

## DAFTAR PUSTAKA

- Adamson, E. A. S., Hurwood, D. A., & Mather, P. B. 2012. Insights into historical drainage evolution based on the phylogeography of the chevron snakehead fish (*Channa striata*) in the mekong basin. *Freshwater biology*, 57(11), 2211–2229.
- Albert B, Johnsons A, Lewis J, Raff M, Roberts K, Walter P. 2002. *Molecular Biology of The Cell*. New York (USA): Garland Science.
- Ambak, M.A., Bolong A-M. A., Ismail P. & MinhTam B. 2006. Genetic variation of snakehead fish (*Channa striata*) populations using Random Amplified Polymorphic DNA. *Journal of Biotechnology*. 5(1): 104–110.
- Andreeva AM. 2010. Structure of fish serum albumin. *Journal of Evolution Biology and Physiology*. 46:135-144.
- Anne R, Kapuscinski, Miller ML. 2007. Genetic guidelines for fisheries managment. Second Edition. University of Minnesota Sea Grant Program.
- Aryani, Suprayitno E, Sasmito B, B Hardoko. 2020. Profile of Kerandang Fish (*Channa pleurophthalmus* Blkr) Proteins from Central Kalimantan. *IOP Conf. Ser.: Earth Environ. Sci.* 441 012091.
- Asfar, M., Tawali, A.B., Pirman, dan Mahendradatta, M., 2019, Ekstraksi albumin ikan gabus (*Channa striata*) pada titik isoelektriknya, *Jurnal Agercolere*, 1 (1), 6-12.
- Asikin A N dan I Kusumaningrum, 2018. Albumin profile of snakehead fish (*Channa striata*) from East Kalimantan, Indonesia. *IOP Conference Series: Earth and Environmental Science* 144. 012035.
- Association of Official Analytical Chemist [AOAC]. 2005. *Official Methods of Analysis (18 Edn)*. Association of Official Analytical Chemist Inc. Mayland. USA.
- Awise JC, Bowen BW, Lamp T. 1989. DNA fingerprint from hypervariable mitochondrial genotypes. *Molecular Biology Evolution*, 6:258-269.
- Baisvar VS., Ravindra Kumar, Mahender Singh, Ajay Kumar Singh, U.K. Chauhan, Akhilesh Kumar Mishra, Basdeo Kushwaha. 2018. Genetic Diversity Analyses for Population Structuring in *Channa striata* using Mitochondrial and Microsatellite DNA Regions with implication to their Conservation in Indian Waters. *Meta Gene* 390. S2214-5400(18)30004-5.
- Balkhis, Abu Bakar Siti, Amirul Firdaus Jamaluddin Jamsari, Tan Shau Hwai, Zulfigar Yasin and Mohd Nor Siti-Azizah. 2011. Evidence of geographical structuring in the Malaysian Snakehead, *Channa striata* based on partial segment of the CO1 gene. *Genetics and Molecular Biology*, 34, 3, 520-523.

- Baker. M.E., 2002. Beyond carrier proteins; Albumin, steroid hormones and the origin of vertebrates. *Journal of Endocrinology* (2002) 175, 121–127.
- Bantscheff M, Schirle M, Sweetman G, Rick J, Kuster B. 2007. Quantitative mass spectrometry in proteomics: A critical review. *Anal Bioanal Chem.*2007;389:1017-1031.
- Benziger A., Philip S., Raghavan R., Al P.H.A., Sukumaran M., Thairan J.C., Dahanukar N., Baby F., Peter R., Devi K.R., Radhakrishnan K.V., Haniffa M.A., Britz R., & Antunes A. 2011. Unraveling a 146 years old taxonomic puzzle: Validation of Malabar Snakehead, species-status and its relevance for Channid systematics and evolution. *PLoS ONE*. 6(6): 1–12.
