

Salmon caudal fin development (*Salmo salar*) [Desarrollo de la aleta caudal del salmón (*Salmo salar*)]

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Caudal fin pathologies and traumas can affect swimming, impede food and exhaust efficiency, and also increase susceptibility to bacterial and fungal infections. Adult salmon can regenerate their fin quickly and completely if it is amputated. However, yolk sac fry expressing anatomical defects in the caudal fin have been reported in southern Chile and are associated to a high mortality rate where regeneration does not occur. There are many studies on adult salmon but this description does not match the morphology of the juvenile phase. We describe the anatomy and histology of the caudal fin in salmon 15mm, 30 mm and 60 mm to facilitate the early diagnosis of diseases of the caudal fin. We worked with 60 salmon divided into three groups of 20 in steps of 15, 30 and 60 mm. 10 salmon from each group were processed with Hanken & Wassersug anatomical techniques. Another 10 fry from each group were processed using H&E/Alcian blue pH 2.5 techniques: for glycosaminoglycans and technical histochemistry Picrosirius Junqueira for collagen I and III. Upon hatching of fish (group 1) the caudal fin has no definitive form but has commenced training ray or lepidotriquias. In group 2, the caudal fin comprises from 19 to 20 lepidotriquias and two lobes one dorsal and one ventral, both are constituted under the notochord. Each lobe ray grows faster than the rays that lie between the lobes and a groove is formed between them. In group 3 clearly shows the bilobed flap, 19 lepidotriquias that are now in the process of calcification are maintained. Each lepidotriquia grows distally by forming joints and segments. In group 2 an average of 4?5 lepidotriquia joints were recorded and in group 3 there was an increase at 6? 10 joints. This description of normal fry flap facilitates comparative study of the deformed fin. © 2015, Universidad de la Frontera. All rights reserved.

Caudal fin

Development

Juvenile salmon

Lepidotrichia

Salmo salar