



Fig. 93. ADULT RED-BREASTED MERGANSERS WHOSE DEATH HAD BEEN CAUSED IN EACH CASE BY THE ATTEMPT TO SWALLOW A SCULPIN.

Water Fowl and Sculpins.—Two instances of water fowl dying as the result of attempting to swallow large sculpins have been brought to my attention recently and are herewith recorded.

In the first instance (figure 93) two male Red-breasted Mergansers (*Mergus serrator*), each with a large sculpin wedged in the throat, were picked up in the sea near Victoria, British Columbia. This was early in May, 1928. I was informed by Mr. W. N. Lenfesty of Victoria, who photographed the subjects, that the spines of the fish, in each case, had passed through the cheeks of the bird.

The second instance, a female Pied-billed Grebe (*Podilymbus podiceps*), was picked up on Quamichan Lake, Vancouver Island, and brought to me by Game Warden Marshall, of Duncan. In this case the sculpin (*Cottus asper*) measured 130 mm. and about half this length protruded from the grebe's mouth. The sharp spines on the preopercula had lodged so securely in the lining of the bird's throat that considerable force was required to remove the fish.—J. A. MUNRO, *Okanagan Landing, British Columbia, May 15, 1930.*

Under-water Behavior of Red-throated Loons.—Authorities seem to be divided on the question of whether or not the Red-throated Loon (*Gavia stellata*) employs its wings as an aid to propulsion under water. For example, Forbush (*Birds of Massachusetts, I, p. 29*) states: "Like the Loon, it uses its wings under water when necessary to increase its speed;" and he quotes Dr. George Suckley to the effect that "the bird used the wings as in flying in addition to the ordinary motions of the feet." On the other hand, Hoffmann (*Birds of the Pacific States, p. 3*) writes: "Propelled by powerful strokes of its webbed feet, it follows every dart or winding of its victim."

An exceptionally favorable opportunity which I had for watching the under-water behavior of two Red-throated Loons, on April 3, 1930, convinced me that in this instance, at least, they positively did *not* use their wings. The observations were made from the pier of the San Diego Yacht Club, at Roseville, San Diego Bay. The morning was clear and bright, the tide medium. At the time, the deck of the pier was about seven feet above the water. The beach at this point is almost flat and for 100 feet off-shore the water does not reach a depth of over four feet. The bottom is a hard, muddy sand and, as there was no wind, the water was calm, making conditions perfect for visibility.

Two Red-throated Loons in winter plumage were observed fishing close to the pier and I watched them for fully half an hour. There were numerous schools of small fish from two to four inches in length feeding in the neighborhood. The loons would dive, swim slowly in a large arc until they had driven the fish into shallow water, then each would suddenly put on a remarkable burst of speed, apparently single out an individual fish and, two times out of three, succeed in catching it. As my eyes were only twelve to thirteen feet above the water and as the loons were never over 100 feet away, and at times immediately under me, their every move was noticeable.