UNIVERSITAS
GADJAH MADA
**Profil Keanekaragaman Iktiofauna di Danau Semayang, Kaskade Mahakam Berdasarkan Analisis Environmental DNA (eDNA)**
Kezia Janice Lokardo, Dr. Dwi Sendi Priyono, S.Si., M.Si.
**Universitas Gadjah Mada, 2026 | Diunduh dari http://etd.repository.ugm.ac.id/**

# DAFTAR PUSTAKA

Amarasinghe, S. L., Su, S., Dong, X., Zappia, L., Ritchie, M. E., & Gouil, Q. (2020). Opportunities and Challenges in Long-Read Sequencing Data Analysis. *Genome Biology*, 21(1), 30. https://doi.org/10.1186/s13059-020-1935-5

Barnes, M. A., Turner, C. R., Jerde, M. A., Renshaw, M. A., Chadderton, W. L., & Lodge, D. M. (2014). Environmental conditions influence eDNA persistence in aquatic systems. *Environmental Science & Technology*, 48(3), 1819–1827. https://doi.org/10.1021/es404734p

Barnes, M. A., & Turner, C. R. (2016). The Ecology Of Environmental DNA and Implications For Conservation Genetics. *Conservation Genetics*, 17(1), 1-17. https:/doi.org/10.1007/s10592-015-0775-4.

Burton, A. C., Neilson, E., Moreira, D., Ladle, A., Steenweg, R., Fisher, J. T., Bayne, E., & Boutin, S. (2015). Wildlife Camera Trapping: A Review And Recommendations For Linking Surveys To Ecological Processes. *Journal of Applied Ecology*, 52(3), 675–685. https://doi.org/10.1111/1365-2664.12432

Christensen, M. S. (1992). Investigations on the ecology and fish fauna of the Mahakam River in East Kalimantan (Borneo), Indonesia. *Internationale Revue der gesamten Hydrobiologie und Hydrographie*, 77(4), 593–608. https://doi.org/10.1002/iroh.19920770405

Chuanata, W., Susilowati, A., Budiharjo, A., & Travis, J. M. J. (2025). Fish Diversity and Phylogenetics In The Lakes Of Bromo Tengger Semeru National Park Based On eDNA. *Biosaintifika: Journal of Biology & Biology Education*, 17(2), 304-315. https://doi.org/10.15294/biosaintifika.v17i2.22842

Collins, R. A., & Cruickshank, R. H. (2013). The Seven Deadly Sins of DNA Barcoding. *Molecular Ecology Resources*, 13(6), 969-975. https://doi.org/10.1111/1755-0998.12046

Costello, M. J., Coll, M., Danovaro, R., Halpin, P., Ojaveer, H., & Miloslavich, P. (2016). A census of marine biodiversity knowledge, resources, and future challenges. *PLoS ONE*, 11(10), e0164731. https://doi.org/10.1371/journal.pone.0164731

Deiner, K., Fronhofer, E. A., Mächler, E., Walser, J.-C., & Altermatt, F. (2016). Environmental DNA reveals that rivers are conveyer belts of biodiversity information. *Nature Communications*, 7, 12544. https://doi.org/10.1038/ncomms12544

Deiner, K., Bik, H. M., Mächler, E., Seymour, M., Lacoursière-Roussel, A., Altermatt, F., Creer, S., Bista, I., Lodge, D. M., de Vere, N., Pfrender, M. E., & Bernatchez, L. (2017). Environmental DNA *metabarcoding*: Transforming how we survey animal and plant communities. *Molecular Ecology*, 26(21), 5872-5895. https://doi.org/10.1111/mec.14350

Desjardins, P., & Conklin, D. (2010). *Nanodrop* microvolume quantitation of nucleic acids. *Journal of Visualized*

