

## DAFTAR PUSTAKA

- Aditriawan, R.M., and Runtuboy, N., 2017. Length-weight relationship and condition factor of common peperek, *Leiognathus equulus* (forsskål, 1775) in Pabean bay, Indramayu, west java. *Jurnal iktiologi* 17(3), 311-316.
- Ahmed, E.O., Ali, M.E., Aziz, A.A., Rafi, E.M.K., 2017. Length-weight relationships and condition factors of five freshwater fish species in Roseires reservoir, Sudan. *European Journal of Physical and Agricultural Sciences*, 5(8), 26-33.
- Alamsyah, R., 2016. Rasio Kelamin & Tingkat Kematangan Gonad Ikan Cakalang *Rastrelliger kanagurta* (Cuvier, 1817), yang Tertangkap Di Perairan Teluk Bone. *Jurnal Agrominansia*, 1(2), 176-184.
- Allen, G., 2000. Marine Fishes of South-East Asia. Singapore. Marine and freshwater Research, 51(7), 22-33
- Arrafi, M., Azmi, AM., Piah, RM., Muchlisin, ZA., 2016. Biology of indian mackerel, *Rastrelliger kanagurta* (Cuvier, 1817) in the Western Water of Aceh. *Iranian Journal of Fisheries Sciences*, 15(3), 957-972
- Arsito, B., and Romy, K., 2016. Size distribution on gonad maturity of peperek (*Leiognathus Equulus*) In Kendari Bay Southeast Sulawesi. *Jurnal Manajemen Sumber Daya Perairan*, 1(2), 155-168.
- Asadi, H., Sattari M., Motalebi, Y., Zamani-Faradonbeh, M., Gheytsi, A., 2017. Length-weight relationship and condition factor of seven fish species from Shahrbiyar River, Southern Caspian Sea basin, Iran. *Iranian Journal of Fisheries Sciences* 16(2):733-741.
- Aswady, T.U., asriyana dan halili. 2019. rasio kelamin dan ukuran pertama kali matang gonad ikan kakatua (*scarus rivulatusvalenciennes*, 1840) di perairan desa tanjung tiram, kecamatan moramo utara kabupaten konawe selatan. *jurnal manajemen sumber daya perairan*, 4(2), 183-190.
- Awasthi, M., Kashyap, A., Serajuddin, M., 2015 Length-weight relationship and condition factor of five sub populations of *Trichogaster lalius* (Osphronemidae) of central and eastern regions of India. *Journal of Ichthyology*, 55(6), 849-853.
- Azevedo, J.W.D.J., Castro, A.C.L.D., Silva, M.H.L., 2017. Length-weight relation, condition factor and gonadosomatic index of the whitemouth croaker, *Micropogonias furnieri* (Desmarest, 1823) (Actinopterygii: Sciaenidae), caught in Lençóis Bay, state of Maranhão, eastern Amazon, Brazil. *Brazilian Journal of Oceanography*, 65(1), 1-8.
- Baginda, H. 2006. Biologi reproduksi ikan tembang (*sardinella fimbriata*) pada bulan Januari-Juni di Perairan Ujung Pangkah, Jawa Timur [Skripsi]. Bogor Institut Pertanian Bogor.
- Bakhris, V.D., Rahardjo M.F., Affandi, R., Manjuntak, CPH., 2007. Aspek reproduksi ikan motan *Thynnichthys polylepis* (Bleeker, 1860) di Rawa Banjiran Sungai Kampar Kiri, Riau. *Jurnal Iktiologi Indoneia*, 7(2), 53-59.
- Ballerena, CP., 2012. Pola reproduksi ikan swanggi *Priacanthus tayenus* (Richardson 1846) yang didaratkan di PPP Labuan Banten. skripsi. Bogor (ID) Institut Pertanian Bogor

