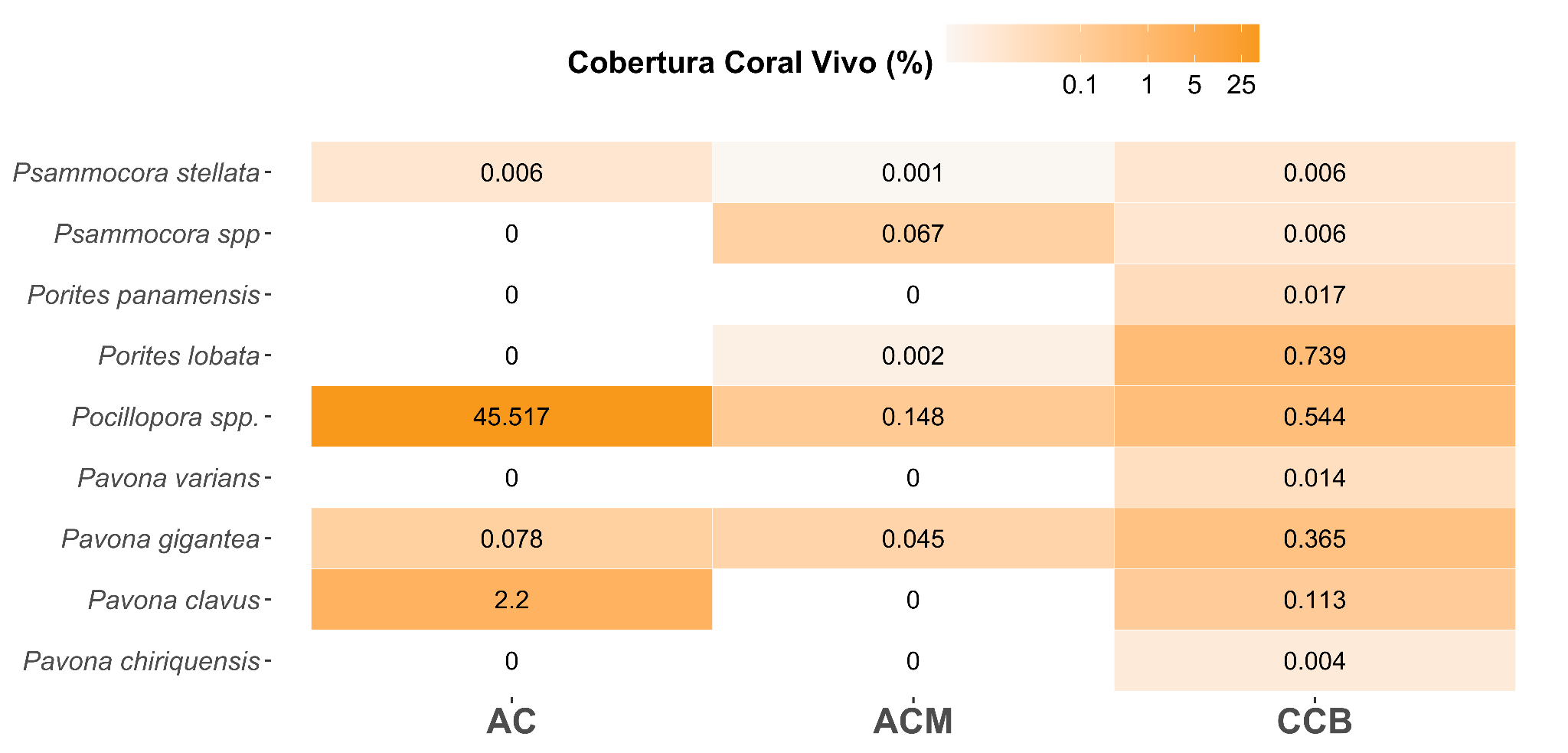
Apéndice 1

Cobertura promedio de especies de coral en arrecifes coralinos vivos (AC), arrecifes coralinos muertos (ACM) y comunidades coralinas sobre basaltos (CCB) visitados en los sitios de importancia para la conservación Papagayo y Punta Pargos - Punta Gorda.

Appendix 1

Average cover of coral species in live coral reefs (AC), dead coral reefs (ACM) and coral communities upon basalts (CCB) assessed at the sites of conservation importance Papagayo and Punta Pargos - Punta Gorda.



