

DAFTAR PUSTAKA

- Adrim, M., Fahmi. 2010. *Panduan Penelitian Untuk Ikan Laut*. Pusat Penelitian Oseanografi-LIPI, Jakarta.
- Akbar, H. 2017. Ekobiologi, habitat, dan potensi budidaya ikan betok (*Anabas testudineus* BLOCH) di Indonesia. *Jurnal Ilmiah Samudra Akuatika*, 1 (1): 1.
- Amin, M. H. F. 2021. *Pemetaan Genom Mitokondria Ikan Air Tawar Indonesia sebagai Fondasi Assessment Biodiversitas non-Invasif*. <https://news.unair.ac.id/2021/01/07/pemetaan-genom-mitokondria-ikan-air-tawar-indonesia-sebagai-fondasi-assessment-biodiversitas-non-invasif/>. Diakses tanggal 5 September 2022, jam 18.12.
- Anhelt, H., Wibowo, A., Prianto, E. 2020. A new species of *Pectenocypris* (Teleostei: Cyprinidae) from peat. *Vertebrate Zoology*, 70 (1): 1-8.
- Bohmann, K., Evans, A., Gilbert, M.T.P., Carvalho, G.R., Creer, S., Knapp, M., Yu, D.W., de Bryn, M. 2014. Environmental DNA for wildlife biology and biodiversity monitoring. *Trends in Ecology & Evolution*, 29(6): 358-367.
- Bylemans J, Furlan EM, Gleeson DM, Hardy CM, Duncan RP. 2018. Does size matter? An experimental evaluation of the relative abundance and decay rates of aquatic environmental DNA. *Environ. Sci. Technol.* 52, 6408–6416.
- Cahyani, N. K. D. & Anggoro, A. W. 2020. QIIME2 tutorial untuk data DNA metabarcoding. *Bionesia*. 1- 10.
- Calderón-Sanou, I., Münkemüller, T., Boyer, F., Zinger, L., Thuiller, W. 2019. From environmental DNA sequences to ecological conclusions: How strong is the influence of methodological choices?. *Journal of Biogeography*, 47(1): 193-206.
- Chan, K. O., Hertwig, S. T., Neokleous, D. N., Flury, J. M., & Brown, R. M. (2022). Widely used, short 16S rRNA mitochondrial gene fragments yield poor and erratic results in phylogenetic estimation and species delimitation of amphibians. *BMC ecology and evolution*, 22(1), 37.
- Cristescu, M.E., Hebert, P.D.N. 2018. Uses and misuses of environmental DNA in biodiversity science and conservation. *Annual Review of Ecology, Evolution, and Systematics*, 49(1): 209-230.

- Djumanto & Probosunu, N. 2011. Biodiversitas sumber daya ikan di hulu Sungai Opak. *Jurnal Ikhtiologi Indonesia*. 11(1): 1-10.
- Djumanto, Gustiana, M., Setyobudi, E. 2015. Dinamika Populasi Ikan Belanak, *Chelon Subviridis* (Valenciennes, 1836) di Muara Sungai Opak. *Jurnal Ikhtiologi Indonesia*, 15(1): 13-24.
- Emmons AL, DeBruyn JM, Mundorff AZ, Cobaugh KL, Cabana GS. 2017. The persistence of human DNA in soil following surface decomposition. *Sci. Justice* 57, 341–348.
- Estaki, M., Jiang, L., Bokulich, N. A., McDonald, D., González, A., Kosciulek, T., Martino, C., Zhu, Q., Birmingham, A., Vázquez-Baeza, Y., Dillon, M. R., Bolyen, E., Caporaso, J. G., & Knight, R. 2020. QIIME 2 enables comprehensive end-to-end analysis of diverse microbiome data and comparative studies with publicly available data. *Current protocols in bioinformatics*, 70 (1): 100.
- Ficetola, G.F., Miaud. C., Pompanon, F., Taberlet, P. 2008. Species detection using environmental DNA from water samples. *Biol Lett* 4(4):423–425
- Foran DR. 2006. Relative degradation of nuclear and mitochondrial DNA: an experimental approach. *J. Forensic Sci.* 51, 766–770.
- Freeland, J. R. 2017. The importance of molecular markers and primer design when characterizing biodiversity from environmental DNA. *Genome*, 60(4): 358–374.
- Froese, R. & Pauly, D. 2023. FishBase [Daring]. Tersedia: <https://www.fishbase.se/> versi (02/2023). Diakses tanggal 20 Juni 2023, jam 18.00 WIB.
- Hebert, P. D. N., Ratnasingham, S., Waard, J. R. De, B, P. R. S. L., & Jeremy, R. 2003. Barcoding animal life : cytochrome c oxidase subunit 1 divergences among closely related species Barcoding animal life : cytochrome c oxidase subunit 1 divergences among closely related species. *Proc. R. Soc. Lond. B.* <https://doi.org/10.1098/rsbl.2003.0025>
- Henwood A. 1992. Exceptional preservation of dipteran flight muscle and the taphonomy of insects in amber. *Palaios* 7, 203
- Inocencia, A., Gonggoli, A. D., Rangin, A. R., Dendie, Putra, E. D., Lorensi, M., Nareyasa, W. A., Kadafi, A. M. 2021. Inventarisasi Jenis Ikan Air Tawar di

