2.7	91.55

Groups 8/13/2017 &
9/12/2017

Average dissimilarity =
78.93

	Group 8/13/2017	Group 9/12/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Gobiidae	3.61	5.29	21.73	1.87	27.53	27.53

Clupeiformes	2.26	0	9.65	0.85	12.23	39.76
Pomacentridae	1.38	0.41	6.69	0.84	8.47	48.23
Gerreidae	0.46	1.24	6.46	0.99	8.19	56.42
Serranidae	1.34	0	5.95	0.81	7.54	63.96
Carangidae	0.44	1.41	5.54	1.24	7.02	70.98
Sphyraenidae	0.45	1.17	4.3	1.03	5.45	76.43
Achiridae	0.91	0	3.83	0.89	4.85	81.29
Scombridae	0	1.15	3.28	0.56	4.15	85.44
Haemulidae	0.46	0	2.45	0.52	3.1	88.54
Monacanthidae	0	0.6	2.07	0.56	2.62	91.16

Groups 9/11/2017 &
9/12/2017

Average dissimilarity =
85.03

	Group 9/11/2017	Group 9/12/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Gobiidae	4.63	5.29	15.27	1.44	17.96	17.96
Serranidae	4.13	0	14.61	0.9	17.19	35.15
Gerreidae	4.12	1.24	10.66	1.07	12.54	47.69
Carangidae	4.44	1.41	7.61	1.29	8.95	56.63
Pomacentridae	4.14	0.41	6.21	1.17	7.3	63.94
Clupeiformes	1.19	0	5.69	0.52	6.69	70.63
Blenniidae	4.04	0	4.65	0.77	5.47	76.09
Haemulidae	3.65	0	4.25	0.79	5	81.1
Scombridae	1.67	1.15	3.83	0.84	4.51	85.61
Sphyraenidae	0.79	1.17	3.43	0.92	4.03	89.64
Tetraodontiformes	0.98	0	2.21	0.55	2.59	92.23

Groups 8/22/2016 &
9/13/2017

Average dissimilarity =
86.42

	Group 8/22/2016	Group 9/13/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Gobiidae	6.34	4.15	33.6	1.27	38.88	38.88
Tetraodontiformes	0	0.61	11.06	0.39	12.79	51.68
Pomacentridae	3.05	1.29	10.36	0.8	11.98	63.66
Serranidae	1.79	0.84	8.01	0.79	9.27	72.93
Syngnathidae	1.89	0	6.44	0.66	7.46	80.39

Carangidae	0.41	0	6.16	0.47	7.12	87.51
Ostraciidae	0	0.84	5.02	0.47	5.81	93.32
Groups 8/23/2016 & 9/13/2017						
Average dissimilarity = 89.54						
	Group 8/23/2016	Group 9/13/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Gobiidae	13.42	4.15	41.48	1.88	46.32	46.32
Syngnathidae	1.66	0	7.01	0.87	7.82	54.14
Tetraodontiformes	0	0.61	6.89	0.4	7.7	61.84
Sphyraenidae	0.37	0	5.74	0.47	6.41	68.25
Gerreidae	0.8	0.64	5.63	0.8	6.29	74.54
Serranidae	0.87	0.84	5.08	0.57	5.67	80.22
Pomacentridae	0	1.29	4.26	0.5	4.76	84.98
Ostraciidae	0	0.84	4.17	0.46	4.65	89.63
Achiriidae	0.37	0	3.64	0.5	4.07	93.7
Groups 8/24/2016 & 9/13/2017						
Average dissimilarity = 84.03						
	Group 8/24/2016	Group 9/13/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Pomacentridae	19.23	1.29	28.4	1.27	33.8	33.8
Gobiidae	13.49	4.15	27.95	2	33.26	67.06
Gerreidae	0.73	0.64	6.96	0.88	8.28	75.34
Tetraodontiformes	0	0.61	4.6	0.41	5.47	80.81
Sphyraenidae	0.37	0	3.65	0.5	4.34	85.15
Ostraciidae	0	0.84	3.39	0.45	4.04	89.19
Serranidae	0	0.84	3.39	0.45	4.04	93.22
Groups 9/20/2016 & 9/13/2017						
Average dissimilarity = 72.13						
	Group 9/20/2016	Group 9/13/2017				

Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Pomacentridae	8.64	1.29	31.82	1.8	44.11	44.11
Gobiidae	3.81	4.15	15.19	1.46	21.06	65.17
Serranidae	1.51	0.84	6.28	0.9	8.71	73.88
Gerreidae	0.37	0.64	4.35	0.72	6.04	79.92
Tetraodontiformes	0	0.61	4.17	0.49	5.78	85.69
Syngnathidae	1.12	0	3.62	0.88	5.02	90.71

Groups 9/21/2016 &
9/13/2017

Average dissimilarity =
74.25

	Group 9/21/2016	Group 9/13/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Pomacentridae	5.08	1.29	18.71	1.85	25.2	25.2
Gobiidae	5.22	4.15	17.17	1.42	23.12	48.32
Syngnathidae	3.41	0	11.52	1.2	15.52	63.84
Gerreidae	1.32	0.64	7.42	1.13	9.99	73.84
Tetraodontiformes	0.5	0.61	4.94	0.56	6.65	80.49
Ostraciidae	0	0.84	3.48	0.51	4.68	85.18
Serranidae	0	0.84	3.48	0.51	4.68	89.86
Carangidae	0.92	0	3.12	0.88	4.21	94.07

Groups 9/22/2016 &
9/13/2017

Average dissimilarity =
83.24

	Group 9/22/2016	Group 9/13/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Gobiidae	7.4	4.15	30.19	1.36	36.27	36.27
Syngnathidae	3.25	0	10.07	1.12	12.09	48.37
Clupeiformes	4.79	0	8.05	0.56	9.68	58.04
Haemulidae	1.37	0	7.75	0.62	9.31	67.36
Pomacentridae	2.36	1.29	7.74	0.89	9.29	76.65
Tetraodontiformes	0	0.61	7.34	0.41	8.82	85.47
Serranidae	0.48	0.84	4.76	0.52	5.72	91.18

Groups 10/20/2016 &
9/13/2017

Average dissimilarity =
80.83

	Group 10/20/2016	Group 9/13/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Pomacentridae	12.09	1.29	27.02	1.64	33.43	33.43
Clupeiformes	4.37	0	14.07	0.93	17.4	50.83
Gobiidae	4.71	4.15	8.66	1.18	10.72	61.55
Sphyraenidae	1.6	0	4.49	1.12	5.56	67.11
Tripterygidae	2.48	0	3.98	0.56	4.92	72.03
Clupeidae	0.95	0	3.65	0.54	4.52	76.55
Congridae	0.95	0	3.65	0.54	4.52	81.06
Tetraodontiformes	0.78	0.61	3.49	0.75	4.32	85.39
Ostraciidae	0	0.84	2.28	0.54	2.83	88.21
Serranidae	0	0.84	2.28	0.54	2.83	91.04

Groups 10/21/2016 &
9/13/2017

Average dissimilarity =
80.60

	Group 10/21/2016	Group 9/13/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Gobiidae	1.79	4.15	20.02	1.54	24.83	24.83
Pomacentridae	3.12	1.29	19.96	1.37	24.76	49.6
Clupeiformes	1.84	0	9.4	0.53	11.66	61.26
Tripterygidae	1.31	0	7.72	0.53	9.58	70.84
Tetraodontiformes	0	0.61	5.46	0.54	6.77	77.61
Ostraciidae	0	0.84	4.4	0.55	5.46	83.07
Serranidae	0	0.84	4.4	0.55	5.46	88.53
Gerreidae	0.46	0.64	3.98	0.78	4.93	93.46

Groups 2/13/2017 &
9/13/2017

Average dissimilarity =
75.29

	Group 2/13/2017	Group 9/13/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Gobiidae	14.46	4.15	28.75	1.67	38.19	38.19

Pomacentridae	8.79	1.29	18.8	1.37	24.97	63.16
Tripterygidae	3.18	0	9.31	0.83	12.37	75.53
Gerreidae	2.34	0.64	6.01	0.75	7.99	83.52
Tetraodontiformes	0.36	0.61	2.82	0.81	3.75	87.27
Sphyraenidae	0.76	0	2.67	0.86	3.55	90.82
Groups 2/14/2017 & 9/13/2017						
Average dissimilarity = 90.04						
	Group 2/14/2017	Group 9/13/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Pomacentridae	195.6	1.29	47.68	1.25	52.95	52.95
Gobiidae	25.64	4.15	19.34	1.08	21.48	74.43
Tripterygidae	12.97	0	8.86	1.03	9.84	84.28
Gerreidae	10.55	0.64	7.49	1.27	8.32	92.59
Groups 2/15/2017 & 9/13/2017						
Average dissimilarity = 76.57						
	Group 2/15/2017	Group 9/13/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Pomacentridae	21.27	1.29	41.89	2.68	54.71	54.71
Gobiidae	10.67	4.15	16.09	1.47	21.01	75.72
Gerreidae	1.33	0.64	3.83	1	5	80.72
Tripterygidae	1.73	0	3.51	0.92	4.59	85.31
Tetraodontiformes	1.53	0.61	3.35	0.83	4.38	89.69
Ostraciidae	0	0.84	2.01	0.5	2.62	92.31
Groups 3/15/2017 & 9/13/2017						
Average dissimilarity = 80.78						
	Group 3/15/2017	Group 9/13/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Gobiidae	18.62	4.15	34.62	2.04	42.86	42.86

Pomacentridae	9	1.29	20.08	1.51	24.85	67.71
Serranidae	3.24	0.84	7.09	1.26	8.77	76.48
Mullidae	0.85	0	4.18	0.54	5.17	81.65
Tetraodontiformes	0.81	0.61	4.09	0.47	5.07	86.72
Holocentridae	0.4	0	3.78	0.5	4.68	91.4
Groups 3/16/2017 & 9/13/2017						
Average dissimilarity = 80.08						
	Group 3/16/2017	Group 9/13/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Pomacentridae	27.6	1.29	29.23	1.23	36.5	36.5
Gobiidae	18.78	4.15	25.3	1.78	31.6	68.1
Holocentridae	0.89	0	4.47	0.72	5.58	73.68
Gerreidae	3.54	0.64	4.26	1.41	5.32	79
Tetraodontiformes	1.47	0.61	3.86	0.8	4.82	83.82
Serranidae	2.58	0.84	3.78	0.76	4.72	88.54
Scorpaenidae	0.44	0	3.34	0.52	4.18	92.72
Groups 3/17/2017 & 9/13/2017						
Average dissimilarity = 77.74						
	Group 3/17/2017	Group 9/13/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Gobiidae	23.43	4.15	30.97	2.31	39.83	39.83
Pomacentridae	12.93	1.29	19.59	2.42	25.2	65.03
Serranidae	6.66	0.84	9.26	1.39	11.91	76.93
Gerreidae	1.92	0.64	4.95	0.92	6.36	83.3
Sphyraenidae	2.06	0	4.15	2.26	5.34	88.64
Clupeiformes	1.19	0	2.22	0.85	2.85	91.49
Groups 8/11/2017 & 9/13/2017						
Average dissimilarity = 82.79						
	Group 8/11/2017	Group 9/13/2017				

Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Pomacentridae	21.96	1.29	43.65	2.08	52.73	52.73
Gobiidae	3.67	4.15	11.5	1.35	13.89	66.62
Clupeiformes	2.42	0	6.86	0.76	8.28	74.9
Clupeidae	1.22	0	4.15	0.92	5.01	79.92
Tetraodontiformes	0	0.61	2.97	0.46	3.58	83.5
Haemulidae	0.8	0	2.96	0.65	3.57	87.07
Ostraciidae	0	0.84	2.76	0.49	3.34	90.41

Groups 8/12/2017 &

9/13/2017

Average dissimilarity =
79.56

Species	Group 8/12/2017	Group 9/13/2017	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Clupeiformes	8.63	0	24.1	1.89	30.29	30.29		
Gobiidae	7.65	4.15	14.99	1.7	18.84	49.13		
Achiriidae	3.99	0	9.74	0.88	12.25	61.38		
Pomacentridae	2.74	1.29	6.92	1.19	8.7	70.08		
Carangidae	1.38	0	4.99	1.2	6.28	76.36		
Serranidae	1.33	0.84	4.28	0.84	5.38	81.74		
Gerreidae	0.46	0.64	3.3	0.69	4.15	85.89		
Ostraciidae	0	0.84	2.42	0.51	3.04	88.93		
Tetraodontiformes	0	0.61	2.39	0.48	3	91.93		

Groups 8/13/2017 &

9/13/2017

Average dissimilarity =
74.47

Species	Group 8/13/2017	Group 9/13/2017	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Gobiidae	3.61	4.15	16.71	1.38	22.43	22.43		
Clupeiformes	2.26	0	11.26	0.86	15.13	37.56		
Pomacentridae	1.38	1.29	9.93	0.94	13.33	50.89		
Serranidae	1.34	0.84	7.94	0.93	10.66	61.55		
Achiriidae	0.91	0	4.46	0.91	6	67.54		
Gerreidae	0.46	0.64	4.25	0.74	5.7	73.24		
Tetraodontiformes	0	0.61	4.24	0.55	5.69	78.94		
Ostraciidae	0	0.84	3.8	0.56	5.1	84.04		

Haemulidae	0.46	0	2.95	0.52	3.97	88.01
Sphyraenidae	0.45	0	2.33	0.53	3.13	91.13
Groups 9/11/2017 & 9/13/2017						
Average dissimilarity = 80.46						
	Group 9/11/2017	Group 9/13/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Serranidae	4.13	0.84	15.59	0.83	19.38	19.38
Gobiidae	4.63	4.15	11.39	1.32	14.16	33.54
Gerreidae	4.12	0.64	9.11	0.77	11.32	44.86
Pomacentridae	4.14	1.29	7.33	1.05	9.11	53.97
Clupeiformes	1.19	0	6.75	0.53	8.39	62.35
Carangidae	4.44	0	5.3	0.76	6.58	68.93
Blenniidae	4.04	0	4.89	0.78	6.07	75.01
Tetraodontiformes	0.98	0.61	4.55	0.67	5.66	80.67
Haemulidae	3.65	0	4.48	0.81	5.56	86.23
Ostraciidae	0	0.84	2.77	0.48	3.44	89.67
Sphyraenidae	0.79	0	2.66	0.65	3.3	92.98
Groups 9/12/2017 & 9/13/2017						
Average dissimilarity = 84.23						
	Group 9/12/2017	Group 9/13/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Gobiidae	5.29	4.15	27.38	1.43	32.51	32.51
Gerreidae	1.24	0.64	11.22	0.83	13.32	45.83
Carangidae	1.41	0	9.92	1.1	11.78	57.61
Pomacentridae	0.41	1.29	6.94	0.8	8.24	65.84
Tetraodontiformes	0	0.61	5.71	0.47	6.78	72.62
Sphyraenidae	1.17	0	4.43	0.91	5.26	77.88
Ostraciidae	0	0.84	4.24	0.52	5.04	82.92
Serranidae	0	0.84	4.24	0.52	5.04	87.96
Scombridae	1.15	0	3.81	0.55	4.52	92.48
Groups 8/22/2016 & 10/9/2017						

Average dissimilarity =
80.85

	Group 8/22/2016	Group 10/9/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Gobiidae	6.34	7.65	20.33	1.88	25.14	25.14
Serranidae	1.79	12.18	17.44	0.7	21.57	46.71
Clupeiformes	0.92	2.23	8.19	0.72	10.13	56.84
Pomacentridae	3.05	1.77	8.15	1.06	10.08	66.92
Achiridae	0	0.92	6.45	0.64	7.98	74.9
Syngnathidae	1.89	0.92	5.12	0.75	6.34	81.24
Carangidae	0.41	1.38	4.85	0.7	6	87.24
Haemulidae	0	1.77	3.4	0.65	4.21	91.45

Groups 8/23/2016 &
10/9/2017

Average dissimilarity =
82.37

	Group 8/23/2016	Group 10/9/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Gobiidae	13.42	7.65	28.18	1.84	34.21	34.21
Serranidae	0.87	12.18	15.49	0.63	18.8	53.01
Clupeiformes	1.3	2.23	8.42	1.02	10.23	63.23
Syngnathidae	1.66	0.92	4.82	0.92	5.85	69.09
Achiridae	0.37	0.92	4.05	0.61	4.92	74
Pomacentridae	0	1.77	4.01	1.03	4.86	78.87
Haemulidae	0	1.77	3.14	0.64	3.82	82.68
Gerreidae	0.8	0.46	2.69	0.68	3.27	85.95
Sphyraenidae	0.37	0.46	2.68	0.49	3.26	89.2
Carangidae	0	1.38	2.68	0.53	3.25	92.45

Groups 8/24/2016 &
10/9/2017

Average dissimilarity =
82.08

	Group 8/24/2016	Group 10/9/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Pomacentridae	19.23	1.77	19.85	1.05	24.19	24.19

Gobiidae	13.49	7.65	19.43	1.83	23.67	47.86
Serranidae	0	12.18	13.39	0.57	16.31	64.17
Clupeiformes	2.68	2.23	7.87	1.25	9.59	73.76
Achiridae	0	0.92	4.02	0.66	4.9	78.66
Gerreidae	0.73	0.46	3.25	0.68	3.96	82.63
Haemulidae	0	1.77	2.77	0.61	3.38	86.01
Carangidae	0	1.38	2.35	0.5	2.87	88.87
Sphyraenidae	0.37	0.46	2.1	0.52	2.56	91.43

Groups 9/20/2016 &
10/9/2017

Average dissimilarity =
71.61

	Group 9/20/2016	Group 10/9/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Pomacentridae	8.64	1.77	18.62	1.2	26	26
Serranidae	1.51	12.18	16.89	0.72	23.59	49.59
Gobiidae	3.81	7.65	10.66	1.81	14.88	64.47
Clupeiformes	0.37	2.23	5.5	1.26	7.68	72.16
Achiridae	0	0.92	4.13	0.82	5.77	77.92
Syngnathidae	1.12	0.92	3.32	0.95	4.64	82.56
Haemulidae	0	1.77	3.16	0.68	4.41	86.97
Carangidae	0	1.38	2.68	0.55	3.75	90.72

Groups 9/21/2016 &
10/9/2017

Average dissimilarity =
72.02

	Group 9/21/2016	Group 10/9/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Serranidae	0	12.18	14.84	0.6	20.61	20.61
Gobiidae	5.22	7.65	11.38	1.26	15.8	36.41
Pomacentridae	5.08	1.77	9.72	1.11	13.5	49.91
Syngnathidae	3.41	0.92	7.51	1.05	10.43	60.34
Clupeiformes	0.99	2.23	6.61	1.15	9.18	69.53
Achiridae	0	0.92	4.03	0.78	5.59	75.12
Carangidae	0.92	1.38	3.92	0.94	5.45	80.57
Gerreidae	1.32	0.46	3.89	0.89	5.4	85.97
Haemulidae	0	1.77	3.08	0.67	4.28	90.25

Groups 9/22/2016 &
10/9/2017

Average dissimilarity =
78.04

	Group 9/22/2016	Group 10/9/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Gobiidae	7.4	7.65	18.34	1.27	23.5	23.5
Serranidae	0.48	12.18	15.17	0.6	19.44	42.94
Clupeiformes	4.79	2.23	13.28	1.34	17.01	59.95
Syngnathidae	3.25	0.92	6.62	1.15	8.48	68.43
Pomacentridae	2.36	1.77	5.39	1.22	6.91	75.34
Haemulidae	1.37	1.77	5.39	0.83	6.91	82.25
Achiriidae	0.48	0.92	5.23	0.65	6.7	88.94
Carangidae	0	1.38	2.72	0.53	3.48	92.43

Groups 10/20/2016 &
10/9/2017

Average dissimilarity =
75.44

	Group 10/20/2016	Group 10/9/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Pomacentridae	12.09	1.77	18.12	1.25	24.02	24.02
Serranidae	0	12.18	12.95	0.6	17.17	41.18
Clupeiformes	4.37	2.23	9.19	1.31	12.18	53.37
Gobiidae	4.71	7.65	7.69	1.45	10.19	63.56
Tripterygidae	2.48	0.46	3.88	0.73	5.14	68.71
Sphyraenidae	1.6	0.46	2.89	0.94	3.83	72.54
Carangidae	0.39	1.38	2.67	0.74	3.54	76.08
Achiriidae	0	0.92	2.54	0.89	3.37	79.45
Haemulidae	0	1.77	2.54	0.68	3.37	82.82
Clupeidae	0.95	0	2.38	0.5	3.15	85.97
Congridae	0.95	0	2.38	0.5	3.15	89.13
Syngnathidae	0.83	0.92	2.01	0.73	2.66	91.79

Groups 10/21/2016 &
10/9/2017

Average dissimilarity =
75.19

	Group 10/21/2016	Group 10/9/2017					
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%	
Serranidae	0	12.18	16.31	0.61	21.7	21.7	
Gobiidae	1.79	7.65	14.66	2.25	19.49	41.19	
Clupeiformes	1.84	2.23	10.61	1.38	14.11	55.3	
Pomacentridae	3.12	1.77	8.14	0.77	10.82	66.12	
Tripterygidae	1.31	0.46	5.48	0.63	7.29	73.41	
Achiriidae	0.46	0.92	4.47	0.79	5.94	79.35	
Haemulidae	0	1.77	3.51	0.68	4.66	84.02	
Carangidae	0	1.38	3	0.56	3.98	88	
Syngnathidae	0	0.92	2	0.56	2.66	90.66	
Groups 2/13/2017 & 10/9/2017							
Average dissimilarity = 73.21							
	Group 2/13/2017	Group 10/9/2017					
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%	
Gobiidae	14.46	7.65	18.01	1.23	24.6	24.6	
Serranidae	0	12.18	12.91	0.6	17.64	42.23	
Pomacentridae	8.79	1.77	12.85	1.11	17.55	59.79	
Tripterygidae	3.18	0.46	6.49	0.86	8.86	68.65	
Clupeiformes	0	2.23	4.79	1.42	6.54	75.19	
Gerreidae	2.34	0.46	4.16	0.66	5.68	80.87	
Achiriidae	0	0.92	2.57	0.85	3.51	84.39	
Haemulidae	0	1.77	2.53	0.68	3.46	87.85	
Carangidae	0.35	1.38	2.39	0.65	3.27	91.12	
Groups 2/14/2017 & 10/9/2017							
Average dissimilarity = 86.74							
	Group 2/14/2017	Group 10/9/2017					
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%	
Pomacentridae	195.6	1.77	44.17	1.17	50.92	50.92	
Gobiidae	25.64	7.65	14.11	0.95	16.27	67.18	
Tripterygidae	12.97	0.46	7.11	0.97	8.2	75.38	
Gerreidae	10.55	0.46	6.26	1.27	7.21	82.59	

Serranidae	0.51	12.18	5.91	0.48	6.81	89.4
Clupeiformes	0	2.23	1.56	0.97	1.8	91.2

Groups 2/15/2017 &
10/9/2017

Average dissimilarity =
76.03

	Group 2/15/2017	Group 10/9/2017				
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Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Pomacentridae	21.27	1.77	29.86	1.91	39.27	39.27
Serranidae	0	12.18	11.98	0.59	15.76	55.03
Gobiidae	10.67	7.65	10.68	1.22	14.05	69.08
Clupeiformes	0	2.23	4.22	1.29	5.56	74.64
Tripterygidae	1.73	0.46	2.79	1.02	3.67	78.31
Gerreidae	1.33	0.46	2.36	0.84	3.11	81.42
Haemulidae	0	1.77	2.3	0.67	3.03	84.45
Achiridae	0	0.92	2.24	0.79	2.94	87.39
Tetraodontiformes	1.53	0	2.01	0.9	2.64	90.03

Groups 3/15/2017 &
10/9/2017

Average dissimilarity =
78.48

	Group 3/15/2017	Group 10/9/2017				
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Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Gobiidae	18.62	7.65	24.74	1.8	31.52	31.52
Serranidae	3.24	12.18	15.38	0.76	19.6	51.13
Pomacentridae	9	1.77	11.45	1.03	14.59	65.72
Clupeiformes	0	2.23	5.83	1	7.43	73.15
Achiridae	0	0.92	3.38	0.66	4.3	77.45
Haemulidae	0	1.77	2.64	0.63	3.36	80.81
Mullidae	0.85	0	2.55	0.48	3.24	84.05
Carangidae	0	1.38	2.23	0.51	2.84	86.9
Holocentridae	0.4	0	1.86	0.44	2.37	89.27
Syngnathidae	0	0.92	1.49	0.51	1.89	91.16

Groups 3/16/2017 &
10/9/2017

Average dissimilarity =
80.04

	Group 3/16/2017	Group 10/9/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Pomacentridae	27.6	1.77	23.98	1.17	29.96	29.96
Gobiidae	18.78	7.65	17.01	1.33	21.25	51.21
Serranidae	2.58	12.18	12.06	0.64	15.07	66.28
Clupeiformes	0	2.23	4.37	0.91	5.46	71.74
Gerreidae	3.54	0.46	3.2	1.35	4	75.74
Tetraodontiformes	1.47	0	2.63	0.73	3.29	79.02
Holocentridae	0.89	0	2.59	0.67	3.24	82.26
Achiridae	0	0.92	2.44	0.6	3.04	85.3
Haemulidae	0.52	1.77	2.26	0.65	2.82	88.12
Carangidae	0	1.38	1.81	0.49	2.26	90.39

Groups 3/17/2017 &
10/9/2017

Average dissimilarity =
68.46

	Group 3/17/2017	Group 10/9/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Gobiidae	23.43	7.65	20.64	1.42	30.16	30.16
Serranidae	6.66	12.18	14.98	0.99	21.89	52.04
Pomacentridae	12.93	1.77	14.06	1.77	20.54	72.58
Gerreidae	1.92	0.46	3.57	0.86	5.21	77.8
Sphyraenidae	2.06	0.46	2.55	1.29	3.72	81.52
Haemulidae	1.1	1.77	2.43	0.88	3.55	85.08
Clupeiformes	1.19	2.23	2.24	1.06	3.28	88.36
Achiridae	0	0.92	1.76	0.84	2.57	90.93

Groups 8/11/2017 &
10/9/2017

Average dissimilarity =
75.58

	Group 8/11/2017	Group 10/9/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Pomacentridae	21.96	1.77	29.41	1.39	38.92	38.92
Serranidae	0	12.18	13.24	0.58	17.52	56.44
Gobiidae	3.67	7.65	8.9	1.43	11.78	68.22

Clupeiformes	2.42	2.23	4.92	1.41	6.51	74.73
Haemulidae	0.8	1.77	3.48	0.85	4.6	79.32
Achiriidae	0.42	0.92	2.9	0.71	3.83	83.16
Clupeidae	1.22	0	2.73	0.82	3.61	86.77
Carangidae	0.41	1.38	2.47	0.6	3.26	90.03

Groups 8/12/2017 &
10/9/2017

Average dissimilarity =
65.86

	Group 8/12/2017	Group 10/9/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Serranidae	1.33	12.18	14.22	0.68	21.59	21.59
Clupeiformes	8.63	2.23	12.09	1.32	18.36	39.95
Gobiidae	7.65	7.65	9.87	1.36	14.98	54.93
Achiriidae	3.99	0.92	7.65	1.23	11.61	66.54
Carangidae	1.38	1.38	4.25	1.35	6.45	72.99
Pomacentridae	2.74	1.77	4.16	1.06	6.32	79.31
Haemulidae	0	1.77	2.59	0.68	3.93	83.24
Gerreidae	0.46	0.46	1.77	0.56	2.69	85.93
Lutjanidae	0.92	0	1.7	0.86	2.58	88.5
Labridae	0.91	0	1.49	0.87	2.26	90.76

Groups 8/13/2017 &
10/9/2017

Average dissimilarity =
63.68

	Group 8/13/2017	Group 10/9/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Serranidae	1.34	12.18	18.13	0.75	28.48	28.48
Gobiidae	3.61	7.65	11.25	1.43	17.67	46.14
Clupeiformes	2.26	2.23	7.28	1.31	11.43	57.57
Pomacentridae	1.38	1.77	5.06	0.81	7.95	65.52
Haemulidae	0.46	1.77	4.22	0.85	6.63	72.15
Carangidae	0.44	1.38	3.76	0.77	5.91	78.05
Achiriidae	0.91	0.92	3.1	0.76	4.86	82.92
Blenniidae	0.46	0.46	2.26	0.67	3.55	86.46
Tripterygidae	0.46	0.46	2.26	0.67	3.55	90.01

Groups 9/11/2017 &
10/9/2017

Average dissimilarity =
75.92

	Group 9/11/2017	Group 10/9/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Serranidae	4.13	12.18	20.1	1	26.47	26.47
Gobiidae	4.63	7.65	8.7	1.31	11.46	37.94
Gerreidae	4.12	0.46	6.46	0.7	8.51	46.45
Clupeiformes	1.19	2.23	5.65	1.11	7.44	53.89
Carangidae	4.44	1.38	5.63	0.95	7.42	61.31
Pomacentridae	4.14	1.77	5.6	1.36	7.38	68.69
Haemulidae	3.65	1.77	5.04	1.03	6.64	75.33
Blenniidae	4.04	0.46	4.52	0.87	5.96	81.29
Achiriidae	0	0.92	3.16	0.74	4.16	85.44
Scombridae	1.67	0	1.9	0.9	2.5	87.94
Sphyraenidae	0.79	0.46	1.83	0.68	2.41	90.35

Groups 9/12/2017 &
10/9/2017

Average dissimilarity =
82.87

	Group 9/12/2017	Group 10/9/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Gobiidae	5.29	7.65	18.15	1.59	21.91	21.91
Serranidae	0	12.18	15.82	0.6	19.09	41
Clupeiformes	0	2.23	8.31	1.23	10.03	51.03
Carangidae	1.41	1.38	6.57	1.23	7.93	58.96
Gerreidae	1.24	0.46	5.49	0.68	6.63	65.59
Achiriidae	0	0.92	5.02	0.79	6.05	71.64
Pomacentridae	0.41	1.77	4.25	1.03	5.13	76.77
Haemulidae	0	1.77	3.37	0.67	4.07	80.84
Sphyraenidae	1.17	0.46	3.03	0.87	3.66	84.5
Scombridae	1.15	0	2.57	0.51	3.11	87.61
Syngnathidae	0	0.92	1.92	0.55	2.31	89.92
Blenniidae	0	0.46	1.84	0.53	2.22	92.14

Groups 9/13/2017 &
10/9/2017

Average dissimilarity =
79.65

	Group 9/13/2017	Group 10/9/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Serranidae	0.84	12.18	18.53	0.7	23.27	23.27
Gobiidae	4.15	7.65	15.57	1.59	19.54	42.81
Clupeiformes	0	2.23	9.86	1.22	12.38	55.19
Pomacentridae	1.29	1.77	6.28	1.08	7.88	63.07
Achiriidae	0	0.92	6.17	0.79	7.75	70.82
Haemulidae	0	1.77	3.63	0.67	4.56	75.38
Tetraodontiformes	0.61	0	3.41	0.42	4.28	79.66
Carangidae	0	1.38	3.11	0.55	3.91	83.57
Ostraciidae	0.84	0	2.92	0.47	3.66	87.23
Gerreidae	0.64	0.46	2.28	0.68	2.86	90.09

Groups 8/22/2016 &
10/10/2017

Average dissimilarity =
100.00

	Group 8/22/2016	Group 10/10/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Achiriidae	0	1.87	32.99	0.97	32.99	32.99
Gobiidae	6.34	0	20.48	0.93	20.48	53.47
Tetraodontiformes	0	0.93	12.14	0.63	12.14	65.61
Carangidae	0.41	0	9.68	0.53	9.68	75.28
Syngnathidae	1.89	0	7.62	0.65	7.62	82.91
Pomacentridae	3.05	0	7.42	0.54	7.42	90.33

Groups 8/23/2016 &
10/10/2017

Average dissimilarity =
89.61

	Group 8/23/2016	Group 10/10/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Gobiidae	13.42	0	33.16	0.93	37	37
Achiriidae	0.37	1.87	15.2	0.77	16.96	53.96
Sphyraenidae	0.37	0	9.1	0.52	10.15	64.12

Syngnathidae	1.66	0	9.02	0.91	10.07	74.19
Tetraodontiformes	0	0.93	8.47	0.63	9.45	83.64
Gerreidae	0.8	0	6.47	0.7	7.22	90.86
Groups 8/24/2016 & 10/10/2017						
Average dissimilarity = 100.00						
	Group 8/24/2016	Group 10/10/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Pomacentridae	19.23	0	33.59	1.35	33.59	33.59
Gobiidae	13.49	0	25.83	1.25	25.83	59.42
Achiriidae	0	1.87	13.66	1.18	13.66	73.08
Gerreidae	0.73	0	9.46	0.91	9.46	82.53
Tetraodontiformes	0	0.93	6.07	0.64	6.07	88.6
Sphyraenidae	0.37	0	5.2	0.53	5.2	93.8
Groups 9/20/2016 & 10/10/2017						
Average dissimilarity = 100.00						
	Group 9/20/2016	Group 10/10/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Pomacentridae	8.64	0	41.33	2.56	41.33	41.33
Gobiidae	3.81	0	21.82	2.27	21.82	63.16
Achiriidae	0	1.87	12.47	1.91	12.47	75.62
Serranidae	1.51	0	5.82	0.93	5.82	81.44
Tetraodontiformes	0	0.93	5.74	0.79	5.74	87.18
Clupeiformes	0.37	0	4.3	0.54	4.3	91.47
Groups 9/21/2016 & 10/10/2017						
Average dissimilarity = 97.85						
	Group 9/21/2016	Group 10/10/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Pomacentridae	5.08	0	24.98	3.08	25.53	25.53

Gobiidae	5.22	0	21.94	1.98	22.42	47.95
Syngnathidae	3.41	0	13.65	1.21	13.95	61.9
Achiriidae	0	1.87	12.44	1.48	12.72	74.62
Gerreidae	1.32	0	10.07	1.23	10.29	84.91
Tetraodontiformes	0.5	0.93	5.93	0.76	6.06	90.97
Groups 9/22/2016 & 10/10/2017						
Average dissimilarity = 98.29						
	Group 9/22/2016	Group 10/10/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Gobiidae	7.4	0	28.4	1.04	28.89	28.89
Achiriidae	0.48	1.87	20.86	1.04	21.23	50.12
Syngnathidae	3.25	0	12.88	1.15	13.1	63.22
Haemulidae	1.37	0	11.41	0.65	11.61	74.83
Tetraodontiformes	0	0.93	8.99	0.65	9.14	83.98
Clupeiformes	4.79	0	8.79	0.54	8.94	92.92
Groups 10/20/2016 & 10/10/2017						
Average dissimilarity = 98.28						
	Group 10/20/2016	Group 10/10/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Pomacentridae	12.09	0	32.92	1.89	33.5	33.5
Clupeiformes	4.37	0	16.43	0.93	16.72	50.22
Gobiidae	4.71	0	13.21	5.16	13.44	63.66
Achiriidae	0	1.87	6.46	3.06	6.57	70.23
Sphyraenidae	1.6	0	5.2	1.1	5.29	75.52
Clupeidae	0.95	0	4.37	0.54	4.44	79.96
Congridae	0.95	0	4.37	0.54	4.44	84.41
Tetraodontiformes	0.78	0.93	4.36	0.97	4.44	88.84
Tripterygidae	2.48	0	4.32	0.54	4.4	93.24
Groups 10/21/2016 & 10/10/2017						
Average dissimilarity = 94.11						

	Group 10/21/2016	Group 10/10/2017					
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%	
Pomacentridae	3.12	0	27.82	1.77	29.56	29.56	
Gobiidae	1.79	0	17.06	0.83	18.12	47.68	
Achiriidae	0.46	1.87	13.35	1.48	14.18	61.87	
Clupeiformes	1.84	0	11.78	0.54	12.52	74.38	
Tripterygidae	1.31	0	9.92	0.54	10.54	84.92	
Tetraodontiformes	0	0.93	7.41	0.89	7.88	92.8	
Groups 2/13/2017 & 10/10/2017							
Average dissimilarity = 98.01							
	Group 2/13/2017	Group 10/10/2017					
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%	
Gobiidae	14.46	0	43.45	2.91	44.33	44.33	
Pomacentridae	8.79	0	21.77	1.36	22.22	66.55	
Tripterygidae	3.18	0	10.77	0.82	10.98	77.53	
Achiriidae	0	1.87	6.62	2.25	6.76	84.29	
Gerreidae	2.34	0	6.16	0.63	6.28	90.57	
Groups 2/14/2017 & 10/10/2017							
Average dissimilarity = 98.87							
	Group 2/14/2017	Group 10/10/2017					
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%	
Pomacentridae	195.6	0	49.74	1.28	50.31	50.31	
Gobiidae	25.64	0	24.18	1.13	24.45	74.76	
Tripterygidae	12.97	0	9.38	0.99	9.48	84.25	
Gerreidae	10.55	0	8.5	1.27	8.59	92.84	
Groups 2/15/2017 & 10/10/2017							
Average dissimilarity = 98.32							

	Group 2/15/2017	Group 10/10/2017					
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%	
Pomacentridae	21.27	0	50.21	4.44	51.07	51.07	
Gobiidae	10.67	0	25.61	3.2	26.04	77.11	
Achiriidae	0	1.87	5.71	1.61	5.81	82.92	
Gerreidae	1.33	0	4.77	1	4.85	87.77	
Tripterygidae	1.73	0	3.9	0.9	3.97	91.74	
Groups 3/15/2017 & 10/10/2017							
Average dissimilarity = 98.73							
	Group 3/15/2017	Group 10/10/2017					
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%	
Gobiidae	18.62	0	37.6	1.54	38.08	38.08	
Pomacentridae	9	0	25.42	1.68	25.75	63.83	
Achiriidae	0	1.87	10.59	1.09	10.73	74.56	
Serranidae	3.24	0	7.14	1.55	7.23	81.79	
Holocentridae	0.4	0	5.35	0.53	5.42	87.2	
Mullidae	0.85	0	5.2	0.54	5.27	92.47	
Groups 3/16/2017 & 10/10/2017							
Average dissimilarity = 94.96							
	Group 3/16/2017	Group 10/10/2017					
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%	
Gobiidae	18.78	0	31.74	1.91	33.42	33.42	
Pomacentridae	27.6	0	31.02	1.17	32.66	66.09	
Achiriidae	0	1.87	7.08	0.92	7.46	73.54	
Holocentridae	0.89	0	5.79	0.73	6.1	79.64	
Scorpaenidae	0.44	0	4.51	0.54	4.75	84.4	
Gerreidae	3.54	0	4.33	1.49	4.56	88.96	
Tetraodontiformes	1.47	0.93	3.81	0.57	4.01	92.97	
Groups 3/17/2017 & 10/10/2017							

Average dissimilarity =
99.00

	Group 3/17/2017	Group 10/10/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Gobiidae	23.43	0	42.43	6.23	42.86	42.86
Pomacentridae	12.93	0	23.47	3.38	23.7	66.56
Serranidae	6.66	0	10.21	1.27	10.32	76.88
Gerreidae	1.92	0	6.03	0.91	6.1	82.97
Sphyraenidae	2.06	0	4.66	2.23	4.7	87.68
Achiriidae	0	1.87	4.22	2.19	4.26	91.94

Groups 8/11/2017 &
10/10/2017

Average dissimilarity =
97.58

	Group 8/11/2017	Group 10/10/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Pomacentridae	21.96	0	53.38	3.03	54.71	54.71
Gobiidae	3.67	0	12.13	2.32	12.43	67.14
Clupeiformes	2.42	0	8.48	0.75	8.69	75.83
Achiriidae	0.42	1.87	7.69	1.12	7.88	83.72
Clupeidae	1.22	0	4.97	0.93	5.09	88.81
Tetraodontiformes	0	0.93	4.17	0.73	4.27	93.08