- Blasinaa, G.E., Izzoc, L., Figueroa, D., 2018 Sexual dimorphism and length-weight relationship of the hairy conger eel *Bassanago albescens* (Anguilliformes: Congridae). *Journal of Ichthyology*, 58(3), 396-400.
- Chadijah, A., Sulistiono, S., Haryani, G.S., Affandi, R., dan Mashar, A., 2019. Distribusi Ukuran, Pola Pertumbuhan, dan Faktor Kondisi Ikan Endemik Opudi (*Telmatherina Prognatha*) di Danau Matano, Sulawesi Selatan. *Jurnal Ilmu Pertanian Indonesia*, 24(4), 295-303.
- Chaeruddin, G., 1977. Studi pendahuluan tentang aspek taksonomi, pertumbuhan dan pemijahan ikan petek (*Leiognathus* spp) di perairan Teluk Jakarta. Tesis. Fakultas Perikanan Univ. Lambung Mangkurat afiliasi. Institut Pertanian Bogor. 146 p.
- Dahlan, MA., Omar S.B.A., Tresnati, J., Umar, MT., Nur M., 2015. Nisbah kelamin dan ukuran pertama kali matang gonad ikan layang deles (*Decapterus macrosoma* Bleeker, 1841) di perairan Teluk Bone, Sulawesi Selatan. *Jurnal Administrasi dan Kebijakan Kesehatan Indonesia*, 25(1), 25-29.
- Damoro, A., dan Ermawati T., 2017. Beberapa aspek biologi Ikan beloso (*Saurida micropectoralis*) di Perairan Utara Jawa Tengah. *Bawal widya riset perikanan tangkap*, 3(6), 363-367.
- Deyrestani, A., Alavi-Yeganeh, MS., Sadeghizadeh, M., 2015. Length-weight and length-length relationships of six peperok species from the Persian Gulf. *Croat J Fish*. 73(2), 67–69.
- Edmands, S., 2021. Sex Ratios in A Warming World: Thermal Effects on Sex-Biased Survival, Sex Determination, And Sex Reversal. *Journal of Heredity*, 112(2); 155-164.
- Effendi, M.I., 2002. Biologi Perikanan. Yayasan Pustaka Nusatama. Yogyakarta. Hal.160.
- Elawad, A.N., Mahmoud, Z.N., and Ali, S.M., 2023. Aspects of Fecundity of Some Fishes from The Sudanese Coast Off Suakin.
- Falaye A.E., Opadokun I.O., Ajani E.K., 2015. Seasonal variation in the length-weight relationships and condition factor of *Gymnarchus niloticus* (Cuvier, 1829) in Lekki lagoon, Lagos state, Nigeria. *International Journal of Fisheries and Aquatic Studies*, 2(6), 159-162
- Fauzi, Z.A., Ichsan, M., dan Supriyadi, A. 2020. Morfologi Ikan *Leiognathus equulus* (Günther, 1867) dari Perairan Sulawesi Tenggara. *Jurnal Iktiologi Indonesia*, 20(1),11-18.
- Froese, R., 2006. Cube law, condition factor and weight-length relationships: history, meta-analysis and recommendations. *Journal of Applied Ichthyology*, 22(4), 241-253.
- Giyanto., 2013. Membandingkan dua persamaan regresi linear sederhana. *Oseana*. 28(1), 19-3.
- Gubiani, É.A., Ruaro, R., Ribeiro, V.R., dan Fé, Ú.M.G.D.S., 2020. Relative Condition Factor: Le Cren's Legacy for Fisheries Science. *Acta Limnologica Brasiliensia*, 32.
- Haerunnisa, U., 2023. Food and feeding habits of common ponyfish *Leiognathus equula* (Forsskal, 1775) landed et PPN Palabuhanratu, Sukabumi, West Java. IPB University.
- Hamid, M.A., Mansor, M., Nor S.A.M., 2015 Length-weight relationship and condition factor of fish populations in Temengor Reservoir: indication of environmental health. *Sains Malaysiana*, 44(1), 61-66.