- Berg, L.S., 1947, *Classification of fishes both recent and fossil*: Ann Arbor, Michigan, J.W. Edwards, 517 p.
- Bernatchez L dan C.C. Wilson. 1998. Comparative Phylogeography of Nearctic and Palearctic Fishes. *Mol. Ecol.* 7:431-452.
- Berra, T.M., 2001, *Freshwater fish distribution*: New York, Academic Press, 604 p.
- Bertholf RL, Bowman MA. 2014. Microbeads, magnets, and magic: The enchanting science of immunochemistry. *Ann Clin Lab Sci.*1996;26:377-388.
- Bhat, A.A., Haniffa M.A., Miltn M.J., Paray B.A., Divya P.R. & Gopalakrishnan A. 2014. Genetic variation of striped snakehead (*Channa striatus* Bloch, 1793) populations using Random Amplified Polymorphic DNA (RAPD) markers. *International J. Biodiversity and conservation*. 6(5):363–372.
- Bloch, M. E., 1793, *Naturgeschichte der Ausländischen fische*, 7: Berlin, Germany, Morino & Co., 144 p.
- Burnawi & Pamungkas, Y.P., 2015. Komposisi jenis pakan alami ikan gabus (*Channa striata*) di Danau Cala, Kabupaten Musi Banyuasin Propinsi Sumatera Selatan. *Buletin Teknik Litkayasa Sumberdaya dan Penangkapan*. 13(2): 71–72.
- Carvalho, G.R., 1993. Evolutionary aspects of fish distribution: genetic variability and adaptation. *Journal of Fish Biology* 43 (Supplement A), 53-73.
- Chasanah Ekowati, Mala Nurilmala, Ayu Ratih Purnamasari, and Diini Fithriani., 2015. Chemical Composition, Albumin Content and Bioactivity of Crude Protein Extract of Native and Cultured *Channa striata*. *JPB Kelautan dan Perikanan* Vol. 10 No. 2, 2015: 123–132.
- Chowdhury, M.A. and D.P. Bureau. 2009. Pre- dicting body composition of Nile Tilapia (*Oreochromis niloticus*). *Asian Fisheries Science* 22:597–605.

- Courtenay, Jr., Walter R. and James D. Williams. 2004. *Channa striata* USGS Circular 1251: Snakeheads (Pisces, Channidae) - A Biological Synopsis and Risk Assessment. U.S. Department of the Interior, U.S. Geological Survey. 143 halaman.
- Deshpande, S.S. and S. Damodaran. 1989. Structure Digestibility Relationship of Legume Proteins. J. Food Sci., 54: 108- 113.
- De Smet H, R. Blust & L. Moens. 1998. Absence of albumin in the plasma of the common carp *Cyprinus carpio*: binding of fatty acids to high density lipoprotein. Fish Physiology and Biochemistry volume 19, pages71–81.
- Dunham, R.A. 2004. Aquaculture and fisheries bio- technology: genetic approach. CABI Publishing. Cambridge MA. 367 p.
- Firlianty, E. Suprayitno, Hardoko, H. Nursyam. 2013. Protein Profile and Amino Acid Profile of Vacuum Drying and Freeze-Drying of Family Channidae Collected from Central Kalimantan, Indonesia. International Journal of Biosciences. Vol. 5, No. 8, p. 75-83, 2014.
- Fitzpatrick S.W., Crockett H., & Funk W.C. 2014. Water availability strongly impacts population genetic patterns of an imperiled great plains endemic fish. J. Conservation Genetic. 15 (4): 771-788.
- Freeland JR. 2005. Molecular ecology. British library cataloguing in publication data. Minion-regular by Thomson press (India) limited. New Delhi, India.
- Froese, R., Pauly, D. (Eds.), 2010. FishBase. World Wide Web electronic publication. [www.fishbase.org](http://www.fishbase.org). version (01/2010).
