

DAFTAR PUSTAKA

- Achmad MJ, Djamhur, M, Fabanyo, MA, & Akbar, N. 2019. Aplikasi *DNA barcoding* ikan julung-julung (*Hemirhampus* sp.) di Perairan Laut Maluku Utara. *Jurnal Iktologi Indonesia*, vol.19, no. 3: 463-473.
- Afrisal M, Isyrini R, Irmawati & Burhanuddin AI. 2018. Morphologic and radiographic analyses of *Lethrinus erythropterus* (Lethrinidae) from the Spermonde Archipelago, Indonesia. *AACL Bioflux*, vol.11, no. 6: 1696–1706.
- Afrisal, M, Irmawati, Nurjirana, Iwatsuki, Y, & Burhanuddin, AI. 2020. Lethrinid fishes (Lethrinidae) of Wallacea region. *IOP Conference. Series: Earth and Environmental Science*, vol. 486, no. 1: 1–9.
- Afrisal, M, Nurjirana, Irmawati, Iwatsuki, Y, & Burhanuddin, AI. 2020. Landmark-based morphometric and meristic variations in emperors (*Lethrinus*, Lethrinidae, Percoidae) from three areas around Sulawesi (Indonesia) with different levels of destructive fishing. *Jordan Journal of Biological Sciences*, vol. 13, no. 12: 637–646.
- Aldonov, V. K, & Druzhinin, A. D. 1979. Some data on scavengers (Family Lethrinidae) from the Gulf of Aden region. *Journal of Ichthyology*, vol. 18, no. 4: 527–535.
- Al-Abdali, FSH, Al-Buwaiqi, B, Al-Kindi, ASM, Ambuali, A, Borsa, P, Govender, A. & Russell, B. 2019. *Lethrinus mahsena*. The IUCN Red List of Threatened Species 2019: e.T16720057A16722325. <https://dx.doi.org/10.2305/IUCN.UK.2019-2.RLTS.T16720057A16722325.en>. Downloaded on 25 March 2021.
- Al-Mamry, JM. 2006. Biology and fisheries management of king soldier bream, *Argyrops spinifer* and spangled emperor, *Lethrinus nebulosus* in the Arabian Sea, Oman. PhD. Thesis. University of Wales, Bangor, U.K, 421p.
- Al-Sakaff H., M. Esseen, 1999. Occurrence and distribution of fish species off Yemen (Gulf of Aden and Arabian Sea). *Naga*, vol. 22, no. 1: 43-47.
- Amin, S, Motlagh, T, Seyfabadi, J, Vahabnezhad, A, & Shojaei, MG. 2010. Some reproduction characteristics and weight-length relationships of the spangled emperor, *Lethrinus nebulosus* (Lethrinidae) of the South Coastal of Iran (Persian Gulf and Oman Sea). *Turkish Journal of Fisheries and Aquatic Sciences*, vol. 10, no. 2: 221–227.
- Andriyono, S, Alam, MJ, & Kim, HW. 2020. The Jawa and Bali Island Marine Fish Molecular Identification to Improve 12S rRNA-tRNA Valin-16S rRNA Partial Region Sequences on the *GenBank* Database. *Thalassas: An International Journal of Marine Sciences*, vol. 36, no. 2: 1–14.
- Andrés L, Chalde T, Elisio M, & Augusto C. 2013. Effects of global warming on fish reproductive endocrine axis, with special emphasis in pejerrey *Odontesthes bonariensis*. *General and Comparative Endocrinology*, vol. 192, no. 3: 45–54.
- Baddar, MK. 1987. A preliminary study of the population dynamics of a Sheiry, the starry pig face bream, *Lethrinus nebulosus*. *Kuwait Bulletin of Marine Science*, vol. 9, no. 4: 29-33.
- Ballesteros-Córdova CA, Ruiz-Campos G, Findley LT, Grijalva-Chon JM, Gutiérrez-Millán LE, & Varela-Romero A. 2016. Morphometric and meristic characterization of the endemic Desert chub *Gila eremica* (Teleostei: Cyprinidae), and its related

- congeners in Sonora, Mexico. *Revista Mexicana de Biodiversidad*, vol. 87, no. 2: 390–398.
- Balon, EK. 1981. About processes which cause the evolution of guilds and species. *Environmental Biology of Fishes*, vol. 6, no. 5: 129-138.
- Bereiter-Hahn, J. & Zylberberg, L. 1993. Regeneration of teleost fish scale. *Comparative Biochemistry and Physiology*, vol. 105, no. 4: 625-641.
- Budimawan, Budi, S, Kasmawati, R, Zaky, MA, & Darmawati. 2002. Struktur populasi ikan katamba *Lethrinus Lentjam* yang tertangkap di perairan Spermonde, Sulawesi Selatan. *Prosiding Seminar Nasional Tahunan X Hasil Penelitian Perikanan dan Kelautan, Yogyakarta 31 Agustus 2013*. Jurusan Perikanan Fakultas Pertanian UGM. Yogyakarta. MD-08.
- Burhanuddin, AI. 2014. *Ikhtologi Ikan dan Segala Aspek Kehidupannya*. Makassar: Deepublish. 22-25.
- Burhanuddin AI, & Iwatsuki Y. 2018. *Snapper and Emperor of Spermonde Archipelago, Indonesia*. UPT Unhas Press. 107-116.
- Bernardo, J. 2011. A Critical Appraisal of The Meaning and Diagnosability of Cryptic Evolutionary Diversity, and Its Implications for Conservation In The Face of Climate Change. In *Climate Change, Ecology and Systematics* (Hodkinson, TR, ed.). Cambridge University Press. 380–438,
- Borsa, P, Collet, A, Carassou, L, Ponton, D, & Chen, WJ. 2010. Multiple nuclear and mitochondrial genotyping identifies emperors and large-eye brems (Teleostei: Lethrinidae) from New Caledonia and reveals new large-eye bream species. *Biochemical Systematics and Ecology*, vol. 38, no. 3: 370–389.
- Briggs MRP. 2003. Destructive fishing practices in south Sulawesi Island, east Indonesia and the role of aquaculture as a potential alternative livelihood improving coastal through sustainable aquaculture practices. A Report to the Collaborative APEC Grouper Research and Development Network.
- Brezky VJ, Doyle RW. 1988. A morphometric criterion for sex discrimination in Tilapia In Pullin RSV, Bhukaswan T, Tonguthai K, Maclean JL (Eds.) *The Second International Symposium on Tilapia in Aquaculture*. ICLARM Conference Proceedings 15. Philippines: Department of Fisheries, Bangkok, Thailand & International Center for Living Aquatic Resources Management, Manila.
- Carpenter KE. 2001 Lethrinidae: Emperor (emperor snappers). In *The living marine resources of the Western Central Pacific*. vol. 5. Bony fishes. Part 3 (Menidae to Pomacentridae). Carpenter K. E., Niem V. H. (eds), pp. 3004–3050, FAO, Rome.
- Carpenter, KE. 1996. Morphometric pattern and feeding mode in emperor fishes (Lethrinidae, Perciformes). In: Marcus, L.F., Corti, M., Loy, A., Naylor, G.J.P. & Slice, D.E. (Eds) *Advances in Morphometrics*. NATO Advanced Science Series, Series A, vol. 284, 479-487.
- Carpenter, KE & Allen GR. 1989. *FAO Species Catalogue*. Vol. 9. Emperor fishes and large-eye brems of the world (Family Lethrinidae). *FAO Fisheries Synopsis*, vol

125, no. 9: 118.

- Carpenter KE, & Niem VH. 2001. FAO Species identification guide for fishery purpose. The Living Marine Resources of The Western Central Pacific. Volume 6. Food Agriculture Organization of United Nation, Mexico.
- Carpenter, KE & Randall, JE. 2003. *Lethrinus ravus*, a new species of emperor fish (Perciformes: Lethrinidae) from the western Pacific and eastern Indian oceans. *Zootaxa*, vol. 240, no. 7: 1–8.
- Carpenter, KE, Lawrence, A. & Myers, R. 2016. *Lethrinus lentjan*. The IUCN Red List of Threatened Species 2016: e.T16720036A16722340. <http://dx.doi.org/10.2305/IUCN.UK.2016-3.RLTS.T16720036A16722340.en>.
- Clayton JW. 1981. The stock concept and the uncoupling of organismal and molecular evolution. *Canadian Journal of Fisheries and Aquatic Sciences*, vol. 38, no.12: 1515- 1522.
- Currey, LM, Williams, AJ, Mapstone, BD, Davies, CR, Carlos, G, Welch, DJ, & Bean, K. 2013. Comparative biology of tropical *Lethrinus* species (Lethrinidae): Challenges for multi-species management. *Journal of Fish Biology*, vol. 82, no. 3: 764–788.
- Ebisawa, A. 2006. Reproductive and sexual characteristics in five *Lethrinus* species in waters off the Ryukyu Islands. *Ichthyological Research*, vol. 53, no. 3: 269–280.
- Ebisawa, A, & Ozawa, T. 2009. Life-history traits of eight lethrinus species from two local populations in waters off the Ryukyu Islands. *Fisheries Science*, vol. 75, no.3: 553–566.
- Edinger, Jompa, J, Limmon, G, Widjatmoko, W, & Risk, M. 1998. Reef degradation and coral biodiversity in Indonesia: Effects of land-based pollution, destructive fishing practices and changes over time. *Marine Pollution Bulletin* vol. 36, no. 8: 617–630.
- Effendie MI. 2002. *Biologi Perikanan*. Yayasan Pustaka Nusantara. Yogyakarta. 163p.
- Elawa, A. 2004. *Morphometric: Application in Biology and Paleontology*. ISBN 3-540-21429-1 Springer- Verlag. Berlin. Heidelberg. New York.
- Elliott, NG, Haskard, K, & Koslow, JA. 1995. Morphometric analysis of orange roughy (*Hoplostethus atlanticus*) off the continental slope of southern Australia. *Journal of Fish Biology*, vol. 46, no.2: 202-220.
- Exportgenius, 2020. Emperor Export Data of Indonesia. [online] <https://www.indonesianimporter.com/indonesia-export-data/emperor.html>. [diakses pada tanggal 4 Desember 2020].
- Firawati, I, Murwantoko, & Setyobudi, E. 2016. Morphological and molecular characterization of hairtail (*Trichiurus* spp.) from the Indian Ocean, southern coast of East Java, Indonesia. *Biodiversitas*, vol. 18, no. 1: 190-196.
- Fouda M. M. (1979) Studies on scale regeneration in the common goby, *Pomatoschistus*

- microps* (Pisces). Journal of Zoology, vol. 189, no. 12: 503-509.
- Gabriel L, Barboza A, Vethaak AD, Lavorante BRBO, Lundebye A, & Guilhermino L. 2018. Marine microplastic debris: An emerging issue for food security , food safety and human health. Marine Pollution Bulletin. Elsevier. vol. 133:336–348.
- Gaylord, B, & Gaines, SD. 2000. Temperature or transport? Range limits in marine species mediated solely by flow. American Society of Naturalists, vol. 155, no. 8: 769 - 789.
- Grandcourt, EM, Thabit, Z, & Al Shamsi, AT, Francis, F. 2006. Biology and assessment of the painted sweetlips *Diagramma pictum* (Thunberg, 1792) and the spangled emperor *Lethrinus nebulosus* (Forsskål, 1775) in the southern Arabian Gulf Fish. Fishery Bulletin, vol. 104, no.1: 75–88.
- Hall, T.A. 1999. BioEdit: a user-friendly biological sequence alignment editor and analysis program for Windows 95/98/NT. Nucleic Acids Symposium, vol. 53, no. 1: 95-98.
- Hebert, PD, Ratnasingham, S, & De Waard, JR. 2003. Barcoding animal life: cytochrome c oxidase subunit 1 divergences among closely related species. Proceedings of the Royal Society of London. Series B: Biological Sciences, vol. 270, no. 8: 96-99.
- Hubert, Nicolas, Wibowo, A, Busson, F, Caruso, D, Sulandari, S, Nafiqoh, N, Pouyaud, L, Rüber, L, Avarre, J, Herder, F, Hanner, F, Keith, P & Hadiaty, RK. 2015. DNA barcoding indonesian freshwater fishes: Challenges and Prospects, vol.3, no.12: 44–69.
- Hubbs, CL.1922. Variations in the number of vertebrae and other meristic characters of fishes correlated with the temperature of water during development. American Naturalist, 1922, vol. 56, no.645: 360–372.
- Healey, AJE, Gouws, G, Fennessy, ST, Kuguru, B, Sauer, WHH, Shaw, PW, & McKeown, NJ. 2018. Genetic analysis reveals harvested *Lethrinus nebulosus* in the Southwest Indian Ocean comprise two cryptic species. ICES Journal of Marine Science, vol. 75, no. 4: 1465–1472.
- Ismail MR, Lewaru MW, & Prihadi DJ. 2018. Microplastics ingestion by fish in the Biawak Island. World Scientific News, vol. 106, no. 8:230–237.
- Ismail MR, Padjadjaran U, Lewaru MW, Padjadjaran U, & Prihadi DJ. 2019. Microplastics ingestion by fish in The Pangandaran Bay , Indonesia. World Scientific News, vol. 23, no.2: 230-237.
- Iwatsuki, Y, Nagino, H, Tanaka, F, Wada, H, Tanahara, K, Wada, M, Tanaka, H, Hidaka, K, & Kimura, S. 2017. Annotated checklist of marine and freshwater fishes in the Hyuga Nada Area , Southwestern Japan. The Bulletin of the Graduate School of Bioresources Mie University, vol. 43, no. 3: 27–55.
- Jovanović, B. 2017. Ingestion of microplastics by fish and its potential consequences from a physical perspective. Integrated Environmental Assessment and Management, vol. 13, no. 3: 510-515.
- Jolicoeur, P. 1963. The multivariate generalization of the allometry equation. Biometrics, vol. 19, no. 3: 497-499.