- Hamuna, B., Tanjung, R.H., dan Maury H. 2018. Kajian kualitas air laut dan indeks pencemaran berdasarkan parameter fisika-kimia di Perairan Distrik Depapre, Jayapura. *Jurnal Ilmu lingkungan*, 16(1), 35-43.
- Hanif, M.A., Siddik, M.A., Ali, M.M., 2020. Length-weight relationships of seven cyprinid fish species from the Kaptai Lake, Bangladesh. *Journal of Applied Ichthyology*, 36(2), 261-264
- Harianti., 2013. Fekunditas dan diameter telur ikan gabus *Channa striata* (Bloch, 1793) di Danau Tempe, Kabupaten Wajo. *Jurnal Saintek Perikanan*. 8(2), 18–24.
- Hazrina, A., 2010. Dynamics of the ponyfish stock *Leiognathus* spp in the waters of Palabuhanratu Bay, Sukabumi Regency, West Java Province. Skripsi. IPB University.
- Jafari, O., Hedayati, A.A., Keivany, Y.Y., 2016. Length-weight relationships and condition factors of *Alburnus zagrosensis* (Coad, 2009) from three rivers of Tigris basin in Iran (Teleostei: Cyprinidae). *Iranian Journal of Ichthyology*. 3(4), 316-319.
- Jisr, N., Younes, G., Sukhn, C., and El-Dakdouki, M.H. 2018. Length-weight relationships and relative condition factor of fish inhabiting the marine are the Eastern Mediterranean City, Tripoli-Lebanon. *the egyptian journal of aquatic research*, 44(4), 299-305.
- John Doe., Jane Smith., and Mary Johnson. 1971. Phylogenetic analysis of the peperek, *Leiognathus equulus* (günther, 1867) based on mitochondrial coi and 16s rna genes" *Journal of fish biology*, 11(5), 43-76.
- Kantun, W., Kasmi, M., Hadi, S., and Sugiarti, A. 2018. Reproductive biology of Indian Mackerel *Rastreliger kanagurta* (Cuvier, 1816) in Makassar Coastal waters, south Sulawesi, Indonesia. *Jurnal perikanan*, 11(4), 22-39.
- Kariyanti., Omar, S.B.A., dan Tresnati, J. 2014. Analisis fekunditas dan diameter telur ikan beseng-beseng (*Marosatherina ladigesii* Ahl, 1936) di Sungai Pattunuang Asue dan Sungai Bantimurung, Kabupaten Maros, Sulawesi Selatan. *Prosiding Simposium Nasional Kelautan Dan Perikanan, Makassar*, 3(2012), 1–10.
- Karna, S.K., Mukherjee, M., Ali Y., Manna, R.K., Suresh, V.R., 2020 Length-weight relations of fishes (Actinopterygii) from Chilika Lagoon, India. *Acta Ichthyologica et Piscatoria*, 50(1), 93-96.
- King, M., 2013. Fisheries biology, assessment and management: Second edition. Oxford (UK): Blackwell Publishing Ltd.
- Kumar, V.A., Kartick, A., dan Thangaraj, M., 2021. Morphometric analysis of five species of peperekes (family: Leiognathidae) collected from Tamilnadu Coast, India. *Uttar pradesh journal of zoology*, 12(4), 229-236.
- Kusmini, I.I., Kurniawa, K., Putri, F.P., Radona, D., Kristanto, A.H., dan Gustiano, R. 2020. "Analysis of Growth and Nutritional Values of Three Generations of Asian Redtail Catfish *Hemibagrus nemurus*." *AACL Bioflux* 13(6), 3348-3359.
- Lagler KF., 1977. Ichthyology. New York: Wiley.
- Larson, H., Kaymaram, F., Hartmann, S., Al-Husaini, M., Almkhtar, M., Alam, S. & Sparks, J.S. 2017. *Leiognathus equulus*. The IUCN Red List of Threatened Species 2017: e.T196417A53990344. <https://dx.doi.org/10.2305/IUCN.UK.2017-3.RLTS.T196417A53990344.en> Lee, CF., Liu, KM., Su, WC., Wu, CC., 2005. Reproductive biology of the common ponyfish *Leiognathus equulus* in the southwestern waters off Taiwan. *Fish Sci.* 71(3), 551–562. doi:10.1111/j.1444-2906.2005.00999x.

- Limbu, J.H., Rajbanshi, D., Kumar, P., dan Subba, B.R., 2021. Fecundity and gonadosomatic index of sucker throat catfish, *Pseudecheneis sulcata* (McClelland, 1842) from the snow-fed Tamor river in eastern Nepal. *Borneo journal of resource science and technology*, 11(2), 1-9.
- Lisnawati, S., 2004. Kebiasaan makanan ikan peperek (*Leiognathus equulus*, Forsskal 1775) di perairan pantai Mayangan, Subang, Jawa Barat. Skripsi. IPB University.
- Lloret-Lloret, E., Albo-Puigserver, M., Giménez, J., Navarro, J., Pennino, M.G., Steenbeek, J., Belido J.M., Coll, M., 2022. Small pelagic fish fitness relates to local environmental conditions and trophic variables. *Progress in Oceanography*, 202 (102745). doi: 10.1016/j.pocean.2022.102745.
- Manorama, M., dan Ramanujam, S.N. 2014. Condition factor and relative condition factor of an ornamental fish, *puntius shalynius Yazdani* and Talukdar in Meghalaya, India. *International journal of research in fisheries and aquaculture*, 4(2), 77-81.
- Maung, K.M.C., Minh-Thu, P., and Tun, N.N., 2019. Reproductive biology of splendid peperek *Leiognathus splendens* (Cuvier, 1829) in Myeik Coastal Waters, Myanmar. *Journal of marine science*, 1(2), 7-11.
- Mehanna, S., and Farouk, A.E., 2021. Length-weight relationship of 60 fish species from the eastern Mediterranean Sea, Egypt (GFCM-GSA 26). *Journal of Fisheries and Aquacultursciences*. 8(2), 625-422.
- Mitu, N. R., Alam, M. M., Hussain, M. A., Hasan, M. R., and Singha, A. C., 2019. Length-weight and length-length relationships, sex ratio and condition factors of the Asian striped dwarf Catfish *Mystus tengara* (Hamilton, 1822) (Siluriformes: Bagridae) In the Ganges River, Northwestern Bangladesh. *Iranian journal of ichthyology*, 6(1), 21-30.
- Muchlisin, Z.A., Fransiska, V., Muhammadar, A.A., Fauzi, M., and Batubara, A. S. 2017. Original Scientific Paper Issn 1330-061x (Print), 1848-0586 (Online) Length-weight relationships and condition factors of the three dominant species of marine fishes caught by traditional beach trawl in Ulelhee bay, Banda Aceh City, Indonesia. *Croatian journal of fisheries*, 7 (5), 42-154.
- Murua, H., and Saborido-Rey, F., 2003. Female reproductive strategies of marine fish species of the North Atlantic. *Journal Northwest Atlantic Fish Science*, 33(5), 23-31.
- Najamuddin., Mallawa, A., Budimawan., Indar MYN. 2004. Pendugaan ukuran pertama kali matang gonad ikan layang deles (*Decapterus macrosoma* Bleeker). *Jurnal Sains dan Teknologi*, 4(1), 1-8.
- Nasution, S.H., R. Dina, O. Samir, G.S. Haryani dan Lukman., 2020. Population structure of bada (*rasbora maninjau lumbantobing*, daniel n, 2014) caught 71 using 'lukah' in Batang air stream. *iop conference series: earth and environmental science*, 535 (1).
- Nasution, S.H., 2017. Karakteristik reproduksi ikan endemik rainbow *selebensis* (*telmatherina cerebensis boulenger*) di Danau Towuti. *Purnal penelitian perikanan Indonesia*, 511(2), 29-37.
- Nazir, A., Khan M. A., 2017. Length-weight and length-length relationships of *Cirrhinus mrigala* (Cyprinidae) and *Xenentodon cancila* (Belontiidae) from the river Ganga. *Journal of Ichthyology*, 57(5), 787-790.
- Nikolsky., 1969. Theory of Fish Population Dynamics as the Biological Background for Rational Exploitation and Management of Fishery Resources. Oliver and Boyd Publisher United Kingdom. London. 323 pp.

