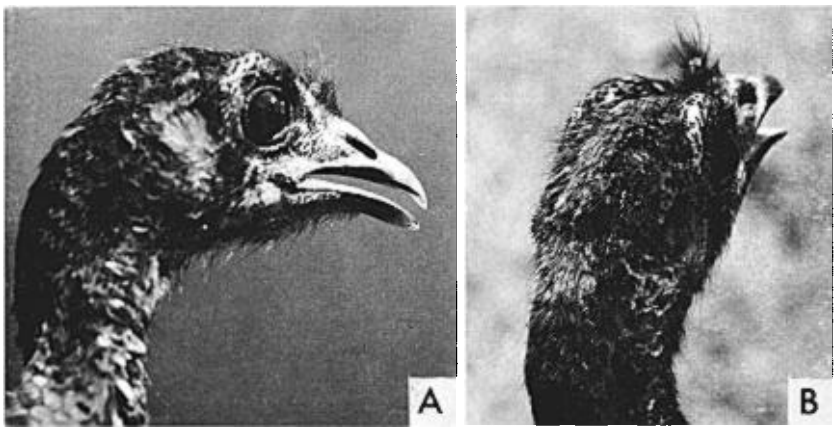

Figure 1. An adult wild turkey hen with fully feathered head.

This adult hen was captured in March 1971 in Osceola County, Florida in connection with the Game and Fresh Water Fish Commission turkey restocking program. The typical hairlike bristles of the head were accompanied by other feathers with much more vane. The extra feathers were slate-colored, which made the hen seem black-headed. There were no semi-plumes such as those Schorger (Auk, 87: 168, 1970) reports in specimens he described as a new extinct subspecies (*M. g. tularosa*) from Arizona and New Mexico.

Although I cannot find turkeys with fully feathered heads reported in scientific literature, old-timers in Florida have a well-known legend about turkeys they shot or heard about with "hairy" heads.—LOVETT E. WILLIAMS, JR., *Game and Fresh Water Fish Commission, Wildlife Research Projects Office, Gainesville, Florida 32601.* Accepted 29 Apr. 71.

A behavioral attitude of Saw-whet and Boreal Owls.—The concealing pose of both the Screech Owl (*Otus asio*) and the Long-eared Owl (*Asio otus*) has been frequently reported (e.g. Bent, U. S. Natl. Mus., Bull. 170: 163, 255, 1938), and the erect camouflaging posture of the Elf Owl (*Micrathene whitneyi*) is well-documented (Ligon, Univ. Michigan, Misc. Publ. No. 136: 63, 1968). The only reference to the similar behavior of the Saw-whet Owl (*Aegolius acadicus*) is that of Taylor (Blue Jay, 20: 118, 1962): "When approached, they straighten up, draw their feathers in tightly to the body, making themselves appear as long and thin as possible, and remain quite motionless. This attempt to avoid detection is termed 'freezing'." I would expand Taylor's observation as follows:

While roosting during the day, undisturbed Saw-whet and Boreal Owls (*Aegolius funereus*) have a rounded or oval appearance, with the plumage of the breast and upper back fluffed out (not appressed), eyes closed to slits, and head either directed forward or turned over the back. Disturbance during such daytime roosting frequently induces a concealing pose (Figure 1A), characterized by four simultaneous changes: the plumage of the breast and upper back is tightly appressed, giving the owl a narrowly oblong appearance; the closed wing nearest to the intruder is directed toward him, and raised to a level with the bill (if the intruder moves to either side, the owl, now appearing to look over a hunched shoulder,