Groups 8/12/2017 &
10/10/2017

Average dissimilarity =
94.95

	Group 8/12/2017	Group 10/10/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Clupeiformes	8.63	0	28.24	1.96	29.74	29.74
Gobiidae	7.65	0	22.44	3.44	23.63	53.37
Achiriidae	3.99	1.87	13.18	1.96	13.88	67.26
Pomacentridae	2.74	0	7.23	1.22	7.62	74.87
Carangidae	1.38	0	6.05	1.18	6.37	81.24
Serranidae	1.33	0	3.83	0.77	4.03	85.27
Tetraodontiformes	0	0.93	3.42	0.77	3.6	88.87

Gerreidae	0.46	0	3.34	0.54	3.52	92.38
Groups 8/13/2017 & 10/10/2017						
Average dissimilarity = 88.88						
	Group 8/13/2017	Group 10/10/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Gobiidae	3.61	0	23.77	1.61	26.74	26.74
Clupeiformes	2.26	0	14.06	0.88	15.82	42.56
Pomacentridae	1.38	0	10.35	0.76	11.65	54.21
Serranidae	1.34	0	8.79	0.84	9.89	64.09
Achiriidae	0.91	1.87	7.15	0.96	8.05	72.14
Tetraodontiformes	0	0.93	5.92	0.92	6.66	78.8
Gerreidae	0.46	0	3.86	0.54	4.34	83.14
Haemulidae	0.46	0	3.86	0.54	4.34	87.48
Sphyraenidae	0.45	0	2.93	0.54	3.3	90.78
Groups 9/11/2017 & 10/10/2017						
Average dissimilarity = 98.74						
	Group 9/11/2017	Group 10/10/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Serranidae	4.13	0	21.99	0.91	22.27	22.27
Gobiidae	4.63	0	12.53	2.31	12.69	34.96
Gerreidae	4.12	0	9.44	0.65	9.56	44.53
Achiriidae	0	1.87	9.03	1.5	9.14	53.67
Clupeiformes	1.19	0	8.6	0.54	8.71	62.38
Pomacentridae	4.14	0	6.18	0.92	6.26	68.64
Carangidae	4.44	0	5.69	0.75	5.76	74.4
Tetraodontiformes	0.98	0.93	5.67	0.93	5.75	80.14
Blenniidae	4.04	0	5.25	0.77	5.32	85.46
Haemulidae	3.65	0	4.82	0.8	4.88	90.34
Groups 9/12/2017 & 10/10/2017						
Average dissimilarity = 100.00						

	Group 9/12/2017	Group 10/10/2017					
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%	
Gobiidae	5.29	0	24.26	0.87	24.26	24.26	
Achiriidae	0	1.87	16.98	1.63	16.98	41.24	
Gerreidae	1.24	0	15.85	0.91	15.85	57.09	
Carangidae	1.41	0	13.66	1.2	13.66	70.75	
Tetraodontiformes	0	0.93	7.54	0.76	7.54	78.29	
Sphyraenidae	1.17	0	5.3	0.91	5.3	83.58	
Scombridae	1.15	0	4.46	0.54	4.46	88.05	
Pomacentridae	0.41	0	4.42	0.54	4.42	92.47	
Groups 9/13/2017 & 10/10/2017							
Average dissimilarity = 92.46							
	Group 9/13/2017	Group 10/10/2017					
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%	
Gobiidae	4.15	0	32.11	1.39	34.73	34.73	
Achiriidae	0	1.87	23.45	1.73	25.36	60.09	
Tetraodontiformes	0.61	0.93	14.49	0.75	15.67	75.76	
Ostraciidae	0.84	0	6.56	0.54	7.09	82.85	
Serranidae	0.84	0	6.56	0.54	7.09	89.95	
Pomacentridae	1.29	0	6.2	0.54	6.7	96.65	
Groups 10/9/2017 & 10/10/2017							
Average dissimilarity = 83.52							
	Group 10/9/2017	Group 10/10/2017					
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%	
Gobiidae	7.65	0	22.87	6.43	27.38	27.38	
Serranidae	12.18	0	17.91	0.59	21.45	48.83	
Clupeiformes	2.23	0	12.59	1.27	15.08	63.91	
Pomacentridae	1.77	0	5.51	1.15	6.6	70.51	
Tetraodontiformes	0	0.93	4.67	0.65	5.6	76.1	
Haemulidae	1.77	0	4.05	0.65	4.84	80.95	
Carangidae	1.38	0	3.49	0.54	4.18	85.12	
Blenniidae	0.46	0	2.63	0.54	3.15	88.27	

Tripterygidae	0.46	0	2.63	0.54	3.15	91.42
Groups 8/22/2016 & 10/11/2017						
Average dissimilarity = 87.00						
	Group 8/22/2016	Group 10/11/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Pomacentridae	3.05	18.41	19.48	0.86	22.39	22.39
Gobiidae	6.34	5.82	13.79	1.03	15.85	38.25
Clupeiformes	0.92	5.35	10.67	0.93	12.27	50.52
Achiriidae	0	2.89	9.84	0.69	11.31	61.83
Haemulidae	0	3.44	8.71	0.53	10.01	71.83
Tetraodontiformes	0	1.92	7.3	0.51	8.39	80.22
Serranidae	1.79	3.39	4.89	1.14	5.63	85.84
Syngnathidae	1.89	0.49	4.2	0.65	4.82	90.67
Groups 8/23/2016 & 10/11/2017						
Average dissimilarity = 86.50						
	Group 8/23/2016	Group 10/11/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Gobiidae	13.42	5.82	21.66	1.07	25.04	25.04
Pomacentridae	0	18.41	16.34	0.7	18.89	43.93
Clupeiformes	1.3	5.35	9.74	0.87	11.26	55.19
Haemulidae	0	3.44	7.91	0.52	9.15	64.33
Achiriidae	0.37	2.89	6.64	0.73	7.68	72.01
Tetraodontiformes	0	1.92	5.42	0.55	6.27	78.27
Syngnathidae	1.66	0.49	3.96	0.73	4.58	82.86
Serranidae	0.87	3.39	3.71	0.96	4.28	87.14
Sphyraenidae	0.37	0.48	2.75	0.39	3.18	90.32
Groups 8/24/2016 & 10/11/2017						
Average dissimilarity = 83.21						
	Group 8/24/2016	Group 10/11/2017				

Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Pomacentridae	19.23	18.41	25.78	1.13	30.98	30.98
Gobiidae	13.49	5.82	16.7	1.29	20.06	51.04
Clupeiformes	2.68	5.35	8.94	0.85	10.75	61.79
Haemulidae	0	3.44	6.89	0.49	8.28	70.07
Achiriidae	0	2.89	6.18	0.8	7.42	77.5
Tetraodontiformes	0	1.92	4.12	0.59	4.95	82.45
Gerreidae	0.73	0.48	3.16	0.57	3.79	86.24
Serranidae	0	3.39	2.84	0.75	3.42	89.66
Sphyraenidae	0.37	0.48	2	0.44	2.4	92.06

Groups 9/20/2016 &
10/11/2017

Average dissimilarity =
80.90

	Group 9/20/2016	Group 10/11/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Pomacentridae	8.64	18.41	27.68	1.38	34.21	34.21
Gobiidae	3.81	5.82	10.53	1.1	13.01	47.23
Clupeiformes	0.37	5.35	10.27	0.99	12.7	59.93
Haemulidae	0	3.44	7.83	0.55	9.67	69.6
Achiriidae	0	2.89	6.44	0.99	7.96	77.56
Serranidae	1.51	3.39	4.85	1.15	5.99	83.55
Tetraodontiformes	0	1.92	4.07	0.73	5.04	88.58
Syngnathidae	1.12	0.49	2.44	0.82	3.02	91.6

Groups 9/21/2016 &
10/11/2017

Average dissimilarity =
80.36

	Group 9/21/2016	Group 10/11/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Pomacentridae	5.08	18.41	21.1	1.05	26.26	26.26
Gobiidae	5.22	5.82	11.47	1.13	14.27	40.53
Clupeiformes	0.99	5.35	9.57	0.92	11.91	52.43
Haemulidae	0	3.44	7.61	0.54	9.47	61.9
Syngnathidae	3.41	0.49	6.46	0.91	8.04	69.94
Achiriidae	0	2.89	6.33	0.94	7.87	77.81
Tetraodontiformes	0.5	1.92	3.87	0.69	4.82	82.64

Gerreidae	1.32	0.48	3.76	0.76	4.68	87.31
Serranidae	0	3.39	3.12	0.78	3.88	91.2
Groups 9/22/2016 & 10/11/2017						
Average dissimilarity = 83.28						
	Group 9/22/2016	Group 10/11/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Pomacentridae	2.36	18.41	17.17	0.77	20.62	20.62
Gobiidae	7.4	5.82	15.33	0.93	18.41	39.03
Clupeiformes	4.79	5.35	12.51	0.99	15.02	54.05
Haemulidae	1.37	3.44	10.48	0.7	12.59	66.64
Achiriidae	0.48	2.89	7.81	0.73	9.37	76.01
Tetraodontiformes	0	1.92	5.68	0.55	6.82	82.83
Syngnathidae	3.25	0.49	5.51	0.83	6.62	89.46
Serranidae	0.48	3.39	3.31	0.85	3.97	93.43
Groups 10/20/2016 & 10/11/2017						
Average dissimilarity = 76.44						
	Group 10/20/2016	Group 10/11/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Pomacentridae	12.09	18.41	24.91	1.42	32.59	32.59
Clupeiformes	4.37	5.35	10.3	0.98	13.48	46.06
Gobiidae	4.71	5.82	7.69	1.27	10.06	56.12
Haemulidae	0	3.44	6.02	0.55	7.87	63.99
Achiriidae	0	2.89	4.51	1.02	5.9	69.9
Tetraodontiformes	0.78	1.92	2.98	1.09	3.9	73.79
Tripterygidae	2.48	0	2.8	0.52	3.66	77.46
Serranidae	0	3.39	2.79	0.77	3.65	81.11
Sphyraenidae	1.6	0.48	2.56	0.85	3.35	84.46
Clupeidae	0.95	0.48	2.25	0.5	2.95	87.41
Congridae	0.95	0	2.09	0.46	2.73	90.14
Groups 10/21/2016 & 10/11/2017						
Average dissimilarity = 83.50						

	Group 10/21/2016	Group 10/11/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Pomacentridae	3.12	18.41	21.78	0.93	26.08	26.08
Clupeiformes	1.84	5.35	12.48	0.9	14.94	41.02
Gobiidae	1.79	5.82	11.8	1.01	14.13	55.15
Haemulidae	0	3.44	8.88	0.56	10.64	65.79
Achiriidae	0.46	2.89	6.9	0.96	8.27	74.06
Tetraodontiformes	0	1.92	4.98	0.76	5.96	80.02
Tripterygidae	1.31	0	3.98	0.41	4.77	84.79
Serranidae	0	3.39	3.38	0.8	4.04	88.83
Labridae	0.45	0.48	1.94	0.53	2.32	91.15

Groups 2/13/2017 &
10/11/2017

Average dissimilarity =
79.01

	Group 2/13/2017	Group 10/11/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Pomacentridae	8.79	18.41	21.17	1.18	26.8	26.8
Gobiidae	14.46	5.82	18.18	1.05	23	49.8
Clupeiformes	0	5.35	7.75	0.85	9.81	59.6
Haemulidae	0	3.44	6.01	0.54	7.6	67.21
Tripterygidae	3.18	0	5.68	0.71	7.19	74.4
Achiriidae	0	2.89	4.54	1	5.74	80.14
Gerreidae	2.34	0.48	3.6	0.6	4.55	84.69
Serranidae	0	3.39	2.79	0.77	3.52	88.22
Tetraodontiformes	0.36	1.92	2.45	1.11	3.1	91.31

Groups 2/14/2017 &
10/11/2017

Average dissimilarity =
85.88

	Group 2/14/2017	Group 10/11/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Pomacentridae	195.6	18.41	44.92	1.35	52.31	52.31
Gobiidae	25.64	5.82	13.86	0.94	16.14	68.45
Tripterygidae	12.97	0	6.88	0.99	8.01	76.46

Gerreidae	10.55	0.48	5.81	1.2	6.76	83.22
Clupeiformes	0	5.35	3.12	0.63	3.63	86.85
Haemulidae	0	3.44	2.23	0.43	2.6	89.45
Achiriidae	0	2.89	1.68	0.71	1.96	91.41

Groups 2/15/2017 &

10/11/2017

Average dissimilarity =
76.32

	Group 2/15/2017	Group 10/11/2017
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Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Pomacentridae	21.27	18.41	31.8	2.03	41.67	41.67
Gobiidae	10.67	5.82	11.24	1.09	14.73	56.4
Clupeiformes	0	5.35	7.04	0.83	9.23	65.62
Haemulidae	0	3.44	5.39	0.53	7.06	72.68
Achiriidae	0	2.89	4.08	0.95	5.34	78.03
Tetraodontiformes	1.53	1.92	2.86	1.06	3.75	81.77
Serranidae	0	3.39	2.62	0.76	3.43	85.2
Tripterygidae	1.73	0	2.34	0.82	3.07	88.27
Gerreidae	1.33	0.48	2.24	0.78	2.93	91.2

Groups 3/15/2017 &

10/11/2017

Average dissimilarity =
81.80

	Group 3/15/2017	Group 10/11/2017
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Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Gobiidae	18.62	5.82	21.72	1.26	26.55	26.55
Pomacentridae	9	18.41	20.73	1.1	25.34	51.9
Clupeiformes	0	5.35	8.08	0.8	9.88	61.77
Haemulidae	0	3.44	6.43	0.5	7.86	69.64
Achiriidae	0	2.89	5.43	0.82	6.64	76.27
Serranidae	3.24	3.39	5.09	1.44	6.22	82.49
Tetraodontiformes	0.81	1.92	3.45	0.61	4.22	86.71
Mullidae	0.85	0	2.25	0.43	2.75	89.46
Holocentridae	0.4	0	1.75	0.37	2.14	91.6

Groups 3/16/2017 &

10/11/2017

Average dissimilarity =
77.15

	Group 3/16/2017	Group 10/11/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Pomacentridae	27.6	18.41	25.83	1.18	33.48	33.48
Gobiidae	18.78	5.82	16.95	1.27	21.97	55.45
Clupeiformes	0	5.35	6.61	0.75	8.57	64.02
Haemulidae	0.52	3.44	5.3	0.5	6.87	70.89
Achiriidae	0	2.89	4.17	0.78	5.4	76.29
Serranidae	2.58	3.39	3.37	1.14	4.37	80.66
Gerreidae	3.54	0.48	2.9	1.23	3.75	84.41
Holocentridae	0.89	0	2.34	0.57	3.03	87.45
Tetraodontiformes	1.47	1.92	2.03	1.19	2.63	90.07

Groups 3/17/2017 &
10/11/2017

Average dissimilarity =
74.18

	Group 3/17/2017	Group 10/11/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Gobiidae	23.43	5.82	20.72	1.35	27.94	27.94
Pomacentridae	12.93	18.41	20	1.54	26.96	54.9
Serranidae	6.66	3.39	6.55	1.09	8.83	63.73
Clupeiformes	1.19	5.35	6.31	0.96	8.5	72.23
Haemulidae	1.1	3.44	5.16	0.64	6.95	79.18
Achiriidae	0	2.89	3.44	0.96	4.64	83.82
Gerreidae	1.92	0.48	3.22	0.78	4.35	88.17
Sphyraenidae	2.06	0.48	2.26	1.14	3.05	91.21

Groups 8/11/2017 &
10/11/2017

Average dissimilarity =
77.54

	Group 8/11/2017	Group 10/11/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Pomacentridae	21.96	18.41	32.71	1.5	42.18	42.18
Clupeiformes	2.42	5.35	9.06	0.97	11.69	53.87

Gobiidae	3.67	5.82	8.1	1.19	10.45	64.32
Haemulidae	0.8	3.44	7.39	0.64	9.54	73.86
Achiriidae	0.42	2.89	4.82	0.88	6.22	80.07
Tetraodontiformes	0	1.92	3.17	0.72	4.09	84.17
Serranidae	0	3.39	2.83	0.76	3.65	87.82
Clupeidae	1.22	0.48	2.44	0.75	3.15	90.96

Groups 8/12/2017 &
10/11/2017

Average dissimilarity =
70.11

	Group 8/12/2017	Group 10/11/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Pomacentridae	2.74	18.41	15.47	0.76	22.06	22.06
Clupeiformes	8.63	5.35	12.77	1.07	18.22	40.27
Gobiidae	7.65	5.82	10.3	1.17	14.69	54.97
Achiriidae	3.99	2.89	7.07	1.08	10.09	65.05
Haemulidae	0	3.44	6.16	0.54	8.78	73.84
Serranidae	1.33	3.39	3.9	1.06	5.56	79.4
Tetraodontiformes	0	1.92	2.8	0.8	3.99	83.4
Carangidae	1.38	0.49	2.41	0.76	3.44	86.84
Gerreidae	0.46	0.48	1.52	0.48	2.17	89.01
Lutjanidae	0.92	0	1.5	0.8	2.14	91.15

Groups 8/13/2017 &
10/11/2017

Average dissimilarity =
77.94

	Group 8/13/2017	Group 10/11/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Pomacentridae	1.38	18.41	18.31	0.78	23.49	23.49
Clupeiformes	2.26	5.35	11.66	1.03	14.96	38.45
Gobiidae	3.61	5.82	11.59	1.04	14.87	53.32
Haemulidae	0.46	3.44	9.16	0.65	11.75	65.07
Serranidae	1.34	3.39	5.63	0.95	7.22	72.3
Achiriidae	0.91	2.89	5.34	0.94	6.85	79.14
Tetraodontiformes	0	1.92	4.2	0.82	5.39	84.53
Carangidae	0.44	0.49	1.88	0.61	2.42	86.95
Gerreidae	0.46	0.48	1.7	0.47	2.18	89.13
Sphyraenidae	0.45	0.48	1.68	0.57	2.16	91.29

Groups 9/11/2017 &

10/11/2017

Average dissimilarity =

82.77

	Group 9/11/2017	Group 10/11/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Pomacentridae	4.14	18.41	16.04	0.8	19.38	19.38
Serranidae	4.13	3.39	9.52	0.72	11.5	30.88
Clupeiformes	1.19	5.35	9.11	0.86	11	41.88
Gobiidae	4.63	5.82	8.55	1.27	10.33	52.21
Haemulidae	3.65	3.44	7.98	0.68	9.64	61.86
Gerreidae	4.12	0.48	5.6	0.63	6.77	68.62
Achiridae	0	2.89	5.15	0.91	6.22	74.84
Carangidae	4.44	0.49	4.23	0.79	5.11	79.95
Tetraodontiformes	0.98	1.92	3.74	0.84	4.52	84.47
Blenniidae	4.04	0	3.6	0.71	4.35	88.82
Scombridae	1.67	0	1.71	0.86	2.07	90.88

Groups 9/12/2017 &

10/11/2017

Average dissimilarity =

88.88

	Group 9/12/2017	Group 10/11/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Pomacentridae	0.41	18.41	17.63	0.74	19.83	19.83
Gobiidae	5.29	5.82	13.91	0.89	15.66	35.49
Clupeiformes	0	5.35	10.34	0.88	11.63	47.12
Haemulidae	0	3.44	8.5	0.55	9.56	56.68
Achiridae	0	2.89	7.54	0.93	8.48	65.16
Gerreidae	1.24	0.48	5.24	0.56	5.9	71.06
Tetraodontiformes	0	1.92	5.01	0.67	5.64	76.7
Carangidae	1.41	0.49	4.34	0.66	4.89	81.58
Serranidae	0	3.39	3.29	0.79	3.7	85.28
Sphyraenidae	1.17	0.48	2.65	0.76	2.98	88.26
Scombridae	1.15	0	2.26	0.47	2.54	90.8

Groups 9/13/2017 &

10/11/2017

Average dissimilarity =
85.17

	Group 9/13/2017	Group 10/11/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Pomacentridae	1.29	18.41	19.04	0.79	22.36	22.36
Gobiidae	4.15	5.82	14.49	0.96	17.01	39.37
Clupeiformes	0	5.35	11.15	0.89	13.09	52.46
Haemulidae	0	3.44	9.33	0.55	10.95	63.41
Achiriidae	0	2.89	9.02	0.9	10.59	74
Tetraodontiformes	0.61	1.92	5.63	0.78	6.6	80.6
Serranidae	0.84	3.39	5.24	0.81	6.16	86.76
Ostraciidae	0.84	0	2.6	0.41	3.06	89.82
Gerreidae	0.64	0.48	1.69	0.53	1.98	91.79

Groups 10/9/2017 &
10/11/2017

Average dissimilarity =
75.66

	Group 10/9/2017	Group 10/11/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Pomacentridae	1.77	18.41	15.06	0.71	19.91	19.91
Serranidae	12.18	3.39	13.47	0.67	17.8	37.71
Gobiidae	7.65	5.82	10.66	1.19	14.09	51.81
Clupeiformes	2.23	5.35	9.68	1.17	12.79	64.6
Haemulidae	1.77	3.44	7.75	0.65	10.25	74.85
Achiriidae	0.92	2.89	3.56	0.91	4.7	79.55
Tetraodontiformes	0	1.92	3.43	0.64	4.54	84.09
Carangidae	1.38	0.49	2.6	0.68	3.43	87.52
Syngnathidae	0.92	0.49	1.92	0.7	2.54	90.06

Groups 10/10/2017 &
10/11/2017

Average dissimilarity =
76.05

	Group 10/10/2017	Group 10/11/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Pomacentridae	0	18.41	18.99	0.71	24.97	24.97

Clupeiformes	0	5.35	12.43	0.88	16.35	41.32
Gobiidae	0	5.82	11.26	1.02	14.8	56.12
Haemulidae	0	3.44	10.66	0.54	14.02	70.15
Tetraodontiformes	0.93	1.92	6.46	0.58	8.5	78.65
Achiridae	1.87	2.89	4.49	0.86	5.9	84.54
Serranidae	0	3.39	3.64	0.78	4.79	89.33
Carangidae	0	0.49	1.52	0.54	2	91.33

Appendix III: Similarity Percentages (SIMPER) of fish larval assemblage between sites (Sites), time of day (Time) and day (Month) the sample was collected at the Station 12 in Guayanilla, Puerto Rico.

N12					
Station					
Average similarity: 19.63					
Species	Av.Abund	Av.Sim	Sim/SD	Contrib%	Cum.%
Pomacentridae	10.58	5.72	0.75	29.12	29.12
Gobiidae	5.1	5.32	0.67	27.09	56.21
Gerreidae	5.97	1.45	0.3	7.37	63.58
Carangidae	2.77	1.26	0.39	6.4	69.99
Haemulidae	2.13	1.24	0.4	6.32	76.3
Clupeidae	4.22	1.06	0.19	5.39	81.69
Serranidae	2.35	1.02	0.31	5.21	86.89
Clupeiformes	2.07	0.96	0.25	4.88	91.78
Time					
Group Day					
Average similarity: 18.16					
Species	Av.Abund	Av.Sim	Sim/SD	Contrib%	Cum.%
Pomacentridae	14.41	5.2	0.63	28.63	28.63
Gerreidae	11.38	4.32	0.53	23.78	52.41
Carangidae	4.61	2.2	0.49	12.1	64.51
Haemulidae	2.69	1.62	0.5	8.92	73.43
Gobiidae	3.06	1.5	0.43	8.26	81.68
Sphyraenidae	1.91	0.75	0.26	4.12	85.81
Clupeiformes	2.48	0.69	0.25	3.81	89.62
Serranidae	1.78	0.6	0.27	3.29	92.91
Group Night					
Average similarity: 28.99					

Species	Av.Abund	Av.Sim	Sim/SD	Contrib%	Cum.%
Gobiidae	7.23	11.83	1.17	40.82	40.82
Pomacentridae	6.58	6.47	0.93	22.32	63.14
Clupeidae	8.53	4.4	0.4	15.18	78.32
Serranidae	2.95	1.56	0.33	5.38	83.71
Clupeiformes	1.65	1.24	0.26	4.29	87.99
Haemulidae	1.55	0.84	0.3	2.89	90.88

Groups Day & Night

Average dissimilarity =
83.99

Species	Group Day	Group Night	Av.Diss	Diss/SD	Contrib%	Cum.%
	Av.Abund	Av.Abund				
Pomacentridae	14.41	6.58	13.65	1.07	16.25	16.25
Gobiidae	3.06	7.23	10.98	1.01	13.08	29.33
Clupeidae	0.09	8.53	10.33	0.66	12.29	41.62
Gerreidae	11.38	0.31	9.16	0.76	10.91	52.53
Clupeiformes	2.48	1.65	5.15	0.59	6.13	58.66
Carangidae	4.61	0.84	5.12	0.83	6.09	64.75
Serranidae	1.78	2.95	5.1	0.66	6.08	70.83
Haemulidae	2.69	1.55	4.23	0.75	5.04	75.87
Lutjanidae	3.88	0.66	3.34	0.42	3.98	79.85
Sphyraenidae	1.91	0.77	2.78	0.62	3.31	83.16
Tripterygidae	2.88	0.34	2.35	0.45	2.79	85.95
Syngnathidae	0	0.9	1.64	0.53	1.95	87.9
Scombridae	1.02	0.26	1.23	0.52	1.47	89.37
Tetraodontiformes	0.23	0.33	1.14	0.38	1.36	90.73

Sampling month

Group 8/22/2016

Average similarity: 27.69

Species	Av.Abund	Av.Sim	Sim/SD	Contrib%	Cum.%
Pomacentridae	5.68	12.75	2.41	46.04	46.04
Gobiidae	2.23	3.03	0.89	10.95	56.99
Tripterygidae	2.23	3.03	0.89	10.95	67.94
Serranidae	1.27	1.96	0.41	7.08	75.02
Carangidae	0.86	1.76	0.41	6.37	81.39
Clupeiformes	0.86	1.76	0.41	6.37	87.77
Haemulidae	0.86	1.76	0.41	6.37	94.14

Group 8/23/2016

Average similarity: 22.64

Species	Av.Abund	Av.Sim	Sim/SD	Contrib%	Cum.%
Pomacentridae	3.47	21.92	0.68	96.83	96.83
Group 8/24/2016					
Average similarity: 28.01					
Species	Av.Abund	Av.Sim	Sim/SD	Contrib%	Cum.%
Haemulidae	3.16	8.26	2.67	29.5	29.5
Gobiidae	6.84	7.86	0.87	28.05	57.55
Clupeidae	5.73	3.25	0.41	11.6	69.15
Monacanthidae	1.27	3.04	0.89	10.85	80
Hemiramphidae	0.76	1.69	0.41	6.03	86.03
Mugilidae	0.84	1.01	0.41	3.62	89.65
Serranidae	0.84	1.01	0.41	3.62	93.27
Group 9/20/2016					
Average similarity: 18.84					
Species	Av.Abund	Av.Sim	Sim/SD	Contrib%	Cum.%
Pomacentridae	32.07	6.05	1.33	32.12	32.12
Gerreidae	25.94	3.92	0.41	20.79	52.91
Carangidae	4.16	3.91	1.54	20.78	73.69
Gobiidae	3.2	2.29	0.65	12.17	85.86
Clupeidae	7.02	1.42	0.41	7.56	93.43
Group 9/21/2016					
Average similarity: 32.29					
Species	Av.Abund	Av.Sim	Sim/SD	Contrib%	Cum.%
Pomacentridae	4.58	12.95	2.52	40.1	40.1
Clupeiformes	1.64	6.2	0.9	19.2	59.3
Carangidae	1.26	5.6	0.91	17.34	76.64
Gobiidae	1.32	1.98	0.41	6.14	82.78
Hemiramphidae	0.94	1.94	0.41	6.02	88.79
Syngnathidae	0.79	1.87	0.41	5.8	94.6
Group 9/22/2016					
Average similarity: 19.38					
Species	Av.Abund	Av.Sim	Sim/SD	Contrib%	Cum.%
Pomacentridae	3.2	9.82	0.85	50.65	50.65
Gobiidae	0.9	3.29	0.41	16.96	67.61
Tetraodontiformes	1.35	3.29	0.41	16.96	84.57
Sphyraenidae	2.32	2.99	0.41	15.43	100

Group 10/20/2016
Average similarity: 14.20

Species	Av.Abund	Av.Sim	Sim/SD	Contrib%	Cum.%
Clupeidae	7.99	6.17	0.41	43.49	43.49
Pomacentridae	1.49	3.03	0.87	21.37	64.86
Haemulidae	1.93	1.18	0.41	8.29	73.15
Carangidae	0.76	1.13	0.41	7.99	81.14
Gobiidae	1.53	1.13	0.41	7.99	89.13
Aulostomidae	1.44	0.77	0.41	5.44	94.56

Group 10/21/2016
Average similarity: 16.18

Species	Av.Abund	Av.Sim	Sim/SD	Contrib%	Cum.%
Gobiidae	5.46	10.12	0.72	62.57	62.57
Pomacentridae	3.87	3.66	0.79	22.64	85.21
Gerreidae	1.99	1.85	0.41	11.41	96.62

Group 2/13/2017
Average similarity: 24.05

Species	Av.Abund	Av.Sim	Sim/SD	Contrib%	Cum.%
Pomacentridae	39.7	7.85	0.99	32.65	32.65
Gobiidae	3.53	6.58	0.45	27.35	59.99
Gerreidae	22.28	3.76	0.49	15.64	75.63
Tripterygidae	22.23	3.69	0.48	15.32	90.96

Group 2/14/2017
Average similarity: 46.69

Species	Av.Abund	Av.Sim	Sim/SD	Contrib%	Cum.%
Pomacentridae	47.25	30.8	4.58	65.97	65.97
Gerreidae	42.59	7.35	0.5	15.74	81.71
Clupeidae	18.13	6.08	0.41	13.02	94.73

Group 2/15/2017
Average similarity: 37.35

Species	Av.Abund	Av.Sim	Sim/SD	Contrib%	Cum.%
Pomacentridae	31.59	18.32	1.12	49.04	49.04
Clupeidae	12.57	9.1	0.45	24.37	73.41
Gobiidae	6.54	7.33	1.16	19.62	93.03

Group 3/15/2017

Average similarity: 13.53

Species	Av.Abund	Av.Sim	Sim/SD	Contrib%	Cum.%
Gobiidae	8.69	7.89	0.41	58.3	58.3
Serranidae	6.03	4.39	0.41	32.44	90.74

Group 3/16/2017

Average similarity: 34.60

Species	Av.Abund	Av.Sim	Sim/SD	Contrib%	Cum.%
Haemulidae	7.64	13.58	3.1	39.24	39.24
Serranidae	8.57	9.26	1.15	26.77	66.01
Gobiidae	8.19	5.81	0.99	16.8	82.81
Tripterygidae	3.44	3.92	1.7	11.34	94.16

Group 3/17/2017

Average similarity: 19.33

Species	Av.Abund	Av.Sim	Sim/SD	Contrib%	Cum.%
Pomacentridae	5.32	8.62	0.8	44.6	44.6
Gerreidae	2.22	4.54	0.65	23.51	68.11
Sphyraenidae	1.11	3.08	0.41	15.95	84.05
Gobiidae	4.57	3.08	0.41	15.95	100

Group 8/11/2017

Average similarity: 25.74

Species	Av.Abund	Av.Sim	Sim/SD	Contrib%	Cum.%
Pomacentridae	5.76	6.33	1.5	24.58	24.58
Clupeiformes	2.11	4.77	0.41	18.54	43.11
Gobiidae	3.7	4.65	0.98	18.08	61.2
Lutjanidae	20.53	4.2	0.41	16.31	77.51
Carangidae	12.53	3.64	0.41	14.14	91.64

Group 8/12/2017

Average similarity: 34.87

Species	Av.Abund	Av.Sim	Sim/SD	Contrib%	Cum.%
Gobiidae	9.64	8.89	2.76	25.5	25.5
Haemulidae	7.33	8.4	2.27	24.1	49.6
Clupeiformes	7.58	5.68	1.09	16.28	65.88
Pomacentridae	13.71	4.44	0.52	12.72	78.6
Carangidae	6.87	3.09	2.48	8.85	87.45
Lutjanidae	8.86	2.4	0.41	6.87	94.32

Group 8/13/2017

Average similarity: 45.97

Species	Av.Abund	Av.Sim	Sim/SD	Contrib%	Cum.%
Gobiidae	8.53	10.4	2.45	22.63	22.63
Pomacentridae	8.51	9.78	2.94	21.27	43.9
Carangidae	9.27	9.1	2.62	19.8	63.69
Serranidae	5.26	5.04	2.68	10.96	74.65
Haemulidae	6.03	4.09	0.91	8.9	83.56
Gerreidae	2.81	1.88	0.82	4.1	87.66
Sphyraenidae	1.66	1.74	0.82	3.8	91.45

Group 9/11/2017

Average similarity: 15.31

Species	Av.Abund	Av.Sim	Sim/SD	Contrib%	Cum.%
Gobiidae	9.44	10.2	0.9	66.62	66.62
Serranidae	5.98	3.54	0.41	23.15	89.77
Clupeiformes	5.54	1.57	0.41	10.23	100

Group 9/12/2017

Average similarity: 9.28

Species	Av.Abund	Av.Sim	Sim/SD	Contrib%	Cum.%
Carangidae	0.91	3.35	0.41	36.15	36.15
Gobiidae	2.41	3.02	0.41	32.52	68.66
Pomacentridae	1.39	2.91	0.41	31.34	100

Group 9/13/2017

Average similarity: 30.21

Species	Av.Abund	Av.Sim	Sim/SD	Contrib%	Cum.%
Haemulidae	5.12	11.73	3.65	38.83	38.83
Carangidae	7.01	4.97	0.41	16.46	55.29
Pomacentridae	2	3.4	0.83	11.27	66.56
Gobiidae	3.87	3.32	0.41	11	77.56
Serranidae	2.6	3.1	0.83	10.27	87.83
Gerreidae	6.15	2.84	0.41	9.41	97.24

Group 10/9/2017

Average similarity: 26.86

Species	Av.Abund	Av.Sim	Sim/SD	Contrib%	Cum.%
Pomacentridae	20.47	10.61	0.89	39.49	39.49
Gobiidae	13.52	7.59	0.88	28.25	67.74

Lutjanidae	10.38	2.27	0.41	8.46	76.2
Serranidae	6.47	2.11	0.41	7.87	84.07
Gerreidae	7.49	1.78	0.73	6.62	90.69

Group 10/10/2017

Average similarity: 25.40

Species	Av.Abund	Av.Sim	Sim/SD	Contrib%	Cum.%
Carangidae	1.88	8.47	#####	33.33	33.33
Clupeiformes	6.66	8.47	#####	33.33	66.67
Gobiidae	3.79	8.47	#####	33.33	100

Group 10/11/2017

Average similarity: 30.78

Species	Av.Abund	Av.Sim	Sim/SD	Contrib%	Cum.%
Gobiidae	4.91	10.03	1.63	32.59	32.59
Clupeiformes	4.81	7.14	0.67	23.18	55.78
Carangidae	1.77	7.07	4.4	22.97	78.74
Pomacentridae	2.55	4.02	0.84	13.05	91.8

Groups 8/22/2016 &

8/23/2016

Average dissimilarity =

81.83

Species	Group 8/22/2016	Group 8/23/2016	Av.Diss	Diss/SD	Contrib%	Cum.%
	Av.Abund	Av.Abund				
Clupeidae	4.04	6.92	17.14	0.84	20.94	20.94
Pomacentridae	5.68	3.47	12.22	1.24	14.93	35.88
Gobiidae	2.23	3.28	9.1	1.31	11.12	46.99
Clupeiformes	0.86	2.16	8.03	0.94	9.82	56.81
Tripterygidae	2.23	0	6.01	1	7.35	64.16
Serranidae	1.27	0	5.23	0.78	6.4	70.55
Syngnathidae	1.82	0.72	5.15	0.86	6.29	76.84
Carangidae	0.86	0	3.61	0.8	4.41	81.25
Haemulidae	0.86	0	3.61	0.8	4.41	85.66
Gerreidae	0.81	0	3.25	0.5	3.98	89.64
Monacanthidae	0.85	0	2.07	0.87	2.53	92.17

Groups 8/22/2016 &

8/24/2016

Average dissimilarity =

76.45

	Group 8/22/2016	Group 8/24/2016					
Species	Av. Abund	Av. Abund	Av. Diss	Diss/SD	Contrib%	Cum.%	
Clupeidae	4.04	5.73	13.27	0.94	17.35	17.35	
Gobiidae	2.23	6.84	12.25	1.1	16.02	33.37	
Pomacentridae	5.68	0.81	10.16	1.35	13.29	46.66	
Haemulidae	0.86	3.16	5.16	1.07	6.75	53.41	
Carangidae	0.86	1.45	4.82	0.93	6.31	59.71	
Tripterygidae	2.23	0	4.49	1.04	5.87	65.58	
Syngnathidae	1.82	0	3.42	0.72	4.47	70.05	
Sphyraenidae	0	1.73	3.36	0.87	4.39	74.44	
Serranidae	1.27	0.84	3.05	1.02	3.99	78.44	
Clupeiformes	0.86	0	2.32	0.9	3.03	81.47	
Monacanthidae	0.85	1.27	2.2	1.06	2.87	84.34	
Hemiramphidae	0	0.76	2.14	0.92	2.8	87.13	
Gerreidae	0.81	0	2.13	0.54	2.79	89.93	
Mugilidae	0	0.84	1.9	0.89	2.48	92.41	

Groups 8/23/2016 &
8/24/2016

Average dissimilarity =
87.36

	Group 8/23/2016	Group 8/24/2016					
Species	Av. Abund	Av. Abund	Av. Diss	Diss/SD	Contrib%	Cum.%	
Gobiidae	3.28	6.84	18.42	1.1	21.09	21.09	
Clupeidae	6.92	5.73	17.84	1.12	20.42	41.51	
Haemulidae	0	3.16	10.58	1.07	12.12	53.62	
Carangidae	0	1.45	5.88	0.5	6.74	60.36	
Clupeiformes	2.16	0	5.73	0.53	6.56	66.92	
Pomacentridae	3.47	0.81	5.55	1.1	6.36	73.28	
Sphyraenidae	0.36	1.73	4.55	0.88	5.21	78.48	
Monacanthidae	0	1.27	3.82	1.08	4.38	82.86	
Hemiramphidae	0	0.76	3.39	0.79	3.88	86.74	
Mugilidae	0	0.84	2.8	0.73	3.2	89.94	
Serranidae	0	0.84	2.8	0.73	3.2	93.14	

Groups 8/22/2016 &
9/20/2016

Average dissimilarity =
77.94

	Group 8/22/2016	Group 9/20/2016					
Species	Av. Abund	Av. Abund	Av. Diss	Diss/SD	Contrib%	Cum.%	

Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Gerreidae	0.81	25.94	17	1.01	21.81	21.81
Pomacentridae	5.68	32.07	16.48	1.27	21.15	42.96
Clupeidae	4.04	7.02	12.87	0.83	16.52	59.48
Clupeiformes	0.86	10.35	5.09	0.82	6.53	66.01
Carangidae	0.86	4.16	3.67	1.74	4.71	70.72
Gobiidae	2.23	3.2	3.6	1.08	4.62	75.34
Syngnathidae	1.82	0.64	2.91	0.85	3.73	79.07
Tripterygidae	2.23	0	2.89	0.82	3.71	82.77
Sphyraenidae	0	3.45	2.51	1.57	3.22	86
Serranidae	1.27	1.61	2.26	0.78	2.9	88.89
Scombridae	0	1.55	1.69	0.56	2.17	91.07

Groups 8/23/2016 &
9/20/2016

Average dissimilarity =
84.78

Species	Group	Group	Diss/SD	Contrib%	Cum.%
	8/23/2016	9/20/2016			
Gerreidae	0	25.94	17.56	0.88	20.71
Pomacentridae	3.47	32.07	17.3	1.21	20.41
Clupeidae	6.92	7.02	15.94	0.81	18.8
Gobiidae	3.28	3.2	7.77	0.95	9.17
Clupeiformes	2.16	10.35	7.05	0.77	8.31
Carangidae	0	4.16	5.73	1.71	6.76
Syngnathidae	0.72	0.64	2.97	0.53	3.5
Sphyraenidae	0.36	3.45	2.91	1.14	3.43

