

taken 3 miles east of Camelback Mountain, 4,350 feet, on 19 September 1961. It was presumably a fall migrant, being very fat. This species seems to have disappeared as a breeding bird in Utah along with the removal of grassland through overgrazing.

Lapland Longspur (*Calcarius lapponicus alasensis*).—Evidence is mounting that the longspur, heretofore considered hypothetical or accidental in the state, is actually a regular, although uncommon, winter visitant, at least in the northern part of Utah. Porter (1954. *Condor*, 56:364) reported a specimen from the Dugway Proving Grounds, Tooele County, taken on 13 April 1953, representing the race *C. l. lapponicus*. However, the race *C. l. alasensis* seems to be more common, for Porter (loc. cit.) reports a specimen of this race also from Dugway taken on 3 November 1953, and Killpack (1953. *Condor*, 55:152) and Killpack and Hayward (1958. *Great Basin Nat.*, p. 25) give several records from the Uinta Basin around Roosevelt and Myton. A hitherto unreported specimen of *C. l. alasensis* was taken by William H. Behle at the Farmington Bay Waterfowl Management Area on 5 November 1955. Another representative of *alasensis* from Dugway is a male found dead on 9 October 1957, beside a building 3 miles east of Camelback Mountain, Tooele County.—WILLIAM H. BEHLE, JOHN B. BUSHMAN, AND CLAYTON M. WHITE, *Department of Zoology, and Ecology and Epizootology Research, University of Utah, Salt Lake City and Dugway, Utah, 15 March 1963.*

Production of sterile eggs in the Dickcissel.—Because female Dickcissels (*Spiza americana*) are secretive, their nests are difficult to find, and little is known about incubation in this species. Gross (1921. *Auk*, 38:169) reported that of eleven nests that were studied in 1918 in the state of Illinois, sterile eggs were contained in six. Some "sterile" eggs were broken open by Gross and were found to show no embryonic development. Of five eggs contained in one nest, four were sterile.

In late May to early July 1963, nine nests containing eggs of the Dickcissel were found within 4 miles of Lawrence, Kansas. Observation of these nests until their eggs hatched or were destroyed by predators (four nests were robbed) revealed that of five nests, four contained sterile eggs. In one nest containing five eggs, two were sterile. Sterile eggs were found, one in each nest, in two nests containing three eggs and in one nest containing five. The one nest lacking a sterile egg contained only three eggs. Therefore, in northeastern Kansas as well as in Illinois the production of sterile eggs in the Dickcissel is seemingly not uncommon.

It is difficult to show adaptiveness in the production of sterile eggs because their production requires an expenditure of energy. Laying of sterile eggs entails making unnecessary trips to the nest, increasing the chance that predators find it.

Skutch (1957. *Ibis*, 99:69-93) suggested that incubation by both male and female is primitive behavior. In the Dickcissel all of the duties of nest building, incubation, and care of young are now performed by the female (Gross, op. cit.). The male is brightly colored, resembling in color and pattern the meadowlark; whereas the female is obscure in color and pattern. Selection may have been, therefore, in favor of a small brood so that the female, in assuming all responsibility for it, could find and bring sufficient food for the young. Obviously, a decrease in clutch size would decrease the brood size; but it is suggested that in the Dickcissel the brood size has been decreased by the production of sterile eggs. If so, the physiological mechanisms governing clutch size in this species seem to be relatively more immutable than those governing fertilization.

I thank J. Knops, of the University of Kansas, and my wife, C. F. Long, for helping with the field studies.—CHARLES A. LONG, *Department of Zoology, University of Illinois, Urbana, Illinois, 8 October 1963.*