- Garduno-Lugo, M., J.R. Herrera-Solis, J.O. Angulo-Guerrero, G. Munoz-Cordova, and J. De La Cruz-Medina. 2007. Nutrient composition and sensory evaluation of fillets from wild-type Nile tilapia (*Oreochromis niloticus*, Linnaeus) and a red hybrid (Florida red tilapia×red *O. niloticus*). Aquaculture Research 38:1074–1081.
- Graham, J.B., 1997, Air-breathing fishes: Evolution, diversity, and adaptation: San Diego, California, Academic Press, 299 p.
- Griffiths AJF, Miller JH, Suzuki DT. 2000. An Introduction to Genetic Analysis. 7th edition. W.H. Freeman. New York.
- Gul By Y, Z.X.Gao, X.Q.Qian dan W.M.Wang. 2010. Haematological and serum biochemical characterization and comparison of wild and cultured northern snakehead (*Channa argus* Cantor, 1842). Journal of Applied Ichthyology 27 (2011), 122–128.
- Gusrina, 2014. Genetika dan reproduksi ikan, Yogyakarta: Deepublish. 263 p.
- Haard, N.F. 1992. Control of chemical composition and food quality attributes of cultured fish. Food Research International 25:289–307.
- Hamilton MB. 2009. Population Genetics. A John Wiley & Sons, Ltd Publication.

- Hanifa, M., Kader, A., Sheela, P.A.J., Kavitha, K., dan Jais, A.M.M., 2014, Salutory value of haruan, the triped snakehead *Channa striatus*-a review, *Asian Pasific Journal of Tropical Biomedicine*, 4, S8-S15
- Hartl LD dan Clark GA. 1997. Priciple of population genetics. Sinauer Associates, Inc. Publisher. Sunderland, Massachusetts. Canada.
- Hartl DL dan Jones EW. 1998. Genetics: principles and analysis. Fourth edition. Jones and Bartlett Publishers, Inc.Canada and America.
- Hasnain A., Arif S. H., Ahmad R., Jabeen M., Khan M. M., 2004 Biochemical characterization of a protein of albumin multigene family from serum of African catfish *Clarias gariepinus* Bloch. *Indian Journal of Biochemistry and Biophysics* 41(4):148-153.
- Hauser L, Ward RD. 2002.Population identification in pelagic fish: the limits of molecular markers. In: Carvalho GR (ed) advances in molecular ecology. NATO Science Series. IOS Press, Amsterdam, 306: 191-22
- Hebert, Paul D. N., Alina Cywinska, Shelley L. Ball dan Jeremy R. deWaard. 2003. Biological identifications through DNA barcodes. *The Royal Society London. B* (2003) 270, 313–321.
- Hedgecock D, Gaffney P, Goulletquer P, Guo X, Reece K, Warr GW. 2005. The case for sequenc- ing the oyster genome. *Journal of Shellfish Re- search*, 24: 429–442.
- Henderson, R.J. and D.R. Tocher. 1987. The lipid composition and biochemistry of freshwater fish. *Progress in Lipid Research* 26:281–347.
- Huss, H.H. 1995. Quality and quality changes in fresh fish. FAO Fisheries Technical paper No. 348, Food and Agriculture Organization (FAO) of the United Nations, Rome
- Jamaluddin, J.A.F., Pau, T.M. & Siti-Azizah, M.N. 2011. Genetic structure of the snakehead murrel, *Channa striata* (Channidae) based on the cytochrome c oxidase subunit i gene: Influence of historical and geomorphological factors. *Genetics and Molecular Biology/* 34(1):152–160.
- Kakkaeo, M., Chittapalapong, T. & Villanueva, M., 2004. Food habits, daily ration and relative food consumption in some fish populations in Ubolratana Reservoir, Thailand. *Asian Fish Sci.* 17: 249–259.
