Laboratory work № 10

Manufacturing of fish skeleton

.Objective: To learn the method of manufacturing a fish skeleton

Materials and equipment: Fresh fish with length of 20–30 cm. Tools: scissors, scalpel, dissecting needles, ruler, cuvettes, tweezers, brush, thick thread, wire, plate, gasoline, .hydrogen peroxide

Basic theoretical information

A great exhibit and clearly material for studying the structure of fish is fish skeleton. Moreover its manufacturing is quite easily. There are several variants for placing fish skeleton, complete skeleton upright on a wired rack, half-skeleton on a black background to which it is attached by spine (Fig. 11). The biggest problem in the manufacturing of fish skeleton is that this work is very painstaking and requires a lot of attention, diligence and .patience

For choosing an object for the manufacturing of the skeleton, especially if the work is done for the first time attention must be paid to the species of fish that have a massive skeleton with thick bones. For example, carp fish (roach, carp, silver bream, and bream) have a thick edge and perch (pike, perch), herring (herring) and pike, on the contrary have thin and soft ribs, and work with them is difficult. Fish size also plays a significant role, do not use very large specimens, it is better to use medium-sized individuals it will greatly facilitate the .process of making the preparation

A

B

Figure 11. Variants of placement of fish skeleton. A – skeleton in an upright position at the .wired rack; B – half-skeleton attached to the timber

1. Wash the fish thoroughly to remove slime and scales. While cleaning fish from the scales it is important not to damage the fins. 2. Make a small incision on the ventral side of the body - in front of the anal fin, insert the edge of the scissors into this incision and cut through the skin of the fish to the pelvic fins. Make incision around the belly fins without cutting them. Bring cut up to the head. Remove any entrails of fish. 3. Remove fins of fish. Firstly remove abdominal fins with triangular bone in which they are held. The dorsal and anal fins need to be removed as follows: make two cuts by scissors on the sides of fins and remove them with their major bones. Cut off the tail fin with the last vertebra. Remove the pectoral fins. The remnants of the muscles should be removed from bases of fins by a brush, for this purpose only bases of fins can be immersed briefly to boiling water. When the fins are cleared of residual muscle, they should be whitened; they need to be put for some time in a solution of hydrogen peroxide. Then rinse them in water, spread and put on a plate, cover with sheet and leave to dry under the pressure. 4. Divide the fish head from the body. Remove the gills. Using a scalpel and needle it is necessary to clean maximally the skull and remove brain. Remove excess fat. 5. Remove fish muscles roughly through their cut along the spinous processes of the vertebrae. Clipped muscles should be pushed and cut at the beginning of ribs. Cleaning of the axial skeleton from muscles must be done with a scalpel, tweezers and brushes. If the muscles fade badly, hot water can be used - the fish need to be immersed to the boiling water for a very short time. The main thing is not overdo fish in hot water because the skeleton may disintegrate. It is necessary to scrape muscles very gently in a combination of ribs with the vertebrae so as not to tear them away from the spine. Clear ribs from the muscles.