

## DAFTAR PUSTAKA

- Acosta, A. A., Caffara, M., Fioravanti, M. L., Utsunomia, R., Zago, A. C., Franceschini, L., & Da Silva, R. J. (2016). Morphological and Molecular Characterization of *Clinostomum detrunctum* (Trematoda: Clinostomidae) Metacercariae Infecting *Synbranchus marmoratus*. *Journal of Parasitology*, 102(1), 151–156. <https://doi.org/10.1645/15-773>
- Adliana, C., Sukendi, & Aryani, N. (2012). *Gonad maturation of Sepat siam with different feeding treatments. Riau.*
- Adugna, M. (2020). The Prevalence of Fish Parasites of Nile Tilapia (*Oreochromis niloticus*) in Selected Fish farms , Amhara Regional State. *Ethiopia Journal of Agriculture and Science*, 30(3), 119–128.
- Afrianto, E., Liviawaty, E., Jamaris, Z., & Hendi. (2015). *Penyakit Ikan*. Penebar Swadya.
- Aghlmandi, F., Habibi, F., Afraii, M. A., Abdoli, A., & Shamsi, S. (2018). Infection with metacercaria of *Clinostomum complanatum* (Trematoda: Clinostomidae) in freshwater fishes from Southern Caspian Sea Basin. *Revue de Medecine Veterinaire*, 169(7–9), 147–151.
- Aisyah, S., & Nomosatryo, S. (2016). Distribusi Spasial dan Temporal Nutrien di Danau Tempe, Sulawesi Selatan. *OLDI (Oseanologi Dan Limnologi Di Indonesia)*, 1(2), 31. <https://doi.org/10.14203/oldi.2016.v1i2.19>
- Alvin, A., Suciyono, & Ulkhaq, M. F. (2019). Inventarisasi parasit pada ikan air tawar dan air laut di balai karantina ikan dan pengendalian mutu hasil perikanan Surabaya II parasites inventory in freshwater and seawater fish at balai. *Journal of Aquaculture*, 4(1), 50–61.
- Anggraeni, D. P., Dwirastina, M., & Ditya, Y. C. (2016). Growth of Sepat siam fish in flood swamps, south Sumatra. *IOP Conference Series: Earth and Environmental Science*, 1119(1). <https://doi.org/10.1088/1755-1315/1119/1/012004>
- Anggraeni, D. P., Dwirastina, M., & Ditya, Y. C. (2022). Growth of Sepat Siam fish in flood swamps, South Sumatra. *IOP Conference Series: Earth and Environmental Science*, 1119(1). <https://doi.org/10.1088/1755-1315/1119/1/012004>
- Anisah, N., Rokhmani, R., & Riwidharso, E. (2016). Intensitas dan variasi morfometrik *Trichodina* sp. pada benih Ikan Gurami (*Osphronemus gouramy* Lacepede) Pendederan I yang Dijual di Pasar Ikan Purwonegoro Kabupaten Banjarnegara. *Biosfera*, 33(3), 134. <https://doi.org/10.20884/1.mib.2016.33.3.349>
- Anshary, H. (2019). *Parasitologi Ikan: Biologi, Identifikasi dan pengendaliannya*. Depublish. Yogyakarta.
- Aqil, M., Nur, I., Abidin, L. O. B., & Megawati. (2019). Deteksi megalocytivirus pada ikan kerapu budidaya di Sulawesi Tenggara menggunakan metode Polymerase Chain Reaction berdasarkan ge major capsid protein. *Media Akuatika*, 4(2), 61–67.
- Azizah, R., Hernawati, D., & Chaidir, D. M. (2023). Keanekaragaman gastropoda air tawar dan analisis trematoda di ekosistem Situ kota Tasikmalaya. *Biota : Jurnal Ilmiah Ilmu-Ilmu Hayati*, 8(1), 19–29. <https://doi.org/10.24002/biota.v8i1.4347>
- Baum, D. (2008). Reading a Phylogenetic Tree: The Meaning of Monophyletic Groups. *Nature Education* 1 (1): 190.
- Bauw, A. R., Mulyana, & Mumpuni, F. S. (2016). Inventarisasi parasit pada ikan Kembung (*Rastrelliger kanagurta*) di tempat pelelangan ikan Muara Angke, Jakarta Utara. 7(April), 1–6.
- Bera, A. K., Das, N., Bhattacharya, S., Malick, R. C., Swain, H. S., Chowdhury, H., Sinha, A., Manna, S. K., Sarkar, U. K., & Das, B. K. (2021). Molecular confirmation of metacercaria of *Clinostomum complanatum* recovered from one-stripe spiny eel *Macrognathus aral*. *Aquaculture Research*, 52(9), 4362–4370. <https://doi.org/10.1111/are.15273>
- Bordloi, B., & Hazarika, A. K. (2023). Incidence of *Clinostomum complanatum* (Trematoda: Clinostomidae) in *Trichogaster fasciata* (Actinopterygii: Osphronemidae), the first report from Deepor Beel, Assam, India Bobita. *Journal of Threatened Taxa* |, 2023.
- Cagatay, I. T., Aydin, B., Aktop, Y., & Yilmaz, H. E. (2022). Molecular And Morphologic Study Of *Clinostomum Complanatum* (Digenea Clinostomidae) In Garra Rufa (*Doctor Fish*) From Southern Turkey. *Fresenius Environmental Bulletin*, 31(5), 4759–4768.
- Choudhary, K., Rav, S., Shamsi, S., & Agrawal, N. (2022). Characterization of *Clinostomum* (Digenea: ssp. in India. *Parasitology Research*, 121(11), 3083–3089. <https://doi.org/10.1007/s00436-022-07644-y>
- Jan, W. E. (2018). Gambaran histopatologi hati, lambung dan usus ikan Cakalang (*Belamis*) yang Terinfestasi cacing endoparasit. *Octopus: Jurnal Ilmu*, 7(2005). <https://journal.unismuh.ac.id/index.php/octopus/article/view/2469%0Ahttps://journal.unismuh.ac.id/index.php/octopus/article/download/2469/1956>
- Pratiwi, D. (2022). Rekap data produksi ikan Sepat siam.



