

DAFTAR PUSTAKA

- Affandi, R. 2005. Strategi Pemanfaatan Sumberdaya Ikan sidat *Anguilla* spp. di Indonesia. *Jurnal Ikhtologi Indonesia*. 5 (2): 77-81.
- Abouheif, E., Fave, M. J., Ibarraran-Viniegra, S., Lesoway, M. P., Rafiqi, A. M., dan Rajakumar, R. 2014. Eco-Devo-Evo: The Time has Come. *Adv Exp Med Biol*. 78 (1): 107-125.
- Al-Kadhomiy, N. K. 1984. Vascular pathways in the gill filaments of the flounder, *Platichthys flesus* L. *J. Fish. Biol.* 24 (1): 105-114.
- Aoyama, J. 2009. Life History and Evolution of Migration in Catadromous Eels (*Anguilla* sp.). *Aqua-Bio Science Monograph (AMSM)*. 2(1): 1-42.
- Arai, T., Marui, M., Otake, T., dan Tsukamoto, K. 2002. Inshore migration of a tropical eel, *Anguilla marmorata*, from Taiwanese and Japanese coasts. *Fisheries Science*. 68: 152-157.
- Arai, T. dan Chino, N. 2013. Timing of Maturation of Tropical Eel, *Anguilla bicolor bicolor* in Malaysia. *Journal of Applied Ichthyology*. 29: 271 – 273.
- Arai, T. 2016. *Biology and Ecology of Anguillid Eels*. CRC Press. New York.
- Arai, T. dan Kadir, S. R. A. 2017. Opportunistic spawning of tropical anguillid eels *Anguilla bicolor bicolor* and *A. bengalensis bengalensis*. *Scientific Reports*. doi: 10.1038/srep41649.
- Budiharjo, A. 2010. Migrasi Larva Sidat (*Anguilla* spp.) di Muara Sungai Progo. *Disertasi*. Fakultas Biologi. Universitas Gajah Mada. Yogyakarta.
- Burton, D. dan Burton, M. 2017. *Essential Fish Biology: Diversity, Structure, and Function*. Oxford University Press. London.
- Calabro, C. Albanese, M. P., Lauriano, E. R., Martella, S., dan Licata, A. 2005. Morphological, histochemical, and immunohistochemical study of the gill epithelium in the abyssal teleost fish *Coelorhynchus coelorhynchus*. *Folia Histochemica et Cytobiologica*. 43(1): 51-56.
- Chai, I. J. dan Arai, T. 2018. Ages at maturation of tropical freshwater eels, *Anguilla bicolor bicolor* and *A. bengalensis bengalensis*. *Journal of Applied Animal Research*. 46 (1): 1103-1113.
- Chen, S. C., Chang, C. R., dan Han, Y. S. 2018. Seaward Migration Routes of Indigenous Eel, *Anguilla japonica*., *A. marmorata*, and *A. bicolor pacifica*, via Satellite Tag. *Zoological Studies*. 57 (21): 1-13.
- Dang, M., Pittman, K., Sonne, C., Hansson, S., Bach, L., Sondergaard, J., Stride, M., dan Nowak, B. 2020. Histological mucous cell quantification and mucosal mapping reveal different aspects of mucous cell responses in gills and skin of shorthorn sculpins (*Myoxocephalus scorpius*). *Fish and Shellfish Immunology*. 100 (1): 334-344.
- Ellis, R. 2020. *Alcyan Blue and PAS Staining Protocol*. http://www.ihcworld.com/_protocols/special_stains/alcian_blue_pas_ellis.htm. Diakses tanggal 27 Juli 2020 pukul 01.45 WIB.
- Egginton, S. 1986. Metamorphosis of the American Eel, *Anguilla rostrata* LeSeur: Change in Metabolism of Skeletal Muscle. *The Journal of Experimental Zoology*. 237: 173-184.
- Elson, D. A., Ryan, H. E., Snow, J. W., Johnson, R., dan Arbeit, J. M. 2000. Coordinate Up-Regulation of Hypoxia Inducible Factor (HIF)-1 α and HIF-