Apéndice 2

Dominancia específica y biomasa de las especies de peces observadas en los ecosistemas coralinos visitados en los sitios de importancia para la conservación Papagayo y Punta Pargos - Punta Gorda. Ecosistemas coralinos; arrecifes coralinos vivos (AC), arrecifes coralinos muertos (ACM) y comunidades coralinas sobre basaltos (CCB). Dominancia específica; predominante (P), común (C), ocasional (O) y raro (R).

Appendix 2

Specific dominance and biomass of fish species observed in the coral ecosystems visited in the sites of conservation importance Papagayo and Punta Pargos - Punta Gorda. Coral ecosystems; live coral reefs (AC), dead coral reefs (ACM) and coral communities upon basalts (CCB). Specific dominance; predominant (P), common (C), occasional (O) and rare R).(

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Especie | Dominancia  Específica | Biomasa (g m-2) | | | |
| Total | AC | ACM | CCB |
| **Clase Teleostei** |  |  |  |  |  |
| **Orden Acanthuriformes** |  |  |  |  |  |
| **Familia Acanthuridae** |  |  |  |  |  |
| *Acanthurus xanthopterus* | R | 3.51 ± 23.82 | 53.85 ± 93.27 | - | - |
| *Prionurus laticlavius* | R | 0.28 ± 1.90 | - | - | 0.44 ± 2.39 |
| **Familia Chaetodontidae** |  |  |  |  |  |
| *Chaetodon humeralis* | P | 1.46 ± 3.28 | 6.71 ± 6.93 | 0.67 ± 1.93 | 1.30 ± 2.97 |
| *Johnrandallia nigrirostris* | P | 4.18 ± 12.63 | 21.59 ± 35.84 | 0.01 ± 0.02 | 4.39 ± 11.11 |
| **Familia Pomacanthidae** |  |  |  |  |  |
| *Holacanthus passer* | C | 0.66 ± 2.14 | 0.31 ± 0.53 | 0.02 ± 0.08 | 1.01 ± 2.64 |
| *Pomacanthus zonipectus* | C | 0.23 ± 1.15 | 2.57 ± 4.46 | 0.17 ± 0.31 | 0.01 ± 0.06 |
| **Orden Anguilliformes** |  |  |  |  |  |
| **Familia Muraenidae** |  |  |  |  |  |
| *Echidna nebulosa* | R | 0.01 ± 0.04 | - | - | 0.01 ± 0.06 |
| *Gymnothorax castaneus* | R | 0.04 ± 0.24 | - | - | 0.06 ± 0.30 |
| *Gymnothorax flavimarginatus* | R | 0.10 ± 0.67 | - | - | 0.16 ± 0.84 |
| *Muraena lentiginosa* | R | 0.07 ± 0.27 | - | 0.17 ± 0.46 | 0.02 ± 0.09 |
| **Orden Synodontidae** |  |  |  |  |  |
| **Familia Synodontidae** |  |  |  |  |  |
| *Synodus lacertinus* | R | 0.002 ± 0.01 | - | - | 0.003 ± 0.02 |
| **Orden Beloniformes** |  |  |  |  |  |
| **Familia Belonidae** |  |  |  |  |  |
| Belonidae spp. | R | 4.95 ± 33.56 | - | - | 7.85 ± 42.27 |
| **Familia Blenniidae** |  |  |  |  |  |
| *Ophioblennius steindachneri* | R | 0.02 ± 0.10 | - | 0.002 ± 0.01 | 0.03 ± 0.13 |
| *Plagiotremus azaleus* | C | 0.005 ± 0.02 | 0.001 ± 0.002 | 0.01 ± 0.02 | 0.004 ± 0.01 |
|  |  |  |  |  |  |
| Especie | Dominancia  Específica | Biomasa (g m-2) | | | |
|  | Total | AC | ACM | CCB |
| **Orden Carangiformes** |  |  |  |  |  |
| **Familia Carangidae** |  |  |  |  |  |
| *Caranx caballus* | C | 1.07 ± 3.40 | - | - | 1.691  ± 4.184 |
| *Gnathanodon speciosus* | R | 0.06 ± 0.38 | - | 0.18 ± 0.69 | - |
| *Trachinotus rhodopus* | R | 0.17 ± 1.18 | - | - | 0.277  ± 1.49 |
| **Orden Centrarchiformes** |  |  |  |  |  |
| **Familia Cirrhitidae** |  |  |  |  |  |
| *Cirrhitichthys oxycephalus* | R | 0.003 ± 0.01 | 0.01± 0.02 | 0.003 ± 0.01 | 0.001 ± 0.01 |
