

## Intisari

Penelitian ini bertujuan untuk mengetahui kehadiran larva *Anisakis* (nematoda) pada ikan layang *Decapterus* spp. di Samudera Hindia Perairan Selatan Jawa Timur. Sebanyak 450 ekor sampel ikan layang yang terdiri dari ikan layang biasa (*D. russelli*), layang ekor merah (*D. kurroides*) dan layang deles (*D. macrosoma*) dikumpulkan dari PPN Prigi dan PPP Muncar Jawa Timur. Setiap sampel ikan diukur panjang total dan beratnya, kemudian dibedah untuk pengamatan infeksi *Anisakis*. Pemeriksaan infeksi *Anisakis* dilakukan pada bagian rongga tubuh, saluran pencernaan, hati, gonad dan daging. Larva *Anisakis* diawetkan dalam ethanol *absolute* untuk proses identifikasi secara morfologi dan molekuler (PCR-RFLP dan *Direct Sequencing*). Hasil penelitian menunjukkan bahwa ikan layang (*Decapterus* spp.) rentan terhadap infeksi *Anisakis* dengan tingkat prevalensi dan intensitas yang berbeda. Prevalensi dan intensitas infeksi yang paling tinggi terjadi pada ikan layang ekor merah (*D. kurroides*), dengan prevalensi sebesar 100% dan intensitas infeksi sebesar 24,54 larva/ind (P) dan 19,76 larva/ind (M). Sebagian besar larva ditemukan pada bagian rongga tubuh (52,30%-76,61%) dan saluran pencernaan (16,78%-18,40%), sangat sedikit ditemukan pada organ dalam lain dan daging. Hasil identifikasi morfologi dan molekuler menunjukkan bahwa *Anisakis* ikan layang merupakan *Anisakis* Tipe I, yaitu *Anisakis typica*. Terdapat perbedaan komposisi nukleotida yang mengindikasikan bahwa *A. typica* yang menginfeksi ikan layang ekor merah (*D. kurroides*) dan ikan layang deles (*D. macrosoma*) di Perairan Selatan Jawa Timur memiliki keragaman genetik. Kehadiran *Anisakis* dapat digunakan sebagai indikator biologis untuk beberapa studi ekologi.

Kata kunci : *Anisakis*, identifikasi, intensitas, layang, prevalensi

### Abstract

This study aimed to determine the presence of *Anisakis* larvae (nematodes) in scad (*Decapterus* spp.) in the Indian Ocean Southern Water of East Java. A total of 450 fish samples consisting 3 species i.e. Indian scad (*Decapterus russelli*), redbtail scad (*D. kurroides*) and shortfin scad (*D. macrosoma*) were collected from PPN Prigi and PPP Muncar East Java. Each sample was measured its length and weight, and then dissected for *Anisakis* larvae observation. Examination of *Anisakis* larvae infection was conducted in the body cavity, digestive tract, liver, gonad and muscle. *Anisakis* larvae were preserved in ethanol absolute for morphological and molecular identification (PCR-RFLP and Direct sequencing). The results showed that the scad (*Decapterus* spp.) was susceptible to *Anisakis* infection with the different prevalence and intensity levels. The highest prevalence and intensity of infection was occurred in red tail scad (*D. kurroides*), with a prevalence was 100% and mean intensity was 22.54 larvae/individuals, whereas short-fin scad (*D. macrosoma*) has the lowest prevalence and mean intensity (P = 30.61% and MI = 1.29 larvae/individual). Most of the larvae were found in the body cavity (52.30% -76.61%) and the digestive tract (16.78% - 18.40%), only a few of larvae were found in other internal organs and muscle. The results of morphological and molecular identification indicate that the scad infected by *Anisakis* Type I, namely *Anisakis typica*. Differences of nucleotide composition indicate that *A. typica* that infects redbtail scad (*D. kurroides*) and shortfin scad (*D. macrosoma*) in southern water of East Java has genetic diversity. The prevalence of *Anisakis* can be used as biological indicator for a few study of ecology.

Keywords: *Anisakis*, identification, intensity, scad, prevalence