Groups 8/24/2016 &
9/20/2016

Average dissimilarity =
81.22

Species	Group	Group	Diss/SD	Contrib%	Cum.%
	8/24/2016	9/20/2016			
Pomacentridae	0.81	32.07	16.83	1.22	20.72
Gerreidae	0	25.94	16.14	0.91	19.88
Clupeidae	5.73	7.02	12.72	0.9	15.66
Gobiidae	6.84	3.2	7.22	0.88	8.89
Carangidae	1.45	4.16	4.41	1.15	5.43
Haemulidae	3.16	0.34	4.05	0.86	4.99
Clupeiformes	0	10.35	3.81	0.56	4.7

Sphyraenidae	1.73	3.45	2.9	1.42	3.57	83.83
Syngnathidae	0	0.64	1.79	0.53	2.2	86.03
Serranidae	0.84	1.61	1.75	1.01	2.15	88.18
Monacanthidae	1.27	0	1.7	1.02	2.1	90.28

Groups 8/22/2016 &

9/21/2016

Average dissimilarity =

68.33

Species	Group 8/22/2016	Group 9/21/2016	Av.Diss	Diss/SD	Contrib%	Cum.%
	Av.Abund	Av.Abund				
Pomacentridae	5.68	4.58	11	1.15	16.1	16.1
Clupeidae	4.04	0.82	10.46	0.69	15.3	31.4
Gobiidae	2.23	1.32	5.41	1.22	7.91	39.31
Tripterygidae	2.23	0	5.33	1.1	7.81	47.12
Syngnathidae	1.82	0.79	4.55	1.02	6.66	53.78
Serranidae	1.27	0	4.19	0.9	6.14	59.92
Gerreidae	0.81	0.88	3.64	0.99	5.32	65.24
Clupeiformes	0.86	1.64	3.29	1.23	4.82	70.06
Sphyraenidae	0	1.23	3.26	0.55	4.78	74.83
Haemulidae	0.86	0	2.88	0.95	4.21	79.04
Hemiramphidae	0	0.94	2.53	0.93	3.7	82.74
Carangidae	0.86	1.26	2.28	1.12	3.34	86.08
Monacanthidae	0.85	0	1.89	0.95	2.77	88.85
Ephippidae	0.45	0	1.56	0.56	2.28	91.13

Groups 8/23/2016 &

9/21/2016

Average dissimilarity =

79.32

Species	Group 8/23/2016	Group 9/21/2016	Av.Diss	Diss/SD	Contrib%	Cum.%
	Av.Abund	Av.Abund				
Pomacentridae	3.47	4.58	14.01	0.78	17.66	17.66
Clupeidae	6.92	0.82	13.29	0.81	16.75	34.41
Clupeiformes	2.16	1.64	12.1	1.21	15.26	49.67
Gobiidae	3.28	1.32	10.08	1.1	12.71	62.38
Carangidae	0	1.26	5.73	1.18	7.23	69.61
Sphyraenidae	0.36	1.23	5.52	0.59	6.96	76.57
Syngnathidae	0.72	0.79	4.75	0.98	5.98	82.55
Hemiramphidae	0	0.94	3.82	0.81	4.82	87.37
Gerreidae	0	0.88	3.63	0.81	4.57	91.95

Groups 8/24/2016 &

9/21/2016

Average dissimilarity =

83.08

Species	Group 8/24/2016	Group 9/21/2016	Av.Diss	Diss/SD	Contrib%	Cum.%
	Av.Abund	Av.Abund				
Gobiidae	6.84	1.32	14.38	1.12	17.31	17.31
Clupeidae	5.73	0.82	11.75	1.01	14.14	31.44
Pomacentridae	0.81	4.58	10.21	0.88	12.29	43.73
Haemulidae	3.16	0	8.79	1.41	10.58	54.31
Carangidae	1.45	1.26	6.17	1.1	7.42	61.73
Sphyraenidae	1.73	1.23	5.37	1.01	6.46	68.2
Clupeiformes	0	1.64	4.72	1.21	5.68	73.88
Monacanthidae	1.27	0	3.22	1.48	3.88	77.76
Hemiramphidae	0.76	0.94	2.62	1.16	3.15	80.91
Gerreidae	0	0.88	2.35	0.9	2.83	83.74
Mugilidae	0.84	0	2.28	0.9	2.74	86.48
Serranidae	0.84	0	2.28	0.9	2.74	89.22
Syngnathidae	0	0.79	2.26	0.9	2.72	91.95

Groups 9/20/2016 &

9/21/2016

Average dissimilarity =

78.82

Species	Group 9/20/2016	Group 9/21/2016	Av.Diss	Diss/SD	Contrib%	Cum.%
	Av.Abund	Av.Abund				
Gerreidae	25.94	0.88	18.16	1.02	23.03	23.03
Pomacentridae	32.07	4.58	18.02	1.3	22.86	45.89
Clupeidae	7.02	0.82	12.41	0.71	15.75	61.64
Clupeiformes	10.35	1.64	6.5	1.09	8.24	69.89
Gobiidae	3.2	1.32	3.8	0.93	4.82	74.7
Sphyraenidae	3.45	1.23	3.68	1.22	4.66	79.37
Carangidae	4.16	1.26	3.68	1.55	4.66	84.03
Syngnathidae	0.64	0.79	2.16	0.77	2.74	86.77
Scombridae	1.55	0	1.84	0.56	2.34	89.11
Hemiramphidae	0	0.94	1.53	0.71	1.94	91.05

Groups 8/22/2016 &

9/22/2016

Average dissimilarity =

78.79

	Group 8/22/2016	Group 9/22/2016					
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%	
Pomacentridae	5.68	3.2	11.1	1.39	14.09	14.09	
Clupeidae	4.04	0	9.85	0.55	12.5	26.59	
Sphyraenidae	0	2.32	7.57	0.7	9.61	36.2	
Tripterygidae	2.23	0	5.77	1.1	7.32	43.52	
Gobiidae	2.23	0.9	5.07	1.1	6.43	49.95	
Serranidae	1.27	0	4.7	0.89	5.96	55.91	
Tetraodontiformes	0.37	1.35	4.35	0.9	5.53	61.44	
Syngnathidae	1.82	0	4.3	0.74	5.46	66.9	
Gobiesocidae	0	1.84	4.22	0.55	5.36	72.26	
Gerreidae	0.81	0.92	3.99	0.73	5.07	77.33	
Clupeiformes	0.86	0	3.22	0.93	4.09	81.42	
Carangidae	0.86	0.46	3.13	0.93	3.98	85.4	
Haemulidae	0.86	0.46	3.13	0.93	3.98	89.37	
Monacanthidae	0.85	0	2.03	0.94	2.58	91.95	

Groups 8/23/2016 &
9/22/2016

Average dissimilarity =
85.23

	Group 8/23/2016	Group 9/22/2016					
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%	
Sphyraenidae	0.36	2.32	13.83	0.6	16.22	16.22	
Pomacentridae	3.47	3.2	13.34	1.5	15.65	31.87	
Clupeidae	6.92	0	11.78	0.65	13.83	45.7	
Gobiidae	3.28	0.9	10.27	1.11	12.05	57.75	
Tetraodontiformes	0	1.35	8.26	0.74	9.69	67.45	
Clupeiformes	2.16	0	7.94	0.55	9.31	76.76	
Gobiesocidae	0	1.84	5.78	0.51	6.79	83.54	
Gerreidae	0	0.92	2.89	0.51	3.39	86.94	
Syngnathidae	0.72	0	2.65	0.55	3.1	90.04	

Groups 8/24/2016 &
9/22/2016

Average dissimilarity =
84.93

	Group 8/24/2016	Group 9/22/2016					
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%	
Gobiidae	6.84	0.9	15.7	1.12	18.48	18.48	

Clupeidae	5.73	0	11.9	0.87	14.01	32.49
Haemulidae	3.16	0.46	8.8	1.15	10.36	42.85
Sphyraenidae	1.73	2.32	8.22	0.88	9.68	52.52
Pomacentridae	0.81	3.2	7.76	1.17	9.14	61.66
Carangidae	1.45	0.46	5.74	0.63	6.75	68.41
Tetraodontiformes	0	1.35	4.38	0.83	5.16	73.58
Gobiesocidae	0	1.84	4.16	0.54	4.9	78.48
Monacanthidae	1.27	0	3.53	1.39	4.16	82.64
Hemiramphidae	0.76	0.45	2.87	0.99	3.38	86.01
Mugilidae	0.84	0	2.53	0.86	2.98	88.99
Serranidae	0.84	0	2.53	0.86	2.98	91.97

Groups 9/20/2016 &
9/22/2016

Average dissimilarity =
85.68

	Group 9/20/2016	Group 9/22/2016				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Gerreidae	25.94	0.92	18.47	0.98	21.56	21.56
Pomacentridae	32.07	3.2	18.2	1.36	21.24	42.79
Clupeidae	7.02	0	13.61	0.72	15.89	58.68
Carangidae	4.16	0.46	5.14	1.73	6	64.68
Sphyraenidae	3.45	2.32	5	0.76	5.84	70.52
Gobiidae	3.2	0.9	4.36	0.96	5.08	75.6
Clupeiformes	10.35	0	3.99	0.56	4.66	80.26
Gobiesocidae	0	1.84	2.63	0.46	3.07	83.33
Tetraodontiformes	0	1.35	2.6	0.63	3.04	86.37
Syngnathidae	0.64	0	2.52	0.55	2.94	89.31
Scombridae	1.55	0	1.9	0.56	2.22	91.53

Groups 9/21/2016 &
9/22/2016

Average dissimilarity =
73.37

	Group 9/21/2016	Group 9/22/2016				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Pomacentridae	4.58	3.2	13.77	1.12	18.77	18.77
Sphyraenidae	1.23	2.32	10.83	0.88	14.76	33.53
Clupeiformes	1.64	0	6.74	1.25	9.19	42.72
Tetraodontiformes	0	1.35	5.63	0.89	7.67	50.39
Gobiidae	1.32	0.9	5.3	1.18	7.23	57.62

Gobiesocidae	0	1.84	5.02	0.56	6.84	64.46
Gerreidae	0.88	0.92	4.6	1.16	6.27	70.73
Carangidae	1.26	0.46	4.52	1.28	6.16	76.89
Hemiramphidae	0.94	0.45	3.54	0.95	4.83	81.72
Syngnathidae	0.79	0	3.22	0.93	4.39	86.11
Clupeidae	0.82	0	2.96	0.55	4.03	90.14

Groups 8/22/2016 &
10/20/2016

Average dissimilarity =
73.87

Species	Group 8/22/2016	Group 10/20/2016	Av.Diss	Diss/SD	Contrib%	Cum.%
	Av.Abund	Av.Abund				
Clupeidae	4.04	7.99	17.46	0.97	23.64	23.64
Pomacentridae	5.68	1.49	9.86	1.23	13.35	36.99
Gobiidae	2.23	1.53	4.94	1.15	6.69	43.68
Tripterygidae	2.23	0	4.92	1.04	6.66	50.34
Serranidae	1.27	1.44	4.4	1.02	5.96	56.3
Haemulidae	0.86	1.93	4.18	1.12	5.65	61.95
Syngnathidae	1.82	0	3.71	0.72	5.02	66.97
Gerreidae	0.81	0.79	3.47	0.71	4.7	71.67
Clupeiformes	0.86	0.75	3.38	1.11	4.58	76.25
Aulostomidae	0	1.44	2.67	0.78	3.62	79.87
Scombridae	0	0.79	2.59	0.54	3.5	83.37
Carangidae	0.86	0.76	2.26	0.95	3.06	86.43
Monacanthidae	0.85	0	1.75	0.91	2.37	88.8
Ephippidae	0.45	0	1.43	0.52	1.93	90.73

Groups 8/23/2016 &
10/20/2016

Average dissimilarity =
83.29

Species	Group 8/23/2016	Group 10/20/2016	Av.Diss	Diss/SD	Contrib%	Cum.%
	Av.Abund	Av.Abund				
Clupeidae	6.92	7.99	23.29	1.06	27.96	27.96
Clupeiformes	2.16	0.75	9.71	0.75	11.66	39.62
Gobiidae	3.28	1.53	8.53	1.1	10.24	49.86
Pomacentridae	3.47	1.49	7.48	1.15	8.98	58.84
Haemulidae	0	1.93	5.68	0.82	6.82	65.66
Gerreidae	0	0.79	4.78	0.47	5.73	71.39
Scombridae	0	0.79	4.78	0.47	5.73	77.13

Aulostomidae	0.41	1.44	3.46	0.77	4.15	81.28
Serranidae	0	1.44	3.35	0.73	4.02	85.3
Carangidae	0	0.76	3.18	0.66	3.82	89.12
Sphyraenidae	0.36	0.39	2.76	0.56	3.32	92.43

Groups 8/24/2016 &

10/20/2016

Average dissimilarity =
76.29

	Group 8/24/2016	Group 10/20/2016				
Species	Av. Abund	Av. Abund	Av. Diss	Diss/SD	Contrib%	Cum.%
Clupeidae	5.73	7.99	17.28	1.12	22.66	22.66
Gobiidae	6.84	1.53	13.45	1.05	17.63	40.29
Haemulidae	3.16	1.93	6.7	1.08	8.79	49.07
Carangidae	1.45	0.76	5.13	0.75	6.72	55.79
Sphyraenidae	1.73	0.39	3.63	0.96	4.75	60.55
Serranidae	0.84	1.44	3.31	1.06	4.34	64.88
Pomacentridae	0.81	1.49	3.24	0.87	4.25	69.13
Monacanthidae	1.27	0	2.97	1.31	3.89	73.02
Aulostomidae	0	1.44	2.63	0.77	3.45	76.47
Gerreidae	0	0.79	2.57	0.53	3.36	79.84
Scombridae	0	0.79	2.57	0.53	3.36	83.2
Clupeiformes	0	0.75	2.49	0.53	3.26	86.46
Hemiramphidae	0.76	0	2.42	0.86	3.17	89.64
Mugilidae	0.84	0	2.1	0.83	2.76	92.4

Groups 9/20/2016 &

10/20/2016

Average dissimilarity =
80.97

	Group 9/20/2016	Group 10/20/2016				
Species	Av. Abund	Av. Abund	Av. Diss	Diss/SD	Contrib%	Cum.%
Gerreidae	25.94	0.79	17.53	1.02	21.64	21.64
Pomacentridae	32.07	1.49	17.03	1.24	21.03	42.68
Clupeidae	7.02	7.99	14.96	0.95	18.47	61.15
Clupeiformes	10.35	0.75	5.19	0.76	6.41	67.56
Carangidae	4.16	0.76	3.98	1.49	4.91	72.47
Gobiidae	3.2	1.53	3.92	0.91	4.84	77.32
Scombridae	1.55	0.79	2.77	0.69	3.42	80.73
Haemulidae	0.34	1.93	2.52	0.72	3.11	83.85
Sphyraenidae	3.45	0.39	2.41	1.54	2.98	86.83

Serranidae	1.61	1.44	2.2	0.86	2.72	89.55
Syngnathidae	0.64	0	2.05	0.52	2.53	92.08

Groups 9/21/2016 &
10/20/2016

Average dissimilarity =
77.54

Species	Group 9/21/2016	Group 10/20/2016	Av.Diss	Diss/SD	Contrib%	Cum.%
	Av.Abund	Av.Abund				
Clupeidae	0.82	7.99	17.71	1.03	22.83	22.83
Pomacentridae	4.58	1.49	10.65	0.86	13.73	36.57
Gobiidae	1.32	1.53	5.11	1.12	6.59	43.16
Clupeiformes	1.64	0.75	4.96	1.17	6.4	49.56
Haemulidae	0	1.93	4.72	0.89	6.08	55.64
Sphyraenidae	1.23	0.39	4.53	0.75	5.84	61.48
Gerreidae	0.88	0.79	4.21	0.91	5.43	66.91
Scombridae	0	0.79	3.29	0.55	4.25	71.16
Aulostomidae	0	1.44	3.08	0.79	3.97	75.13
Serranidae	0	1.44	3.08	0.79	3.97	79.11
Hemiramphidae	0.94	0	2.83	0.88	3.65	82.75
Carangidae	1.26	0.76	2.78	0.99	3.59	86.34
Syngnathidae	0.79	0	2.61	0.86	3.36	89.7
Ophychthidae	0	0.77	1.54	0.56	1.98	91.68

Groups 9/22/2016 &
10/20/2016

Average dissimilarity =
84.04

Species	Group 9/22/2016	Group 10/20/2016	Av.Diss	Diss/SD	Contrib%	Cum.%
	Av.Abund	Av.Abund				
Clupeidae	0	7.99	18.08	0.89	21.51	21.51
Sphyraenidae	2.32	0.39	8.77	0.71	10.44	31.94
Pomacentridae	3.2	1.49	8.36	1.17	9.94	41.89
Haemulidae	0.46	1.93	5.31	0.97	6.31	48.2
Tetraodontiformes	1.35	0	5.19	0.8	6.18	54.38
Gobiesocidae	1.84	0.38	5.09	0.62	6.06	60.44
Gerreidae	0.92	0.79	4.89	0.7	5.82	66.26
Gobiidae	0.9	1.53	4.74	1.23	5.64	71.9
Scombridae	0	0.79	3.83	0.54	4.56	76.46
Clupeiformes	0	0.75	3.74	0.54	4.45	80.91
Aulostomidae	0	1.44	3.29	0.78	3.92	84.83

Serranidae	0	1.44	3.29	0.78	3.92	88.75
Carangidae	0.46	0.76	2.9	0.89	3.45	92.2
Groups 8/22/2016 & 10/21/2016						
Average dissimilarity = 75.50						
	Group 8/22/2016	Group 10/21/2016				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Clupeidae	4.04	14.94	20.53	0.82	27.19	27.19
Gobiidae	2.23	5.46	10.16	1.22	13.46	40.65
Pomacentridae	5.68	3.87	9.81	1.2	12.99	53.63
Gerreidae	0.81	1.99	6.8	0.76	9.01	62.64
Tripterygidae	2.23	0.39	4.38	0.92	5.8	68.43
Serranidae	1.27	0	3.73	0.78	4.94	73.37
Syngnathidae	1.82	0	3.55	0.68	4.7	78.07
Carangidae	0.86	0.79	3.21	1.03	4.26	82.32
Clupeiformes	0.86	0.39	2.41	0.8	3.19	85.51
Haemulidae	0.86	0.39	2.41	0.8	3.19	88.7
Ophychthidae	0	1.16	1.89	0.89	2.5	91.2
Groups 8/23/2016 & 10/21/2016						
Average dissimilarity = 85.97						
	Group 8/23/2016	Group 10/21/2016				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Clupeidae	6.92	14.94	22.82	0.84	26.54	26.54
Gobiidae	3.28	5.46	17.72	1.04	20.61	47.16
Gerreidae	0	1.99	14.14	0.51	16.45	63.6
Pomacentridae	3.47	3.87	10.46	1.32	12.17	75.78
Clupeiformes	2.16	0.39	7.02	0.58	8.17	83.94
Ophychthidae	0	1.16	2.71	0.71	3.15	87.1
Carangidae	0	0.79	2.48	0.51	2.88	89.98
Syngnathidae	0.72	0	2.1	0.5	2.44	92.42
Groups 8/24/2016 & 10/21/2016						
Average dissimilarity = 80.10						

	Group 8/24/2016	Group 10/21/2016				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Clupeidae	5.73	14.94	21.58	0.98	26.94	26.94
Gobiidae	6.84	5.46	13.77	1.14	17.19	44.13
Haemulidae	3.16	0.39	6.92	0.97	8.63	52.76
Gerreidae	0	1.99	6.73	0.62	8.41	61.17
Pomacentridae	0.81	3.87	6.05	1.19	7.55	68.72
Carangidae	1.45	0.79	4.95	0.63	6.18	74.9
Sphyraenidae	1.73	0	3.5	0.82	4.37	79.27
Monacanthidae	1.27	0	2.86	1.18	3.57	82.85
Hemiramphidae	0.76	0	2.35	0.81	2.94	85.78
Ophychthidae	0.43	1.16	2.06	0.95	2.57	88.35
Mugilidae	0.84	0	2.03	0.77	2.54	90.89

Groups 9/20/2016 &
10/21/2016

Average dissimilarity =
81.80

	Group 9/20/2016	Group 10/21/2016				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Clupeidae	7.02	14.94	18.93	0.92	23.14	23.14
Gerreidae	25.94	1.99	18.33	1.15	22.41	45.55
Pomacentridae	32.07	3.87	16.43	1.24	20.09	65.64
Gobiidae	3.2	5.46	5.97	1.06	7.3	72.94
Carangidae	4.16	0.79	4.28	1.5	5.24	78.17
Clupeiformes	10.35	0.39	4.25	0.65	5.2	83.37
Sphyraenidae	3.45	0	2.57	1.35	3.14	86.52
Syngnathidae	0.64	0	1.99	0.49	2.43	88.95
Scombridae	1.55	0	1.66	0.54	2.03	90.98

Groups 9/21/2016 &
10/21/2016

Average dissimilarity =
78.72

	Group 9/21/2016	Group 10/21/2016				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Clupeidae	0.82	14.94	17.26	0.66	21.93	21.93
Gobiidae	1.32	5.46	12.92	1.42	16.42	38.35
Pomacentridae	4.58	3.87	11.72	0.96	14.88	53.23
Gerreidae	0.88	1.99	8.28	0.71	10.52	63.75
Clupeiformes	1.64	0.39	4.74	0.92	6.02	69.76

Carangidae	1.26	0.79	4.35	1.36	5.52	75.29
Sphyraenidae	1.23	0	3.53	0.5	4.48	79.77
Hemiramphidae	0.94	0	2.74	0.82	3.48	83.24
Syngnathidae	0.79	0	2.54	0.8	3.22	86.47
Ophychthidae	0	1.16	2.23	0.89	2.83	89.3
Ostraciidae	0.38	0	1.36	0.49	1.73	91.03

Groups 9/22/2016 &
10/21/2016

Average dissimilarity =
84.53

Species	Group 9/22/2016	Group 10/21/2016	Av.Diss	Diss/SD	Contrib%	Cum.%
	Av.Abund	Av.Abund				
Clupeidae	0	14.94	15.76	0.56	18.65	18.65
Gobiidae	0.9	5.46	14.7	1.43	17.39	36.03
Gerreidae	0.92	1.99	10.54	0.66	12.47	48.5
Pomacentridae	3.2	3.87	10.12	1.26	11.97	60.48
Sphyraenidae	2.32	0	8.71	0.61	10.3	70.78
Tetraodontiformes	1.35	0	5.1	0.75	6.04	76.82
Gobiesocidae	1.84	0	4.43	0.51	5.24	82.06
Carangidae	0.46	0.79	2.93	0.71	3.47	85.53
Ophychthidae	0	1.16	2.45	0.85	2.9	88.43
Haemulidae	0.46	0.39	1.83	0.72	2.17	90.6

Groups 10/20/2016 &
10/21/2016

Average dissimilarity =
81.19

Species	Group 10/20/2016	Group 10/21/2016	Av.Diss	Diss/SD	Contrib%	Cum.%
	Av.Abund	Av.Abund				
Clupeidae	7.99	14.94	26.07	1.09	32.11	32.11
Gobiidae	1.53	5.46	11.83	1.17	14.58	46.69
Gerreidae	0.79	1.99	7.99	0.71	9.84	56.53
Pomacentridae	1.49	3.87	6.89	1.14	8.49	65.02
Haemulidae	1.93	0.39	4.23	0.85	5.2	70.23
Clupeiformes	0.75	0.39	3.26	0.58	4.01	74.24
Carangidae	0.76	0.79	3.17	0.91	3.9	78.14
Scombridae	0.79	0	2.98	0.48	3.67	81.81
Aulostomidae	1.44	0	2.72	0.72	3.35	85.17
Serranidae	1.44	0	2.72	0.72	3.35	88.52
Ophychthidae	0.77	1.16	2.7	0.95	3.32	91.84

Groups 8/22/2016 &

2/13/2017

Average dissimilarity =

77.70

Species	Group 8/22/2016	Group 2/13/2017	Av.Diss	Diss/SD	Contrib%	Cum.%
	Av.Abund	Av.Abund				
Pomacentridae	5.68	39.7	19.51	1.48	25.11	25.11
Tripterygidae	2.23	22.23	11.96	1.4	15.39	40.5
Gerreidae	0.81	22.28	11.78	1.31	15.16	55.66
Gobiidae	2.23	3.53	6.14	0.81	7.9	63.56
Clupeidae	4.04	0.89	6.07	0.53	7.82	71.37
Serranidae	1.27	4.27	3.54	1.04	4.55	75.93
Syngnathidae	1.82	0.35	2.56	0.68	3.29	79.22
Mullidae	0.45	3.55	2.53	1.45	3.26	82.48
Haemulidae	0.86	2.13	2.22	1.01	2.85	85.33
Sphyraenidae	0	2.49	2.16	0.93	2.78	88.11
Carangidae	0.86	1.6	2.04	0.88	2.63	90.74

Groups 8/23/2016 &

2/13/2017

Average dissimilarity =

87.27

Species	Group 8/23/2016	Group 2/13/2017	Av.Diss	Diss/SD	Contrib%	Cum.%
	Av.Abund	Av.Abund				
Pomacentridae	3.47	39.7	21.21	1.5	24.31	24.31
Gobiidae	3.28	3.53	13.84	0.87	15.85	40.16
Gerreidae	0	22.28	12.5	1.26	14.33	54.49
Tripterygidae	0	22.23	11.86	1.17	13.59	68.08
Clupeidae	6.92	0.89	7.56	0.59	8.66	76.74
Clupeiformes	2.16	0	4.01	0.42	4.59	81.33
Mullidae	0	3.55	2.88	1.25	3.3	84.63
Sphyraenidae	0.36	2.49	2.66	0.91	3.04	87.68
Syngnathidae	0.72	0.35	2.1	0.64	2.41	90.09

Groups 8/24/2016 &

2/13/2017

Average dissimilarity =

84.35

Group 8/24/2016	Group 2/13/2017
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Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Pomacentridae	0.81	39.7	19.82	1.39	23.49	23.49
Gerreidae	0	22.28	11.29	1.17	13.38	36.87
Tripterygidae	0	22.23	11	1.12	13.04	49.91
Gobiidae	6.84	3.53	8.45	0.96	10.02	59.93
Clupeidae	5.73	0.89	7.03	0.74	8.33	68.26
Haemulidae	3.16	2.13	4.76	0.81	5.64	73.9
Sphyraenidae	1.73	2.49	3.1	1.01	3.68	77.58
Carangidae	1.45	1.6	2.99	0.48	3.54	81.12
Serranidae	0.84	4.27	2.71	1.33	3.21	84.33
Mullidae	0	3.55	2.4	1.49	2.85	87.18
Monacanthidae	1.27	0	1.88	0.93	2.22	89.4
Hemiramphidae	0.76	0	1.48	0.66	1.75	91.15

Groups 9/20/2016 &
2/13/2017

Average dissimilarity =
73.66

Species	Group 9/20/2016	Group 2/13/2017	Av.Diss	Diss/SD	Contrib%	Cum.%
	Av.Abund	Av.Abund				
Pomacentridae	32.07	39.7	19.44	1.47	26.39	26.39
Gerreidae	25.94	22.28	14.91	1.04	20.24	46.63
Tripterygidae	0	22.23	8.8	1.01	11.94	58.57
Clupeidae	7.02	0.89	7.54	0.56	10.24	68.81
Carangidae	4.16	1.6	3.25	1.15	4.41	73.23
Clupeiformes	10.35	0	3.15	0.54	4.27	77.5
Gobiidae	3.2	3.53	3.01	0.95	4.08	81.59
Sphyraenidae	3.45	2.49	2.14	1.24	2.9	84.49
Serranidae	1.61	4.27	1.96	1.1	2.66	87.15
Mullidae	0	3.55	1.78	1.24	2.42	89.57
Scombridae	1.55	0.53	1.29	0.52	1.76	91.32

Groups 9/21/2016 &
2/13/2017

Average dissimilarity =
80.69

Species	Group 9/21/2016	Group 2/13/2017	Av.Diss	Diss/SD	Contrib%	Cum.%
	Av.Abund	Av.Abund				
Pomacentridae	4.58	39.7	21.43	1.55	26.55	26.55
Gerreidae	0.88	22.28	11.87	1.23	14.71	41.26
Tripterygidae	0	22.23	11.68	1.15	14.47	55.74

Gobiidae	1.32	3.53	8.19	0.94	10.15	65.89
Sphyraenidae	1.23	2.49	3.77	0.82	4.67	70.55
Clupeiformes	1.64	0	3.31	0.82	4.1	74.65
Carangidae	1.26	1.6	2.84	1.15	3.52	78.17
Mullidae	0	3.55	2.67	1.51	3.31	81.48
Clupeidae	0.82	0.89	2.16	0.7	2.68	84.16
Serranidae	0	4.27	1.87	0.9	2.32	86.47
Hemiramphidae	0.94	0	1.74	0.67	2.16	88.63
Syngnathidae	0.79	0.35	1.54	0.7	1.91	90.54

Groups 9/22/2016 &
2/13/2017

Average dissimilarity =
82.54

Species	Group	Group	Diss/SD	Contrib%	Cum.%
	9/22/2016	2/13/2017			
Pomacentridae	3.2	39.7	21.42	25.95	25.95
Gerreidae	0.92	22.28	12.85	15.57	41.52
Tripterygidae	0	22.23	11.94	14.46	55.98
Gobiidae	0.9	3.53	9.77	11.83	67.81
Sphyraenidae	2.32	2.49	5.82	7.05	74.87
Gobiesocidae	1.84	0	2.91	3.52	78.39
Tetraodontiformes	1.35	0.4	2.89	3.51	81.9
Mullidae	0	3.55	2.81	3.4	85.3
Serranidae	0	4.27	1.89	2.29	87.59
Aulostomidae	0	0.4	1.66	2.01	89.6
Haemulidae	0.46	2.13	1.59	1.92	91.52

Groups 10/20/2016 &
2/13/2017

Average dissimilarity =
86.10

Species	Group	Group	Diss/SD	Contrib%	Cum.%
	10/20/2016	2/13/2017			
Pomacentridae	1.49	39.7	19.97	23.19	23.19
Gerreidae	0.79	22.28	12.15	14.11	37.3
Tripterygidae	0	22.23	11.29	13.11	50.42
Clupeidae	7.99	0.89	10.48	12.17	62.58
Gobiidae	1.53	3.53	7.76	9.01	71.6
Haemulidae	1.93	2.13	3.11	3.62	75.21
Serranidae	1.44	4.27	3.01	3.49	78.71

Mullidae	0	3.55	2.54	1.44	2.95	81.65
Sphyraenidae	0.39	2.49	2.41	0.95	2.8	84.45
Aulostomidae	1.44	0.4	2.33	0.75	2.71	87.16
Scombridae	0.79	0.53	1.9	0.44	2.2	89.36
Carangidae	0.76	1.6	1.79	0.86	2.08	91.44

Groups 10/21/2016 &

2/13/2017

Average dissimilarity =

78.06

Species	Group 10/21/2016	Group 2/13/2017	Av.Diss	Diss/SD	Contrib%	Cum.%
	Av.Abund	Av.Abund				
Pomacentridae	3.87	39.7	19.5	1.43	24.98	24.98
Gerreidae	1.99	22.28	13.4	1.37	17.17	42.15
Clupeidae	14.94	0.89	11.25	0.55	14.41	56.56
Tripterygidae	0.39	22.23	10.93	1.13	14	70.56
Gobiidae	5.46	3.53	6.02	0.65	7.71	78.26
Mullidae	0.39	3.55	2.45	1.35	3.14	81.4
Sphyraenidae	0	2.49	2.19	0.89	2.81	84.21
Serranidae	0	4.27	1.77	0.88	2.26	86.47
Carangidae	0.79	1.6	1.67	0.59	2.14	88.61
Haemulidae	0.39	2.13	1.44	0.98	1.84	90.45

Groups 8/22/2016 &

2/14/2017

Average dissimilarity =

84.30

Species	Group 8/22/2016	Group 2/14/2017	Av.Diss	Diss/SD	Contrib%	Cum.%
	Av.Abund	Av.Abund				
Pomacentridae	5.68	47.25	29.66	2.85	35.19	35.19
Gerreidae	0.81	42.59	24.51	1.02	29.07	64.26
Clupeidae	4.04	18.13	15.31	1.04	18.17	82.43
Sphyraenidae	0	2.89	1.87	1.44	2.22	84.65
Syngnathidae	1.82	1.56	1.78	0.96	2.11	86.76
Haemulidae	0.86	3.11	1.68	1.44	1.99	88.74
Tripterygidae	2.23	0	1.61	0.97	1.91	90.65

Groups 8/23/2016 &

2/14/2017

Average dissimilarity =

89.05

Species	Group 8/23/2016	Group 2/14/2017	Av.Diss	Diss/SD	Contrib%	Cum.%
	Av.Abund	Av.Abund				
Pomacentridae	3.47	47.25	33.66	2.64	37.8	37.8
Gerreidae	0	42.59	26.01	1.01	29.21	67.01
Clupeidae	6.92	18.13	16.43	0.96	18.45	85.45
Gobiidae	3.28	0.45	2.14	0.6	2.41	87.86
Haemulidae	0	3.11	1.96	1.3	2.2	90.06

Groups 8/24/2016 &
2/14/2017

Average dissimilarity =
90.12

Species	Group 8/24/2016	Group 2/14/2017	Av.Diss	Diss/SD	Contrib%	Cum.%
	Av.Abund	Av.Abund				
Pomacentridae	0.81	47.25	32.87	3.31	36.48	36.48
Gerreidae	0	42.59	24.53	1.01	27.22	63.7
Clupeidae	5.73	18.13	15.01	1.08	16.65	80.35
Gobiidae	6.84	0.45	4.75	0.97	5.27	85.62
Haemulidae	3.16	3.11	1.89	1.23	2.09	87.71
Sphyraenidae	1.73	2.89	1.76	1.31	1.96	89.67
Mullidae	0	2.28	1.51	0.82	1.67	91.34

Groups 9/20/2016 &
2/14/2017

Average dissimilarity =
69.15

Species	Group 9/20/2016	Group 2/14/2017	Av.Diss	Diss/SD	Contrib%	Cum.%
	Av.Abund	Av.Abund				
Pomacentridae	32.07	47.25	22.37	1.92	32.35	32.35
Gerreidae	25.94	42.59	20.37	1.12	29.46	61.81
Clupeidae	7.02	18.13	10.97	0.99	15.87	77.68
Clupeiformes	10.35	0.91	3.09	0.63	4.47	82.15
Carangidae	4.16	0	2.14	1.9	3.09	85.24
Sphyraenidae	3.45	2.89	1.56	1.73	2.25	87.49
Gobiidae	3.2	0.45	1.55	1.25	2.24	89.73
Haemulidae	0.34	3.11	1.37	1.18	1.99	91.71

Groups 9/21/2016 &
2/14/2017

Average dissimilarity =
88.36

Species	Group 9/21/2016	Group 2/14/2017	Av.Diss	Diss/SD	Contrib%	Cum.%
	Av.Abund	Av.Abund				
Pomacentridae	4.58	47.25	32.26	3	36.51	36.51
Gerreidae	0.88	42.59	25.41	0.99	28.75	65.26
Clupeidae	0.82	18.13	16.78	0.98	18.99	84.25
Sphyraenidae	1.23	2.89	2.01	1.33	2.28	86.53
Haemulidae	0	3.11	1.96	1.32	2.21	88.74
Mullidae	0	2.28	1.61	0.81	1.82	90.56

Groups 9/22/2016 &
2/14/2017

Average dissimilarity =
91.76

Species	Group 9/22/2016	Group 2/14/2017	Av.Diss	Diss/SD	Contrib%	Cum.%
	Av.Abund	Av.Abund				
Pomacentridae	3.2	47.25	34.16	3.11	37.22	37.22
Gerreidae	0.92	42.59	26.24	1.02	28.6	65.82
Clupeidae	0	18.13	17.33	0.95	18.89	84.71
Sphyraenidae	2.32	2.89	2.42	1.2	2.64	87.35
Haemulidae	0.46	3.11	1.9	1.35	2.08	89.43
Mullidae	0	2.28	1.64	0.81	1.79	91.22

Groups 10/20/2016 &
2/14/2017

Average dissimilarity =
87.59

Species	Group 10/20/2016	Group 2/14/2017	Av.Diss	Diss/SD	Contrib%	Cum.%
	Av.Abund	Av.Abund				
Pomacentridae	1.49	47.25	33.28	3.23	37.99	37.99
Gerreidae	0.79	42.59	24.84	1.01	28.36	66.35
Clupeidae	7.99	18.13	15.27	1.1	17.43	83.78
Haemulidae	1.93	3.11	2.04	1.32	2.33	86.11
Sphyraenidae	0.39	2.89	1.75	1.42	2	88.11
Mullidae	0	2.28	1.55	0.81	1.77	89.87
Syngnathidae	0	1.56	1.5	0.72	1.72	91.59

Groups 10/21/2016 &
2/14/2017

Average dissimilarity =
86.84

Species	Group 10/21/2016	Group 2/14/2017	Av.Diss	Diss/SD	Contrib%	Cum.%
	Av.Abund	Av.Abund				
Pomacentridae	3.87	47.25	30.63	2.52	35.27	35.27
Gerreidae	1.99	42.59	23.77	1.02	27.37	62.64
Clupeidae	14.94	18.13	17.91	1.11	20.63	83.26
Gobiidae	5.46	0.45	3.76	1.27	4.33	87.59
Sphyraenidae	0	2.89	1.83	1.39	2.11	89.7
Haemulidae	0.39	3.11	1.72	1.29	1.98	91.69

Groups 2/13/2017 &
2/14/2017

Average dissimilarity =
72.12

Species	Group 2/13/2017	Group 2/14/2017	Av.Diss	Diss/SD	Contrib%	Cum.%
	Av.Abund	Av.Abund				
Pomacentridae	39.7	47.25	21.91	1.53	30.38	30.38
Gerreidae	22.28	42.59	19.06	0.97	26.42	56.81
Clupeidae	0.89	18.13	11.53	0.83	15.99	72.8
Tripterygidae	22.23	0	7.3	1.02	10.13	82.92
Gobiidae	3.53	0.45	2.44	0.96	3.39	86.31
Sphyraenidae	2.49	2.89	1.61	1.35	2.23	88.54
Mullidae	3.55	2.28	1.54	1.17	2.14	90.68

Groups 8/22/2016 &
2/15/2017

Average dissimilarity =
73.94

Species	Group 8/22/2016	Group 2/15/2017	Av.Diss	Diss/SD	Contrib%	Cum.%
	Av.Abund	Av.Abund				
Pomacentridae	5.68	31.59	24.24	1.23	32.79	32.79
Clupeidae	4.04	12.57	17.21	1.01	23.28	56.07
Gobiidae	2.23	6.54	6.67	1.19	9.02	65.09
Tripterygidae	2.23	7.64	6.52	0.94	8.82	73.91
Mullidae	0.45	6.72	5.29	0.88	7.16	81.07
Syngnathidae	1.82	0.36	1.99	0.8	2.7	83.77
Gerreidae	0.81	1.77	1.82	0.91	2.46	86.23
Serranidae	1.27	0.43	1.6	0.87	2.16	88.39
Haemulidae	0.86	0.87	1.53	1.12	2.07	90.46

Groups 8/23/2016 &
2/15/2017
Average dissimilarity =
82.66

Species	Group	Group	Av.Diss	Diss/SD	Contrib%	Cum.%
	8/23/2016	2/15/2017				
Pomacentridae	3.47	31.59	29.08	1.31	35.18	35.18
Clupeidae	6.92	12.57	20.6	0.91	24.92	60.1
Gobiidae	3.28	6.54	9.79	1.28	11.85	71.95
Tripterygidae	0	7.64	5.98	0.69	7.23	79.18
Mullidae	0	6.72	5.47	0.8	6.62	85.79
Clupeiformes	2.16	0	2.77	0.53	3.36	89.15
Gerreidae	0	1.77	1.65	0.91	2	91.14

