

SUMMARY

Histopathological investigations in the diseases of juveniles sea bream and sea bass

In this study, between the months of April 2011-August 2012 in a large-scale of hatchery and fry adaptation units, sea bream and sea basses showing sign of disease were examined. As a material, a total of 720 fry fish were used ranging from, weights from 0,1 to 3,3 g, lengths 2,0 to 8,0 cm 480 sea bass (*D. labrax*) and 240 sea bream (*S. auratus*). Before starting the dissection process, all fish was measured based on length and body weight with anesthesia (25 mg/L MS-222). Then, they were divided into three equal groups for pathological, microbiological and parasitological analysis.

As a result of the investigations two bacterial (*Vibrio anguillarum*, *Photobacterium damsela* subsp. *piscicida*), one viral (*Iridovirus*) and two parasitic (*Dactylogyrus spp.*, *Trichodina spp.*) diseases were detected in the examined fry fish. Vibriosis, Dactylogyrosis and Trichodiniasis in the sea bass, Lymphocystis in the sea bream and Photobacteriosis in both fish species were observed.

In the sea bass (75 fish) with vibriosis, unilateral-bilateral exophthalmos, bleeding in organs and tissues, prolapse of the anus and extending stool were prominent macroscopic findings. Microscopically clusters of bacteria in the organs and tissues together with hyperemia, heart macrophage activation and clusters of bacteria in macrophages were generally noted. In the (55 fish) sea bass and (63 fish) sea bream with Photobacteriosis, hyperpigmentation, flake shedding, and white miliary foci in the spleen were macroscopically determined. Microscopically clusters of bacteria in all organs and tissues, and hyperemia and granulomas in kidney and spleen were main microscopic findings.

In parasitic enfestastations such as opening of the operculum, holding water surface, pointing out the breathing difficulties which were typical clinical findings. In dactylogyrosis (65 fish); cachexia, edema and bleeding in gills, microscopic parasites adhesion to gill filaments, traumatic degradations and goblet cell hyperplasia were only seen in sea basses. In juvenile fishes with trichodiniasis (59 fish) 4-13 pieces of parasites were counted in 10 x magnification. Typical dome shape of the ciliated of trikodinas' was

evident on tissue sections. Hyperemia in the primary lamellae and degeneration and separations in the secondary lamellae were observed.

Lymphocystis, (80 fish) have appeared 100-120 day fry with chronic form. Fish mortalities have reached the level of 30-40 % which were transferred to cages. All juvenile sea breams skin surfaces were covered with nodules like blackberry. In microscopic examination typical basophilic inclusions were noted in the center of the multiple cysts, and all cysts surrounded by lymphoid cells.

For deformation control, macroscopic deformation was systematically evaluated from 7 tank consist of 300 pieces of 0,1 to 3,0 g sea bream with fluorescent lamp table. 2,95 % vertebral compression, 2,09 % lordosis, 8,14 % mouth deformation, 3,90 % air bladder deformation, 1,57 % gill deformation, 1,19 % dorsal fin and 0,38 % and caudal fin deformations were detected.

Outbreaks have increased especially during the summer months and it drew attention to the important differences between the sensitivity of two species. Parasitic infestation and disease control measures associated with the importance of the protection of diversity and not seem significant fluctuations in resource water temperatures. Detected high level deformations of sea breams (20, 22 %), repeated Photobacteriosis of sea basses (36 %) and Vibriosis with 40 % mortality rate of sea basses, especially the cultivation of juvenile fish, were found to be a significant problem. In this study, pathological findings of promoting etiological diagnosis of diseases investigations put forward the importance once again.

Key Words: Juvenile sea bream, juvenile sea bass, vibriosis, photobacteriosis, lymphocystis, deformation, pathology.