- Kimura, S, & Matsuura, K. 2003. Fishes of Bitung Northern Tip of Sulawesi, Indonesia. Tokai University Press. Japan. 98-101p.
- Kirpichnikov, VS. 1979. Geneticheskie osnovy selektsii ryb (Genetic Bases of Fish Breeding), Leningrad: Nauka.
- Kelley, JL, Davies, PM, Collin, SP, & Grierson, PF. 2017. Morphological plasticity in a native freshwater fish from semiarid Australia in response to variable water flows, *Ecology and Evolution*, vol. 7: 6595–6605.
- [KKP] Kementerian Kelautan dan Perikanan RI. 1999. Peraturan Pemerintah Republik Indonesia Nomor 7 Tahun 1999 Tentang Pengawetan Jenis Tumbuhan Dan Satwa.
- [KKP] Kementerian Kelautan dan Perikanan RI. 2017. Peraturan Pemerintah Republik Indonesia Nomor 60 Tahun 2007 Tentang Konservasi Sumber Daya Ikan.
- [KKP] Kementerian Kelautan dan Perikanan RI. 2019. Keputusan Menteri Kelautan Dan Perikanan Republik Indonesia Nomor /Kepmen-KP/SJ/2019 tentang Pedoman Rencana Aksi Nasional Pengawasan dan Penanggulangan Kegiatan Penangkapan Ikan yang Merusak Tahun 2019-2023.
- [KKP] Kementerian Kelautan dan Perikanan RI. 2016. Keputusan Menteri Kelautan dan Perikanan Republik Indonesia Nomor 79/Kepmen-KP/2016 Tentang Rencana Pengelolaan Perikanan Wilayah Pengelolaan Perikanan Negara Republik Indonesia 712.
- Kulmiye, AJ, Ntiba MJ, & Kisia, SM. 2002. Some aspects of the reproductive biology of the thumbprint emperor *Lethrinus harak* (Forsskäl 1775), in Kenyan coastal waters. *Western Indian Ocean Journal of Marine Science*, vol. 1, no. 2: 135-144.
- Kusmini II, Gustiano R, & Mulyasari. 2010. Karakterisasi *truss morphometric* ikan Tengadak (*Barbonymus Schwanenfeldii*) asal Kalimantan Barat dengan Ikan Tengadak Albino dan Ikan Tawes Asal Jawa Barat. *Prosiding Forum Inovasi Teknologi Akuakultur, Jakarta [Indonesia]*. 507-513p.
- Kruse I, Reusch TBH, & Schneider MV. 2003. Sibling species or poecilogony in the polychaete *Scoloplos armiger*. *Marine Biology*, vol. 142, no. 5: 937–947.
- Kochzius, M. 2002. Ecology, genetic population structure, and molecular phylogeny of fishes on coral reefs in the Gulf of Aqaba and northern Red Sea. [Tesis]. Faculty of Biology and Chemistry, University of Bremen.
- Koh, TL, Khoo, G, Fan, LQ, Pan, V, & Phang, E. 1999. Genetic diversity among wild forms and cultivated varieties of *Discus* (*Symphysodon* spp.) as revealed by Random Amplified Polymorphic (DNA RAPD) fingerprinting. *Aquaculture*, vol. 173, no. 1: 485–497.
- Kottelat, MAJ, Whitten, SN, Kartikasari & Wiroatmodjo, S. 1993. Freshwater fishes of western Indonesia and Sulawesi. Periplus Editions Limited. Munich, Germany, vol. 11, no. 2: 1-8.
- Kuo, CL. & Lee, S.S. 1990. Maturation and spawning of common porgy *Lethrinus nebulosus* in the Northwestern Shelf of Australia. *Journal of the Marine Biological Association of India*, vol. 32, no. 12: 201–207.

- Li, S, Pearl, D, & Doss, H. 1999. Phylogenetic tree construction using Markov Chain Monte Carlo. Fred Hutchinson Cancer Research Center Washington, vol. 45, no. 450: 493-508.
- Leis, JM. 1991. The pelagic stage of reef fishes: the larval biology of coral reef fishes. In PF Sale, ed. The ecology of fishes on coral reefs. San Diego, New York: Academic Press, 183-230p.
- Levin, BA. 2011. Ontogenetic causes and mechanisms for formation of differences in number of fish scales. Russian Journal of Developmental Biology, vol. 42, no. 3: 220–225.
- Lequeux BD, Ahumada-Sempoal MA, López-Pérez A, & Reyes-Hernandez, C. 2018. Coral connectivity between equatorial eastern Pacific marine protected areas: A biophysical modeling approach, PloS one, vol. 13, no. 8; 1-16.
- Lo Galbo, AM, Carpenter, KE, & Reed, DL. 2002. Evolution of trophic types in emperor fishes (*Lethrinus*, Lethrinidae, Percoidae) based on cytochrome B gene sequence variation. Journal of Molecular Evolution, vol. 54, no. 6: 754–762.
- Mariani RU, Emiyarti, & Haya, LMY. 2020. kandungan logam berat Pb pada sedimen dan kerang (*Polymesoda Erosa*) di perairan Koeono, Kecamatan Palangga Selatan, Kabupaten Konawe Selatan. Sapa Laut, vol. 5, no. 4: 317-325.
- Marriott, RJ, Jarvis, NDC, Adams, DJ, Gallash, AE, Norriss, J, & Newman, SJ. 2010. Maturation and sexual ontogeny in the spangled emperor *Lethrinus nebulosus*. Journal of Fish Biology, vol. 76, no.6: 1396–1414.
- Mehanna, S, Zaki, S, Al-kiuyumi, F, Al-kharusi, L, & Al-bimani, S. 2012. Biology and fisheries management of spangled emperor *Lethrinus nebulosus* from the Arabian Sea Coast of Oman. INOC- CNRS, International Conference on Land-Sea Interactions in the Coastal Zone, vol. 5, no. 11: 161–171.
- Meyer A. 1987. Phenotypic plasticity and heterochrony in *Cichlasoma managuense* (Pisces, Cichlidae) and their implications for speciation in cichlid fishes. Evolution, vol. 41, no.6: 1357-1369.
- Muchlisin ZA. 2013. Morphometric variations of rasbora group (Pisces: Cyprinidae) in Lake Laut Tawar, Aceh Province, Indonesia, based on truss character analysis. HAYATI Journal of Bioscience, vol. 20, no. 3: 138-143.
- Mukhtasor, 2007. Pencemaran pesisir dan laut. Pradnya Paramita. Jakarta. 322p.
- Motlagh SAT, Seyfabadi J, Vahabnezhad A, Shojaei MG, & Hakimelahi M. 2010. Some reproduction characteristics and weight-length relationships of the Spangled emperor, *Lethrinus nebulosus* (Lethrinidae) of the South Coastal of Iran (Persian Gulf and Oman Sea). Turkish Journal of Fisheries and Aquatic Science, vol. 10, no. 2: 227: 221–7.
- Myers, RF. 1999. Micronesian reef fishes: a comprehensive guide to the coral reef fishes of Micronesia, 3rd revised and expanded edition. Coral Graphics, Barrigada, Guam. 330 p
- Nair, RJ. 2007. Note The orange spotted emperor *Lethrinus erythracanthus* Valenciennes , 1830 (Perciformes: Lethrinidae) - a new record from Indian

waters. vol. 49, no. 9: 234–236.

- Nenashev, GA. 1966. Heritability of Some Morphological (Diagnostic) Traits of Ropsha Carps, *Izv. GosNIORKh*, vol. 61, 125–135.
- Nei, M. 1972. Genetic Distance Between Population. *American Nature*, vol, 106, no. 949: 283- 292.
- Nurdin, N, Komatsu, T, Agus, Akbar ASM, Djalil, AR, & Amri, K. 2015. Multisensor and multitemporal data from Landsat images to detect damage to coral reefs, small islands in the Spermonde archipelago, Indonesia. *Ocean Science Journal*, vol. 50, no. 2: 317–325.
- Nurdin, N, Nurliah, & Grydehøj, A. 2014. Informal governance through patron-client relationships and destructive fishing in Spermonde Archipelago, Indonesia. *Journal of Marine and Island Cultures*, vol. 3, no.2: 54–59.
- Nurdiansyah, Hamid, A, & Mustafa, A. 2017. Aspek reproduksi Ikan Sikuda (*Lethrinus ornatius*) hasil tangkapan di perairan Teluk Luar Kendari yang didaratkan di Kecamatan Abeli Kota Kendari. *Jurnal Manajemen Sumber Daya Perairan*, vol. 2, no. 4: 317-325.
- Nelson, JS, Grande, TC, & Wilson, MVH. 2016. *Fishes of the World* Fifth Edition (Fifth edit). Canada: John Wiley & Sons, Inc., Hoboken, New Jersey.506p
- Norau S. 2010. Analisis optimisasi pemanfaatan sumber daya ikan lele (*Lethrinus lentjan*) di kawasan terumbu karang Kepulauan Guraici, Kabupaten Halmahera Selatan. Tesis. Sekolah Pascasarjana, Institut Pertanian Bogor. Bogor.
- Pangastuti, A. 2006. Definisi spesies prokaryota berdasarkan urutan basa gen penyandi 16s rRNA dan gen penyandi protein. *Journal Biodiversitas*, vol. 7, no. 3: 292-296.
- Pauly, D & Cheung, WWL. 2017. Sound physiological knowledge and principles in modeling shrinking of fishes under climate changes. *Global Change Biology*, vol. 24, no. 2: 1-12.
- Raeisi, H, Daliri, M, Paighambari, SY, Shabani, M.J, Bibak, & Davoodi, R. 2011. Length-weight relationships, condition factors and relative weight of five fish species of Bushehr waters, Northern Persian Gulf. *African Journal of Biotechnology*, vol. 10, no. 82: 19181-19186.
- Randall, JE. 1995. *Coastal fishes of Oman*. University of Hawaii Press, Honolulu, Hawaii, 439 p.
- Reist, JD. 1983. Studies on the systematic significance of the external body morphometry of esocoid fishes. Ph. D. Dissertation. Department of Zoology, University of Toronto.
- Samaradivakara, SP, Hirimuthugoda, NY, Gunawardana, RHANM, Illeperuma, RJ, Fernandopulle, ND, De Silva, AD, & Alexander, PABD. 2012. Morphological Variation of Four Tilapia Populations in Selected Reservoirs in Sri Lanka. *Tropical Agricultural Research*, vol. 23, no. 2: 105–116.
- Sanders, MJ, Kedidi, SM & Hegazy, MR. 1984. Stock assessment for the spangled emperor (*Lethrinus nebulosus*) caught by small scale fishermen along the