UNIVERSITAS
GADJAH MADA
**Profil Keanekaragaman Iktiofauna di Danau Semayang, Kaskade Mahakam Berdasarkan Analisis Environmental DNA (eDNA)**
Kezia Janice Lokardo, Dr. Dwi Sendi Priyono, S.Si., M.Si.
**Universitas Gadjah Mada, 2026 | Diunduh dari http://etd.repository.ugm.ac.id/**

*Experiments*, (45), e2565. https://doi.org/10.3791/2565

Edgar, R. C. (2013). UPARSE: Highly Accurate OTU Sequences From Microbial Amplicon Reads. *Nature Methods*, 10(10), 996–998. https://doi.org/10.1038/nmeth.2604

Elbrecht, V., & Leese, F. (2015). Can DNA-based ecosystem assessments quantify species abundance? Testing primer bias and biomass–sequence relationships with an innovative *metabarcoding* protocol. *PLOS ONE*, 10(7), e0130324. https://doi.org/10.1371/journal.pone.0130324

Ewing, B., & Green, P. (1998). Base-calling of automated sequencer traces using phred. II. Error probabilities. *Genome Research*, 8(3), 186–194. https://doi.org/10.1101/gr.8.3.186

Fakhrudin, M., Turmudi, T., Setiawan, F., Apip, A., & Mislan, M. (2023). Hydrological Characteristics Of Mahakam Cascade Lake As A Reference For The Sustainability Management. *IOP Conference Series: Earth and Environmental Science*, 1260(1), 012032. https://doi.org/10.1088/1755-1315/1260/1/012032

Froese, R., & Pauly, D. (Eds.). (2025). FishBase. World Wide Web electronic publication. https://www.fishbase.org

García-Machado, E., García-Machado, C., and Hernández, D. (2023). How eDNA data filtration, sequence coverage, and primer selection influence assessment of fish communities in northern temperate lakes. *Environmental DNA*, 5(6), 1216-1233. https://doi.org/10.1002/edn3.444.

Goldberg, C. S., Strickler, K. M., & Pilliod, D. S. (2015). Moving environmental DNA methods from concept to practice for monitoring aquatic macroorganisms. *Biological Conservation*, 183, 1–3. https://doi.org/10.1016/j.biocon.2014.11.040

Goldberg, C. S., Turner, C. R., Deiner, K., Klymus, K. E., Thomsen, P. F., Murphy, M. A., Spear, S. F., McKee, A., Oyler-McCance, S. J., Cornman, R. S., Laramie, M. B., Mahon, A. R., Lance, R. F., Pilliod, D. S., Strickler, K. M., Waits, L. P., Fremier, A. K., Takahara, T., Herder, J. E., & Taberlet, P. (2016). Critical considerations for the application of environmental DNA methods to detect aquatic species. *Methods in Ecology and Evolution*, 7(11), 1299-1307. https://doi.org/10.1111/2041-210X.12595

Goldenberger, D., Perschil, I., Ritzler, M., & Altwegg, M. (1995). A simple “universal” DNA extraction procedure using SDS and Proteinase K is compatible with direct PCR amplification. *PCR Methods and Applications*, 4(6), 368-370. https://doi.org/10.1101/gr.4.6.368

Guerrero Aguilar, A., Rodríguez Castrejón, U. E., Serafín Muñoz, A. H., Schüth, C., & Noriega Luna, B. (2023). Bioindicators And Biomonitoring: Review Of Methodologies Applied In Water Bodies And Use During The COVID-19 Pandemic. *Acta Universitaria 32*, e3388, 1-22. http://doi.org/10.15174.au.2022.3388

Hänfling, B., Handley, L. L., Read, D. S., Hahn, C., Li, J., Nichols, P., Blackman, R. C., Oliver, A., & Winfield, I. J. (2016). Environmental DNA *metabarcoding* of lake fish communities reflects long-term data from established survey methods. *Molecular Ecology, 25*(13), 3101-3119. https://doi.org/10.1111/mec.13660