Groups 8/24/2016 &
2/15/2017
Average dissimilarity =
80.09

Species	Group	Group	Av.Diss	Diss/SD	Contrib%	Cum.%
	8/24/2016	2/15/2017				
Pomacentridae	0.81	31.59	27.96	1.44	34.91	34.91
Clupeidae	5.73	12.57	16.55	1.02	20.67	55.58
Gobiidae	6.84	6.54	7.11	1.32	8.87	64.46
Tripterygidae	0	7.64	5.56	0.69	6.94	71.4
Mullidae	0	6.72	5.07	0.8	6.33	77.73
Haemulidae	3.16	0.87	3.3	1.23	4.13	81.85
Carangidae	1.45	0	1.86	0.53	2.32	84.17
Sphyraenidae	1.73	0.45	1.86	0.83	2.32	86.49
Gerreidae	0	1.77	1.51	0.93	1.88	88.37
Monacanthidae	1.27	0	1.42	1.44	1.77	90.14

Groups 9/20/2016 &
2/15/2017
Average dissimilarity =
72.72

Species	Group	Group	Av.Diss	Diss/SD	Contrib%	Cum.%
	9/20/2016	2/15/2017				
Pomacentridae	32.07	31.59	21.67	1.37	29.79	29.79
Gerreidae	25.94	1.77	12.51	1.03	17.2	47
Clupeidae	7.02	12.57	11.05	0.86	15.19	62.19

Tripterygidae	0	7.64	4.26	0.64	5.86	68.05
Mullidae	0	6.72	3.86	0.73	5.31	73.35
Gobiidae	3.2	6.54	3.82	0.99	5.26	78.61
Clupeiformes	10.35	0	3.28	0.56	4.51	83.12
Carangidae	4.16	0	2.96	1.82	4.08	87.2
Sphyraenidae	3.45	0.45	1.62	1.34	2.23	89.43
Scombridae	1.55	0	1.15	0.55	1.58	91.01

Groups 9/21/2016 &
2/15/2017

Average dissimilarity =
83.06

Species	Group 9/21/2016	Group 2/15/2017	Av.Diss	Diss/SD	Contrib%	Cum.%
	Av.Abund	Av.Abund				
Pomacentridae	4.58	31.59	27.35	1.34	32.93	32.93
Clupeidae	0.82	12.57	20.22	1.01	24.34	57.27
Gobiidae	1.32	6.54	7.96	1.26	9.59	66.86
Tripterygidae	0	7.64	5.96	0.7	7.18	74.03
Mullidae	0	6.72	5.45	0.81	6.56	80.59
Clupeiformes	1.64	0	2.19	1.23	2.64	83.23
Gerreidae	0.88	1.77	1.96	1.41	2.36	85.59
Sphyraenidae	1.23	0.45	1.74	0.61	2.1	87.68
Carangidae	1.26	0	1.66	1.41	2	89.68
Tetraodontiformes	0	0.74	1.24	0.96	1.49	91.18

Groups 9/22/2016 &
2/15/2017

Average dissimilarity =
86.24

Species	Group 9/22/2016	Group 2/15/2017	Av.Diss	Diss/SD	Contrib%	Cum.%
	Av.Abund	Av.Abund				
Pomacentridae	3.2	31.59	28.46	1.28	33	33
Clupeidae	0	12.57	21.71	0.99	25.18	58.17
Gobiidae	0.9	6.54	8.83	1.32	10.24	68.41
Tripterygidae	0	7.64	6.09	0.7	7.06	75.47
Mullidae	0	6.72	5.57	0.81	6.46	81.93
Sphyraenidae	2.32	0.45	3.27	0.69	3.79	85.72
Gobiesocidae	1.84	0.43	2.46	0.64	2.85	88.57
Gerreidae	0.92	1.77	2.01	0.92	2.33	90.89

Groups 10/20/2016 &
2/15/2017

Average dissimilarity =
80.40

	Group 10/20/2016	Group 2/15/2017					
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%	
Pomacentridae	1.49	31.59	28.16	1.39	35.02	35.02	
Clupeidae	7.99	12.57	16.99	0.97	21.13	56.16	
Gobiidae	1.53	6.54	7.55	1.2	9.39	65.55	
Tripterygidae	0	7.64	5.72	0.69	7.11	72.66	
Mullidae	0	6.72	5.22	0.8	6.49	79.15	
Haemulidae	1.93	0.87	2.4	0.94	2.99	82.13	
Gerreidae	0.79	1.77	1.9	0.9	2.37	84.5	
Serranidae	1.44	0.43	1.59	0.85	1.98	86.48	
Aulostomidae	1.44	0	1.51	0.76	1.88	88.35	
Tetraodontiformes	0	0.74	1.16	0.93	1.44	89.79	
Scombridae	0.79	0	1.12	0.52	1.39	91.18	

Groups 10/21/2016 &
2/15/2017
Average dissimilarity =
76.71

	Group 10/21/2016	Group 2/15/2017					
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%	
Pomacentridae	3.87	31.59	25.47	1.22	33.2	33.2	
Clupeidae	14.94	12.57	23.61	1.22	30.78	63.98	
Tripterygidae	0.39	7.64	5.61	0.72	7.32	71.3	
Mullidae	0.39	6.72	5.13	0.84	6.69	77.99	
Gobiidae	5.46	6.54	5.08	0.91	6.62	84.61	
Gerreidae	1.99	1.77	3.1	0.8	4.04	88.65	
Haemulidae	0.39	0.87	1.14	0.75	1.49	90.14	

Groups 2/13/2017 &
2/15/2017
Average dissimilarity =
70.55

	Group 2/13/2017	Group 2/15/2017					
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%	
Pomacentridae	39.7	31.59	22.43	1.27	31.79	31.79	
Clupeidae	0.89	12.57	12.59	0.76	17.84	49.63	
Tripterygidae	22.23	7.64	10.19	1.25	14.44	64.06	
Gerreidae	22.28	1.77	9.02	1.18	12.78	76.84	

Mullidae	3.55	6.72	4.19	0.88	5.94	82.79
Gobiidae	3.53	6.54	3.21	1.55	4.55	87.34
Serranidae	4.27	0.43	1.66	1.04	2.35	89.69
Sphyraenidae	2.49	0.45	1.47	0.88	2.08	91.77

Groups 2/14/2017 &

2/15/2017

Average dissimilarity =

62.32

	Group 2/14/2017	Group 2/15/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Gerreidae	42.59	1.77	19.11	0.98	30.66	30.66
Pomacentridae	47.25	31.59	15.98	1.48	25.64	56.3
Clupeidae	18.13	12.57	10.28	1.39	16.49	72.79
Gobiidae	0.45	6.54	3.73	1.43	5.98	78.77
Tripterygidae	0	7.64	3.34	0.66	5.36	84.13
Mullidae	2.28	6.72	3.17	0.91	5.09	89.22
Haemulidae	3.11	0.87	1.4	1.28	2.25	91.47

Groups 8/22/2016 &

3/15/2017

Average dissimilarity =

85.37

	Group 8/22/2016	Group 3/15/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Gobiidae	2.23	8.69	17.45	1.44	20.44	20.44
Serranidae	1.27	6.03	13.09	1.4	15.33	35.77
Pomacentridae	5.68	1.53	12.69	1.2	14.86	50.64
Clupeidae	4.04	0	9.56	0.52	11.2	61.83
Tripterygidae	2.23	0	5.67	0.99	6.65	68.48
Syngnathidae	1.82	0.38	4.26	0.73	4.99	73.47
Gerreidae	0.81	0.39	3.62	0.67	4.24	77.71
Carangidae	0.86	0	3.34	0.78	3.91	81.62
Clupeiformes	0.86	0	3.34	0.78	3.91	85.54
Haemulidae	0.86	0.38	3.26	0.77	3.82	89.36
Monacanthidae	0.85	0	1.97	0.86	2.3	91.66

Groups 8/23/2016 &

3/15/2017

Average dissimilarity =

86.94

	Group 8/23/2016	Group 3/15/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Gobiidae	3.28	8.69	20.05	0.96	23.06	23.06
Pomacentridae	3.47	1.53	19.03	0.6	21.89	44.95
Serranidae	0	6.03	13.27	0.83	15.26	60.21
Clupeidae	6.92	0	11.38	0.63	13.09	73.3
Clupeiformes	2.16	0	8.18	0.48	9.41	82.7
Gerreidae	0	0.39	3.91	0.44	4.5	87.2
Hemiramphidae	0	0.39	3.91	0.44	4.5	91.7

Groups 8/24/2016 &

3/15/2017

Average dissimilarity =

82.17

	Group 8/24/2016	Group 3/15/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Gobiidae	6.84	8.69	21.28	1.26	25.9	25.9
Serranidae	0.84	6.03	11.76	1.15	14.31	40.21
Clupeidae	5.73	0	11.46	0.82	13.94	54.15
Haemulidae	3.16	0.38	9.24	0.94	11.25	65.4
Carangidae	1.45	0	5.46	0.49	6.64	72.04
Sphyraenidae	1.73	0.37	4.29	0.85	5.22	77.26
Pomacentridae	0.81	1.53	3.7	1.07	4.5	81.77
Monacanthidae	1.27	0	3.58	1.05	4.36	86.13
Hemiramphidae	0.76	0.39	2.66	0.74	3.24	89.37
Mugilidae	0.84	0	2.61	0.71	3.18	92.54

Groups 9/20/2016 &

3/15/2017

Average dissimilarity =

90.64

	Group 9/20/2016	Group 3/15/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Pomacentridae	32.07	1.53	18.03	1.31	19.89	19.89
Gerreidae	25.94	0.39	17.77	0.95	19.61	39.5
Clupeidae	7.02	0	13.27	0.7	14.64	54.14
Gobiidae	3.2	8.69	12.33	1.19	13.6	67.74
Serranidae	1.61	6.03	7.3	0.83	8.05	75.8
Carangidae	4.16	0	5.49	1.7	6.06	81.86
Clupeiformes	10.35	0	3.91	0.56	4.31	86.17
Sphyraenidae	3.45	0.37	2.85	1.14	3.15	89.32

Syngnathidae	0.64	0.38	2.7	0.5	2.97	92.3
Groups 9/21/2016 & 3/15/2017						
Average dissimilarity = 85.55						
Species	Group 9/21/2016	Group 3/15/2017	Av.Abund	Av.Diss	Diss/SD	Contrib%
Gobiidae	1.32	8.69	20.48	1.43	23.94	23.94
Pomacentridae	4.58	1.53	14.8	0.82	17.3	41.24
Serranidae	0	6.03	12.32	0.9	14.41	55.65
Clupeiformes	1.64	0	7.23	0.92	8.45	64.1
Carangidae	1.26	0	5.3	1.12	6.19	70.29
Sphyraenidae	1.23	0.37	4.95	0.55	5.79	76.08
Hemiramphidae	0.94	0.39	3.7	0.86	4.33	80.4
Gerreidae	0.88	0.39	3.49	0.83	4.08	84.48
Syngnathidae	0.79	0.38	3.43	0.75	4.01	88.49
Clupeidae	0.82	0	3.03	0.49	3.54	92.03
Groups 9/22/2016 & 3/15/2017						
Average dissimilarity = 87.68						
Species	Group 9/22/2016	Group 3/15/2017	Av.Abund	Av.Diss	Diss/SD	Contrib%
Gobiidae	0.9	8.69	21.94	1.41	25.02	25.02
Serranidae	0	6.03	13.12	0.89	14.96	39.98
Pomacentridae	3.2	1.53	12.73	0.95	14.52	54.49
Sphyraenidae	2.32	0.37	12.7	0.56	14.48	68.97
Tetraodontiformes	1.35	0.38	7.53	0.7	8.58	77.56
Gobiesocidae	1.84	0	5.43	0.5	6.19	83.74
Gerreidae	0.92	0.39	4.49	0.78	5.12	88.87
Hemiramphidae	0.45	0.39	3.53	0.65	4.02	92.89
Groups 10/20/2016 & 3/15/2017						
Average dissimilarity = 89.11						
Species	Group 10/20/2016	Group 3/15/2017	Av.Abund	Av.Diss	Diss/SD	Contrib%

Gobiidae	1.53	8.69	18.28	1.27	20.52	20.52
Clupeidae	7.99	0	17.47	0.82	19.6	40.12
Serranidae	1.44	6.03	12.44	1.07	13.96	54.08
Pomacentridae	1.49	1.53	6.14	0.75	6.89	60.97
Haemulidae	1.93	0.38	5.34	0.82	5.99	66.96
Gerreidae	0.79	0.39	4.91	0.57	5.51	72.48
Scombridae	0.79	0	4.37	0.45	4.91	77.39
Clupeiformes	0.75	0	4.32	0.45	4.85	82.23
Aulostomidae	1.44	0	3.18	0.72	3.57	85.8
Carangidae	0.76	0	2.95	0.63	3.31	89.11
Sphyraenidae	0.39	0.37	2.47	0.52	2.78	91.89

Groups 10/21/2016 &

3/15/2017

Average dissimilarity =

84.36

	Group 10/21/2016	Group 3/15/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Gobiidae	5.46	8.69	22.34	1.32	26.49	26.49
Clupeidae	14.94	0	15.15	0.55	17.96	44.44
Gerreidae	1.99	0.39	12.41	0.48	14.71	59.15
Serranidae	0	6.03	10.9	0.82	12.92	72.07
Pomacentridae	3.87	1.53	8.62	0.91	10.22	82.29
Ophychthidae	1.16	0	2.54	0.7	3.01	85.3
Carangidae	0.79	0	2.32	0.5	2.76	88.06
Hemiramphidae	0	0.39	1.92	0.46	2.27	90.33

Groups 2/13/2017 &

3/15/2017

Average dissimilarity =

85.48

	Group 2/13/2017	Group 3/15/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Pomacentridae	39.7	1.53	21.69	1.51	25.38	25.38
Gobiidae	3.53	8.69	16.51	1.11	19.31	44.68
Gerreidae	22.28	0.39	12.02	1.23	14.06	58.74
Tripterygidae	22.23	0	11.68	1.16	13.66	72.41
Serranidae	4.27	6.03	7.74	0.73	9.05	81.46
Mullidae	3.55	0	2.78	1.26	3.25	84.71
Sphyraenidae	2.49	0.37	2.54	0.91	2.97	87.67
Tetraodontiformes	0.4	0.38	1.84	0.5	2.15	89.83

Aulostomidae	0.4	0	1.77	0.47	2.07	91.9
Groups 2/14/2017 & 3/15/2017						
Average dissimilarity = 95.19						
	Group 2/14/2017	Group 3/15/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Pomacentridae	47.25	1.53	34.34	2.96	36.07	36.07
Gerreidae	42.59	0.39	25.34	0.99	26.62	62.7
Clupeidae	18.13	0	16.68	0.93	17.53	80.22
Gobiidae	0.45	8.69	5.98	0.94	6.28	86.5
Serranidae	0.91	6.03	4.26	0.99	4.47	90.97
Groups 2/15/2017 & 3/15/2017						
Average dissimilarity = 87.40						
	Group 2/15/2017	Group 3/15/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Pomacentridae	31.59	1.53	29.6	1.37	33.86	33.86
Clupeidae	12.57	0	20.81	0.94	23.81	57.68
Gobiidae	6.54	8.69	11.17	1.77	12.78	70.46
Serranidae	0.43	6.03	6.26	0.91	7.16	77.62
Tripterygidae	7.64	0	5.88	0.69	6.73	84.35
Mullidae	6.72	0	5.38	0.8	6.15	90.5
Groups 8/22/2016 & 3/16/2017						
Average dissimilarity = 76.54						
	Group 8/22/2016	Group 3/16/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Haemulidae	0.86	7.64	10.59	1.8	13.84	13.84
Serranidae	1.27	8.57	10.39	1.37	13.58	27.42
Clupeidae	4.04	6.33	9.98	0.8	13.04	40.45
Gobiidae	2.23	8.19	8.89	1.14	11.61	52.06
Gerreidae	0.81	6	8.25	0.75	10.78	62.84
Pomacentridae	5.68	0.73	7.04	1.37	9.2	72.03
Carangidae	0.86	3.96	5.29	0.85	6.92	78.95

Tripterygidae	2.23	3.44	4.59	0.86	5.99	84.94
Syngnathidae	1.82	0.37	2.41	0.76	3.15	88.09
Mullidae	0.45	0.8	1.48	0.8	1.94	90.03

Groups 8/23/2016 &
3/16/2017

Average dissimilarity =
92.17

Species	Group 8/23/2016	Group 3/16/2017	Av.Diss	Diss/SD	Contrib%	Cum.%
	Av.Abund	Av.Abund				
Haemulidae	0	7.64	14.61	1.43	15.85	15.85
Serranidae	0	8.57	14.36	1.37	15.58	31.43
Gobiidae	3.28	8.19	12.19	1.28	13.22	44.66
Clupeidae	6.92	6.33	11.79	0.8	12.8	57.45
Gerreidae	0	6	9.78	0.71	10.61	68.06
Tripterygidae	0	3.44	7.45	0.87	8.08	76.14
Carangidae	0	3.96	5.62	0.66	6.1	82.24
Pomacentridae	3.47	0.73	4.46	1.39	4.84	87.08
Clupeiformes	2.16	0.4	3.86	0.61	4.18	91.26

Groups 8/24/2016 &
3/16/2017

Average dissimilarity =
74.22

Species	Group 8/24/2016	Group 3/16/2017	Av.Diss	Diss/SD	Contrib%	Cum.%
	Av.Abund	Av.Abund				
Clupeidae	5.73	6.33	10.82	1.02	14.57	14.57
Serranidae	0.84	8.57	10.79	1.32	14.54	29.11
Gobiidae	6.84	8.19	10.53	1.34	14.19	43.3
Gerreidae	0	6	8.25	0.71	11.12	54.41
Haemulidae	3.16	7.64	7.18	1.2	9.67	64.09
Tripterygidae	0	3.44	5.89	0.98	7.94	72.02
Carangidae	1.45	3.96	5.83	0.88	7.85	79.87
Sphyraenidae	1.73	0	2.25	0.82	3.04	82.91
Monacanthidae	1.27	0	1.77	1.47	2.38	85.29
Pomacentridae	0.81	0.73	1.66	1	2.24	87.54
Lutjanidae	0.43	0.73	1.41	0.73	1.89	89.43
Hemiramphidae	0.76	0.37	1.25	0.89	1.68	91.11

Groups 9/20/2016 &
3/16/2017

Average dissimilarity =
82.72

	Group 9/20/2016	Group 3/16/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Gerreidae	25.94	6	15.78	1.26	19.08	19.08
Pomacentridae	32.07	0.73	14.55	1.14	17.59	36.67
Clupeidae	7.02	6.33	9.71	0.78	11.74	48.41
Haemulidae	0.34	7.64	7.6	1.25	9.18	57.6
Serranidae	1.61	8.57	7.38	1.02	8.92	66.52
Gobiidae	3.2	8.19	6.09	1.1	7.36	73.88
Carangidae	4.16	3.96	4.45	1.12	5.38	79.26
Tripterygidae	0	3.44	3.9	0.81	4.71	83.97
Clupeiformes	10.35	0.4	3.79	0.63	4.59	88.56
Sphyraenidae	3.45	0	1.92	1.47	2.32	90.88

Groups 9/21/2016 &
3/16/2017

Average dissimilarity =
89.08

	Group 9/21/2016	Group 3/16/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Haemulidae	0	7.64	13.65	1.82	15.32	15.32
Serranidae	0	8.57	13.64	1.53	15.31	30.64
Gobiidae	1.32	8.19	10.29	1.22	11.55	42.19
Gerreidae	0.88	6	9.17	0.76	10.29	52.48
Clupeidae	0.82	6.33	7.98	0.67	8.96	61.44
Tripterygidae	0	3.44	6.87	0.99	7.71	69.15
Pomacentridae	4.58	0.73	6.81	0.99	7.64	76.79
Carangidae	1.26	3.96	5.98	0.91	6.71	83.5
Clupeiformes	1.64	0.4	2.53	1.11	2.84	86.34
Sphyraenidae	1.23	0	2.01	0.53	2.25	88.59
Hemiramphidae	0.94	0.37	1.55	0.94	1.74	90.33

Groups 9/22/2016 &
3/16/2017

Average dissimilarity =
91.58

	Group 9/22/2016	Group 3/16/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Serranidae	0	8.57	14.35	1.51	15.67	15.67

Haemulidae	0.46	7.64	13.79	1.61	15.05	30.73
Gobiidae	0.9	8.19	10.59	1.13	11.57	42.29
Gerreidae	0.92	6	9.8	0.77	10.7	53
Tripterygidae	0	3.44	7.32	0.96	8	60.99
Clupeidae	0	6.33	7.32	0.56	7.99	68.99
Carangidae	0.46	3.96	5.84	0.74	6.37	75.36
Pomacentridae	3.2	0.73	4.9	1.17	5.36	80.71
Sphyraenidae	2.32	0	4.29	0.68	4.68	85.4
Gobiesocidae	1.84	0	2.73	0.54	2.98	88.38
Tetraodontiformes	1.35	0	2.5	0.82	2.73	91.1

Groups 10/20/2016 &
3/16/2017

Average dissimilarity =
80.43

	Group 10/20/2016	Group 3/16/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Clupeidae	7.99	6.33	13.17	1.03	16.38	16.38
Serranidae	1.44	8.57	11.27	1.24	14.01	30.39
Haemulidae	1.93	7.64	10.09	1.22	12.55	42.94
Gobiidae	1.53	8.19	9.7	1.16	12.07	55
Gerreidae	0.79	6	8.55	0.74	10.64	65.64
Tripterygidae	0	3.44	6.36	0.95	7.91	73.55
Carangidae	0.76	3.96	5.4	0.79	6.72	80.27
Pomacentridae	1.49	0.73	2.33	1.03	2.9	83.17
Aulostomidae	1.44	0	1.84	0.77	2.29	85.46
Clupeiformes	0.75	0.4	1.64	0.66	2.03	87.49
Scombridae	0.79	0	1.46	0.53	1.82	89.31
Lutjanidae	0	0.73	1.22	0.55	1.52	90.83

Groups 10/21/2016 &
3/16/2017

Average dissimilarity =
81.25

	Group 10/21/2016	Group 3/16/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Clupeidae	14.94	6.33	15.9	0.79	19.57	19.57
Serranidae	0	8.57	12.16	1.34	14.97	34.53
Haemulidae	0.39	7.64	11.54	1.43	14.2	48.74
Gobiidae	5.46	8.19	9.41	1.39	11.58	60.32
Gerreidae	1.99	6	8.99	0.89	11.07	71.39

Tripterygidae	0.39	3.44	5.51	0.81	6.78	78.17
Carangidae	0.79	3.96	5.17	0.74	6.36	84.53
Pomacentridae	3.87	0.73	4.27	1.29	5.26	89.78
Lutjanidae	0.77	0.73	1.46	0.67	1.8	91.58

Groups 2/13/2017 &

3/16/2017

Average dissimilarity =
81.02

Species	Group 2/13/2017	Group 3/16/2017	Av.Diss	Diss/SD	Contrib%	Cum.%
	Av.Abund	Av.Abund				
Pomacentridae	39.7	0.73	17.09	1.27	21.1	21.1
Gerreidae	22.28	6	12.33	1.29	15.22	36.32
Tripterygidae	22.23	3.44	11.12	1.49	13.73	50.04
Serranidae	4.27	8.57	7.91	0.92	9.76	59.8
Haemulidae	2.13	7.64	7.48	0.92	9.23	69.04
Gobiidae	3.53	8.19	6.4	1.34	7.9	76.94
Clupeidae	0.89	6.33	5.19	0.56	6.4	83.34
Carangidae	1.6	3.96	3.67	0.61	4.53	87.87
Mullidae	3.55	0.8	2.08	1.52	2.57	90.44

Groups 2/14/2017 &

3/16/2017

Average dissimilarity =
86.25

Species	Group 2/14/2017	Group 3/16/2017	Av.Diss	Diss/SD	Contrib%	Cum.%
	Av.Abund	Av.Abund				
Pomacentridae	47.25	0.73	27.89	3.29	32.34	32.34
Gerreidae	42.59	6	21.29	1.11	24.69	57.02
Clupeidae	18.13	6.33	12.48	0.99	14.48	71.5
Serranidae	0.91	8.57	4.83	1.34	5.6	77.1
Gobiidae	0.45	8.19	4.63	1.06	5.36	82.46
Haemulidae	3.11	7.64	3.42	1.23	3.97	86.43
Carangidae	0	3.96	2.33	0.69	2.7	89.13
Tripterygidae	0	3.44	2.32	1.08	2.69	91.82

Groups 2/15/2017 &

3/16/2017

Average dissimilarity =
79.54

	Group 2/15/2017	Group 3/16/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Pomacentridae	31.59	0.73	22.76	1.38	28.61	28.61
Clupeidae	12.57	6.33	12.94	0.95	16.27	44.88
Serranidae	0.43	8.57	7.16	1.33	9	53.88
Haemulidae	0.87	7.64	6.43	1.63	8.09	61.97
Tripterygidae	7.64	3.44	6.05	1.08	7.61	69.58
Gobiidae	6.54	8.19	5.66	1.43	7.12	76.7
Gerreidae	1.77	6	5.25	0.73	6.6	83.3
Mullidae	6.72	0.8	4.41	0.86	5.55	88.85
Carangidae	0	3.96	3.23	0.68	4.06	92.91

Groups 3/15/2017 &
3/16/2017

Average dissimilarity =
79.58

	Group 3/15/2017	Group 3/16/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Gobiidae	8.69	8.19	13.88	1.4	17.44	17.44
Haemulidae	0.38	7.64	13.51	1.37	16.98	34.42
Serranidae	6.03	8.57	12.47	1.2	15.67	50.09
Gerreidae	0.39	6	9.3	0.73	11.68	61.77
Tripterygidae	0	3.44	7.09	0.87	8.91	70.69
Clupeidae	0	6.33	7.02	0.55	8.83	79.51
Carangidae	0	3.96	5.45	0.66	6.85	86.36
Pomacentridae	1.53	0.73	2.61	1.03	3.28	89.64
Lutjanidae	0	0.73	1.33	0.53	1.67	91.32

Groups 8/22/2016 &
3/17/2017

Average dissimilarity =
74.97

	Group 8/22/2016	Group 3/17/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Clupeidae	4.04	5.61	13.63	0.77	18.18	18.18
Pomacentridae	5.68	5.32	11.7	1.24	15.61	33.79
Gobiidae	2.23	4.57	9.95	1.18	13.28	47.07
Gerreidae	0.81	2.22	6.77	0.89	9.03	56.09
Tripterygidae	2.23	0	4.96	1.01	6.62	62.72
Serranidae	1.27	1.05	4.42	0.95	5.9	68.61
Syngnathidae	1.82	0.7	4.03	0.8	5.37	73.99

Clupeiformes	0.86	1.4	3.96	1.19	5.28	79.27
Sphyraenidae	0	1.11	3.77	0.85	5.03	84.3
Carangidae	0.86	0	2.7	0.85	3.6	87.91
Haemulidae	0.86	0.35	2.65	0.84	3.54	91.45

Groups 8/23/2016 &

3/17/2017

Average dissimilarity =

81.60

Species	Group	Group	Av.Diss	Diss/SD	Contrib%	Cum.%
	8/23/2016	3/17/2017				
Pomacentridae	3.47	5.32	17.36	1.22	21.27	21.27
Clupeidae	6.92	5.61	16.18	0.84	19.82	41.1
Gerreidae	0	2.22	13.68	0.61	16.77	57.86
Gobiidae	3.28	4.57	12.96	0.84	15.88	73.74
Clupeiformes	2.16	1.4	7.8	0.62	9.56	83.3
Sphyraenidae	0.36	1.11	6.99	0.68	8.56	91.86

Groups 8/24/2016 &

3/17/2017

Average dissimilarity =

82.04

Species	Group	Group	Av.Diss	Diss/SD	Contrib%	Cum.%
	8/24/2016	3/17/2017				
Gobiidae	6.84	4.57	15.29	1.12	18.63	18.63
Clupeidae	5.73	5.61	14.66	1.04	17.87	36.51
Pomacentridae	0.81	5.32	11.28	1.07	13.75	50.25
Haemulidae	3.16	0.35	7.77	1.08	9.47	59.72
Gerreidae	0	2.22	6.95	0.74	8.47	68.19
Carangidae	1.45	0	4.45	0.51	5.42	73.61
Sphyraenidae	1.73	1.11	4.41	1.2	5.38	78.99
Monacanthidae	1.27	0	3.02	1.25	3.68	82.67
Serranidae	0.84	1.05	3	1.08	3.65	86.32
Hemiramphidae	0.76	0	2.49	0.84	3.03	89.35
Mugilidae	0.84	0	2.14	0.8	2.61	91.96

Groups 9/20/2016 &

3/17/2017

Average dissimilarity =

79.61

	Group 9/20/2016	Group 3/17/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Gerreidae	25.94	2.22	18.93	1.21	23.78	23.78
Pomacentridae	32.07	5.32	17.87	1.37	22.45	46.23
Clupeidae	7.02	5.61	13.79	0.8	17.32	63.55
Gobiidae	3.2	4.57	6.91	1.04	8.68	72.23
Carangidae	4.16	0	4.98	1.8	6.25	78.49
Clupeiformes	10.35	1.4	4.91	0.75	6.17	84.65
Sphyraenidae	3.45	1.11	2.59	1.36	3.26	87.91
Syngnathidae	0.64	0.7	2.27	0.56	2.85	90.76

Groups 9/21/2016 &
3/17/2017

Average dissimilarity =
74.96

	Group 9/21/2016	Group 3/17/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Pomacentridae	4.58	5.32	14.9	1.15	19.88	19.88
Gobiidae	1.32	4.57	11.6	1.15	15.47	35.35
Clupeidae	0.82	5.61	10.31	0.73	13.75	49.1
Gerreidae	0.88	2.22	7.76	0.76	10.35	59.45
Clupeiformes	1.64	1.4	6.46	1.35	8.62	68.06
Sphyraenidae	1.23	1.11	6.34	1.12	8.46	76.52
Carangidae	1.26	0	4.17	1.31	5.56	82.08
Syngnathidae	0.79	0.7	3.13	1.02	4.18	86.26
Hemiramphidae	0.94	0	2.89	0.86	3.86	90.12

Groups 9/22/2016 &
3/17/2017

Average dissimilarity =
78.14

	Group 9/22/2016	Group 3/17/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Pomacentridae	3.2	5.32	14.81	1.26	18.96	18.96
Gobiidae	0.9	4.57	12.29	1.11	15.72	34.68
Gerreidae	0.92	2.22	10.46	0.78	13.39	48.07
Sphyraenidae	2.32	1.11	9.61	0.91	12.3	60.37
Clupeidae	0	5.61	8.8	0.56	11.26	71.63
Tetraodontiformes	1.35	0	5.4	0.78	6.91	78.54
Gobiesocidae	1.84	0	4.67	0.52	5.98	84.52
Clupeiformes	0	1.4	2.2	0.56	2.81	87.34

Hemiramphidae	0.45	0	1.7	0.5	2.17	89.51
Ostraciidae	0.45	0	1.7	0.5	2.17	91.69

Groups 10/20/2016 &
3/17/2017

Average dissimilarity =
78.60

Species	Group 10/20/2016	Group 3/17/2017	Av.Diss	Diss/SD	Contrib%	Cum.%
	Av.Abund	Av.Abund				
Clupeidae	7.99	5.61	18.9	0.98	24.04	24.04
Pomacentridae	1.49	5.32	12.06	1.07	15.34	39.38
Gobiidae	1.53	4.57	10.35	1.03	13.17	52.54
Gerreidae	0.79	2.22	7.83	0.82	9.97	62.51
Haemulidae	1.93	0.35	4.44	0.85	5.65	68.16
Clupeiformes	0.75	1.4	4.43	0.71	5.64	73.79
Sphyraenidae	0.39	1.11	3.87	0.84	4.93	78.72
Scombridae	0.79	0.7	3.57	0.58	4.54	83.26
Serranidae	1.44	1.05	3.49	0.88	4.44	87.7
Aulostomidae	1.44	0	2.86	0.74	3.64	91.34

Groups 10/21/2016 &
3/17/2017

Average dissimilarity =
72.21

Species	Group 10/21/2016	Group 3/17/2017	Av.Diss	Diss/SD	Contrib%	Cum.%
	Av.Abund	Av.Abund				
Clupeidae	14.94	5.61	19.93	0.78	27.6	27.6
Gobiidae	5.46	4.57	13.35	0.98	18.49	46.09
Pomacentridae	3.87	5.32	11.87	0.96	16.44	62.54
Gerreidae	1.99	2.22	8.27	0.77	11.45	73.99
Sphyraenidae	0	1.11	4.42	0.73	6.12	80.11
Clupeiformes	0.39	1.4	2.61	0.77	3.62	83.73
Ophychthidae	1.16	0	2.11	0.8	2.92	86.65
Carangidae	0.79	0	2	0.52	2.77	89.42
Serranidae	0	1.05	1.41	0.53	1.95	91.38

Groups 2/13/2017 &
3/17/2017

Average dissimilarity =
78.84

Species	Group 2/13/2017	Group 3/17/2017	Av.Diss	Diss/SD	Contrib%	Cum.%
	Av.Abund	Av.Abund				
Pomacentridae	39.7	5.32	21.48	1.69	27.25	27.25
Gerreidae	22.28	2.22	13.31	1.42	16.88	44.13
Tripterygidae	22.23	0	11.25	1.13	14.27	58.41
Gobiidae	3.53	4.57	9.39	0.86	11.9	70.31
Clupeidae	0.89	5.61	6.2	0.58	7.86	78.17
Sphyraenidae	2.49	1.11	3.23	0.88	4.09	82.27
Mullidae	3.55	0	2.55	1.4	3.23	85.5
Serranidae	4.27	1.05	2.37	0.98	3.01	88.5
Syngnathidae	0.35	0.7	1.42	0.7	1.8	90.3

Groups 2/14/2017 &
3/17/2017

Average dissimilarity =
83.06

Species	Group 2/14/2017	Group 3/17/2017	Av.Diss	Diss/SD	Contrib%	Cum.%
	Av.Abund	Av.Abund				
Pomacentridae	47.25	5.32	30.3	2.63	36.49	36.49
Gerreidae	42.59	2.22	24.28	1.01	29.23	65.72
Clupeidae	18.13	5.61	15.56	0.97	18.73	84.45
Gobiidae	0.45	4.57	3.19	0.86	3.83	88.28
Haemulidae	3.11	0.35	1.8	1.28	2.16	90.45

Groups 2/15/2017 &
3/17/2017

Average dissimilarity =
74.81

Species	Group 2/15/2017	Group 3/17/2017	Av.Diss	Diss/SD	Contrib%	Cum.%
	Av.Abund	Av.Abund				
Pomacentridae	31.59	5.32	25.67	1.28	34.31	34.31
Clupeidae	12.57	5.61	18.17	0.9	24.29	58.6
Gobiidae	6.54	4.57	7.15	1.07	9.56	68.16
Tripterygidae	7.64	0	5.68	0.69	7.6	75.76
Mullidae	6.72	0	5.19	0.8	6.94	82.69
Gerreidae	1.77	2.22	3.09	0.9	4.13	86.82
Sphyraenidae	0.45	1.11	1.59	0.83	2.12	88.95
Clupeiformes	0	1.4	1.21	0.54	1.61	90.56

Groups 3/15/2017 &
3/17/2017

Average dissimilarity =
82.16

	Group 3/15/2017	Group 3/17/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Gobiidae	8.69	4.57	19.94	1.11	24.27	24.27
Pomacentridae	1.53	5.32	15.68	0.91	19.08	43.35
Serranidae	6.03	1.05	11.81	0.92	14.38	57.73
Gerreidae	0.39	2.22	11.31	0.55	13.76	71.49
Clupeidae	0	5.61	8.42	0.54	10.25	81.75
Sphyraenidae	0.37	1.11	6.57	0.65	8	89.74
Clupeiformes	0	1.4	2.11	0.54	2.56	92.31

Groups 3/16/2017 &
3/17/2017

Average dissimilarity =
83.63

	Group 3/16/2017	Group 3/17/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Haemulidae	7.64	0.35	12.37	1.51	14.79	14.79
Serranidae	8.57	1.05	11.98	1.28	14.32	29.11
Gobiidae	8.19	4.57	10.52	1.29	12.58	41.69
Clupeidae	6.33	5.61	10.17	0.76	12.16	53.85
Gerreidae	6	2.22	9.21	0.91	11.01	64.86
Pomacentridae	0.73	5.32	7.22	1.03	8.63	73.49
Tripterygidae	3.44	0	6.39	0.92	7.64	81.13
Carangidae	3.96	0	5.12	0.67	6.13	87.25
Sphyraenidae	0	1.11	2.1	0.82	2.51	89.76
Clupeiformes	0.4	1.4	1.78	0.74	2.13	91.89

Groups 8/22/2016 &
8/11/2017

Average dissimilarity =
74.54

	Group 8/22/2016	Group 8/11/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Lutjanidae	0	20.53	16.78	0.86	22.52	22.52
Carangidae	0.86	12.53	11.63	1.28	15.61	38.12
Pomacentridae	5.68	5.76	7.02	1.02	9.42	47.54
Clupeidae	4.04	0	6.61	0.48	8.87	56.42
Clupeiformes	0.86	2.11	5.26	1.01	7.06	63.48

Gobiidae	2.23	3.7	4.15	1.08	5.57	69.04
Tripterygidae	2.23	0.44	3.49	0.86	4.69	73.73
Syngnathidae	1.82	0	2.9	0.63	3.89	77.62
Haemulidae	0.86	2.03	2.77	1.13	3.71	81.33
Serranidae	1.27	0.39	2.66	0.82	3.57	84.9
Sphyraenidae	0	2.84	2.39	0.93	3.2	88.1
Scombridae	0	2.44	2.07	0.85	2.78	90.88

Groups 8/23/2016 &
8/11/2017

Average dissimilarity =
84.14

	Group 8/23/2016	Group 8/11/2017				
Species	Av. Abund	Av. Abund	Av. Diss	Diss/SD	Contrib%	Cum.%
Lutjanidae	0	20.53	17.97	0.85	21.36	21.36
Clupeiformes	2.16	2.11	12.41	0.86	14.75	36.11
Carangidae	0	12.53	11.12	0.94	13.21	49.32
Gobiidae	3.28	3.7	9.33	1.59	11.08	60.41
Clupeidae	6.92	0	8.36	0.57	9.93	70.34
Pomacentridae	3.47	5.76	7.57	1.34	8.99	79.34
Haemulidae	0	2.03	3.93	0.78	4.67	84.01
Sphyraenidae	0.36	2.84	3.08	1.14	3.66	87.66
Serranidae	0	0.39	2.38	0.47	2.83	90.49

Groups 8/24/2016 &
8/11/2017

Average dissimilarity =
82.95

	Group 8/24/2016	Group 8/11/2017				
Species	Av. Abund	Av. Abund	Av. Diss	Diss/SD	Contrib%	Cum.%
Lutjanidae	0.43	20.53	16.94	0.9	20.43	20.43
Carangidae	1.45	12.53	12.32	1.22	14.85	35.28
Gobiidae	6.84	3.7	10.17	0.93	12.26	47.54
Clupeidae	5.73	0	8.19	0.74	9.88	57.42
Clupeiformes	0	2.11	6.47	0.86	7.8	65.21
Pomacentridae	0.81	5.76	6.28	1.46	7.57	72.79
Haemulidae	3.16	2.03	5.04	0.88	6.07	78.86
Sphyraenidae	1.73	2.84	3.92	1.07	4.73	83.58
Monacanthidae	1.27	0	2.31	1.02	2.78	86.37
Scombridae	0	2.44	2.05	0.84	2.47	88.84
Hemiramphidae	0.76	0	1.86	0.71	2.24	91.07

