**Table S3.**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Trophic Group |   | Test-statistic |   | *p*-value |   | Contrast (permuted *t-*test) |
| **Fishing Effects** |
| Carnivore |  | *F*1,122 = 13.95 |  | 0.0125 |  | Disturbed=Non-Disturbed |
| Corallivore |  | *F*1,122 = 0.0015 |  | 1 |  |  |
| Planktivore |  | *F*1,122 = 0.026 |  | 1 |  |  |
| Herbivore |  | *F*1,122 = 0.74 |  | 1 |  |  |
| Detritivore |  | *F*1,122 = 10.41 |  | 0.001 |  |  |
| **Disturbance Effects** |
| Carnivore |  | *F*1,122 = 2.26 |  | 1 |  |  |
| Corallivore |  | *F*1,122 = 13.66 |  | 0.0075 |  | Fished=Non-Fished |
| Planktivore |  | *F*1,122 = 70.25 |  | 0.0025 |  | Fished=Non-Fished |
| Herbivore |  | *F*1,122 = 80.05 |  | 0.0025 |  | Fished<Non-Fished\* |
| Detritivore |  | *F*1,122 = 35.75 |  | 0.0001 |  |  |
| **Interaction Effects (Fishing x Disturbance)** |
| Carnivore |  | *F*1,122 = 0.11 |  | 1 |  |  |
| Corallivore |  | *F*1,122 = 2.81 |  | 1 |  |  |
| Planktivore |  | *F*1,122 = 0.40 |  | 1 |  |  |
| Herbivore |  | *F*1,122 = 2.15 |  | 1 |  |  |
| Detritivore |  | *F*1,122 = 15.88 |  | 0.005 |  |  |

 \*Contrast significant only during disturbed phase (*t*47 = 3.62, *p* = 0.001)