- Diniya, A., Ridwan, M. P., & Deni, E. (2013). Stomach analyse of *Trichogaster pectoralis*. Fishery and Marine Science Faculty, University of Riau.
- Dowell, K. (2008). *Molecular Phylogenetics: An Introduction to Computational Methods and Tools for Analyzing Evolutionary Relationships*. Orono: University of Maine.
- Dzikowski, R., Levy, M. G., Poore, M. F., Flowers, J. R., & Paperna, I. (2004). *Clinostomum complanatum* and *Clinostomum marginatum* (Rudolphi, 1819) (Digenea: Clinostomidae) Are separate species based on differences in Ribosomal DNA. *Journal of Parasitology*, 90(2), 413–414. <https://doi.org/10.1645/GE-159R>
- Elfachmi, M. (2018). Inventarisasi Ektoparasit Pada Ikan Sepat siam (*Trichogaster pectoralis*) Di Kecamatan Sirah Pulau Padang Kabupaten Ogan Komering Ilir Sumatra Selatan. *Fisheries*, 2550-133X.
- Fariduddin, H. (2014). Analisis Fenotipe dan Performa Perkembangan Awal Ikan Sepat Siam (*Trichogaster pectoralis*) Regan 1910 Potensial Budidaya Asal Sumatera, Jawa dan Kalimantan.
- Fathiyah, Estri, A. ., Widyarti, S., & Rahayu, S. (2011). *Biologi Molekuler Prinsip Dasar Analisa*. Erlangga.
- Fedorčák, J., Šmiga, L., Kutsokon, I., Kolarčík, V., Koščová, L., Oros, M., & Koščo, J. (2019). Parasitic infection of *Cobitis elongatoides* Băcescu & Mayer, 1969 by zoonotic metacercariae *Clinostomum complanatum* (Rudolphi, 1814). *Journal of Fish Diseases*, 42(12), 1677–1685. <https://doi.org/10.1111/jfd.13097>
- Filzah, S., Raza'i, T. S., & Wulandari, R. (2018). Silver pompano's (*Trachinotus blochii*) identification and prevalence of endoparasite in Teluk Bintan's Culture Area. *Intek Akuakultur*, 2(2), 70–77. <https://doi.org/10.31629/intek.v2i2.546>
- Getso, B., Abdullahi, J., & Yola, I. (2017). Length-Weight Relationship And Condition Factor Of *Clarias Gariepinus* And *Oreochromis Niloticus* Of Wudil River , Kano , Nigeria Length-Weight Relationship and Condition Factor of two fish species in Nigerian River. *Journal of Tropical Agriculture, Food, Environment and Extension*, 16(1), 1–4.
- Ghassani, S., Hidayati, D., & Abdulgani, N. (2016). Prevalensi dan intensitas endoparasit pada ikan Gabus (*Channa striata*) dari budidaya dan alam. *Jurnal Sains Dan Seni ITS*, 5(2), 67–70.
- Gjurčević, E., Kužir, S., Valić, D., Marino, F., Benko, V., Kuri, K., & Matanović, K. (2022). Pathogenicity of *Clinostomum complanatum* (Digenea: Clinostomidae) in naturally infected chub (*Squalius cephalus*) and common carp (*Cyprinus carpio*). *Veterinarski Arhiv*, 92(3), 339–348. <https://doi.org/10.24099/vet.arhiv.1553>
- Grabda J. (1991). *Marine Fish Parasitology*. Polish Scientific Publishers.
- Habibi, M. (2010). *Identifikasi Biodeteriogen sebagai langkah awal konservasi benda cagar alam*. 23–30.
- Hadijah, S. (2023). *Keberlanjutan Beloso Ikan Langka yang Terancam Punah*. Intelektual karya nusantara.
- Hanifa, Y. R., Pujiyanto, S., Ferniah, R. S., & Kusumaningrum, H. P. (2021). Identifikasi Molekuler Jeruk Nipis Tegal Berdasarkan Fragmen Gen 18S Ribosomal Rna. *Jurnal Bioetnologi & Biosains Indonesia*, 8(2), 244–254.
- Hara, H., Miyauchi, Y., Tahara, S., & Yamashita, H. (2014). Human laryngitis caused by *Clinostomum complanatum*. *Nagoya Journal of Medical Science*, 76(1–2), 181–185.
- Hardi, E. H. (2015). *Parasit Biota Akuatik*. Mulawarman University Press. Samarinda.
- Irawan, D., & Muhammad, Y. (2016). Tehnik Pemijahan Ikan Sepat Siam (*Trichogaster Pectoralis*) Secara Semi Alami. *Buletin Teknik Litkayasa Akuakultur*, 13(1), 49–53.
- Jasmindar, Y. (2011). Prevelensi parasit dan penyakit air tawar yang dibudidayakan di kota/kabupaten kupang. BIONATURA- Jurnal Ilmu-Ilmu Hayati Dan Fisiik, 13.
- Jithila, P. J., & Prasadana, P. K. (2019). Histopathology and other aspects of the *Clinostomum complanatum* infection in the freshwater fish. *Pseudosphromenus Cupanus* from the South Western Ghats. *Pakistan J. Parasitol*, December 2019, 33–38.
- Juanda, S. J., & Edo, S. I. (2018). Histopatologi Insang, Hati Dan Usus Ikan Lele (*Clarias Gariepinus*) Di Kota Kupang, Nusa Tenggara Timur (Gill, Liver And Gut's Histopathology Of Catfish (Clarias Gariepinus) In Kota Kupang, East West Nusa). *SAINTEK PERIKANAN: Indonesian Journal of Fisheries Science and Technology*, 14(1), 23. <https://doi.org/10.14710/ijfst.14.1.23-29>
- Kabata, Z. (1985). *Parasites And Diseases of Fish Cultured In The Tropics*. Taylor and Francis. London.
- Kannur, U., Kannur, U., & Mananthavady, K. (2019). Histopatologi dan aspek lain dari infeksi *Clinostomum Complanatum* pada ikan air tawar, *Pseudosphromenus Cupanus* dari selatan Ghats Barat.
- Khan, S., Ahmed, S., Serajuddin, M., & Saifullah, M. K. (2018). Variation in seasonal prevalence and enetic metacercariae of *Clinostomum complanatum* infection in *Trichogaster fasciatus* of University Journal of Basic and Applied Sciences, 7(3), 310–316. [10.1016/j.bjbas.2018.03.006](https://doi.org/10.1016/j.bjbas.2018.03.006)
- Lee, C. J., & Heo, G. J. (2002). Nematode worm infections (*Camallanus cotti*, *n guppies* (*Poecilia reticulata*) imported to Korea. *Aquaculture*. 205(4-5): 231-235.
- Penyakit Akuatik (Issue 1). UBB press.
- 16). Identifikasi dan Prevalensi Infeksi Cacing Saluran Pencernaan pada Belut Rawa (*engalensis*) yang di Pasarkan di Kota Surabaya, Jawa Timur. *Skripsi*, 67.



- Locke, S. A., Caffara, M., Barčák, D., Sonko, P., Tedesco, P., Fioravanti, M. L., & Li, W. (2019). A new species of *Clinostomum Leidy*, 1856 in East Asia based on genomic and morphological data. *Parasitology Research*, 118(12), 3253–3265. <https://doi.org/10.1007/s00436-019-06536-y>
- Mahdy, Olfat A., Abdelsalam, M., & Salem, M. A. (2023). Molecular Characterization and Immunological Approaches Associated with Yellow Grub Trematode (Clinostomid) Infecting Nile Tilapia. *Aquaculture Research*, 2023. <https://doi.org/10.1155/2023/5579508>
- Mahdy, Olfat Anter, Abdelsalam, M., Abdel- Maogood, S. Z., Shaalan, M., & Salem, M. A. (2021). First genetic confirmation of Clinostomidae metacercariae infection in *Oreochromis niloticus* in Egypt. *Aquaculture Research*, 53(1), 199–207. <https://doi.org/10.1111/are.15565>
- Maryani, M., Monalisa, S. S., BR Sembiring, I. R., & Fransisco, T. (2022). Identifikasi Endoparasit Pada Ikan Gabus (*Channa striata*) di Sungai Sebangau Palangka Raya Kalimantan Tengah. *Jurnal Akuakultur Sungai Dan Danau*, 7(1), 8. <https://doi.org/10.33087/akuakultur.v7i1.124>
- Measures, L. N., Moravec, F., Douglas, S., & Lair, S. (2017). *Philometra rubra* (Nematoda: Philometridae) - First description of the male from striped bass (*Morone saxatilis*) and implications for re-introduction of an extirpated population. *Canadian Journal of Zoology*, 95(5), 345–352. <https://doi.org/10.1139/cjz-2016-0141>
- Menconi, V., Manfrin, C., Pastorino, P., Mugetti, D., Cortinovis, L., Pizzul, E., Pallavicini, A., & Prearo, M. (2020). First report of *Clinostomum complanatum* (Trematoda: Digenea) in european perch (*Perca fluviatilis*) from an italian subalpine lake: A risk for public health *International Journal of Environmental Research and Public Health*, 17(4). <https://doi.org/10.3390/ijerph17041389>
- Mesquita, S. G., Rodrigues-Luiz, G. F., Reis-Cunha, J. L., Cardoso, M. S., De Mendonça, C. L. F., Bueno, L. L., Fujiwara, R. T., Pinto, H. A., Caldeira, R. L., & Bartholomeu, D. C. (2020). A multiplex PCR protocol for rapid differential identification of four families of trematodes with medical and veterinary importance transmitted by Biomphalaria Preston, 1910 snails. *Acta Tropica*, 211(August), 105655. <https://doi.org/10.1016/j.actatropica.2020.105655>
- Mohammadi, F., Mousavi, S.M. and Rezaie, A. (2012). Histopathological study of parasitic infestation of skin and gill on Oscar (*Astronotus ocellatus*) and discus (*Symphysodon discus*). *AACL Bioflux* 5: 88- 93.
- Moravec, F. (2004). Some Aspects Of The Taxonomy And Biology Of Dracunculoid Nematodes Parasitic In Fishes: a review. *Folia Parasitol*, 51: 1–13.
- Mostafa, N., Abdel-Ghaffar, F., Fayed, H., & Hassan, A. (2022). First record of *Gnathostoma* sp. (Owen, 1836) (Nematoda: Gnathostomatidae) infecting the European Eel *Anguilla anguilla* (Anguillidae) from the Mediterranean Sea, Egypt. *Egyptian Journal of Aquatic Biology and Fisheries*, 26(3), 139–148. <https://doi.org/10.21608/ejabf.2022.238788>
- Mugiyarto, L., Elrifadah, & Mukhlisa. (2021). Identifikasi Dan Prevalensi Endoparasit (*Gnathostoma* Sp.) Pada Belut Sawah (*Monopterus Albus*) Dengan Ukuran Berbeda Yang Dikirim Keluar Provinsi Kalimantan Selatan. *ZIRAA'AH*, 46, 352–362.
- Muslimah, N., Setyaningsih, T., & Nur., A. F. (2019). *Penyakit Ikan Tropis pada Komoditas yang Dilalulintaskan Di Kalimantan Selatan (Parasit dan Virus)*. Yogyakarta: Deepublish.
- Mutengu, C., Mhlanga, W., & Mupangwa, J. F. (2018). Occurrence of *Clinostomum* metacercariae in oreochromis mossambicus from Mashoko Dam, Masvingo Province, Zimbabwe. *Scientifica*, 2018. <https://doi.org/10.1155/2018/9565049>
- Muthifah, L., Nurhayati, & Utomo, K. P. (2018). Analisis kualitas air Danau Kandung Suli Kecamatan Jongkong, Kabupaten Kapuas Hulu. *Jurnal Teknologi Lingkungan Lahan Basah*. 6 (1), 21–30.
- Muttaqin, Z., Dewiyanti, I., & Aliza, D. (2016). Study Of Long-Weight Relationship And Condition Factor Of *Oreochromis Niloticus* And Mugil Cephalus In Matang Guru River, Madat Subdistrict, East Aceh District. *Jurnal Ilmiah Mahasiswa Kelautan Dan Perikanan Unsyiah*, 1(November), 397–403.
- Nasir, M., & Nur, M. (2018). Komposisi Tanaman Akuatik Di Danau Tempe Kabupaten Wajo dan Pemanfaatannya Sebagai Media Pembelajaran Ekologi Tumbuhan. *Prosiding Seminar Nasional Biologi Dan Pembelajarannya "Inovasi Pembelajaran Dan Penelitian Biologi Berbasis Potensi Alam,"* 0(0), 509–514. <https://ojs.unm.ac.id/semnasbio/article/view/7186>
- Nasution, A., Lukistyowaty, I., & Riauwyaty, M. (2023). *Identification Of Clinostomum sp. Parasites In Swamp Sepat Fish ( Trichogaster trichopterus ) In FAPERIKA DAM, Pekanbaru.*
- Nasution, S. H. (2012). Biodiversitas dan distribusi ikan di Danau Tempe. *Prosiding Seminar Nasional Ikan Penelitian Limnologi, Lembaga Ilmu Pengetahuan Indonesia*, 1989, 381–392.
- Nasution, S. H. (2012). *Parasit Pada Ikan*. Gajah mada Universitas Press. Yogyakarta.
- Nasution, S. H., Joo, H. S., & Kim, J. (2009). A human case of *Clinostomum complanatum* infection in fish. *Journal of Parasitology*, 47(4), 401–404. <https://doi.org/10.3347/kjp.2009.47.4.401>
- Nasution, S. H., & Joo, H. S. (2009). The simple methods for the assessment of tropical fish stocks. *FAO Fisheries Tech.*