Groups 9/20/2016 &

8/11/2017

Average dissimilarity =

83.10

Species	Group 9/20/2016	Group 8/11/2017	Av.Diss	Diss/SD	Contrib%	Cum.%
	Av.Abund	Av.Abund				
Gerreidae	25.94	0.41	14.28	0.87	17.19	17.19
Pomacentridae	32.07	5.76	14.16	1.12	17.04	34.23
Lutjanidae	2.51	20.53	12.65	0.8	15.22	49.45
Clupeidae	7.02	0	9.44	0.62	11.36	60.81
Carangidae	4.16	12.53	9.4	1.56	11.32	72.13
Clupeiformes	10.35	2.11	6.98	1.03	8.39	80.52
Gobiidae	3.2	3.7	3.23	1.18	3.89	84.41
Sphyraenidae	3.45	2.84	2.91	1.68	3.5	87.92
Scombridae	1.55	2.44	2.25	0.8	2.71	90.63

Groups 9/21/2016 &

8/11/2017

Average dissimilarity =

74.96

Species	Group 9/21/2016	Group 8/11/2017	Av.Diss	Diss/SD	Contrib%	Cum.%
	Av.Abund	Av.Abund				
Lutjanidae	0	20.53	17.9	0.87	23.87	23.87
Carangidae	1.26	12.53	13.05	1.51	17.41	41.28
Pomacentridae	4.58	5.76	8.34	0.82	11.13	52.41
Clupeiformes	1.64	2.11	5.51	0.97	7.35	59.76
Gobiidae	1.32	3.7	4.88	1.46	6.5	66.27
Sphyraenidae	1.23	2.84	4.29	0.72	5.72	71.99
Haemulidae	0	2.03	3.17	0.96	4.23	76.22
Scombridae	0	2.44	2.21	0.85	2.95	79.17
Hemiramphidae	0.94	0	2.17	0.73	2.9	82.07
Gerreidae	0.88	0.41	2.05	0.72	2.74	84.81
Syngnathidae	0.79	0	2	0.71	2.67	87.48
Clupeidae	0.82	0	1.87	0.46	2.49	89.97
Tripterygidae	0	0.44	1.65	0.56	2.2	92.17

Groups 9/22/2016 &

8/11/2017

Average dissimilarity =

81.78

	Group 9/22/2016	Group 8/11/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Lutjanidae	0	20.53	18.32	0.86	22.4	22.4
Carangidae	0.46	12.53	11.84	1.06	14.48	36.88
Clupeiformes	0	2.11	9.44	0.9	11.54	48.42
Pomacentridae	3.2	5.76	7.66	1.38	9.36	57.79
Sphyraenidae	2.32	2.84	7.63	0.64	9.33	67.11
Gobiidae	0.9	3.7	4.17	1.11	5.1	72.21
Tetraodontiformes	1.35	0	3.96	0.66	4.85	77.06
Gobiesocidae	1.84	0	3.57	0.47	4.36	81.42
Haemulidae	0.46	2.03	3.55	0.99	4.35	85.76
Scombridae	0	2.44	2.27	0.84	2.77	88.54
Gerreidae	0.92	0.41	2	0.54	2.44	90.98

Groups 10/20/2016 &
8/11/2017

Average dissimilarity =
81.56

	Group 10/20/2016	Group 8/11/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Lutjanidae	0	20.53	17.11	0.86	20.98	20.98
Clupeidae	7.99	0	12.28	0.74	15.06	36.04
Carangidae	0.76	12.53	11.62	1.2	14.25	50.29
Pomacentridae	1.49	5.76	6.05	1.29	7.42	57.71
Clupeiformes	0.75	2.11	6.01	0.82	7.36	65.07
Gobiidae	1.53	3.7	4.6	1.4	5.64	70.71
Haemulidae	1.93	2.03	4.11	0.99	5.03	75.75
Scombridae	0.79	2.44	3.69	0.72	4.53	80.27
Sphyraenidae	0.39	2.84	3.23	1.1	3.95	84.23
Serranidae	1.44	0.39	2.83	0.8	3.47	87.7
Gerreidae	0.79	0.41	2.48	0.48	3.04	90.74

Groups 10/21/2016 &
8/11/2017

Average dissimilarity =
82.91

	Group 10/21/2016	Group 8/11/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Lutjanidae	0.77	20.53	16.6	0.87	20.02	20.02
Clupeidae	14.94	0	12.12	0.52	14.62	34.64
Carangidae	0.79	12.53	11	1.11	13.27	47.91

Gobiidae	5.46	3.7	9.11	1.12	10.99	58.9
Clupeiformes	0.39	2.11	6.95	0.75	8.38	67.28
Pomacentridae	3.87	5.76	6.93	1.29	8.36	75.63
Gerreidae	1.99	0.41	6.16	0.5	7.43	83.06
Haemulidae	0.39	2.03	2.86	0.87	3.45	86.51
Sphyraenidae	0	2.84	2.33	0.9	2.81	89.32
Scombridae	0	2.44	2.02	0.82	2.44	91.76

Groups 2/13/2017 &
8/11/2017

Average dissimilarity =
83.82

Species	Group 2/13/2017	Group 8/11/2017	Av.Diss	Diss/SD	Contrib%	Cum.%
	Av.Abund	Av.Abund				
Pomacentridae	39.7	5.76	16.84	1.29	20.09	20.09
Lutjanidae	0	20.53	12.44	0.75	14.84	34.94
Gerreidae	22.28	0.41	10.1	1.11	12.05	46.99
Tripterygidae	22.23	0.44	10.02	1.12	11.95	58.94
Carangidae	1.6	12.53	7.75	0.84	9.25	68.19
Gobiidae	3.53	3.7	5.72	0.82	6.82	75.01
Clupeiformes	0	2.11	4.53	0.63	5.41	80.42
Sphyraenidae	2.49	2.84	2.75	1.19	3.28	83.7
Serranidae	4.27	0.39	2.32	1	2.77	86.47
Haemulidae	2.13	2.03	2.29	0.92	2.73	89.2
Mullidae	3.55	0	2.13	1.26	2.54	91.74

Groups 2/14/2017 &
8/11/2017

Average dissimilarity =
89.77

Species	Group 2/14/2017	Group 8/11/2017	Av.Diss	Diss/SD	Contrib%	Cum.%
	Av.Abund	Av.Abund				
Pomacentridae	47.25	5.76	26.13	2.08	29.11	29.11
Gerreidae	42.59	0.41	21.63	0.95	24.1	53.21
Clupeidae	18.13	0	13.5	0.88	15.04	68.24
Lutjanidae	0	20.53	9.61	0.83	10.7	78.95
Carangidae	0	12.53	5.9	0.93	6.58	85.52
Gobiidae	0.45	3.7	1.91	1.05	2.13	87.65
Sphyraenidae	2.89	2.84	1.78	1.32	1.98	89.64
Haemulidae	3.11	2.03	1.72	1.34	1.92	91.55

Groups 2/15/2017 &
8/11/2017

Average dissimilarity =
85.44

Species	Group 2/15/2017	Group 8/11/2017	Av.Diss	Diss/SD	Contrib%	Cum.%
	Av.Abund	Av.Abund				
Pomacentridae	31.59	5.76	21.46	1.12	25.12	25.12
Clupeidae	12.57	0	15.4	0.85	18.02	43.14
Lutjanidae	0	20.53	12.35	0.84	14.46	57.59
Carangidae	0	12.53	7.61	0.93	8.9	66.49
Gobiidae	6.54	3.7	5.25	0.95	6.14	72.64
Tripterygidae	7.64	0.44	5.05	0.72	5.91	78.55
Mullidae	6.72	0	4.43	0.76	5.19	83.74
Clupeiformes	0	2.11	2.9	0.84	3.4	87.14
Haemulidae	0.87	2.03	1.86	1.05	2.18	89.31
Sphyraenidae	0.45	2.84	1.81	1.02	2.12	91.43

Groups 3/15/2017 &
8/11/2017

Average dissimilarity =
88.92

Species	Group 3/15/2017	Group 8/11/2017	Av.Diss	Diss/SD	Contrib%	Cum.%
	Av.Abund	Av.Abund				
Lutjanidae	0	20.53	17.66	0.85	19.86	19.86
Gobiidae	8.69	3.7	15.55	1.3	17.48	37.34
Carangidae	0	12.53	10.92	0.94	12.28	49.62
Clupeiformes	0	2.11	10.4	0.73	11.7	61.32
Serranidae	6.03	0.39	10.26	0.94	11.54	72.86
Pomacentridae	1.53	5.76	8.24	1.12	9.27	82.13
Haemulidae	0.38	2.03	3.68	0.76	4.14	86.27
Sphyraenidae	0.37	2.84	2.8	1.11	3.15	89.42
Scombridae	0	2.44	2.18	0.83	2.46	91.88

Groups 3/16/2017 &
8/11/2017

Average dissimilarity =
82.35

Species	Group 3/16/2017	Group 8/11/2017	Av.Diss	Diss/SD	Contrib%	Cum.%
	Av.Abund	Av.Abund				
Lutjanidae	0.73	20.53	14.35	0.92	17.43	17.43

Carangidae	3.96	12.53	10.19	1.22	12.38	29.81
Serranidae	8.57	0.39	9.46	1.15	11.49	41.3
Haemulidae	7.64	2.03	8.22	1.04	9.99	51.29
Gerreidae	6	0.41	6.99	0.65	8.49	59.78
Gobiidae	8.19	3.7	6.88	0.89	8.35	68.13
Clupeidae	6.33	0	5.55	0.52	6.74	74.87
Pomacentridae	0.73	5.76	4.79	1.55	5.82	80.69
Tripterygidae	3.44	0.44	4.3	0.75	5.23	85.92
Clupeiformes	0.4	2.11	3.6	0.86	4.38	90.29

Groups 3/17/2017 &
8/11/2017

Average dissimilarity =
82.21

Species	Group	Group	Av.Diss	Diss/SD	Contrib%	Cum.%
	3/17/2017	8/11/2017				
Lutjanidae	0	20.53	17.01	0.85	20.7	20.7
Carangidae	0	12.53	10.51	0.94	12.79	33.48
Pomacentridae	5.32	5.76	9.38	0.98	11.41	44.89
Gobiidae	4.57	3.7	9.01	1.13	10.96	55.85
Clupeiformes	1.4	2.11	7.72	0.81	9.4	65.25
Clupeidae	5.61	0	6.35	0.51	7.72	72.97
Gerreidae	2.22	0.41	6.19	0.57	7.53	80.5
Sphyraenidae	1.11	2.84	4.8	1	5.83	86.33
Haemulidae	0.35	2.03	3.02	0.89	3.67	90
Serranidae	1.05	0.39	2.44	0.74	2.97	92.97

Groups 8/22/2016 &
8/12/2017

Average dissimilarity =
79.61

Species	Group	Group	Av.Diss	Diss/SD	Contrib%	Cum.%
	8/22/2016	8/12/2017				
Pomacentridae	5.68	13.71	12.04	1.87	15.13	15.13
Clupeiformes	0.86	7.58	10.28	0.87	12.91	28.04
Haemulidae	0.86	7.33	9.29	1.13	11.67	39.71
Gobiidae	2.23	9.64	8.05	2.35	10.12	49.83
Lutjanidae	0	8.86	6.73	0.96	8.45	58.28
Clupeidae	4.04	0	4.81	0.51	6.04	64.31
Carangidae	0.86	6.87	4.56	1.01	5.73	70.04
Serranidae	1.27	3.6	4.52	0.91	5.68	75.72

Gerreidae	0.81	5.27	4.27	0.76	5.37	81.09
Sphyraenidae	0	4.02	3.45	1.16	4.34	85.43
Tripterygidae	2.23	0	2.72	0.91	3.42	88.85
Syngnathidae	1.82	0.42	2.31	0.83	2.9	91.75

Groups 8/23/2016 &

8/12/2017

Average dissimilarity =

86.72

Species	Group 8/23/2016	Group 8/12/2017	Av.Diss	Diss/SD	Contrib%	Cum.%
	Av.Abund	Av.Abund				
Haemulidae	0	7.33	13.14	0.96	15.16	15.16
Clupeiformes	2.16	7.58	13.1	0.88	15.11	30.27
Pomacentridae	3.47	13.71	11.68	1.28	13.47	43.73
Gobiidae	3.28	9.64	11.15	2.06	12.86	56.59
Lutjanidae	0	8.86	7.18	0.94	8.28	64.87
Clupeidae	6.92	0	6.58	0.58	7.59	72.46
Carangidae	0	6.87	6.39	1.51	7.37	79.82
Sphyraenidae	0.36	4.02	3.74	1.15	4.32	84.14
Serranidae	0	3.6	3.53	0.55	4.07	88.21
Gerreidae	0	5.27	3.53	0.55	4.07	92.27

Groups 8/24/2016 &

8/12/2017

Average dissimilarity =

75.84

Species	Group 8/24/2016	Group 8/12/2017	Av.Diss	Diss/SD	Contrib%	Cum.%
	Av.Abund	Av.Abund				
Clupeiformes	0	7.58	11.35	0.93	14.97	14.97
Pomacentridae	0.81	13.71	10.5	1.12	13.84	28.81
Gobiidae	6.84	9.64	8.1	1.32	10.69	39.5
Lutjanidae	0.43	8.86	6.84	1.05	9.02	48.52
Haemulidae	3.16	7.33	6.6	0.89	8.71	57.23
Clupeidae	5.73	0	6.2	0.77	8.18	65.4
Carangidae	1.45	6.87	5.86	1.47	7.73	73.13
Serranidae	0.84	3.6	3.94	0.77	5.19	78.32
Sphyraenidae	1.73	4.02	3.68	1.34	4.85	83.17
Gerreidae	0	5.27	3.32	0.56	4.38	87.56
Scombridae	0	2.42	1.84	0.94	2.43	89.99
Monacanthidae	1.27	0	1.58	1.23	2.09	92.07

Groups 9/20/2016 &

8/12/2017

Average dissimilarity =

76.44

Species	Group 9/20/2016	Group 8/12/2017	Av.Diss	Diss/SD	Contrib%	Cum.%
	Av.Abund	Av.Abund				
Pomacentridae	32.07	13.71	15.18	1.4	19.86	19.86
Gerreidae	25.94	5.27	13.15	1	17.21	37.07
Clupeiformes	10.35	7.58	9.68	1.05	12.67	49.73
Clupeidae	7.02	0	7.18	0.62	9.4	59.13
Haemulidae	0.34	7.33	6.69	0.93	8.75	67.88
Lutjanidae	2.51	8.86	5.17	0.91	6.76	74.64
Gobiidae	3.2	9.64	4.86	1.59	6.36	81
Carangidae	4.16	6.87	3.46	1.03	4.52	85.52
Serranidae	1.61	3.6	2.96	0.71	3.87	89.39
Sphyraenidae	3.45	4.02	2.63	1.27	3.45	92.83

Groups 9/21/2016 &

8/12/2017

Average dissimilarity =

78.29

Species	Group 9/21/2016	Group 8/12/2017	Av.Diss	Diss/SD	Contrib%	Cum.%
	Av.Abund	Av.Abund				
Pomacentridae	4.58	13.71	12.73	1.51	16.27	16.27
Haemulidae	0	7.33	12.07	1.15	15.42	31.69
Clupeiformes	1.64	7.58	10.78	0.83	13.77	45.45
Gobiidae	1.32	9.64	9.41	2.76	12.02	57.47
Lutjanidae	0	8.86	7.15	0.96	9.13	66.6
Gerreidae	0.88	5.27	4.53	0.81	5.79	72.4
Carangidae	1.26	6.87	4.44	0.91	5.67	78.06
Sphyraenidae	1.23	4.02	4.24	1.23	5.41	83.47
Serranidae	0	3.6	3.5	0.56	4.48	87.95
Scombridae	0	2.42	1.98	0.94	2.53	90.48

Groups 9/22/2016 &

8/12/2017

Average dissimilarity =

87.36

Species	Group 9/22/2016	Group 8/12/2017	Av.Diss	Diss/SD	Contrib%	Cum.%
	Av.Abund	Av.Abund				

Clupeiformes	0	7.58	13.88	0.94	15.89	15.89
Pomacentridae	3.2	13.71	12.58	1.57	14.4	30.29
Haemulidae	0.46	7.33	12.26	1.04	14.03	44.32
Gobiidae	0.9	9.64	10.3	3.31	11.79	56.11
Lutjanidae	0	8.86	7.31	0.96	8.37	64.48
Carangidae	0.46	6.87	5.92	1.32	6.77	71.25
Sphyraenidae	2.32	4.02	5.26	0.99	6.02	77.27
Gerreidae	0.92	5.27	4.52	0.75	5.17	82.44
Serranidae	0	3.6	3.6	0.56	4.12	86.56
Gobiesocidae	1.84	0	2.44	0.5	2.79	89.36
Tetraodontiformes	1.35	0	2.25	0.73	2.57	91.93

Groups 10/20/2016 &

8/12/2017

Average dissimilarity =

82.96

Species	Group 10/20/2016	Group 8/12/2017	Av.Diss	Diss/SD	Contrib%	Cum.%
	Av.Abund	Av.Abund				
Clupeiformes	0.75	7.58	11.09	0.88	13.36	13.36
Pomacentridae	1.49	13.71	10.92	1.21	13.17	26.53
Haemulidae	1.93	7.33	9.25	0.93	11.15	37.68
Clupeidae	7.99	0	9.1	0.8	10.97	48.66
Gobiidae	1.53	9.64	9	2.42	10.85	59.5
Lutjanidae	0	8.86	6.85	0.95	8.26	67.76
Carangidae	0.76	6.87	4.84	1.05	5.84	73.6
Gerreidae	0.79	5.27	4.45	0.77	5.36	78.95
Serranidae	1.44	3.6	4.39	0.83	5.29	84.24
Sphyraenidae	0.39	4.02	3.47	1.2	4.18	88.42
Scombridae	0.79	2.42	2.54	0.93	3.06	91.48

Groups 10/21/2016 &

8/12/2017

Average dissimilarity =

81.72

Species	Group 10/21/2016	Group 8/12/2017	Av.Diss	Diss/SD	Contrib%	Cum.%
	Av.Abund	Av.Abund				
Clupeiformes	0.39	7.58	11.11	0.84	13.6	13.6
Pomacentridae	3.87	13.71	11.1	1.41	13.58	27.18
Clupeidae	14.94	0	10.43	0.53	12.77	39.95
Haemulidae	0.39	7.33	10.24	0.98	12.52	52.47
Gobiidae	5.46	9.64	6.78	1.42	8.29	60.76

Lutjanidae	0.77	8.86	6.71	1	8.21	68.97
Gerreidae	1.99	5.27	5.96	0.89	7.29	76.26
Carangidae	0.79	6.87	5.33	1.31	6.53	82.79
Sphyraenidae	0	4.02	3.41	1.1	4.17	86.96
Serranidae	0	3.6	3.19	0.54	3.91	90.87

Groups 2/13/2017 &
8/12/2017

Average dissimilarity =
78.76

Species	Group 2/13/2017	Group 8/12/2017	Av.Diss	Diss/SD	Contrib%	Cum.%
	Av.Abund	Av.Abund				
Pomacentridae	39.7	13.71	17.44	1.58	22.15	22.15
Gerreidae	22.28	5.27	9.89	1.25	12.56	34.71
Tripterygidae	22.23	0	8.96	1.04	11.37	46.08
Clupeiformes	0	7.58	8.06	0.73	10.23	56.31
Haemulidae	2.13	7.33	6.59	0.72	8.37	64.68
Lutjanidae	0	8.86	5.03	0.83	6.38	71.06
Gobiidae	3.53	9.64	4.39	2.16	5.57	76.63
Carangidae	1.6	6.87	4.21	1.1	5.34	81.97
Serranidae	4.27	3.6	3.21	0.71	4.07	86.05
Sphyraenidae	2.49	4.02	2.79	1.15	3.55	89.59
Mullidae	3.55	0	1.77	1.38	2.24	91.84

Groups 2/14/2017 &
8/12/2017

Average dissimilarity =
79.58

Species	Group 2/14/2017	Group 8/12/2017	Av.Diss	Diss/SD	Contrib%	Cum.%
	Av.Abund	Av.Abund				
Pomacentridae	47.25	13.71	19.82	1.43	24.9	24.9
Gerreidae	42.59	5.27	19.81	1.02	24.9	49.8
Clupeidae	18.13	0	11.74	0.91	14.76	64.56
Gobiidae	0.45	9.64	4.8	2.34	6.03	70.59
Clupeiformes	0.91	7.58	4.48	0.88	5.63	76.21
Lutjanidae	0	8.86	3.94	0.94	4.95	81.17
Haemulidae	3.11	7.33	3.12	1.04	3.92	85.08
Carangidae	0	6.87	3.12	1.06	3.92	89
Serranidae	0.91	3.6	2.11	0.71	2.65	91.65

Groups 2/15/2017 &
8/12/2017

Average dissimilarity =
78.68

Species	Group 2/15/2017	Group 8/12/2017	Av.Diss	Diss/SD	Contrib%	Cum.%
	Av.Abund	Av.Abund				
Pomacentridae	31.59	13.71	19.51	1.35	24.8	24.8
Clupeidae	12.57	0	12.14	0.9	15.44	40.23
Clupeiformes	0	7.58	6.86	0.92	8.72	48.96
Haemulidae	0.87	7.33	5.61	1.16	7.14	56.09
Lutjanidae	0	8.86	5.01	0.94	6.37	62.47
Tripterygidae	7.64	0	4.33	0.66	5.51	67.98
Carangidae	0	6.87	4.05	1.16	5.15	73.12
Mullidae	6.72	0	3.92	0.76	4.98	78.1
Gobiidae	6.54	9.64	3.68	1.43	4.68	82.78
Gerreidae	1.77	5.27	3.37	0.82	4.28	87.06
Serranidae	0.43	3.6	2.53	0.62	3.21	90.27

Groups 3/15/2017 &
8/12/2017

Average dissimilarity =
84.64

Species	Group 3/15/2017	Group 8/12/2017	Av.Diss	Diss/SD	Contrib%	Cum.%
	Av.Abund	Av.Abund				
Clupeiformes	0	7.58	13.4	0.88	15.84	15.84
Gobiidae	8.69	9.64	12.22	1.75	14.44	30.28
Haemulidae	0.38	7.33	12.12	0.93	14.32	44.59
Pomacentridae	1.53	13.71	11.53	1.22	13.62	58.22
Serranidae	6.03	3.6	7.77	0.89	9.18	67.4
Lutjanidae	0	8.86	7.06	0.94	8.34	75.73
Carangidae	0	6.87	6.22	1.48	7.35	83.09
Gerreidae	0.39	5.27	4.06	0.68	4.8	87.89
Sphyraenidae	0.37	4.02	3.63	1.12	4.29	92.18

Groups 3/16/2017 &
8/12/2017

Average dissimilarity =
69.94

Species	Group 3/16/2017	Group 8/12/2017	Av.Diss	Diss/SD	Contrib%	Cum.%
	Av.Abund	Av.Abund				
Pomacentridae	0.73	13.71	8.96	1.14	12.82	12.82
Clupeiformes	0.4	7.58	7.89	0.89	11.28	24.09

Serranidae	8.57	3.6	7.61	1.18	10.88	34.97
Gerreidae	6	5.27	6.84	0.81	9.79	44.76
Gobiidae	8.19	9.64	6.53	1.62	9.34	54.09
Lutjanidae	0.73	8.86	5.88	1.11	8.41	62.5
Carangidae	3.96	6.87	5.48	1.24	7.83	70.33
Clupeidae	6.33	0	4.71	0.53	6.74	77.07
Tripterygidae	3.44	0	3.74	0.92	5.34	82.42
Haemulidae	7.64	7.33	3.06	1.13	4.38	86.8
Sphyraenidae	0	4.02	2.77	1.1	3.96	90.76

Groups 3/17/2017 &
8/12/2017

Average dissimilarity =
81.02

Species	Group 3/17/2017	Group 8/12/2017	Av.Diss	Diss/SD	Contrib%	Cum.%
	Av.Abund	Av.Abund				
Pomacentridae	5.32	13.71	12.75	1.68	15.74	15.74
Clupeiformes	1.4	7.58	11.43	0.84	14.11	29.85
Haemulidae	0.35	7.33	10.96	1.01	13.53	43.38
Gobiidae	4.57	9.64	8.7	1.58	10.74	54.12
Lutjanidae	0	8.86	6.81	0.95	8.41	62.53
Gerreidae	2.22	5.27	6.19	1.01	7.64	70.17
Carangidae	0	6.87	5.88	1.43	7.26	77.43
Clupeidae	5.61	0	5.12	0.52	6.32	83.75
Serranidae	1.05	3.6	3.9	0.69	4.82	88.56
Sphyraenidae	1.11	4.02	3.48	1.2	4.3	92.86

Groups 8/11/2017 &
8/12/2017

Average dissimilarity =
70.03

Species	Group 8/11/2017	Group 8/12/2017	Av.Diss	Diss/SD	Contrib%	Cum.%
	Av.Abund	Av.Abund				
Lutjanidae	20.53	8.86	14.28	1.05	20.39	20.39
Pomacentridae	5.76	13.71	9.65	1.4	13.78	34.16
Carangidae	12.53	6.87	9.4	1.46	13.42	47.58
Haemulidae	2.03	7.33	7.51	0.81	10.72	58.3
Clupeiformes	2.11	7.58	7.08	0.73	10.1	68.41
Gobiidae	3.7	9.64	6.38	1.62	9.12	77.52
Sphyraenidae	2.84	4.02	3.36	1.3	4.8	82.32
Serranidae	0.39	3.6	3.24	0.66	4.63	86.95

Gerreidae	0.41	5.27	3.12	0.59	4.46	91.41
Groups 8/22/2016 & 8/13/2017						
Average dissimilarity = 70.46						
	Group 8/22/2016	Group 8/13/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Carangidae	0.86	9.27	9.25	2.54	13.13	13.13
Gobiidae	2.23	8.53	8.59	1.65	12.19	25.32
Lutjanidae	0	6.82	7	0.78	9.94	35.27
Haemulidae	0.86	6.03	6.28	1.83	8.92	44.18
Pomacentridae	5.68	8.51	6.1	1.52	8.66	52.85
Clupeidae	4.04	0	5.07	0.53	7.2	60.05
Serranidae	1.27	5.26	4.63	1.75	6.57	66.62
Blenniidae	0	3.58	3.21	0.56	4.56	71.18
Gerreidae	0.81	2.81	3.02	1.51	4.29	75.47
Syngnathidae	1.82	1.26	2.98	1.14	4.22	79.69
Tripterygidae	2.23	0	2.87	0.97	4.07	83.76
Sphyraenidae	0	1.66	2.74	1.07	3.88	87.65
Scombridae	0	2.04	2.7	0.92	3.83	91.47
Groups 8/23/2016 & 8/13/2017						
Average dissimilarity = 86.39						
	Group 8/23/2016	Group 8/13/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Gobiidae	3.28	8.53	12.18	1.52	14.1	14.1
Carangidae	0	9.27	12.14	2.99	14.05	28.15
Pomacentridae	3.47	8.51	9.18	1.82	10.63	38.78
Lutjanidae	0	6.82	7.77	0.78	9	47.78
Haemulidae	0	6.03	7.61	1.39	8.8	56.59
Serranidae	0	5.26	7.09	2.28	8.21	64.8
Clupeidae	6.92	0	6.95	0.6	8.04	72.84
Clupeiformes	2.16	0.42	3.85	0.66	4.46	77.29
Blenniidae	0	3.58	3.47	0.55	4.02	81.31
Gerreidae	0	2.81	3.38	1.5	3.91	85.22
Scombridae	0	2.04	3.21	0.83	3.71	88.93
Sphyraenidae	0.36	1.66	3.01	0.87	3.48	92.41

Groups 8/24/2016 &
8/13/2017

Average dissimilarity =
72.45

Species	Group 8/24/2016	Group 8/13/2017	Av.Diss	Diss/SD	Contrib%	Cum.%
	Av.Abund	Av.Abund				
Pomacentridae	0.81	8.51	9.16	2.63	12.65	12.65
Carangidae	1.45	9.27	9.06	2.37	12.5	25.15
Gobiidae	6.84	8.53	8.6	1.36	11.87	37.02
Lutjanidae	0.43	6.82	6.72	0.76	9.28	46.3
Clupeidae	5.73	0	6.55	0.81	9.04	55.34
Haemulidae	3.16	6.03	5.4	1.59	7.46	62.8
Serranidae	0.84	5.26	4.95	1.71	6.84	69.64
Blenniidae	0	3.58	3.18	0.56	4.38	74.02
Gerreidae	0	2.81	2.96	1.54	4.09	78.11
Sphyraenidae	1.73	1.66	2.69	1.22	3.72	81.83
Scombridae	0	2.04	2.66	0.91	3.67	85.5
Syngnathidae	0	1.26	2.29	0.86	3.16	88.66
Monacanthidae	1.27	0	1.67	1.37	2.3	90.96

Groups 9/20/2016 &
8/13/2017

Average dissimilarity =
72.26

Species	Group 9/20/2016	Group 8/13/2017	Av.Diss	Diss/SD	Contrib%	Cum.%
	Av.Abund	Av.Abund				
Gerreidae	25.94	2.81	13.81	1.11	19.11	19.11
Pomacentridae	32.07	8.51	13.09	1.14	18.11	37.22
Clupeidae	7.02	0	7.58	0.64	10.49	47.72
Lutjanidae	2.51	6.82	5.26	0.75	7.28	55
Gobiidae	3.2	8.53	5.01	1.29	6.94	61.94
Carangidae	4.16	9.27	4.74	1.11	6.56	68.49
Haemulidae	0.34	6.03	4.58	1.21	6.33	74.83
Clupeiformes	10.35	0.42	3.83	0.65	5.3	80.13
Serranidae	1.61	5.26	3.55	1.22	4.92	85.05
Blenniidae	0	3.58	2.36	0.51	3.27	88.31
Scombridae	1.55	2.04	2.3	0.92	3.18	91.5

Groups 9/21/2016 &
8/13/2017

Average dissimilarity =
74.76

	Group 9/21/2016	Group 8/13/2017					
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%	
Gobiidae	1.32	8.53	10.24	1.81	13.69	13.69	
Carangidae	1.26	9.27	9.68	2.44	12.95	26.64	
Pomacentridae	4.58	8.51	7.8	1.68	10.43	37.07	
Lutjanidae	0	6.82	7.62	0.79	10.19	47.26	
Haemulidae	0	6.03	7.36	1.52	9.84	57.1	
Serranidae	0	5.26	6.81	2.72	9.11	66.21	
Sphyraenidae	1.23	1.66	3.51	1.28	4.69	70.9	
Blenniidae	0	3.58	3.45	0.56	4.61	75.51	
Scombridae	0	2.04	3.03	0.91	4.05	79.56	
Gerreidae	0.88	2.81	2.92	1.6	3.91	83.47	
Clupeiformes	1.64	0.42	2.21	1.11	2.95	86.42	
Syngnathidae	0.79	1.26	2.21	0.96	2.95	89.37	
Hemiramphidae	0.94	0	1.45	0.87	1.94	91.32	

Groups 9/22/2016 &
8/13/2017

Average dissimilarity =
80.51

	Group 9/22/2016	Group 8/13/2017					
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%	
Carangidae	0.46	9.27	11.55	2.97	14.35	14.35	
Gobiidae	0.9	8.53	11.3	1.92	14.03	28.38	
Pomacentridae	3.2	8.51	8.17	1.82	10.14	38.53	
Lutjanidae	0	6.82	7.88	0.79	9.78	48.31	
Haemulidae	0.46	6.03	7.45	1.55	9.26	57.57	
Serranidae	0	5.26	7.12	2.71	8.84	66.41	
Sphyraenidae	2.32	1.66	4.39	1.06	5.45	71.86	
Blenniidae	0	3.58	3.54	0.56	4.4	76.25	
Gerreidae	0.92	2.81	3.45	1.51	4.29	80.54	
Scombridae	0	2.04	3.19	0.9	3.96	84.51	
Syngnathidae	0	1.26	2.86	0.88	3.55	88.05	
Gobiesocidae	1.84	0	2.57	0.52	3.19	91.25	

Groups 10/20/2016 &
8/13/2017

Average dissimilarity =
79.36

	Group 10/20/2016	Group 8/13/2017		
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Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Carangidae	0.76	9.27	9.89	2.49	12.47	12.47
Gobiidae	1.53	8.53	9.7	1.65	12.23	24.69
Clupeidae	7.99	0	9.61	0.84	12.11	36.81
Pomacentridae	1.49	8.51	8.6	2.16	10.84	47.65
Lutjanidae	0	6.82	7.21	0.78	9.09	56.73
Haemulidae	1.93	6.03	6.33	1.47	7.97	64.7
Serranidae	1.44	5.26	5.32	1.66	6.71	71.41
Blenniidae	0	3.58	3.28	0.55	4.14	75.55
Gerreidae	0.79	2.81	3.15	1.46	3.97	79.52
Scombridae	0.79	2.04	2.82	0.97	3.55	83.07
Syngnathidae	0	1.26	2.47	0.85	3.12	86.18
Sphyraenidae	0.39	1.66	2.43	0.97	3.07	89.25
Aulostomidae	1.44	0	1.74	0.74	2.2	91.45

Groups 10/21/2016 &
8/13/2017

Average dissimilarity =
75.19

Species	Group 10/21/2016	Group 8/13/2017	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Clupeidae	14.94	0		10.98	0.55	14.61	14.61	
Carangidae	0.79	9.27		9.42	1.96	12.52	27.13	
Pomacentridae	3.87	8.51		7.43	1.54	9.88	37.01	
Lutjanidae	0.77	6.82		6.81	0.75	9.06	46.07	
Gobiidae	5.46	8.53		6.72	1.07	8.94	55.01	
Haemulidae	0.39	6.03		6.45	1.43	8.58	63.59	
Serranidae	0	5.26		6.12	2.13	8.14	71.73	
Gerreidae	1.99	2.81		3.91	0.86	5.2	76.93	
Blenniidae	0	3.58		3.14	0.54	4.18	81.11	
Sphyraenidae	0	1.66		2.77	0.96	3.69	84.8	
Scombridae	0	2.04		2.71	0.85	3.6	88.4	
Syngnathidae	0	1.26		2.36	0.81	3.14	91.55	

Groups 2/13/2017 &
8/13/2017

Average dissimilarity =
74.89

Species	Group 2/13/2017	Group 8/13/2017	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Pomacentridae	39.7	8.51		16.11	1.43	21.51	21.51	

Gerreidae	22.28	2.81	9.69	1.29	12.94	34.45
Tripterygidae	22.23	0	9.31	1.06	12.44	46.89
Carangidae	1.6	9.27	7.25	1.39	9.69	56.58
Lutjanidae	0	6.82	5.06	0.66	6.76	63.34
Haemulidae	2.13	6.03	4.41	0.96	5.89	69.23
Gobiidae	3.53	8.53	4.33	1.77	5.79	75.01
Serranidae	4.27	5.26	4.33	1.37	5.78	80.79
Blenniidae	1.6	3.58	2.64	0.57	3.53	84.32
Sphyraenidae	2.49	1.66	2.19	1.03	2.92	87.24
Scombridae	0.53	2.04	1.91	0.73	2.55	89.79
Mullidae	3.55	0	1.84	1.45	2.46	92.25

Groups 2/14/2017 &

8/13/2017

Average dissimilarity =

82.37

Species	Group 2/14/2017	Group 8/13/2017	Av.Diss	Diss/SD	Contrib%	Cum.%
	Av.Abund	Av.Abund				
Pomacentridae	47.25	8.51	22.47	2.35	27.28	27.28
Gerreidae	42.59	2.81	20.09	0.99	24.39	51.67
Clupeidae	18.13	0	12.34	0.93	14.99	66.65
Carangidae	0	9.27	5.09	1.99	6.18	72.83
Gobiidae	0.45	8.53	4.76	2.03	5.78	78.61
Lutjanidae	0	6.82	3.6	0.73	4.37	82.98
Haemulidae	3.11	6.03	2.77	1.32	3.36	86.34
Serranidae	0.91	5.26	2.54	1.59	3.09	89.43
Blenniidae	0	3.58	1.77	0.55	2.15	91.58

Groups 2/15/2017 &

8/13/2017

Average dissimilarity =

74.30

Species	Group 2/15/2017	Group 8/13/2017	Av.Diss	Diss/SD	Contrib%	Cum.%
	Av.Abund	Av.Abund				
Pomacentridae	31.59	8.51	17.55	1.1	23.62	23.62
Clupeidae	12.57	0	12.83	0.94	17.27	40.89
Carangidae	0	9.27	6.96	2.21	9.37	50.27
Lutjanidae	0	6.82	4.81	0.74	6.48	56.75
Tripterygidae	7.64	0	4.54	0.68	6.11	62.86
Haemulidae	0.87	6.03	4.18	1.36	5.62	68.48
Mullidae	6.72	0	4.11	0.77	5.53	74.01

Serranidae	0.43	5.26	3.68	1.69	4.95	78.97
Gobiidae	6.54	8.53	3.15	1.17	4.24	83.21
Blenniidae	0	3.58	2.31	0.55	3.11	86.32
Gerreidae	1.77	2.81	1.91	1.37	2.57	88.88
Scombridae	0	2.04	1.68	0.91	2.26	91.14

Groups 3/15/2017 &
8/13/2017

Average dissimilarity =
78.48

Species	Group 3/15/2017	Group 8/13/2017	Av.Diss	Diss/SD	Contrib%	Cum.%
	Av.Abund	Av.Abund				
Gobiidae	8.69	8.53	13.29	1.74	16.94	16.94
Carangidae	0	9.27	11.75	2.94	14.97	31.9
Pomacentridae	1.53	8.51	9.8	1.87	12.48	44.39
Serranidae	6.03	5.26	8.71	1.65	11.1	55.49
Lutjanidae	0	6.82	7.57	0.77	9.65	65.14
Haemulidae	0.38	6.03	7.22	1.4	9.2	74.34
Blenniidae	0	3.58	3.4	0.55	4.34	78.68
Scombridae	0	2.04	3.08	0.84	3.93	82.61
Gerreidae	0.39	2.81	3.08	1.53	3.93	86.53
Sphyraenidae	0.37	1.66	2.94	0.87	3.74	90.27

Groups 3/16/2017 &
8/13/2017

Average dissimilarity =
65.28

Species	Group 3/16/2017	Group 8/13/2017	Av.Diss	Diss/SD	Contrib%	Cum.%
	Av.Abund	Av.Abund				
Carangidae	3.96	9.27	7.03	1.63	10.76	10.76
Pomacentridae	0.73	8.51	7.01	2.41	10.74	21.5
Gobiidae	8.19	8.53	6.6	1.52	10.11	31.61
Gerreidae	6	2.81	6.1	0.81	9.35	40.96
Serranidae	8.57	5.26	5.96	1.19	9.13	50.08
Lutjanidae	0.73	6.82	5.45	0.77	8.35	58.44
Clupeidae	6.33	0	4.97	0.54	7.61	66.05
Haemulidae	7.64	6.03	4.79	0.99	7.34	73.38
Tripterygidae	3.44	0	3.95	0.98	6.04	79.43
Blenniidae	0.4	3.58	2.86	0.64	4.38	83.81
Scombridae	0	2.04	1.99	0.92	3.04	86.85
Sphyraenidae	0	1.66	1.93	1.09	2.95	89.8

Syngnathidae	0.37	1.26	1.55	0.86	2.37	92.17
Groups 3/17/2017 & 8/13/2017						
Average dissimilarity = 72.05						
	Group 3/17/2017	Group 8/13/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Carangidae	0	9.27	10.98	2.94	15.24	15.24
Gobiidae	4.57	8.53	8.99	1.23	12.48	27.72
Pomacentridae	5.32	8.51	7.56	1.39	10.49	38.21
Lutjanidae	0	6.82	7.18	0.77	9.97	48.18
Haemulidae	0.35	6.03	6.79	1.42	9.43	57.61
Serranidae	1.05	5.26	5.88	1.86	8.16	65.77
Clupeidae	5.61	0	5.41	0.54	7.5	73.27
Gerreidae	2.22	2.81	3.7	0.91	5.14	78.41
Blenniidae	0	3.58	3.27	0.55	4.53	82.94
Scombridae	0.7	2.04	2.83	0.9	3.93	86.88
Syngnathidae	0.7	1.26	2.49	0.87	3.46	90.33
Groups 8/11/2017 & 8/13/2017						
Average dissimilarity = 68.38						
	Group 8/11/2017	Group 8/13/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Lutjanidae	20.53	6.82	15.38	1.09	22.49	22.49
Carangidae	12.53	9.27	11.64	2.52	17.02	39.51
Gobiidae	3.7	8.53	6.68	1.17	9.77	49.28
Pomacentridae	5.76	8.51	5.58	1.33	8.16	57.44
Haemulidae	2.03	6.03	5.18	1.29	7.58	65.02
Serranidae	0.39	5.26	4.52	1.6	6.62	71.64
Clupeiformes	2.11	0.42	3.24	0.87	4.74	76.38
Sphyraenidae	2.84	1.66	2.99	1.25	4.37	80.74
Blenniidae	0	3.58	2.75	0.53	4.02	84.76
Scombridae	2.44	2.04	2.73	0.96	3.99	88.75
Gerreidae	0.41	2.81	2.43	1.24	3.55	92.31
Groups 8/12/2017 & 8/13/2017						
Average dissimilarity = 59.30						

