

BRIEF NOTE

Wild Turkey Egg Laying in Ruffed Grouse Nests¹

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ABSTRACT. Egg laying by wild turkey in ruffed grouse nests has been previously documented only once and that observation occurred in New York State. Four additional instances of ruffed grouse nests containing wild turkey eggs are reported here from Ohio. Follow-up visits at two of the four grouse nests revealed no trace of the female, nest, or eggs. In the remaining two nests, incubation progressed beyond the 23-24 day period for ruffed grouse. Both of these nests failed to hatch live grouse chicks, but evidence indicated that two turkey poults (incubation period 28 days) hatched from one of the nests, presumably accompanied by the female grouse.

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INTRODUCTION

Wild turkeys (*Meleagris gallopavo silvestris*) have been restored throughout or to parts of 46 of the 88 counties of Ohio after extirpation in the early 1900s (Donohoe 1990). Turkey restoration efforts, initiated in the late 1950s, have been concentrated almost exclusively in the more forested eastern unglaciated portion of the state where resident ruffed grouse (*Bonasa umbellus monticola*) populations have existed since times prior to human settlement. From 1971 to the present, the Forest Wildlife Project (Ohio Department of Natural Resources, Division of Wildlife) has investigated reports of ruffed grouse nests. During this period, four instances of ruffed grouse nests containing wild turkey eggs have been recorded and are reported here.

MATERIALS AND METHODS

Reports of ruffed grouse nests were solicited from Division of Wildlife personnel and were voluntarily received from other sources. Reported nests were revisited by Project personnel accompanied by the initial observer to establish location and to complete a nest observation form. When this was not feasible, the initial observer was given an observation form and asked to complete it. The observation form was used to record nest location, habitat, and concealment; additionally, the status of the nest (e.g., presence of the incubating female, number of eggs present, hatched or destroyed) was recorded initially and after each revisit. Unusual circumstances like the presence of wild turkey eggs, were also noted. For unattended nests or nests where the incubating female was inadvertently flushed, an egg was removed from the nest, immersed in water to estimate the stage of incubation (Westerskov 1950), and returned to the nest. The normal incubation period for ruffed grouse is 23-24 days (Johnsgard 1973) and that for turkey is 28 days (Schorger 1966). Revisits were normally scheduled at weekly

intervals taking precautions not to disturb any incubating female until the fate of the nest was determined.

RESULTS

A total of 38 ruffed grouse nests were investigated from 1971 through 1991. Four of these nests contained wild turkey eggs.

On 1 May 1979, R. Bryte (ODNR, Div. Wildl.) reported flushing a grouse from a Hocking County, Star Township nest containing 10 grouse eggs and one turkey egg. The nest was not revisited again until 4 June when no sign of the nest or eggs was found.

On 26 April 1989 a hunter reported a nest in Vinton County, Brown Township, containing nine grouse eggs and three turkey eggs. The nest was revisited on 26 April and again on 4, 11, 19, and 25 May. On each visit, the incubating female grouse was observed on the nest. On 25 May the female was inadvertently flushed revealing seven grouse eggs, two turkey eggs, and one dead grouse hatchling in the nest; one grouse and one turkey egg lay outside the nest, presumably bumped from the nest when the female flushed. The nest was revisited on 6 June and evidence of only two broken, unhatched turkey eggs was found. Thirty days elapsed between 26 April when the female was first observed on the nest and 25 May when she was flushed from the nest.

On 21 April 1991, L. Toki (ODNR, Div. Wildl.) reported and photographed a grouse nest containing 12 grouse eggs and three turkey eggs in Perry County, Saltlick Township. On 24 April a grouse egg from the nest was immersed in water and incubation was estimated at approximately three days. The nest was revisited and the incubating female observed on 30 April, and on 7 and 15 May. On 21 May, two hatched turkey eggs along with 12 unhatched grouse eggs and one unhatched turkey egg were found in the nest. The turkey egg and two grouse eggs were opened and no visible embryos were found, however the contents were badly addled. The estimated hatching date was 14 May for the grouse eggs and 18 May for the turkey eggs. The fate of the female grouse and the two turkey poults was unknown; no sign of either was found at or near the nest site.

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Again, on 21 April 1991, R. Brown reported and photographed a grouse nest containing 13 grouse eggs and four turkey eggs in Monroe County, Wayne Township. The nest was revisited and the hen grouse observed on the nest every three days thereafter until 5 May when no trace of the female or eggs was found.

DISCUSSION

Schorger (1966) cites instances of more than one turkey hen laying eggs in the same turkey nest with clutches ranging from 26-42 eggs. Such behavior among conspecifics is frequently referred to as dumping or nest parasitism and is considered common among Galliformes (Rohwer and Freeman 1989). The ring-necked pheasant (*Phasianus colchicus*), an exotic Galliform in North America, is known to lay eggs in the nests of conspecifics (Edminster 1954), as well as the nests of other species, including ruffed grouse (Kimmel 1988). The only other reported instance of wild turkey laying eggs in a ruffed grouse nest was provided by R. O'Neil of Ticonderoga, NY, and consisted of a grouse nest containing eight grouse eggs and four turkey eggs (Kennamer 1989).

Four of the 38 grouse nests investigated contained wild turkey eggs. This is not likely to represent the frequency of turkey/grouse nesting interactions in the wild because of the tendency to report such nests as unusual. It is reasonable to conclude that grouse nests containing turkey eggs stand a reduced chance of successfully hatching a brood of grouse. The larger size of the turkey egg (approximately three times the volume of a grouse egg) may impede incubation by a female grouse by preventing or reducing body contact with the smaller

grouse eggs. Two of the four grouse nests that contained turkey eggs exceeded the 23-24 day incubation period for grouse and both nests failed to hatch live grouse chicks. Evidence indicated that two turkey poultts successfully hatched from one of these nests. This leads to speculation that the turkey poultts left the nest site accompanied by a surrogate female ruffed grouse, since no sign of either the poultts or the grouse was found near the nest site.

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