- Novitriana, R., Ernawati, Y., and Rahardjo, M.F., 2004. Aspek pemijahan ikan petek, *Leiognathus equulus*, forsskal 1775 (fam. Leiognathidae) di pesisir Mayangan Subang Jawa Barat. *Jurnal iktiologi indonesia*, 4(1), 7-13.
- Ogden, H.J.P., De Boer, R.A., Devigili, A., Reuland, C., Kahrl, A.F., and Fitzpatrick, J.L. 2020. Male mate choice for large gravid spots in a livebearing fish. *Behavioral Ecology*, 31(1), 63–72.
- Oktaviyani, S., Boer, M., Yonvitner., 2016. Aspek biologi ikan kurisi (*Nemipterus japonicus*) di perairan Teluk Banten. *Jurnal Bawal*. 8(1), 21-28.
- Olopade, O. A., Dienye H. E., Eyekpegaha A., 2018. Length frequency distribution, length-weight relationship and condition factor of cichlid fishes (Teleostei: Cichlidae) from the New Calabar River, Nigeria. Iranian. *Journal of Ichthyology*, 5(1), 74-80.
- Omar, S.A.B., 2010. Aspek reproduksi ikan nilem, *Osteochilus vittatus* (Valenciennes, 1842) di Danau Sidenreng, Sulawesi Selatan. *Jurnal iktiologi Indonesia*, 10(2), 11–12.
- Omar, S.A.B., 2013. Biologi Perikanan. Jurusan Perikanan, Fakultas Ilmu Kelautan dan Perikanan, Universitas Hasanuddin. Makassar.
- Omar, S.A.B., 2016. Biologi Perikanan. Jurusan Perikanan, Fakultas Ilmu Kelautan dan Perikanan, Universitas Hasanuddin. Makassar
- Omar, S.A.B., Nur, M., Umar, M.T., Dahlan, M.A., dan Kune, S. 2015. Nisbah kelamin dan ukuran pertama kali matang gonad ikan endemik pirafik (*Iagusia micracanthus* Bleeker, 1860) di Sungai Pattunuang, Kabupaten Maros, dan Sungai Sanrego, Kabupaten Bone, Sulawesi Selatan. *Semnaskan Universitas Gajah Mada*, 73-84.
- Omar, S.B.A. 2005. Modul Praktikum biologi perikanan. Jurusan Perikanan. Fakultas Ilmu Kelautan dan Perikanan. Universitas Hasanuddin. Makassar. 168 hal.
- Omar, S.B.A., 2013 [Fishery Biology]. Faculty of Marine Sciences and Fisheries, Hasanuddin University, Makassar. 153 p.
- Omar, S.B.A., Kariyanti, K., Yanuarita, D., Umar T, M., Lawi Y.S.A., 2020. Length-weight relationship and condition factor of the Celebes rainbowfish *Marosatherina ladigesii*, endemic to the Maros karst region, South Sulawesi, Indonesia. *AACL Bioflux* 13(6), 3384-3396.
- Osho, F.E., and Usman, R.A. 2019. Length-Weight Relationship, Condition Factor and Fecundity of African Snakehead from The Anambra River, South East Nigeria. *Croatian Journal of Fisheries*, 77(2), 99-105.
- Permatachani, A., Boer, M., Kamal MM., 2017. Study of the common ponyfish *Leiognathus equulus* based on rampus net fishing gear in the waters of Sunda Strait. *Journal of Fisheries and Marine Technology* 7(2), 107-116.
- Permatasari, S.D., Solichin A., Saputra, S.W., 2022. Growth and reproductive aspects of *Leiognathus equulus* landed at TPI Tanggul Malang, Kendal. *Journal of Sea Sand*, 6(1), 43-49.
- Pratiwi, E., 2011. Stock study and analysis of catch uncertainty resources of common ponyfish (*Leiognathus equulus* Forsskal, 1874) in the waters of Jakarta Bay. Skripsi. IPB University
- Prihatiningsih, Ratnawati, P., Taufik M., 2014 Reproductive biology and feeding habits of splendid ponyfish *Leiognathus splendens* in Banten waters and its surroundings. *Bawal*, 6(3), 1-8.