Species	Group 8/12/2017	Group 8/13/2017	Av.Diss	Diss/SD	Contrib%	Cum.%
	Av.Abund	Av.Abund				
Pomacentridae	13.71	8.51	9.67	2.52	16.3	16.3
Lutjanidae	8.86	6.82	7.39	1.12	12.45	28.76
Clupeiformes	7.58	0.42	7.35	0.87	12.39	41.14
Carangidae	6.87	9.27	5.95	1.52	10.03	51.18
Serranidae	3.6	5.26	5.09	1.78	8.58	59.76
Haemulidae	7.33	6.03	4.53	0.85	7.64	67.39
Gerreidae	5.27	2.81	4.24	1.11	7.14	74.54
Gobiidae	9.64	8.53	4	1.21	6.74	81.28
Sphyraenidae	4.02	1.66	2.46	1.14	4.15	85.43
Blenniidae	0	3.58	2.39	0.54	4.02	89.45
Scombridae	2.42	2.04	2.06	1	3.48	92.93

Groups 8/22/2016 &
9/11/2017

Average dissimilarity =
83.40

Species	Group 8/22/2016	Group 9/11/2017	Av.Diss	Diss/SD	Contrib%	Cum.%
	Av.Abund	Av.Abund				
Gobiidae	2.23	9.44	14.16	1.36	16.98	16.98
Serranidae	1.27	5.98	11.71	1.03	14.04	31.01
Pomacentridae	5.68	1.52	10.56	1.32	12.66	43.67
Clupeiformes	0.86	5.54	9.79	0.84	11.74	55.41
Clupeidae	4.04	1.52	8.6	0.64	10.32	65.73
Tripterygidae	2.23	0	4.29	0.98	5.14	70.87
Haemulidae	0.86	1.13	3.34	1.08	4	74.87
Syngnathidae	1.82	0	3.26	0.69	3.91	78.78
Gerreidae	0.81	0.76	3.18	0.7	3.82	82.6
Carapidae	0	0.76	2.81	0.54	3.37	85.97
Carangidae	0.86	0.38	2.17	0.79	2.6	88.57
Monacanthidae	0.85	0	1.54	0.87	1.84	90.42

Groups 8/23/2016 &
9/11/2017

Average dissimilarity =
90.16

Species	Group 8/23/2016	Group 9/11/2017	Av.Diss	Diss/SD	Contrib%	Cum.%
	Av.Abund	Av.Abund				
Gobiidae	3.28	9.44	18.42	1.26	20.43	20.43

Serranidae	0	5.98	13.68	0.72	15.17	35.6
Clupeiformes	2.16	5.54	13.6	0.81	15.09	50.68
Clupeidae	6.92	1.52	10.85	0.76	12.04	62.72
Pomacentridae	3.47	1.52	8.4	1.53	9.31	72.03
Carapidae	0	0.76	6.35	0.45	7.04	79.07
Gerreidae	0	0.76	6.35	0.45	7.04	86.12
Haemulidae	0	1.13	2.3	0.53	2.55	88.67
Sphyraenidae	0.36	0.75	2.12	0.73	2.35	91.02

Groups 8/24/2016 &
9/11/2017

Average dissimilarity =
80.63

	Group 8/24/2016	Group 9/11/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Gobiidae	6.84	9.44	15.79	1.25	19.58	19.58
Serranidae	0.84	5.98	11.13	0.9	13.8	33.38
Clupeidae	5.73	1.52	9.52	0.89	11.8	45.18
Clupeiformes	0	5.54	8.89	0.68	11.03	56.21
Haemulidae	3.16	1.13	6.5	1.06	8.07	64.27
Carangidae	1.45	0.38	3.98	0.55	4.94	69.21
Sphyraenidae	1.73	0.75	3.55	0.97	4.4	73.61
Pomacentridae	0.81	1.52	3.2	0.98	3.97	77.58
Carapidae	0	0.76	2.81	0.52	3.48	81.06
Gerreidae	0	0.76	2.81	0.52	3.48	84.54
Monacanthidae	1.27	0	2.58	1.19	3.2	87.74
Hemiramphidae	0.76	0	2.06	0.79	2.55	90.29

Groups 9/20/2016 &
9/11/2017

Average dissimilarity =
87.15

	Group 9/20/2016	Group 9/11/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Pomacentridae	32.07	1.52	16.71	1.26	19.17	19.17
Gerreidae	25.94	0.76	16.62	1.04	19.07	38.24
Clupeidae	7.02	1.52	10.75	0.71	12.33	50.57
Gobiidae	3.2	9.44	9.21	1.09	10.57	61.14
Clupeiformes	10.35	5.54	8.75	0.86	10.04	71.18
Serranidae	1.61	5.98	7.17	0.71	8.22	79.4
Carangidae	4.16	0.38	4.11	1.53	4.72	84.12

Sphyraenidae	3.45	0.75	2.52	1.45	2.89	87.01
Syngnathidae	0.64	0	1.74	0.49	2	89
Carapidae	0	0.76	1.63	0.41	1.87	90.88

Groups 9/21/2016 &
9/11/2017

Average dissimilarity =
85.81

Species	Group 9/21/2016	Group 9/11/2017	Av.Diss	Diss/SD	Contrib%	Cum.%
	Av.Abund	Av.Abund				
Gobiidae	1.32	9.44	16.78	1.5	19.56	19.56
Serranidae	0	5.98	12.54	0.79	14.61	34.17
Clupeiformes	1.64	5.54	11.93	0.97	13.9	48.07
Pomacentridae	4.58	1.52	11.62	0.97	13.54	61.61
Gerreidae	0.88	0.76	3.94	0.77	4.59	66.19
Sphyraenidae	1.23	0.75	3.86	0.64	4.49	70.69
Clupeidae	0.82	1.52	3.84	0.77	4.48	75.17
Carapidae	0	0.76	3.69	0.55	4.3	79.47
Carangidae	1.26	0.38	3.07	0.99	3.58	83.05
Hemiramphidae	0.94	0	2.41	0.81	2.81	85.86
Syngnathidae	0.79	0	2.21	0.78	2.58	88.44
Haemulidae	0	1.13	2.16	0.56	2.52	90.96

Groups 9/22/2016 &
9/11/2017

Average dissimilarity =
91.45

Species	Group 9/22/2016	Group 9/11/2017	Av.Diss	Diss/SD	Contrib%	Cum.%
	Av.Abund	Av.Abund				
Gobiidae	0.9	9.44	18.08	1.54	19.77	19.77
Serranidae	0	5.98	13.41	0.78	14.66	34.43
Clupeiformes	0	5.54	10.82	0.69	11.83	46.26
Pomacentridae	3.2	1.52	8.97	1.08	9.81	56.07
Sphyraenidae	2.32	0.75	7.74	0.63	8.46	64.53
Gerreidae	0.92	0.76	5.1	0.64	5.58	70.12
Carapidae	0	0.76	4.46	0.54	4.87	74.99
Tetraodontiformes	1.35	0	4.38	0.71	4.79	79.78
Gobiesocidae	1.84	0	3.98	0.51	4.36	84.14
Haemulidae	0.46	1.13	2.9	0.74	3.17	87.31
Clupeidae	0	1.52	2.51	0.56	2.75	90.05

Groups 10/20/2016 &
9/11/2017

Average dissimilarity =
84.75

Species	Group 10/20/2016	Group 9/11/2017	Av.Diss	Diss/SD	Contrib%	Cum.%
	Av.Abund	Av.Abund				
Gobiidae	1.53	9.44	15.37	1.34	18.14	18.14
Clupeidae	7.99	1.52	14.19	0.91	16.74	34.88
Serranidae	1.44	5.98	12.01	0.86	14.17	49.05
Clupeiformes	0.75	5.54	10.54	0.8	12.44	61.48
Pomacentridae	1.49	1.52	4.89	0.98	5.77	67.25
Haemulidae	1.93	1.13	4.61	0.97	5.44	72.69
Gerreidae	0.79	0.76	3.57	0.64	4.21	76.9
Carapidae	0	0.76	3.44	0.5	4.06	80.96
Scombridae	0.79	0	2.56	0.46	3.02	83.98
Aulostomidae	1.44	0	2.51	0.74	2.96	86.94
Sphyraenidae	0.39	0.75	2.2	0.72	2.59	89.53
Ophychthidae	0.77	0.49	1.94	0.76	2.29	91.83

Groups 10/21/2016 &
9/11/2017

Average dissimilarity =
79.97

Species	Group 10/21/2016	Group 9/11/2017	Av.Diss	Diss/SD	Contrib%	Cum.%
	Av.Abund	Av.Abund				
Clupeidae	14.94	1.52	15.09	0.64	18.87	18.87
Gobiidae	5.46	9.44	14.22	1.05	17.78	36.66
Serranidae	0	5.98	11.09	0.73	13.87	50.53
Clupeiformes	0.39	5.54	9.32	0.69	11.65	62.18
Pomacentridae	3.87	1.52	6.63	1.04	8.29	70.47
Gerreidae	1.99	0.76	6.55	0.78	8.19	78.66
Carapidae	0	0.76	3.43	0.47	4.28	82.95
Haemulidae	0.39	1.13	2.43	0.71	3.04	85.99
Ophychthidae	1.16	0.49	2.14	0.88	2.67	88.66
Carangidae	0.79	0.38	2.03	0.64	2.54	91.2

Groups 2/13/2017 &
9/11/2017

Average dissimilarity =
84.65

	Group 2/13/2017	Group 9/11/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Pomacentridae	39.7	1.52	19.94	1.46	23.55	23.55
Gerreidae	22.28	0.76	11.56	1.31	13.66	37.21
Tripterygidae	22.23	0	10.74	1.11	12.69	49.9
Gobiidae	3.53	9.44	9.62	0.88	11.37	61.26
Serranidae	4.27	5.98	7.79	0.65	9.2	70.47
Clupeiformes	0	5.54	6.28	0.55	7.41	77.88
Sphyraenidae	2.49	0.75	2.43	1.03	2.87	80.75
Mullidae	3.55	0	2.33	1.39	2.76	83.5
Clupeidae	0.89	1.52	2.19	0.74	2.59	86.09
Carapidae	0	0.76	1.98	0.41	2.34	88.43
Haemulidae	2.13	1.13	1.84	0.65	2.17	90.6

Groups 2/14/2017 &
9/11/2017

Average dissimilarity =
93.47

	Group 2/14/2017	Group 9/11/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Pomacentridae	47.25	1.52	31.45	2.96	33.65	33.65
Gerreidae	42.59	0.76	23.59	1.01	25.24	58.89
Clupeidae	18.13	1.52	14.89	0.97	15.93	74.83
Gobiidae	0.45	9.44	6.08	1.12	6.51	81.33
Serranidae	0.91	5.98	4.17	0.9	4.46	85.79
Clupeiformes	0.91	5.54	3.7	0.7	3.95	89.75
Haemulidae	3.11	1.13	1.85	1.34	1.98	91.73

Groups 2/15/2017 &
9/11/2017

Average dissimilarity =
83.85

	Group 2/15/2017	Group 9/11/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Pomacentridae	31.59	1.52	26.45	1.34	31.54	31.54
Clupeidae	12.57	1.52	16.92	0.96	20.18	51.72
Gobiidae	6.54	9.44	7.57	1.18	9.03	60.74
Serranidae	0.43	5.98	6.19	0.82	7.38	68.13
Tripterygidae	7.64	0	5.39	0.69	6.42	74.55
Clupeiformes	0	5.54	5.36	0.67	6.39	80.94
Mullidae	6.72	0	4.9	0.79	5.85	86.79

Gerreidae	1.77	0.76	1.82	0.88	2.17	88.96
Haemulidae	0.87	1.13	1.58	0.75	1.88	90.84

Groups 3/15/2017 &
9/11/2017

Average dissimilarity =
78.36

Species	Group 3/15/2017	Group 9/11/2017	Av.Diss	Diss/SD	Contrib%	Cum.%
	Av.Abund	Av.Abund				
Gobiidae	8.69	9.44	20.81	1.35	26.56	26.56
Serranidae	6.03	5.98	15.79	0.87	20.15	46.71
Clupeiformes	0	5.54	10.4	0.65	13.27	59.97
Carapidae	0	0.76	5.82	0.42	7.43	67.4
Gerreidae	0.39	0.76	5.63	0.45	7.18	74.58
Pomacentridae	1.53	1.52	4.83	0.98	6.16	80.74
Haemulidae	0.38	1.13	2.55	0.65	3.26	84
Clupeidae	0	1.52	2.41	0.54	3.07	87.07
Sphyraenidae	0.37	0.75	1.84	0.69	2.35	89.42
Hemiramphidae	0.39	0	1.62	0.43	2.06	91.48

Groups 3/16/2017 &
9/11/2017

Average dissimilarity =
75.71

Species	Group 3/16/2017	Group 9/11/2017	Av.Diss	Diss/SD	Contrib%	Cum.%
	Av.Abund	Av.Abund				
Gobiidae	8.19	9.44	11.21	1.39	14.8	14.8
Serranidae	8.57	5.98	10.45	1.23	13.8	28.6
Haemulidae	7.64	1.13	9.96	1.3	13.15	41.75
Gerreidae	6	0.76	7.65	0.74	10.11	51.86
Clupeidae	6.33	1.52	7.19	0.68	9.5	61.36
Clupeiformes	0.4	5.54	6.54	0.71	8.64	70
Tripterygidae	3.44	0	5.62	0.92	7.43	77.43
Carangidae	3.96	0.38	4.76	0.71	6.28	83.71
Pomacentridae	0.73	1.52	2.28	0.8	3.01	86.72
Carapidae	0	0.76	1.51	0.52	1.99	88.71
Lutjanidae	0.73	0	1.09	0.54	1.44	90.16

Groups 3/17/2017 &
9/11/2017

Average dissimilarity =
80.20

	Group 3/17/2017	Group 9/11/2017					
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%	
Gobiidae	4.57	9.44	15.62	1.14	19.48	19.48	
Serranidae	1.05	5.98	11.81	0.78	14.73	34.21	
Pomacentridae	5.32	1.52	11.28	0.93	14.06	48.27	
Clupeiformes	1.4	5.54	10.02	0.73	12.5	60.77	
Clupeidae	5.61	1.52	8.63	0.7	10.76	71.53	
Gerreidae	2.22	0.76	6.32	0.93	7.88	79.41	
Sphyraenidae	1.11	0.75	3.92	0.73	4.88	84.3	
Carapidae	0	0.76	3.63	0.49	4.52	88.82	
Haemulidae	0.35	1.13	2.26	0.63	2.82	91.63	

Groups 8/11/2017 &
9/11/2017

Average dissimilarity =
85.82

	Group 8/11/2017	Group 9/11/2017					
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%	
Lutjanidae	20.53	0	16.04	0.85	18.69	18.69	
Gobiidae	3.7	9.44	12	1.19	13.99	32.68	
Clupeiformes	2.11	5.54	10.25	0.92	11.95	44.62	
Carangidae	12.53	0.38	10.15	1.01	11.83	56.46	
Serranidae	0.39	5.98	9.51	0.75	11.08	67.54	
Pomacentridae	5.76	1.52	7.29	1.55	8.49	76.03	
Haemulidae	2.03	1.13	3.37	0.99	3.93	79.96	
Sphyraenidae	2.84	0.75	2.78	1.06	3.24	83.2	
Gerreidae	0.41	0.76	2.75	0.46	3.2	86.4	
Carapidae	0	0.76	2.62	0.43	3.05	89.45	
Scombridae	2.44	0	1.98	0.84	2.3	91.75	

Groups 8/12/2017 &
9/11/2017

Average dissimilarity =
74.53

	Group 8/12/2017	Group 9/11/2017					
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%	
Pomacentridae	13.71	1.52	10.68	1.23	14.33	14.33	
Clupeiformes	7.58	5.54	10.49	0.89	14.07	28.4	
Haemulidae	7.33	1.13	8.77	0.91	11.77	40.17	
Gobiidae	9.64	9.44	8.62	1.25	11.56	51.73	

Serranidae	3.6	5.98	7.53	0.82	10.11	61.84
Lutjanidae	8.86	0	6.44	0.95	8.64	70.48
Carangidae	6.87	0.38	5.06	1.18	6.79	77.27
Gerreidae	5.27	0.76	4.33	0.78	5.8	83.08
Sphyraenidae	4.02	0.75	3.23	1.13	4.33	87.41
Scombridae	2.42	0	1.78	0.93	2.39	89.8
Clupeidae	0	1.52	1.43	0.52	1.92	91.72

Groups 8/13/2017 &
9/11/2017

Average dissimilarity =
74.66

Species	Group 8/13/2017	Group 9/11/2017	Av.Diss	Diss/SD	Contrib%	Cum.%
	Av.Abund	Av.Abund				
Carangidae	9.27	0.38	9.6	2.39	12.86	12.86
Gobiidae	8.53	9.44	8.98	1.21	12.03	24.89
Pomacentridae	8.51	1.52	8.7	1.91	11.65	36.54
Serranidae	5.26	5.98	7.9	1.26	10.58	47.12
Lutjanidae	6.82	0	6.65	0.76	8.9	56.02
Clupeiformes	0.42	5.54	6.27	0.72	8.4	64.42
Haemulidae	6.03	1.13	5.89	1.32	7.89	72.31
Blenniidae	3.58	0	3.06	0.55	4.1	76.41
Gerreidae	2.81	0.76	2.89	1.4	3.88	80.29
Scombridae	2.04	0	2.54	0.87	3.41	83.69
Sphyraenidae	1.66	0.75	2.42	0.98	3.24	86.94
Syngnathidae	1.26	0	2.18	0.82	2.92	89.86
Clupeidae	0	1.52	1.52	0.54	2.03	91.89

Groups 8/22/2016 &
9/12/2017

Average dissimilarity =
79.09

Species	Group 8/22/2016	Group 9/12/2017	Av.Diss	Diss/SD	Contrib%	Cum.%
	Av.Abund	Av.Abund				
Pomacentridae	5.68	1.39	13.42	1.43	16.97	16.97
Clupeidae	4.04	0	10.6	0.55	13.4	30.37
Gobiidae	2.23	2.41	8.79	1.1	11.11	41.48
Serranidae	1.27	1.29	6.85	1.14	8.66	50.15
Tripterygidae	2.23	0	6.26	1.11	7.91	58.06
Syngnathidae	1.82	0.48	5.04	0.87	6.37	64.43
Clupeiformes	0.86	0	3.61	0.93	4.57	69

Haemulidae	0.86	0	3.61	0.93	4.57	73.57
Gerreidae	0.81	0	3.28	0.55	4.15	77.72
Carangidae	0.86	0.91	3.06	1.02	3.87	81.59
Ephippidae	0.45	0.43	2.46	0.7	3.11	84.7
Monacanthidae	0.85	0	2.18	0.95	2.76	87.45
Mullidae	0.45	0	1.97	0.55	2.49	89.95
Tetraodontiformes	0.37	0.43	1.82	0.74	2.3	92.24

Groups 8/23/2016 &
9/12/2017

Average dissimilarity =
87.75

Species	Group 8/23/2016	Group 9/12/2017	Av.Diss	Diss/SD	Contrib%	Cum.%
	Av.Abund	Av.Abund				
Gobiidae	3.28	2.41	15.89	0.91	18.11	18.11
Pomacentridae	3.47	1.39	13.49	1.38	15.37	33.48
Clupeidae	6.92	0	12.46	0.66	14.2	47.68
Clupeiformes	2.16	0	8.87	0.55	10.11	57.78
Carangidae	0	0.91	7.52	0.62	8.57	66.35
Serranidae	0	1.29	6.51	0.48	7.42	73.77
Sphyraenidae	0.36	0.43	5.83	0.48	6.65	80.42
Syngnathidae	0.72	0.48	4.36	0.73	4.97	85.39
Mugilidae	0	0.48	3.39	0.46	3.87	89.26
Achiriidae	0	0.48	2.23	0.49	2.54	91.8

Groups 8/24/2016 &
9/12/2017

Average dissimilarity =
83.66

Species	Group 8/24/2016	Group 9/12/2017	Av.Diss	Diss/SD	Contrib%	Cum.%
	Av.Abund	Av.Abund				
Gobiidae	6.84	2.41	17.74	1.19	21.2	21.2
Clupeidae	5.73	0	12.67	0.88	15.15	36.35
Haemulidae	3.16	0	10.74	1.32	12.84	49.19
Carangidae	1.45	0.91	7.15	0.85	8.55	57.74
Serranidae	0.84	1.29	5.42	0.93	6.48	64.21
Pomacentridae	0.81	1.39	4.72	0.92	5.64	69.85
Sphyraenidae	1.73	0.43	4.71	1.05	5.63	75.48
Monacanthidae	1.27	0	3.89	1.35	4.65	80.13
Hemiramphidae	0.76	0	3.36	0.92	4.02	84.15
Mugilidae	0.84	0.48	3.03	0.92	3.62	87.76

Synodontidae	0.36	0	1.48	0.55	1.77	89.53
Achiriidae	0	0.48	1.37	0.53	1.64	91.18

Groups 9/20/2016 &
9/12/2017

Average dissimilarity =
85.62

Species	Group 9/20/2016	Group 9/12/2017	Av.Diss	Diss/SD	Contrib%	Cum.%
	Av.Abund	Av.Abund				
Pomacentridae	32.07	1.39	19.3	1.43	22.54	22.54
Gerreidae	25.94	0	18.35	0.89	21.43	43.97
Clupeidae	7.02	0	14.54	0.73	16.98	60.95
Gobiidae	3.2	2.41	6.17	0.97	7.2	68.15
Carangidae	4.16	0.91	4.71	1.69	5.5	73.65
Clupeiformes	10.35	0	4.04	0.56	4.72	78.37
Serranidae	1.61	1.29	3.15	0.63	3.68	82.05
Sphyraenidae	3.45	0.43	2.91	1.63	3.4	85.45
Syngnathidae	0.64	0.48	2.8	0.58	3.27	88.72
Scombridae	1.55	0.43	2.49	0.72	2.9	91.62

Groups 9/21/2016 &
9/12/2017

Average dissimilarity =
78.10

Species	Group 9/21/2016	Group 9/12/2017	Av.Diss	Diss/SD	Contrib%	Cum.%
	Av.Abund	Av.Abund				
Pomacentridae	4.58	1.39	15.74	1	20.15	20.15
Gobiidae	1.32	2.41	10.52	1.11	13.47	33.62
Clupeiformes	1.64	0	7.66	1.23	9.81	43.43
Sphyraenidae	1.23	0.43	6.26	0.8	8.02	51.44
Serranidae	0	1.29	4.85	0.56	6.22	57.66
Carangidae	1.26	0.91	3.92	1.14	5.02	62.68
Syngnathidae	0.79	0.48	3.9	1.01	5	67.68
Hemiramphidae	0.94	0	3.85	0.94	4.93	72.61
Gerreidae	0.88	0	3.64	0.93	4.66	77.27
Clupeidae	0.82	0	3.29	0.55	4.22	81.49
Mugilidae	0	0.48	2.17	0.55	2.77	84.26
Ostraciidae	0.38	0	2.01	0.54	2.57	86.83
Atherinidae	0.48	0	1.85	0.55	2.37	89.21
Holocentridae	0.48	0	1.85	0.55	2.37	91.58

Groups 9/22/2016 &

9/12/2017

Average dissimilarity =

79.83

Species	Group 9/22/2016	Group 9/12/2017	Av.Diss	Diss/SD	Contrib%	Cum.%
	Av.Abund	Av.Abund				
Sphyraenidae	2.32	0.43	12.85	0.77	16.09	16.09
Pomacentridae	3.2	1.39	12.73	1.27	15.95	32.04
Gobiidae	0.9	2.41	10.92	0.97	13.67	45.72
Tetraodontiformes	1.35	0.43	7.43	0.9	9.31	55.03
Gobiesocidae	1.84	0	5.99	0.55	7.51	62.54
Serranidae	0	1.29	5.55	0.55	6.95	69.49
Carangidae	0.46	0.91	4.98	0.88	6.24	75.72
Gerreidae	0.92	0	3	0.55	3.75	79.48
Mugilidae	0	0.48	2.57	0.54	3.21	82.69
Hemiramphidae	0.45	0	2.36	0.54	2.96	85.65
Ostraciidae	0.45	0	2.36	0.54	2.96	88.61
Achiridae	0	0.48	1.95	0.55	2.44	91.05

Groups 10/20/2016 &

9/12/2017

Average dissimilarity =

83.91

Species	Group 10/20/2016	Group 9/12/2017	Av.Diss	Diss/SD	Contrib%	Cum.%
	Av.Abund	Av.Abund				
Clupeidae	7.99	0	19.36	0.89	23.07	23.07
Gobiidae	1.53	2.41	9.42	0.96	11.23	34.29
Pomacentridae	1.49	1.39	6.64	0.9	7.91	42.2
Serranidae	1.44	1.29	6.36	0.78	7.58	49.78
Haemulidae	1.93	0	5.71	0.91	6.8	56.58
Scombridae	0.79	0.43	4.95	0.65	5.89	62.47
Gerreidae	0.79	0	4.46	0.54	5.31	67.79
Clupeiformes	0.75	0	4.37	0.54	5.2	72.99
Carangidae	0.76	0.91	3.67	0.92	4.37	77.36
Aulostomidae	1.44	0	3.53	0.78	4.2	81.56
Sphyraenidae	0.39	0.43	2.96	0.69	3.53	85.1
Mugilidae	0	0.48	2.01	0.5	2.39	87.49
Ophychthidae	0.77	0	1.74	0.56	2.07	89.56
Achiridae	0	0.48	1.58	0.52	1.88	91.44

Groups 10/21/2016 &

9/12/2017

Average dissimilarity =
84.46

	Group 10/21/2016	Group 9/12/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Clupeidae	14.94	0	16.29	0.56	19.28	19.28
Gobiidae	5.46	2.41	16.2	1.13	19.19	38.47
Gerreidae	1.99	0	12.37	0.61	14.65	53.11
Pomacentridae	3.87	1.39	9.57	1.1	11.33	64.44
Carangidae	0.79	0.91	4.89	0.91	5.78	70.23
Serranidae	0	1.29	4.35	0.49	5.15	75.38
Ophychthidae	1.16	0	2.71	0.83	3.2	78.58
Sphyraenidae	0	0.43	2.3	0.46	2.72	81.3
Mugilidae	0	0.48	1.98	0.48	2.35	83.65
Achiridae	0	0.48	1.54	0.49	1.82	85.47
Syngnathidae	0	0.48	1.54	0.49	1.82	87.29
Ephippidae	0	0.43	1.45	0.49	1.72	89
Scombridae	0	0.43	1.45	0.49	1.72	90.72

Groups 2/13/2017 &
9/12/2017

Average dissimilarity =
84.26

	Group 2/13/2017	Group 9/12/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Pomacentridae	39.7	1.39	22.81	1.66	27.07	27.07
Gerreidae	22.28	0	12.82	1.28	15.21	42.28
Tripterygidae	22.23	0	12.24	1.18	14.53	56.8
Gobiidae	3.53	2.41	10.47	0.85	12.42	69.22
Serranidae	4.27	1.29	4.03	0.65	4.78	74
Sphyraenidae	2.49	0.43	3	0.95	3.57	77.57
Mullidae	3.55	0	2.96	1.42	3.51	81.09
Carangidae	1.6	0.91	2.66	0.79	3.16	84.25
Tetraodontiformes	0.4	0.43	1.98	0.59	2.35	86.6
Aulostomidae	0.4	0	1.88	0.54	2.24	88.83
Syngnathidae	0.35	0.48	1.72	0.65	2.04	90.87

Groups 2/14/2017 &
9/12/2017

Average dissimilarity =
95.88

Species	Group 2/14/2017	Group 9/12/2017	Av.Diss	Diss/SD	Contrib%	Cum.%
	Av.Abund	Av.Abund				
Pomacentridae	47.25	1.39	36.5	3.34	38.07	38.07
Gerreidae	42.59	0	27.04	1.02	28.2	66.27
Clupeidae	18.13	0	17.87	0.95	18.64	84.9
Haemulidae	3.11	0	2.03	1.33	2.12	87.03
Gobiidae	0.45	2.41	1.98	0.72	2.07	89.09
Sphyraenidae	2.89	0.43	1.91	1.46	2	91.09

Groups 2/15/2017 &

9/12/2017

Average dissimilarity =
89.13

Species	Group 2/15/2017	Group 9/12/2017	Av.Diss	Diss/SD	Contrib%	Cum.%
	Av.Abund	Av.Abund				
Pomacentridae	31.59	1.39	31.75	1.45	35.62	35.62
Clupeidae	12.57	0	22.9	0.99	25.69	61.32
Gobiidae	6.54	2.41	8.35	1.17	9.37	70.68
Tripterygidae	7.64	0	6.25	0.7	7.01	77.69
Mullidae	6.72	0	5.72	0.81	6.42	84.11
Serranidae	0.43	1.29	2.02	0.65	2.27	86.38
Gerreidae	1.77	0	1.73	0.93	1.94	88.32
Tetraodontiformes	0.74	0.43	1.31	0.99	1.47	89.79
Carangidae	0	0.91	1.31	0.87	1.47	91.26

Groups 3/15/2017 &

9/12/2017

Average dissimilarity =
86.55

Species	Group 3/15/2017	Group 9/12/2017	Av.Diss	Diss/SD	Contrib%	Cum.%
	Av.Abund	Av.Abund				
Gobiidae	8.69	2.41	26.14	1.38	30.2	30.2
Serranidae	6.03	1.29	17.24	1.06	19.92	50.11
Pomacentridae	1.53	1.39	9.56	0.76	11.05	61.16
Carangidae	0	0.91	7.06	0.54	8.16	69.33
Sphyraenidae	0.37	0.43	5.39	0.41	6.23	75.55
Gerreidae	0.39	0	3.1	0.52	3.58	79.13
Hemiramphidae	0.39	0	3.1	0.52	3.58	82.72
Mugilidae	0	0.48	3.1	0.44	3.58	86.3
Syngnathidae	0.38	0.48	2.52	0.59	2.91	89.21
Tetraodontiformes	0.38	0.43	2.44	0.58	2.82	92.04

Groups 3/16/2017 &

9/12/2017

Average dissimilarity =

88.35

Species	Group 3/16/2017	Group 9/12/2017	Av.Diss	Diss/SD	Contrib%	Cum.%
	Av.Abund	Av.Abund				
Haemulidae	7.64	0	15.39	1.69	17.42	17.42
Serranidae	8.57	1.29	13.72	1.38	15.53	32.95
Gobiidae	8.19	2.41	11.58	1.31	13.1	46.05
Gerreidae	6	0	10.33	0.74	11.7	57.75
Tripterygidae	3.44	0	7.84	0.96	8.87	66.62
Clupeidae	6.33	0	7.59	0.56	8.59	75.2
Carangidae	3.96	0.91	6.41	0.84	7.25	82.46
Pomacentridae	0.73	1.39	2.91	0.92	3.3	85.75
Lutjanidae	0.73	0	1.47	0.56	1.66	87.42
Mullidae	0.8	0	1.26	0.56	1.43	88.85
Syngnathidae	0.37	0.48	1.06	0.7	1.2	90.05

Groups 3/17/2017 &

9/12/2017

Average dissimilarity =

82.71

Species	Group 3/17/2017	Group 9/12/2017	Av.Diss	Diss/SD	Contrib%	Cum.%
	Av.Abund	Av.Abund				
Pomacentridae	5.32	1.39	16.42	1.1	19.86	19.86
Gobiidae	4.57	2.41	15.03	1.02	18.18	38.04
Gerreidae	2.22	0	12.35	0.73	14.94	52.97
Clupeidae	5.61	0	9.23	0.56	11.16	64.13
Sphyraenidae	1.11	0.43	5.67	0.96	6.85	70.99
Serranidae	1.05	1.29	5.51	0.62	6.66	77.65
Carangidae	0	0.91	4.05	0.77	4.9	82.55
Syngnathidae	0.7	0.48	2.41	0.73	2.91	85.46
Scombridae	0.7	0.43	2.35	0.74	2.84	88.3
Clupeiformes	1.4	0	2.31	0.56	2.79	91.09

Groups 8/11/2017 &

9/12/2017

Average dissimilarity =

85.13

	Group 8/11/2017	Group 9/12/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Lutjanidae	20.53	0	18.84	0.87	22.13	22.13
Carangidae	12.53	0.91	13.73	1.38	16.12	38.25
Clupeiformes	2.11	0	10.84	0.9	12.73	50.98
Pomacentridae	5.76	1.39	8.55	1.41	10.04	61.02
Gobiidae	3.7	2.41	8.05	1.04	9.46	70.49
Serranidae	0.39	1.29	4.72	0.69	5.55	76.03
Sphyraenidae	2.84	0.43	3.98	0.98	4.68	80.71
Haemulidae	2.03	0	3.84	0.91	4.52	85.23
Scombridae	2.44	0.43	3.08	1.01	3.62	88.84
Tripterygidae	0.44	0	2.13	0.54	2.51	91.35

Groups 8/12/2017 &
9/12/2017

Average dissimilarity =
85.52

	Group 8/12/2017	Group 9/12/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Clupeiformes	7.58	0	14.77	0.95	17.27	17.27
Haemulidae	7.33	0	13.76	1.08	16.09	33.36
Pomacentridae	13.71	1.39	12.45	1.29	14.55	47.91
Gobiidae	9.64	2.41	10.01	2.17	11.71	59.62
Lutjanidae	8.86	0	7.51	0.96	8.78	68.4
Carangidae	6.87	0.91	5.34	1.11	6.25	74.65
Serranidae	3.6	1.29	5.11	0.78	5.97	80.62
Sphyraenidae	4.02	0.43	3.97	1.24	4.64	85.26
Gerreidae	5.27	0	3.67	0.56	4.29	89.55
Scombridae	2.42	0.43	2.4	1.16	2.81	92.36

Groups 8/13/2017 &
9/12/2017

Average dissimilarity =
77.70

	Group 8/13/2017	Group 9/12/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Carangidae	9.27	0.91	11.15	2.8	14.35	14.35
Gobiidae	8.53	2.41	10.83	1.53	13.94	28.29
Pomacentridae	8.51	1.39	10.4	2.31	13.38	41.67
Lutjanidae	6.82	0	8.18	0.8	10.53	52.2
Haemulidae	6.03	0	8.01	1.51	10.31	62.51

Serranidae	5.26	1.29	6.81	2.28	8.77	71.28
Blenniidae	3.58	0	3.65	0.56	4.7	75.97
Gerreidae	2.81	0	3.55	1.62	4.57	80.55
Scombridae	2.04	0.43	3.37	1	4.34	84.88
Sphyraenidae	1.66	0.43	2.99	0.99	3.85	88.74
Syngnathidae	1.26	0.48	2.84	0.9	3.65	92.39

Groups 9/11/2017 &
9/12/2017

Average dissimilarity =
86.42

	Group 9/11/2017	Group 9/12/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Gobiidae	9.44	2.41	18.85	1.3	21.81	21.81
Serranidae	5.98	1.29	15.47	0.89	17.9	39.71
Clupeiformes	5.54	0	11.48	0.69	13.29	53
Pomacentridae	1.52	1.39	6.08	0.83	7.03	60.03
Carapidae	0.76	0	5.39	0.53	6.23	66.26
Gerreidae	0.76	0	5.39	0.53	6.23	72.5
Carangidae	0.38	0.91	3.26	0.68	3.77	76.27
Sphyraenidae	0.75	0.43	3.03	0.63	3.51	79.78
Clupeidae	1.52	0	2.64	0.56	3.06	82.84
Haemulidae	1.13	0	2.43	0.56	2.81	85.65
Achiriidae	0.49	0.48	2.11	0.68	2.44	88.09
Mugilidae	0	0.48	1.69	0.45	1.96	90.05

Groups 8/22/2016 &
9/13/2017

Average dissimilarity =
74.22

	Group 8/22/2016	Group 9/13/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Carangidae	0.86	7.01	11.11	1.14	14.97	14.97
Gerreidae	0.81	6.15	9.54	0.96	12.85	27.82
Clupeidae	4.04	2.33	8.67	0.81	11.69	39.5
Haemulidae	0.86	5.12	7.11	3.14	9.58	49.08
Gobiidae	2.23	3.87	7.05	1.13	9.49	58.58
Pomacentridae	5.68	2	6.29	1.24	8.48	67.06
Clupeiformes	0.86	2.03	3.7	0.94	4.98	72.04
Serranidae	1.27	2.6	3.63	1.3	4.9	76.93
Tripterygidae	2.23	0.45	3.29	1.04	4.43	81.36

Syngnathidae	1.82	0	2.73	0.74	3.68	85.04
Monacanthidae	0.85	0.77	2.06	0.95	2.77	87.82
Ephippidae	0.45	0.97	1.94	0.82	2.62	90.43

Groups 8/23/2016 &
9/13/2017

Average dissimilarity =
88.66

Species	Group 8/23/2016	Group 9/13/2017	Av.Diss	Diss/SD	Contrib%	Cum.%
	Av.Abund	Av.Abund				
Carangidae	0	7.01	12.99	0.9	14.65	14.65
Clupeidae	6.92	2.33	11.99	0.89	13.53	28.18
Gerreidae	0	6.15	11.08	0.82	12.49	40.67
Haemulidae	0	5.12	10.76	2.42	12.14	52.81
Gobiidae	3.28	3.87	10.66	1.02	12.03	64.83
Clupeiformes	2.16	2.03	6.66	0.88	7.51	72.35
Serranidae	0	2.6	5.41	1.14	6.1	78.45
Pomacentridae	3.47	2	4.76	1.59	5.37	83.82
Labridae	0	0.78	1.85	0.52	2.09	85.91
Apogonidae	0	0.77	1.85	0.52	2.09	87.99
Atherinidae	0	0.77	1.85	0.52	2.09	90.08

Groups 8/24/2016 &
9/13/2017

Average dissimilarity =
71.96

Species	Group 8/24/2016	Group 9/13/2017	Av.Diss	Diss/SD	Contrib%	Cum.%
	Av.Abund	Av.Abund				
Carangidae	1.45	7.01	11.05	1.15	15.36	15.36
Gobiidae	6.84	3.87	10.32	1.31	14.34	29.7
Gerreidae	0	6.15	9.24	0.85	12.84	42.53
Clupeidae	5.73	2.33	9.2	1.02	12.79	55.32
Haemulidae	3.16	5.12	4.12	1.36	5.72	61.05
Serranidae	0.84	2.6	3.73	1.22	5.18	66.22
Clupeiformes	0	2.03	3.59	0.71	4.98	71.21
Pomacentridae	0.81	2	2.89	1.26	4.02	75.23
Sphyraenidae	1.73	0	2.59	0.85	3.61	78.83
Monacanthidae	1.27	0.77	2.38	1.48	3.3	82.13
Hemiramphidae	0.76	0	1.51	0.95	2.1	84.24
Tetraodontiformes	0	0.9	1.48	0.55	2.06	86.3
Labridae	0	0.78	1.45	0.55	2.01	88.31