| *Cirrhitus rivulatus* | R | 0.04 ± 0.17 | - | - | 0.06 ± 0.21 |
| **Orden Eupercaria incertae sedis** |  |  |  |  |  |
| **Familia Haemulidae** |  |  |  |  |  |
| *Anisotremus caesius* | R | 0.07 ± 0.31 | - | - | 0.11 ± 0.40 |
| *Anisotremus interruptus* | O | 2.60 ± 16.94 | - | - | 4.12 ± 21.33 |
| *Haemulon flaviguttatum* | R | 0.69 ± 2.93 | 0.99 ± 1.72 | - | 0.99 ± 3.64 |
| *Haemulon maculicauda* | P | 11.98 ± 32.07 | 40.95 ± 70.92 | 0.69 ± 2.34 | 14.44 ± 33.7 |
| *Haemulon scudderii* | R | 2.25 ± 15.27 | - | - | 3.57 ± 19.23 |
| *Haemulon steindachneri* | P | 1.89 ± 11.1 | 2.78 ± 4.57 | 0.062 ± 0.23 | 2.68 ± 13.93 |
| *Microlepidotus brevipinnis* | O | 1.45 ± 6.56 | 7.54 ± 13.06 | - | 1.52 ± 7.21 |
| **Familia Labridae** |  |  |  |  |  |
| *Bodianus diplotaenia* | P | 1.10 ± 2.37 | 0.16 ± 0.29 | 0.01 ± 0.05 | 1.72 ± 2.81 |
| *Halichoeres chierchiae* | P | 0.42 ± 0.97 | - | 0.37 ± 1.38 | 0.48 ± 0.78 |
| *Halichoeres dispilus* | P | 1.39 ± 1.48 | 1.05 ± 1.40 | 1.92 ± 1.58 | 1.17 ± 1.31 |
| *Halichoeres nicholsi* | C | 0.24 ± 0.48 | - | 0.09 ± 0.23 | 0.34 ± 0.57 |
| *Halichoeres notospilus* | R | 0.10 ± 0.66 | - | - | 0.15 ± 0.82 |
| *Thalassoma lucasanum* | P | 0.98 ± 2.08 | 5.74 ± 5.28 | 0.68 ± 1.64 | 0.63 ± 1.06 |
| **Familia Lutjanidae** |  |  |  |  |  |
| *Hoplopagrus guentherii* | R | 0.08 ± 0.39 | 0.77 ± 1.33 | - | 0.05 ± 0.26 |
| *Lutjanus argentiventris* | P | 2.93 ± 12.69 | 1.56 ± 2.70 | - | 4.49 ± 15.85 |
| *Lutjanus guttatus* | P | 1.37 ± 8.19 | 2.16 ± 3.61 | 0.03 ± 0.10 | 1.94 ± 10.27 |
| *Lutjanus inermis* | R | 0.04 ± 0.22 | 0.12 ± 0.21 | - | 0.05 ± 0.27 |
| *Lutjanus novemfasciatus* | R | 0.03 ± 0.21 | 0.48 ± 0.83 | - | - |
| **Familia Scaridae** |  |  |  |  |  |
| *Scarus compressus* | R | 0.18 ± 1.00 | - | - | 0.29 ± 1.26 |
| *Scarus ghobban* | O | 0.49 ± 1.91 | 1.76 ± 1.57 | 0.04 ± 0.15 | 0.57 ± 2.32 |
| Especie | Dominancia  Específica | Biomasa (g m-2) | | | |
|  | Total | AC | ACM | CCB |
| *Scarus rubroviolaceus* | R | 0.21± 1.04 | - | - | 0.34 ± 1.31 |
| *Calamus brachysomus* | R | 0.14 ± 0.75 | 0.438  ± 0.759 | - | 0.17 ± 0.92 |
| **Orden Holocentriformes** |  |  |  |  |  |
| **Familia Holocentridae** |  |  |  |  |  |
| *Myripristis berndti* | R | 0.10 ± 0.65 | - | - | 0.15 ± 0.82 |
| *Myripristis leiognathus* | R | 0.17 ± 0.67 | - | - | 0.27 ± 0.83 |
| *Sargocentron suborbitale* | P | 0.81 ± 1.67 | - | - | 1.29 ± 1.96 |
| **Orden Kurtiformes** |  |  |  |  |  |
| **Familia Apogonidae** |  |  |  |  |  |
| *Apogon dovii* | R | <0.001 | <0.001 | <0.001 | - |
| *Apogon pacificus* | R | 0.002 ± 0.01 | - | - | 0.002 ± 0.01 |
| **Orden Mugiliformes** |  |  |  |  |  |
| **Familia Mugilidae** |  |  |  |  |  |
| *Mugil curema* | R | 0.33 ± 2.23 | - | 1.08 ± 4.04 | - |
| **Familia Mullidae** |  |  |  |  |  |
| *Mulloidichthys dentatus* | R | 0.52 ± 3.51 | - | - | 0.82 ± 4.42 |
| *Mulloidichthys vanicolensis* | R | 0.021 ± 0.10 | - | 0.034 ± 0.13 | 0.016 ± 0.09 |
| *Pseudupeneus grandisquamis* | R | 0.004 ± 0.02 | - | - | 0.01 ± 0.03 |
| **Orden Ovalentaria incertae sedis** |  |  |  |  |  |
