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DAFTAR PUSTAKA

Adrianto, H. (2017). *Biologi Sel dan Molekuler*. Yogyakarta: Deepublish.

Al-Shuhaib, M. B. S., & Hashim, H. O. (2023). Mastering DNA chromatogram analysis in Sanger sequencing for reliable clinical analysis. *Journal of Genetic Engineering and Biotechnology*, 21(1), 115.

Al-Thuwaini, T. M., Mosia, I. A., Algboory, H. L., & Al-Shuhaib, M. B. S. (2023). An efficient, fast and inexpensive method for genomic DNA extraction of fish tissue. *Molecular Biology Reports*, 50(4), 3963-3968.

Arianto, M. F. (2020). Potensi wilayah pesisir di negara Indonesia. *Jurnal Geografi,* 10(1), 204-215.

Arsana, I. N., & Juliasih, N. K. A. A. (2023). Karakteristik DNA Mitokondria. *Jurnal Widya Biologi*, 14(02), 56-65.

Azahra, A. P. A., Listanto, P., Ramadhani, K. N., Indriansyah, T. A. G., Khairunnisa, L. A., & Arini, L. D. D. (2025). Peran Asam Nukleat dalam Proses Sintesis Protein: Analisis Mekanisme DNA, RNA, dan Ribosom dalam Regulasi Genetik. *Student Scientific Creativity Journal*, 3(2), 15-24.

Brown, T. A. (2023). *Genomes 5.* Florida: CRC Press.

Carpenter, K. E., dan Angelis, N. D. (2016). *The Living Marine Resources if The Eastern Central Atlantic, Volume 4 Bony Fishes Part 2 (Perciformes to Tetradontiformes) and Sea Turtles*. Rome: Food and Agriculture Organization of The United Nations.

Chandar, N. and Viselli, S. (2019). *Lippincott Illustrated Reviews: Cell and Molecular Biology Second Edition*. Philadelphia: Wolters Kluwer

Chen, L. C., Weng, J. S., Lan, K. W., Tseng, C. T., Liao, C. H., Lee, W. Y., & Lim, I. C. L. (2025). Variation in the catch rate and distribution of three important commercial Spanish mackerel (Commerson: Niphonius: Guttatus) related to ENSO events around the waters off Taiwan. *Regional Studies in Marine Science*, 104255.

Collette, B.B., Di Natale, A. & Pollard, D.A. (2023). *Scomberomorus commerson*. The IUCN Red List of Threatened Species 2023: e.T170316A46647677.

Demandt, M. H. (2013). Sequence variation in mitochondrial ATP synthase subunit 6 & 8 and nuclear genes ITS 1 and ITS 2 in 17 cyprinid species. *Journal of Applied Ichthyology*, 29(1), 278-280.

Deng Z, Wang X, Xu S, Gao T, Han Z (2019). Population genetic structure and selective pressure on the mitochondrial ATP6 gene of the Japanese sand lance Ammodytes personatus Girard. *Journal of the Marine Biological Association of the United Kingdom*, 1409–1416

UNIVERSITAS
GADJAH MADA
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Dineshbabu, A. P., Zacharia, P. U., Sujitha, T., Shoba, J. K., Rajesh, K. M., Vivekanandan, E., & Ninan, R. G. (2020). Assessment of stock vulnerability of Indian marine fishes to past changes in climate and options for adaptation. *Climate Research*, 79(3), 175-192.

Firda, W., Toha, A. H. A., Mudjirahayu, M., & Dailami, M. (2025). Keragaman Genetik Antar Individu Bulu Babi (Tripneustes gratilla) di Pantai Rendani Kabupaten Manokwari. *Journal of Tropical Diversity*, 1(1), 56-63.

Gautam, A. (2022). *DNA and RNA Isolation Techniques for Non-experts*. Cham: Springer.

Genbank. (2024). Scomberomorus commerson isolate KSMJ-3 mitochondrion, complete genome: *PP437202.1*. National Center for Biotechnology Information (NCBI). Diakses pada 3 Februari 2026 melalui https://www.ncbi.nlm.nih.gov/nuccore/2871140507.

Gordon, A. L., Huber, B. A., Metzger, E. J., Susanto, R. D., Hurlburt, H. E., & Adi, T. R. (2012). South China Sea throughflow impact on the Indonesian throughflow. *Geophysical Research Letters*, 39(11).

Hahn, A., & Zuryn, S. (2019). Mitochondrial genome (mtDNA) mutations that generate reactive oxygen species. *Antioxidants*, 8(9), 392.

