**Table S1**.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | **PG** | **FAROL** | **PB** | **PESP** | **ESP** | **GJ** | **SCAR** |
| **Chlorophyta** |  |  |  |  |  |  |  |
| *Halimeda* sp. | 1.1 | 2.4 | - | 0.1 | 1.2 | 0.3 | - |
| *Dictyosphaeria versluysii* | 0.7 | 4.9 | 2.7 | 0.3 | 1.5 | 0.5 | 0.2 |
| *Bryopsis pennata* | 1.5 |  | - | - | 0.9 | 2.1 | - |
| *Caulerpa* spp.\* | 0.5 | 0.1 | - | 0.4 | 1.2 | 0.8 | 1.3 |
| *Codium intertextum* | - | 0.1 | - | - | - | 0.8 | - |
| *Valonia macrophysa* | - | - | - | - | 0.04 | - | - |
| *Ulva* sp. | 0.9 | 1.3 | 1.5 | 0.5 | 5.1 | 4.4 | 2.7 |
| *Anadyomene stellata* | - | - | - | 0.1 | 1.2 | 0.2 | 0.7 |
| *Cladophora vagabunda* | - | - | - | - | 0.5 | - | 0.1 |
| *Valonia aegagropila* | - | 1.1 | - | - | - | - | - |
| **TOTAL** | **4.8** | **10.0** | **4.1** | **1.5** | **11.6** | **9.1** | **5.0** |
| **Rhodophyta** |  |  |  |  |  |  |  |
| *Palisada papillosa* | 19.9 | 17.3 | 25.6 | 11.2 | 12.6 | 13.1 | 6.9 |
| *Gelidiella acerosa* | 13.4 | 7.3 | 14.8 | 17.3 | 7.5 | 6.9 | 1.3 |
| *Acantophora spicifera* | 5.1 | 2 | 1.7 | 2.5 | 0.8 | 4.0 | 0.7 |
| *Pterocladiella* spp.\* | 2.7 | 4 | 0.7 | - | 0.6 | - | 0.3 |
| *Hypnea* spp.\* | 2.5 | 0.4 | 0.4 | 0.4 | 1.44 | 1 | 0.4 |
| *Amphiroa fragilissima* | 3.6 | 7.1 | 1.6 | 0.1 | 4.0 | 4.3 | 2.1 |
| *Gracilaria cervicornis* | 1.6 | - | 0.1 | - | 0.2 | 0.4 | 0.1 |
| *Meristiella gelidium* | 0.1 | - | - | - | - | - | - |
| *Digenea simplex* | 0.8 | 1.3 | - | - | 0.4 | - | 0.5 |
| *Dichotomaria marginata* | 0.1 | - | - | - | 0.04 | - | 0.2 |
| *Bryothamnion seaforthii* | - | - | - | - | - | 0.3 | - |
| *Centrocerus clavulatum* | - | - | 0.3 | - | 0.7 | 0.04 | - |
| *Octhodes secundiramea* | - | - | - | - | 0.2 | - | - |
| *Chondracanthus acicularis* | - | - | - | - | 0.5 | 0.8 | 0.5 |
| *Gelidium* spp.\* | - | - | - | - | - | 1.9 | - |
| *Heterosiphonia gibbesii* | - | - | - | - | - | - | 0.2 |
| *Halymenia brasiliana* | - | - | - | - | - | - | 1.1 |
| *Botryocladia occidentalis* | 0.05 | - | - | - | - | - | - |
| Corallinales | 2.4 | 0.8 | 1.2 | 2.8 | 2.0 | 0.4 | 1.9 |
| Others | 0.05 | - | - | - | 0.1 | 2 | 0.6 |
| **TOTAL** | **52.3** | **40.3** | **46.4** | **34.4** | **31.0** | **35.2** | **16.9** |
| **Ochrophyta** |  |  |  |  |  |  |  |
| *Sargassum* sp. | 1.1 | 2.8 | - | - | 0.6 | 1.8 | 13.3 |
| *Dyctiota* spp.\* | 1.6 | 2 | - | 0.1 | 2.5 | 2.9 | 9.6 |
| *Padina* sp. | - | 2.7 | - | - | 6.0 | 1.4 | 17.7 |
| *Colpomenia sinuosa* | - | 1.3 | - | - | 0.04 | 0.2 | 0.2 |
| *Dyctiopteris* sp. | - | 0.1 | - | - | 0.1 | - | - |
| *Spatoglossum schroederi* | - | - | 0.3 | - | **5.6** | 0.1 | - |
| **TOTAL** | **2.7** | **8.9** | **0.3** | **0.1** | **14.9** | **6.4** | **40.7** |
| **Others** |  |  |  |  |  |  |  |
| *Palythoa* sp. | 9.5 | 0.4 | 4.3 | 32.7 | - | 5.6 | - |
| Corals | 0.10 | 0.3 | - | - | 0.1 | 0.4 | 0.1 |
| Sponges | 0.05 | - | - | 0.1 | 0.3 | 0.30 | - |
| Polichaetes/Tube Worms | 0.20 | 3.5 | - | - | 0.1 | 0.8 | - |
| Cyanobacteria | - | - | - | - | 0.2 | 1.6 | - |
| Crustaceans | - | - | - | - | - | 0.02 | - |
| Echinoderms | - | - | - | - | - | - | 0.1 |
| Substratum(sand/grit) | 30.2 | 36.7 | 44.9 | 31.2 | 41.8 | 40.5 | 37.2 |