UNIVERSITAS
GADJAH MADA
**Profil Keanekaragaman Iktiofauna di Danau Semayang, Kaskade Mahakam Berdasarkan Analisis Environmental DNA (eDNA)**
Kezia Janice Lokardo, Dr. Dwi Sendi Priyono, S.Si., M.Si.
**Universitas Gadjah Mada, 2026 | Diunduh dari http://etd.repository.ugm.ac.id/**

Haryono, H. (2006). Komunitas ikan di perairan Danau Kaskade Mahakam Kalimantan Timur. *Jurnal Iktiologi Indonesia*, *6*(2), 79-84. https://doi.org/10.32491/jii.v6i1.235

He, Y., Zhao, X., Shi, C., Peng, K., Wang, Z., & Jiang, Z. (2024). Fish Community Monitoring In Floodplain Lakes: eDNA *Metabarcoding* and Traditional Sampling Revealed Inconsistent Fish Community Composition. *Ecological Indicators*, 166, 112467. https://doi.org/10.1016/j.ecolind.2024.112467

Hebert, P. D. N., Cywinska, A., Ball, S. L., & deWaard, J. R. (2003). Biological identifications through DNA barcodes. *Proceedings of the Royal Society B: Biological Sciences*, 270 (1512), 313–321. https://doi.org/10.1098/rspb.2002.2218

Helmizuryani, H., Muslimin, B., Nizar, M., Hidayat, S., Prasetyo, P. A., Dwirastina, M., Robin, R., Khotimah, K., Swarlanda, S., Apriyanti, D., Heriyati, E. & Fahmi, A. I. (2025). Exploring Freshwater Fish Biodiversity Using Edna *Metabarcoding* and Traditional Sampling To Assess Floodplain Waters. *Journal of Water and Land Development*, 65, 100-112. https://doi.org/10.24425/jwld.2025.154254

Itakura, H., Wakiya, R., Yamanaka, H., Yamamoto, S., Sato, H., & Minamoto, T. (2019). Environmental DNA analysis reveals the spatial distribution and habitat preferences of Japanese eels in a large lake and its inflowing rivers. *Aquatic Conservation: Marine and Freshwater Ecosystems*, *29*(3), 361-373. https://doi.org/10.1002/aqc.3008

Jane, S. F., Wilcox, T. M., McKelvey, K. S., Young, M. K., Schwartz, M. K., Lowe, W. H., Letcher, B. H., & Whiteley, A. R. (2015). Distance, flow and PCR inhibition: eDNA dynamics in two headwater streams. *Molecular Ecology Resources*, *15*(1), 216-227. https://doi.org/10.1111/1755-0998.12285

Jusmaldi, A., Hariani, N., & Doq, N. (2019). Diversity, potentiality, and conservation status of fish fauna in the upper Mahakam's tributaries, East Kalimantan. *Jurnal Iktiologi Indonesia*, 19(3), 391-410. https://doi.org/10.32491/jii.v19i3.471

Junk, W. J., Bayley, P. B., & Sparks, R. E. (1989). The Flood Pulse Concept In River-Floodplain Systems. *Canadian Special Publication of Fisheries and Aquatic Sciences*, 106, 110-127.

Kartika, S. (2025, Desember 26). Keajaiban danau kaskade Mahakam: Tiga danau terbesar di Kaltim yang bisa mengering dan menyatu jadi gurun. Timenews. https://www.timenews.co.id/hiburan/99516475611/keajaiban-danau-kaskade-mahakam-tiga-danau-terbesar-di-kaltim-yang-bisa-mengering-dan-menyatu-jadi-gurun

Keith, P. (2003). Biology and ecology of amphidromous Gobiidae of the Indo-Pacific and Caribbean regions. *Journal of Fish Biology, 63*(4), 831-847. https://doi.org/10.1046/j.1095-8649.2003.00197.x

Khatri, N & Tyagi, S. (2015). Influences of Natural and Anthropogenic Factors On Surface And Groundwater Quality In Rural and Urban Areas. *Life Sci*. 8(1), 23- 39. https://doi.org/10.1080/21553769.2014.933716

Klymus, K. E., Richter, C. A., Chapman, D. C., & Paukert, C. (2015). Quantification of eDNA shedding rates from invasive bighead carp *Hypophthalmichthys nobilis* and silver carp *Hypophthalmichthys molitrix*.