- Kawasan Kampus Universitas Palangka Raya, Kalimantan Tengah. *Jurnal Ilmu Hayat*, 5 (1): 35-42.
- Jackson MC, Wely OLF, Altermatt F, Durance I, Friberg N, Drumbrell AJ, Piggott JJ, Tiegs SD, Tockner K, Krug CB, Leadley PW, Woodward G. 2016. Recommendations of the next generation of global freshwater biological monitoring tools. *Advances in Ecological Research*, 55: 615-636.
- Julaeha, A. S. 2020. Karakterisasi genetik ikan betok (*Anabas testudineus* Bloch, 1792) dari Danau Lebo Taliwang, Sumbawa Barat, Nusa Tenggara Barat berdasarkan gen mitokondria 16S. *Skripsi*. Universitas Gadjah Mada. P. 1.
- Kaban, S. & Wibowo, A. 2018. Genetic diagnosis and reproductive biology of introduced *Mystacoleucus marginatus* in the Toba Lake, North Sumatra. *Indonesian Fisheries Research Journal*, 24 (1): 1.
- Kamiswara, R., Herawati, T., Yustiati, A., Nurhayati, A., Pamungkas, W., Lili, W. 2022. Growth Pattern of *Mystacoleucus marginatus* (Valenciennes 1842) in Cimanuk and Cipeles River, West Java. *Jurnal Perikanan*, 24 (1): 63-70.
- Kottelat, M., Whitten, A. J., Kartikasari, S. N., & Wirjoatmodjo, S. 1993. *Freshwater Fishes of Western Indonesia dan Sulawesi*. 1st Edition. Periplus Editions (HK) Ltd. Jakarta.
- Kumar G., Eble J.E., Gaither M.R. A practical guide to sample preservation and pre-PCR processing of aquatic environmental DNA. *Mol. Ecol. Resour.* 2019;20:29–39. doi: 10.1111/1755-0998.13107.
- Lee, S. R., Kim, E., Go, Y., Kang, Y., Alam, M. J., Kim, K. S., Andriyono, S. & Kim, H. 2022. The complete mitochondrial genome of the Korean endemic species *Cobitis hankugensis* (Kim, Park, Son & Nalbant, 2003). *Mitochondrial DNA Part B*, 7:1, 21-22
- Leray, M., Yang, J. Y., Meyer, C. P., Mills, S. C., Agudelo, N., Ranwez, V. Boehm, J. T., Machida, R. J. 2013. A new versatile primer set targeting a short fragment of the mitochondrial COI region for metabarcoding metazoan diversity: application for characterizing coral reef fish gut contents. *Frontiers in Zoology*, 10 (34): 1-14.
- Low, B. W., & Lim, K. K. P. 2012. Gouramies of the genus *Trichopodus* in Singapore (Actinopterygii: Perciformes: Osphronemidae). *Nature in*

Singapore, 5: 83-93.

- Masykuri, M. F. 2015. Keanekaragaman morfologi ikan wader (famili cyprinidae) di Kabupaten Bantul, Daerah Istimewa Yogyakarta. *Skripsi*. Universitas Sebelas Maret. P. 1.
- Pawlowski J., Apothéloz-Perret-Gentil L., Mächler E. & Altermatt F. 2020: *Environmental DNA Applications in Biomonitoring and Bioassessment of Aquatic Ecosystems*. Bern: Federal Office for the Environment.
- Petit-Marty, N., Casas, L., Saborido-Rey, F. 2023. State-of-the-art of data analyses in environmental DNA approaches towards its applicability to sustainable fisheries management. *Frontiers in Marine Science*, 10:1061530. doi: 10.3389/fmars.2023.1061530
- Prakoso, R. D. 2014. Deskripsi dan distribusi ikan genus *Rasbora* pada kelompok spesies *Rasbora sumatrana* dan kelompok spesies *Rasbora trifasciata* di tenggara Kalimantan, Indonesia. *Skripsi*. Universitas Indonesia. P. 16.
- Rais, A. H., Wulandari, T. N. M., Dharyati, E. 2019. Aktivitas penangkapan dan produksi ikan di Kabupaten Hulu Sungai Utara Kalimantan Selatan. *J.Lit.Perikan.Ind*, 24 (4): 227-238.
- Rees, H. C., Maddison, B. C., Middleditch, D. J., Patmore, J. R. M., Gough, K. C. 2014. The detection of aquatic animal species using environmental DNA - a review of eDNA as a survey tool in ecology. *Journal of Applied Ecology*, 51(5): 1450-1459.
- Rishan, S. T., Kline, R. J., Rahman, M. S. 2023. Applications of environmental DNA (eDNA) to detect subterranean and aquatic invasive species: A critical review on the challenges and limitations of eDNA metabarcoding. *Environmental Advances*, 12 (100370): 1-12.
- Roesma, D. I., Tjong, D. H., & Janra, M. N., Aidil, D. R. 2021. Freshwater vertebrates monitoring in Maninjau Lake, West Sumatra, Indonesia using environmental DNA. *Biodiversitas Journal of Biological Diversity*. 22.
- Saleeza, S. N., Norma-Rashid, Y. & Sofian-Azirun, M. 2014. Guppies as predators of common mosquito larvae in Malaysia. *Southeast Asian J. Trop. Med. Public Health*, 45(2), 299-308.
- Saputra, A., Wulandari, A., Ernawati, Yusuf, M. A., Eriswandy, I., Hidayani, A. A.