- Egyptian Red Sea coast. Project for the Development of Fisheries in the areas of the Red Sea and Gulf of Aden, FAO/UNDP RAB/83/023/01. Cairo, 41 pp.
- Sato, T. 1978. A synopsis of the sparoid fish genus *Lethrinus*, with the description of a new species. The University Museum of Tokyo, Bulletin, vol. 15, no. 4:1–70.
- Schindler, DE, Essington, TE, Kitchell, JF, Boggs, C, & Hilborn, R. 2002. Sharks and tunas: fisheries impacts on predators with contrasting life histories. *Ecological Applications*, vol. 12, no. 3: 735–748.
- Sevtian A. 2012. Distribusi dan aspek pertumbuhan ikan lecah *Lethrinus lentjan* di perairan Dangkal Karang Congkak, Taman Nasional Laut Kepulauan Seribu, Jakarta. Skripsi. Institut Pertanian Bogor.
- Shannon, L, Coll, M, Bundy, A, Gascuel, D, Heymans, JJ, Kleisner, K, Lyanam CP, & Piroddi, C. 2014. Trophic level-based indicators to track fishing impacts across marine ecosystems. *Marine Ecology Progress Series*, vol. 512, no. 10: 115–140.
- Shibuno, T, Nakamura, Y, Horinouchi, M, & Sano, M. 2016. Habitat use patterns of fishes across the mangrove-seagrass-coral reef seascape at Ishigaki Island, southern Japan. *Ichthyological Research*, vol. 55, no. 5: 218–237.
- Sire, JY & Akimenko, MA. 2004. Scale Development in Fish: A Review, with description of sonic hedgehog expression in the Zebrafish (*Danio rerio*). *International Journal of Developmental Biology*, vol. 48, 233–247.
- Sivaraman B, Jeyasekaran G, Shakila RJ, Alamelu V, Wilwet L, Aanand S, & Sukumar, D. 2018. PCR-RFLP for authentication of different species of processed snappers using mitochondrial D-loop region by single enzyme. *Food Control*. Elsevier, vol. 90, no. 8: 1-17.
- Sparre, P & Venema SC. 1999. *Introduksi pengkajian stok ikan tropis buku-i manual (Edisi Terjemahan)*. Kerja sama Organisasi Pangan, Perserikatan Bangsa-Bangsa dengan Pusat Penelitian dan Pengembangan Perikanan, Badan Penelitian dan Pengembangan Pertanian. Jakarta.
- Stearns, SC. 1983. A Natural Experiment in Life-History Evolution: Field Data on the Introduction of Mosquitofish (*Gambusia affinis*) to Hawaii. *Evolution*, vol. 37, no. 3: 601-617.
- Strauss, RE & Bond, CE. 1990. Taxonomic Methods: Morphology. 109-140p in C.B. Schreck and P.B. Moyle (eds.). *Methods for Fish Biology*. American Fisheries Society, Bethesda, Maryland.
- Struck, TH, Feder, JL, Bendiksbj, M, Birkeland, S, Cerca, J, Gusarov, VI, Kistenich, S, Larsson, K, Liow, LH, Nowak, MD, Stedje, B, Bachmann, L, & Dimitrov, D. 2018. Finding Evolutionary Processes Hidden in Cryptic Species. *Trends in Ecology & Evolution*, vol. 33, no. 3, 153–163.
- Swift, HF, Daglio, LG & Dawson, MN. 2016. Three routes to crypsis: stasis, convergence, and parallelism in the mastigias species complex (scyphozoa, rhizostomeae) molecular phylogenetics and evolution three routes to crypsis: stasis, convergence, and parallelism in the mastigias species complex (scyphozoa, rhizostomeae). *Molecular Phylogenetics and Evolution*, vol. 99, no. 3: 103–15.

- Taghavi, M, Vahabnezhad, Seyfabadi, Ghodrati, S, & Hakimelahi. 2010. Growth, mortality and spawning season of the spangled emperor (*Lethrinus nebulosus* Forsskal , 1775) in coastal waters of Hormozgan Province in the Persian Gulf and Oman Sea, vol. 9, no. 1: 161–172.
- Tamura, K, Stecher, G, Peterson, D, Filipiski, A, & Kumar, S. 2003. MEGA6. Molecular Evolutionary Genetic Analysis version 6.0. *Molecular Biology and Evolution*, vol. 30, no. 12: 2725-2729.
- Thompson, JD, Gibson, TJ, Plewniak, F, Jeanmougin, F, & Higgins, DG. 1997. The ClustalX windows interface: flexible strategies for multiple sequence alignment aided by quality analysis tools. *Nucleic Acids Research*, vol. 25, no. 24: 4876-4882.
- Thresher, RE. 1984. *Reproduction in reef fishes*. T.F.H. Publications, Inc. Ltd., Neptune City, New Jersey. 399 p.
- Truong, O & Dang, BT. 2015. Phylogenetic relationships of emperors (lethrinidae) and snappers (Lutjanidae) in Vietnam based on mitochondrial *DNA* sequences. International Conference on Biological, Environment and Food Engineering (BEFE-2015), (May 2018), 74–77. Singapore.
- Trontelj, P, Blejec, A. & Fišer, C. 2012. Ecomorphological convergence of cave communities. 2012. *Evolution: International Journal of Organic Evolution*, vol. 66, no. 12: 3852-3865.
- Turan C, Denis E, Turan F, & Erguden M. 2004. Genetic and morfometric structure of *Liza abu* (Heckel, 1843). Population from the Rivers Orontes, Eupharates and Tigris. *Turkish Journal of Veterinary and Animal Sciences*. vol. 28, no. 1: 729–734.
- Umar, W, Tassaka, ASCMAR, & Jompa. 2019. High genetic connectivity in a scleractinian coral (*Lobophyllia corymbosa*) around Sulawesi, Indonesia, *Biodiversitas*, vol. 20, no. 12: 3484-3942.
- Unsworth, RKF, Wylie, E, Smith, DJ, & Bell, JJ. 2007. Diel trophic structuring of seagrass bed fish assemblages in the Wakatobi Marine National Park, Indonesia. *Estuarine, Coastal and Shelf Science*, vol. 72, no.1–2: 81–88.
- Villwock, W. 1963. Genetische Analyse des Merkmals “Beschup pung” bei anatolischen Zahnkarpfen (Pisces, Cyprinodontidae) in Aufloserversuch, *Zoologischer Anzeiger*, vol. 170, no:1: 23–45 .
- Vrijenhoek. 2009. Cryptic Species , Phenotypic plasticity , and complex life histories: assessing deep-sea faunal diversity with molecular markers. *Deep-Sea Research II*, vol 56, no. 19: 1713–1723.
- Waugh J. 2007. DNA barcoding in animal species: progress, potential and pitfalls. *BioEssays*, vol. 29, no. 2: 188-197.
- Wassef, EA. 1991. Comparative growth studies on *Lethrinus lentjan*, Lacépède 1802 and *Lethrinus mahsena*, Forsskål 1775 (Pisces, Lethrinidae) in the Red Sea. *Fisheries Research*, vol. 11, no. 1: 75–92.
- Ward, RD, Zemlak, TS, Innes, BH, Last, PR, & Hebert, PDN. 2005. DNA barcoding

Australia's fish species. Philosophical Transactions of the Royal Society B: Biological Sciences, vol. 360, no. 1462: 1847–1857.

White WT, Last PR, Dharmadi, Faizah R, Chodrijah U, White, William T, Peter R. Last, Dharmadi, Ria Faizah, Umi Chodrijah, Prisantoso, BI, Poginoski, JJ, Puckridge, M, & Blaber, SJM. 2013. Market fishes of Indonesia. ACIAR Monograph Series, ACIAR Publishing, Canberra, 214-222p.

Williams, ST, Jara, J, Gomez E, & Knowlton, N. 2002. The Marine Indo-West Pacific Break: contrasting the resolving power of mitochondrial and nuclear genes. Integrative and Comparative Biology, vol. 42, no. 5: 941–952.

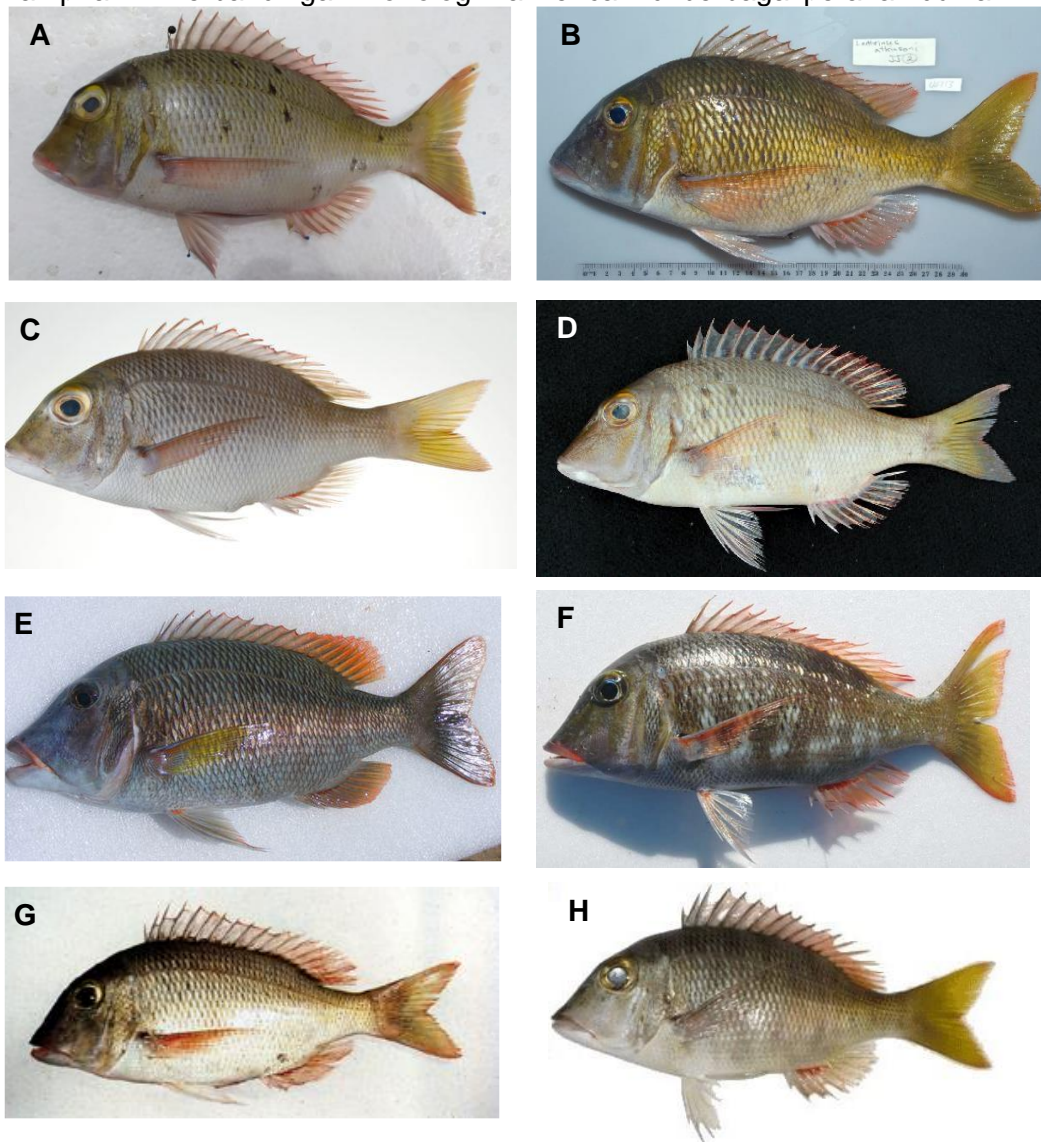
Young, PC. & Martin, RB. 1982. Evidence for protogynous hermaphroditism in some lethrinid fishes. Journal of Fish Biology, vol 21, no. 10: 475–484.

Zaahkoug, SA, Khalaf-Allah, HM, Mehanna, SF, El-Gammal, FI, & Makkey, AF. 2017. Studies on age, growth, and mortality rates for management of the redspot emperor, *Lethrinus lentjan* (Lacepède, 1802) in the Egyptian sector of Red Sea Samir. Egyptian Journal of Aquatic Biology & Fisheries, vol. 21, no. 1: 63–72.

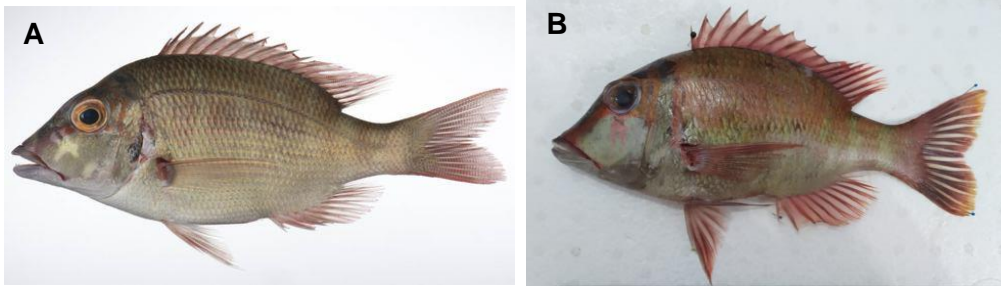
Zein MSA & Prawiradilaga DM. 2013. *DNA Barcode Fauna Indonesia*. Jakarta:Kencana Prenadamedia group.

