Survey on skin and gill's helments and protozoa of Fahlian River' fish

Golchin Manshadi, A.R.¹; Ataei, A.² and Sadeghi Limanjoob, R.¹

Received: 12.11.2016 Accepted: 05.07.2017

Abstract

In this study 85 fish of 3 species were caught from 3 stations of Fahlian River'fish including Alburnus mossulensis, Cyprinion macrostomum, Capoeta barroisi persica in 2014 and after transferring to the Laboratory of Parasitology, Faculty of Veterinary Medicine, Islamic Azad University of Kazerun Branch were examined In terms of skin and gill's helments and protozoa. A total of 8 species were isolated and identified, including 2 monogenian speices (Dactylogyrus sp.),2 digenea (Postodiplostomum sp and Haplorchis sp.), 1 arthropoda (Lamprolegna sp),2 protozoa (Ichthyophthrius multifilis and Trichodina sp.) and 1 myxozoa (Myxobolus sp.). The results showed that the highest percentage of parasitic infestation was Ichthyophthirius multifilis and the lowest was Lamprolegna sp. Also Capoeta barroisi persica and Cyprinion macrostomum allocated the highest and the lowest percentage of parasitic infection, respectively. Based on the results of this study Haplorchis sp. was reported for the first time in Iranian freshwater. Cyprinion macrostomum for Haplorchis sp. and all three under study fish for Postodiplostomum sp. were reported as a new host. Also there was no significant relationship between infection of fish species and between infected organs (P>0.05).

Key words: Protozoa, Metazoan, Fahlian River, Fish

Corresponding Author: Golchin Manshadi, A.R., E-mail: golchinalireza@yahoo.com

¹⁻ Assistant Professor, Department of Aquatic Animal Health, Faculty of Veterinary Medicine, Kazerun Branch, Islamic Azad University, Kazerun, Iran

²⁻ DVM Gratuated from Faculty of Veterinary Medicine, Kazerun Branch, Islamic Azad University, Kazerun, Iran

Refrences

- Abbasi, K.; Moradkhah, S. and Rahimi, R. (2003). Identification and study of Black River fish distribution of Siah Darvishan Anzali Wetland, Bony fish research center of Khazar Sea. Research and Development Magazine, 19(1): 27-39. (in Persian).
- Barzegar, M.; Asadollah, S.; Hemmatzadeh, A.; Rahnama R. and Jalali, B. (2004). Parasites of Fishes in Beheshtabad River (Chaharmahal and Bakhtiari Province), Journal of Iranian Veterinary Science, 1(1): 67-74. (in Persian).
- Berg, L.S. (1964). Freshwater Fishes of USSR and adjacent countries, Vol,3 (English version). Nauka, Mos, Pp: 926-1382.
- Bush, O.B.; Ferandez, J.E.; Esch, G.W. and Seed, J.R. (2001). Parasitism, the diversity and ecology of animal parasites. Cambrigde university press, P: 652.
- Coad, B.W. (1992). Freshwater Fishes of Iran . A checklist and bibliography Ichthyology Section. Canadian museum of Nature. Ottawa, Ontario. Canada, Pp. 66-90.
- Evans, B.B. and Lester, R.J.G. (2001). Parasites of ornamental fish imported into Australia. Bulletin of the European Association of Fish Pathologists, 21(2): 51-55.
- Eslami, A.; Anwar, M. and Khatibi, Sh. (1972). Incidence and intensity of heliminthiasis in pike (*Esox lucius*) of the Caspian Sea (Northern Iran). Rivista Italiana Di Piascicolotura Ed Ittiopatologia, 1(1): 11-14.
- Farahnak, A.; Mobedi, I. and Tabibi, R. (2002). Fish Anisakidae Helminthes in Khuzestan Province, South West of Iran. Iranian Journal of Public Health, 31(3-4): 129-132.
- Fernando, C.H.; Furtado, J.I.; Gussev, A.V.; Kakong, S.A. and Hanek, A.V. (1972). Methods for the study of fresh water fish parasites, University of waterloo, Biology series. P: 76.
- Gjurcevic, E.; Petrinec, Z.; Kozaric, Z.; Kuzir, S.; Gjurcevic Kantura, V.; Vucemilo, M. and Dzaja, P. (2007). Metacercariae of Centrocestus formosanus in goldfish (Carassius auratus L.) imported into Croatia. Helminthologia 44(4): 214-216.
- Golchin Manshad, A.R.; Jalali, B.; Barzegar, M.; Mostafavi, E. and Reissy, M. (2011). Study on monogenes of native and introduced Parishan lake's fish, Iranian Journal of Biopathology, 7(1): 189-194. (in Persian).
- Golchin Manshadi, A.R.; Masoumian, M.; Jalali, B. and Barzegar Dowlafabadi, M. (2012). Protozoan and myxozoan Infections in Some Fishes of Parishan Lake. Asian Journal of Animal and Veterinary Advances, 7(9): 842-850.
- Gussev, A.V.; Jalali, B. and Molnár, K. (1993). Six new species of the genus Dactylogyrus (Monogenea: Dactylogyridae) from Iranian freshwater fishes. Zoosystematica Rossica, 2(1): 29-35.
- Gussev, A.V. (1983). The methods of collection and processing of fish parasitic Monogenean materials (In Russian), Nauka, Leningrad, Pp. 5-48.
- Gussev, A.V. (1987). Key to parasites of freshwater fishes of the soviet USSR. Izd. Nauka, Leningrad, USSR, Pp: 379-523.
- Jalali, B. (1998). freshwater fish parasites and parasitic diseases in Iran, Publications of Iran's Department of Fisheries and aquaculture, Second Edition, Pp. 274-271. (in Persian).
- Jalali, B.; Pappa, M. and Molnar, K. (1995). Four new Dactylogyrus species (Monogenea, Dactylogyridae) from Iranian fishes. Folia Parasitologica, 42(2): 97-101.
- Jalali, B. (1992). Description of Dogieliusmolnarin sp. (Monogenea, Dactylogyridae) from the gills of an Iranian freshwater fish, Cyprinion macrostomum (Heckel, 1843). Acta Veterinary, Hungaria, 40(7): 239-242.
- Jalali, B. and Monlar, K. (1990). Occurance of Monogeneans of freshwater fishes of Iran. Dactylogyrus spp. On cultured Iranian fishes. Acta Veterinary Hungaria, 38(4): 339-342.
- Lom, J. and Dykova, I. (1992). Protozoan Parasites of Fishes (Developments in Aquaculture and Fisheries Science). 1st ed, Elsevier Science, Amesterdam. P: 316.