| **Familia Pomacentridae** |  |  |  |  |  |
| *Abudefduf troschelii* | P | 21.47 ± 56.37 | 4.55 ± 4.13 | 0.81 ± 2.79 | 33.20 ± 68.7 |
| *Azurina atrilobata* | P | 6.68 ± 19.41 | 36.01 ± 62.30 | 5.54 ± 19.03 | 4.19 ± 7.79 |
| *Microspathodon dorsalis* | P | 1.41 ± 2.79 | - | - | 2.24 ± 3.26 |
| *Stegastes acapulcoensis* | P | 5.07 ± 5.54 | 4.90  ± 8.19 | 1.22 ± 2.09 | 6.94 ± 5.61 |
| *Stegastes beebei* | R | 0.14 ± 0.49 | - | - | 0.22 ± 0.60 |
| *Stegastes flavilatus* | P | 0.78 ± 1.55 | 0.98  ± 1.55 | 0.12 ± 0.27 | 1.08 ± 1.83 |
| **Orden Perciformes** |  |  |  |  |  |
| **Familia Serranidae** |  |  |  |  |  |
| *Alphestes immaculatus* | R | 0.14 ± 0.95 | 2.14 ± 3.71 | - | - |
| *Cephalopholis panamensis* | P | 1.04 ± 2.08 | 2.12 ± 3.65 | 0.01 ± 0.03 | 1.44 ± 2.28 |
| *Epinephelus labriformis* | C | 0.78 ± 1.55 | 1.38 ± 1.87 | - | 1.09 ± 1.78 |
| *Serranus psittacinus* | P | 0.47 ± 0.69 | 0.52 ± 0.81 | 0.92 ± 0.70 | 0.25 ± 0.58 |
| **Orden Scombriformes** |  |  |  |  |  |
| **Familia Scombridae** |  |  |  |  |  |
| *Euthynnus lineatus* | R | 0.57 ± 3.86 | - | - | 0.90 ± 4.86 |
| *Scomberomorus sierra* | R | 0.01± 0.08 | - | - | 0.02 ± 0.09 |
| Especie | Dominancia  Específica | Biomasa (g m-2) | | | |
|  | Total | AC | ACM | CCB |
| **Orden Syngnathiformes** |  |  |  |  |  |
| **Familia Fistulariidae** |  |  |  |  |  |
| *Fistularia commersonii* | R | 0.72  ± 3.44 | 1.21 ± 2.09 | - | 1.01 ± 4.28 |
| **Orden Tetraodontiformes** |  |  |  |  |  |
| **Familia Balistidae** |  |  |  |  |  |
| *Balistes polylepis* | R | 0.01 ± 0.09 | 0.20 ± 0.35 | - | - |
| *Pseudobalistes naufragium* | R | 0.10 ± 0.65 | - | 0.32 ± 1.18 | - |
| *Sufflamen verres* | P | 1.86 ± 2.40 | 1.25 ± 1.55 | 0.77 ± 1.11 | 2.46 ± 2.74 |
| **Familia Diodontidae** |  |  |  |  |  |
| *Chilomycterus reticulatus* | R | 0.18 ± 1.24 | - | - | 0.29 ± 1.56 |
| *Diodon holocanthus* | C | 0.66 ± 1.70 | 2.09 ± 3.62 | 0.53 ± 0.46 | 0.57 ± 1.84 |
| *Diodon hystrix* | R | 0.28 ± 1.32 | - | - | 0.45 ± 1.65 |
| **Familia Monacanthidae** |  |  |  |  |  |
| *Aluterus scriptus* | R | 0.04 ± 0.24 | - | - | 0.06 ± 0.31 |
| **Familia Tetraodontidae** |  |  |  |  |  |
| *Arothron hispidus* | R | 0.09 ± 0.38 | - | - | 0.14 ± 0.47 |
| *Arothron meleagris* | R | 0.13 ± 0.76 | - | 0.06 ± 0.24 | 0.18 ± 0.95 |
| *Canthigaster punctatissima* | C | 0.19 ± 0.31 | 0.10 ± 0.12 | 0.06 ± 0.14 | 0.25 ± 0.37 |
| *Sphoeroides annulatus* | R | 0.04 ± 0.27 | - | 0.13 ± 0.49 | - |
| *Sphoeroides lobatus* | R | 0.04 ± 0.25 | 0.57 ± 0.96 | - | 0.002 ± 0.01 |
| **Clase Elasmobranchii** |  |  |  |  |  |
| **Orden Myliobatiformes** |  |  |  |  |  |
| **Familia Aetobatidae** |  |  |  |  |  |
| *Aetobatus narinari* | R | 0.15 ± 1.04 | - | - | 0.24 ± 1.31 |
| **Familia Dasyatidae** |  |  |  |  |  |
| *Hypanus longus* | R | 3.27 ± 22.18 | - | - | 5.19 ± 27.94 |
| **Familia Urolophidae** |  |  |  |  |  |
| *Urobatis halleri* | R | 0.07 ± 0.46 | - | - | 0.11 ± 0.57 |
| **Orden Orectolobiformes** |  |  |  |  |  |
| **Familia Ginglymostomatidae** |  |  |  |  |  |
| *Ginglymostoma unami* | R | 4.59 ± 31.14 | - | - | 7.28 ± 39.19 |