Pap., FAO Rome, 234, 52.

- Pinto, H. A., Caffara, M., Fioravanti, M. L., & Melo, A. L. (2015). Experimental and molecular study of cercariae of *Clinostomum* sp. (Trematoda: Clinostomidae) from *Biomphalaria* spp. (Mollusca: Planorbidae) in Brazil. *Journal of Parasitology*, 101(1), 108–113. <https://doi.org/10.1645/14-497.1>
- Putra, N. N., Fauzi, M., & Fajri, N. El. (2022). Bioekologi Ikan Sepat Siam (*Trichopodus pectoralis*) di Danau Tuok Tengah, Desa Buluh Cina, Kecamatan Siak Hulu, Kabupaten Kampar, Provinsi Riau. *Jurnal Sumberdaya Dan Lingkungan Akuatik Vol.3*, 3(2).
- Putri, A., & Madduppa, H. (2020). Perbandingan Hasil Metode Identifikasi Spesies: Morfologi Dan Molekuler Pada Ikan Julung-Julung Di Tpi (Tempat Pelelangan Ikan) Muara Angke, Dki Jakarta. *Jurnal Kelautan: Indonesian Journal of Marine Science and Technology*, 13(3), 168–175. <https://doi.org/10.21107/jk.v13i3.7303>
- Rahmaningsih, S. (2018). *Hama dan Penyakit Ikan*. Deepublish. Yogyakarta.
- Rahmat, H., Gde Sasmita Julyantoro, P., & Wulandari Suryaningtyas, E. (2020). Prevalensi dan Intensitas Parasit pada Ikan Layur (*Trichiurus lepturus*) di Pasar Ikan Kedongan, Bali. *Current Trends in Aquatic Science III*, 1(1), 47–53.
- Rais, A. H., Sawestri, S., & Muthmainnah, D. (2020). Dinamika pertumbuhan sepat siam (*Trichopodus pectoralis*, Regan 1910) di Perairan Rawa Banjiran Patra Tani Sumatra Selatan. *Depik*, 9(3), 444–451. <https://doi.org/10.13170/depik.9.3.17696>
- Reshid, M., Adugna, M., Redda, Y. T., Awol, N., & Teklu, A. (2015). A Study of *Clinostomum* (Trematode) and *Contracaecum* (Nematode) Parasites Affecting *Oreochromis Niloticus* in Small Abaya Lake, Silite Zone, Ethiopia. *Journal of Aquaculture Research & Development*, 06(03), 3–6. <https://doi.org/10.4172/2155-9546.1000316>
- Riauwaty, M., Kurniasih, Prastowo, J., & Wibdarti. (2012). Identifikasi *Clinostomum complanatum* Secara Molekuler pada Ikan Air Tawar di Yogyakarta dan Riau. *Jurnal Veteriner*.
- Riauwaty, M., Kurniasih, Prastowo, J., & Windarti. (2011). Scanning Electron Microscopy Dari *Clinostomum complanatum* (Digenea: Clinostomidae) Pada Ikan Betok (*Anabas testudineus*) Di Yogyakarta, Indonesia. In *Universitas Gadjah Mada Jl. Fauna* (Issue 2).
- Riauwaty, M., & Windarti. (2011). Identifikasi Parasit *Clinostomum* sp. (Trematoda) Pada Ikan Sepat (*Trihogaster trichopterus*) Dengan Scanning Electron Microscope. *Fakultas Perikanan Dan Ilmu Kelautan, Universitas Riau Kampus*, 0761 63275.
- Rizki, N., & Abdullah, M. (2021). Kondisi Histopatologi Usus dan Lambung Ikan Gabus (*Channa striata*) yang Terinfeksi Endoparasit. *Jurnal Kelautan Dan Perikanan Indonesia*, 1(2), 60–74.
- Rohmani, Wahyono, daniel joko, & Mulyani, L. (2021). Molekul Deteksi Protozoa Gen 18S rRNA Putatif *Trichodina* sp. Larva gurame yang terinfeksi (ikan gurame *Osphronemus L*) Di balai benih ikan Kutassari Purbalinga Jawa Barat. *BioEksakta: Jurnal Ilmiah Biologi Unsoed*, 3, 26–32.
- Rosser, T. G., Alberson, N. R., Woodyard, E. T., Cunningham, F. L., Pote, L. M., & Griffin, M. J. (2017). *Clinostomum album* n. sp. and *Clinostomum marginatum* (Rudolphi, 1819), parasites of the great egret *Ardea alba* L. from Mississippi, USA. *Systematic Parasitology*, 94(1), 35–49. <https://doi.org/10.1007/s11230-016-9686-0>
- Salem, M. A., Abdel-Maogood, S. Z., Abdelsalam, M., & Mahdy, O. A. (2021). Comparative morpho-molecular identification of *Clinostomum phalacrocoracis* and *Clinostomum complanatum* metacercariae coinfesting Nile tilapia in Egypt. *Egyptian Journal of Aquatic Biology and Fisheries*, 25(1), 461–476. <https://doi.org/10.21608/ejabf.2021.145698>
- Sari, A. I., Idris, M., & Nur, I. (2019). Inventarisasi Parasit Ikan Nila (*Oreochromis niloticus*) yang Hidup pada Kolam Bekas Galian Penambangan Emas Rakyat Desa Watu-watu Kecamatan Lantari Jaya Kabupaten Bombana Inventory of Parasites (*Oreochromis niloticus*) in Nile Tilapia Live in Former. *Media Akuatika*, 4(3), 118–124. <http://ojs.uho.ac.id/index.php/JMA/article/download/9754/6892>
- Seher, D., & Suleyman, C. . (2012). Condition factors of seven cyprinid fish species from Çamlığöze Dam Lake on central Anatolia, Turkey. *African Journal of Agricultural Research*, 7 (31), 4460-4464.
- Selvakumar, P., Gopalakrishnan, A., Sakthivel, A., & Bharathirajan, P. (2016). Ovarian nematode (Nematoda: *Philometra* sp.) infestation on *Pseudorhombus triocellatus* (Paralichthyidae). *Asian Pacific Journal of Tropical Disease*, 6(10), 793–796. [https://doi.org/10.1016/S2222-1808\(16\)61132-5](https://doi.org/10.1016/S2222-1808(16)61132-5)
- Sereno-Urbe, A. L., López-Jiménez, A., Ortega-Olivares, M. P., Drade-Gómez, L. A., González-García, M. T., & García-Varela, M. (2022). Looking at the diversity of *Clinostomids* (Platyhelminthes: Digenea), associated with fish and water birds in Mexico and Central America by molecular and biological methods. *Journal of Parasitology*, 152(1), 1–11. <https://doi.org/10.1017/S0022267321000111>
- Siti, S. M. A. (2012). Incidence and histopathology of encysted progenetic metacercaria *complanatum* (Digenea: Clinostomidae) in *Channa punctatus* and its development in host. *Asian Pacific Journal of Tropical Biomedicine*, 2(6), 421–426. [https://doi.org/10.1016/S2221-1691\(12\)60068-9](https://doi.org/10.1016/S2221-1691(12)60068-9)
- Sugandi, A., & Mujthidah, T. (2023). Inventarisasi Endoparasit pada Ikan Mas (*Cyprinus carpio*) di Desa Bajak, Kabupaten Magelang. *AKUAKULTURA*, 2, 27–32. <https://doi.org/10.35308>