- Karapanagiotidis, I.T., M.V. Bell, D.C. Little, A. Yakupitiyage, and S.K. Rakshit. 2006. Polyun- saturated fatty acid content of wild and farmed tilapias in Thailand: effect of aquaculture prac- tices and implications for human nutrition. *Journal of Agricultural and Food Chemistry* 54:4304–4310.
- Kazmi S S Ul-Hassan, M A Kalhoro, S B Hussain Shah, T U Khan, U Nisar dan M Arif. 2019. Comparative assessment of serum biochemical profile in riverine and cultured populations of *Channa marulius* (Hamilton, 1822). *Indian Journal of Geo Marine Sciences* Vol. 49 (06)

- Kementerian Kelautan dan Perikanan Republik Indonesia, 2018. Marine and Fisheries Figures 2018. ISBN 978-602-1278-26-0.
- Kottellat, M.A.J. Whitten, S.N. Kartikasari dan S. Wirjoatmodjo. 1993. *Freshwater Fishes of Western Indonesia and Sulawesi*, Periplus Editions Limited. Munich, Germany. 293 hal.
- Kovyrshina, T.B. & Rudneva, Il. 2012. Comparative study of serum albumin level in round goby *Neogobius melanostomus* from Black Sea and Azov Sea. *Int. J. Adv. Biol. Res.* 2, 203–208.
- Kusmini, I., Vitas Atmadi Prakoso & Kusdiarti. 2015. Keragaman fenotipe truss morfometrik dan genotipe ikan gabus (*Channa striata*) dari Jawa Barat, Sumatera Selatan, dan Kalimantan Tengah. *Jurnal Riset Akuakultur* Vol. 10 Nomor 4.
- Kumar S, Stecher G, and Tamura K (2016) MEGA7: Molecular Evolutionary Genetics Analysis version 7.0 for bigger datasets. *Molecular Biology and Evolution* 33:1870-1874.
- Kusumaningrum GA, Alamsyah MA, Masithah ED. 2014. Uji kadar albumin dan pertumbuhan ikan gabus (*Channa striata*) dengan kadar protein pakan komersial yang berbeda. *Jurnal Ilmiah Perikanan dan Kelautan*. 6(1):25-29.
- Lakra, W.S., Goswami M., Gopalakrishnan A., Singh D.P., Singh NS., & Nagpure N.S. 2010. Genetic relatedness among fish species of genus *Channa* using mitochondrial DNA genes. *Biochemical Systematics and Ecology*. 38(6): 1212–1219.
- Lee P.G., & Peter K.L. Ng. 1994. The systematic and ecology of snakehead (Pisces: Channidae) in Peninsular Malaysia and Singapore. *Hydrobiologia*. 285: 59- 74.
- López, LM, E Durazo, A Rodríguez-Gómez, CD True, MT Viana. 2006. Proximate composition and fatty acid profile of wild and cultured juvenile *Totoaba macdonaldi*. *Ciencias Marinas* (2006), 32(2): 303–309.
- Luikart, G. (1998). Distortion of allele frequency distributions provides a test for recent population bottlenecks. *Journal of Heredity*, 89(3), 238–247.
- Maillou, Julia dan I A. Nimmo. 1993. Identification and Some Properties of an Albumin-Like Protein in the Serum of Pre-Spawning Atlantic Salmon (*Salmo salar*). *Biochem. Physiol.* Vol. 104B pp 401-405.
- Mustafa, A., M. Aris Widodo, Yohanes Kristianto. 2012. Albumin and Zinc Content of Snakehead Fish (*Channa striata*) Extract and Its Role in Health. *International Journal of Science and Technology (IJSTE)* Vol.1 No.2 1-8.
- Myers, G., and Shapovalov, L., 1932, On the identity of *Ophicephalus* and *Channa*, two genera of labyrinth fishes: *Peking Natural History Bulletin* 6, p. 33-37.

- Nei M, Tajimi F. 1981. DNA polymorphism detectable by restriction endonucleases. *Genetics*, 97:145-163.