- 1 Target Genes during Multi-Stage Epidermal Carcinogenesis and Wound Healing. *Cancer Research*. 60 (21): <https://cancerres.aacrjournals.org/content/60/21/6189>.
- Fahmi, M.R. 2015. Short Communication: Conservation genetic of tropical eel in Indonesian waters based on population genetic study. *Prosiding Seminar Nasional Masyarakat Biodiversitas Nasional*. 1(1): 38-43.
- Fishbase, 2020. *Anguilla bicolor bicolor* McClelland, 1844 Indonesian Shortfin Eel. <https://www.fishbase.se/summary/1274>. Diakses tanggal 13 Agustus 2020 pukul 10.44 WIB.
- Fondriest (Environmental Learning Center). 2017. *Dissolved Oxygen*. <https://www.fondriest.com/>. Accessed on January 1st, 2019 at 10:00 p.m.
- Han, Y. S., Liao, I. C., Huang, Y. S., He, J. T., Chang, C. W., dan Tzeng, W. N. 2003. Synchronous changes of morphology and gonadal development of silvering Japanese eel *Anguilla japonica*. *Aquaculture*. 219(1-4):783-796.
- Haryono, H. dan Dewantoro, W. 2016. Pemetaan Ruaya Habitat Benih Ikan Sidat (*Anguilla bicolor*) dan Potensinya di Pantai Selatan Jawa. *Omni-Akuatika*. 12 (3): 47-58.
- Hirose, S., Kaneko, T., Naito, N., dan Takei, Y. 2003. Molecular biology of major components of chloride cells. *Comp Biochem Physiol B Biochem Mol Biol*. 136 (4): 593-620.
- Hwang, P.P. dan Lee, T. H. 2007. New insight into fish ion regulation and mitochondrion-rich-cells. *Comparative Biochemistry and Physiology Part A: Molecular and Integrative Physiology*. 148 (3): 479-497.
- Indayani, N. S. 2018. Struktur Histologis dan Deteksi HIF-1alfa pada Jantung dan Hepar Ikan Belut (*Monopterus* sp.) sebagai Respon Keadaan Hipoksia. *Tesis*. Fakultas Biologi Universitas Gadjah Mada. Yogyakarta.
- Indrawati, A., Anggoro, S., dan Suradi, W. S. 2016. Pemetaan Potensi Ikan Sidat pada Perairan Sungai di Kabupaten Purworejo. *Prosiding Seminar Nasional Tahunan Ke-V Hasil-Hasil Penelitian Perikanan dan Kelautan*. F2 08: 669-679.
- ITIS. 2019. *Anguilla bicolor bicolor* McClelland, 1844 (Taxonomic Serial No.: 161130. https://www.itis.gov/servlet/SingleRpt/SingleRpt?search_topic=TSN&search_value=161130#null. Accessed on December 31st, 2019 at 10:00 p.m.
- Jakhrani, A. Q., Samo, S. R., Sobuz, H. R., Uddin, M. A., Ahsan, M. J. dan Hasan, N. M. S. 2012. Assessment of Dissolved Salts Concentration of Seawater in the Vicinity of Karawachi. *International Journal of Structural and Civil Engineering*. 1 (2): 61-69.
- Jana, B. 2005. *Human Pathology*. Kuldeep Jain. New Delhi, p. 261.
- Kelly, C. D., Fellers, T. J., dan Davidson, M. W. 2015. *Mallory-stained Human TongueSection*. <https://micro.magnet.fsu.edu/optics/olympusmicd/galleries/brightfield/tonguehumanmallory.html>. Diakses tanggal 24 Juli 2020 pukul 00.06 WIB.
- Koppang, E. O., Kvellestad, A. dan Fischer, U. 2015. Fish Mucosal Immunity: Gill. *Mucosal Health in Aquaculture*. 408 (5): 93-133 [doi: 10.1016/C2013-0-06826-0].
- Kumar, V., Abbas, A.K., dan Aster, J.C. 2018. *Robbins Basic Pathology*. Elsevier

Inc. Philadelphia.