- Souza, D. C. de., Sousa, L. F. de., Coelho, T. A., & Correa, L. L. (2020). Host-parasite interaction between trematode, *Clinostomum marginatum* (Clinostomidae) and armoured catfish, *Pterygoplichthys pardalis* (Loricariidae) from Brazilian Amazon. *Annals of Parasitology*, 66(2), 243–249. <https://doi.org/10.17420/ap6602.261>
- Sudayatma, P. E., & Eriawati, N. N. (2012). Histopatologis Insang Ikan Hias Air Laut yang Terinfeksi Dactylogyru sp. *Jurnal Sain Veteriner*, 30(1), 68–75.
- Sugianti, Y., & Astuti, L. P. (2018). Respon Oksigen Terlarut Terhadap Pencemaran dan Pengaruhnya Terhadap Keberadaan Sumber Daya Ikan di Sungai Citarum. *Jurnal Teknologi Lingkungan*, 19(2), 203. <https://doi.org/10.29122/jtl.v19i2.2488>
- Sulastri, S., Zakaria, I. J., & Marusin, N. (2018). Intestine Histological Structure of Silver Sharkminnow (*Osteochilus hasseltii* C.V.) in Singkarak Lake, West Sumatera. *Metamorfosa: Journal of Biological Sciences*, 5(2), 214. <https://doi.org/10.24843/metamorfosa.2018.v05.i02.p12>
- Susanto, D. (2008). *Gambaran Histopatologi Organ Insang, Otot dan Usus Ikan Mas (Cyprinus carpio) di Desa Cibanteng [Penelitian] FKH. IPB.*
- Tampubolon, P. A. R. P., & Rahardjo, M. F. (2011). Pemijahan ikan sepat siam, *Trichogaster pectoralis* Regan 1910 di Danau Taliwang, Sumbawa. *Jurnal Iktiologi Indonesia*, 11(2), 135–142.
- Tansatit, T., Sobhon, P., Sahaphong, S., & Sangsuriya, P. (2014). Original Article Prevalence and Histopathology of *Trichogaster pectoralis* Harboursing Metacercaria of *Clinostomum piscidium* (Southwell and Prasad, 1918) in Central Thailand. 44(2), 223–230.
- Tansatit, T., Sobhon, P., Sahaphong, S., Sangsuriya, P., & Klinsrihong, S. (2014). Prevalence and histopathology of *Trichogaster pectoralis* harbouring metacercaria of *Clinostomum piscidium* (Southwell and Prasad, 1918) in central Thailand. *Thai Journal of Veterinary Medicine*, 44(2), 223–230. <https://doi.org/10.56808/2985-1130.2564>
- Tavares-Dias, M., Silva, L. M. A., & Florentino, A. C. (2021). Metacercariae of *Clinostomum Leidy*, 1856 (Digenea: Clinostomidae) infecting freshwater fishes throughout Brazil: infection patterns, parasite–host interactions, and geographic distribution. *Studies on Neotropical Fauna and Environment*, 00(00), 1–14. <https://doi.org/10.1080/01650521.2021.1915058>
- Umesha, S., Manukumar, H. M., & Raghava, S. (2016). A Rapid Food-Borne, Method for Isolation of Genomic DNA from 6(2)., Fungal Pathogens. 3 Biotech.
- Williams, E. H., & Bunkley, L. W. (1996). *Parasites Off shore big game fishes of Puerto Rico and the Western Atlantic. Puerto Rico. Department of Natural Environmental Resources and University of Puerto Rico, Rio Piedras.*
- Wirawan, I. K. A., Suryani, S. A. M. P., & Arya, I. W. (2018). Diagnosa, Analisis dan Identifikasi Parasit yang Menyerang Ikan Nila (*Oreochromis Niloticus*) Pada Kawasan Budidaya Ikan Di Subak “Baru” Tabanan. *Gema Agro*, 23(1), 63. <https://doi.org/10.22225/ga.23.1.661.63-78>
- WoRMS. (2023). Klasifikasi *Philometra* sp. Di akses pada tanggal 22 Mei 2023. <https://www.marinespecies.org/aphia.php?p=taxdetails&id=22918>.
- WoRMS. (2024). Identifikasi *Clinostomum*. di akses pada tanggal 30 Oktober. <https://www.marinespecies.org/aphia.php?p=taxlist>.
- Yang, Z., & Rannala, B. (2012). Molecular phylogenetics: Principles and practice. *Nature Reviews Genetics* 13: 303- 314.
- Yuwono, T. (2005). *Biologi Molekuler*. Erlangga. Jakarta.
- Zhang, S., Huang, G., & Li, L. (2021). *Gnathostoma spinigerum* Parasitizing the Asian Swamp Eel *Monopterus albus* in China.



## LAMPIRAN

### Lampiran 1 data ikan ikan sepat siam

Lokasi penelitian: Danau Tempe

Titik pengambilan sampel: Tae (Kecamatan Tanasitolo)

Titik penelitian: 1

No	Tanggal	Kode	Nama ikan	Panjang (cm)	Berat (gram)	Organ Target	Jenis Parasit	Jumlah	faktor kondisi
1	23/07/2023	S1	Sepat siam	16	64	Usus	-	0	1.5625
2	23/07/2023	S2	Sepat siam	12.5	28	Usus	<i>Clinostomum sp</i>	3	1.4336
3	23/07/2023	S3	Sepat siam	12.4	27	Usus	<i>clinostomum sp</i>	2	1.416115605
4	23/07/2023	S4	Sepat siam	12	26	Usus	-	0	1.50462963
5	23/07/2023	S5	Sepat siam	12.5	26	Usus	-	0	1.3312
6	23/07/2023	S6	Sepat siam	13	36	Usus	-	0	1.638598088
7	23/07/2023	S7	Sepat siam	13	27	Usus	-	0	1.228948566
8	23/07/2023	S8	Sepat siam	11.5	27	Usus	<i>clinostomum sp</i>	4	1.775293828
9	23/07/2023	S9	Sepat siam	10.5	22	Usus	-	0	1.900442717
10	23/07/2023	S10	Sepat siam	14	34	Usus	-	0	1.239067055
11	23/07/2023	S11	Sepat siam	13	29	Usus	-	0	1.319981793
	2023	S12	Sepat siam	14	47	Usus	-	0	1.712827988
	2023	S13	Sepat siam	13.2	28	Usus	<i>clinostomum sp</i>	7	1.217408242
	2023	S14	Sepat siam	12.5	27	Usus	-	0	1.3824



15	24/07/2023	S15	Sepat siam	12.5	31	Usus	-	0	1.5872
16	24/07/2023	S16	Sepat siam	13.5	34	Usus	<i>Clinostomum sp</i>	1	1.381903165
17	24/07/2023	S17	Sepat siam	11	21	Usus	-	0	1.577761082
18	24/07/2023	S18	Sepat siam	12	29	Usus	-	0	1.678240741
19	24/07/2023	S19	Sepat siam	14.5	22	Usus	<i>Clinostomum sp</i>	18	0.721636803
20	24/07/2023	S20	Sepat siam	12.5	31	Usus	-	0	1.5872
21	24/07/2023	S21	Sepat siam	11.5	25	Usus	<i>Clinostomum sp</i>	11	1.643790581
22	24/07/2023	S22	Sepat siam	12.2	23	Usus	-	0	1.266625841
23	24/07/2023	S23	Sepat siam	10	19	Usus	<i>Clinostomum sp</i>	20	1.9
24	24/07/2023	S24	Sepat siam	12	24	Usus	-	0	1.388888889
25	24/07/2023	S25	Sepat siam	15.5	48	Usus	-	0	1.288979893
26	24/07/2023	S26	Sepat siam	13.8	34	Usus	-	0	1.293724068
27	24/07/2023	S27	Sepat siam	13	32	Usus	<i>Clinostomum sp</i>	2	1.456531634
28	24/07/2023	S28	Sepat siam	13	31	Usus	<i>Clinostomum sp</i>	2	1.41101502
29	24/07/2023	S29	Sepat siam	15.8	55	Usus	-	0	1.394413018
30	24/07/2023	S30	Sepat siam	13.6	37	Usus	-	0	1.470906269
31	24/07/2023	S31	Sepat siam	13	34	Usus	-	0	1.547564861
32	25/07/2023	S32	Sepat siam	12.3	46	Usus	-	0	2.471966024
33	25/07/2023	S33	Sepat siam	14	38	Usus	-	0	1.38483965
	2023	S34	Sepat siam	13.3	36	Usus	-	0	1.530197816
	2023	S35	Sepat siam	15	42	Usus	-	0	1.244444444
	2023	S36	Sepat siam	13.5	36	Usus	-	0	1.463191587