LAMPIRAN

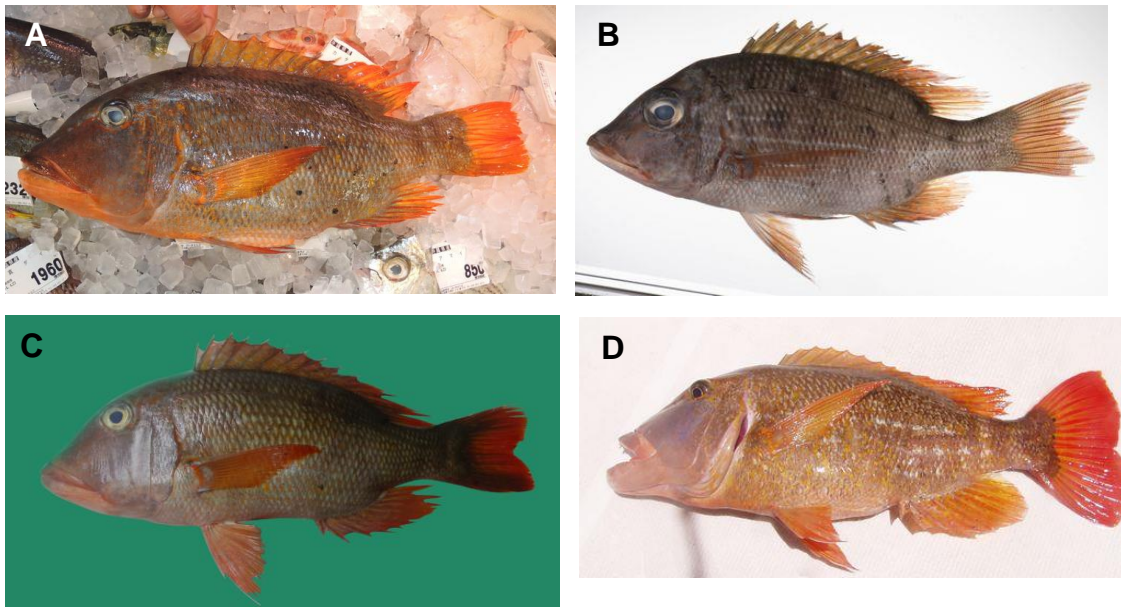
Lampiran 1. Perbandingan morfologi ikan leucis di berbagai perairan dunia



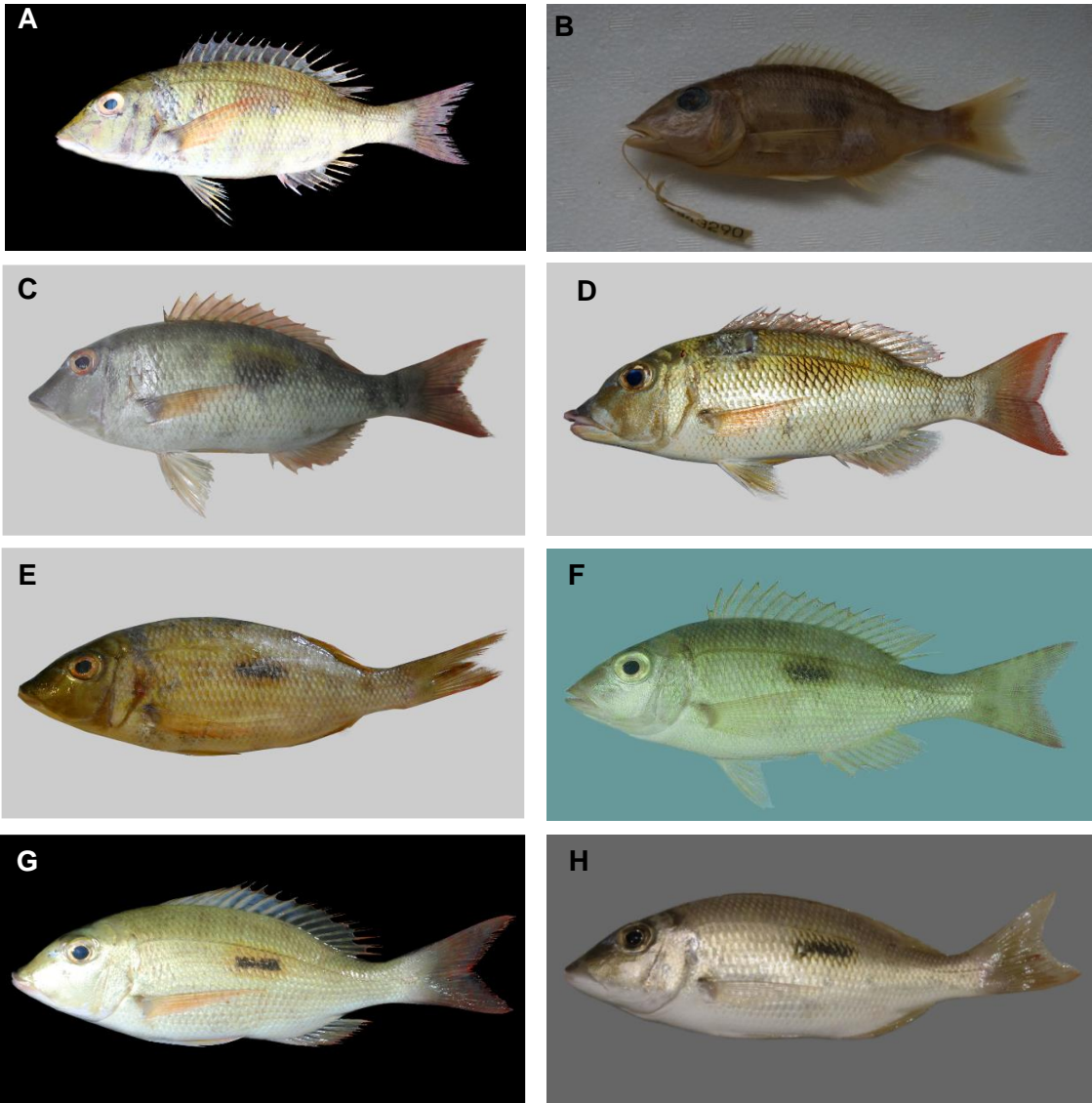
Spesies *Lethrinus atkinsoni* **A.** Spesimen MSFUH3931596, panjang baku (PB) 213 mm, diambil di Tempat Pelelangan Ikan Paotere, Makassar, Indonesia, 20 Januari 2019 (didokumentasikan oleh Afrisal). **B.** LIFS498-08, diambil di Lizard Island, Queensland, Australia, 07 September 2009, (didokumentasikan oleh CBG Photography Group) **C.** USNM 403042, PB 146, diambil di farmer's market, Cubao, Metro Manila, Philippines (didokumentasikan oleh J. Williams & K. Carpenter). **D.** BIFZC066-17, diambil di Pasar ikan Arumbai, Ambon, Indonesia, 06 Januari 2016 (didokumentasikan oleh Gino Limmon). **E.** Spesimen USNM 440237, diambil Gambier Islands, French Polynesia, 8 Oktober 2010 (didokumentasikan oleh Jeffrey T. Williams). **F.** Zukan14864, panjang total (PT: 330 mm), diambil di Prefektur Okinawa, Jepang, 25 Juli 2007 (didokumentasikan oleh Kaito). **G.** FRIP20074, PT: 245, diambil di Taitung, Cheng gong, Taiwan (didokumentasikan oleh Pai-Lei Lin). **H.** diambil di Phu Quoc, Bac Lieu and Vung Tau, Vietnam, (didokumentasikan oleh Oanh Truong Thi)



Spesies *Lethrinus erythropterus*. **A.** Spesimen USNM 445296, panjang baku (PB) 120 mm, diambil di Pagbilao market Tayabas Bay, Quezon Province, Philippines, 26 Oktober 2017, (didokumentasikan oleh Williams, Jeffrey T.). **B.** MUFS48436, panjang baku (PB) 204 mm, diambil di Tempat Pelelangan Ikan Paotere, Makassar, Indonesia, 20 Januari 2019 (didokumentasikan oleh Afrisal).



Spesies *Lethrinus erythracanthus*. **A.** Spesimen Zukan49270, panjang total (PT) 460 mm, diambil di Naha City, Prefektur Okinawa, Jepang, 22 April 2014 (didokumentasikan oleh Nuh). **B.** USNM 445442, panjang baku (PB) 194 mm, diambil Legazpi City market, Albay Province, Philippines, 01 November 2017. **C.** MUFS48438, panjang baku (PB) 323 mm, diambil di Tempat Pelelangan Ikan Paotere, Makassar, Indonesia, 20 Januari 2019 (didokumentasikan oleh Afrisal). **D.** USNM 19149695, diambil di Australia, 28 Desember 2008, (didokumentasikan oleh David Moore).



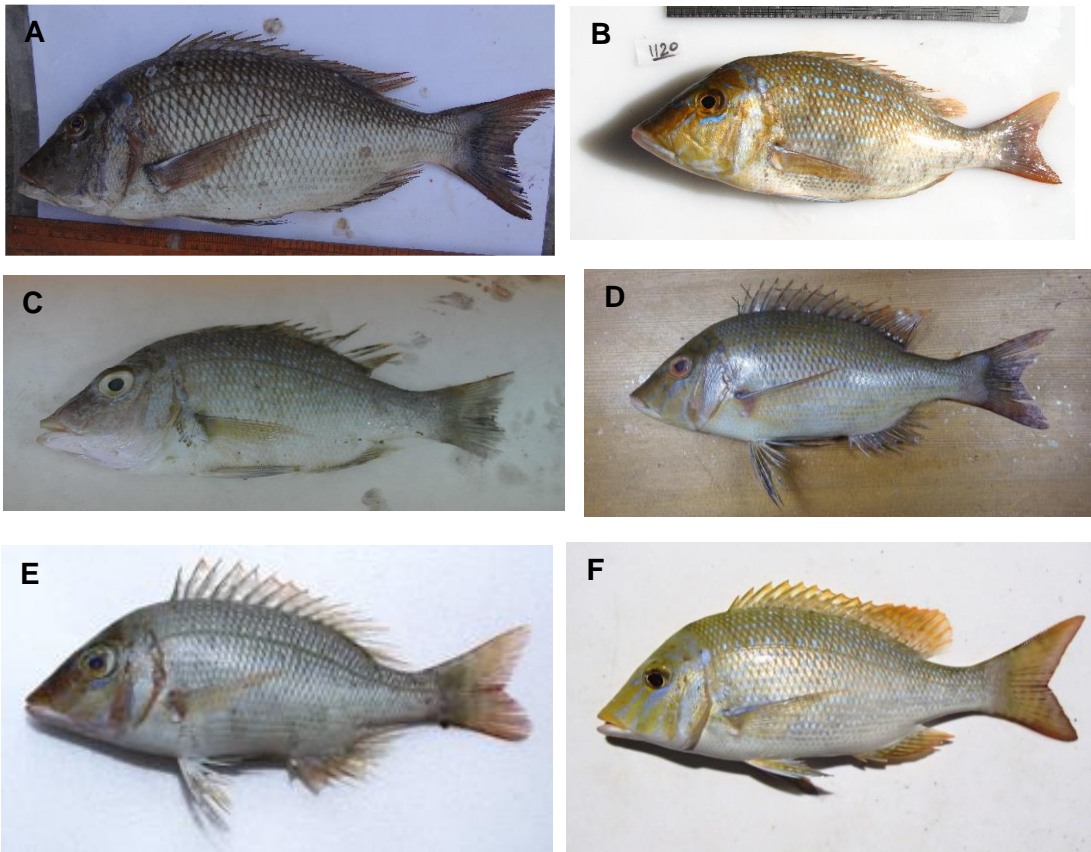
Spesies *Lethrinus harak* **A.** Spesimen BIFZC073-17, panjang baku (PB) 170 mm, diambil di Pasar Ikan Arumbai, Ambon, Indonesia, 06 Januari 2016 (didokumentasikan oleh Limmnon). **B.** Spesimen MUFS43290, PB: 131 mm, diambil dari koleksi sampel museum MUFS (Miyazaki University, Fisheries Sciences). **C.** Spesimen MSFUH000591, PB: 217 mm, diambil di perairan Makassar, 20 Januari 2019 (didokumentasikan oleh Afrisal). **D.** LIFS517-08, PB: 219 mm, diambil dari Lizard Island, Queensland, Australia, 07 September 2008 (didokumentasikan oleh tim Australian Museum, Sydney), **E.** DSFSG620-11, diambil dari perairan Mozambique, 15 November 2010 (didokumentasikan oleh Connell). **F.** SBF007-11, PB: 190 mm, diambil dari Nosy Tanikely-West, Quest, Antananarivo, Madagascar, 07 Mei 2008, (didokumentasikan oleh Planes). **G.** GBI6686107, SL: 200 mm, diambil dari Thuwal Saudi Arabia, Makkah Saudi Arabia, 22 Maret 2017, (didokumentasikan oleh tim iNaturalist).



