

M. Athoillah An Nafi'. NPM. 210341100083. Indeks Nilai Penting Mangrove dan Kelimpahan Gastropoda di Pesisir Arosbaya dan Bancaran, Bangkalan. Di bawah bimbingan Eka Nurrahema Ning Asih, S.Kel., M.Si.

ABSTRAK

Ekosistem mangrove berperan penting sebagai habitat gastropoda yang berfungsi sebagai bioindikator kualitas lingkungan perairan pesisir. Kajian mengenai kondisi ekologi, kualitas perairan, dan kelimpahan gastropoda di kawasan pesisir Madura, khususnya Kecamatan Arosbaya dan Bancaran, Kabupaten Bangkalan, masih terbatas sehingga menyebabkan kesenjangan data dasar ekologis bagi pengelolaan dan konservasi ekosistem mangrove secara berkelanjutan. Kedua kawasan tersebut memiliki karakteristik ekologis dan tingkat tekanan aktivitas manusia yang berbeda sehingga relevan untuk dikaji secara komparatif. Penelitian ini bertujuan untuk (1) mengetahui kondisi kualitas perairan, (2) menganalisis Indeks Nilai Penting (INP) mangrove, dan (3) menganalisis kelimpahan gastropoda di pesisir Kecamatan Arosbaya (Desa Tengket) dan Kecamatan Bancaran, Bangkalan. Penelitian dilaksanakan pada April–Mei 2026 menggunakan metode transek garis berpetak dengan pendekatan purposive sampling pada tiga stasiun di masing-masing lokasi; kualitas perairan (suhu, salinitas, pH, dan oksigen terlarut) diukur secara *in situ*, sedangkan data vegetasi mangrove dan gastropoda dikumpulkan pada plot 10×10 m dan subplot 1×1 m di setiap transek. Hasil penelitian menunjukkan bahwa (1) kualitas perairan di kedua lokasi secara umum masih mendukung ekosistem mangrove, meskipun Stasiun 1 Bancaran mencatat DO di bawah baku mutu (4,11 mg/L) dan Stasiun 2 Bancaran mencatat pH di bawah baku mutu (6,67); (2) INP mangrove tertinggi di Tengket dicapai oleh *Rhizophora apiculata* (153,72%) di Stasiun 2, sedangkan di Bancaran oleh *Rhizophora mucronata* (140,85%) di Stasiun 3, dengan kerapatan mangrove di kedua lokasi tergolong kategori baik (≥ 1.000 ind/ha); dan (3) kelimpahan gastropoda di Bancaran (786 individu; 4 spesies; 29,1 ind/m²) lebih tinggi dibandingkan Tengket (548 individu; 2 spesies; 20,3 ind/m²), dengan *Nerita lineata* mendominasi di Tengket dan *Cerithidea cingulata* mendominasi di Stasiun 3 Bancaran.

Kata kunci: Arosbaya, Bancaran, Gastropoda, Indeks Nilai Penting, Mangrove, Madura.

M. Athoillah An Nafi'. NPM. 210341100083. Important Value Index of Mangrove and Gastropod Abundance in the Coastal Areas of Arosbaya and Bancaran, Bangkalan. Supervised by **Eka Nurrahema Ning Asih, S.Kel., M.Si.**

ABSTRACT

*Mangrove ecosystems play an important role as habitat for gastropods, which serve as bioindicators of coastal water quality. Research on the ecological condition, water quality, and gastropod abundance in Madura's coastal areas, particularly Arosbaya and Bancaran Districts, Bangkalan Regency, remains limited, creating a gap in baseline ecological data for the sustainable management and conservation of mangrove ecosystems. The two areas also differ in ecological characteristics and the level of anthropogenic pressure, making them relevant for comparative study. This study aimed to (1) assess water quality conditions, (2) analyze the mangrove Important Value Index (IVI), and (3) analyze gastropod abundance in the coastal areas of Arosbaya District (Tengket Village) and Bancaran District, Bangkalan. The study was conducted from April to May 2026 using a belt transect method with a purposive sampling approach at three stations in each location; water quality (temperature, salinity, pH, and dissolved oxygen) was measured in situ, while mangrove vegetation and gastropod data were collected in 10×10 m plots and 1×1 m subplots along each transect. Results showed that (1) water quality at both locations generally supported the mangrove ecosystem, although Station 1 Bancaran recorded DO below the quality standard (4.11 mg/L) and Station 2 Bancaran recorded pH below the quality standard (6.67); (2) the highest mangrove IVI in Tengket was achieved by *Rhizophora apiculata* (153.72%) at Station 2, while in Bancaran it was achieved by *Rhizophora mucronata* (140.85%) at Station 3, with mangrove density at both locations classified as good ($\geq 1,000$ ind/ha); and (3) gastropod abundance at Bancaran (786 individuals; 4 species; 29.1 ind/m²) was higher than at Tengket (548 individuals; 2 species; 20.3 ind/m²), with *Nerita lineata* dominant at Tengket and *Cerithidea cingulata* dominant at Station 3 Bancaran.*

Keywords: Arosbaya, Bancaran, Gastropoda, Important Value Index, Mangrove, Madura.