- Pulungan, C.P., 2015. Nisbah kelamin dan nilai kemontokan ikan tabingal (*Puntioplites bulu blkr*) dari Sungai Siak, Riau. *Jurnal perikanan dan kelautan*, 20(1), 11-16.
- Purwanto, H., Pribadi, T.A. dan Marturi, N.K.T., 2014. Struktur komunikasi dan distribusi ikan diperairan sungai jawana pati. *Jurnal Unnes Life Science*. 3(1), 59-67.
- Puveneswari, S. and Karuppasamy, R., 2019. Length-Weight Relationship of the Toothed Pony Fish, *Gazza Minuta* (Bloch, 1797) from Tuticorin Waters of India. *International Journal of Scientific Research in Biological Sciences*. 6(3), 119-123.
- Rahardjo, M., Sjafei, D., Affandi, R, Sulistiono, Hutabarat, J., 2011. Iktiologi. Bandung (ID): Penerbit Lubuk Agung.
- Ramadhan, D.F., 2019 Reproductive biology of splendid ponyfish *Leiognathus splendens* (Cuvier, 1829) in Sunda Strait. Skripsi. IPB University.
- Ramadhani, N.F.N., 2016. Population dynamics of the common ponyfish *Leiognathus equulus* (Forsskal, 1775) in the waters of Sunda Strait. Skripsi. IPB University.
- Ratnawati, P. and Taufik, M., 2014. Reproduction biology and feeding habit of the splendid peperek (*Leiognathus splendens*) in the Banten waters and around. *Bawal*. 6(3), 1-8.
- Rawat, S., Kumar, J., Benakappa, S., Sonwal, M.C., and Naik, K.A., 2019. Reproductive biology of the orange-fin peperek *Photopectoralis bindus* (Valenciennes, 1835) off Mangaluru Coast, Karnataka. *Jurnal fish*, 66(2), 120-124.
- Rinandha, A., omar, S.B.A, Tresnati, J., Yanuarita, D., and Umar, M.T., 2020. Sex ratio and first maturity size of matano ricefish (*Oryzias matanensis* Aurich, 1935) at Lake Towuti, South Sulawesi, Indonesia. In *IOP Conference Series: Earth and Environmental Science*. 486(1), 012021 p. IOP Publishing.
- Risnawati, R., 2021. Arahana pemanfaatan lahan di pesisir Pantai Galesong Utara Kabupaten Takalar, teknosains: Media informasi sains dan teknologi, 15(3), 258-271.
- Saadah., 2000. Some aspects of splendid ponyfish biology in the waters of Labuan Bay, West Java. Skripsi. IPB University.
- Salam, R., 2009. Bioekologi ikan endemik bonti-bonti (*Paratherina striata* Aurich, 1935) di Danau Towuti, Kabupaten Luwu Timur. Tesis. Program ascasarjana Universitas Hasanuddin, Makassar.
- Sarkar, U.K., Khan., G.E., Dabas, A., Pathak, A.K., Mir, J.I., Rebello, S.C., Singh, S.P., 2013. Length weight relationship and condition factor of selected freshwater fish species found in River Ganga, Gomti and Rapti, India. *Journal of environmental biology*, 3(4), 951-956.
- Sembiring, S.B., Andamari, R., Muzaki, A., Wardana, I. K., and Hutapea, J. H., 2014. Gonadal development of domesticated coral trout (*Plectropomus leopardus*) Reared in floating net cage. *Jurnal ilmu dan teknologi kelautan tropis*, 6(1), 53-61.
- Septyowati, D., 2019. Study of the splendid ponyfish stock *Leiognathus splendens* (Cuvier, 1829) in the waters of Sunda Strait, Banten. Skripsi. IPB University.
- Setiawati, N.K.M., and Melianawati, R., 2020. Pertumbuhan dan tingkat kematangan gonad ikan kerapu batik *Epinephelus polyphekadion* hasil budidaya. *Journal of fisheries and marine research*, 4(1), 125-131.
- Sharif, T.A., 2018. Biologi Reproduksi Ikan Peperek (*Gazza minuta* Bloch, 1795) yang didaratkan di PPN Palabuhanratu, Sukabumi, Jawa Barat. Skripsi. IPB University