Hanada, K. (2020). *DNA Electrophoresis Methods and Protocols*. Oita: Humana Press

Hashemi, S.A. Doustdar, M. Al Kindi, A. Dutta, S. Assessment of Population Dynamics and Fishery Exploitation of Narrow-Barred Spanish Mackerel (*Scomberomorus commerson*) in Iranian Waters. *Oceans 2025*, 6, 55.

Jeena, N. S., Rahuman, S., Roul, S. K., Azeez, P. A., Vinothkumar, R., Manas, H. M., . Nesnas, E. A., Rathinam, A. M., Surya S., Rohit P, & Gopalakrishnan, A. (2022). Resolved and redeemed: a new fleck to the evolutionary divergence in the genus Scomberomorus Lacepède, 1801 (Scombridae) with cryptic speciation. *Frontiers in Marine Science*, 9, 888463.

Kasim, K., & Triharyuni, S. (2014). Status pemanfaatan dan musim penangkapan ikan tenggiri (*Scomberomorus spp*.) di Laut Jawa. *Jurnal Penelitian Perikanan Indonesia*, 20(4), 235-242.

Katyal, G., Ebanks, B., Lucassen, M., Papetti, C., & Chakrabarti, L. (2021). Sequence and structure comparison of ATP synthase F0 subunits 6 and 8 in notothenioid fish. *PLoS One*, 16(10), e0245822.

Keklik, G. (2023). Understanding evolutionary relationships and analysis methods through mega software. *International Journal Of New Horizons In The Sciences,* 83-90.

Khehra, N., Padda, I. S., & Swift, C. J. (2023). *Polymerase chain reaction (PCR).* Florida: StatPearls Publishing,

UNIVERSITAS
GADJAH MADA
**ANALISIS KERAGAMAN GENETIK IKAN TENGGIRI (Scomberomorus sp.) ASAL CILACAP , GRESIK, MOROWALI UTARA,
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Universitas Gadjah Mada, 2026 | Diunduh dari http://etd.repository.ugm.ac.id/

Kumar, S. (2021). *Advances In Biotechnology And Bioscience Volume 10.* New Delhi: AkiNik Publication.

Kumar, S., Stecher, G., Suleski, M., Sanderford, M., Sharma, S., & Tamura, K. (2024). MEGA12: Molecular Evolutionary Genetic Analysis version 12 for adaptive and green computing. *Molecular Biology and Evolution*, 41(12), msae263.

Kumar, S., Tamura, K., & Nei, M. (1993). *MEGA: Molecular evolutionary genetics analysis (Version 1.01) [Computer software]*. Pennsylvania : The Pennsylvania State University.

Kusnadi, J., & Arumingtyas, E. L. (2020). *Polymerase Chain Reaction (PCR) : Teknik dan Fungsi.* Malang: UB Press.

Lee, P. Y., Costumbrado, J., Hsu, C. Y., & Kim, Y. H. (2012). Agarose gel electrophoresis for the separation of DNA fragments. *Journal of Visualized Experiments: JoVE*, (62), 3923.

Maharani, D. S., & Sumsanto, M. (2024). PCR (Polymerase Chain Reaction) Method As A Detector of IMNV (Infectious myonecrosis virus) Disease in Vaname Shrimp (*Litopenaeus vannamei*). *Journal of Fish Health*, 4(4), 224-234.

Mahendrarajah, T. A., Moody, E. R., Schrempf, D., Szánthó, L. L., Dombrowski, N., Davín, A. A., Pisani, D., Donoghue, P. C. J., Szöllősi, g. j., Williams., T. A. & Spang, A. (2023). ATP synthase evolution on a cross-braced dated tree of life. *Nature Communications*, 14(1), 7456.

Nei, M. & Kumar, S. (2000). *Molecular Evoution and Phylogenetics*. New York: Oxford University Press.

Ningsih, E. Y., Faiqoh, E., Astarini, I. A., Pertiwi, P. D., Sembiring, A., Yusmalinda, N. L. A., & Al Malik, M. D. (2021). Identifikasi dan Keragaman Genetik Longtail Tuna (*Thunnus tonggo*l) yang Didaratkan di PPI Kedonganan dan PPP Muncar Menggunakan Marka D-loop Mitokondria. *Journal of Marine and Aquatic Sciences,* 7(1), 94-102.

Noegroho, T., Hidayat, T., Chodriyah, U., & Patria, M. P. (2018). Biologi reproduksi ikan tenggiri (Scomberomorus commerson Lacepede, 1800) di perairan Teluk Kwandang, Laut Sulawesi. *BAWAL Widya Riset Perikanan Tangkap*, 10(1), 69-84.

