

ABSTRAK

Ekosistem terumbu karang di Pulau Pari mengalami degradasi akibat adanya faktor ekologis dan antropogenik. Pada saat kondisi ekosistem terumbu karang terdegradasi, akan seiring dengan penurunan tutupan karang dan peningkatan persentase tutupan *turf algae*. *Turf algae* memiliki peran penting sebagai indikator kesehatan terumbu karang karena hidup berasosiasi pada ekosistem terumbu karang dengan variasi kedalaman yang berbeda. Tujuan penelitian ini untuk mengetahui persentase tutupan *turf algae* dan karang serta mengetahui hubungan antara kedua variabel tersebut sebagai indikator status terumbu karang. Penelitian ini dilakukan pada 3 stasiun penelitian dengan perbedaan variasi kedalaman (4 m dan 7 m). Metode UPT digunakan untuk pengukuran persentase tutupan *turf algae* dan karang serta software CPCe untuk menganalisis dan menghitung persentase tutupan bentik (*turf algae* dan karang). Data yang diperoleh dianalisis secara deskriptif, dan untuk mengetahui hubungan kedua variabel ukur dilakukan analisis statistik regresi linier sederhana. Hasil menunjukkan persentase tutupan *turf algae* lebih tinggi pada kedalaman 4 m (*turf algae*: 46.20%; karang: 32.73%) dibandingkan kedalaman 7 m (*turf algae*: 35.33%; karang: 20.67%) di setiap stasiun. Persentase tutupan *turf algae* berpengaruh signifikan terhadap persentase tutupan karang dengan nilai $r = -0.83$ pada persamaan $y' = -2.9301x' + 11.672$, $R^2 = 0.6956$. Hasil dari penelitian ini dapat diterapkan sebagai strategi dalam penanggulangan terumbu karang yang rusak.

Kata kunci : Terumbu karang; *turf algae*; kompetisi; kedalaman; Pulau Pari

ABSTRACT

The coral reef ecosystem in Pari Island is experiencing degradation due to ecological and anthropogenic factors. When the condition of the coral reef ecosystem is degraded, a decrease in coral cover, and an increase in the percentage of *turf algae* cover. *Turf algae* have an important role as an indicator of coral reef health because it lives in association with coral reef ecosystems with different depth variations. The purpose of this study was to determine the percentage cover of *turf algae* and coral and to determine the relationship between these two variables as an indicator of coral reef status. This research was conducted at 3 research stations with different depth variations (4 m and 7 m). The UPT method was used to measure the percentage cover of *turf algae* and coral and the CPCe software to analyze and calculate the percentage of benthic cover (*turf algae* and coral). The data obtained were analyzed descriptively, and to determine the relationship between the two measuring variables, a simple linear regression statistical analysis was carried out. The results showed that the percentage of *turf algae* cover was higher at a depth of 4 m (*turf algae*: 46.20%; coral: 32.73%) compared to a depth of 7 m (*turf algae*: 35.33%; coral: 20.67%) at each station. The percentage of *turf algae* cover has a significant effect on the percentage of coral cover with a value of $r = -0.83$ in the equation $y' = -2.9301x' + 11.672$, $R^2 = 0.6956$. The results of this study can be applied as a strategy in dealing with damaged coral reefs.

Keywords : *Coral reef; turf algae; competition; depth; Pari Island*