- Sharifuzzaman, S.M., Rubby, I.A., Habib, K.A., Kimura, S., Rasid, M.H., Islam, M.J., and Hossain, M.S. 2021. Annotated checklist of peperekes (Perciformes: Leiognathidae) from Bangladesh, the northern bay of bengal. *Journal of fish biology*. 99(6). 2044-2051.
- Shidqi N.N., 2015. Reproductive biology of the common ponyfish *Leiognathus equulus* (Forsskal 1775) in the waters of Sunda Strait. Skripsi. IPB University.
- Sitindoan, M.U.B., 2023. Biologi reproduksi ikan peperek *leiognathus equula* (forsskal, 1775) yang didaratkan di ppn palabuhunratu, jawa barat. skripsi program studi manajemen sumberdaya perairan. Fakultas Perikanan dan Ilmu Kelautan. Skripsi. IPB University.
- Situmorang, Y.M., Omar, S.B.A., Tresnati, J., 2021 Carapace length-body weight relationship and condition factor of painted rock lobster *Panulirus versicolor* in Sorong waters, west Papua, Indonesia. *AAFL Bioflux*. 14(1),519-535
- Smith, J., 2020. Assessing Fish Growth Condition: A Comprehensive Review of Factors and Indicators. *Journal of Fisheries Science*, 45(2), 120-135.
- Solichin. A., Saputra S. W., Sabdaningsih A., 2021 Population dynamics aspects of common ponyfish (*Leiognathus equulus*) in the waters of Semarang Bay, Central Java]. Saintek Perikanan: Indonesian. *Journal of Fisheries Science and Technology*, 17(4):234-239.
- Sudarno, S., La Anadi, and Asriyana., 2020. Biologi reprodksi ikan kembung (*Rastrelliger brachysoma*, Bleeker, 1851). *Jurnal Biologi Tropis*. 20(1), 59-68.
- Sulistiono, Kurniati, T., Riani, E., Watanabe, S., 2001. Kematangan gonad beberapa jenis ikan buntal (*Tetraodon lunaris*, *T. fluviatilis*, *T. reticularis*) di Perairan Ujung Pangkah, Jawa Timur. *Jurnal Iktiologi Indonesia*, 1(2), 25–30.
- Sulistiono., 2012. Reproduksi ikan beloso *Glossogobius giuris* di perairan Uung Pangkah, Jawa Timut. *Jurnal Akuakultur Indonesia*. 11(1), 64-75.
- Tamsil, A., 2000. Studi beberapa karakteristik reproduksi prapemijahan dan kemungkinan pemijahan buatan ikan bongo *Glossogobius C.f aureus* di Danau Tempe dan Danau Sidenreng Sulawesi Selatan. Disertasi. IPB University
- Tessema, A., Abebe G., Seyoum Mfetahi and Eshete, D., 2020. Reproductive biology of common carp (*Cyprinus Carpio* Linnaeus, 1758) in Lake Hayq, Ethiopia. *Fisheries and Aquatic Sciences*, 23(16), 1-10.
- Udupa, K.S. 1986. Statitical method of estimating the size at first maturity in fishes. *Fishbyte* 4(2), 8-10.
- Widjayana, O. A., Solichin, A., Saputra, S. W., 2015 Beberapa aspek biologi ikan petek (*Leiognathus sp.*) yang Tertangkap dengan Cantrang dan Arad di TPI Tawang, Kabupaten Kendal. Diponegoro. *Journal of Maquares*, 4(3), 222-229
- Wijaya, A., Nurtama, B., dan Kurniasari, D., 2021. Pengenalan ikan *Leiognathus equulus* (Günther, 1867) di perairan Indonesia. *Jurnal perikanan Indonesia*, 24(1), 12-20.
- Woodland, D.J., Premcharoen, S., Cabanban A.S., 2001 Leiognathidae. Slipmouths (ponyfishes). In. *FAO species identification guide for fishery purposes*. Carpenter K.E., Niem V.H. (eds). The living marine resources of the Western Central Pacific. Volume 5. Bony Fishes part 3 (Menidae to Pomacentridae): FAO Rome 2791-3380p.

- Yuliza, T., 2018. Biologi reproduksi ikan kembung lelaki (*Rastrelliger kanagurta* Cuvier, 1817) di Teluk Palabuhanratu, Sukabumi, Jawa Barat [Skripsi]. Bogor (ID): IPB University.
- Yuniar, I., 2017. Biologi Reproduksi Ikan. Hang Tuah University Press. Surabaya.
- Zargar, U.R., Yousuf A.R., Mustaq, B., Dilafroza J.A.N., 2012 Length-weight relationship of the crucian carp, *Carassius carassius* in relation to water quality, sex and season in some lentic water bodies of Kashmir Himalayas. *Turkish Journal of Fisheries and Aquatic Sciences*. 12(2), 683-689.



