

DAFTAR PUSTAKA

- Aji, K. W., & Arisuryanti, T. (2021). Molecular Identification of Mudskipper Fish (*Periophthalmus* spp.) from Baros Beach, Bantul, Yogyakarta. *Journal of Tropical Biodiversity and Biotechnology*, 6(3), 66391. <https://doi.org/10.22146/jtbb.66391>
- Akbar, N., Bode, I. D., Baksir, A., Tahir, I., Paembonan, R. E., Marus, I., & Wibowo, E. S. (2020). Distribusi dan karakteristik habitat ikan tembakul (Gobiidae sp) di pesisir Pantai Pulau Ternate Provinsi Maluku Utara. *Jurnal Maritim*, 1(2), 49–58.
- Ali, M., & Ghasemi, S. A. (2012). Study of Genetic diversity of mudskipper (*Periophthalmus waltoni*) using RAPD markers in the Persian Gulf. *Journal of Marine Science*, 11(3), 5-15
- Ansari, A. A., Trivedi, S., Saggu, S., & Rehman, H. (2014). Mudskipper: A biological indicator for environmental monitoring and assessment of coastal waters. *Journal of Entomology and Zoological Studies*, 2(6), 22–33.
- Arisuryanti, T., Firdaus, N.U.N., Hakim, L. 2020. Genetic characterization of striped snakehead (*Channa striata* Bloch, 1793) from Arut River, Central Kalimantan inferred from *COI* mitochondrial gene. *AIP Conference Proceedings*, 2260, 020001.
- Arisuryanti, T., Hasan, R. L., & Koentjana, J. P. (2018). Genetic identification of two mudskipper spesies (Pisces: Gobiidae) from Bogowonto Lagoon (Yogyakarta, Indonesia) using COI mitochondrial gene as a DNA barcoding marker. *AIP Conference Proceedings*, 2002.
- Cavalli-Sforza, L. L., & Feldman, M. W. (1990). Spatial subdivision of populations and estimates of genetic variation. *Theoretical Population Biology*, 37(1), 3–25. [https://doi.org/10.1016/0040-5809\(90\)90024-P](https://doi.org/10.1016/0040-5809(90)90024-P)
- Cawthorn, D. M., Steinman, H. A., & Witthuhn, R. C. (2012). Evaluation of the 16S and 12S rRNA genes as universal markers for the identification of commercial fish spesies in South Africa. *Gene*, 491(1), 40–48. <https://doi.org/10.1016/j.gene.2011.09.009>
- Choudhuri, S. (2014). Fundamentals of Molecular Evolution. *Bioinformatics for Beginners*, 27–53. <https://doi.org/10.1016/b978-0-12-410471-6.00002-5>
- Dabruzzi, T. F., Fangué, N. A., Kadir, N. N., & Bennett, W. A. (2019). Thermal niche adaptations of common mudskipper (*Periophthalmus kalolo*) and barred mudskipper (*Periophthalmus argentilineatus*) in air and water. *Journal of Thermal Biology*, 81(October 2018), 170–177. <https://doi.org/10.1016/j.jtherbio.2019.02.023>
- Dudu, A., Georgescu, S. E., & Costache, M. (2015). Evaluation of genetic diversity in fish using molecular markers. *Molecular Approaches to Genetic Diversity*.