Apéndice 3

Análisis de similitud porcentual (SIMPER) de la biomasa de especies de peces observadas en los ecosistemas coralinos de los sitios de importancia para la conservación Papagayo y Punta Pargos - Punta Gorda. Ecosistemas coralinos; arrecifes coralinos vivos (AC), arrecifes coralinos muertos (ACM) y comunidades coralinas sobre basaltos (CCB).

Appendix 3

Percentage similarity analysis (SIMPER) of the biomass of fish species observed in the coral ecosystems of the conservation importance sites Papagayo and Punta Pargos - Punta Gorda.Coral ecosystems; live coral reefs (AC), dead coral reefs (ACM) and coral communities upon basalts (CCB).

|  |  |  |
| --- | --- | --- |
| **Ecosistemas** | **Especie** | **% Contribución a la Disimilitud** |
| AC ~ ACM | *Acanthurus xanthopterus* | 16 |
| *Haemulon maculicauda* | 14 |
| *Azurina atrilobata* | 13 |
| *Johnrandallia nigrirostris* | 9 |
| *Haemulon steindachneri* | 8 |
| AC ~ CCB | *Haemulon maculicauda* | 13 |
| *Acanthurus xanthopterus* | 13 |
| *Azurina atrilobata* | 10 |
| *Abudefduf troschelii* | 7 |
| *Johnrandallia nigrirostris* | 7 |
| ACM ~ CCB | *Abudefduf troschelii* | 12 |
| *Stegastes acapulcoensis* | 9 |
| *Haemulon maculicauda* | 8 |
| *Azurina atrilobata* | 7 |
| *Chaetodon humeralis* | 3 |

Apéndice 4

Dominancia específica y densidad de las especies de macroinvertebrados observadas en los ecosistemas coralinos visitados en los sitios de importancia para la conservación Papagayo y Punta Pargos - Punta Gorda. Ecosistemas coralinos; arrecifes coralinos vivos (AC), arrecifes coralinos muertos (ACM) y comunidades coralinas sobre basaltos (CCB). Dominancia específica; predominante (P), común (C), ocasional (O) y raro (R).