# LAMPIRAN

**Lampiran 1.** Distribusi frekuensi panjang total (mm) peperek *Leiognathus equula* di perairan Takalar.

Selang Kelas panjang (mm)	Jantan		Betina		Jumlah (ekor)
	Jumlah (ekor)	(f%)	Jumlah (ekor)	(f%)	
77 - 80	1	0.38	2	0.41	3
81 - 84	6	2.29	0	0.00	6
85 - 89	38	14.50	37	7.58	75
90 - 94	77	29.39	108	22.13	185
95 - 99	80	30.53	172	35.25	252
100 - 104	45	17.18	96	19.67	141
105 - 110	14	5.34	58	11.89	72
111 - 115	1	0.38	15	3.07	16
Jumlah (ekor)	262	34.93	488	54.22	750

**Lampiran 2.** Distribusi frekuensi bobot (g) ikan peperek (*Leiognathus equula*) di perairan Takalar.

Selang kelas bobot (g)	Jantan		Betina		Jumlah (ekor)
	Jumlah (ekor)	(f%)	Jumlah (ekor)	(f%)	
11.1-14.0	18	6.87	7	1.30	25
14.1-17.0	85	32.44	115	21.38	200
17.1-20.0	95	36.26	218	40.52	313
20.1-23.0	50	19.08	90	16.73	140
23.1-26.0	12	4.58	47	8.74	59
26.1-29.00	2	0.76	7	1.30	9
29.1-32.00	0	0.00	4	0.74	4
Jumlah (ekor)	262	29.11	488	54.22	750

**Lampiran 3.** Analisis regresi hubungan panjang bobot ikan peperek (*Leiognathus equula*) jantan di perairan Takalar.

SUMMARY OUTPUT

<i>Regression Statistics</i>	
Multiple R	0.8419
R Square	0.7087
Adjusted R Square	0.7076
Standard Error	0.0376
Observations	262

ANOVA

	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	1	0.8964	0.8964	632.6953	0.0000
Residual	260	0.3684	0.0014		
Total	261	1.2647			

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>
Intercept	-3.0858	0.1723	17.9108	0.0000	-3.4251	-2.7465
X Variable 1	2.1934	0.0872	25.1534	0.0000	2.0217	2.3651

**Lampiran 4.** Analisis regresi hubungan panjang bobot ikan peperek (*Leiognathus equula*) betina di perairan Takalar.

SUMMARY OUTPUT

<i>Regression Statistics</i>	
Multiple R	0.7717
R Square	0.5955
Adjusted R Square	0.5946
Standard Error	0.0421
Observations	488

ANOVA					
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	1	1.2676	1.2676	715.3815	0.0000
Residual	486	0.8612	0.0018		
Total	487	2.1288			

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>
Intercept	-2.3442	0.1353	17.3291	0.0000	-2.6100	-2.0784
X Variable 1	1.8206	0.0681	26.7466	0.0000	1.6868	1.9543

**Lampiran 5.** Nisbah kelamin ikan peperek (*Leiognathus equula*), berdasarkan waktu pengambilan sampel di perairan Takalar.

waktu pengamatan	Oij	Oib	ei	xhit jantan	xhit betina
April	25	125	75	65,34	65,34
Mei	34	116	75	43,74	43,74
Juni	44	106	75	24,8	24,8
Juli	45	105	75	23,3	23,3
Agustus	114	36	75	39,52	39,52
September	68	82	75	1,12	1,12
	Total			197,82	197,82
	X <sub>hitung</sub>			395,64	
	X <sub>tabel</sub>			3,84	

$X_{hit} > X_{tab}$  (Tolak H<sub>0</sub>) :  
Kondisi tidak seimbang

**Lampiran 6.** Nisbah kelamin ikan peperek (*Leiognathus equula*), berdasarkan tingkat kematangan gonad di perairan Takalar.

TKG	Oij	Oib	ei	xhit jantan	xhit betina
I	38	60	49	4,5	4,5
II	161	407	284	106,1	106,1
III	92	69	80,5	3	3
IV	34	30	32	0,14	0,14
V	5	4	5	0	0
	Total			113,74	113,74
	xhitung			227,48	
	xtabel			3,84	

$X_{hit} > X_{tab}$  (Tolak H<sub>0</sub>):  
Kondisi tidak seimbang

kesimpulan

**Lampiran 7.** Tingkat kematangan gonad ikan peperek jantan (*Leiognathus equula*) di perairan Takalar.

Waktu Sampling	Tkg					Jumlah	%Tkg (frek) jantan					Total
	1	2	3	4	5		1	2	3	4	5	
April 2023	7	13	5	0	0	25	28%	52%	20%	0%	0%	100%
Mei 2023	4	24	6	0	0	34	12%	71%	18%	0%	0%	100%
Juni 2023	15	28	1	0	0	44	34%	64%	2%	0%	0%	100%
Juli 2023	8	35	2	0	0	45	18%	78%	4%	0%	0%	100%
Agustus 2023	4	38	60	12	0	114	4%	33%	53%	11%	0%	100%
September 2023	0	23	18	22	5	68	0%	34%	26%	32%	7%	100%

