

Boyd Lake, whereas cattails and bulrushes were typical at the others. The supporting mats under the nests, usually green bulrushes, were often placed on submerged snags when these were available.

In exposed colonies the grebes often left the nests while I was still several hundred yards away. They swam well out into open water where they waited, calling noisily. Where the cover was denser, however, I managed to approach within ten feet of some incubating birds.

TABLE 1
DISTRIBUTION OF CLUTCH SIZES IN WESTERN GREBE NESTING COLONIES AT FOSSIL CREEK
RESERVOIR, COLORADO

Clutch size June 2, 1957		Clutch size June 8, 1958		Clutch size June 5, 1959	
Number of nests		Number of nests		Number of nests	
SW end		SW end—None SE end		SW end—None SE end	
1	12	1	10	1	6
2	7	2	9	2	16
3	1	3	19	3	49
4	1	4	32	4	54
Total	21	5	35	5	11
		6	10	6	1
		Total	115	Total	137
SE end					
0	2				
1	5				
3	1				
Total	8				

In 1960 the reservoirs around Fort Collins failed to reach capacity by two or three feet, and there was no nesting at the known sites as the water did not flood the cover. However, grebes lingered in small numbers, and I have no doubt that nesting will be re-established when conditions permit.—DONALD G. DAVIS, *Timnath, Colorado, December 15, 1960.*

The Flight Speed of a Red-breasted Merganser.—In the course of investigating the terrestrial avifauna of the Cape Thompson area of northern Alaska for the United States Atomic Energy Commission, several low aerial reconnaissance flights of the Kukpuk River (latitude 68° 22'N, longitude 166° 00'W) were made. On May 29, 1960, a flock of six Red-breasted Mergansers (*Mergus serrator*) was flushed from the river ahead of the airplane. The area in which this flock was flushed was bordered on the south by a sheer bluff, rising to about 30 feet, and on the north by a bank 4 feet high. The wind was blowing from the west at 20 miles per hour. At the time the ducks were flushed we were flying east up the river. When the ducks took flight, all the birds turned aside except one male which flew slightly below and ahead of the airplane. This bird with a burst of speed managed to keep his position in relation to the aircraft for about 1500 feet before finally losing ground and turning aside. The air speed of the airplane during the chase was 80 miles per hour. The 20 miles per hour wind from the west added to the 80 miles per hour air speed would give the bird a ground speed of 100 miles per hour.

Similar flights had been conducted several times before and although mergansers had been flushed, none behaved in such a manner that an air speed could be calculated.

Cooke (Flight Speed of Birds, U. S. Dept. Agr. Circ. 428, 1937) did not list the flight speed of the Red-breasted Merganser in her compilation of flight speeds. The fastest speed of a duck that she recorded was that of a Canvasback (*Aythya valisineria*) with a clocked speed from an airplane of 72± miles per hour.—MAX C. THOMPSON, *Arctic Health Research Center, Anchorage, Alaska, November 25, 1960.*

Notes on Bird Nests Found in a Desert Shrub Community Following Nuclear Detonations.—In the past three years I have conducted investigations in plant ecology at the United States Atomic Energy Commission's Nevada Test Site, Nye County, Nevada, under A. E. C. Contract Num-

ber AT (29-2) 517. In the course of these investigations chance observations of bird nests were recorded.

The purpose of this note is to report the occurrences of these nests in relation to the gross influences of nuclear detonations (air bursts), which occurred prior to September 2, 1957, upon the vegetation of a desert shrub community.

Nuclear explosions differ from conventional explosions primarily in the attainment of extremely high temperatures and the emission of nuclear radiations. The tremendous heat released is the primary destructive agent of vegetation and creates a large circular burn in the community. A nuclear device of nominal energy yield (approximately 20 kilotons), positioned far enough above the ground to prevent the fire ball from contacting the soil surface, is capable of destroying the vascular vegetation within a radius of 0.6 miles (table 1). The powerful shock winds produced have little apparent effect upon low growing plants beyond the limits of extensive thermal damage, although these shocks may break tall Joshua trees at distances of more than a mile.

TABLE 1

BIRD NESTS FOUND IN THE VICINITY OF A NUCLEAR DETONATION SITE,
 NYE COUNTY, NEVADA, 1958, 1959, AND 1960

Distance in miles from detonation point	Gross damage to vegetation	Kinds and numbers of active nests found
2.5-1.3	Undamaged desert shrub community. Joshua trees (<i>Yucca brevifolia</i>), scattered. Dominant shrubs, hopsage (<i>Grayia spinosa</i>) and <i>Lycium andersonii</i> . Sparse bunch grasses, rice grass (<i>Oryzopsis hymenoides</i>), and desert needle grass (<i>Stipa speciosa</i>). Variable understory of small winter annuals, primarily <i>Chaenactis steviodes</i> .	<p>Joshua trees</p> <p>Swainson Hawk (<i>Buteo swainsoni</i>), 1, 1960; eggs 2, young 2.</p> <p>Western Kingbird (<i>Tyrannus verticalis</i>), 1, 1960; eggs 3.</p> <p>Mockingbird (<i>Mimus polyglottos</i>), 1, 1960; eggs 3, young 3.</p> <p>Shrubs</p> <p>Black-throated Sparrow (<i>Amphispiza bilineata</i>), 2, 1960; eggs 3, 3.</p>
1.3-0.7	Joshua trees broken by shock winds.	<p>Shrubs</p> <p>Brewer Sparrow (<i>Spizella breweri</i>), 3, 1958; eggs 4, 3, 3, young 4, 3, 2.</p> <p>Black-throated Sparrow (<i>Amphispiza bilineata</i>), 1, 1960; eggs 3.</p>
0.7-0.6	Shrubs destroyed by heat and shock but bunch grasses survive.	None found.
0.6-0	All standing vascular plants destroyed. Revegetation by annuals, primarily <i>Mentzelia albicaulis</i> and Russian thistle (<i>Salsola kali</i>).	<p>Ground</p> <p>Horned Lark (<i>Eremophila alpestris</i>), 1, 1960; young 2.</p> <p>Concrete building</p> <p>House Finch (<i>Carpodacus mexicanus</i>), 1, 1960; eggs 5, young 5.</p> <p>Say Phoebe (<i>Sayornis saya</i>), 1, 1958, 1959, 1960; eggs 5, 5, 5, young 5, 5, 5.</p>

The results of field observations are reported in table 1. The nest found nearest the detonation point was that of a Horned Lark (*Eremophila alpestris*). This nest was about 0.2 miles from ground zero and was discovered in April, 1960. The destruction of shrubby vegetation appears to modify the community in favor of Horned Larks. At all seasons populations of Horned Larks are greater in the disturbed area than in the adjacent shrub-dominated vegetation.—W. H. RICKARD, *Mercury, Nevada, December 20, 1960.* (Present address: Biology Laboratory, Hanford Laboratories, Richland, Washington.)