Appendix 4

Specific dominance and density of macroinvertebrate species observed in the coral ecosystems visited in the sites of conservation importance Papagayo and Punta Pargos - Punta Gorda. Coral ecosystems; living coral reefs (AC), dead coral reefs (ACM) and coral communities upon basalts (CCB). Specific dominance; predominant (P), common (C), occasional (O) and rare (R).

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Especie | Dominancia  Específica | Biomasa (g m-2) | | | |
|  | Total | AC | ACM | CCB |
| **Filo Arthropoda** |  |  |  |  |  |
| **Clase Malacostraca** |  |  |  |  |  |
| *Aniculus elegans* | R | 0.001 ± 0.007 | - | - | 0.002 ± 0.009 |
| *Himenocera picta* | R | 0.001 ± 0.005 | - | 0.002 ± 0.009 | - |
| *Paguroidea* spp. | R | 0.002 ± 0.01 | - | - | 0.003 ± 0.013 |
| *Panulirus* spp. | R | 0.001 ± 0.004 | - | 0.001 ± 0.004 | 0.001 ± 0.004 |
| *Stenorynchus debilis* | P | 0.106 ± 0.111 | 0.378 ± 0.092 | 0.089 ± 0.092 | 0.086 ± 0.082 |
| *Trapezia* spp. | R | 0.007 ± 0.021 | 0.022 ± 0.038 | 0.008 ± 0.027 | 0.004 ± 0.016 |
| **Filo Echinodermata** |  |  |  |  |  |
| **Clase Asteroidea** |  |  |  |  |  |
| *Mitrodia bradleyi* | R | 0.001 ± 0.005 | - | 0.001 ± 0.004 | 0.002 ± 0.005 |
| *Nidorellia armata* | R | 0.005 ± 0.017 | - | - | 0.008 ± 0.021 |
| *Pharia pyramidata* | C | 0.011 ± 0.024 | - | 0.004 ± 0.01 | 0.016 ± 0.028 |
| *Phataria unifascialis* | C | 0.022 ± 0.033 | 0.006 ± 0.01 | 0.001 ± 0.004 | 0.034 ± 0.037 |
| **Clase Echinoidea** |  |  |  |  |  |
| *Astropyga pulvinata* | R | 0.003 ± 0.015 | - | 0.007 ± 0.027 | 0.001 ± 0.003 |
| *Diadema mexicanum* | P | 5.569 ± 7.087 | 9.311 ± 16.012 | 1.176 ± 1.392 | 7.302 ± 6.873 |
| *Echinometra vanbrunti* | P | 0.036 ± 0.136 | - | 0.002 ± 0.009 | 0.056 ± 0.168 |
| *Eucidaris thouarsii* | P | 0.471 ± 0.683 | 0.05 ± 0.06 | 0.162 ± 0.367 | 0.664 ± 0.763 |
| *Toxopneustes roseus* | P | 0.034 ± 0.083 | - | 0.06 ± 0.14 | 0.024 ± 0.037 |
| **Clase Holothuroidea** |  |  |  |  |  |
| *Cucumaria flamma* | P | 0.036 ± 0.121 | - | - | 0.057 ± 0.15 |
| *Euapta godeoffroyi* | R | 0.001 ± 0.003 | - | 0.002 ± 0.006 | - |
| *Isostichopus fuscus* | R | 0.002 ± 0.005 | - | - | 0.003 ± 0.006 |
| **Filo Mollusca** |  |  |  |  |  |
| **Clase Bivalvia** |  |  |  |  |  |
| *Chama* spp. | R | 0.001 ± 0.005 | - | - | 0.002 ± 0.007 |
| Pectinidae spp. | R | >0.001 | - | - | 0.001 ± 0.003 |
| *Pinctada mazatlanica* | C | 0.009 ± 0.016 | 0.017 ± 0.029 | 0.002 ± 0.007 | 0.012 ± 0.017 |
| *Pinna rugosa* | P | 0.03 ± 0.056 | 0.017 ± 0.029 | 0.013 ± 0.023 | 0.039 ± 0.067 |
| *Spondylus limbatus* | R | 0.001 ± 0.004 | - | - | 0.001 ± 0.004 |
| *Spondylus* spp. | R | 0.001 ± 0.003 | - | - | 0.001 ± 0.004 |
|  |  |  |  |  |  |
| Especie | Dominancia  Específica | Biomasa (g m-2) | | | |
|  | Total | AC | ACM | CCB |
| **Clase Cephalopoda** |  |  |  |  |  |
| *Octopus mimus* | R | 0.002 ± 0.007 | - | 0.001 ± 0.004 | 0.003 ± 0.009 |
| **Clase Gastropoda** |  |  |  |  |  |
| *Acanthais* spp. | R | 0.004 ± 0.022 | - | - | 0.006 ± 0.028 |
| Architectonicidae spp. | R | 0.001 ± 0.005 | - | 0.002 ± 0.009 | - |
| *Elysia diomedea* | P | 0.145 ± 0.398 | 0.106 ± 0.084 | 0.351 ± 0.683 | 0.049 ± 0.084 |
| *Elysia* sp. | R | 0.001 ± 0.005 | - | - | 0.001 ± 0.006 |
| *Felimare agassizii* | R | 0.001 ± 0.004 | - | - | 0.002 ± 0.005 |
| *Hexaplex* spp | P | 0.041 ± 0.048 | 0.083 ± 0.104 | 0.027 ± 0.049 | 0.044 ± 0.038 |
| *Leucozonia cerata* | C | 0.024 ± 0.043 | - | 0.005 ± 0.014 | 0.036 ± 0.05 |
| *Malea rigens* | R | >0.001 | - | 0.001 ± 0.004 | - |
| *Mitridae* spp. | R | 0.001 ± 0.003 | - | 0.002 ± 0.006 | - |
| Muricidae spp. | R | >0.001 | 0.006 ± 0.01 | - | - |
| *Neorapana muricata* | C | 0.026 ± 0.045 | - | - | 0.041 ± 0.052 |
| *Opeatostoma pseudodon* | P | 0.093 ± 0.12 | - | 0.063 ± 0.093 | 0.118 ± 0.13 |
| *Triplofusus princeps* | R | 0.002 ± 0.007 | - | 0.001 ± 0.004 | 0.003 ± 0.008 |
| *Vasula melones* | R | 0.001 ± 0.006 | - | - | 0.002 ± 0.007 |
| *Vasum* spp. | C | 0.011 ± 0.015 | 0.006 ± 0.01 | 0.004 ± 0.007 | 0.015 ± 0.017 |