37	25/07/2023	S37	Sepat siam	15	48	Usus	-	0	1.42222222
38	25/07/2023	S38	Sepat siam	14	33	Usus	-	0	1.202623907
39	25/07/2023	S39	Sepat siam	14	37	Usus	-	0	1.348396501
40	25/07/2023	S40	Sepat siam	12	37	Usus	-	0	2.141203704
41	25/07/2023	S41	Sepat siam	14	38	Usus	-	0	1.38483965
42	25/07/2023	S42	Sepat siam	14	37	Usus	-	0	1.348396501
43	25/07/2023	S43	Sepat siam	11.5	28	Usus	-	0	1.841045451
44	25/07/2023	S44	Sepat siam	13	50	Usus	-	0	2.275830678
45	25/07/2023	S45	Sepat siam	12	23	Usus	-	0	1.331018519
46	25/07/2023	S46	Sepat siam	12	27	Usus	<i>Clinostomum sp</i>	9	1.5625
47	25/07/2023	S47	Sepat siam	12.5	27	Usus	-	0	1.3824
48	25/07/2023	S48	Sepat siam	13	33	Usus	-	0	1.502048248
49	25/07/2023	S49	Sepat siam	12	27	Usus	<i>Clinostomum sp</i>	7	1.5625
50	25/07/2023	S50	Sepat siam	14	38	Usus	-	0	1.38483965
51	25/07/2023	S51	Sepat siam	15	45	Usus	-	0	1.333333333
52	26/07/2023	S52	Sepat siam	14	34	Usus	-	0	1.239067055
53	26/07/2023	S53	Sepat siam	14	33	Usus	-	0	1.202623907
54	26/07/2023	S54	Sepat siam	14	32	Usus	-	0	1.166180758
55	26/07/2023	S55	Sepat siam	12	25	Usus	<i>Clinostomum sp</i>	2	1.446759259
	2023	S56	Sepat siam	12.5	27	Usus	-	0	1.3824
	2023	S57	Sepat siam	12	28	Usus	-	0	1.62037037
	2023	S58	Sepat siam	13.5	26	Usus	-	0	1.056749479





59	26/07/2023	S59	Sepat siam	13.5	31	Usus	-	0	1.259970533
60	26/07/2023	S60	Sepat siam	11.5	20	Usus	-	0	1.315032465
61	26/07/2023	S61	Sepat siam	12.9	25	Usus	<i>Clinostomum sp</i>	1	1.164584157
62	26/07/2023	S62	Sepat siam	12	24	Usus	-	0	1.388888889
63	26/07/2023	S63	Sepat siam	13.2	33	Usus	-	0	1.434802571
64	26/07/2023	S64	Sepat siam	11.5	23	Usus	-	0	1.512287335
65	26/07/2023	S65	Sepat siam	13	26	Usus	-	0	1.183431953
66	26/07/2023	S66	Sepat siam	12	22	Usus	<i>Clinostomum sp</i>	4	1.273148148
67	26/07/2023	S67	Sepat siam	12.5	28	Usus	-	0	1.4336
68	26/07/2023	S68	Sepat siam	13.5	34	Usus	-	0	1.381903165
69	26/07/2023	S69	Sepat siam	13.9	34	Usus	-	0	1.266002363
70	26/07/2023	S70	Sepat siam	12	31	Usus	<i>Clinostomum sp</i>	1	1.793981481
71	26/07/2023	S71	Sepat siam	15	43	Usus	-	0	1.274074074
72	27/07/2023	S72	Sepat siam	14	37	Usus	-	0	1.348396501
73	27/07/2023	S73	Sepat siam	13	30	Usus	-	0	1.365498407
74	27/07/2023	S74	Sepat siam	13	34	Usus	-	0	1.547564861
75	27/07/2023	S75	Sepat siam	13.5	38	Usus	-	0	1.544480008
76	27/07/2023	S76	Sepat siam	14	40	Usus	-	0	1.457725948
77	27/07/2023	S77	Sepat siam	12.8	31	Usus	<i>Clinostomum sp</i>	1	1.47819519
	2023	S78	Sepat siam	12	32	Usus	-	0	1.851851852
	2023	S79	Sepat siam	13	32	Usus	-	0	1.456531634
	2023	S80	Sepat siam	14	35	Usus	-	0	1.275510204



81	27/07/2023	S81	Sepat siam	15	50	Usus	-	0	1.481481481
82	27/07/2023	S82	Sepat siam	12	27	Usus	-	0	1.5625
83	27/07/2023	S83	Sepat siam	13	29	Usus	-	0	1.319981793
84	27/07/2023	S84	Sepat siam	14	37	Usus	-	0	1.348396501
85	27/07/2023	S85	Sepat siam	11	24	Usus	-	0	1.803155522
86	27/07/2023	S86	Sepat siam	15	42	Usus	-	0	1.244444444
87	27/07/2023	S87	Sepat siam	12	30	Usus	-	0	1.736111111
88	27/07/2023	S88	Sepat siam	12	27	Usus	-	0	1.5625
89	29/07/2023	S89	Sepat siam	13	34	Usus	-	0	1.547564861
90	29/07/2023	S90	Sepat siam	13	37	Usus	<i>Clinostomum sp</i>	7	1.684114702
91	29/07/2023	S91	Sepat siam	11	20	Usus	<i>Clinostomum sp</i>	2	1.502629602
92	29/07/2023	S92	Sepat siam	12.4	28	Usus	-	0	1.468564332
93	29/07/2023	S93	Sepat siam	12	22	Usus	-	0	1.273148148
94	29/07/2023	S94	Sepat siam	11	24	Usus	-	0	1.803155522
95	29/07/2023	S95	Sepat siam	13	30	Usus	-	0	1.365498407
96	29/07/2023	S96	Sepat siam	12.5	22	Usus	-	0	1.1264
97	29/07/2023	S97	Sepat siam	11.2	20	Usus	<i>Clinostomum sp</i>	12	1.423560496
98	29/07/2023	S98	Sepat siam	12	20	Usus	<i>Clinostomum sp</i>	19	1.157407407
99	29/07/2023	S99	Sepat siam	11.5	20	Usus	-	0	1.315032465
	2023	S100	Sepat siam	11	26	Usus	-	0	1.953418482
								Jumlah	135



1 ekor / 100 ekor x 100% = 21%

Intensitas= 135 ind / 21 ekor = 6 ind/ekor

**Lokasi penelitian: Danau Lampulung**  
**Titik pengambilan sampel: Atakkae (Kecamatan Tempe)**  
**Titik penelitian: 2**

No	Tanggal	Kode	Nama ikan	Panjang (cm)	Berat (gram)	Organ Target	Jenis Parasit	Jumlah	Faktor kondisi
1	30/07/2023	S1	Sepat siam	14	45	Usus	-	0	1.639942
2	30/07/2023	S2	Sepat siam	15	46	Usus	<i>Clinostomum sp</i>	18	1.362963
3	30/07/2023	S3	Sepat siam	13	36	Usus	-	0	1.638598
4	30/07/2023	S4	Sepat siam	12	25	Usus	<i>Clinostomum sp</i>	1	1.446759
5	30/07/2023	S5	Sepat siam	12	25	Usus	<i>Clinostomum sp</i>	2	1.446759
6	30/07/2023	S6	Sepat siam	14.6	37	Usus	<i>Clinostomum sp</i>	7	1.188894
7	30/07/2023	S7	Sepat siam	17	70	Usus	-	0	1.424791
8	30/07/2023	S8	Sepat siam	13.2	34	Usus	-	0	1.478281
9	30/07/2023	S9	Sepat siam	12.5	56	Usus	-	0	2.8672
10	30/07/2023	S10	Sepat siam	14.2	47	Usus	<i>Clinostomum sp</i>	10	1.64147
11	30/07/2023	S11	Sepat siam	14	39	Usus	-	0	1.421283
12	30/07/2023	S12	Sepat siam	14.5	42	Usus	-	0	1.37767
	30/07/2023	S13	Sepat siam	14.5	42	Usus	-	0	1.37767
	30/07/2023	S14	Sepat siam	15	46	Usus	<i>Clinostomum sp</i>	3	1.362963
	30/07/2023	S15	Sepat siam	14	40	Usus	-	0	1.457726
	30/07/2023	S16	Sepat siam	16	64	Usus	-	0	1.5625