(Continuance Table 1)\* *Caulerpa* spp. = *C. cupressoides, C. sertularioides, C. racemosa; Hypnea* spp*. = H. spinella, H.musciformis; Gelidium* spp*. = G. constrictum, G. torulosum; Dyctiota* spp*. = D. jamaicensis, D. cervicornis, D. dichotoma; Pterocladiella spp. = P. bartletii, P. caerulescens;* Others *= Jania adhaerens and Soliera filiformis.*

**Table S2.**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  |  |
|  | **BAR** | **PTT** | **PIB** | **CAV** | **CUR** | **PIS** |
| **Chlorophyta** |  |  |  |  |  |  |
| *Caulerpa racemosa* | - | - | - | - | 1.6 | - |
| *Ulva* sp. | - | - | - | - | - | 10 |
| *Caulerpa cupressoides* | - | - | - | - | - | 1.2 |
| **TOTAL** | - | - | - | - | **1.6** | **11.2** |
| **Rhodophyta** |  |  |  |  |  |  |
| *Heterosiphonia gibbesii* | - | 6.4 | - | - | - | - |
| *Dichotomaria marginata* | - | - | - | - | - | 5.2 |
| *Gracilaria* sp. | - | - | - | - | - | 2.8 |
| **TOTAL** | - | **6.4** | - | - | - | **8.0** |
| **Ochrophyta** |  |  |  |  |  |  |
| *Sargassum* sp. | - | - | - | - | - | 14.8 |
| *Dyctiota* sp. | - | - | - | - | - | 18.4 |
| *Padina* sp. | - | - | - | - | - | 8.8 |
| **TOTAL** | - | - | - | - | - | **42.0** |
| **Others**  Cyanobacteria | 35.9 | 52.7 | 10.4 | 0 | 0 | 0 |
| Incrusting Coralline Algae  Sponges | 11.5  22.6 | 4.5  15.1 | 20.9  2.4 | 6.6  6.8 | 32.7  3.6 | 1.6  0 |
| Corals | 3.7 | 0.1 | 0.7 | 2.4 | 0.1 | 0 |
| Ascidean | 11.6 | 6.8 | 0 | 0.2 | 0 | 0 |
| Turf Algae | 4.9 | 1.6 | 39.9 | 74.4 | 40.1 | 0 |
| Substratum (sand/grit) | 8.8 | 12.8 | 25.7 | 9.6 | 21.9 | 37.2 |
|  |  |  |  |  |  |  |

**Table S3.**

|  |  |
| --- | --- |
| **Species** | **Frequency (%)** |
| **Rhodophyta** |  |
| *Gelidiella acerosa* | 68.2 |
| *Hypnea musciformis* | 59.1 |
| *Gelidium coarctatum* | 50 |
| *Gelidiopsis variabilis* | 31,8 |
| *Amansia multifida* | 22.7 |
| *Chondracantus acicularis* | 18.2 |
| *Gracilaria sp* | 18.2 |
| *Gelidiella ligulata* | 13.6 |
| *Gelidiela trinitatensis* | 9.1 |
| *Gelidium sp*. | 9,1 |
| *Pterocladiella caerulescens* | 9.1 |
| *Vidalia obtusiloba* | 9.1 |
| *Bryothamnion seafortii* | 4.5 |
| *Cryptonemia seminervis* | 4.5 |
| *Gelidiopsis repens* | 4.5 |
| *Gracilaria ornata* | 4.5 |
| *Haloplegma duperreyi* | 4.5 |
| *Polysiphonia sp* | 4.5 |
| *Acanthophora spicifera* | 4.5 \* |
| *Cryptonemia luxurians* | 4.5 |
| **Chlorophyta** |  |
| *Ulva sp* | 13.6 |
| *Ulva rigidula* | 9.1 |
| *Ulva lactuca* | 4.5 |
| *Bryopsis pennata* | 4.5 |
| *Caulerpa setularioides* | 4.5 |
| *Cladophora ordinata* | 4.5 |
| **Ochrophyta** |  |
| *Dictyopteris delicatula* | 22.7 |
| *Dyctiota sp* | 9.1 |
| *Dictyopteris justii* | 4.5 |

*\*trace levels*

**Table S4.**

|  |  |  |  |
| --- | --- | --- | --- |
| **Variables** | **Df** | **MS** | **P** |
|  |  |  |  |
| Time Intervals (T) | 3 | 366,73 | 0.001 |
| Reef Flat (R) | 2 | 851,73 | 0.001 |
| T x R | 6 | 255,5 | 0.001 |
| Residuals |  | 26,51 |  |
| Post - Hoc Tests |  | PG: H1≈ H2 < H3 < H4 | H1: PG ≈ PESP ≈ PB |
| PESP: H1≈ H2 ≈ H3 ≈ H4 | H2: PG ≈ PESP; PG ≈ PB; PESP > PB |
| PB: H1≈ H2 ≈ H3 ≈ H4 | H3: PG ≈ PESP; PG > PB; PESP > PB |
|  | H4: PG > PESP > PB |

Df = degrees of freedom; MS = mean squares.