<https://doi.org/10.5772/60423>

- Elviana, S., & Sunarni, S. (2018). Komposisi dan kelimpahan jenis ikan gelodok kaitannya dengan kandungan bahan organik di perairan estuari Kabupaten Merauke. *Agrikan: Jurnal Agribisnis Perikanan*, 11(2), 38.
- Elviana, S., Sunarni, S., Maturbongs, M. R., Sajriawati, & Fakhriyyah, S. (2019). Mudskipper diversity and its relationship to an environmental condition in estuary. *IOP Conference Series: Earth and Environmental Science*, 343(1).
- Enot, W. S., Annawaty, & Fahri. (2015). *Periophthalmus* spp. (Gobiidae: Oxudercinae) di Habitat Mangrove Kabupaten Banggai, Sulawesi Tengah. *Pros. Sem. Nas. Biologi*, (September), 117–120.
- Frey, B. (2018). *The SAGE encyclopedia of educational research, measurement, and evaluation* (Vols. 1-4). Thousand Oaks, CA: SAGE Publications, Inc. doi: 10.4135/9781506326139
- Garcia E, Wright D, Gatins R, Roberts MB, Pinheiro HT, Salas E, Chen JY, Winnikoff JR, Bernardi G.(2021). Haplotype network branch diversity, a new metric combining genetic and topological diversity to compare the complexity of haplotype networks. *PLoS One*, 16(6):e0251878. doi: 10.1371/journal.pone.0251878. PMID: 34191803; PMCID: PMC8244886.
- Grant WS, Bowen BW. (1998).Shallow population histories in deep evolutionary lineages of marine fishes: insights from sardines and anchovies and lessons for conservation. *American Genetics Association*, 89, 415–26.
- Harahab, N., & Setiawan. (2017). Suitability index of mangrove ecotourism in Malang regency indeks kesesuaian ekowisata mangrove di Kabupaten Malang. *Journal of Economic and Social of Fisheries and Marine*, 4(02), 153–165.
- Harclerode, M. Richard E., C. F. (2007). Molecular Evidence for High Levels of Intrapopulation Genetic Diversity in Woodrats (*Neotoma Micropus*). *J Mammal*, 23(1), 1–7. <https://doi.org/10.1644/05-MAMM-A-377R1.1>.Molecular
- Hughes, A. R., Inouye, B. D., Johnson, M. T. J., Underwood, N., & Vellend, M. (2008). Ecological consequences of genetic diversity. *Ecology Letters*, 11(6), 609–623. <https://doi.org/10.1111/j.1461-0248.2008.01179.x>
- Hui, N. Y., Mohamed, M., Ammin Othman, M. N., & Tokiman, L. (2019). Diversity and behaviour of mudskippers of Tanjung Piai, Pontian, Johor. *IOP Conference Series: Earth and Environmental Science*, 269(1).
- Iqbal, M. (2019). A Review of recent status on Mudskippers (Oxudercine Gobies) in Indonesian Waters. *Oceanography & Fisheries Open Access Journal*, 9(4), 1–4.
- Jaafar, Z., Polgar, G., & Zamroni, Y. (2016). Description of a new spesies of

Periophthalmus (Teleostei: Gobiidae) from the Lesser Sunda Islands. *Raffles Bulletin of Zoology*, 64(September), 278–283.

- Jahan, H., Akter, M., Begum, R. A., & Md Shahjahan, R. (2017). Identification and comparison of three carp fishes based on mitochondrial 16S rRNA gene. *Dhaka University Journal of Biological Sciences*, 26(2), 167–174. <https://doi.org/10.3329/dujbs.v26i2.46396>
- Jong, M. A., Wahlberg, N., van Eijk, M., Brakefield, P. M., & Zwaan, B. J. (2011). Mitochondrial DNA signature for range-wide populations of *Bicyclus anynana* suggests a rapid expansion from recent refugia. *PLoS ONE*, 6(6), 1–5. <https://doi.org/10.1371/journal.pone.0021385>
- Kalinowski, S. (2009). How well do evolutionary trees describe genetic relationships among populations?. *Heredity* 102, 506–513
- Kumar, S., Stecher, G., Li, M., Knyaz, C., Tamura, K. 2018. MEGA X: Molecular evolutionary genetics analysis across computing platforms. *Molecular Biology and Evolution* 35, 1547-1549.
- Ladoukakis, E. D., & Zouros, E. (2017). Evolution and inheritance of animal mitochondrial DNA: Rules and exceptions. *Journal of Biological Research (Greece)*, 24(1), 1–7. <https://doi.org/10.1186/s40709-017-0060-4>
- Leys, M., Keller, I., Räsänen, K., Gattolliat, J., & Robinson, C. T. (2016). Distribution and population genetic variation of cryptic species of the Alpine mayfly *Baetis alpinus* (Ephemeroptera : Baetidae) in the Central Alps. *BMC Evolutionary Biology*, 1–15. <https://doi.org/10.1186/s12862-016-0643-y>
- Madison, W.P., Madison, D.R. 2018. Mesquite: A modular system for evolutionary analysis. Version 3.51 (<http://www.mesquiteproject.org>).
- Muhtadi, A., Ramadhani, S. F., & Yunasfi. (2016). Identification and habitat type of Mudskipper (Family: Gobiidae) at the Bali Beach, district of Batu Bara, North Sumatra Province. *Biospecies*, 9(2), 1–6.
- Murniati, N., & Hasan, R. (2016). Populasi Ikan Gelodok (*Periophthalmus modestus*) di Kawasan Hutan Mangrove Kualo Lingkar Barat Bengkulu. *Jurnal Gradien*, 12(1), 59–64.
- Nei, M. 1972. Genetic Distance. In *Brenner's Encyclopedia of Genetics: Second Edition* (3). Elsevier Inc. <https://doi.org/10.1016/B978-0-12-374984-0.00615-X>
- Nei, M., N Saitou,. 1987. The neighbor-joining method: a new method for reconstructing phylogenetic trees., *Molecular Biology and Evolution*, 4(4), 406-425, <https://doi.org/10.1093/oxfordjournals.molbev.a040454>
- Nugroho, E. D., Ibrahim, Rahayu, D. A., & Rupa, d. (2016). Studi Morfologi Ikan Mudskippers (Gobiidae: Oxudercinae) Sebagai Upaya Karakterisasi Biodiversitas Lokal Pulau Tarakan. *Jurnal Harpodon Borneo*, 9(1), 46–57.

