

ABSTRACT

ARNIWATI. NPM 05161611058. *Aspects of Biology Reproduction Mackarel Scad Fishery (Decapterus russelli) that on land in Nusantara Fishery Port (PPN) Ternate. Supervised by IRHAM and SUNARTI.*

Mackarel scad is one of the potential fishery resources found in the North Maluku sea. Information of fish resources such as biological aspects of reproduction extremely required in management efforts resource sustainable fishery. Objective in the research is that for determine aspects of the biology of reproduction on (Pattern Growth, Factor Conditions, Ratio Sex, Level of Maturity gonads, Gonad Maturity Index, Fecundity and Egg Diameter) of mackarel scad (*Decapterus russelli*) landed at the Nusantara Fisheries Port (PPN) Ternate. Sampling of mackarel scad (*Decapterus russelli*) was obtained from the catch of fishermen who landed at the Bastiong Nusantara Fishery Port (PPN), Ternate City, North Maluku Province. The total number of fish samples used for the study was 400 fish. The results of the study have demonstrated a pattern of growth of mackarel scad (*Decapterus russelli*) male (3,43) and females (3,61) is the pattern of growth allometric positive. For the condition of male mackarel scad, it was obtained that the value of $K = 1,01$ and for the female fish, the value of $K = 1,05$ was obtained, so it was concluded that the conditions of male and female mackarel scad were less flat. The mean value of the relative weight condition factor was 100,75 for male fish and 104,86 for female fish. Ratio sex based test Chi-square is hit = 19,36 and tables = 3,84, from the results of the calculation of Chi-square turns out value hit more substantial than the value of the table so that be inferred ratio of genital mackarel scad male to female is not 1:1 or not in a state of balance. The relationship between the level of gonad maturity and the total body length of the male mackarel scad obtained that TKG I was in the range of total length (155-190 mm), TKG II (200-239 mm), TKG III (240-255 mm), and TKG IV (260-300 mm). While the length of total body mackarel scad females obtained that TKG I were in the range of length in total (160-186 mm), TKG II (204-237 mm), TKG III (238-269 mm), and TKG IV (240-305 mm). The fecundities of mackarel scad were (12.343-45.693 grain) in the length range of 238-305 mm. The diameter of mackarel scad eggs at TKG III and TKG IV were 0,109-0,153 mm and 0,120-0,158 mm.

Keywords : *Aspects of Biology, Mackarel Scad, PPN Ternate, Reproduction.*

RINGKASAN

ARNIWATI. NPM 05161611058. Aspek Biologi Reproduksi Ikan Layang (*Decapterus russelli*) yang Didaratkan di Pelabuhan Perikanan Nusantara (PPN) Ternate. Dibimbing oleh IRHAM dan SUNARTI.

Ikan layang merupakan salah satu potensi sumberdaya perikanan yang terdapat di laut Maluku Utara. Informasi sumberdaya ikan seperti aspek biologi reproduksi sangat diperlukan dalam upaya pengelolaan sumberdaya perikanan yang berkelanjutan. Tujuan dalam penelitian ini yaitu untuk menentukan aspek biologi reproduksi mengenai (Pola Pertumbuhan, Faktor Kondisi, Nisbah Kelamin, Tingkat Kematangan Gonad, Indeks Kematangan Gonad, Fekunditas dan Diameter Telur) ikan layang (*Decapterus russelli*) yang didaratkan di Pelabuhan Perikanan Nusantara (PPN) Ternate. Pengambilan sampel ikan layang (*Decapterus russelli*) diperoleh dari hasil tangkapan nelayan yang didaratkan di Pelabuhan Perikanan Nusantara (PPN) Bastiong Kota Ternate Provinsi Maluku Utara. Jumlah total sampel ikan yang digunakan untuk penelitian berjumlah 400 ekor ikan. Hasil penelitian ini menunjukkan pola pertumbuhan ikan layang (*Decapterus russelli*) jantan (3,43) dan betina (3,61) adalah pola pertumbuhan allometrik positif. Faktor kondisi ikan layang jantan diperoleh nilai $K = 1,01$ dan ikan betina diperoleh nilai $K = 1,05$, sehingga disimpulkan bahwa kondisi ikan layang jantan dan betina kurang pipih. Nilai rerata faktor kondisi berat relatif sebesar 100,75 untuk ikan jantan dan 104,86 untuk ikan betina. Nisbah kelamin berdasarkan uji *Chi-square* yaitu χ^2 hit = 19,36 dan χ^2 tabel = 3,84, dari hasil perhitungan *Chi-square* ternyata nilai χ^2 hit lebih besar dari nilai χ^2 tabel sehingga bisa disimpulkan nisbah kelamin ikan layang jantan terhadap betina tidak 1:1 atau tidak dalam keadaan seimbang. Hubungan tingkat kematangan gonad dengan panjang total tubuh ikan layang jantan diperoleh bahwa TKG I berada pada kisaran panjang total (155-190 mm), TKG II (200-239 mm), TKG III (240-255 mm), dan TKG IV (260-300 mm). Sedangkan pada ikan layang betina diperoleh bahwa TKG I berada pada kisaran panjang total (160-186 mm), TKG II (204-237 mm), TKG III (238-269 mm), dan TKG IV (240-305 mm). Fekunditas ikan layang yaitu (12.343-45.693 butir) pada kisaran panjang 238-305 mm. Diameter telur ikan layang pada TKG III dan TKG IV yaitu 0,109-0,153 mm dan 0,120-0,158 mm.

Kata Kunci: Aspek Biologi, Ikan Layang, PPN Ternate, Reproduksi