

capture nesting geese with this method may be considerable, the technique proved to be a very workable means of capturing nesting Canada Geese.—MICHAEL C. ZICUS, *Department of Entomology, Fisheries, and Wildlife, University of Minnesota, St. Paul, Minn. 55108*. Received 23 November 1974, accepted 16 January 1975.

Dwarf eggs laid by a Starling.—On 30 April 1974, two undersized eggs were found in a Starling (*Sturnus vulgaris*) nest box near Kennett Square, southeastern Pennsylvania. The eggs, which were light bluish-green in color and had the normal surface texture of Starling eggs, measured 15.1 x 13.3 and 19.1 x 15.3 mm. They weighed 1.4 and 2.5 g, respectively, or 20 and 36% of the average weight of Starling eggs (7.0 g fide Kessel, *Amer. Midl. Nat.*, 58: 259-331, 1957).

On 29 April 1974, at 0900 the nest box had contained a completed Starling nest. The eggs were discovered at 1700 the following day. Because Starlings commonly lay their eggs after 0900, the eggs could have been laid by the same female on consecutive days. The eggs were present in the nest on 1 May at 1700, but the smaller egg disappeared before 1130 the following day. On 2 May the larger egg was broken open and found to lack a yolk. No additional eggs were laid in the nest box during the remainder of the breeding season. Undersized eggs had not previously been found in this colony over a period of five years, during which about 400 clutches, consisting of perhaps 2,000 eggs, were observed.

Kessel (op. cit.) does not mention finding undersized Starling eggs near Ithaca, New York. Dwarf eggs are, however, well-known in the domestic hen (Romanoff and Romanoff, *The Avian Egg*, New York, Wiley, 1949: 256-262, 295-298). Dwarf eggs have also been reported in several passerines (Ingersoll, *Condor*, 12: 15-17, 1910; M'Williams, *Scot. Nat.*, 166: 108-110, 1927). The relative volumes of dwarfs in Figure 8 of Ingersoll's paper, calculated from their dimensions and expressed as a percent of the volumes of normal eggs from the same clutch, are 35% (*Icteria virens*), 38% (*Carpodacus mexicanus*), and 45% (*Catharus ustulatus*). Ingersoll noted that "The yolk is generally present but sometimes much reduced in quantity and occasionally entirely lacking." M'Williams (op. cit.) stated that most dwarf eggs are yolkless. In the domestic fowl, yolks are always present in eggs greater than 57% normal weight and always absent from eggs less than 20% normal weight (Romanoff and Romanoff, op. cit., p. 295). Yolkless dwarf eggs apparently can form around a dry object (e.g., a blood clot or fragment of yolk) introduced into the oviduct. Yolkless eggs may even follow normal ovulation if the ovum is prevented from entering the oviduct, perhaps by an infection of the funnel of the oviduct. The yolk ends up in the body cavity. Consecutive dwarf eggs laid by the same female was not mentioned either by the Romanoffs or by Ingersoll, but M'Williams (loc. cit.) reported finding more than one miniature egg in otherwise normal clutches, and two cases of full clutches of miniatures in the Songthrush (*Turdus philomelos*). M'Williams estimated the proportion of dwarf eggs among all birds to be 1 per 1,000 or 2,000, and probably less among passerines.—ROBERT E. RICKLEFS, *Department of Biology, University of Pennsylvania, Philadelphia, Pennsylvania 19174*. Received 22 December 1974, accepted 30 January 1975.

Co-roosting of Barred Owls and Common Grackles.—Common Grackles (*Quiscalus quiscula*) flock in large numbers throughout most of the year (Meanley, 1971). Graber and Graber (1963) in their intensive censuses of Illinois birds reported the grackle as "encountered commonly in summer throughout the state." The Barred Owl (*Strix varia*) is found in dense woods, swamps, and thick pines (Bent, 1938). In Illinois its habitat seems to be mostly in second-growth oak-hickory (*Quercus-Carya*) forests often along streams or lakes. When pine plantations are available owls will use them as roosting and feeding sites. I have recorded data on use of pine plantations by Barred Owls from several locations in central and southern Illinois since 1969.

In June and July of 1974, while studying birds in a utility right-of-way in Morgan Co., Illinois (Applegate, 1975), I discovered that an apparent family group of Barred Owls (male, female, three young) was using an Eastern White Pine (*Pinus strobus*) plantation with a flock of approximately 2,500 grackles. The plantation was 2 acres in size with trees averaging from 3-9 meters high. The stand was 9 years old.

An examination of the plantation floor in June and July revealed large quantities of grackle feathers, droppings, and occasionally a few wings. These items were used to locate concentrations of roosting grackles at night. Observations at night revealed the presence of grackles and the owls. Owl pellets were found around the grackle roost. An examination of the Barred Owl pellets revealed remains of grackles and parts of Box Turtles (*Terrapene carolina*), but only a cursory examination of the pellets was made. In previous years of examining pellets I had not found remains of grackles or turtles.

A brief review of the literature revealed little published material on co-roosting of Common Grackles and Barred Owls, of large family groups or of Barred Owls preying on Common Grackles. Bent (1938) lists several bird species in the Barred Owl diet but does not mention grackles specifically. The term blackbird is, however, used by Bent and could also refer to the grackles as well as the Red-winged Blackbird (*Agelaius phoeniceus*), Boat-tailed Grackle (*Cassidix major*), Bobolink (*Dolichonyx oryzivorus*), and the Brown-headed Cowbird (*Molothrus ater*) according to Meanley (1971). Munyer and Parmalee (1966) listed primarily mammalian prey for this owl. Korschgen and Stuart (1972), in an extensive study of raptor food habits, found that Barred Owls eat principally mammals in spite of the fact that their data did not cover a significant amount of summer periods in the 20-year study.

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