UNIVERSITAS
GADJAH MADA
**Profil Keanekaragaman Iktiofauna di Danau Semayang, Kaskade Mahakam Berdasarkan Analisis Environmental DNA (eDNA)**
Kezia Janice Lokardo, Dr. Dwi Sendi Priyono, S.Si., M.Si.
**Universitas Gadjah Mada, 2026 | Diunduh dari http://etd.repository.ugm.ac.id/**

*Biological Conservation*, 183, 77-84. https://doi.org/10.1016/j.biocon.2014.11.020

Kottelat, M. (1994). The Fishes Of The Mahakam River, East Borneo: An Example Of The Limitations Of Zoogeographic Analyses and The Need For Extensive Fish Surveys In Indonesia. *Tropical Biodiversity*, 2(3), 401-426.

Likens, G. E. (2010). *Plankton of inland waters*. Academic Press.

Lucas, M. C., & Baras, E. (2001). *Migration of freshwater fishes*. Blackwell Science.

Machida, R. J., & Knowlton, N. (2017). Metazoan Mitochondrial Gene Sequence Reference Datasets for Taxonomic Assignment of Environmental Samples. *Scientific Data*, 4, 170027. https://doi.org/10.1038/sdata.2017.27

Mauro, M., Longo, F., Lo Valvo, M., Vizzini, A., Di Grigoli, A., Radovic, S., Arizza, V., Vecchioni, L., La Paglia, L., Queiroz, V., Ponte, M., Gargano, C., Ciaccio, P. S. F., Vicari, D., & Vazzana, M. (2025). The Use of Environmental DNA as Preliminary Description of Invertebrate Diversity in Three Sicilian Lakes. *Animals*, 15(3), 355. https://doi.org/10.3390/ani15030355

Mislan, H. M., Lariman, T. S., Anwar, Y., Rahman, N., Iskandar, A., Pratama, A., Aprianti, D. A., 2022. Laporan Studi Keanekaragaman Hayati di Danau Kaskade Mahakam Tahun 2022. Dinas Lingkungan Hidup Provinsi Kalimantan Timur.

Mustakim, M., Anggoro, S., Purwanti, F., & Haeruddin. (2020). Food habits and trophic level of *Anabas testudineus* in floodplain lake, Lake Semayang, East Kalimantan. *E3S Web of Conferences*, 147, 02024. https://doi.org/10.1051/e3sconf/202014702024

Nalendra, S., Irawan, E. G. & Puradimaja, J. D. (2023) *Tiga Danau Mahakam: Penambah Eksotis Setelah Dinamika Sungai dan Deltanya*. Kementerian Pekerjaan Umum dan Perumahan Rakyat (PUPR).

Pawlowski, J., Bruce, K., Panksep, K., Aguirre, F. I., and Apothéloz-PerretGentil, L. (2022). Environmental DNA *Metabarcoding* for Benthic Monitoring: A Review of Sediment Sampling and DNA Extraction Methods. Science of The Total Environment, 818, 151783. https://doi.org/10.1016/j.scitotenv.2021.151783

Pedersen, M. W., Overballe-Petersen, S., Ermini, L., Sarkissian, C. D., Haile, J., Hellstrom, M., Spens, J., Thomsen, P. F., Bohmann, K., Cappellini, E., & Willerslev, E. (2015). Ancient and Modern Environmental DNA. *Philosophical Transactions of the Royal Society B: Biological Sciences*, 370(1660), 20130383. https://doi.org/10.1098/rstb.2013.0383

Peraturan Presiden (Perpres) Nomor 60 Tahun 2021 tentang Penyelamatan Danau Prioritas Nasional (Lembaran Negara Republik Indonesia Tahun 2021 Nomor 143) jdih.setkab.go.id : 14 hlm.

