

HUBUNGAN MORFOMETRIK OTOLITH DENGAN PANJANG DAN BERAT IKAN SWANGGI (*Priacanthus tayenus* Richardson, 1846) YANG DIDARATKAN DI PELABUHAN PERIKANAN NUSANTARA TEGALSARI KOTA TEGAL

Ikan swanggi (*Priacanthus tayenus*) merupakan salah satu ikan hasil tangkapan nelayan yang didaratkan di Pelabuhan Perikanan Nusantara Tegalsari. Penelitian ini bertujuan untuk menyajikan indeks bentuk otolith, mengkaji morfometrik otolith, dan menganalisis hubungan morfometrik otolith dengan panjang dan berat ikan. Sampel ikan diambil bulan Oktober 2024 sebanyak 230 ekor dengan jumlah ikan jantan 161 dan betina 69 ekor. Sampel ikan swanggi diukur panjang, berat, dibedah perut untuk melihat jenis kelamin, dan diambil otolithnya. Pengambilan otolith menggunakan metode *up through gill*. Otolith yang berhasil diambil sebanyak 215 pasang dengan jumlah 150 pasang otolith jantan dan 65 pasang otolith betina yang kemudian diukur morfometriknya menggunakan ImageJ. Indeks bentuk otolith dihitung dengan 6 deskriptor yaitu  $F_F$ ,  $R_o$ ,  $C$ ,  $R_t$ ,  $E$ , dan  $A_R$ . Hasil bentuk otolith memiliki permukaan bertumpuk dengan rerata 0,640 ( $F_F < 1$ ), cenderung berbentuk oval dengan rerata 0,094 ( $E < 1$ ), dan memanjang dengan rerata 1,210 ( $A_R > 1$ ). Perbedaan otolith kiri dan kanan serta jantan dan betina diukur menggunakan uji-t dimana antara otolith kiri dan kanan memiliki panjang dan bobot otolith yang sama sama. Namun, terdapat perbedaan yang signifikan antara otolith jantan dan betina. Hubungan morfometrik otolith dengan panjang dan berat dihitung menggunakan persamaan regresi linier ( $y = a + bx$ ) dengan koefisien determinasi ( $R^2$ ) untuk mengetahui keeratan hubungan antara dua variabel. Perhitungan menghasilkan nilai  $R^2$  yang paling kuat antara panjang ikan dan lebar otolith ( $O_L$ ) dengan nilai 73,8% serta berat ikan dengan bobot otolith ( $O_M$ ) dengan nilai 84,3%.

Kata kunci: *Priacanthus tayenus*, analisis, determinasi, indeks bentuk, otolith

MORPHOMETRICS RELATIONSHIP OF OTOLITH WITH LENGTH AND WEIGHT OF PURPLE-SPOTTED BIGEYE (*Priacanthus tayenus*, Richardson 1846) LANDED AT TEGALSARI NUSANTARA FISHING PORT TEGAL CITY

Purple-spotted bigeye (*Priacanthus tayenus*) is one of the fish caught by fishermen who landed at Tegalsari Nusantara Fisheries Port. This study aims to present the otolith shape index, examine the otolith morphometrics, and analyze the relationship between otolith morphometrics and fish length and weight. Fish samples were collected in October 2024, with as many as 230 fish, with 161 male and 69 female fish. Fish samples were measured for length and weight, dissected to see the sex, and their otoliths were taken. Otolith collection used the up-through-gill method. The successfully taken otoliths were 215 pairs, with 150 pairs of male and 65 pairs of female otoliths, which were then measured for morphometrics using ImageJ. The otolith shape index was calculated using 6 descriptors:  $F_F$ ,  $R_O$ ,  $C$ ,  $R_t$ ,  $E$ , and  $A_R$ . The results of the otolith shape have a stacked surface with an average of 0.640 ( $F_F < 1$ ), tend to be oval with an average of 0.094 ( $E < 1$ ), and elongated with an average of 1.210 ( $A_R > 1$ ). The differences between the left and right otoliths and males and females were measured using the t-test, where the left and right otoliths had the same length and weight. However, there was a significant difference between male and female otoliths. The morphometric relationship of otoliths with length and weight was calculated using a linear regression equation ( $y = a + bx$ ) with a coefficient of determination ( $R^2$ ) to determine the closeness of the relationship between the two variables. The calculation produced  $R^2$  the strongest closeness relationship between fish length and otolith width (OL) with a value of 73.8% and fish weight with otolith weight (OM) with a value of 84.3%.

Keywords: *Priacanthus tayenus*, analysis, determination, shape index, otolith