2018. Penjantanan ikan gapi, *Poecilia reticulata* Peters, 1859 dengan pemberian ekstrak jeroan teripang pasir (*Holothuria scabra*). *Jurna. Ikhtiologi Indonesia*, 18 (2):127-137.
- Schallenberg, L., Wood, S.A., Pochon, X., Pearman, J.K. 2020. *What Can DNA in the Environment Tell Us About an Ecosystem?*. <https://kids.frontiersin.org/article/10.3389/fri.2020.00038>. Diakses tanggal 5 September 2022, jam 10.30.
- Shu, L., Ludwig, A., Peng, Z. 2020. Standards for methods utilizing environmental dna for detection of fish species. *Genes MDPI AG*, 11(3): 296.
- Singh, A. S., Mandal, S.C. & Barman, A.D. 2010. Selective breeding in ornamental fishes – a step toward development in production of new variety. *Aquaculture Europe*, 35(4), 14-16.
- Syafei, L. S. 2017. Keanekaragaman hayati dan konservasi ikan air tawar. *Jurnal Penyuluhan Perikanan dan Kelautan*, 11(1): 4862.
- Takahara T, Minamoto T, Doi H (2013) Using environmental DNA to estimate the distribution of an invasive fish species in ponds. *PLoS ONE* 8(2):e56584
- Tsuji S., Takahara T., Doi H., Shibata N., Yamanaka H. The detection of aquatic macroorganisms using environmental DNA analysis—A review of methods for collection, extraction, and detection. *Environ. DNA*. 2019;1:99–108. doi: 10.1002/edn3.21.
- Vences, M., Lyra, M. L., Perl, R. G. B., Bletz, M. C., Stankovic, D., Lopes, C. M., Jarek, M., Bhujju, S., Geffers, R., Haddad, C. F. B., Steinfartz, S. 2016. Freshwater vertebrate metabarcoding on Illumina platforms using double-indexed primers of the mitochondrial 16S rRNA gene. *Conservation Genet Resour*, 8: 323-327.
- Wardhana. P. N. 2015. Analisis transpor sedimen sungai opak dengan menggunakan program hec-ras 4.1.0. *Jurnal Teknisia*, 11 (1): 22-31.
- Wibowo, A., Kurniawan, K., Atminarso, D., Prihadi, T. H., Baumgartner, L. J., Rourke, M. L., Nagai, S., Hubert, N., Vasemagi, A. 2022. Assessing freshwater fish biodiversity of Kumbe River, Papua (Indonesia) through environmental DNA metabarcoding. *Pacific Conservation Biology*, 29 (4): 340-350.
- Xiong, F., Shu, L., Zeng, H., Gan, X., He, S., Peng, Z. 2022. Methodology for fish

biodiversity monitoring with environmental DNA metabarcoding: The primers, databases and bioinformatic pipelines. *Water Biology and Security*, 1 (1): 1-7.

- Yeliana, 2017. Potensi dan status konservasi iktiofauna di sungai serkap areal restorasi ekosistem Riau, Provinsi Riau. *Artikel Ilmiah*. Universitas Jambi.
- Yudha, D. S. & Priyono, D. S. 2021. Optimasi metode environmental DNA dalam mengungkap keanekaragaman fauna vertebrata air tawar di Sungai Boyong-Code. Laporan Akhir Penelitian, Hibah Kolaborasi Dosen dan Mahasiswa, Fakultas Biologi, Universitas Gadjah Mada.
- Yudha, D. S., Priyono, D. S., Izzati, R., Ardianto, A. S., Puradi, A., Nainggolan. 2021. Comparising DNA extraction from environmental DNA samples to reveal the diversity of freshwater metazoans. *Biogenesis*, 9 (2): 206-212.
- Yudha, D. S., Trijoko, Eprlurahman, R., Nugraha, R., Suranto, R. D. P., Abida, F. U., Tobing, V. F., Fathiya, R. F., Nopitasari, S. 2020. Keanekaragaman Jenis Ikan di Sepanjang Sungai Opak Propinsi Daerah Istimewa Yogyakarta, Indonesia. *Biota: Jurnal Ilmiah Ilmu-Ilmu Hayati*, 5 (2): 81-91.
- Zhang, X, Xia, P, Wang, P, Yang, J, Baird, D.J. 2018. Omics Advances in Ecotoxicology. *Environmental Science & Technology*, 52 (7): 3842-3851.