Apogonidae	0	0.77	1.44	0.55	2.01	90.32
Groups 9/20/2016 & 9/13/2017						
Average dissimilarity = 80.48						
	Group 9/20/2016	Group 9/13/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Gerreidae	25.94	6.15	17.17	1.35	21.34	21.34
Pomacentridae	32.07	2	14.81	1.13	18.4	39.74
Clupeidae	7.02	2.33	9.7	0.81	12.05	51.8
Carangidae	4.16	7.01	7.53	1.15	9.36	61.15
Clupeiformes	10.35	2.03	5.65	0.92	7.03	68.18
Haemulidae	0.34	5.12	5.34	1.52	6.64	74.82
Gobiidae	3.2	3.87	4.46	1.22	5.54	80.36
Serranidae	1.61	2.6	2.57	0.89	3.19	83.55
Sphyraenidae	3.45	0	2.11	1.56	2.62	86.18
Scombridae	1.55	0	1.47	0.56	1.82	88
Syngnathidae	0.64	0	1.28	0.55	1.59	89.59
Tetraodontiformes	0	0.9	0.99	0.48	1.23	90.83
Groups 9/21/2016 & 9/13/2017						
Average dissimilarity = 82.22						
	Group 9/21/2016	Group 9/13/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Carangidae	1.26	7.01	12.6	1.23	15.32	15.32
Gerreidae	0.88	6.15	10.73	0.99	13.05	28.37
Haemulidae	0	5.12	10.04	3.91	12.21	40.58
Gobiidae	1.32	3.87	8.2	1.14	9.97	50.55
Pomacentridae	4.58	2	6.41	0.95	7.79	58.34
Clupeidae	0.82	2.33	5.8	0.7	7.06	65.4
Serranidae	0	2.6	5.06	1.27	6.15	71.55
Clupeiformes	1.64	2.03	4.54	1.16	5.52	77.08
Sphyraenidae	1.23	0	2.36	0.55	2.87	79.95
Atherinidae	0.48	0.77	2.1	0.76	2.55	82.5
Hemiramphidae	0.94	0	1.82	0.96	2.21	84.71
Tetraodontiformes	0	0.9	1.71	0.56	2.08	86.8
Labridae	0	0.78	1.7	0.56	2.07	88.86
Apogonidae	0	0.77	1.7	0.56	2.06	90.92

Groups 9/22/2016 &

9/13/2017

Average dissimilarity =

86.58

	Group 9/22/2016	Group 9/13/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Carangidae	0.46	7.01	13.07	1.01	15.09	15.09
Gerreidae	0.92	6.15	11.25	0.93	12.99	28.08
Haemulidae	0.46	5.12	9.87	2.63	11.4	39.48
Gobiidae	0.9	3.87	8.84	1.1	10.21	49.69
Clupeidae	0	2.33	5.45	0.55	6.3	55.99
Serranidae	0	2.6	5.37	1.25	6.2	62.19
Sphyraenidae	2.32	0	5.12	0.72	5.92	68.1
Pomacentridae	3.2	2	4.82	1.41	5.57	73.68
Clupeiformes	0	2.03	4.46	0.72	5.15	78.83
Tetraodontiformes	1.35	0.9	3.38	1	3.9	82.73
Gobiesocidae	1.84	0	3.18	0.56	3.67	86.4
Labridae	0	0.78	1.82	0.55	2.1	88.5
Apogonidae	0	0.77	1.81	0.55	2.1	90.59

Groups 10/20/2016 &

9/13/2017

Average dissimilarity =

77.42

	Group 10/20/2016	Group 9/13/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Clupeidae	7.99	2.33	12.73	1.07	16.45	16.45
Carangidae	0.76	7.01	11.61	1.06	15	31.45
Gerreidae	0.79	6.15	10.03	0.96	12.96	44.41
Gobiidae	1.53	3.87	7.62	1.03	9.84	54.25
Haemulidae	1.93	5.12	7.03	1.62	9.08	63.33
Serranidae	1.44	2.6	4.31	1.16	5.57	68.9
Clupeiformes	0.75	2.03	4.17	0.89	5.39	74.29
Pomacentridae	1.49	2	2.65	1.09	3.42	77.71
Aulostomidae	1.44	0	2.11	0.79	2.73	80.45
Labridae	0.38	0.78	1.82	0.67	2.35	82.79
Scombridae	0.79	0	1.75	0.55	2.26	85.05
Tetraodontiformes	0	0.9	1.59	0.54	2.05	87.11
Apogonidae	0	0.77	1.57	0.54	2.02	89.13
Atherinidae	0	0.77	1.57	0.54	2.02	91.15

Groups 10/21/2016 &

9/13/2017

Average dissimilarity =

78.71

	Group 10/21/2016	Group 9/13/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Clupeidae	14.94	2.33	16.04	0.76	20.38	20.38
Carangidae	0.79	7.01	11.07	0.98	14.07	34.44
Gerreidae	1.99	6.15	9.91	1.03	12.59	47.04
Haemulidae	0.39	5.12	8.21	2.04	10.43	57.46
Gobiidae	5.46	3.87	7.53	1.01	9.57	67.03
Pomacentridae	3.87	2	4.63	1.77	5.88	72.91
Serranidae	0	2.6	4.48	1.12	5.69	78.6
Clupeiformes	0.39	2.03	3.72	0.72	4.72	83.32
Tetraodontiformes	0	0.9	1.52	0.52	1.93	85.25
Labridae	0	0.78	1.5	0.52	1.91	87.16
Apogonidae	0	0.77	1.5	0.52	1.9	89.06
Atherinidae	0	0.77	1.5	0.52	1.9	90.96

Groups 2/13/2017 &

9/13/2017

Average dissimilarity =

81.01

	Group 2/13/2017	Group 9/13/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Pomacentridae	39.7	2	17.21	1.22	21.25	21.25
Gerreidae	22.28	6.15	13.52	1.57	16.69	37.94
Tripterygidae	22.23	0.45	10.21	1.11	12.6	50.54
Carangidae	1.6	7.01	7.63	0.74	9.42	59.96
Haemulidae	2.13	5.12	5.27	1.03	6.51	66.47
Gobiidae	3.53	3.87	4.51	1.04	5.57	72.04
Serranidae	4.27	2.6	3.69	1.13	4.55	76.59
Clupeidae	0.89	2.33	3.43	0.55	4.24	80.83
Clupeiformes	0	2.03	2.52	0.57	3.11	83.94
Mullidae	3.55	0	2.09	1.55	2.58	86.52
Sphyraenidae	2.49	0	1.83	0.89	2.25	88.77
Tetraodontiformes	0.4	0.9	1.47	0.73	1.82	90.59

Groups 2/14/2017 &

9/13/2017

Average dissimilarity =
87.15

Species	Group 2/14/2017	Group 9/13/2017	Av.Diss	Diss/SD	Contrib%	Cum.%
	Av.Abund	Av.Abund				
Pomacentridae	47.25	2	29.17	3.44	33.47	33.47
Gerreidae	42.59	6.15	22.76	1.14	26.12	59.59
Clupeidae	18.13	2.33	13.77	1.04	15.8	75.4
Carangidae	0	7.01	4.56	0.92	5.23	80.63
Gobiidae	0.45	3.87	2.73	0.91	3.13	83.76
Haemulidae	3.11	5.12	2.28	1.39	2.62	86.38
Sphyraenidae	2.89	0	1.71	1.43	1.96	88.34
Serranidae	0.91	2.6	1.64	1.21	1.88	90.21

Groups 2/15/2017 &
9/13/2017

Average dissimilarity =
81.45

Species	Group 2/15/2017	Group 9/13/2017	Av.Diss	Diss/SD	Contrib%	Cum.%
	Av.Abund	Av.Abund				
Pomacentridae	31.59	2	23.58	1.33	28.95	28.95
Clupeidae	12.57	2.33	14.5	1.08	17.81	46.76
Carangidae	0	7.01	6.6	0.91	8.11	54.86
Gerreidae	1.77	6.15	5.77	0.91	7.08	61.95
Tripterygidae	7.64	0.45	5.19	0.73	6.37	68.32
Gobiidae	6.54	3.87	4.89	1.26	6.01	74.33
Mullidae	6.72	0	4.62	0.79	5.67	80
Haemulidae	0.87	5.12	4.37	1.82	5.37	85.37
Serranidae	0.43	2.6	2.4	1.13	2.95	88.31
Clupeiformes	0	2.03	2.08	0.71	2.55	90.87

Groups 3/15/2017 &
9/13/2017

Average dissimilarity =
85.33

Species	Group 3/15/2017	Group 9/13/2017	Av.Diss	Diss/SD	Contrib%	Cum.%
	Av.Abund	Av.Abund				
Gobiidae	8.69	3.87	15.17	1.49	17.78	17.78
Carangidae	0	7.01	12.47	0.9	14.61	32.39
Gerreidae	0.39	6.15	10.77	0.89	12.62	45.01
Serranidae	6.03	2.6	10.12	1.54	11.86	56.87

Haemulidae	0.38	5.12	9.75	2.04	11.43	68.3
Clupeidae	0	2.33	5.28	0.52	6.18	74.48
Clupeiformes	0	2.03	4.31	0.67	5.05	79.53
Pomacentridae	1.53	2	3.93	1.34	4.61	84.14
Tetraodontiformes	0.38	0.9	2.01	0.65	2.36	86.5
Labridae	0	0.78	1.76	0.52	2.06	88.56
Apogonidae	0	0.77	1.76	0.52	2.06	90.62

Groups 3/16/2017 &
9/13/2017

Average dissimilarity =
64.44

Species	Group 3/16/2017	Group 9/13/2017	Av.Diss	Diss/SD	Contrib%	Cum.%
	Av.Abund	Av.Abund				
Gerreidae	6	6.15	9.56	1.09	14.83	14.83
Carangidae	3.96	7.01	8.2	1.03	12.72	27.56
Gobiidae	8.19	3.87	8.13	1.49	12.62	40.18
Serranidae	8.57	2.6	7.82	1.3	12.13	52.31
Clupeidae	6.33	2.33	7.65	0.8	11.87	64.18
Tripterygidae	3.44	0.45	4.29	0.95	6.66	70.84
Haemulidae	7.64	5.12	3.58	0.94	5.56	76.39
Clupeiformes	0.4	2.03	2.54	0.77	3.94	80.34
Pomacentridae	0.73	2	2.2	1.22	3.41	83.75
Apogonidae	0.37	0.77	1.17	0.67	1.81	85.56
Tetraodontiformes	0	0.9	1.07	0.55	1.66	87.22
Ephippidae	0	0.97	1.04	0.55	1.62	88.84
Labridae	0	0.78	1.01	0.54	1.57	90.4

Groups 3/17/2017 &
9/13/2017

Average dissimilarity =
80.34

Species	Group 3/17/2017	Group 9/13/2017	Av.Diss	Diss/SD	Contrib%	Cum.%
	Av.Abund	Av.Abund				
Carangidae	0	7.01	11.48	0.92	14.29	14.29
Gerreidae	2.22	6.15	10.38	1.12	12.92	27.21
Clupeidae	5.61	2.33	9.71	0.83	12.08	39.29
Gobiidae	4.57	3.87	9.07	1.05	11.29	50.58
Haemulidae	0.35	5.12	8.93	2.26	11.12	61.7
Pomacentridae	5.32	2	7.51	1.16	9.35	71.05
Serranidae	1.05	2.6	4.6	1.15	5.72	76.77

Clupeiformes	1.4	2.03	4.39	0.8	5.46	82.23
Sphyraenidae	1.11	0	2.51	0.87	3.13	85.36
Tetraodontiformes	0	0.9	1.59	0.54	1.98	87.34
Labridae	0	0.78	1.58	0.53	1.96	89.31
Apogonidae	0	0.77	1.57	0.53	1.96	91.27

Groups 8/11/2017 &
9/13/2017

Average dissimilarity =
76.50

	Group 8/11/2017	Group 9/13/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Lutjanidae	20.53	0	15.07	0.86	19.69	19.69
Carangidae	12.53	7.01	13.4	1.25	17.52	37.22
Gerreidae	0.41	6.15	7.84	0.75	10.24	47.46
Gobiidae	3.7	3.87	6.27	1.11	8.2	55.66
Haemulidae	2.03	5.12	5.76	1.35	7.54	63.19
Clupeiformes	2.11	2.03	4.19	1.06	5.47	68.66
Pomacentridae	5.76	2	4.06	1.32	5.31	73.97
Clupeidae	0	2.33	3.68	0.48	4.82	78.79
Serranidae	0.39	2.6	3.32	1.07	4.33	83.12
Sphyraenidae	2.84	0	2.14	0.93	2.79	85.92
Scombridae	2.44	0	1.85	0.85	2.42	88.34
Ephippidae	1.21	0.97	1.66	0.76	2.17	90.5

Groups 8/12/2017 &
9/13/2017

Average dissimilarity =
69.51

	Group 8/12/2017	Group 9/13/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Pomacentridae	13.71	2	9.56	1.26	13.75	13.75
Carangidae	6.87	7.01	8.1	1.33	11.65	25.4
Clupeiformes	7.58	2.03	7.95	0.88	11.44	36.84
Gerreidae	5.27	6.15	7.48	0.95	10.76	47.6
Gobiidae	9.64	3.87	6.41	2.12	9.22	56.82
Lutjanidae	8.86	0	6.07	0.96	8.73	65.54
Serranidae	3.6	2.6	4.66	1.2	6.71	72.25
Haemulidae	7.33	5.12	3.81	0.85	5.48	77.73
Sphyraenidae	4.02	0	3.03	1.13	4.35	82.08
Clupeidae	0	2.33	2.71	0.51	3.9	85.97

Scombridae	2.42	0	1.68	0.94	2.41	88.39
Ephippidae	0.39	0.97	1.23	0.76	1.77	90.15

Groups 8/13/2017 &
9/13/2017

Average dissimilarity =
63.65

Species	Group 8/13/2017	Group 9/13/2017	Av.Diss	Diss/SD	Contrib%	Cum.%
	Av.Abund	Av.Abund				
Carangidae	9.27	7.01	8.4	1.64	13.19	13.19
Gerreidae	2.81	6.15	6.6	1	10.38	23.57
Gobiidae	8.53	3.87	6.3	1.61	9.89	33.46
Pomacentridae	8.51	2	6.3	2.12	9.89	43.35
Lutjanidae	6.82	0	6.09	0.77	9.57	52.93
Haemulidae	6.03	5.12	4.11	1.29	6.46	59.39
Serranidae	5.26	2.6	3.59	1.54	5.64	65.03
Clupeidae	0	2.33	2.86	0.53	4.49	69.52
Blenniidae	3.58	0	2.86	0.56	4.49	74
Clupeiformes	0.42	2.03	2.41	0.79	3.78	77.79
Scombridae	2.04	0	2.23	0.94	3.5	81.29
Sphyraenidae	1.66	0	2.2	1.12	3.45	84.74
Syngnathidae	1.26	0	1.84	0.88	2.89	87.63
Ephippidae	0.83	0.97	1.54	1.04	2.41	90.05

Groups 9/11/2017 &
9/13/2017

Average dissimilarity =
78.36

Species	Group 9/11/2017	Group 9/13/2017	Av.Diss	Diss/SD	Contrib%	Cum.%
	Av.Abund	Av.Abund				
Gobiidae	9.44	3.87	11.21	1.22	14.3	14.3
Carangidae	0.38	7.01	10.3	0.95	13.15	27.45
Serranidae	5.98	2.6	9.23	1.16	11.78	39.23
Gerreidae	0.76	6.15	9.04	0.98	11.54	50.76
Clupeiformes	5.54	2.03	8.44	0.92	10.78	61.54
Haemulidae	1.13	5.12	6.98	1.61	8.9	70.44
Clupeidae	1.52	2.33	4.98	0.67	6.36	76.8
Pomacentridae	1.52	2	4.03	1.55	5.14	81.94
Carapidae	0.76	0	1.81	0.55	2.32	84.26
Apogonidae	0.51	0.77	1.66	0.67	2.11	86.37
Ephippidae	0.38	0.97	1.62	0.71	2.06	88.43

Atherinidae	0.38	0.77	1.61	0.66	2.06	90.49
Groups 9/12/2017 & 9/13/2017						
Average dissimilarity = 85.69						
Species	Group 9/12/2017	Group 9/13/2017	Av.Abund	Av.Diss	Diss/SD	Contrib%
Carangidae	0.91	7.01	14	1.14	16.34	16.34
Gerreidae	0	6.15	11.73	0.87	13.69	30.03
Haemulidae	0	5.12	11.36	3.65	13.26	43.29
Gobiidae	2.41	3.87	9.63	1.08	11.23	54.52
Clupeidae	0	2.33	5.85	0.56	6.83	61.35
Serranidae	1.29	2.6	5.81	1.27	6.78	68.13
Clupeiformes	0	2.03	4.77	0.72	5.57	73.69
Pomacentridae	1.39	2	4.05	1.35	4.72	78.41
Tetraodontiformes	0.43	0.9	2.4	0.76	2.8	81.21
Ephippidae	0.43	0.97	2.28	0.78	2.66	83.87
Labridae	0	0.78	1.95	0.56	2.28	86.15
Apogonidae	0	0.77	1.95	0.56	2.27	88.42
Atherinidae	0	0.77	1.95	0.56	2.27	90.7
Groups 8/22/2016 & 10/9/2017						
Average dissimilarity = 84.90						
Species	Group 8/22/2016	Group 10/9/2017	Av.Abund	Av.Diss	Diss/SD	Contrib%
Pomacentridae	5.68	20.47	17.92	2.85	21.1	21.1
Gobiidae	2.23	13.52	12.81	1.47	15.09	36.19
Serranidae	1.27	6.47	7.55	1.28	8.9	45.09
Lutjanidae	0	10.38	6.88	0.96	8.11	53.2
Gerreidae	0.81	7.49	5.91	1.14	6.96	60.16
Clupeidae	4.04	0	5.55	0.43	6.53	66.69
Carangidae	0.86	7.25	5.41	1.1	6.37	73.06
Haemulidae	0.86	3.8	3.55	1.24	4.19	77.25
Tripterygidae	2.23	0	3.23	0.74	3.8	81.05
Syngnathidae	1.82	0	2.43	0.56	2.87	83.91
Clupeiformes	0.86	1.93	2.29	0.79	2.69	86.61
Sphyraenidae	0	3.9	2.22	0.7	2.62	89.23
Carapidae	0	0.47	1.91	0.53	2.25	91.48

Groups 8/23/2016 &

10/9/2017

Average dissimilarity =

91.60

Species	Group 8/23/2016	Group 10/9/2017	Av.Diss	Diss/SD	Contrib%	Cum.%
	Av.Abund	Av.Abund				
Pomacentridae	3.47	20.47	20.73	2.73	22.63	22.63
Gobiidae	3.28	13.52	13.44	1.04	14.67	37.29
Gerreidae	0	7.49	9.93	0.82	10.84	48.13
Lutjanidae	0	10.38	7.28	0.94	7.94	56.08
Serranidae	0	6.47	7.12	0.93	7.77	63.85
Clupeidae	6.92	0	7.12	0.54	7.77	71.61
Carapidae	0	0.47	5.46	0.43	5.96	77.58
Clupeiformes	2.16	1.93	4.89	0.45	5.34	82.92
Carangidae	0	7.25	4.5	0.8	4.91	87.83
Sphyraenidae	0.36	3.9	2.78	0.82	3.04	90.86

Groups 8/24/2016 &

10/9/2017

Average dissimilarity =

85.28

Species	Group 8/24/2016	Group 10/9/2017	Av.Diss	Diss/SD	Contrib%	Cum.%
	Av.Abund	Av.Abund				
Pomacentridae	0.81	20.47	16.59	1.88	19.45	19.45
Gobiidae	6.84	13.52	13.64	1.04	16	35.45
Lutjanidae	0.43	10.38	7.11	1.07	8.33	43.79
Serranidae	0.84	6.47	6.92	1.2	8.11	51.9
Clupeidae	5.73	0	6.89	0.66	8.08	59.98
Carangidae	1.45	7.25	6.12	0.77	7.18	67.15
Gerreidae	0	7.49	6.1	1.1	7.16	74.31
Haemulidae	3.16	3.8	5.66	0.83	6.63	80.94
Sphyraenidae	1.73	3.9	3.85	0.98	4.52	85.46
Monacanthidae	1.27	0	1.97	0.79	2.31	87.77
Carapidae	0	0.47	1.92	0.51	2.25	90.02

Groups 9/20/2016 &

10/9/2017

Average dissimilarity =

79.38

	Group 9/20/2016	Group 10/9/2017					
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%	
Pomacentridae	32.07	20.47	17.05	1.69	21.47	21.47	
Gerreidae	25.94	7.49	14.13	1.09	17.79	39.27	
Gobiidae	3.2	13.52	9.42	1.25	11.87	51.13	
Clupeidae	7.02	0	8.02	0.57	10.1	61.23	
Lutjanidae	2.51	10.38	5.41	0.94	6.82	68.05	
Carangidae	4.16	7.25	4.84	1.24	6.09	74.15	
Serranidae	1.61	6.47	4.79	0.96	6.03	80.17	
Clupeiformes	10.35	1.93	3.93	0.72	4.95	85.12	
Sphyraenidae	3.45	3.9	2.85	1.15	3.59	88.71	
Haemulidae	0.34	3.8	2.04	1.05	2.57	91.28	

Groups 9/21/2016 &
10/9/2017

Average dissimilarity =
85.51

	Group 9/21/2016	Group 10/9/2017					
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%	
Pomacentridae	4.58	20.47	20.42	1.92	23.87	23.87	
Gobiidae	1.32	13.52	14.37	1.44	16.8	40.68	
Lutjanidae	0	10.38	7.27	0.96	8.5	49.17	
Serranidae	0	6.47	7	0.97	8.19	57.36	
Carangidae	1.26	7.25	6.29	1.31	7.35	64.72	
Gerreidae	0.88	7.49	5.66	0.94	6.62	71.33	
Sphyraenidae	1.23	3.9	4.18	0.67	4.89	76.23	
Clupeiformes	1.64	1.93	3.83	0.71	4.47	80.7	
Carapidae	0	0.47	2.57	0.55	3.01	83.71	
Haemulidae	0	3.8	2.57	0.96	3	86.71	
Scombridae	0	2.82	2.01	0.94	2.36	89.07	
Hemiramphidae	0.94	0.45	1.86	0.59	2.18	91.25	

Groups 9/22/2016 &
10/9/2017

Average dissimilarity =
90.65

	Group 9/22/2016	Group 10/9/2017					
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%	
Pomacentridae	3.2	20.47	20.76	2.66	22.9	22.9	
Gobiidae	0.9	13.52	14.95	1.43	16.5	39.39	
Gerreidae	0.92	7.49	7.72	1.21	8.52	47.91	

Lutjanidae	0	10.38	7.41	0.96	8.18	56.09
Sphyraenidae	2.32	3.9	7.39	0.53	8.15	64.23
Serranidae	0	6.47	7.23	0.96	7.98	72.21
Carangidae	0.46	7.25	5.01	0.93	5.53	77.74
Tetraodontiformes	1.35	0	3.6	0.51	3.97	81.71
Carapidae	0	0.47	3.22	0.53	3.55	85.26
Haemulidae	0.46	3.8	3.05	1.14	3.37	88.62
Gobiesocidae	1.84	0	3	0.41	3.31	91.94

Groups 10/20/2016 &
10/9/2017

Average dissimilarity =
89.20

	Group 10/20/2016	Group 10/9/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Pomacentridae	1.49	20.47	17.92	2.17	20.09	20.09
Gobiidae	1.53	13.52	13.23	1.37	14.83	34.92
Clupeidae	7.99	0	10.31	0.66	11.55	46.48
Serranidae	1.44	6.47	7.14	1.16	8.01	54.49
Lutjanidae	0	10.38	6.99	0.95	7.84	62.32
Gerreidae	0.79	7.49	6.36	1.12	7.12	69.45
Carangidae	0.76	7.25	5.32	1.03	5.96	75.41
Haemulidae	1.93	3.8	4.21	0.95	4.72	80.13
Scombridae	0.79	2.82	3.43	0.59	3.85	83.98
Sphyraenidae	0.39	3.9	3	0.78	3.36	87.34
Clupeiformes	0.75	1.93	2.8	0.49	3.14	90.49

Groups 10/21/2016 &
10/9/2017

Average dissimilarity =
83.17

	Group 10/21/2016	Group 10/9/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Pomacentridae	3.87	20.47	17.03	1.95	20.48	20.48
Gobiidae	5.46	13.52	13.96	1.11	16.79	37.26
Clupeidae	14.94	0	10.59	0.51	12.73	49.99
Gerreidae	1.99	7.49	8.05	0.73	9.68	59.67
Lutjanidae	0.77	10.38	6.9	1.01	8.3	67.97
Serranidae	0	6.47	6.34	0.92	7.63	75.6
Carangidae	0.79	7.25	4.94	0.93	5.94	81.53
Haemulidae	0.39	3.8	2.75	1.13	3.31	84.84

Carapidae	0	0.47	2.46	0.46	2.96	87.8
Sphyraenidae	0	3.9	2.17	0.69	2.61	90.41

Groups 2/13/2017 &
10/9/2017

Average dissimilarity =
78.96

Species	Group 2/13/2017	Group 10/9/2017	Av.Diss	Diss/SD	Contrib%	Cum.%
	Av.Abund	Av.Abund				
Pomacentridae	39.7	20.47	19.97	2.1	25.3	25.3
Gobiidae	3.53	13.52	10.85	1.02	13.75	39.04
Gerreidae	22.28	7.49	9.97	1.31	12.62	51.66
Tripterygidae	22.23	0	9.02	1.04	11.43	63.09
Lutjanidae	0	10.38	5.23	0.84	6.62	69.71
Serranidae	4.27	6.47	4.84	0.86	6.13	75.84
Carangidae	1.6	7.25	3.42	0.77	4.33	80.17
Sphyraenidae	2.49	3.9	2.7	0.99	3.41	83.58
Haemulidae	2.13	3.8	2.02	0.99	2.56	86.15
Mullidae	3.55	0	1.9	1.1	2.41	88.55
Scombridae	0.53	2.82	1.47	0.87	1.86	90.41

Groups 2/14/2017 &
10/9/2017

Average dissimilarity =
75.21

Species	Group 2/14/2017	Group 10/9/2017	Av.Diss	Diss/SD	Contrib%	Cum.%
	Av.Abund	Av.Abund				
Gerreidae	42.59	7.49	19.2	0.96	25.53	25.53
Pomacentridae	47.25	20.47	17.11	1.07	22.76	48.29
Clupeidae	18.13	0	11.86	0.85	15.78	64.06
Gobiidae	0.45	13.52	6.49	1.3	8.63	72.7
Lutjanidae	0	10.38	4.23	0.95	5.62	78.32
Serranidae	0.91	6.47	3.4	1.04	4.51	82.84
Carangidae	0	7.25	2.75	0.76	3.66	86.5
Sphyraenidae	2.89	3.9	2.14	1.3	2.85	89.35
Haemulidae	3.11	3.8	1.95	1.45	2.59	91.93

Groups 2/15/2017 &
10/9/2017

Average dissimilarity =
77.18

	Group 2/15/2017	Group 10/9/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Pomacentridae	31.59	20.47	19.62	1.28	25.42	25.42
Clupeidae	12.57	0	13.04	0.77	16.9	42.32
Gobiidae	6.54	13.52	8.29	1.44	10.74	53.06
Lutjanidae	0	10.38	5.28	0.95	6.84	59.9
Serranidae	0.43	6.47	4.51	0.99	5.84	65.74
Tripterygidae	7.64	0	4.34	0.64	5.62	71.36
Mullidae	6.72	0	3.93	0.73	5.09	76.46
Gerreidae	1.77	7.49	3.92	0.94	5.08	81.54
Carangidae	0	7.25	3.37	0.77	4.37	85.91
Haemulidae	0.87	3.8	2.11	1.1	2.73	88.64
Sphyraenidae	0.45	3.9	1.83	0.73	2.37	91.01

Groups 3/15/2017 &
10/9/2017

Average dissimilarity =
80.16

	Group 3/15/2017	Group 10/9/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Pomacentridae	1.53	20.47	18.52	2	23.11	23.11
Gobiidae	8.69	13.52	14.45	0.86	18.03	41.14
Serranidae	6.03	6.47	9.6	0.85	11.97	53.11
Gerreidae	0.39	7.49	8.25	0.67	10.29	63.4
Lutjanidae	0	10.38	7.17	0.95	8.95	72.35
Carapidae	0	0.47	5.12	0.39	6.39	78.74
Carangidae	0	7.25	4.44	0.8	5.54	84.29
Haemulidae	0.38	3.8	2.75	1.12	3.44	87.72
Sphyraenidae	0.37	3.9	2.54	0.8	3.17	90.89

Groups 3/16/2017 &
10/9/2017

Average dissimilarity =
76.57

	Group 3/16/2017	Group 10/9/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Pomacentridae	0.73	20.47	13.54	1.79	17.68	17.68
Gobiidae	8.19	13.52	9.79	1.17	12.79	30.47
Serranidae	8.57	6.47	7.85	0.97	10.25	40.72
Gerreidae	6	7.49	7.39	0.85	9.65	50.36
Haemulidae	7.64	3.8	6.99	0.8	9.13	59.49

Lutjanidae	0.73	10.38	6.23	1.12	8.14	67.63
Carangidae	3.96	7.25	5.73	0.94	7.48	75.11
Clupeidae	6.33	0	4.82	0.5	6.29	81.4
Tripterygidae	3.44	0	4.22	0.71	5.51	86.91
Sphyraenidae	0	3.9	1.94	0.69	2.53	89.44
Scombridae	0	2.82	1.62	0.94	2.11	91.55

Groups 3/17/2017 &

10/9/2017

Average dissimilarity =

79.66

Species	Group 3/17/2017	Group 10/9/2017	Av.Diss	Diss/SD	Contrib%	Cum.%
	Av.Abund	Av.Abund				
Pomacentridae	5.32	20.47	18.97	1.67	23.82	23.82
Gobiidae	4.57	13.52	13.27	1.06	16.65	40.47
Gerreidae	2.22	7.49	7.33	0.79	9.2	49.67
Lutjanidae	0	10.38	6.95	0.95	8.73	58.4
Serranidae	1.05	6.47	6.78	1.03	8.52	66.91
Clupeidae	5.61	0	5.4	0.48	6.78	73.7
Sphyraenidae	1.11	3.9	4.68	0.74	5.87	79.57
Carangidae	0	7.25	4.32	0.8	5.43	84.99
Carapidae	0	0.47	2.6	0.48	3.27	88.26
Haemulidae	0.35	3.8	2.6	1.09	3.26	91.52

Groups 8/11/2017 &

10/9/2017

Average dissimilarity =

79.07

Species	Group 8/11/2017	Group 10/9/2017	Av.Diss	Diss/SD	Contrib%	Cum.%
	Av.Abund	Av.Abund				
Pomacentridae	5.76	20.47	14.81	2.02	18.72	18.72
Lutjanidae	20.53	10.38	14.24	0.96	18	36.73
Gobiidae	3.7	13.52	10.97	1.32	13.88	50.61
Carangidae	12.53	7.25	8.82	1.02	11.15	61.76
Serranidae	0.39	6.47	6.05	1.02	7.65	69.41
Gerreidae	0.41	7.49	5.4	0.92	6.82	76.23
Clupeiformes	2.11	1.93	5.13	0.54	6.48	82.72
Haemulidae	2.03	3.8	3.29	1.03	4.16	86.87
Sphyraenidae	2.84	3.9	3	1.11	3.8	90.67

Groups 8/12/2017 &

10/9/2017

Average dissimilarity =
66.88

Species	Group 8/12/2017	Group 10/9/2017	Av.Diss	Diss/SD	Contrib%	Cum.%
	Av.Abund	Av.Abund				
Pomacentridae	13.71	20.47	11.76	1.24	17.58	17.58
Gobiidae	9.64	13.52	8.28	1.24	12.39	29.97
Clupeiformes	7.58	1.93	7.59	0.66	11.34	41.31
Lutjanidae	8.86	10.38	6.91	1.05	10.34	51.65
Haemulidae	7.33	3.8	6.42	0.65	9.6	61.25
Gerreidae	5.27	7.49	5.67	1.11	8.48	69.73
Carangidae	6.87	7.25	5.59	1.35	8.37	78.1
Serranidae	3.6	6.47	5.28	0.94	7.9	86
Sphyraenidae	4.02	3.9	3.28	1.14	4.9	90.9

Groups 8/13/2017 &
10/9/2017

Average dissimilarity =
66.37

Species	Group 8/13/2017	Group 10/9/2017	Av.Diss	Diss/SD	Contrib%	Cum.%
	Av.Abund	Av.Abund				
Pomacentridae	8.51	20.47	12.46	2.7	18.77	18.77
Gobiidae	8.53	13.52	9.07	1.27	13.67	32.43
Carangidae	9.27	7.25	7.79	1.57	11.74	44.17
Lutjanidae	6.82	10.38	7.76	1.05	11.69	55.86
Serranidae	5.26	6.47	5.64	1.5	8.5	64.37
Haemulidae	6.03	3.8	4.56	1.03	6.86	71.23
Gerreidae	2.81	7.49	4.27	1.04	6.43	77.66
Sphyraenidae	1.66	3.9	2.97	1.03	4.47	82.13
Blenniidae	3.58	0	2.41	0.51	3.63	85.76
Scombridae	2.04	2.82	2.4	0.91	3.61	89.37
Syngnathidae	1.26	0	1.63	0.66	2.45	91.82

Groups 9/11/2017 &
10/9/2017

Average dissimilarity =
76.33

Species	Group 9/11/2017	Group 10/9/2017	Av.Diss	Diss/SD	Contrib%	Cum.%
	Av.Abund	Av.Abund				
Pomacentridae	1.52	20.47	15.74	1.7	20.62	20.62
Gobiidae	9.44	13.52	12.87	1.03	16.86	37.47

Serranidae	5.98	6.47	9.1	0.73	11.92	49.39
Lutjanidae	0	10.38	6.61	0.95	8.66	58.06
Clupeiformes	5.54	1.93	6.54	0.58	8.57	66.63
Gerreidae	0.76	7.49	5.57	1.07	7.29	73.92
Carangidae	0.38	7.25	4.35	0.87	5.7	79.62
Haemulidae	1.13	3.8	2.98	0.95	3.9	83.52
Sphyraenidae	0.75	3.9	2.68	0.86	3.52	87.04
Carapidae	0.76	0.47	2.21	0.67	2.9	89.94
Scombridae	0	2.82	1.83	0.93	2.4	92.34

Groups 9/12/2017 &
10/9/2017

Average dissimilarity =
91.27

Species	Group 9/12/2017	Group 10/9/2017	Av.Diss	Diss/SD	Contrib%	Cum.%
	Av.Abund	Av.Abund				
Pomacentridae	1.39	20.47	20.61	2.12	22.59	22.59
Gobiidae	2.41	13.52	16.43	1.24	18	40.58
Serranidae	1.29	6.47	8.96	0.95	9.82	50.4
Gerreidae	0	7.49	8.72	1.11	9.55	59.96
Lutjanidae	0	10.38	7.59	0.96	8.31	68.27
Carangidae	0.91	7.25	6.87	0.99	7.53	75.8
Carapidae	0	0.47	4.07	0.51	4.46	80.26
Sphyraenidae	0.43	3.9	3.91	0.63	4.29	84.55
Scombridae	0.43	2.82	2.79	0.95	3.05	87.6
Haemulidae	0	3.8	2.68	0.96	2.93	90.53

Groups 9/13/2017 &
10/9/2017

Average dissimilarity =
80.87

Species	Group 9/13/2017	Group 10/9/2017	Av.Diss	Diss/SD	Contrib%	Cum.%
	Av.Abund	Av.Abund				
Pomacentridae	2	20.47	14.9	2.5	18.43	18.43
Gobiidae	3.87	13.52	11.27	1.37	13.93	32.36
Carangidae	7.01	7.25	9	0.92	11.12	43.49
Gerreidae	6.15	7.49	8.53	1.11	10.55	54.04
Serranidae	2.6	6.47	6.39	1.44	7.91	61.95
Lutjanidae	0	10.38	6.28	0.96	7.76	69.71
Haemulidae	5.12	3.8	5.35	1.04	6.62	76.33
Clupeidae	2.33	0	3.09	0.44	3.82	80.15

Clupeiformes	2.03	1.93	2.8	0.63	3.47	83.62
Sphyraenidae	0	3.9	2.06	0.7	2.54	86.16
Scombridae	0	2.82	1.74	0.95	2.15	88.31
Carapidae	0	0.47	1.19	0.55	1.47	89.77
Tetraodontiformes	0.9	0	1.06	0.45	1.31	91.08

Groups 8/22/2016 &
10/10/2017

Average dissimilarity =
72.38

Species	Group 8/22/2016	Group 10/10/2017	Av.Diss	Diss/SD	Contrib%	Cum.%
	Av.Abund	Av.Abund				
Pomacentridae	5.68	1.91	10.7	1.16	14.79	14.79
Clupeiformes	0.86	6.66	10.64	1.21	14.7	29.49
Clupeidae	4.04	0	8.4	0.52	11.61	41.09
Gerreidae	0.81	3.82	7.59	1.16	10.49	51.59
Gobiidae	2.23	3.79	5.76	1.28	7.96	59.55
Tripterygidae	2.23	0	4.88	1	6.74	66.29
Serranidae	1.27	0	3.81	0.8	5.27	71.56
Syngnathidae	1.82	0	3.68	0.69	5.08	76.64
Gobiesocidae	0	0.92	3.05	0.89	4.22	80.86
Tetraodontiformes	0.37	0.92	2.86	0.88	3.96	84.81
Haemulidae	0.86	0.96	2.59	0.86	3.57	88.39
Carangidae	0.86	1.88	2.14	1.11	2.95	91.34

Groups 8/23/2016 &
10/10/2017

Average dissimilarity =
87.77

Species	Group 8/23/2016	Group 10/10/2017	Av.Diss	Diss/SD	Contrib%	Cum.%
	Av.Abund	Av.Abund				
Clupeiformes	2.16	6.66	18.57	1.66	21.16	21.16
Gobiidae	3.28	3.79	14.18	3.23	16.16	37.32
Clupeidae	6.92	0	10.38	0.61	11.83	49.15
Pomacentridae	3.47	1.91	9.08	2.2	10.34	59.5
Gerreidae	0	3.82	8.38	0.86	9.55	69.04
Carangidae	0	1.88	7.79	1.25	8.87	77.91
Gobiesocidae	0	0.92	5.69	0.73	6.49	84.4
Tetraodontiformes	0	0.92	5.69	0.73	6.49	90.89

Groups 8/24/2016 &
10/10/2017

Average dissimilarity =
82.75

Species	Group 8/24/2016	Group 10/10/2017	Av.Diss	Diss/SD	Contrib%	Cum.%
	Av.Abund	Av.Abund				
Clupeiformes	0	6.66	13.07	1.61	15.8	15.8
Gobiidae	6.84	3.79	12.32	1.08	14.88	30.68
Clupeidae	5.73	0	10.31	0.81	12.46	43.14
Gerreidae	0	3.82	6.7	0.91	8.09	51.24
Haemulidae	3.16	0.96	6.6	0.91	7.98	59.21
Carangidae	1.45	1.88	6.23	1.43	7.52	66.74
Pomacentridae	0.81	1.91	3.86	1.35	4.67	71.41
Sphyraenidae	1.73	0	3.61	0.83	4.36	75.77
Gobiesocidae	0	0.92	3.03	0.85	3.66	79.43
Tetraodontiformes	0	0.92	3.03	0.85	3.66	83.09
Monacanthidae	1.27	0	2.95	1.26	3.56	86.65
Hemiramphidae	0.76	0	2.4	0.83	2.9	89.55
Mugilidae	0.84	0	2.09	0.8	2.52	92.07