Pinna, M., Zangaro, F., Saccomanno, B., Scalone, C., Bozzeda, F., Fanini, L. & Specchia, V. (2023). An Overview Of Ecological Indicators Of Fish To Evaluate Anthropogenic Pressures In Aquatic Ecosystems: From Traditional To Innovative DNA-Based Approaches. *Water*, 15(5), 949. https://doi.org/10.3390/w15050949

Pont, D., Rocle, M., Valentini, A., Civade, R., Jean, P., Maire, A., Roset, N., Schabuss, M., Zornig, H., & Dejean, T. (2018). Environmental DNA reveals

UNIVERSITAS
GADJAH MADA
**Profil Keanekaragaman Iktiofauna di Danau Semayang, Kaskade Mahakam Berdasarkan Analisis Environmental DNA (eDNA)**
Kezia Janice Lokardo, Dr. Dwi Sendi Priyono, S.Si., M.Si.
**Universitas Gadjah Mada, 2026 | Diunduh dari http://etd.repository.ugm.ac.id/**

quantitative patterns of fish biodiversity in large rivers despite its downstream transportation. *Scientific reports*, *8*(1), 10361. https://doi.org/10.1038/s41598-018-28424-8

Pont, D., Meulenbroek, P., Bammer, V., Dejean, T., Erős, T., Jean, P., Lenhardt, M., Nagel, C., Pekarik, L., Schabuss, M., Stoeckle, B. C., Stoica, E., Zornig, H., Weigand, A., & Valentini, A. (2023). Quantitative monitoring of diverse fish communities on a large scale combining eDNA *metabarcoding* and qPCR. *Molecular ecology resources*, 23(2), 396-409. https://doi.org/10.1111/1755-0998.13715

Priyono, D. S., Reza, A., Eprilurahman, R., Yudha, D. S., Mufti, F., Fauzy, N. H., Triyono, R. B., and Adhi, P. K. (2022). Aquatic Biodiversity In A Pond On The Airport Landside Areas Through Environmental DNA *Metabarcoding*: Implementation For Aviation Security Management. *Biodiversitas*, 23(7), 3638-3645. https://doi.org/10.13057/biodiv/d230741

Ratnasingham, S., & Hebert, P. D. N. (2007). BOLD: The Barcode of Life Data System. *Molecular Ecology Notes*, 7(3), 355-364. https://doi.org/10.1111/j.1471-8286.2007.01678.x

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. https://doi.org/10.1111/1365-2664.12306

Sianturi, R., Dailami, M., & Saleky, D. (2021). Identifikasi dan analisis filogenetik ikan ekonomis penting *Oreochromis* sp. dengan pendekatan DNA barcoding. *Bioscientist: Jurnal Ilmiah Biologi*, 9(2), 465-472. https://doi.org/10.33394/bioscientist.v9i2.4027

Siregar, B. S. A. (2024). *Penggunaan environmental DNA untuk pemantauan keanekaragaman hayati di Danau Kaskade Mahakam sebagai danau prioritas nasional* [Skripsi, Universitas Gadjah Mada]. ETD UGM.

Søballe, D. M., & Kimmel, B. L. (1987). A large-scale comparison of factors influencing phytoplankton abundance in rivers, lakes, and impoundments. *Ecology*, *68*(6), 1943–1954. https://doi.org/10.2307/1939885

Strickler, K. M., Fremier, A. K., & Goldberg, C. S. (2015). Quantifying effects of UV-B, temperature, and pH on eDNA degradation in aquatic microcosms. *Biological Conservation*, 183, 85–92. https://doi.org/10.1016/j.biocon.2014.11.038

Suyatna, I., Syahrir, M., Mislan, M., Wijaya, I.Y., & Abdunnur, A. (2017). A Survey on Marine Fish Species in River of Mahakam East Kalimantan, Indonesia. *Omni-Akuatik*, 13(2), 89-98. https://doi.org/10.20884/1.oa.2017.13.2.332