- Oktavia, L., & Arisuryanti, T. (2018). Komposisi nukleotida sekuen gen mitokondria 16S rRNA Ikan Bilih (*Mystacoleucus padangensis* Bleeker, 1852) Danau Singkarak, Solok, Sumatera Barat. *Biogenesis: Jurnal Ilmiah Biologi*, 6(2), 98. <https://doi.org/10.24252/bio.v6i2.4855>.
- Ota, S., & Li, W. (1987). *NJML : A Hybrid Algorithm for the Neighbor-Joining and Maximum- Likelihood Methods*. 1, 1401–1409.
- Palumbi, S.R. 1996. Nucleic acids II: The polymerase chain reaction. In: Molecular systematics, (Eds.) D.M. Hillis, C.Moritz, B.K. Mable, Sinauer Associates. Sunderland. Massachusetts. p. 205
- Paradis, E.(2018) Analysis of haplotype networks: The randomized minimum spanning tree method. *Methods EcolEvol*,9, 1308– 1317. <https://doi.org/10.1111/2041-210X.12969>
- Polgar, G., Zaccara, S., Babbucci, M., Fonzi, F., Antognazza, C. M., Ishak, N., Crosa, G. (2017). Habitat segregation and cryptic adaptation of spesies of *Periophthalmus* (Gobioidei: Gobiidae). *Journal of Fish Biology*, 90(5), 1926–1943.
- Polgar, G., Zane, L., Babbucci, M., Barbisan, F., Patarnello, T., Rüber, L., & Papetti, C. (2014). Phylogeography and demographic history of two widespread Indo-Pacific mudskippers (Gobiidae: *Periophthalmus*). *Molecular Phylogenetics and Evolution*, 73(1), 161–176. <https://doi.org/10.1016/j.ympev.2014.01.014>
- Rozas, J., Rerrer-Matta, A., Sanchez-DelBarrio, J.C., Guirao-Rico, S., Librado, P., Ramos-Onsins, S.E., Sanchez-Gracia, A. 2017. DnaSP 6 : DNA sequence polymorphism analysis of large data sets. *Molecular Biology and Evolution*, 13(12), 3299 – 3302
- Rumahlatu, D., Sangur, K., Leuwol, A. P., Apituley, Y. N., Salmanu, S. I. A., & Arini, I. (2020). *Study of Environmental Conditions , Morphometric and Meristic of Mudskipper (Periophthalmus spp.) from Ambon Island Coastal Periophthalmus ; Dominggus Rumahlatu Indian Journal of Ecology Study of Environmental Conditions*,47(3),782-787.
- Russo De Moraes, C. A., & Selvatti, A. P. (2018). Bootstrap and rogue identification tests for phylogenetic analyses. *Molecular Biology and Evolution*, 35(9), 2327–2333. <https://doi.org/10.1093/molbev/msy118>
- S. E., Ramos-Onsins, A., Sanchez-Gracia. 2017. DnaSP 6 : DNA sequence polymorphism analysis of large datasets. *Molecular Biology and Evolution* 32 (12) : 3299-3302
- Saha O, Hossain MS, Rahaman.(2020). Genomic exploration light on multiple origin with potential parsimony-informative sites of the severe acute respiratory syndrome coronavirus 2 in Bangladesh. *Gene Rep.* 1. doi: 10.1016/j.genrep.2020.100951.