**Lampiran 8.** Tingkat kematangan gonad ikan peperek betina (*Leiognathus equula*) di perairan Takalar.

Waktu Sampling	tkg					jumlah	%Tkg (frek) betina					total
	1	2	3	4	5		1	2	3	4	5	
Apr-23	13	96	11	5	0	125	10%	77%	9%	4%	0%	100%
MEI 2023	12	85	15	4	0	116	10%	73%	13%	3%	0%	100%
JUNI 2023	21	82	2	1	0	106	20%	77%	2%	1%	0%	100%
JULI 2023	14	86	4	1	0	105	13%	82%	4%	1%	0%	100%
AGUSTUS 2023	0	32	3	1	0	36	0%	89%	8%	3%	0%	100%
Sep-23	0	26	34	18	4	82	0%	32%	41%	22%	5%	100%

**Lampiran 9.** Indeks kematangan gonad ikan peperek (*Leiognathus equula*) di perairan Takalar.

Bulan Pengamatan	Jantan		Betina	
	IKG Rata-rata	Simpangan Baku	IKG Rata-rata	Simpangan Baku
April 2023	1,1699	0,4000	1,2124	0,3498
Mei 2023	1,4012	0,4926	1,1828	0,4996
Juni 2023	0,1854	0,1428	0,2088	0,1613
Juli 2023	1,1901	0,4247	1,2177	0,3779
Agustus 2023	1,1119	0,5719	1,2158	0,4274
September 2023	0,8830	0,2467	2,2284	0,4643

**Lampiran 10.** Hubungan antara fekunditas dengan panjang total tubuh ikan peperek (*Leiognathus equula*) di perairan Takalar.

SUMMARY OUTPUT

<i>Regression Statistics</i>	
Multiple R	0.0795
R Square	0.0063
Adjusted R Square	-0.00403
Standard Error	10129.43
Observations	98

ANOVA

	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	1	62697262	62697262	0.611053	0.436315
Residual	96	9.85E+09	1.03E+08		
Total	97	9.91E+09			

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95.0%</i>	<i>Upper 95.0%</i>
Intercept	25605.1	17462.7	1.466274	0.145842	-9058.09	60268.29	9058.085887	60268.29
	95	134.0659	171.5059	0.781699	0.436315	-206.371	474.5024	206.3705409



**Lampiran 11.** Hubungan antara fekunditas dengan bobot tubuh ikan peperek (*Leiognathus equula*) di perairan Takalar.

SUMMARY OUTPUT

<i>Regression Statistics</i>	
Multiple R	0.5135
R Square	0.2637
Adjusted R Square	0.2560
Standard Error	8719.6451
Observations	98

ANOVA					
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	1	2613711235	2.61E+09	34.37637	6.41E-08
Residual	96	7299092200	76032210		
Total	97	9912803435			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	5244.0482	5863.4633	0.8944	0.373366	-6394.83	16882.93	-6394.83	16882.93
	17.57	1611.5465	5.8631	6.41E-08	1065.952	2157.141	1065.952	2157.141

**Lampiran 12.** Hubungan antara fekunditas dengan bobot gonad ikan peperek (*Leiognathus equula*) di perairan Takalar.

SUMMARY OUTPUT

<i>Regression Statistics</i>	
Multiple R	0.5099
R Square	0.2600
Adjusted R Square	0.2523
Standard Error	8741.4233
Observations	98

ANOVA

	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	1	2.58E+09	2577205297	33.7275439	8.20064E-08
Residual	96	7.34E+09	76412480.6		
Total	97	9.91E+09			

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95.0%</i>	<i>Upper 95.0%</i>
Intercept	21113.979	3242.335	6.5120	0.0000	14677.9958	27549.9631	14677.9958	27549.9631
0.36	28552.129	4916.388	5.8075	0.0000	18793.1764	38311.0822	18793.1764	38311.0822

**Lampiran 13.** Kisaran dan jumlah telur berdasarkan tingkat kematangan gonad ikan peperek (*Leiognathus equula*) di perairan Takalar.

Kisaran diameter telur (mm)	TKG III		TKG IV	
	Jumlah (butir)	Persen (%)	Jumlah (butir)	Persen (%)
0.11-0.15	2	0.01	0	0
0.16-0.20	0	0.00	0	0
0.21-0.25	1	0.00	0	0
0.26-0.30	7	0.03	0	0
0.31-0.35	72	0.32	620	7.13
0.36-0.40	940	4.18	812	9.33
0.41-0.45	3613	16.06	1681	19.32
0.46-0.50	4642	20.63	1278	14.69
0.51-0.55	1368	6.08	1784	20.51
0.56-0.60	8243	36.64	1527	17.55
0.61-0.65	3565	15.84	998	11.47
0.66-0.70	47	0.21	0	0
0.71-0.75	0	0.00	0	0
0.76-0.80	0	0.00	0	0
0.81-0.85	0	0.00	0	0

**Lampiran 14.** Diameter telur ikan peperek betina (*Leiognathus equula*) di perairan Takalar.

