

Some waterfowl diving times.—On 30 November 1963 at Brigantine National Wildlife Refuge near Oceanville, New Jersey, we measured with a stopwatch the diving times of two Horned Grebes (*Podiceps auritus*), two Pied-billed Grebes (*Podilymbus podiceps*), and one Ruddy Duck (*Oxyura jamaicensis*). Our data are presented in the table.

Species	Number of diving observations	Diving time in seconds			Mean and SD (in sec)	SE (in sec)
		Minimum	Maximum	Mean		
<i>P. auritus</i>	11	8.2	25.8	19.24	19.24 ± 6.11	1.93
<i>P. auritus</i>	25	8.2	22.3	17.38	17.38 ± 3.80	0.77
<i>P. podiceps</i>	4	8.9	16.6	12.70	12.70 ± 2.77	1.60
<i>P. podiceps</i>	10	6.2	12.4	9.37	9.37 ± 1.82	0.60
<i>O. jamaicensis</i>	25	17.4	21.8	19.78	19.78 ± 1.14	0.23

The Horned Grebes which we timed remained underwater for less than half a minute during each of their dives. This closely approximates the data presented by Stone (1937. Bird Studies at Old Cape May. Vol. 1. p. 80) who, along coastal New Jersey, recorded them remaining "submerged for from thirty to thirty-five seconds." Conversely, Eaton (1910. Birds of New York. Vol. 1. p. 95) observed the species submerged for 3 minutes, and Bent (1919. U. S. Natl. Mus. Bull. No. 107, p. 24), quoting Charles W. Townsend, states that the bird can remain underwater for 30 to 50 seconds or longer. Palmer (1962. Handbook of North American Birds. Vol. 1. p. 79) records 1.25 minutes as the submergence time for Horned Grebes in deep dives. Localized ecological conditions are possibly responsible for these variations.

A review of several important North American ornithological books revealed no data concerning Pied-billed Grebe and Ruddy Duck diving times. No journal search was made.—DONALD S. HEINTZELMAN, 629 Green Street, Allentown, Pennsylvania, AND CAROLE J. NEWBERRY, 31 Lincolnshire Road, Webster, New York, 2 February 1964.

Mixed trio of a Shoveler drake and Blue-winged Teal pair.—On five occasions in the spring of 1962, a male Shoveler (*Spatula clypeata*) was observed attempting to displace the male of a Blue-winged Teal (*Anas discors*) pair. This behavior was observed at the same site on four different days between 21 May and 28 May while I was conducting a waterfowl nesting study at Lower Souris National Wildlife Refuge in North Dakota.

The first observation occurred between 9:40 and 10:48 AM on 21 May. I first observed the Shoveler between a female Blue-wing and two male Blue-wings on the water of a small bay. The Shoveler continuously head pumped. He rushed repeatedly with bill open at one male Blue-wing who persistently tried to reach the female. The other male Blue-wing, an unmated bird that had previously been captured and marked with plastic nasal discs, remained at a distance and took no part in the activities. This conflict continued for 20 minutes on the water and then for 50 minutes in a crested wheatgrass (*Agropyron cristatum*) meadow where the female Blue-wing was apparently searching for a nest site. The conflict was continuous during the observation except for three brief periods of rest and preening, amounting in total to slightly over 1 minute. Whereas the female Blue-wing had rushed at the Shoveler at 10:20 AM, she sat side by side with him during brief rest periods at 10:28 and 10:34 AM. Again on 21 May, at 5:15 PM, I observed the same behavior by this male Shoveler. One additional male Blue-wing besides the original contestants and the marked