- Kwan, G. T., Finnerty, S. H., Wegner, N. C., dan Tresguerres, M. 2019. Quantification of Cutaneous Ionocytes in Small Aquatic Organisms. *bio-protocol*. 9(09): e3227 (1-22).
- Lai, K. P. Li, J. W., Gu, J., Chan, T. F., Tse, W. K. F. dan Wong, C. K. C. 2015. Transcriptomic analysis reveals specific osmoregulatory adaptive responses in gil mitochondria-rich-cells and pavement cells of the Japanese eel. *BMC Genomics*. 16, doi: 10.1186%2Fs12864-015-2271-0.
- Larson, J., Drew, K. L., Folkow, L. P., Milton, S. L., dan Park, T. J. 2014. No Oxygen? No Problem! Intrinsic brain tolerance to hypoxia in vertebrates. *Journal of Experimental Biology*. 217 (7): 1024-1039.
- Mauceri, A., Tigano, C., Ferrito, V., Barbaro, B., Calderaro, M., Ainis, L., dan Fasulo, S. 2002. Effect of natural confinement on the gill cell types and bony elements of *Lebias fasciata* (Teleostei, Cyprinodontidae): a morphological and immunohistochemical analysis. *Italian Journal of Zoology*. 69: 195-203.
- McKinnon. L. J. 2006. *A Review of Eel Biology: Knowledge and Gaps*. EPA Victoria and Audentes Investments Pty, Ltd. Australia.
- Michiels, C. 2004. Physiological and Pathological Responses to Hypoxia. *Am J Pathol*. 164 (6): 1875 – 1882.
- Mistry, A. C., Honda, S., dan Hirose, S. 2001. Structures, properties and enhanced expression of galactose-binding C-type lectins in mucous cells of gills from freshwater Japanese eels (*Anguilla japonica*). *Biochem J*. 360: 107-115.
- Mokhtar, D. M. 2017. *Fish Histology: From Cells to Organ*. Apple Academic Press. Oakville.
- Moron, S. E., Andrade, C. A., dan Fernandes, M. N. 2009. Response of mucous cells of the gills of traíra (*Hoplias malabaricus*) and jeju (*Hoplerhynchus unitaeniatus*) (Teleostei: Erythrinidae) to hypo- and hyper-osmotic ion stress. *Neotropical Ichthyology*. 7(3): 491-498.
- Mugera, G.M. 2000. *Veterinary Pathology in the Tropics*. Nairobi University Press. Nairobi, pp. 8 – 9.
- Nafsiyah, I., Nurilmala, M., dan Abdullah, A. 2018. Komposisi Nutrisi Ikan Sidat *Anguilla bicolor bicolor* dan *Anguilla marmorata*. *JPHPI*. 21 (3): 504-512.
- Nijman V., 2015 CITES-listings, EU eel trade bans and the increase of export of tropical eels out of Indonesia. *Marine Policy*. 58: 36-41.
- NOAA (National Oceanic and Atmospheric Administration). 2020. *Estuaries*. https://oceanservice.noaa.gov/education/kits/estuaries/estuaries01_whatis.html. Accessed on January 15th, 2020 at 02:08 p.m.
- Oguz, A. R. 2015. Histological changes in the gill epithelium of endemic Lake Van Fish (*Chalcarburnus tarichi*) during migration from alkaline water to freshwater. *North-Western Journal of Zoology*. 11 (1): 51-57.
- Pereira, B. F. dan Caetano, F. H. 2009. Histochemical Technique of Detection of Chloride Cells in Fish. *Micron*. 40(8): 783-786.
- Powles, P. M. dan Warlen, S. M. 2002. Recruitment season, size and age of young American eels (*Anguilla rostrata*) entering an estuary near Beaufort, North Carolina. *Fishery Bulletin*. 100 (2): 299-306.
- Reece, J. B., Urry, L. A., Wasserman, S. A., Minorsky, P. V., dan Jackson, R. B. 2008. *Biology*. Ed. ke-8. Jilid 1. Pearson Education Inc. California.

