


Turkish Journal of Zoology

Turkish Journal
of
Zoology

Changes in the Protein and Lipid Content of Muscle, Liver and Ovaries in Relation to
Diphyllobothrium spp. (Cestoda) Infection in Powan (Coregonus lavaretus) from Loch Lomond,
Scotland

Mustafa DÖRÜCÜ
Firat University, Faculty of Aquaculture 23119 Elazığ-TURKEY

 [Keywords](#)
[Authors](#)



zool@tubitak.gov.tr

[Scientific Journals Home
Page](#)

Abstract: The present study was carried out to examine the relationship between helminth infections, nutrient reserves and gonadal status in powan in relation to infection with *Diphyllobothrium* spp. The relationship between fish size and body composition was also investigated. The condition factor increased with increasing length for uninfected fish and decreased for infected fish. This demonstrates the negative effect of infection on the growth of the fish. The mean percentage of protein and lipid content of muscle, liver and gonads were 89 %, 71.7 % and 64.9 % and 5.03 %, 23.3 % and 14.5 % respectively. A statistically significant correlation appeared between the length of the fish and liver protein, gonad protein and the muscle lipid content of the fish. There was no difference between the body composition of male and female fish. There was a positive correlation between length and gonad lipid in uninfected fish. A negative correlation between muscle lipid and gonad lipid and liver lipid and gonad lipid showed that while fish build up gonads they use energy reserves from muscle and the liver. Fish in good condition had a high protein content in their gonads.

Key Words: Infection, *Diphyllobothrium* spp., *Coregonus lavaretus*, lipid, protein, muscle, liver, ovaries.

Turk. J. Zool., **24**, (2000), 211-218.

Full text: [pdf](#)

Other articles published in the same issue: [Turk. J. Zool., vol.24,iss.2.](#)