Groups 9/20/2016 &
10/10/2017

Average dissimilarity =
81.56

Species	Group 9/20/2016	Group 10/10/2017	Av.Diss	Diss/SD	Contrib%	Cum.%
	Av.Abund	Av.Abund				
Gerreidae	25.94	3.82	18.49	1.17	22.67	22.67
Pomacentridae	32.07	1.91	17.35	1.25	21.28	43.95
Clupeidae	7.02	0	11.82	0.67	14.5	58.45
Clupeiformes	10.35	6.66	11.09	1.61	13.6	72.05
Gobiidae	3.2	3.79	3.45	1.31	4.22	76.27
Carangidae	4.16	1.88	2.97	1.6	3.64	79.91
Sphyraenidae	3.45	0	2.64	1.4	3.24	83.15
Syngnathidae	0.64	0	2.03	0.5	2.49	85.64
Gobiesocidae	0	0.92	1.8	0.64	2.2	87.84
Tetraodontiformes	0	0.92	1.8	0.64	2.2	90.04

Groups 9/21/2016 &
10/10/2017

Average dissimilarity =
68.98

Group 9/21/2016	Group 10/10/2017
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Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Pomacentridae	4.58	1.91	12.14	0.89	17.6	17.6
Clupeiformes	1.64	6.66	11.7	1.28	16.97	34.56
Gerreidae	0.88	3.82	8.68	1.37	12.58	47.14
Gobiidae	1.32	3.79	7.43	2.23	10.77	57.92
Gobiesocidae	0	0.92	3.89	0.92	5.64	63.55
Tetraodontiformes	0	0.92	3.89	0.92	5.64	69.19
Sphyraenidae	1.23	0	3.61	0.5	5.24	74.43
Hemiramphidae	0.94	0	2.8	0.85	4.06	78.5
Syngnathidae	0.79	0	2.58	0.83	3.75	82.24
Clupeidae	0.82	0	2.41	0.5	3.49	85.74
Blenniidae	0	0.96	1.95	0.93	2.82	88.56
Haemulidae	0	0.96	1.95	0.93	2.82	91.38

Groups 9/22/2016 &
10/10/2017

Average dissimilarity =
76.85

Species	Group 9/22/2016	Group 10/10/2017	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Clupeiformes	0	6.66	16.97	1.92	22.08	22.08		
Pomacentridae	3.2	1.91	9.39	1.06	12.22	12.22	34.31	
Gerreidae	0.92	3.82	8.94	1.08	11.64	11.64	45.94	
Sphyraenidae	2.32	0	8.79	0.62	11.44	11.44	57.39	
Gobiesocidae	1.84	0.92	7.64	1.12	9.94	9.94	67.32	
Gobiidae	0.9	3.79	7.24	1.54	9.42	9.42	76.74	
Carangidae	0.46	1.88	5.47	1.27	7.12	7.12	83.86	
Tetraodontiformes	1.35	0.92	4.68	1.13	6.09	6.09	89.95	
Haemulidae	0.46	0.96	2.4	0.93	3.12	3.12	93.07	

Groups 10/20/2016 &
10/10/2017

Average dissimilarity =
78.71

Species	Group 10/20/2016	Group 10/10/2017	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Clupeidae	7.99	0	15.54	0.83	19.74	19.74		
Clupeiformes	0.75	6.66	13.08	1.63	16.61	16.61	36.35	
Gerreidae	0.79	3.82	8.42	1.13	10.7	10.7	47.05	
Gobiidae	1.53	3.79	6.96	1.7	8.85	8.85	55.9	
Pomacentridae	1.49	1.91	5.12	0.98	6.51	6.51	62.41	

Haemulidae	1.93	0.96	4.54	0.95	5.77	68.19
Tetraodontiformes	0	0.92	3.59	0.82	4.56	72.75
Gobiesocidae	0.38	0.92	3.44	0.79	4.36	77.11
Carangidae	0.76	1.88	3.22	1.03	4.1	81.21
Scombridae	0.79	0	3.01	0.49	3.82	85.03
Aulostomidae	1.44	0	2.83	0.73	3.59	88.62
Serranidae	1.44	0	2.83	0.73	3.59	92.21

Groups 10/21/2016 &
10/10/2017

Average dissimilarity =
75.94

Species	Group 10/21/2016	Group 10/10/2017	Av.Diss	Diss/SD	Contrib%	Cum.%
	Av.Abund	Av.Abund				
Clupeidae	14.94	0	14.5	0.53	19.09	19.09
Clupeiformes	0.39	6.66	12.88	1.31	16.96	36.06
Gobiidae	5.46	3.79	10.39	1.18	13.69	49.74
Gerreidae	1.99	3.82	10.32	0.76	13.59	63.33
Pomacentridae	3.87	1.91	7.05	1.04	9.28	72.61
Carangidae	0.79	1.88	4.89	1.37	6.43	79.05
Gobiesocidae	0	0.92	3.53	0.76	4.65	83.69
Tetraodontiformes	0	0.92	3.53	0.76	4.65	88.34
Ophychthidae	1.16	0	2.06	0.8	2.71	91.05

Groups 2/13/2017 &
10/10/2017

Average dissimilarity =
81.29

Species	Group 2/13/2017	Group 10/10/2017	Av.Diss	Diss/SD	Contrib%	Cum.%
	Av.Abund	Av.Abund				
Pomacentridae	39.7	1.91	20.57	1.43	25.3	25.3
Gerreidae	22.28	3.82	13.74	1.83	16.9	42.2
Tripterygidae	22.23	0	11.25	1.09	13.84	56.04
Clupeiformes	0	6.66	9.19	1.02	11.3	67.35
Gobiidae	3.53	3.79	5.2	0.68	6.4	73.74
Carangidae	1.6	1.88	3.55	1.29	4.36	78.11
Mullidae	3.55	0	2.52	1.38	3.1	81.21
Sphyraenidae	2.49	0	2.26	0.88	2.78	83.99
Gobiesocidae	0	0.92	2.13	0.62	2.62	86.61
Serranidae	4.27	0	1.82	0.86	2.23	88.84
Haemulidae	2.13	0.96	1.78	1.14	2.19	91.03

Groups 2/14/2017 &

10/10/2017

Average dissimilarity =

92.64

	Group 2/14/2017	Group 10/10/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Pomacentridae	47.25	1.91	32.97	2.93	35.59	35.59
Gerreidae	42.59	3.82	24.8	1.04	26.76	62.35
Clupeidae	18.13	0	16.02	0.91	17.3	79.65
Clupeiformes	0.91	6.66	4.52	1.22	4.88	84.53
Gobiidae	0.45	3.79	2.54	1.49	2.74	87.27
Sphyraenidae	2.89	0	1.9	1.38	2.05	89.32
Haemulidae	3.11	0.96	1.72	1.32	1.85	91.17

Groups 2/15/2017 &

10/10/2017

Average dissimilarity =

84.77

	Group 2/15/2017	Group 10/10/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Pomacentridae	31.59	1.91	27.89	1.3	32.9	32.9
Clupeidae	12.57	0	19.16	0.93	22.6	55.5
Clupeiformes	0	6.66	7.17	1.33	8.46	63.96
Tripterygidae	7.64	0	5.69	0.67	6.72	70.67
Gobiidae	6.54	3.79	5.6	1.02	6.61	77.28
Mullidae	6.72	0	5.2	0.77	6.13	83.41
Gerreidae	1.77	3.82	4.08	1.08	4.82	88.23
Carangidae	0	1.88	2.29	2.74	2.7	90.93

Groups 3/15/2017 &

10/10/2017

Average dissimilarity =

89.05

	Group 3/15/2017	Group 10/10/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Gobiidae	8.69	3.79	21.11	2.35	23.7	23.7
Clupeiformes	0	6.66	17.2	1.64	19.31	43.01
Serranidae	6.03	0	11.32	0.83	12.71	55.73
Gerreidae	0.39	3.82	8.89	1.08	9.98	65.71

Carangidae	0	1.88	7.21	1.17	8.1	73.81
Pomacentridae	1.53	1.91	5.6	1.16	6.29	80.1
Gobiesocidae	0	0.92	5.21	0.69	5.85	85.95
Tetraodontiformes	0.38	0.92	5.07	0.67	5.69	91.64

Groups 3/16/2017 &

10/10/2017

Average dissimilarity =

82.04

	Group 3/16/2017	Group 10/10/2017				
Species	Av. Abund	Av. Abund	Av. Diss	Diss/SD	Contrib%	Cum.%
Serranidae	8.57	0	12.65	1.39	15.42	15.42
Haemulidae	7.64	0.96	11.41	1.39	13.91	29.32
Gerreidae	6	3.82	10.05	0.97	12.25	41.57
Gobiidae	8.19	3.79	8.58	1.15	10.46	52.03
Clupeiformes	0.4	6.66	8.31	1.28	10.13	62.16
Clupeidae	6.33	0	6.69	0.53	8.15	70.31
Tripterygidae	3.44	0	6.31	0.91	7.69	78
Carangidae	3.96	1.88	5.76	0.99	7.03	85.03
Pomacentridae	0.73	1.91	2.62	0.99	3.19	88.22
Gobiesocidae	0	0.92	1.72	0.86	2.1	90.32

Groups 3/17/2017 &

10/10/2017

Average dissimilarity =

81.15

	Group 3/17/2017	Group 10/10/2017				
Species	Av. Abund	Av. Abund	Av. Diss	Diss/SD	Contrib%	Cum.%
Clupeiformes	1.4	6.66	14.17	1.56	17.46	17.46
Gobiidae	4.57	3.79	12.01	1.58	14.8	32.26
Pomacentridae	5.32	1.91	11.93	0.88	14.7	46.97
Gerreidae	2.22	3.82	10.61	0.93	13.07	60.04
Clupeidae	5.61	0	7.84	0.53	9.66	69.7
Carangidae	0	1.88	5.54	1.67	6.83	76.53
Sphyraenidae	1.11	0	4.44	0.75	5.48	82.01
Gobiesocidae	0	0.92	3.73	0.79	4.6	86.61
Tetraodontiformes	0	0.92	3.73	0.79	4.6	91.21

Groups 8/11/2017 &

10/10/2017

Average dissimilarity =

75.12

	Group 8/11/2017	Group 10/10/2017					
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%	
Lutjanidae	20.53	0	17.04	0.83	22.68	22.68	
Carangidae	12.53	1.88	13.1	1.76	17.43	40.11	
Clupeiformes	2.11	6.66	9.49	1.51	12.63	52.74	
Pomacentridae	5.76	1.91	6.98	1.25	9.29	62.03	
Gerreidae	0.41	3.82	5.71	0.79	7.6	69.64	
Gobiidae	3.7	3.79	4.28	1.13	5.7	75.33	
Haemulidae	2.03	0.96	3.1	0.99	4.13	79.47	
Gobiesocidae	0	0.92	2.74	0.67	3.65	83.11	
Tetraodontiformes	0	0.92	2.74	0.67	3.65	86.76	
Sphyraenidae	2.84	0	2.42	0.89	3.23	89.99	
Scombridae	2.44	0	2.1	0.81	2.8	92.79	

Groups 8/12/2017 &
10/10/2017

Average dissimilarity =
71.41

	Group 8/12/2017	Group 10/10/2017					
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%	
Pomacentridae	13.71	1.91	11.27	1.25	15.78	15.78	
Haemulidae	7.33	0.96	10.08	0.94	14.12	29.9	
Clupeiformes	7.58	6.66	9.93	0.91	13.91	43.8	
Gobiidae	9.64	3.79	6.84	1.93	9.58	53.39	
Lutjanidae	8.86	0	6.82	0.92	9.55	62.94	
Gerreidae	5.27	3.82	6.51	1.09	9.12	72.06	
Carangidae	6.87	1.88	3.75	0.78	5.25	77.3	
Sphyraenidae	4.02	0	3.54	1.1	4.95	82.26	
Serranidae	3.6	0	3.32	0.54	4.65	86.91	
Scombridae	2.42	0	1.89	0.9	2.65	89.55	
Gobiesocidae	0	0.92	1.55	0.75	2.17	91.72	

Groups 8/13/2017 &
10/10/2017

Average dissimilarity =
73.95

	Group 8/13/2017	Group 10/10/2017					
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%	
Pomacentridae	8.51	1.91	8.67	1.66	11.72	11.72	
Carangidae	9.27	1.88	8.2	1.88	11.08	22.81	

Clupeiformes	0.42	6.66	7.56	1.19	10.22	33.02
Gobiidae	8.53	3.79	7.31	1.33	9.89	42.91
Lutjanidae	6.82	0	7.17	0.75	9.7	52.61
Haemulidae	6.03	0.96	6.5	1.46	8.79	61.41
Serranidae	5.26	0	6.36	2.33	8.61	70.01
Gerreidae	2.81	3.82	4.94	1.31	6.69	76.7
Blenniidae	3.58	0.96	4	0.74	5.41	82.11
Sphyraenidae	1.66	0	2.88	0.99	3.9	86.01
Scombridae	2.04	0	2.81	0.86	3.8	89.81
Syngnathidae	1.26	0	2.45	0.82	3.32	93.13

Groups 9/11/2017 &
10/10/2017
Average dissimilarity =
78.95

	Group 9/11/2017	Group 10/10/2017				
Species	Av. Abund	Av. Abund	Av. Diss	Diss/SD	Contrib%	Cum.%
Clupeiformes	5.54	6.66	15.06	1.34	19.07	19.07
Gobiidae	9.44	3.79	14.51	1.41	18.37	37.44
Serranidae	5.98	0	11.51	0.74	14.57	52.02
Gerreidae	0.76	3.82	7.92	1.09	10.03	62.05
Pomacentridae	1.52	1.91	4.27	1	5.41	67.45
Carangidae	0.38	1.88	3.96	1.08	5.01	72.47
Carapidae	0.76	0	3.41	0.48	4.32	76.79
Gobiesocidae	0	0.92	3.03	0.72	3.83	80.62
Tetraodontiformes	0	0.92	3.03	0.72	3.83	84.46
Haemulidae	1.13	0.96	2.92	0.89	3.7	88.16
Clupeidae	1.52	0	2.23	0.53	2.82	90.98

Groups 9/12/2017 &
10/10/2017
Average dissimilarity =
78.37

	Group 9/12/2017	Group 10/10/2017				
Species	Av. Abund	Av. Abund	Av. Diss	Diss/SD	Contrib%	Cum.%
Clupeiformes	0	6.66	18.56	2.07	23.69	23.69
Gobiidae	2.41	3.79	11.29	1.46	14.4	38.09
Gerreidae	0	3.82	8.85	0.93	11.29	49.38
Pomacentridae	1.39	1.91	6.68	0.87	8.52	57.91
Gobiesocidae	0	0.92	5.29	0.89	6.75	64.66
Tetraodontiformes	0.43	0.92	4.74	0.82	6.05	70.71

Serranidae	1.29	0	4.42	0.5	5.64	76.35
Carangidae	0.91	1.88	3.79	0.92	4.84	81.19
Sphyraenidae	0.43	0	2.25	0.47	2.87	84.06
Blenniidae	0	0.96	2.21	0.93	2.82	86.88
Haemulidae	0	0.96	2.21	0.93	2.82	89.7
Mugilidae	0.48	0	1.99	0.48	2.54	92.24

Groups 9/13/2017 &
10/10/2017

Average dissimilarity =
73.76

	Group 9/13/2017	Group 10/10/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Carangidae	7.01	1.88	11.74	1.29	15.92	15.92
Gerreidae	6.15	3.82	10.34	0.98	14.02	29.93
Clupeiformes	2.03	6.66	9.1	1.51	12.34	42.27
Haemulidae	5.12	0.96	7.88	1.8	10.68	52.95
Gobiidae	3.87	3.79	7.22	1.31	9.79	62.74
Clupeidae	2.33	0	4.67	0.52	6.33	69.07
Serranidae	2.6	0	4.65	1.16	6.31	75.38
Pomacentridae	2	1.91	3.62	1.23	4.91	80.29
Tetraodontiformes	0.9	0.92	2.65	1.17	3.59	83.89
Gobiesocidae	0	0.92	2.06	0.92	2.79	86.67
Labridae	0.78	0	1.56	0.52	2.11	88.78
Apogonidae	0.77	0	1.55	0.52	2.11	90.89

Groups 10/9/2017 &
10/10/2017

Average dissimilarity =
86.43

	Group 10/9/2017	Group 10/10/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Pomacentridae	20.47	1.91	17.01	1.87	19.68	19.68
Gobiidae	13.52	3.79	13.92	1.74	16.1	35.78
Clupeiformes	1.93	6.66	9.04	0.91	10.45	46.23
Gerreidae	7.49	3.82	8.59	1.5	9.93	56.17
Lutjanidae	10.38	0	6.96	0.92	8.06	64.22
Carangidae	7.25	1.88	6.7	1.33	7.76	71.98
Serranidae	6.47	0	6.6	0.92	7.64	79.62
Haemulidae	3.8	0.96	3.05	1.36	3.53	83.15
Gobiesocidae	0	0.92	2.48	0.51	2.87	86.02

Tetraodontiformes	0	0.92	2.48	0.51	2.87	88.89
Carapidae	0.47	0	2.41	0.47	2.79	91.68
Groups 8/22/2016 & 10/11/2017						
Average dissimilarity = 72.31						
	Group 8/22/2016	Group 10/11/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Clupeiformes	0.86	4.81	9.66	1.13	13.36	13.36
Pomacentridae	5.68	2.55	8.41	1.16	11.63	25
Gobiidae	2.23	4.91	7.69	1.19	10.64	35.64
Clupeidae	4.04	0	7.64	0.55	10.56	46.2
Gerreidae	0.81	2.95	6.73	0.9	9.31	55.51
Achiridae	0	2.36	4.54	0.55	6.28	61.79
Tripterygidae	2.23	0	4.39	1.05	6.07	67.86
Serranidae	1.27	0.94	3.72	1.01	5.14	73
Syngnathidae	1.82	0	3.35	0.73	4.64	77.64
Haemulidae	0.86	0.41	2.13	0.9	2.95	80.59
Tetraodontiformes	0.37	0.83	2.03	0.73	2.81	83.4
Carangidae	0.86	1.77	1.84	1.13	2.54	85.95
Lutjanidae	0	0.89	1.71	0.95	2.37	88.32
Monacanthidae	0.85	0	1.58	0.93	2.19	90.5
Groups 8/23/2016 & 10/11/2017						
Average dissimilarity = 85.46						
	Group 8/23/2016	Group 10/11/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Clupeiformes	2.16	4.81	15.88	0.98	18.58	18.58
Gobiidae	3.28	4.91	14.67	1.72	17.16	35.74
Clupeidae	6.92	0	9.7	0.63	11.35	47.09
Gerreidae	0	2.95	8.91	0.74	10.43	57.51
Pomacentridae	3.47	2.55	7.49	1.81	8.76	66.27
Achiridae	0	2.36	5.75	0.52	6.73	73.01
Carangidae	0	1.77	5.74	1.47	6.72	79.72
Serranidae	0	0.94	2.3	0.52	2.69	82.42
Lutjanidae	0	0.89	2.17	0.87	2.54	84.96
Tetraodontiformes	0	0.83	2.14	0.52	2.5	87.46
Syngnathidae	0.72	0	1.85	0.54	2.17	89.63

Blenniidae	0	0.41	1.07	0.52	1.25	90.88
Groups 8/24/2016 & 10/11/2017						
Average dissimilarity = 80.82						
	Group 8/24/2016	Group 10/11/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Gobiidae	6.84	4.91	12	1.27	14.84	14.84
Clupeiformes	0	4.81	10.78	1.06	13.33	28.18
Clupeidae	5.73	0	9.51	0.86	11.77	39.95
Gerreidae	0	2.95	6.35	0.74	7.85	47.8
Haemulidae	3.16	0.41	6.24	1.15	7.72	55.52
Carangidae	1.45	1.77	5.36	1.57	6.63	62.16
Achiriidae	0	2.36	4.47	0.55	5.53	67.69
Pomacentridae	0.81	2.55	4.37	1.29	5.41	73.1
Sphyraenidae	1.73	0	3.24	0.86	4.01	77.11
Serranidae	0.84	0.94	2.83	1.05	3.5	80.61
Monacanthidae	1.27	0	2.61	1.43	3.23	83.84
Hemiramphidae	0.76	0	2.05	0.9	2.53	86.37
Mugilidae	0.84	0.41	1.85	0.9	2.29	88.66
Lutjanidae	0.43	0.89	1.78	0.96	2.2	90.86
Groups 9/20/2016 & 10/11/2017						
Average dissimilarity = 80.64						
	Group 9/20/2016	Group 10/11/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Gerreidae	25.94	2.95	17.98	1.21	22.3	22.3
Pomacentridae	32.07	2.55	16.23	1.21	20.13	42.43
Clupeidae	7.02	0	10.9	0.69	13.52	55.95
Clupeiformes	10.35	4.81	9.72	1.2	12.05	68
Gobiidae	3.2	4.91	4.6	1.24	5.71	73.71
Achiriidae	0	2.36	2.91	0.47	3.61	77.33
Carangidae	4.16	1.77	2.79	1.61	3.46	80.78
Sphyraenidae	3.45	0	2.45	1.54	3.04	83.82
Scombridae	1.55	0.41	1.97	0.71	2.45	86.27
Serranidae	1.61	0.94	1.86	0.77	2.31	88.58
Lutjanidae	2.51	0.89	1.86	1.13	2.31	90.89

Groups 9/21/2016 &
10/11/2017
Average dissimilarity =
70.08

Species	Group	Group	Av.Diss	Diss/SD	Contrib%	Cum.%
	9/21/2016	10/11/2017				
Clupeiformes	1.64	4.81	10.85	1.21	15.48	15.48
Gobiidae	1.32	4.91	9.66	1.47	13.78	29.26
Pomacentridae	4.58	2.55	9.52	0.94	13.58	42.84
Gerreidae	0.88	2.95	7.27	0.83	10.38	53.21
Achiridae	0	2.36	5.26	0.56	7.5	60.72
Sphyraenidae	1.23	0	3.13	0.54	4.46	65.18
Hemiramphidae	0.94	0	2.42	0.91	3.45	68.63
Syngnathidae	0.79	0	2.19	0.9	3.12	71.75
Serranidae	0	0.94	2.1	0.56	3	74.75
Clupeidae	0.82	0	2.08	0.54	2.97	77.73
Lutjanidae	0	0.89	1.98	0.96	2.83	80.56
Tetraodontiformes	0	0.83	1.93	0.56	2.76	83.32
Carangidae	1.26	1.77	1.48	0.76	2.11	85.43
Atherinidae	0.48	0	1.18	0.54	1.69	87.12
Holocentridae	0.48	0	1.18	0.54	1.69	88.81
Ostraciidae	0.38	0	1.15	0.53	1.63	90.44

Groups 9/22/2016 &
10/11/2017
Average dissimilarity =
81.41

Species	Group	Group	Av.Diss	Diss/SD	Contrib%	Cum.%
	9/22/2016	10/11/2017				
Clupeiformes	0	4.81	14.43	1.1	17.72	17.72
Gobiidae	0.9	4.91	10	1.24	12.29	30.01
Gerreidae	0.92	2.95	8.74	0.89	10.74	40.74
Pomacentridae	3.2	2.55	7.48	1.19	9.18	49.93
Sphyraenidae	2.32	0	7.23	0.68	8.88	58.81
Achiridae	0	2.36	5.63	0.55	6.92	65.73
Tetraodontiformes	1.35	0.83	4.61	0.94	5.66	71.39
Carangidae	0.46	1.77	4.34	1.4	5.33	76.72
Gobiesocidae	1.84	0	4.06	0.54	4.99	81.71
Serranidae	0	0.94	2.25	0.55	2.77	84.48
Lutjanidae	0	0.89	2.13	0.95	2.61	87.09
Haemulidae	0.46	0.41	1.64	0.75	2.02	89.11

Hemiramphidae	0.45	0	1.35	0.53	1.66	90.77
Groups 10/20/2016 & 10/11/2017						
Average dissimilarity = 78.62						
	Group 10/20/2016	Group 10/11/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Clupeidae	7.99	0	14.23	0.88	18.1	18.1
Clupeiformes	0.75	4.81	11.03	1.12	14.03	32.13
Gobiidae	1.53	4.91	9.03	1.29	11.49	43.61
Gerreidae	0.79	2.95	7.31	0.9	9.3	52.91
Achiriidae	0	2.36	4.85	0.54	6.17	59.08
Pomacentridae	1.49	2.55	4.68	1.11	5.95	65.04
Haemulidae	1.93	0.41	3.87	0.9	4.93	69.97
Serranidae	1.44	0.94	3.46	0.9	4.4	74.37
Scombridae	0.79	0.41	2.81	0.65	3.58	77.95
Aulostomidae	1.44	0	2.58	0.77	3.29	81.23
Carangidae	0.76	1.77	2.56	1.05	3.25	84.49
Lutjanidae	0	0.89	1.83	0.92	2.33	86.82
Tetraodontiformes	0	0.83	1.78	0.54	2.27	89.08
Ophychthidae	0.77	0	1.3	0.55	1.65	90.74
Groups 10/21/2016 & 10/11/2017						
Average dissimilarity = 74.09						
	Group 10/21/2016	Group 10/11/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Clupeidae	14.94	0	13.96	0.56	18.84	18.84
Clupeiformes	0.39	4.81	11.15	0.94	15.05	33.89
Gobiidae	5.46	4.91	9.57	1.16	12.92	46.81
Gerreidae	1.99	2.95	8.59	0.95	11.6	58.41
Pomacentridae	3.87	2.55	6.22	1.22	8.39	66.8
Achiriidae	0	2.36	4.64	0.52	6.26	73.06
Carangidae	0.79	1.77	4.01	1.64	5.42	78.48
Lutjanidae	0.77	0.89	2.07	1.06	2.8	81.28
Serranidae	0	0.94	1.86	0.52	2.51	83.78
Ophychthidae	1.16	0	1.82	0.88	2.46	86.25
Tetraodontiformes	0	0.83	1.71	0.52	2.3	88.55
Haemulidae	0.39	0.41	1.33	0.7	1.79	90.34

Groups 2/13/2017 &

10/11/2017

Average dissimilarity =

80.72

Species	Group 2/13/2017	Group 10/11/2017	Av.Diss	Diss/SD	Contrib%	Cum.%
	Av.Abund	Av.Abund				
Pomacentridae	39.7	2.55	18.94	1.33	23.46	23.46
Gerreidae	22.28	2.95	12.95	1.47	16.05	39.51
Tripterygidae	22.23	0	10.95	1.11	13.56	53.07
Clupeiformes	0	4.81	7.55	0.77	9.36	62.43
Gobiidae	3.53	4.91	5.31	0.99	6.57	69
Achiriidae	0	2.36	3.13	0.44	3.88	72.89
Carangidae	1.6	1.77	3.02	1.48	3.75	76.63
Serranidae	4.27	0.94	2.6	0.9	3.23	79.86
Mullidae	3.55	0	2.37	1.51	2.94	82.8
Sphyraenidae	2.49	0	2.11	0.92	2.61	85.41
Tetraodontiformes	0.4	0.83	1.78	0.71	2.2	87.61
Haemulidae	2.13	0.41	1.39	1.03	1.73	89.34
Lutjanidae	0	0.89	1.18	0.71	1.47	90.8

Groups 2/14/2017 &

10/11/2017

Average dissimilarity =

91.99

Species	Group 2/14/2017	Group 10/11/2017	Av.Diss	Diss/SD	Contrib%	Cum.%
	Av.Abund	Av.Abund				
Pomacentridae	47.25	2.55	31.47	3.17	34.21	34.21
Gerreidae	42.59	2.95	24.09	1.05	26.18	60.39
Clupeidae	18.13	0	15.47	0.95	16.82	77.21
Clupeiformes	0.91	4.81	3.47	0.99	3.77	80.98
Gobiidae	0.45	4.91	3.35	1.23	3.64	84.62
Sphyraenidae	2.89	0	1.85	1.44	2.01	86.63
Haemulidae	3.11	0.41	1.75	1.33	1.9	88.53
Achiriidae	0	2.36	1.67	0.54	1.82	90.35

Groups 2/15/2017 &

10/11/2017

Average dissimilarity =

83.46

	Group 2/15/2017	Group 10/11/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Pomacentridae	31.59	2.55	25.89	1.3	31.02	31.02
Clupeidae	12.57	0	17.93	0.98	21.48	52.5
Clupeiformes	0	4.81	5.59	1.01	6.7	59.2
Tripterygidae	7.64	0	5.53	0.69	6.63	65.83
Mullidae	6.72	0	5.04	0.8	6.04	71.87
Gobiidae	6.54	4.91	4.93	1.07	5.9	77.78
Gerreidae	1.77	2.95	3.69	0.87	4.42	82.2
Achiriidae	0	2.36	2.53	0.53	3.03	85.22
Carangidae	0	1.77	2.06	2.9	2.46	87.69
Tetraodontiformes	0.74	0.83	1.47	1.2	1.77	89.46
Serranidae	0.43	0.94	1.24	0.71	1.49	90.94

Groups 3/15/2017 &
10/11/2017

Average dissimilarity =
84.70

	Group 3/15/2017	Group 10/11/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Gobiidae	8.69	4.91	19.61	2.15	23.16	23.16
Clupeiformes	0	4.81	14.77	0.91	17.43	40.59
Serranidae	6.03	0.94	11.14	1.04	13.15	53.74
Gerreidae	0.39	2.95	8.02	0.75	9.47	63.21
Pomacentridae	1.53	2.55	5.82	1.21	6.87	70.08
Achiriidae	0	2.36	5.46	0.52	6.45	76.53
Carangidae	0	1.77	5.37	1.41	6.34	82.87
Tetraodontiformes	0.38	0.83	2.36	0.63	2.79	85.65
Lutjanidae	0	0.89	2.06	0.87	2.43	88.09
Hemiramphidae	0.39	0	1.46	0.51	1.72	89.81
Haemulidae	0.38	0.41	1.35	0.68	1.59	91.4

Groups 3/16/2017 &
10/11/2017

Average dissimilarity =
79.82

	Group 3/16/2017	Group 10/11/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Haemulidae	7.64	0.41	11.09	1.73	13.9	13.9
Serranidae	8.57	0.94	10.89	1.37	13.65	27.54
Gerreidae	6	2.95	9.2	0.95	11.52	39.07

Gobiidae	8.19	4.91	8.31	1.25	10.41	49.48
Clupeiformes	0.4	4.81	6.73	1.02	8.44	57.92
Clupeidae	6.33	0	6.41	0.56	8.04	65.95
Tripterygidae	3.44	0	5.79	0.99	7.25	73.2
Carangidae	3.96	1.77	5.38	1.01	6.74	79.94
Pomacentridae	0.73	2.55	3.14	1.24	3.93	83.88
Achiriiidae	0	2.36	3.1	0.54	3.88	87.76
Lutjanidae	0.73	0.89	1.67	0.99	2.1	89.86
Tetraodontiformes	0	0.83	1.12	0.54	1.4	91.26

Groups 3/17/2017 &
10/11/2017

Average dissimilarity =
76.95

Species	Group	Group	Diss/SD	Contrib%	Cum.%
	3/17/2017	10/11/2017			
Clupeiformes	1.4	4.81	0.97	15.4	15.4
Gobiidae	4.57	4.91	11.74	15.26	30.66
Pomacentridae	5.32	2.55	10	1.01	12.99
Gerreidae	2.22	2.95	8.54	1.04	11.1
Clupeidae	5.61	0	7.39	0.55	9.61
Achiriiidae	0	2.36	4.88	0.53	6.34
Carangidae	0	1.77	4.48	1.94	5.82
Sphyraenidae	1.11	0	3.6	0.82	4.68
Serranidae	1.05	0.94	2.77	0.72	3.59
Lutjanidae	0	0.89	1.84	0.9	2.4
Tetraodontiformes	0	0.83	1.8	0.53	2.33
Scombridae	0.7	0.41	1.56	0.8	2.03

Groups 8/11/2017 &
10/11/2017

Average dissimilarity =
73.52

Species	Group	Group	Diss/SD	Contrib%	Cum.%
	8/11/2017	10/11/2017			
Lutjanidae	20.53	0.89	17.24	0.96	23.45
Carangidae	12.53	1.77	12.15	1.65	16.53
Clupeiformes	2.11	4.81	7.18	1.17	9.77
Gobiidae	3.7	4.91	5.78	0.88	7.86
Pomacentridae	5.76	2.55	5.57	1.26	7.57
Gerreidae	0.41	2.95	5.44	0.64	7.4

Achiridae	0	2.36	3.79	0.48	5.16	77.74
Haemulidae	2.03	0.41	2.64	0.98	3.59	81.33
Scombridae	2.44	0.41	2.4	1.04	3.27	84.59
Sphyraenidae	2.84	0	2.35	0.93	3.19	87.78
Serranidae	0.39	0.94	2.25	0.75	3.06	90.84

Groups 8/12/2017 &
10/11/2017

Average dissimilarity =
70.76

Species	Group 8/12/2017	Group 10/11/2017	Av.Diss	Diss/SD	Contrib%	Cum.%
	Av.Abund	Av.Abund				
Pomacentridae	13.71	2.55	10.81	1.37	15.27	15.27
Haemulidae	7.33	0.41	9.74	1.12	13.77	29.04
Clupeiformes	7.58	4.81	8.85	0.95	12.5	41.54
Lutjanidae	8.86	0.89	7.02	1.17	9.92	51.46
Gobiidae	9.64	4.91	6.4	1.85	9.04	60.5
Gerreidae	5.27	2.95	6.15	0.95	8.69	69.19
Serranidae	3.6	0.94	3.91	0.73	5.53	74.73
Carangidae	6.87	1.77	3.6	0.78	5.09	79.82
Sphyraenidae	4.02	0	3.38	1.15	4.78	84.6
Achiridae	0.4	2.36	2.96	0.56	4.18	88.78
Scombridae	2.42	0.41	2.03	1.16	2.87	91.65

Groups 8/13/2017 &
10/11/2017

Average dissimilarity =
69.03

Species	Group 8/13/2017	Group 10/11/2017	Av.Diss	Diss/SD	Contrib%	Cum.%
	Av.Abund	Av.Abund				
Carangidae	9.27	1.77	7.91	1.99	11.46	11.46
Pomacentridae	8.51	2.55	7.22	1.73	10.46	21.92
Lutjanidae	6.82	0.89	6.49	0.75	9.4	31.33
Gobiidae	8.53	4.91	6.43	1.33	9.31	40.64
Haemulidae	6.03	0.41	6.36	1.54	9.21	49.85
Clupeiformes	0.42	4.81	6.21	1.01	9	58.85
Serranidae	5.26	0.94	5.32	1.94	7.71	66.56
Gerreidae	2.81	2.95	4.53	1.01	6.56	73.12
Blenniidae	3.58	0.41	3.51	0.66	5.08	78.2
Achiridae	0.4	2.36	3.13	0.59	4.53	82.74
Sphyraenidae	1.66	0	2.65	1.07	3.84	86.58

Scombridae	2.04	0.41	2.62	1.02	3.8	90.37
Groups 9/11/2017 & 10/11/2017						
Average dissimilarity = 75.73						
	Group 9/11/2017	Group 10/11/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Clupeiformes	5.54	4.81	13.43	1.14	17.73	17.73
Gobiidae	9.44	4.91	13.33	1.35	17.6	35.33
Serranidae	5.98	0.94	10.8	0.87	14.27	49.6
Gerreidae	0.76	2.95	6.32	0.92	8.34	57.94
Pomacentridae	1.52	2.55	5.14	1.27	6.79	64.73
Achiriidae	0.49	2.36	4.8	0.63	6.34	71.07
Carangidae	0.38	1.77	3.2	1.21	4.22	75.29
Carapidae	0.76	0	2.69	0.52	3.55	78.84
Haemulidae	1.13	0.41	2.31	0.74	3.04	81.88
Clupeidae	1.52	0	2.09	0.55	2.77	84.65
Lutjanidae	0	0.89	1.61	0.88	2.12	86.77
Tetraodontiformes	0	0.83	1.56	0.52	2.06	88.83
Sphyraenidae	0.75	0	1.23	0.55	1.62	90.45
Groups 9/12/2017 & 10/11/2017						
Average dissimilarity = 77.09						
	Group 9/12/2017	Group 10/11/2017				
Species	Av.Abund	Av.Abund	Av.Diss	Diss/SD	Contrib%	Cum.%
Clupeiformes	0	4.81	15.95	1.1	20.69	20.69
Gobiidae	2.41	4.91	12.14	1.36	15.74	36.43
Gerreidae	0	2.95	9.14	0.79	11.85	48.28
Achiriidae	0.48	2.36	6.83	0.67	8.86	57.14
Pomacentridae	1.39	2.55	6.51	1.16	8.45	65.59
Serranidae	1.29	0.94	5.02	0.73	6.51	72.1
Carangidae	0.91	1.77	3.02	0.99	3.91	76.02
Tetraodontiformes	0.43	0.83	2.95	0.76	3.82	79.84
Lutjanidae	0	0.89	2.29	0.95	2.97	82.8
Mugilidae	0.48	0.41	2.15	0.7	2.78	85.59
Ephippidae	0.43	0.41	1.85	0.72	2.39	87.98
Scombridae	0.43	0.41	1.85	0.72	2.39	90.38

Groups 9/13/2017 &
10/11/2017
Average dissimilarity =
72.83

Species	Group	Group	Av.Diss	Diss/SD	Contrib%	Cum.%
	9/13/2017	10/11/2017				
Carangidae	7.01	1.77	10.89	1.34	14.95	14.95
Gerreidae	6.15	2.95	10.07	1.13	13.82	28.78
Haemulidae	5.12	0.41	7.87	2.71	10.8	39.58
Clupeiformes	2.03	4.81	7.3	1.16	10.02	49.6
Gobiidae	3.87	4.91	7.22	1.39	9.91	59.51
Clupeidae	2.33	0	4.26	0.55	5.85	65.37
Serranidae	2.6	0.94	4.08	1.23	5.6	70.96
Achiriidae	0	2.36	3.56	0.56	4.89	75.86
Pomacentridae	2	2.55	3.11	1.28	4.27	80.13
Tetraodontiformes	0.9	0.83	2.12	0.75	2.91	83.04
Ephippidae	0.97	0.41	1.74	0.76	2.39	85.44
Labridae	0.78	0.42	1.71	0.72	2.35	87.79
Apogonidae	0.77	0	1.42	0.55	1.95	89.73
Atherinidae	0.77	0	1.42	0.55	1.95	91.68

Groups 10/9/2017 &
10/11/2017
Average dissimilarity =
82.07

Species	Group	Group	Av.Diss	Diss/SD	Contrib%	Cum.%
	10/9/2017	10/11/2017				
Pomacentridae	20.47	2.55	16.62	2.43	20.25	20.25
Gobiidae	13.52	4.91	13.13	1.56	16	36.25
Clupeiformes	1.93	4.81	7.68	0.66	9.36	45.62
Lutjanidae	10.38	0.89	7.41	1.22	9.03	54.64
Gerreidae	7.49	2.95	6.85	1	8.35	62.99
Serranidae	6.47	0.94	6.69	1.09	8.15	71.14
Carangidae	7.25	1.77	5.96	1.41	7.26	78.4
Achiriidae	0.45	2.36	3.37	0.47	4.11	82.5
Haemulidae	3.8	0.41	2.71	1.16	3.31	85.81
Sphyraenidae	3.9	0	2.2	0.7	2.68	88.49
Scombridae	2.82	0.41	2.19	1.13	2.67	91.16

Groups 10/10/2017 &
10/11/2017

Average dissimilarity =
56.44

Species	Group 10/10/2017	Group 10/11/2017	Av.Diss	Diss/SD	Contrib%	Cum.%
	Av.Abund	Av.Abund				
Clupeiformes	6.66	4.81	11.86	1.29	21.01	21.01
Gerreidae	3.82	2.95	9.46	1.09	16.75	37.76
Gobiidae	3.79	4.91	6.8	1.04	12.04	49.8
Pomacentridae	1.91	2.55	5.05	1.12	8.95	58.75
Achiridae	0	2.36	4.81	0.52	8.53	67.28
Tetraodontiformes	0.92	0.83	3.44	1.07	6.1	73.38
Gobiesocidae	0.92	0	2.91	0.86	5.16	78.54
Serranidae	0	0.94	1.93	0.52	3.41	81.95
Blenniidae	0.96	0.41	1.87	0.95	3.31	85.26
Haemulidae	0.96	0.41	1.87	0.95	3.31	88.57
Lutjanidae	0	0.89	1.82	0.88	3.22	91.79