- Nei M. 1987. *Molecular Evolutionary Genetics*. New York. Columbia University. Press. New York.
- Nelson, J.S., 1994, *Fishes of the world*: New York, John Wiley, 600 p.
- Newman, D. & Pilson, D. 1997. Increased probability of extinction due to decreased genetic effective population size: experimental populations of *Clarkia pulchella*. *Evolution* 51, 354–362.
- Niwa, Y., Irma, M.H., Rina, H., & Yoyo, W. 2007. Nutrisi dan bahan pakan ikan budidaya. Balai Budidaya Air Tawar, Jambi.
- Nugroho, M., 2013, Uji biologis ekstrak kasar dan isolat albumin ikan gabus (*Ophiocephalus striatus*) terhadap berat badan dan kadar serum albumin tikus mencit, *Jurnal Saintek Perikanan*, 9 (1), 49-54.
- Nurdiansyah. R., Muhaimin Rifa'i, and Widodo. 2016. A Comparative Analysis of Serum Albumin from Different Species to Determine A Natural Source of Albumin that Might Be Useful for Human Therapy. *Journal of Taibah University Medical Sciences* Vol. 11(3), 243e249.
- Ophardt, C. E. (2003). *Protein and Its Properties*. New York: Marcel Dekker. Inc.
- Pandey, B.N., dan Chanchal, A.K., 1977, Minimum level of oxygen in water for fish survival without air breathing: Bangladore, India, *Current Science*, v. 46, no. 18, p. 653-654.
- Peters T Jr. 1995. *All about albumin*. Academic Press. United States.
- Rasmussen, R.S. 2001. Quality of farmed salmonids with emphasis on proximate composition, yield and sensory characteristics: review. *Aquaculture Research* 32:767–786.
- Sambrook, J., Russell, D.W., 2001. *Molecular Cloning: a Laboratory Manual*, third ed. Cold Spring Harbor Laboratory Press, New York.
- Sanger, F., Nicklen, S. and Coulson, A.R. (1977) DNA sequencing with chain terminating inhibitors. *Proc. Natl. Acad. Sci. USA* 74: 5463-5467.
- Santos, V.B., T.R. Martins, and R.T.F. Freitas. 2012. Body composition of Nile tilapias (*Oreochromis niloticus*) in different length classes. *Ciencia Animal Brasileira* 13:396–405.
- Semagn, K. Bjornstad, A. and Ndjioudjop, M.N. 2006. Progress and prospects of marker assisted backcrossing as a tool in crop breeding programs. *African Journal of Biotechnology*. 5: 2588-2603.
- Sharp P.A., Sugden B. & Sambrook J. 1973. Detection of two restriction endonuclease activities in *Haemophilus parainfluenzae* using analytical agarose-ethidium bromide electrophoresis. *Biochemistry*. 12:3055-3063

- Shearer, K.D. 1994. Factors affecting the proximate composition of cultured fishes with emphasis on salmonids. *Aquaculture* 119:63–88.
- Shearer, K.D., J.T. Silverstein, and E.M. Pliset-skaya. 1997. Role of adiposity in food intake control of juvenile Chinook salmon (*Oncorhynchus tshawytscha*). *Comparative Biochemistry and Physiology – A Physiology* 118:1209–1215.
- Sofyan, 2013, Pengaruh pemberian ekstrak ikan gabus terhadap keseimbangan nitrogen pasien luka bakar, *Tesis*, Program Pasca Sarjana, Universitas Hasanuddin.
- Song L.M., Munian K., Rashid Z.A., & Bhassu S. 2013. Characterisation of Asian snakehead murrel *Channa striata* (Channidae) in Malaysia: An insight into molecular data and morphological approach. *The Scientific World J.* 1–16.
- Steffens W. 2006. Freshwater fish wholesome food stuffs. *Bulgarian Journal Agricultural Science*. 12 : 320-328.
