STRUKTUR HISTOLOGIS INSANG DAN POPULASI SEL MUKUS PADA BEBERAPA STADIUM PERKEMBANGAN IKAN SIDAT (*Anguilla bicolor bicolor* McClelland, 1844)

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INTISARI

Salah satu spesies ikan sidat yang banyak dijumpai di Indonesia adalah *Anguilla bicolor bicolor.* Ikan sidat merupakan ikan katadromous yang bermigrasi dari air tawar ke air laut untuk memijah. Selama migrasi tersebut ikan ini rentan menghadapi stress sehingga dapat mempengaruhi struktur histologis dan populasi sel mukus pada insangnya. Penelitian ini bertujuan untuk mengetahui struktur histologis dan populasi sel mukus pada insang ikan sidat *A. bicolor bicolor* stadium *elver, yellow,* dan *silver eel.* Preparat histologis insang dibuat mengikuti standar protokol untuk metode parafin. Ada tiga jenis pewarnaan yang digunakan yaitu H-E, MAF, dan AB-PAS. Hasil menunjukan bahwa struktur histologis insang ikan sidat berbeda pada tiap stadium perkembangan (*elver* (*early* dan *late*), *yellow eel*, dan *silver* eel). Jaringan ikat pada *silver eel* merupakan yang paling tebal. Secara histologis dan deskriptif, sel klorid *silver eel* tampak lebih besar dibandingkan *yellow eel.* Populasi sel mukus pada insang ikan sidat stadium *late elver* (25 ± 9) lebih rendah daripada *yellow eel* (49 ± 0), sedangkan *yellow eel* lebih rendah daripada *silver eel* (163 ± 11). Populasi sel mukus insang pada *late elver* dan *yellow eel* tidak berbeda nyata, sedangkan pada *silver eel* berbeda nyata.

Kata Kunci: sidat, *elver, yellow, silver,* insang, struktur histologis, sel mukus

GILLS HISTOLOGICAL STRUCTURES AND MUCOUS CELLS POPULATION ON SEVERAL STAGES OF DEVELOPMENT OF INDONESIAN EELS (*Anguilla bicolor bicolor* McClelland, 1844)

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ABSTRACT

One species of *Anguilla* eels that is often found in Indonesia is *Anguilla bicolor bicolor*. *Anguilla* eels are catadromous fishes that migrate from fresh water to sea water to spawn. During migration these fishes are susceptible to stress so that it can alter the histological structures and population of mucous cells in the gills.. Therefore, in this study histological preparations of gills were made using the paraffin method. The aim of the study was to determine the histological structures and mucous cell population in the gills of *A. bicolor bicolor* at stages of elver, yellow eel, and silver eel. Three staining method were used, namely H-E, MAF, and AB-PAS. Result showed that the histological structures of gills were different at each stage of development of elver, yellow, and silver eel, respectively. Histologically and descriptively, chloride cell size on the silver was larger compared to yellow eel. The connective tissue in the silver eel was the thickest compared to yellow and elver respectively. The population of mucous cells in the gills of late elver (25 ± 9) was lowest in number, followed by yellow eel (49 ± 0), and the higest number was silver eel stage of 163 ± 11. The gill mucous cell population in late elver and yellow eel was not significantly different, whereas in silver eel it was significantly different.

Keywords: eels, elver, yellow, silver, gills, histological structures, mucous cells