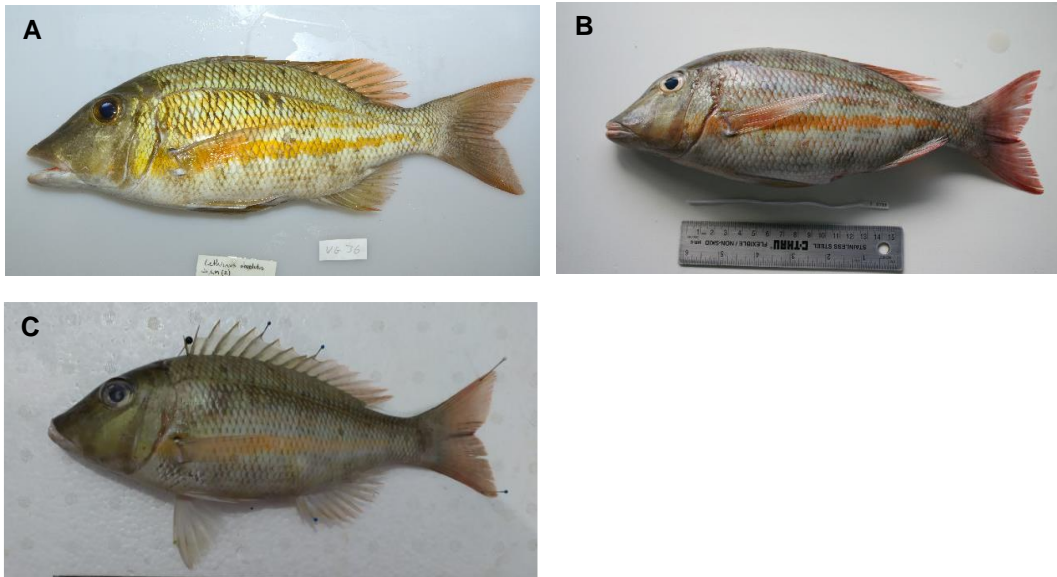
Spesies *Lethrinus lentjan*. **A.** Spesimen CFCS119-08, diambil di Provinsi Hainan, China, 21 Juli 2008, (didokumentasikan oleh Junbin Zhang). **B.** BIFZC080-17, diambil di Pasar ikan Arumbai, Ambon, Indonesia, 06 Januari 2016 (didokumentasikan oleh Gino Limmon). **C.** SAIAB447-06, diambil di Provinsi Mahe, Seychelles, 16 April 2005, (didokumentasikan oleh tim South African Institute for Aquatic Biodiversity), **D.** ASIZP0064733, PB; 108 mm, diambil di Dapon-Bay, Pingtung, Taiwan, 16 Agustus 2004, (didokumentasikan oleh Po-Feng Lee & Cheng-Yi Tsai), **E.** PB; 175, diambil di Kilakarai, India, 04 Maret 1975, (didokumentasikan oleh Randall). **F.** Panjang cagak 145 mm, diambil di Honda Bay, Palawan, Philippines, November 2013, (didokumentasikan oleh Rodulf Anthony T. Balisco). **G.** MSFUH3931594, panjang baku (PB) 223 mm, diambil di Tempat Pelelangan Ikan Paotere, Makassar, Indonesia, 20 Januari 2019 (didokumentasikan oleh Afrisal).



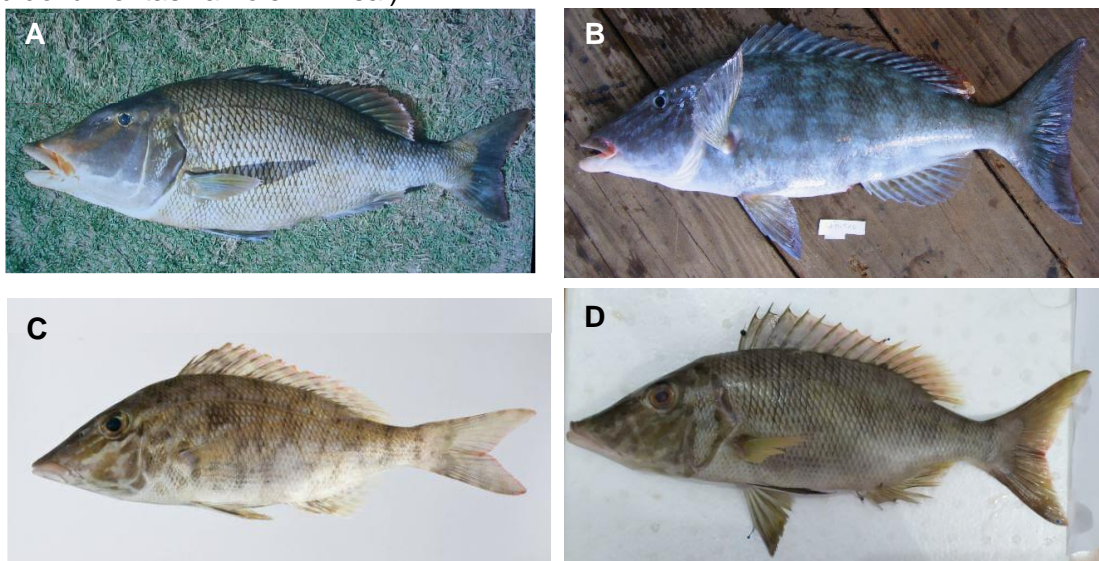
Spesies *Lethrinus microdon*. **A.** Spesimen SAIAB 77953, SL; 230 mm, diambil di Victoria Fish Market, Provinsi Mahe, Seychelles, 30 April 2005, (didokumentasikan oleh Moots, Kate A), **B.** MT551658, PB; 218, diambil di Tempat Pelelangan Ikan Paotere, Makassar, Indonesia, 20 Januari 2019 (didokumentasikan oleh Afrisal), **C.** TL; 280 mm, diambil di Tuticorin, India, 02 Maret 1975, (didokumentasikan oleh Randal JE) **D.** DSC08252, PT; 540 mm, diambil di Karachi Pakistan, (didokumentasikan oleh Hamid Badar Osmany).



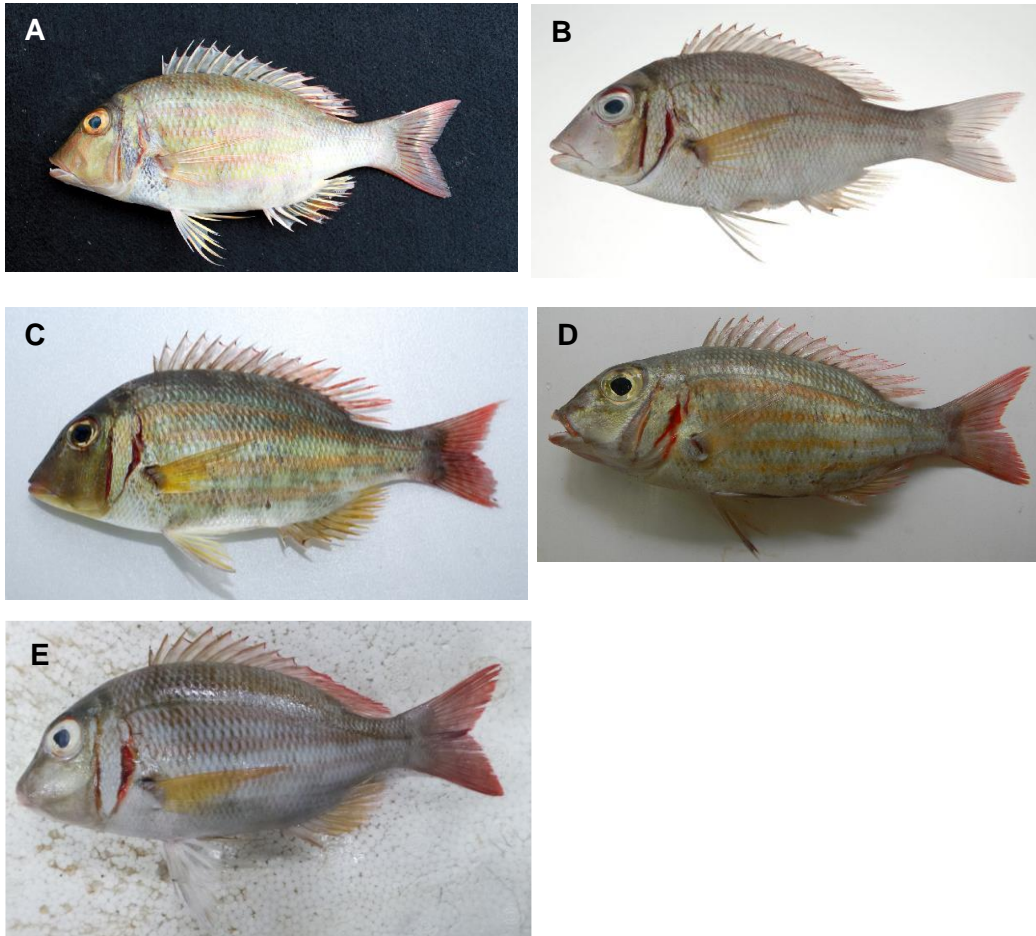
Spesies *Lethrinus nebulosus*. **A.** Spesimen UEZPQ003-14, diambil di Veraval, Gujarat, India, 16 Februari 2014, (didokumentasikan oleh Smit R Lende). **B.** NNPF120-10, diambil Nayband National Park Coast, Bushehr, Iran, 15 Desember 2009, (didokumentasikan oleh Hosseinali Asgharian), **C.** GOAIL195-17, diambil di Eilat, Israel, 02 Mei 2014, (didokumentasikan oleh Tamara A. Gurevich Raguso), **D.** MSFUH3931592, PB; 368 mm, diambil Tempat Pelelangan Ikan Paotere, Makassar, Indonesia, 20 Januari 2019 (didokumentasikan oleh Afrisal), **E.** ASIZP0802323, PB; 117 mm, diambil di Penghu, Taiwan, 06 September 2006, (didokumentasikan oleh Po-Feng Lee). **F.** ZUKAN 84656, PT: 220 mm, diambil di Pulau Ishima, Prefektur Okinawa, Jepang 01 September 2017 (didokumentasikan oleh Tezzy).



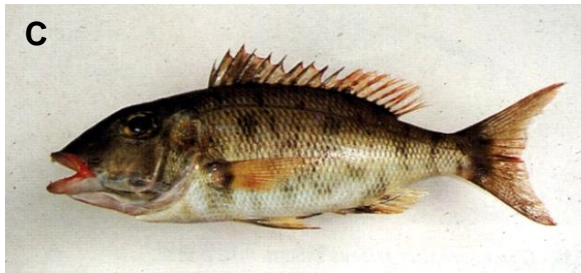
Spesies *Lethrinus obsoletus* **A.** LIFS221-08, diambil di Lizard, Queensland, Australia, 05 September 2008, (didokumentasikan oleh tim CBG Photography Group). **B.** SAIAB444-06, diambil di Provinsi Mahe, Seychelles, 16 April 2005, (didokumentasikan oleh tim South African Institute for Aquatic Biodiversity). **C.** MT551655, PB; 238 mm, diambil Tempat Pelelangan Ikan Paotere, Makassar, Indonesia, 20 Januari 2019 (didokumentasikan oleh Afrisal).