- Masoumian, M. and Pazooki, J. (1998). Infection of some fish speies to Myxospora in Gilan and Mazandaran Provines. Iranian Journal of Fisheries Science, 7(3): 56-67.
- Masoumian, M.; Pazooki, J. and Ghasemi, R. (2004). Myxobolus spp. from three barbus fishes of Southern part of Caspian Sea. Journal Faculty Veterinary Medicine. Tehran University. (58)4: 329-334. (in Persian).
- Molnar, K. and Pazooki, J. (1995). Occurrence of philometrid Nematodes in barboid fishes of River Karun, Iran. Parasitologia Hungarica, 28(10): 57-62.
- Mood, S.M.; Ebrahimzadeh Mousavi, H.A.; Mokhayer, B.; Ahmadi, M.; Soltani, M. and Sharifpour, I. (2010). *Centrocestus formosanus* metacercarial infection of four ornamental fish species imported into Iran. Bulletin of the European Association of Fish Pathologists, 30(4): 146-149.
- Mokhayer, B. (1981). Survey on parasites of fishes from Sefid-Rood River. Journal Faculty Veterinary Medicine. Tehran University, 36(4): 61-75. (in Persian).
- Raissy, M.; Ansari, M. and Jalali, B. (2009). Identification of the parasites of Capoeta spp. from Kiar and Behesht-Abad rivers of Chaharmahal-Bakhtiari and first record of *Lamprolegna chinensis* from Iran. Veterinary Pathobiology, 1: 18-22. (in Persian).
- Scholz, T. and Salgado-Maldonado, G. (2000). The introduction and dispersal of *Centrocestus formosanus* (Nishigori, 1924) (Digenea: Heterophyidae) in Mexico: A review. American Midland Naturalist 143 (1): 185-200.
- Syed-Mortezaii, S.R.; Mobedi, E. and Farahnak, A. (2001). Infection in some freshwater fishes to the helminthes in Khuzestan province. Journal of Iranian Fisheries Sciences, 37(4): 25-36. (in Persian).
- Woo, P.T.K. (2006). Fish diseases and disorders, protozoan and metazoan parasites. CAB international, UK. Pp: 32-245.
- Yildiz, H.A. (2005). Infection with metacercariae of *Centrocestus formosanus* (Trematoda: Heterophyidae) in ornamental fish imported into Turkey. Bulletin of the European Association of Fish Pathologists. 25(5): 244-246.