- Supiwong Weerayuth, Pornpimol Jearranaiprepame and Alongkoad Tanomtong. 2009. A New Report of Karyotype in the Chevron Snakehead Fish, *Channa striata* (Channidae, Pisces) from Northeast Thailand. *Cytologia* 74(3): 317–322.
- Susilowati R., Januar H. I., Fithriani D., Chasanah E., 2015 Potensi ikan air tawar budidaya sebagai bahan baku produk nutrasetikal berbasis serum albumin ikan. *Jurnal Pascapanen dan Bioteknologi Kelautan dan Perikanan* 10(1):37-44.
- Susilowati, Rini., Sugiyono, dan Ekowati Chasanah. 2016. Nutritional and Albumin Content of Swamp Fishes from Merauke, Papua, Indonesia. *Squalen Bulletin of Marine and Fisheries Postharvest and Biotechnology*. 11 (3) 2016, 107-116.
- Tan, M.P., Jamsari, A.F.J. & Siti Azizah, M.N., 2012. Phylogeographic pattern of the striped snakehead, *Channa striata* in Sundaland: Ancient river connectivity, geographical and anthropogenic signatures. *PLoS ONE*. 7(12): 1–11.
- Tan, M.P. Jamsari A.F.J., Muchisin Z.A., & Siti Azizah M.N. 2015. Mitochondrial genetic variation and population structure of the striped snakehead, *Channa striata* in Malaysia and Sumatra, Indonesia. *Biochemical Systematics and Ecology*. 60: 99–105.
- Tandra, H., Soemartono, H.W., dan Tjokroprawiro, 1988. Metabolisme dan aspek klinik albumin, *J. Med.*, 3, 249-258.
- Tamura K, Dudley J, Nei M, Kumar S. 2007. MEGA 7: Molecular Evolutionary Genetic Analysis (MEGA) Software Version 4.0. *Molecular Biological Evolution*. 2(4): 1596.

- Tranggono, 1991. Laboratory Manual for Fishery Products. Project for Tertiary Education Empowerment. University of Gadjah Mada. Yogyakarta.
- Varma, B.R., 1979, Studies on the pH tolerance of certain freshwater teleosts: Comparative Physiological Ecology, v. 4, no. 2, p. 116-117.
- Ward, Robert D., Tyler S. Zemlak, Bronwyn H. Innes, Peter R. Last and Paul D. N. Hebert. 2005. DNA barcoding Australia's fish species. Philosophical Transactions of The Royal Society B Biological Sciences.
- Wallace, A.R., 1863. On the physical geography of the Malay Archipelago. J. R. Geogr. Soc. 33, 217-234.
- Whan-Air Wilawan, Karun Thongprajukaew, Tasneem Salaeharar dan Krueawan Yoonram. 2018. Identification of wild and farmed broadhead catfish (*Clarias macrocephalus* Günther, 1864) based on morphometry, digestive indexes and flesh quality. Journal of Oceanology and Limnology Vol. 36 No. 5, P. 1788-1797.
- Xu Z., Primavera J.H., de la Pena L.D., Pettit P., Belak J., & Alcivar-Warren A. 2001. Genetic diversity of wild and cultured Black Tiger Shrimp (*Penaeus monodon*) in the Philippines using microsatellites. J. Aquaculture. 199: 13- 40.
- Yılmaz. M, Cem Ozic and İlhami Gök. 2012. Principles of Nucleic Acid Separation by Agarose Gel Electrophoresis. Gel Electrophoresis - Principles and Basics. ISBN: 978-953-51- 0458-2, InTech.
- Zhu Shu-Ren, Jian-Jun Fu, Qun Wang dan Jia-Le Li. 2013. Identification of *Channa* species using the partial cytochrome c oxidase subunit I (COI) gene as a DNA barcoding marker. Biochemical Systematics and Ecology 51 (2013) 117-122.