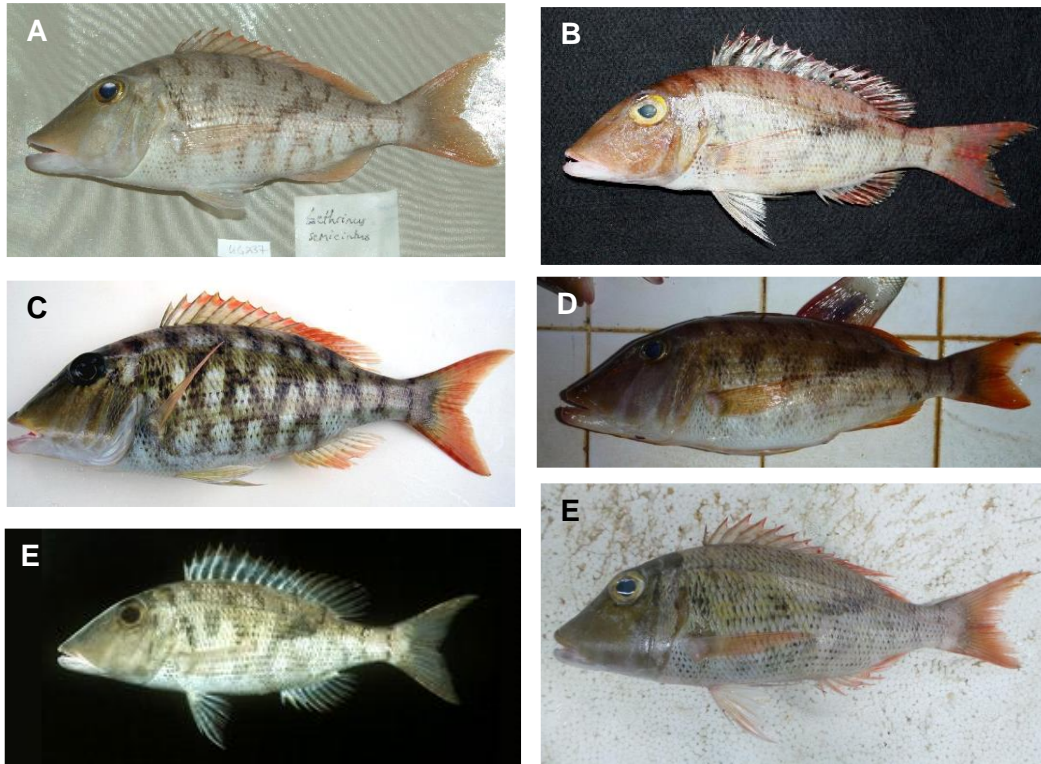
Spesies *Lethrinus olivaceus* **A.** DSFSE389-08, diambil di Afrika Selatan, 17 September 2007, (didokumentasikan oleh Allan D. Connell). **B.** GAMB639-12, diambil di Tuamotu-Gambier, French Polynesia, 06 Oktober 2010, (didokumentasikan oleh Pierre Sasal). **C.** USNM 403330, PB; 149 mm, diambil di Negros, Filipina, 31 Mei 2011, (didokumentasikan oleh Williams, Jeffrey T). **D.** MSFUH3931598, PB; 398 mm, diambil Tempat Pelelangan Ikan Paotere, Makassar, Indonesia, 20 Januari 2019 (didokumentasikan oleh Afrisal).



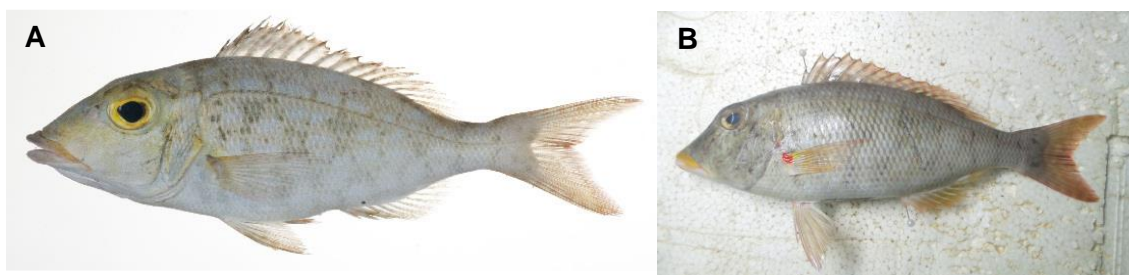
Spesies *Lethrinus ornatus* **A.** Spesimen BIFZC087-17, diambil di Pasar Ikan Arumbai, Ambon, Indonesia, 06 Januari 2016, (didokumentasikan oleh Gino V Limmon), **B.** USNM 403039, PB; 119 mm, diambil di Cubao, Metro Manila, Filipina, 20 Mei 2011, (didokumentasikan oleh Williams J & Carpenter K). **C.** ASIZP0802764, SL; 169 mm, diambil di Penghu, Taiwan, 08 September 2006, (didokumentasikan oleh Po-Feng Lee), **D.** Fishbase1469028214, PB: 170 mm diambil di Gulf of Mannar, Pampan, India, , 20 Juli 2016, (didokumentasikan oleh Raju Saravanan), **E.** MT551654, PB: 159 mm, diambil Tempat Pelelangan Ikan Paotere, Makassar, Indonesia, 20 Januari 2019 (didokumentasikan oleh Afrisal).



Spesies *Lethrinus rubrioperculatus* A. DSFSE392-08, diambil di KwaZulu-Natal, South Africa, 17 September 2009, (didokumentasikan oleh Allan D. Connell). B. BIFZC064-17, diambil di Pasar Ikan Arumbai, Ambon, Indonesia, 06 Januari 2016. (didokumentasikan oleh Gino V Limmon), C. NTOU-AE6058, diambil di Lanyu Township, Taitung County, Taiwan, 20 September 2010, (didokumentasikan oleh W. Y. Chang), D. MT551659, PB: 205 mm, diambil Tempat Pelelangan Ikan Paotere, Makassar, Indonesia, 20 Januari 2019 (didokumentasikan oleh Afrisal).



Spesies *Lethrinus semicinctus* **A.** Spesimen LIFS422-08, diambil di Lizard Island, Queensland, Australia, 06 September 2008, (didokumentasikan oleh tim CBG Photography Group), **B.** BIFZC086-17, diambil di Pasar Ikan Arumbai, Ambon, Indonesia, 06 Januari 2016, (didokumentasikan oleh Gino V Limmon), **C.** ZUKAN 12962, PT: 250 mm, diambil di Off Ishigaki Island, Okinawa Prefecture, Jepang, 02 Maret 2007, (didokumentasikan oleh Arara), **D.** ZUKAN40556, diambil di Pulau Musim Panas, Filipina, 16 Januari 2011, (didokumentasikan oleh Suzuka), **E.** ASIZP0060650, PB: 191 mm, diambil di Fish Market, Hengchun, Pingtung, Taiwan, 07 Januari 1986, (didokumentasikan oleh J. P. Cheng), **E.** MT551653, PB: 212 mm, diambil Tempat Pelelangan Ikan Paotere, Makassar, Indonesia, 20 Januari 2019 (didokumentasikan oleh Afrisal).



Spesies *Lethrinus xanthochilus* **A.** Spesimen MARQ267-12, PB: 157 mm, diambil di Marquesas Islands, French Polynesia, 01 November 2011, (didokumentasikan oleh Jeff Williams). **B.** MT551657, PB: 193 mm, diambil di Tempat Pelelangan Ikan Paotere, Makassar, Indonesia, 20 Januari 2019 (didokumentasikan oleh Afrisal).

Lampiran 2. Hasil Pengukuran Morfometrik antara spesimen dari Makassar dengan koleksi sampel di Laboratorium Miyazaki University, Jepang.

Lethrinus atkinsoni

Lokasi	Seychelles (n = 1)	Ishigaki (n = 3)	Srilanka (n = 1)	Miyazaki (n = 2)	Thailand (n = 1)	Okinawa (n = 1)	Makassar (n = 30)
Rasio panjang baku							
Lebar tubuh	2.3	2.6	2.5	2.4	2.5	2.7	2.5
Panjang kepala	2.9	2.9	3	2.9	3	3.1	2.9
Panjang sirip dada	2.9	2.9	3.2	3.5	3.2	3.3	2.9
Panjang sirip perut	4.1	3.9	4.5	3.6	3.9	4.3	4.3
Rasio panjang kepala							
Diameter mata	4.2	3.7	3.3	3.2	3.6	3.6	3.3
Jarak antar mata	3.4	3.5	3.2	3.4	2.8	3.2	3.8
Panjang moncong	1.7	2	2	2	1.9	1.8	1.9
Lebar suborbital	2.2	2.7	2.5	3.1	2.3	2.4	2.5
Panjang rahang atas	2.3	2.8	2.6	2.8	3.3	2.8	2.6

Lethrinus erythropterus

Lokasi	East Indies (n = 1)	Philippines (n = 1)	Nuguria (n = 1)	Andaman (n = 1)	Sabah (n = 1)	Makassar (n = 30)
Rasio panjang baku						
Lebar tubuh	2.5	2.6	2.7	2.6	2.4	2.5
Panjang kepala	2.7	2.8	2.7	2.8	2.9	2.8
Panjang sirip dada	3.1	3.4	2.7	3.2	2.9	3.1
Panjang sirip perut	3.7	3.7	3.8	4.1	3.5	3.7
Rasio panjang kepala						
Diameter mata	3.9	3.4	4.1	5	3.7	3.7
Jarak antar mata	3.4	3.9	3.5	3.8	3.4	3.7
Panjang moncong	1.8	2.1	2	1.7	1.7	1.8
Lebar suborbital	2.7	3.1	2.8	2.3	2.5	2.5
Panjang rahang atas	2.8	3.1	2.8	2.2	2.7	2.6

Lethrinus erythracantus

Lokasi	Menado (n = 1)	Guam (n = 1)	New Ireland (n = 1)	Ishigaki (n = 1)	Makassar (n = 10)
Rasio panjang baku					
Lebar tubuh	2.7	2.5	2.5	2.4	2.6
Panjang kepala	2.7	2.8	2.7	2.7	2.8
Panjang sirip dada	3	3.2	3.1	3.2	3.3
Panjang sirip perut	3.6	3.6	3.5	3.9	4.1
Rasio panjang kepala					
Diameter mata	4.2	4.7	4.5	5.2	4
Jarak antar mata	3.8	3.6	3.2	3.2	3.6
Panjang moncong	1.9	1.9	1.9	1.8	2
Lebar suborbital	2.9	2.7	2.8	2.5	3
Panjang rahang atas	2.1	2.1	2.2	2	2.2

Lethrinus ki

Lokasi	New Ireland (n = 1)	Singapore (n = 1)	Bonham (n = 1)	Guam (n = 1)	Ishigaki (n = 2)	Philippines (n = 1)	Miyazaki (n = 1)	Okinawa (n = 7)	Makassar (n = 30)
Rasio panjang baku									
Lebar tubuh	3	2.9	2.8	2.9	2.9	2.8	2.7	2.8	2.8
Panjang kepala	3	2.9	3.1	3	3.3	2.9	3.2	3	3
Panjang sirip dada	3.6	3.4		3.1	3.4	3.5	3.3	3.4	3.3
Panjang sirip perut	4.1	5.4	4	4.4	4.4	4.4	4.3	4.4	4.2
Rasio panjang kepala									
Diameter mata	3.8	4.2	3.9	3.7	4.2	3.4	3.7	3.7	3.8
Jarak antar mata	3.6	4	3.6	3.5	3.5	3.4	3.1	3.5	3.9
Panjang moncong	2	1.9	1.9	2	1.9	2.2	2	2	2
Lebar suborbital	3	2.8	2.9	3.1	2.9	2.9	2.7	3	2.6
Panjang rahang atas	2.4	2.6	2.7	2.7	2.6	2.7	2.7	2.7	2.7

Lethrinus lentjan

Lokasi	Tongatabou (n = 1)	loc? (n = 1)	Philippines (n = 1)	New Britain (n = 1)	New Ireland (n = 1)	Srilanka (n = 1)	Sabah (n = 2)	Filipina (n = 2)	Okinawa (n = 1)	Makassar (n = 30)
Rasio panjang baku										
Lebar tubuh	2.9	2.6	2.7	2.8	2.6	2.7	2.6	2.8	2.7	2.7
Panjang kepala	2.8	2.8	3	2.8	2.8	2.9	2.9	2.9	3	3
Panjang sirip dada	3.5	3.3	3.4	3.2	3.3	3.3	3.2	3.4	3.3	3.2
Panjang sirip perut	4.7	4.7	4.2	4.3	4.6	4.6	4.4	4.5	4.4	4.8
Rasio panjang kepala										
Diameter mata	3.9	3.8	3.7	3.7	5.2	3.9	4.2	3.6	3.9	3.7
Jarak antar mata	3.9	3.8	3.7	3.9	4.1	3.9	3.5	4.2	3.6	4.2
Panjang moncong	1.9	1.9	2.1	2	1.9	2.1	1.9	2.1	1.9	2
Lebar suborbital	3.1	2.7	2.9	2.9	2.7	2.8	2.6	3	2.8	2.8
Panjang rahang atas	2.8	2.8	2.9	2.7	2.5	3	2.8	3	2.7	2.6

Lethrinus obsoletus

Lokasi	Guam (n = 1)	Ishigaki (n = 2)	Philippines (n = 1)	Makassar (n = 30)
Rasio panjang baku				
Lebar tubuh	3	2.9	2.8	3
Panjang kepala	2.9	2.8	2.9	2.8
Panjang sirip dada	3.5	3.5	3.4	3.6
Panjang sirip perut	4.4	4.3	4.4	4.3
Rasio panjang kepala				
Diameter mata	3.8	4.55	3.6	3.6
Jarak antar mata	3.8	3.8	3.9	3.9
Panjang moncong	2	1.8	1.9	1.9
Lebar suborbital	3.1	2.7	2.7	2.7
Panjang rahang atas	2.9	2.8	2.8	2.9

