

RINGKASAN

RIZUANDI. Identifikasi Jenis dan Prevalensi Penyakit Karang pada Terumbu Karang di Perairan Desa Pengudang Kabupaten Bintan. Dibimbing oleh DEDY KURNIAWAN dan TRY FEBRIANTO.

Terumbu karang adalah hewan bentik yang hidup di dasar perairan. Sebagian besar hidupnya, hewan ini berkoloni yang tersusun dari kalsium karbonat (CaCO_3) merupakan hasil sekresi dari *Zooxanthellae*. Terumbu karang merupakan salah satu ekosistem di perairan tropis yang tergolong mudah terinfeksi penyakit karang terhadap tekanan atau perubahan lingkungan seperti pencemaran, suhu tinggi, sedimentasi, nutrien yang tinggi terutama nitrogen senyawa karbon, predator, dan kompetisi dengan alga yang pertumbuhannya sangat cepat. Tujuan dari dilakukan penelitian adalah mengetahui persentase tutupan karang hidup di perairan Desa Pengudang, mengidentifikasi jenis-jenis penyakit karang di perairan Desa Pengudang dan menganalisis prevalensi karang yang terinfeksi penyakit karang di perairan Desa Pengudang. Penelitian dilakukan pada bulan November 2021. Lokasi penelitian di perairan Desa Pengudang, Kecamatan Teluk Sebong, Kabupaten Bintan, Provinsi Kepulauan Riau. Alat yang digunakan Perahu, *Roll meter*, *Belt Transek*, Alat *Self-Contained Underwater Breathing Apparatus* (SCUBA), Alat tulis, *Underwater* kamera, *Current Drouge*, *Secchi disc*, *Depth gauge*, Multi Tester (Multitest Model Y.K 005 WA), *Hand refractometer*, Tongkat 1 meter dan GPS (Global positioning system). Bahan yang digunakan aquades dan tisu, foto koloni dan penyakit karang, Buku identifikasi penyakit dan *Ice Box*. Hasil penelitian persentase tutupan karang hidup (HC) sebesar 56%-75% berdasarkan KEPMEN LH nomor 4 tahun 2001 dalam kategori baik. Untuk penyakit karang yang ditemukan terdiri dari *black band disease* (BBD), *brown band disease* (BrB), *dark spots disease* (DSD), *yellow band disease* (YBD), dan *white syndromes* (WS). Dari lima penyakit tersebut, persentase prevalensi penyakit karang sebesar 4,67%-9,07%, kemudian untuk kepadatan penyakit karang yang paling banyak ditemukan terdapat pada (St-2) sebesar 0,320 koloni/m², kemudian diikuti (St-3) sebesar 0,300 koloni/m² dan nilai terendah untuk kepadatan dari 3 stasiun terdapat pada (St-1) sebesar 0,220 koloni/m².

Kata Kunci: Terumbu Karang, Penyakit, Prevalensi, Kepadatan.

SUMMARY

RIZUANDI. Identification of Types and Prevalence of Coral Diseases on Coral Reefs in Pengudang Village, Bintan Regency. Supervised by DEDY KURNIAWAN and TRY FEBRIANTO.

Coral reefs are benthic animals that live on the bottom of the water. Most of their lives, these animals colonize which is composed of calcium carbonate (CaCO_3) which is the result of secretions from *Zooxanthellae*. Coral reefs are one of the ecosystems in tropical waters that are classified as easily infected with coral diseases against environmental pressures or changes such as pollution, high temperatures, sedimentation, high nutrients, especially nitrogen, carbon compounds, predators, and competition with algae that grow very fast. The purpose of the study was to determine the percentage of live coral cover in the waters of Pengudang Village, identify the types of coral disease in the waters of Pengudang Village and analyze the prevalence of coral infected with coral disease in the waters of Pengudang Village. The research was conducted in November 2021. The research location is in the waters of Pengudang Village, Teluk Sebong District, Bintan Regency, Riau Islands Province. The tools used are Boat, *Roll meter*, *Belt Transect*, *Self-Contained Underwater Breathing Apparatus* (SCUBA), Stationery, *Underwater camera*, *Current Drouge*, *Secchi disc*, *Depth gauge*, Multi Tester (Multitest Model YK 005 WA), *Hand refractometer*, 1 meter stick and GPS (Global positioning system). The materials used are distilled water and tissue, photos of coral colonies and diseases, disease identification book and *Ice Box*. The results of the study on the percentage of live coral cover (HC) of 56%-75% based on KEPMEN LH number 4 of 2001 in the good category. The coral diseases found consisted of *black band disease* (BBD), *brown band disease* (BrB), *dark spots disease* (DSD), *yellow band disease* (YBD), and *white syndromes* (WS). Of the five diseases, the percentage of coral disease prevalence was 4.67%-9.07%, then for the density of coral disease the most commonly found was at (St-2) of 0.320 colonies/ m^2 , then followed by (St-3) of 0.300 colonies/ m^2 and the lowest value for the density of the 3 stations was at (St-1) of 0.220 colonies/ m^2 .

Keywords: Coral Reef, Disease, Prevalence, Density.