Suyatna, I., Sukarti, K., Pagoray, H., Kesuma, D.A., Butarbutar, T., Raafi, M., Suyatna, B. B. M. (2021). Fish Fauna of Peatland Waters in The Middle Mahakam, Kutai Kertanegara, East Kalimantan, Indonesia. *E3S Web of Conferences*, 322, 1-10. https://doi.org/10.1051/e3sconf/202132201018

Talling, J.F. and Lemoalle, J. (1998) *Ecological Dynamics of Tropical Inland Waters*. Cambridge University Press, Cambridge.

Taberlet, P., Coissac, E., Pompanon, F., Brochmann, C., & Willerslev, E. (2012). Towards next-generation biodiversity assessment using DNA

UNIVERSITAS
GADJAH MADA
**Profil Keanekaragaman Iktiofauna di Danau Semayang, Kaskade Mahakam Berdasarkan Analisis Environmental DNA (eDNA)**
Kezia Janice Lokardo, Dr. Dwi Sendi Priyono, S.Si., M.Si.
**Universitas Gadjah Mada, 2026 | Diunduh dari http://etd.repository.ugm.ac.id/**

*metabarcoding*. *Molecular Ecology*, *21*(8), 2045-2050. https://doi.org/10.1111/j.1365-294X.2012.05470.x

Tedersoo, L., Bahram, M., Zinger, L., Nilsson, R. H., Kennedy, P. G., Yang, T., Anslan, S., & Mikryukov, V. (2021). Best practices in *metabarcoding* of fungi: From experimental design to results. *Molecular Ecology*, *31*(10), 2769-2795. https://doi.org/10.1111/mec.16460

Thanopoulou, Z., Sini, M., Vatikiotis, K., Katsoupis, C., Dimitrakopoulous, G. P. & Katsanevakis, S. (2018). How Many Fish? Comparison of Two Underwater Visual Sampling Methods For Monitoring Fish Communities. *PeerJ*, 6, e5147. https://doi.org/10.7717/peerj.5066

Thomaz, S. M., Bini, L. M., & Bozelli, R. L. (2007). Floods Increase Similarity Among Aquatic Habitats In River-Floodplain Systems. *Hydrobiologia*, 579, 1-13. https://doi.org/10.1007/s10750-006-0285-y

Thomsen, P. F., & Willerslev, E. (2015). Environmental DNA: An emerging tool in conservation for monitoring past and present biodiversity. *Biological Conservation*, *183*, 4-18. https://doi.org/10.1016/j.biocon.2014.11.019

Tockner, K., & Stanford, J. A. (2002). Riverine flood plains: Present state and future trends. *Environmental Conservation*, *29*(3), 308–330. https://doi.org/10.1017/S037689290200022X

Tomljanović, T., Ivanković, P., Čeprnja, H., Vuković, J., & Matulić, D. (2024). Environmental DNA Analysis: A New Approach To Monitoring Species Reduction. *Journal of Central European Agriculture,* 25(2), 333-341. https://doi.org/10.5513/JCEA01/25.2.3968

Tsuji, S., Takahara, T., Doi, H., Shibata, N., & Yamanaka, H. (2017). The detection of aquatic macroorganisms using environmental DNA analysis: A review of methods for collection, extraction, and detection. *Environmental DNA*, 1(2), 99-108. https://doi.org/10.1002/edn3.21

Tsuji, S., Inui, R., Nakao, R., Miyazono, S., Saito, M., Kono, T., & Akamatsu, Y. (2022). Quantitative Environmental DNA *Metabarcoding* Shows High Potential As A Novel Approach To Quantitatively Assess Fish Community. *Scientific Reports*, 12, 21524. https://doi.org/10.1038/s41598-022-25274-3

Turner, C. R., Uy, K. L., & Everhart, R. C. (2015). Fish environmental DNA is more concentrated in aquatic sediments than surface water. *Biological Conservation*, *183*, 93–102. https://doi.org/10.1016/j.biocon.2014.11.017