Lethrinus olivaceus

Lokasi	Java (n = 1)	Waigiou (n = 1)	Zanzibar (n = 1)	Ishigaki (n = 1)	Ishigaki (n = 1)	Coral Sea (n = 1)	Sabah (n = 1)	Makassar (n = 30)
Rasio panjang baku								
Lebar tubuh	3.1	3.2	3.1	3.1	3.1	3.1	3.3	3.1
Panjang kepala	2.7	2.5	2.7	2.6	2.6	2.4	2.6	2.5
Panjang sirip dada	3.8	3.9	4.3	4.4	4.4	4.7	4.2	4.6
Panjang sirip perut	4.7	5.2	4.7	5.1	5.1	5.1	5.1	5
Rasio panjang kepala								
Diameter mata	4.3	3.6	5.2	4.1	7	8.8	4.6	6.5
Jarak antar mata	4.6	4.6	4.4	4.5	4.6	4.7	4.6	4.8
Panjang moncong	1.8	2.2	1.8	1.9	1.8	1.6	1.8	1.7
Lebar suborbital	3.2	3.7	2.8	3.5	2.8	2.9	3	2.9
Panjang rahang atas	3.2	2.9	2.9	3	3	3.1	2.9	2.7

Lethrinus ornatus

Lokasi	Ishigaki (n = 3)	Sabah (n = 1)	Srilanka (n = 1)	Oman (n = 1)	Bangkok (n = 1)	Miyazaki (n = 2)	Makassar (n = 30)
Rasio panjang baku							
Lebar tubuh	2.5	2.5	2.4	2.6	2.7	2.4	2.5
Panjang kepala	3.0	2.9	2.8	2.9	2.8	3.1	3.0
Panjang sirip dada	3.2	2.5	2.9	3.5	3.2	3.2	3.0
Panjang sirip perut	4.0	4.0	3.8	4.2	3.9	3.9	4.1
Rasio panjang kepala							
Diameter mata	3.5	3.1	3.3	3.5	3.8	3.8	3.3
Jarak antar mata	3.2	3.2	3.2	3.5	3.8	3.0	3.6
Panjang moncong	2.0	1.9	2.0	2.1	2.0	2.0	2.0
Lebar suborbital	2.8	2.8	2.4	2.7	2.5	2.6	2.5
Panjang rahang atas	2.8	2.8	2.7	2.7	2.7	2.8	2.8

Lethrinus rubrioperculatus

Lokasi	Okinawa (H) (n = 1)	Louisiades (n = 1)	Bonin (n = 1)	Hachijo (n = 1)	Okinawa (P) (n = 9)	Makassar (n = 30)
Rasio panjang baku						
Lebar tubuh	3.1	3.1	3.3	3.2	3	3.2
Panjang kepala	2.8	2.7	2.9	2.8	2.7	2.8
Panjang sirip dada	3.8	4	4.1	4	3.8	4
Panjang sirip perut	4.7	4.2	4.5	4.9	4.5	4.6
Rasio panjang kepala						
Diameter mata	4.2	3.5	4.1	5.2	3.8	3.9
Jarak antar mata	3.1	3.7	3.6	3.3	3.8	3.8
Panjang moncong	2.1	2.2	1.8	1.8	1.8	1.9
Lebar suborbital	2.8	3.2	2.8	2.7	2.9	2.8
Panjang rahang atas	2.6	2.9	2.7	2.5	2.9	2.8

Lethrinus semicinctus

Lokasi	Bourou (n = 1)	East Indies (n = 1)	Nuguria (n = 1)	Ishigaki (n = 2)	Sabah (n = 3)	Okinawa (n = 1)	Makassar (n = 30)
Rasio panjang baku							
Lebar tubuh	3.3	3	3.2	3.1	2.9	3	3.2
Panjang kepala	2.7	2.6	2.7	2.8	2.6	2.9	2.8
Panjang sirip dada	3.4	3.5	3.6	3.7	3.5	4.1	3.8
Panjang sirip perut	5	5	4.8	4.5	4.2	5	4.7
Rasio panjang kepala							
Diameter mata	4	3.5	3.6	3.8	3.7	4	3.9
Jarak antar mata	4	4.2	3.9	3.7	4	3.6	4.1
Panjang moncong	1.9	1.9	1.9	2	1.9	1.7	1.8
Lebar suborbital	2.8	2.6	2.8	2.9	2.7	2.4	2.4
Panjang rahang atas	2.9	2.6	2.8	3.1	2.7	3.1	2.7

Lethrinus xanthochilus

Lokasi	Red Sea (n = 1)	Ishigaki (n = 3)	Okinawa (n = 1)	Malaysia (n = 3)	Makassar (n = 7)
Rasio panjang baku					
Lebar tubuh	3.1	3.2	3.1	2.6	2.3
Panjang kepala	3	2.8	2.7	2.9	2.8
Panjang sirip dada	4.8	4.3	4	3.5	3.1
Panjang sirip perut	5.2	4.8	4.8	4.5	4.8
Rasio panjang kepala					
Diameter mata	4.4	4.3	3.8	4.2	3.8
Jarak antar mata	4.4	4.1	3.4	3.7	3.6
Panjang moncong	1.8	1.8	1.9	2	1.9
Lebar suborbital	2.7	3	3.4	2.6	2.5
Panjang rahang atas	2.6	2.6	2.9	2.8	2.8

Lampiran 3. Hasil sekuensing dan nomor aksesori sampel di *GenBank* NCBI.

>MSFUH3931596_ *L. atkinsoni*_Makassar_Indonesia
CCCTTTTTATGTTTGGTGCCTGAGCTGGAATGGTAGGAACAGCCCTAAGCCTACTT
ATTCGGGCCGAACCTTAGTCAACCCGGAGCACTCCTGGGAGACGACCAAATTTATA
ATGTTATTGTACAGCACATGCTTTCGTAATAATCTTCTTTATGGTTATGCCATTA
TGATTGGAGGGTTCGGGAACCTGACTTATCCCCCTAATGATTGGGGCCCCCGACAT
AGCATTCCCCCGAATGAACAACATGAGCTTTTGACTTCTACCCCTTCATTCTCC
TTCTGCTTGCCTTTCAGGCGTAGAGGCCGGGGCTGGGACCGGATGGACAGTCT
ACCCACCACTAGCGGGTAACCTTGCCCATGCAGGTGCATCTGTGACTTAACGAT
TTTCTCACTCCACTTAGCAGGGGTTTCTCAATTCTGGGGGCTATCAACTTCATTA
CAACAATTATTAACATGAAGCCTCCGGCTATCTCTCAGTATCAAACGCCCTGTTT
GTGTGAGCTGTTCTAATTACCGCCGTAATACTTCTCCTATCCCTACCAGTCTTGC
CGCCGGCATCACAATGCTGTTAACGGACCGAAACCTAAACACCACTTTCTTTGAC
CCCGCAGGAGGAGGGGACCCAATCCTCTACCAGCATCTATTCTGATTCTTTGGCC
ACCAGAAAAGTCTAAAA

>MUFS48438_ *L. erythracanthus*_Makassar_Indonesia
CTGGCATGGTAGGAACAGCCCTAAGCCTACTTATCCGAGCAGAACTCAGCCAACC
CGGGGCACTCCTGGGGGACGACCAGATTTATAATGTTATCGTCACAGCACACGCT
TTCGTAATAATTTCTTTATAGTAATGCCTATCATAATCGGAGGCTTCGGTAATTGA
CTCATCCCTCTAATGATCGGTGCCCGGACATGGCATTCCCCCGAATGAATAACA
TGAGCTTTTGACTTCTTCTCCCTCGTTCCCTCCTGCTTGCATCCTCAGGCGTA
GAGGCTGGGGCTGGCACCGGATGAACCGTTTACCCCCCACTAGCAGGCAACCTC
GCCACGCAGGCGCTCTGTAGATCTAACAATTTTCTCGCTCCACCTAGCAGGGG
TCTCCTCAATTCTGGGGGCTATCAACTTCATCACAACAATCATCAACATAAAACCC
CCAGCTATTTCTCAGTACCAGACACCACTGTTTGTGTGGGCTGTTCTAATTACCGC
CGTGCTTCTTCTCCTATCCCTGCCCGTCTTGGCCCGGTATCACAATGCTGTTG
ACAGACCGAAATTTAAACACCACCTTCTTCGACCCTGCAGGAGGGGGAGACCCAA
TTCTCTACCAGCAC

>MUFS48436_ *L. erythropterus*_Makassar_Indonesia
GCCTGAGCTGGCATGGTAGGGACAGCCCTAAGCCTACTTATTCGAGCAGAACTTA
GCCAACCTGGGGCACTCCTAGGAGACGACCAGATTTATAATGTTATTGTTACGGC
CCACGCCTTTGTAATAATCTTCTTTATGGTCATACCTATCATGATCGGAGGCTTTG
GCAATTGGCTTATCCCCCTAATGATCGGAGCCCCTGATATGGCATTCCCACGAAT
AAATAACATGAGCTTTTGACTGTTACCCCTCATTCTCCTCCTGCTTGCATCCT
CAGGCGTAGAAGCTGGGGCTGGAACAGGATGAACAGTCTACCCCACTAGCAG
GCAACCTCGCCCATGCAGGTGCATCCGTAGACCTAACAATCTTCTCACTCCACTTA
GCAGGGGTCTCCTCAATTCTAGGAGCCATCAATTTTATTACAACAATTATTAACAT
GAAACCTCCAGCTATTTCTCAATATCAAACACCTCTATTTGTCTGAGCGGTTCTAAT
TACCGCTGTTCTTCTTCTACTATCCCTGCCCGTTCTTGCTGCCGGTATTACAATGC
TATTAACAGACCGAAACCTAAACACCACCTTCTTCGACCCTGCAGGAGGGAGGCGA
CCCAATTCTATACCAACATCTC

>MT551656_L_harak_Makassar_Indonesia

AAAGACATTGGCACCCCTTTATTTAGTGTTTGGTGCCTGAGCTGGAATAGTAGGAAC
AGCCCTAAGCCTACTCATTTCGAGCCGAACCTAAGTCAGCCCGGAGCCCTCCTGGG
AGACGACCAGATTTATAATGTTATCGTCACAGCACATGCTTTCGTAATAATTTTCTT
TATGGTAATGCCATTATGATTGGAGGTTTTGGCAACTGACTTATTCCCCTAATGA
TTGGAGCCCCCGATATGGCATTCCCCCGAATGAACAACATGAGCTTTTGACTCCT
GCCCCCTTCATTCTCCTCCTACTTGCCTCCTCAGGCGTAGAAGCCGGGGCTGG
GACCGGGTGAACAGTTTACCCCCACTAGCGGGCAACCTAGCCCATGCCGGTGC
ATCTGTGCGACTTAACAATCTTTTCCCTCCACCTGGCAGGGGTCTCCTCAATCTTAG
GGCCATCAACTTCATTACAACAATCATTAAACATGAAGCCTCCAGCTATCTCCAG
TATCAAACCTCCACTGTTTGTGTGGGCCGTTCTAATTACCGCCGTACTACTTCTCCT
GTCCCTACCAGTCCTTGCCGCCGGCATCACGATGCTATTGACGGACCGAAACCTA
AACACCACCTTCTTTGACCCCGCAGGGGGAGGGGACCCAATCCTCTATCAGCATC
TATTCTGATTCTTTGGCC

>MSFUH3931594_L_lentjan_Makassar_Indonesia

CCCTTTTTATGTTTGGTGCCTGAGCTGGAATGGTGGGGACAGCCCTAAGCCTACT
CATTTCGAGCCGAACCTTAGCCAACCCGGGGCTCTCCTGGGAGACGACCAAATTTAT
AATGTTATCGTTACAGCACATGCTTTCGTAATAATCTTCTTTATGGTAATGCCTATT
ATGATCGGAGGTTTTCGGCAACTGGCTCATCCCCCTAATGATTGGAGCCCCCGACA
TGGCATTCCCCCGAATGAATAACATGAGCTTTTGGCTTCTACCCCTTCATTCTC
CTCCTACTTGCCTCCTCAGGCGTAGAAGCTGGGGCTGGAACCGGATGAACGGTTT
ACCCCCCGCTGGCAGGCAACCTTGCCCACGCTGGCGCATCTGTGACCTGACAA
TCTTTTCCCTCCACCTAGCGGGGGTTTTCTCAATTTTAGGGGCTATCAACTTCATC
ACAACAATTATTAATATGAAGCCTCCGGCTATTTCTCAATATCAAACACCGCTGTTT
GTATGAGCCGTCCTAATCACCGCCGTACTTCTCCTATCCCTACCAGTCCTTGC
CGCCGGCATCACAATTAATGACGGACCGAAACCTAAACACTACCTTCTTTGACC
CTGCAGGAGGAGGGGACCCGATCCTCTATCAACATCTATTCTGATTCTTTGGCCA
CCAGAAAAGTCTAAA

