

## **HISTOLOGICAL ANALYSIS OF LIVER AND GILLS OF CLIMBING PEARCH *Anabas testudineus* (BLOCH, 1792) FROM RIVER CONTAMINATED BY TEXTILE WASTE IN WONOYOSO, PEKALONGAN, CENTRAL JAVA**

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### **ABSTRACT**

Jeans washing waste industry in Wonoyoso village make a serious problem to environment. The factory have disposed away the waste directly to irrigation river without any process before. It had made the river water become dark coloured and stinky. The only abundant fish species that survives in this river is Climbing perch (*Anabas testudineus*). This research conducted in June to November 2018 to asses histological alteration on gills and liver in Climbing perch. The result is analyzed with Multivariate Analysis of Variance, LSD, and DMRT test. Gill alterations that is occur in sample Climbing perch (*A. testudineus*) are: aneurysm, edema, hyperplasia epithelium, epithelial lifting, fusion of secondary lamellae, cartilage hyperplasia, telangiectasia, necrosis, primary lamellae degeneration, loss of secondary lamellae, epithelial hypertrophy, loss of cartilago, and branching of primary lamellae. Liver alteration that is occur in Climbing perch (*A. testudineus*) are: cloudy swelling, pyknosis, karyorrhesis, and karyolysis. The common lession in gill samples are: aneurysm, edema, hyperplasia epithelium, epithelial lifting, fusion of secondary lamellae, and cartilage hyperplasia. There is a significant difference between sampling area 1, sampling area 2, and sampling area 3. Differences is occur in each different category of lesions.

**Keyword:** Climbing perch, histopathology, toxicity, Jeans pollution

**ANALISIS HISTOLOGIS HEPAR DAN INSANG IKAN BETOK  
*Anabas testudineus*, (BLOCH, 1792) DARI SUNGAI YANG  
TERCEMAR LIMBAH TEKSTIL DI DESA WONOYOSO,  
KABUPATEN PEKALONGAN, JAWA TENGAH**

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**INTISARI**

Industri limbah cuci jeans di desa Wonoyoso menimbulkan masalah serius bagi lingkungan. Pabrik membuang limbah cucuannya langsung ke sungai irigasi tanpa proses apa pun sebelumnya. Hal ini membuat sungai menjadi berwarna gelap dan bau. Satu-satunya spesies ikan yang masih bertahan dan melimpah di sungai ini adalah ikan betok (*Anabas testudineus*). Penelitian ini dilakukan pada bulan Juni hingga November 2018 untuk menilai perubahan histopatologis pada insang dan hati di ikan betok. Hasilnya dianalisis menggunakan uji Multivariate Analysis of Variance, LSD, dan DMRT. Perubahan insang yang terjadi pada sampel ikan betok (*A. testudineus*) antara lain: aneurisma, edema, epitel hiperplasia, pengangkatan epitel, fusi lamellae sekunder, hiperplasia kartilago, telangiectasia, nekrosis, degenerasi lamella primer, hilangnya lamella sekunder, hipertrofi epitel, hilangnya kartilago, dan percabangan lamella primer. Perubahan hati yang terjadi pada ikan betok (*A. testudineus*) adalah: *cloudy swelling*, piknosis, karyoksis, dan karyolisis. Lesi yang umum terjadi pada sampel-sampel insang ikan betok yaitu: aneurisma, edema, hiperplasia epitel, pengangkatan epitel, fusi lamela sekunder, dan hiperplasia kartilago. Perbedaan yang signifikan lesi hepatosit teramati pada hepar dari titik sampling 1, titik sampling 2, dan titik sampling 3. Perbedaan tersebut berbeda pada setiap jenis lesinya.

Kata kunci: Ikan betok, histopathologi, toksisitas, limbah jeans.