Apéndice 5

Análisis de similitud porcentual (SIMPER) de la densidad de especies de macroinvertebrados observadas en los ecosistemas coralinos de los sitios de importancia para la conservación Papagayo y Punta Pargos - Punta Gorda. Ecosistemas coralinos; arrecifes coralinos vivos (AC), arrecifes coralinos muertos (ACM) y comunidades coralinas sobre basaltos (CCB).

Appendix 5

Percentage similarity analysis (SIMPER) of macroinvertebrate species density observed in coral ecosystems at the conservation importance sites Papagayo and Punta Pargos - Punta Gorda. Coral ecosystems; living coral reefs (AC), dead coral reefs (ACM) and coral communities upon basalts (CCB).

|  |  |  |
| --- | --- | --- |
| **Ecosistemas** | **Especie** | **% Contribución a la Disimilitud** |
| AC ~ ACM | *Diadema mexicanum* | 50 |
| *Stenorynchus debilis* | 13 |
| *Elysia diomedea* | 9 |
| AC ~ CCB | *Diadema mexicanum* | 59 |
| *Eucidaris thouarsii* | 9 |
| *Stenorynchus debilis* | 4 |
| ACM ~ CCB | *Abudefduf troschelii* | 52 |
| *Stegastes acapulcoensis* | 11 |
| *Chaetodon humeralis* | 5 |