Vannote, R. L., Minshall, G. W., Cummins, K. W., Sedell, J. R., & Cushing, C. E. (1980). The river continuum concept. *Canadian Journal of Fisheries and Aquatic Sciences*, 37(1), 130–137. https://doi.org/10.1139/f80-017

Vitule, J. R. S., Freire, C. A., & Simberloff, D. (2009). Introduction of non-native freshwater fish can certainly be bad. *Fish and Fisheries*, 10(1), 98-108. https://doi.org/10.1111/j.1467-2979.2008.00312.x

Wahjono, H. D. (2015). Pemantauan kualitas air Danau Semayang dan Danau Melintang di Kabupaten Kutai Kartanegara menggunakan sistem online monitoring. *Jurnal Air Indonesia*, *8*(1), 81-92.

Ward, R. D., Zemlak, T. S., Innes, B. H., Last, P. R., & Hebert, P. D. N. (2005). DNA barcoding Australia's fish species. *Philosophical Transactions of the Royal Society B: Biological Sciences*, 360(1462), 1847-1857. https://doi.org/10.1098/rstb.2005.1716

Welcomme, R. L. (1979). *Fisheries ecology of floodplain rivers*. Longman.

UNIVERSITAS
GADJAH MADA
**Profil Keanekaragaman Iktiofauna di Danau Semayang, Kaskade Mahakam Berdasarkan Analisis Environmental DNA (eDNA)**
Kezia Janice Lokardo, Dr. Dwi Sendi Priyono, S.Si., M.Si.
**Universitas Gadjah Mada, 2026 | Diunduh dari http://etd.repository.ugm.ac.id/**

Wetzel, R. G. (2001). *Limnology: Lake and river ecosystems* (3rd ed.). Academic Press.

Wibowo, A., Haryono, H., Kurniawan, K., Prakoso, V. A., Dahruddin, H., Lestari Surbani, I., Jaya, Y. Y. P., Sudarsono, S., Rochman, F., Muslimin, B., Sukmono, T., Rourke, M. L., Ahnelt, H., Funge-Smith, S., & Hubert, N. (2023). Rediscovery of the giant featherback *Chitala lopis* (Notopteridae) in its type locality resolves decades of taxonomic confusion. *Endangered Species Research*, 52, 285-303. https://doi.org/10.3354/esr01281

Yates, C. M., Fraser, J. D. & Derry, M. A. (2019). Meta-Analysis Supports Further Refinement of eDNA for Monitoring Aquatic Species-Specific Abundance in Nature. *Environmental DNA*, 1(1), 5-13. https://doi.org/10.1002/edn3.7

Yates, M. C., Glaser, D. M., Post, J. R., Cristescu, M. E., Fraser, D. J., & Derry, A. M. (2021). The relationship between eDNA particle concentration and organism abundance in nature is strengthened by allometric scaling. *Molecular Ecology*, 30(13), 3068-3082. https://doi.org/10.1111/mec.15543

You, X., Bian, C., Zan, Q., Xu, X., Liu, X., Chen, J., Wang, J., Qiu, Y., Li, W., Zhang, X., Sun, Y., Chen, S., Hong, W., Li, Y., Cheng, S., Fan, G., Shi, C., Liang, J., Tom Tang, Y., Yang, C., … Shi, Q. (2014). Mudskipper genomes provide insights into the terrestrial adaptation of amphibious fishes. *Nature communications*, 5, 5594. https://doi.org/10.1038/ncomms6594

Yudha, D. S., Salsabila, S., & Priyono, D. S. (2024). Keanekaragaman Jenis Ikan Di Hulu Sungai Opak Menggunakan *Environmental DNA* (Edna) *Metabarcoding*. *Biota: Jurnal Ilmiah Ilmu-Ilmu Hayati*, 9(3), 238-246. https://doi.org/10.24002/biota.v9i3.7864