17	30/07/2023	S17	Sepat siam	14	45	Usus	<i>Clinostomum sp</i>	29	1.639942
18	30/07/2023	S18	Sepat siam	13.5	37	Usus	-	0	1.503836
19	30/07/2023	S19	Sepat siam	12	29	Usus	-	0	1.678241
20	30/07/2023	S20	Sepat siam	13.2	39	Usus	-	0	1.695676
21	30/07/2023	S21	Sepat siam	14.5	43	Usus	-	0	1.410472
22	2/8/2023	S22	Sepat siam	13	32	Usus	-	0	1.456532
23	2/8/2023	S23	Sepat siam	17	88	Usus	-	0	1.791166
24	2/8/2023	S24	Sepat siam	13	37	Usus	<i>Clinostomum sp</i>	7	1.684115
25	2/8/2023	S25	Sepat siam	14.5	48	Usus	-	0	1.57448
26	2/8/2023	S26	Sepat siam	12.5	28	Usus	<i>Clinostomum sp</i>	22	1.4336
27	2/8/2023	S27	Sepat siam	19	98	Usus	-	0	1.42878
28	2/8/2023	S28	Sepat siam	17	71	Usus	<i>Clinostomum sp</i>	12	1.445146
29	2/8/2023	S29	Sepat siam	13	36	Usus	-	0	1.638598
30	2/8/2023	S30	Sepat siam	18	124	Usus	-	0	2.1262
31	2/8/2023	S31	Sepat siam	13	43	Usus	-	0	1.957214
32	2/8/2023	S32	Sepat siam	14.5	53	Usus	-	0	1.738489
33	2/8/2023	S33	Sepat siam	13	40	Usus	-	0	1.820665
34	2/8/2023	S34	Sepat siam	12	33	Usus	-	0	1.909722
35	2/8/2023	S35	Sepat siam	12	32	Usus	-	0	1.851852
36	2/8/2023	S36	Sepat siam	13	31	Usus	-	0	1.411015
37	2/8/2023	S37	Sepat siam	15	57	Usus	<i>Clinostomum sp</i>	3	1.688889
38	2/8/2023	S38	Sepat siam	16	62	Usus	-	0	1.513672
	2/8/2023	S39	Sepat siam	17	92	Usus	<i>Clinostomum sp</i>	2	1.872583
	3/8/2023	S40	Sepat siam	15.5	65	Usus	-	0	1.745494
	3/8/2023	S41	Sepat siam	14	36	Usus	<i>Clinostomum sp</i>	15	1.311953
	3/8/2023	S42	Sepat siam	12	27	Usus	-	0	1.5625



43	3/8/2023	S43	Sepat siam	12	24	Usus	-	0	1.388889
44	3/8/2023	S44	Sepat siam	13.7	37	Usus	-	0	1.438931
45	3/8/2023	S45	Sepat siam	12	28	Usus	-	0	1.62037
46	3/8/2023	S46	Sepat siam	13	31	Usus	-	0	1.411015
47	3/8/2023	S47	Sepat siam	11	20	Usus	-	0	1.50263
48	3/8/2023	S48	Sepat siam	14.5	55	Usus	-	0	1.804092
49	3/8/2023	S49	Sepat siam	12	24	Usus	<i>Clinostomum sp</i>	7	1.388889
50	3/8/2023	S50	Sepat siam	14	42	Usus	-	0	1.530612
51	3/8/2023	S51	Sepat siam	14	38	Usus	<i>Clinostomum sp</i>	5	1.38484
52	3/8/2023	S52	Sepat siam	13	34	Usus	<i>Clinostomum sp</i>	3	1.547565
53	3/8/2023	S53	Sepat siam	13	29	Usus	<i>Clinostomum sp</i>	8	1.319982
54	3/8/2023	S54	Sepat siam	12	24	Usus	<i>Clinostomum sp</i>	3	1.388889
55	3/8/2023	S55	Sepat siam	13	30	Usus	-	0	1.365498
56	3/8/2023	S56	Sepat siam	13	34	Usus	-	0	1.547565
7	3/8/2023	S7	Sepat siam	12	24	Usus	-	0	1.388889
58	3/8/2023	S58	Sepat siam	15	45	Usus	<i>Clinostomum sp</i>	2	1.333333
59	3/8/2023	S59	Sepat siam	13	39	Usus	<i>Clinostomum sp</i>	19	1.775148
60	5/8/2023	S60	Sepat siam	11.5	18	Usus	-	0	1.183529
61	5/8/2023	S61	Sepat siam	12.5	28	Usus	<i>Clinostomum sp</i>	2	1.4336
62	5/8/2023	S62	Sepat siam	11.5	25	Usus	-	0	1.643791
63	5/8/2023	S63	Sepat siam	12	26	Usus	-	0	1.50463
64	5/8/2023	S64	Sepat siam	14	38	Usus	-	0	1.38484
	5/8/2023	S65	Sepat siam	12	32	Usus	-	0	1.851852
	5/8/2023	S66	Sepat siam	13	35	Usus	<i>Clinostomum sp</i>	27	1.593081
	5/8/2023	S67	Sepat siam	13	32	Usus	<i>Clinostomum sp</i>	18	1.456532
	5/8/2023	S68	Sepat siam	12	29	Usus	-	0	1.678241



69	5/8/2023	S69	Sepat siam	12.8	27	Usus	-	0	1.28746
70	5/8/2023	S70	Sepat siam	14	37	Usus	-	0	1.348397
71	5/8/2023	S71	Sepat siam	13	27	Usus	-	0	1.228949
72	5/8/2023	S72	Sepat siam	13.2	30	Usus	-	0	1.304366
73	5/8/2023	S73	Sepat siam	17.5	82	Usus	<i>Clinostomum sp</i>	1	1.530029
74	5/8/2023	S74	Sepat siam	13	35	Usus	-	0	1.593081
75	5/8/2023	S75	Sepat siam	15	51	Usus	-	0	1.511111
76	5/8/2023	S76	Sepat siam	13	29	Usus	-	0	1.319982
77	5/8/2023	S77	Sepat siam	13	35	Usus	-	0	1.593081
78	7/8/2023	S78	Sepat siam	13	29	Usus	<i>Clinostomum sp</i>	24	1.319982
79	7/8/2023	S79	Sepat siam	13	29	Usus	-	0	1.319982
80	7/8/2023	S80	Sepat siam	13	33	Usus	-	0	1.502048
81	7/8/2023	S81	Sepat siam	13	32	Usus	<i>Clinostomum sp</i>	1	1.456532
82	7/8/2023	S82	Sepat siam	12	27	Usus	<i>Clinostomum sp</i>	1	1.5625
83	7/8/2023	S83	Sepat siam	12	26	Usus	-	0	1.50463
84	7/8/2023	S84	Sepat siam	12	25	Usus	<i>Clinostomum sp</i>	1	1.446759
85	7/8/2023	S85	Sepat siam	11.5	32	Usus	<i>Clinostomum sp</i>	3	2.104052
86	7/8/2023	S86	Sepat siam	12.5	28	Usus	-	0	1.4336
87	7/8/2023	S87	Sepat siam	13	34	Usus	-	0	1.547565
88	7/8/2023	S88	Sepat siam	13	30	Usus	<i>Clinostomum sp</i>	15	1.365498
89	7/8/2023	S89	Sepat siam	15	47	Usus	-	0	1.392593
90	7/8/2023	S90	Sepat siam	13	36	Usus	-	0	1.638598
	7/8/2023	S91	Sepat siam	13.2	31	Usus	-	0	1.347845
	7/8/2023	S92	Sepat siam	13	31	Usus	<i>Clinostomum sp</i>	1	1.411015
	7/8/2023	S93	Sepat siam	12	25	Usus	-	0	1.446759
	7/8/2023	S94	Sepat siam	12	24	Usus	<i>Clinostomum sp</i>	4	1.388889



95	7/8/2023	S95	Sepat siam	13.9	37	Usus	<i>Clinostomum sp</i>	7	1.377708
96	7/8/2023	S96	Sepat siam	17.2	82	Usus	-	0	1.611493
97	7/8/2023	S97	Sepat siam	13.5	59	Usus	-	0	2.398008
98	7/8/2023	S98	Sepat siam	17.3	85	Usus	-	0	1.64165
99	7/8/2023	S99	Sepat siam	12.4	39	Usus	-	0	2.0455
100	7/8/2023	S100	Sepat siam	12.5	28	Usus	<i>Clinostomum sp</i>	48	1.4336
								Jumlah	331

Prevelensi= 34 ekor / 100 ekor x 100% = 34%  
 intensitas= 331 ind / 34 ekor = 10 ind/ekor