- Schon, E. A., Salvator, D., Michio, H. (2017). Human mitochondrial DNA: roles of inherited and somatic mutations. *NIH Public Access* 23(1), 1–7.
- Setiawan, A., Iqbal, M., Priscillia, B., Pormansyah, Setiawan, D., & Yustian, I. (2019). Linking a gap, first record of dusky-gilled mudskipper *Periophthalmus variabilis* Eggert, 1935 (Perciformes: Gobiidae) in southern Sumatra, Indonesia. *Ecologica Montenegrina*, 24, 1–6. <https://doi.org/10.37828/em.2019.24.3>
- Shen, Y., Guan, L., Wang, D. and Gan, X. (2016), DNA barcoding and evaluation of genetic diversity in Cyprinidae fish in the midstream of the Yangtze River. *Ecol Evol*, 6: 2702–2713. <https://doi.org/10.1002/ece3.2060>.
- Simón D, Cristina J, Musto H. Nucleotide Composition and Codon Usage Across Viruses and Their Respective Hosts. *Front Microbiol.* 28;12:646300. doi: 10.3389/fmicb.2021.646300. PMID: 34262534; PMCID: PMC8274242.
- Strimmer, K., von Haeseler, A., & Salemi, M. (2012). Genetic distances and nucleotide substitution models. *The Phylogenetic Handbook*, 111–141. <https://doi.org/10.1017/cbo9780511819049.006>
- Sunarni, & Maturbongs, M. R. (2013). Biodiversitas Dan Kelimpahan Ikan Gelodok (Mudskipper) Di Daerah Intertidal Pantai Payumb, Merauke. *Prosiding Seminar Nasional Kemaritiman Dan Sumberdaya Pulau-Pulau Kecil*, 1(1), 125–131.
- Taanman, J. W. (1999). The mitochondrial genome: Structure, transcription, translation and replication. *Biochimica et Biophysica Acta - Bioenergetics*, 1410(2), 103–123. [https://doi.org/10.1016/S0005-2728\(98\)00161-3](https://doi.org/10.1016/S0005-2728(98)00161-3)
- Takeda, T., Hayashi, M., Toba, A., Soyano, K., & Ishimatsu, A. (2011). Ecology of the Australian mudskipper *Periophthalmus minutus*, an amphibious fish inhabiting a mudflat in the highest intertidal zone. *Australian Journal of Zoology*, 59(5), 312–320. <https://doi.org/10.1071/ZO11059>
- Tan, M. P., Gan, H. M., Nabilsyafiq, M. H., Mazlan, A. G., Mat Jaafar, T. N. A., Siti Azizah, M. N., Sung, Y. Y. (2020). Genetic diversity of the Pearse's Mudskipper *Periophthalmus novemradiatus* (Perciformes: Gobiidae) and characterization of its complete mitochondrial genome. *Thalassas*, 36(1), 103–113.
- Taniwel, D., Leiwakabessy, F., & Rumahlatu, D. (2020). Short Communication : Density and length-weight relationship of mudskipper (*Periophthalmus* spp .) in the mangrove area of Kairatu Beach , Maluku , Indonesia. *Biodiversitas*, 21(11), 5465–5473. <https://doi.org/10.13057/biodiv/d211155>
- Theeranukul, P., Watabe, S., Ikeda, D., Maltagliati, F., Kettratad, J., & Piyapattanakorn, S. (2021). Genetic diversity of blue-spotted mudskipper (*Boleophthalmus boddarti*) populations in Gulf of Thailand Pachoensuk. *Agriculture and populations in Gulf of Thailand*. 55, 838–847.



- Van der Laan., Eschmeyer, W. N., & Fricke, R. (2014). *Family-group names of Recent fishes* (Vol. 3882, Issue 2).
- Wei, Y., Lewis, R., Naseri, A., Zhang, S., & Zhi, D. (2020). Genealogical search using whole-genome genotype profiles. In *Responsible Genomic Data Sharing*. Elsevier Inc. <https://doi.org/10.1016/b978-0-12-816197-5.00004-8>
- Woodruff, D. S. (2001). Population, Species, and Conservation Genetics. *Encyclopedia of Biodiversity*, 4, 811–829.
- You, X., Sun, M., Li, J., Bian, C., Chen, J., Yi, Y., Shi, Q. (2018). Mudskippers and their genetic adaptations to an amphibious lifestyle. *Animals*, 8(2), 1–12. <https://doi.org/10.3390/ani8020024>