>MT551658_L_microdon_Makassar_Indonesia

AAGCACATTGGCACCCCTTTATTTGGTATTTGGTGCCTGAGCCGGCATGGTAGGGA
CCGCCCTAAGCCTACTTATCCGAGCAGAACTTAGCCAACCTGGGGCACTCCTGGG
CGATGACCAGATTTATAATGTTATCGTCACAGCACACGCTTTTGTAAATAATTTTCTT
TATAGTAATGCCTATCATAATTGGAGGCTTCGGCAACTGACTTATTCCCCTAATGA
TTGGGGCCCCCGATATGGCATTCCCTCGGATGAACAACATGAGCTTCTGGCTCCT
ACCTCCCTCGTTCCTCCTCCTTGCATCCTCAGGCGTAGAAGCTGGAGCGGGT
ACCGGGTGAACAGTCTACCCCCGTTAGCAGGGAACCTTGCCCATGCAGGTGCA
TCTGTAGATCTCACAATTTTCTCTCTCCACTTAGCAGGGGTTTTCTCAATTCTCGG
GGCTATTAACTTCATTACAACAATCATCAATATGAAGCCTCCAGCTATCTCTCAGTA
CCAAACTCCCTTGTTTCGTGTGAGCTGTTCTAATTACCGCCGTGCTTCTTCTCCTTT
CTCTGCCAGTCCTTGCCGCCGGAATTACAATGCTTTTAAACAGACCGAAATTTAAAT
ACCACCTTTTTTCGACCCCGCAGGCGGAGGAGACCCAATCCTTTACCAGCATCTTT
TCTGATTCTTTGGCA

>MSFUH3931592_ *L. nebulosus*_Makassar_Indonesia

CCCTTTTGTAGTTTTGGTGCCTGAGCTGGGATGGTAGGAACAGCCCTAAGCCTACT
CATTCGGGCCGAACCTTAGTCAACCCGGAGCCCTCCTGGGAGACGACCAAATTTAT
AATGTTATTGTTACAGCACATGCTTTTCGTAATAATTTTCTTTATGGTTATGCCTATCA
TGATTGGAGGTTTCGGCAACTGACTTATCCCCCTAATGATCGGAGCCCCCGACAT
GGCATTCCCCGAATGAATAACATGAGCTTTTGACTTCTACCCCTTCGTTCCCTCC
TCCTACTTGCATCCTCAGGCGTAGAGGCCGGGGCTGGTACCGGATGAACAGTTTA
CCCACCACTAGCAGGTAACCTTGCCCATGCCGGTGCATCTGTGACTTAACAATT
TTTTCCCTCCACCTAGCAGGGGTCTCCTCAATTTTAGGTGCTATCAACTTCATCAC
AACAAATTATAACATGAAGCCTCCGGCTATTTCTCAGTACCAAACGCCACTGTTTG
TGTGAGCCGTTCTAATTACCGCCGTAATACTTCTCCTATCCCTACCAGTTCTTGCC
GCCGGCATCACAATGCTGTTGACGGACCGAAATCTAAACACTACCTTCTTTGACC
CCGCAGGAGGGGAGGCCAATTCTCTACCAACATCTATTCTGATTCTTTGGCCA
CCAAGAAAGTCTAA

>MT551655_ *L. obsoletus*_Makassar_Indonesia

AAAGACATTGGCACCCCTTATTTAGTGTGGTGCCTGAGCTGGAATGGTGGGAA
CAGCCTTAAGCCTTCTTATTCGAGCCGAACCTTAGTCAACCTGGAGCTCTCCTGGG
AGACGACCAAATTTATAATGTTATTGTTACAGCACATGCTTTTCGTAATGATTTTCTT
TATGGTTATGCCTATTATGATTGGAGGTTTCGGCAACTGACTAATCCCCCTAATGA
TTGGAGCGCCTGACATAGCATTCCCCGAATGAATAACATGAGCTTTTGACTTCTA
CCCCCTTCGTTCCCTCCTACTTGCCTCTTCAGGCGTGGAAGCTGGGGCTGGTA
CCGGGTGAACAGTTTACCCGCCCTAGCAGGCAACCTCGCCATGCTGGGGCAT
CTGTGACTTGACAATCTTCTCCCTCCACCTAGCAGGGGTCTCCTCAATTCTTGGG
GCTATTAACCTTCATCACAACAATCATTAAACATGAAGCCCCCAGCTATTTCTCAATAC
CAAACACCCCTCTTTGTATGAGCCGTTTTAATCACCGCCGTAATACTGCTTCTCCTGTC
CCTACCAGTCTTTGCCGCGGCATCACAATGCTACTGACAGACCGAAACCTAAAC
ACCACCTTCTTTGACCCTGCAGGAGGGGACCCATCCTCTATCAACACCTGT
TTTGATTCTTTGGCC

>MSFUH3931598_ *L. olivaceus*_Makassar_Indonesia

CCCAATTANATTTGGTGCCTGAAGCTGGCATAAGTAGGGACGGCCCTGAGCCTACT
TATCCGTGCAGAACTAAGCCAACCTGGAGCACTCCTGGGAGACGACCAGATTTAT
AATGTTATCGTACAGCACATGCTTTTGTAAATAATTTTCTTTATAGTAATGCCTCTTA
TGATCGGAGGCTTCGGCAATTGACTGATCCCCCTAATGATTGGGGCTCCCGATAT
GGCATTCCCTCGAATAAACAATATGAGCTTTTGACTCTTACCCCTCATTCTCCTCC
TTCTCCTAGCATCCTCAGGTGTAGAAGCCGGGGCGGGCACTGGGTGGACAGTCT
ACCCCCACTAGCGGGAATCTCGCCATGCAGGTGCATCTGTGGATCTAACAAT
TTTCTCACTTCACTTAGCAGGGGTGTCCTCAATTCTAGGGGCTATCAACTTCATTA
CGACAATTATTAATAAAAACCTCCGGCCGTCTCTCAGTACCAAACACCCCTATTC
GTTTGAGCTGTTCTGATCACTGCCGTGCTTCTTCTTCTGTCCCTACCAGTTCTTGC
CGCCGGGATCACAATGCTTCTAACAGACCGAAACTTAAATACTACTTTTTTTGATC
CCGCAGGAGGGGGAGACCCAATCCTTTACCAACACCTCTTCTGATTCTTTGGCCA
CCAAGAAAGTCTAA

>MT551654_ *L_ornatus*_Makassar_Indonesia

AAAGACATTGGCACCCCTTTATTTAGTGTTTGGTGCCTGAGCTGGAATGGTAGGAAC
AGCCCTAAGCCTGCTCATTGAGCCGAACCTAAGTCAACCCGGGGCCCTCCTGGG
AGACGACCAAATTTATAATGTTATTGTTACAGCACATGCTTTTCGTAATAATTTTCTTT
ATGGTAATGCCTATTATGATTGGAGGTTTCGGCAACTGACTTATCCCCCTAATGAT
TGGCGCCCCCGACATGGCATTCCCTCGGATGAATAACATGAGCTTTTGACTTCTG
CCCCCTTCATTCTCCTCCTACTTGCCTCTTCGGGCGTAGAGGCTGGGGCTGGGA
CCGGATGAACAGTTTATCCCCCACTAGCAGGCAACCTTGCCCACGCTGGAGCATC
TGTCGACTTAACAATTTTTTCCCTCCATCTGGCAGGGGTCTCCTCAATTTTAGGGG
CCATCAACTTCATCACAACAATCATTAAACATGAAGCCTCCGGCTATTTCTCAATATC
AAACACCCCTGTTTGTGTGAGCCGTTCTAATCACCGCCGTACTACTTCTCCTGTCC
CTGCCAGTCCTTGCCGCCGGCATCACAATGCTGTTGACAGACCGAAACCTAAACA
CCACCTTCTTTGACCCCGCAGGAGGAGGGGACCCGATCCTCTATCAGCACCTATT
CTGATTCTTTGGCC

>MT551659_ *L_rubrioperculatus*_Makassar_Indonesia

AAAGACATTGGCACCCCTTTATTTAGTATTTGGTGCCTGAGCTGGCATAGTAGGGAC
AGCCCTAAGCCTACTTATCCGAGCAGAACTTAGCCAACCCGGGGCGCTCCTAGG
AGATGACCAGATTTATAATGTCATCGTCACAGCACACGCTTTTGTAAATAATCTTCTT
TATAGTAATACCTATCATGATCGGAGGCTTCGGTAACTGGCTCATTCTCTAATGA
TCGGAGCCCCGATATAGCATTCCCTCGAATGAATAACATGAGCTTCTGACTCCT
GCCCCCTTCTTCTCCTTCTCCTCGCATCCTCAGGCGTTGAAGCCGGAGCGGG
CACTGGATGAACAGTTTACCCCCCATTGGCGGGCAACCTCGCTCATGCAGGTGCA
TCTGTAGACCTAACAATTTTTTCCCTTCACTTAGCAGGAGTTTCTCAATTCTGGG
GGCTATTAATTTTCATCACAACAATTATCAATATGAAACCCCCAGCTATTTCTCAATA
TCAAACGCCACTGTTTCGTTTGGAGCTGTCCTAATCACCGCCGTGCTTCTTCTTCTGT
CCCTGCCAGTCCTTGCCGCCGGAATTACGATGCTTCTAACAGACCGAAATCTAAA
TACTACCTTTTTTCGACCCCGCAGGAGGAGGAGACCCTATCCTTTACCAGCACCTC
TTCTGATTCTTTGGCC

>MT551653_ *L_semicinctus*_Makassar_Indonesia

AAAGACATTGGCACCCCTCTATCTAGTATTTGGTGCCTGAGCCGGCATGGTAGGGA
CAGCTCTAAGCCTACTCATCCGAGCAGAACTCAGTCAACCTGGAGCACTCCTGGG
TGACGACCAGATTTATAATGTTATCGTTACAGCACACGCCTTTGTAAATAATTTTCTT
TATAGTAATGCCTATCATGATCGGAGGCTTCGGAAACTGACTTATCCCTCTAATGA
TTGGAGCCCCTGATATGGCATTCCCCGAATGAATAATATGAGTTTTTGGACTTCTA
CCTCCTTCGTTCTCCTCCTGCTTGCATCCTCAGGCGTAGAAGCCGGGGCCGGAA
CTGGTTGAACAGTCTACCCCCCACTAGCAGGCAATCTCGCCCATGCAGGAGCTTC
TGTAGACTTGACCATTTTTTCACTCCACTTAGCAGGGGTTTCTCAATTCTAGGGG
CCATTAACCTTCATCACAACAATTATTAATATGAAGCCTCCGGCTATTTCTCAATACC
AGACCCCACTATTTGTGTGAGCTGTCCTAATTACGGCCGTACTTCTTCTTCTGTCC
CTACCTGTCTTGGCCGCTGGAATTACAATGCTTTTAAACAGACCGAAACCTTAATAC
CACCTTCTTCGACCCCGCTGGAGGAGGAGATCCCATCCTTTACCAACATCTTTTCT
GATTCTTTGGCC

>MT551657_L_xanthochilus_Makassar_Indonesia

AAAGACATTGGCACCCCTTTATTTAGTATTTGGTGCTTGAGCTGGCATAGTAGGGAC
CGCCCTAAGCCTACTGATCCGAGCAGAACTTAGCCAACCTGGGGCACTCCTGGG
AGACGACCAGATTTATAATGTTATCGTCACAGCACACGCTTTTGTAATAATTTTCTT
TATAGTCATGCCCATCATAATTGGAGGCTTCGGTAACTGACTCATCCCTCTAATGA
TTGGGGCCCCTGATATGGCATTCCCTCGAATGAATAATATGAGCTTTTGACTTCTA
CCCCCTCCTTCCTCCTCCTTGCATCCTCAGGTGTGGAGGCCGGGGCAGGT
ACTGGGTGGACAGTCTACCCTCCATTAGCAGGCAACCTTGCTCATGCGGGTGCAT
CTGTAGATCTCACAATCTTTTCTCTTCATCTAGCAGGGGTCTCCTCAATTCTTGGG
GCTATCAATTTTCATTACGACAATCATCAATATGAAACCTCCAGCTATCTCTCAGTAC
CAAACACCCCTGTTTCGTATGAGCTGTTCTAATTACCGCCGTGCTTCTCCTTCTATC
TCTGCCAGTCCTTGCCGCCGGGATTACAATGCTTTTAACAGACCGAAATCTAAATA
CCACCTTTTTTCGACCCCGCAGGAGGGGGTGACCCAATCCTTTACCAGCATCTCTT
CTGATTCTTTGGCC