**Lokasi penelitian: Danau latamperu**  
**Titik penelitian: Tosora (kecamatan Majauleng)**  
**Lokasi: 3**

No	Tanggal	Kode	Nama ikan	Panjang (cm)	Berat (gram)	Organ Target	Jenis Parasit	Jumlah	Faktor kondisi
1	8/8/2023	S1	Sepat siam	14.4	41	Usus	-	0	1.373081704
2	8/8/2023	S2	Sepat siam	13	29	Usus	-	0	1.319981793
3	8/8/2023	S3	Sepat siam	13.2	34	Usus	<i>Clinostomum sp</i>	8	1.478281437
4	8/8/2023	S4	Sepat siam	14	33	Usus	<i>Clinostomum sp</i>	20	1.202623907
5	8/8/2023	S5	Sepat siam	11.5	22	Usus	-	0	1.446535711
6	8/8/2023	S6	Sepat siam	15.5	46	Usus	-	0	1.235272398
7	8/8/2023	S7	Sepat siam	14	24	Usus	-	0	0.874635569
8	8/8/2023	S8	Sepat siam	12.5	33	Usus	<i>Clinostomum sp</i>	6	1.6896
9	8/8/2023	S9	Sepat siam	12	22	Usus	-	0	1.273148148
10	8/8/2023	S10	Sepat siam	13	33	Usus	<i>Clinostomum sp</i>	1	1.502048248
11	8/8/2023	S11	Sepat siam	14.5	39	Usus	-	0	1.279265243
12	8/8/2023	S12	Sepat siam	15.2	49	Usus	-	0	1.395292681
13	8/8/2023	S13	Sepat siam	14	39	Usus	-	0	1.421282799
14	8/8/2023	S14	Sepat siam	12.5	30	Usus	-	0	1.536
15	8/8/2023	S15	Sepat siam	12	29	Usus	<i>Clinostomum sp</i>	4	1.678240741
16	8/8/2023	S16	Sepat siam	12	25	Usus	-	0	1.446759259
17	8/8/2023	S17	Sepat siam	12	21	Usus	-	0	1.215277778
	8/8/2023	S18	Sepat siam	13.2	30	Usus	-	0	1.304365974
	8/8/2023	S19	Sepat siam	11.5	29	Usus	<i>Clinostomum sp</i>	3	1.906797074
	8/8/2023	S20	Sepat siam	12.5	30	Usus	-	0	1.536
	8/8/2023	S21	Sepat siam	16	60	Usus	-	0	1.46484375





22	9/8/2023	S22	Sepat siam	11	23	Usus	-	0	1.728024042
23	9/8/2023	S23	Sepat siam	14	43	Usus	-	0	1.567055394
24	9/8/2023	S24	Sepat siam	12.5	28	Usus	<i>Clinostomum sp</i>	3	1.4336
25	9/8/2023	S25	Sepat siam	13	31	Usus	<i>Clinostomum sp</i>	8	1.41101502
26	9/8/2023	S26	Sepat siam	14.2	40	Usus	<i>Clinostomum sp</i>	1	1.396995342
27	9/8/2023	S27	Sepat siam	17	79	Usus	-	0	1.607978832
28	9/8/2023	S28	Sepat siam	13.2	30	Usus	<i>Clinostomum sp</i>	7	1.304365974
29	9/8/2023	S29	Sepat siam	13	31	Usus	<i>Clinostomum sp</i>	1	1.41101502
30	9/8/2023	S30	Sepat siam	13.5	35	Usus	-	0	1.422547376
31	9/8/2023	S31	Sepat siam	13	31	Usus	<i>Clinostomum sp</i>	5	1.41101502
32	9/8/2023	S32	Sepat siam	14	37	Usus	-	0	1.348396501
33	9/8/2023	S33	Sepat siam	14	34	Usus	-	0	1.239067055
34	9/8/2023	S34	Sepat siam	14	41	Usus	-	0	1.494169096
35	9/8/2023	S35	Sepat siam	15	44	Usus	-	0	1.303703704
36	9/8/2023	S36	Sepat siam	17	75	Usus	-	0	1.526562182
37	9/8/2023	S37	Sepat siam	12.5	29	Usus	<i>Clinostomum sp</i>	1	1.4848
38	9/8/2023	S38	Sepat siam	12	30	Usus	<i>Clinostomum sp</i>	7	1.736111111
39	9/8/2023	S39	Sepat siam	14.5	52	Usus	-	0	1.70568699
40	9/8/2023	S40	Sepat siam	13	33	Usus	-	0	1.502048248
41	9/8/2023	S41	Sepat siam	14	39	Usus	<i>Clinostomum sp</i>	4	1.421282799
42	10/8/2023	S42	Sepat siam	16.5	52	Usus	-	0	1.157581323
43	10/8/2023	S43	Sepat siam	15	42	Usus	<i>Clinostomum sp</i>	3	1.244444444
	2023	S44	Sepat siam	14	32	Usus	-	0	1.166180758
	2023	S45	Sepat siam	14.5	36	Usus	<i>Clinostomum sp</i>	1	1.180860224
	2023	S46	Sepat siam	13.5	31	Usus	-	0	1.259970533
	2023	S47	Sepat siam	12	28	Usus	-	0	1.62037037



48	10/8/2023	S48	Sepat siam	11.5	24	Usus	-	0	1.578038958
49	10/8/2023	S49	Sepat siam	13	32	Usus	<i>Clinostomum sp</i>	8	1.456531634
50	10/8/2023	S50	Sepat siam	13.5	37	Usus	<i>Clinostomum sp</i>	19	1.503835797
51	10/8/2023	S51	Sepat siam	14	43	Usus	-	0	1.567055394
52	10/8/2023	S52	Sepat siam	13	32	Usus	-	0	1.456531634
53	10/8/2023	S53	Sepat siam	15	45	Usus	-	0	1.333333333
54	10/8/2023	S54	Sepat siam	15.5	49	Usus	-	0	1.315833641
55	10/8/2023	S55	Sepat siam	13	28	Usus	-	0	1.27446518
56	10/8/2023	S56	Sepat siam	13.5	33	Usus	<i>Clinostomum sp</i>	25	1.341258954
7	10/8/2023	S57	Sepat siam	14	34	Usus	-	0	1.239067055
58	10/8/2023	S58	Sepat siam	13	39	Usus	-	0	1.775147929
59	10/8/2023	S59	Sepat siam	13.5	37	Usus	-	0	1.503835797
60	10/8/2023	S60	Sepat siam	14	38	Usus	<i>Clinostomum sp</i>	9	1.38483965
61	11/8/2023	S61	Sepat siam	16	62	Usus	-	0	1.513671875
62	11/8/2023	S62	Sepat siam	12	25	Usus	-	0	1.446759259
63	11/8/2023	S63	Sepat siam	15	50	Usus	<i>Clinostomum sp</i>	66	1.481481481
64	11/8/2023	S64	Sepat siam	14	37	Usus	-	0	1.348396501
65	11/8/2023	S65	Sepat siam	14.5	45	Usus	-	0	1.47607528
66	11/8/2023	S66	Sepat siam	15	46	Usus	-	0	1.362962963
67	11/8/2023	S67	Sepat siam	14.5	33	Usus	-	0	1.082455205
68	11/8/2023	S68	Sepat siam	13	33	Usus	-	0	1.502048248
69	11/8/2023	S69	Sepat siam	16	58	Usus	-	0	1.416015625
	2023	S70	Sepat siam	14	41	Usus	<i>Clinostomum sp</i>	2	1.494169096
	2023	S71	Sepat siam	13	41	Usus	-	0	1.866181156
	2023	S72	Sepat siam	15	51	Usus	-	0	1.511111111
	2023	S73	Sepat siam	13	30	Usus	-	0	1.365498407



74	11/8/2023	S74	Sepat siam	16	48	Usus	-	0	1.171875
75	11/8/2023	S75	Sepat siam	15	62	Usus	-	0	1.837037037
76	11/8/2023	S76	Sepat siam	13.2	41	Usus	<i>clinostomum sp</i>	1	1.782633498
77	11/8/2023	S77	Sepat siam	15	53	Usus	-	0	1.57037037
78	11/8/2023	S78	Sepat siam	16	57	Usus	<i>Clinostomum sp</i>	4	1.391601563
79	11/8/2023	S79	Sepat siam	14	46	Usus	-	0	1.67638484
80	11/8/2023	S80	Sepat siam	13.5	35	Usus	-	0	1.422547376
81	11/8/2023	S81	Sepat siam	14	43	Usus	-	0	1.567055394
82	11/8/2023	S82	Sepat siam	14.5	49	Usus	-	0	1.607281971
83	12/8/2023	S83	Sepat siam	13.5	34	Usus	-	0	1.381903165
84	12/8/2023	S84	Sepat siam	16	54	Usus	-	0	1.318359375
85	12/8/2023	S85	Sepat siam	13.5	42	Usus	-	0	1.707056851
86	12/8/2023	S86	Sepat siam	14	41	Usus	<i>Clinostomum sp</i>	9	1.494169096
87	12/8/2023	S87	Sepat siam	15	55	Usus	-	0	1.62962963
88	12/8/2023	S88	Sepat siam	15	44	Usus	-	0	1.303703704
89	12/8/2023	S89	Sepat siam	14	42	Usus	-	0	1.530612245
90	12/8/2023	S90	Sepat siam	14	36	Usus	<i>Clinostomum sp</i>	16	1.311953353
91	12/8/2023	S91	Sepat siam	13	31	Usus	-	0	1.41101502
92	12/8/2023	S92	Sepat siam	15	55	Usus	-	0	1.62962963
93	12/8/2023	S93	Sepat siam	14	44	Usus	-	0	1.603498542
94	12/8/2023	S94	Sepat siam	15	51	Usus	-	0	1.511111111
95	12/8/2023	S95	Sepat siam	14	39	Usus	-	0	1.421282799
	2023	S96	Sepat siam	16	54	Usus	-	0	1.318359375
	2023	S97	Sepat siam	13	26	Usus	<i>Clinostomum sp</i>	5	1.183431953
	2023	S98	Sepat siam	15	47	Usus	-	0	1.392592593
	2023	S99	Sepat siam	13	34	Usus	-	0	1.547564861