- Rupasinghe, H. dan Attygale, M. V. E. 2006. Food and feeding of brown-stage eels of *Anguilla bicolor* in the Bolgoda Estuary. *Vidyodaya Journal of Science*. 13: 1-8.
- R&D Systems (a bio-technique brand). 2019. *IHC/ICC Protocol Guide*. <https://www.rndsystems.com/IHCProtocol>. Accessed on January 2nd, 2020 at 10:00 p.m.
- Sasai, S., Kaneko, T., dan Tsukamoto, K. 1998. Extrabranchial Chloride Cells in Early Stages of the Japanese Eel, *Anguilla japonica*. *Ichthyological Research*. 45 (1): 95-98.
- Sasai, S., Katoh, F., Kaneko, T., dan Tsukamoto, K. 2006. Ontogenic change of gill chloride cells in leptocephalus and glass eel stages of Japanese eel, *Anguilla japonica*. *Marine Biology*. 150: 487-496.
- Scientific Gear. 2020. *Measuring Salinity in Seawater*. <https://www.scientificgear.com/salt-uses-and-testing-methods/salinity-in-sea-water>. Accessed on January 13th, 2020 at 11:39 p.m.
- Seo, J. S., Choi J. H., Seo H., Ahn T. H., Chong W. S., Kim S. H., Cho H. S., dan Ahn J. C. 2013. Comparison of major nutrients in eels *Anguilla Japonica* cultured with different formula feeds or at different farms. *Fish Aquatic Science*. 16: 85-92.
- Smith, S. A., Newman, S. J., Coleman, M. P., dan Alex, C. 2018. Characterization of the histologic appearance of normal gill tissue using special training techniques. *J Vet Diagn Invest*. 30(5): 688-698.
- Solanki, T. G. dan Benjamin, M. 1982. Changes in the mucous cells of the gills, buccal cavity and epidermis of the nine-spined stickleback, *Pungitius pungitius* L., induced by transferring the fish to sea water. *J. Fish Biol*. 21 (1): 563-575.
- Sterzelecki, F. C., Rodrigues, E., Fanta, E., dan Ribeiro, C. A. O. 2013. The Effect of Salinity on Osmoregulation and Development of Juvenile Fat Snook, *Centropomus parallelus* (POEY). *Brazil. J. Biol*. 73(3): 609-615.
- Tang, C. H., Lai, D. Y., dan Lee, T. H. 2012. Effects of Salinity Acclimation on Na^+/K^+ -ATPase Responses and FXYD11 Expression in the Gills and Kidneys of the Japanese Eel (*Anguilla japonica*). *Comparative Biochemistry and Physiology Part A*. 163: 302-310.
- Tesch, F. W. 2003. *The Eel*. 3rd Edn. Blackwell Publishing Company. London.
- Tumbanghe, J., Subba, B. R., dan Prasad, A. 2018. Branchial Muscle of a Hill-stream Cyprinid fish *Neolissochilus hexagonolepis* (McClelland, 1839). *Our Nature*. 16 (1): 74-79.
- Watanabe, S., Minegishi, Y., Yoshinaga, T., Aoyama, J., dan Tsukamoto, K. 2004. A Quick Method for Species Identification of Japanese Eel (*Anguilla japonica*) Using Real-Time PCR: An Onboard Application for Use During Sampling Surveys. *Marine Biotechnology*. 6: 566-574.
- Widiastuti, N. H. 2019. Struktur Histologis dan Ekspresi HIF-1 Alpha Hepar pada Stadium Perkembangan Ikan Sidat (*Anguilla bicolor bicolor* McClelland, 1844). *Tesis*. Fakultas Biologi Universitas Gadjah Mada. Yogyakarta.
- Wijayanti, I. dan Setiyorini E. S. S. 2018. Nutritional content of wild and cultured eel (*Anguilla bicolor*) from Southern Coast of Central Java. *Jurnal Ilmu Kelautan*. 23(1): 37-44.

Wolf, J. C., Baumgartner, W. A., Blazer, V. S., Camus, A. C., Engelhardt, J. A., Fournie, J. W., Frasca, S., Groman, D. B., Kent, M. L., Khoo, L. H., Law, J. M., Lombardini, E. D., Ruehl-Fehlert, C., Segner, H. E., Smith, S. H., Spitsbergen, J. M., Weber, K., dan Wolfe, M. J. 2015. Nonlesions, Misdiagnoses, Missed Diagnoses, and Other Interpretive Challenges in Fish Histopathology Studies: A Guide for Investigators, Authors, Reviewers, and Readers. *Toxicologic Pathology*. 43 (1): 297-325.