Nurbaiti, N., Roslim, D., & Herman, H. (2025). A DNA barcoding multilocus analysis in the Cucurbitaceae family. *Jurnal Biologi Tropis*, 25(2), 1221-1230.

Peng, S., Qian, Y. K., Lumpkin, R., Du, Y., Wang, D., & Li, P. (2015). Characteristics of the near-surface currents in the Indian Ocean as deduced from satellite-tracked surface drifters. Part I: Pseudo-Eulerian statistics. *Journal of Physical Oceanography*, 45(2), 441-458.

UNIVERSITAS
GADJAH MADA
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Universitas Gadjah Mada, 2026 | Diunduh dari http://etd.repository.ugm.ac.id/

Salma, U., & Madduppa, H. (2021). Morphometric and genetic identification of Mackerel (Rastrelliger sp.) collected from Muara Baru Fish Market, Jakarta. *Jurnal Ilmu Kelautan Kepulauan*, 4(2).

Scheffler, I. E. (2008). *Mitochondria 2nd Edition*. New Jersey: Johan Wiley & Sons.

Schultz, K. (2003). *Ken Schultz's Field Guide to Saltwater Fish.* New Jersey: WileyBlackwell.

Sulaiman, Z. H., & Ovenden, J. R. (2010). Population genetic evidence for the east–west division of the narrow-barred Spanish mackerel (Scomberomorus commerson, Perciformes: Teleostei) along Wallace's Line. *Biodiversity and Conservation*, 19(2), 563-574.

Telaumbanua, B. V., Laoli, D., Zebua, R. D., Zebua, O., Dawolo, J., & Zega, A. (2024). Implementasi teknologi genetika untuk konservasi spesies laut terancam: Tinjauan literatur tentang metode dan keberhasilan. Manfish: *Jurnal Ilmiah Perikanan Dan Peternakan*, 2(2), 58-68.

Toha, A. H. A., Dailami, M., Pranata, B., Manangkalangi, E., Parinding, Z., Wangi, E. M., & Putri, R. F. H. (2025). *Aplikasi Barcode DNA Dalam Perikanan*. Penerbit Brainy Bee.

Trivedi, S., Rehman, H., Saggu, S., Panneerselvam, C., & Ghosh, S. K . (2020). *DNA Barcoding and Molecular Phylogeny (2nd Ed).* Switzerland: Springer Nature.

Wang Q., and Wu J.N. (2025). The origin and global spread of *Scomberomorus* spp.: the intersection of ecological adaptation and fisheries management. *International Journal of Marine Science*, 15(2): 75-91 (doi: 10.5376/ijms.2025.15.0008)

Wang, J., Shi, Y., Elzo, M. A., Dang, S., Jia, X., & Lai, S. (2018). Genetic diversity of ATP8 and ATP6 genes is associated with high-altitude adaptation in yak. *Mitochondrial DNA Part A*, 29(3), 385-393.

Weaver, R. F. (2012). *Molecular Biologi 5th edition*. New York: McGraw-Hill.

White, C., Selkoe, K. A., Watson, J., Siegel, D. A., Zacherl, D. C., & Toonen, R. J. (2010). Ocean currents help explain population genetic structure. *Proceedings of the Royal Society B: Biological Sciences,* 277(1688), 1685-1694.

Widayanti, R. (2025). *Jejak Mitokondria: Strategi Genetik Modern untuk Mengungkap Rahasia Ikan Indonesia*. Sleman: Deepublish.

Xu, T., Pagadala, V., & Mueller, D. M. (2015). Understanding structure, function, and mutations in the mitochondrial ATP synthase. *Microbial cell*, 2(4), 105.

Yan, J., Guo, X., Liu, S., Xiao, J., Liu, Z., Chen, Y., & Liu, Y. (2009). Maternal inheritance in polyploid fish inferred from mitochondrial ATPase genes analysis. *Progress in Natural Science*, 19(6), 693-698.

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Universitas Gadjah Mada, 2026 | Diunduh dari http://etd.repository.ugm.ac.id/

Yang, J., Li, A., & Liu, S. (2025). Structural Characteristics of Mitochondrial Genomes of Two Species of Mackerel and Phylogenetic Analysis of Scombridae Family. Biomolecules, 15(4), 555.

Yu, G. (2023). *Data Integration, Manipulation, and Visualization of Phylogenetic Trees.* Florida: CRC Press

Zeng, X. S., Sun, C. H., Huang, X. Y., Lao, Y. L., Huang, J. L., Li, S., & Zhang, Q. (2022). DNA barcoding of Scomberomorus (Scombridae, Actinopterygii) reveals cryptic diversity and misidentifications. *ZooKeys*, 1135, 157.