100	12/8/2023	S100	Sepat siam	13	33	Usus	-	0	1.502048248
Jumlah								247	

Prevelensi= 28 ekor / 100 ekor x 100% = 28%

intensitas= 247 ind / 28 ekor = 9 ind/ekor



## Lampiran 2. (Chi-Square)

### Prevalensi (Chi-Square)

#### Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Lokasi * Tingkat infeksi	300	100.0%	0	0.0%	300	100.0%

#### Lokasi \* Tingkat infeksi Crosstabulation

Count

Lokasi		Tingkat infeksi		Total
		Ikan Terinfeksi	Tidak Terinfeksi	
Lokasi	Danau Tempe	21	79	100
	Danau Lampulung	34	66	100
	Danau Latamperu	28	72	100
Total		83	217	300

#### Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	4.231 <sup>a</sup>	2	.121
Likelihood Ratio	4.277	2	.118
Linear-by-Linear Association	1.220	1	.269
N of Valid Cases	300		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 27.67.



### Lampiran 3. Korelasi Spearman's

Hubungan Panjang dan berat ikan terhadap kelimpahan parasit *Clinostomum* sp

#### 1. Danau Tempe

### Nonparametric Correlations

#### Correlations

			Kelimpahan parasit	Berat ikan
Spearman's rho	Kelimpahan parasit	Correlation Coefficient	1.000	-.354**
		Sig. (2-tailed)		0.000
		N	100	100
	Berat ikan	Correlation Coefficient	-.354**	1.000
		Sig. (2-tailed)	0.000	
		N	100	100

\*\* . Correlation is significant at the 0.01 level (2-tailed).

#### Correlations

			Kelimpahan parasit	Panjang ikan
Spearman's rho	Kelimpahan parasit	Correlation Coefficient	1.000	-.285**
		Sig. (2-tailed)		0.004
		N	100	100
	Panjang ikan	Correlation Coefficient	-.285**	1.000
		Sig. (2-tailed)	0.004	
		N	100	100

\*\* . Correlation is significant at the 0.01 level (2-tailed).



## 2. Danau Lampulung

### Correlations

			Kelimpahan parasit	Berat ikan
Spearman's rho	Kelimpahan parasit	Correlation Coefficient	1.000	-0.084
		Sig. (2-tailed)		0.406
		N	100	100
	Berat ikan	Correlation Coefficient	-0.084	1.000
		Sig. (2-tailed)	0.406	
		N	100	100

### Correlations

			Kelimpahan parasit	Panjang ikan
Spearman's rho	Kelimpahan parasit	Correlation Coefficient	1.000	-0.009
		Sig. (2-tailed)		0.928
		N	100	100
	Panjang	Correlation Coefficient	-0.009	1.000
		Sig. (2-tailed)	0.928	
		N	100	100



### 3. Danau Latamperu

#### Correlations

			Kelimpahan parasit	Berat ikan
Spearman's rho	Kelimpahan parasit	Correlation Coefficient	1.000	-.214*
		Sig. (2-tailed)		0.032
		N	100	100
	Berat ikan	Correlation Coefficient	-.214*	1.000
		Sig. (2-tailed)	0.032	
		N	100	100

\*. Correlation is significant at the 0.05 level (2-tailed).

#### Correlations

			Kelimpahan parasit	Panjang ikant ikan
Spearman's rho	Kelimpahan parasit	Correlation Coefficient	1.000	-.205*
		Sig. (2-tailed)		0.041
		N	100	100
	Panjang ikan	Correlation Coefficient	-.205*	1.000
		Sig. (2-tailed)	0.041	
		N	100	100

\*. Correlation is significant at the 0.05 level (2-tailed).





## Hubungan factor kondisi terhadap kelimpahan parasit *Clinostomum* sp

### Danau Tempe

			faktor kondisi	Kelimpahan parasit
Spearman's rho	faktor kondisi	Correlation Coefficient	1.000	0.051
		Sig. (2-tailed)		0.617
		N	100	100
	Kelimpahan parasit	Correlation Coefficient	0.051	1.000
		Sig. (2-tailed)	0.617	
		N	100	100

### Danau lamapulung

			faktor kondisi	Kelimpahan parasit
Spearman's rho	faktor kondisi	Correlation Coefficient	1.000	-.200*
		Sig. (2-tailed)		0.046
		N	100	100
	Kelimpahan parasit	Correlation Coefficient	-.200*	1.000
		Sig. (2-tailed)	0.046	
		N	100	100

\*. Correlation is significant at the 0.05 level (2-tailed).

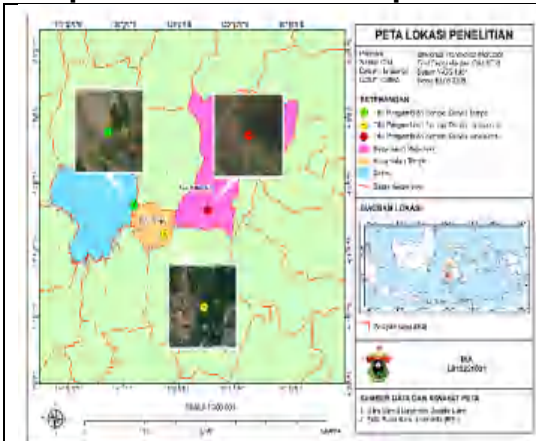
### Danau lamtamperu

#### Correlations

			faktor kondisi	Kelimpahan parasit
Spearman's rho	faktor kondisi	Correlation Coefficient	1.000	-0.026
		Sig. (2-tailed)		0.794
		N	100	100
	Kelimpahan parasit	Correlation Coefficient	-0.026	1.000
		Sig. (2-tailed)	0.794	
		N	100	100



## Lampiran 4 Dokumentasi penelitian



Peta lokasi penelitian



Pengambilan sampel



Packing sampel



Penimbangan berat ikan



Pengukuran panjang ikan sepat siam

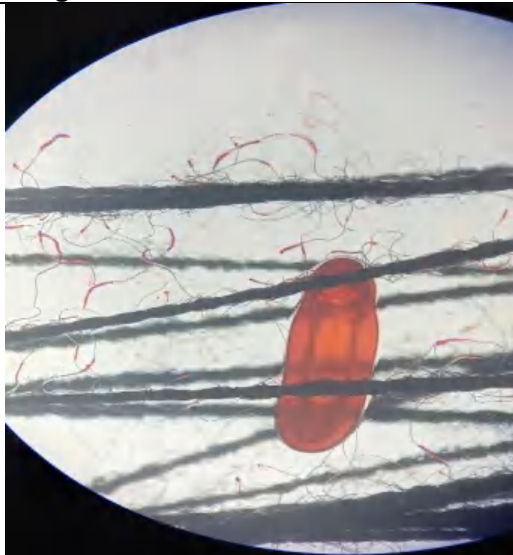




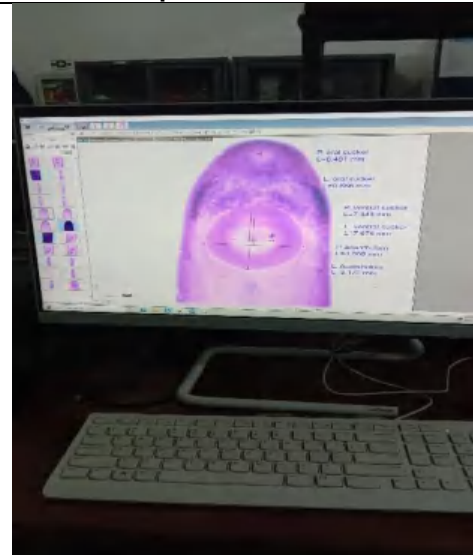
**Pengukuran kualitas air**



**Identifikasi parasit**



**Pewarnaan metazoa**



**Pengukuran parasit**



**DNA**



**Pengamatan histologi**