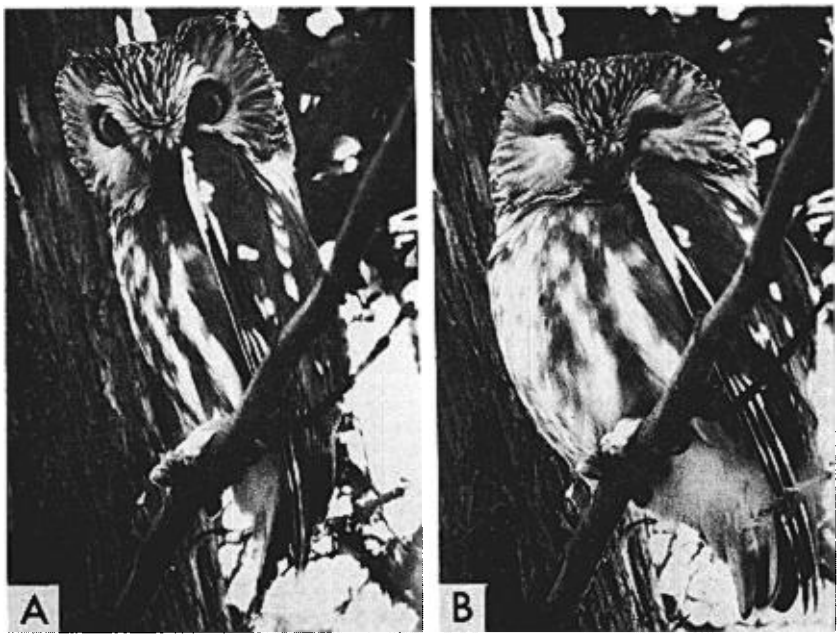

Figure 1. A, Saw-whet Owl 524–19512 in concealing pose (intruder 6 feet away); B, same owl 5 minutes later with concealing pose almost completely dissolved to normal roosting posture (wing still slightly raised).

pivots keeping the raised wing toward him); the frontal crown feathers immediately above each eye are raised, while those in the center of the crown remain flat; lastly, the feathers between and somewhat above the eyes are fanned out. Another change from the normal roosting posture, but not unique to the concealing pose, are the fully opened eyes. Except for these changes, the owl remains still.

The change of shape from rounded to narrowly oblong with outer crown feathers erected (as ear tufts) certainly makes the owl less conspicuous. Some disruptive camouflage is achieved by the lines of white on the wing as well as the expansion of the white between the eyes. It seems reasonable to conclude that this pose is designed to conceal.

If the intruder stands still or retreats, this concealing pose gradually dissolves in 5–10 minutes to the normal roosting posture (Figure 1B). If the intruder approaches more closely, within a certain limit (ca. 3 feet) the concealing pose is transformed to an excited reaction, characterized by the head bobbing up and down and from side to side accompanied by intent glaring, quick turning movements of the head (apparently searching for a new perch), shifting from one foot to the other or turning around, defecating, and finally flying. In this excited state, which I term "fright reaction," all four features of the concealing pose have disappeared. If the intruder withdraws, the owl may settle again into the normal roosting posture. If the bird flies, it usually remains excited (fright reaction) for quite some time, and may, within an hour, return to settle in the exact roosting place from which it was scared, provided the disturbance is removed.

Since I first noticed the concealing pose, I have recorded it in my notes as fully expressed by 29 of 104 Saw-whet Owls that I found during the day, captured, and banded with lock-on bands. Of the remaining 75, several expressed it partially. Many were captured while still "asleep" (my presence apparently unknown to them until capture). Others were frightened into flight before they were seen, and afterward exhibited only fright reaction. A few made no attempt to hide, but woke up very suddenly when danger was close at hand (noose and pole ca. 1 foot away) and showed fright reaction. No concealing pose was induced by approach in a recently banded owl (up to an hour after release), even if it had behaved in this way when initially found. Measurements suggested that the concealing pose is independent of sex (wing chords in early spring ranged from 128 mm to 143 mm). Similarly I have recorded the concealing pose in its full expression in two of nine Boreal Owls banded.

It was obvious, and proved experimentally on several occasions, that the concealing pose occurred when the owls were disturbed from a distance, usually in excess of 3 feet, and then approached more closely, and that it rarely occurred when they were surprised by a sudden, close disturbance from less than 3 feet away, which elicited the fright reaction. Therefore I suspect that some, if not all, of the remaining 62 percent of Saw-whet Owls and 78 percent of Boreal Owls would have demonstrated the concealing pose had they been approached in a manner to induce this response, and further that such response is characteristic in the behavior of these species.

I thank R. R. Taylor for criticizing this note.—PAUL M. CATLING, *104 Victoria Park Avenue, Toronto 13, Ontario, Canada.* Accepted 30 Apr. 71.

Use of time-lapse photography to study nesting activities of birds.[1] —Collecting quantitative data on incubation movements, attentive periods, and other nest-related behavior is a time-consuming, meticulous, and demanding task. Yet such recording is mandatory for gathering information on incubation effort (by sexes if both are involved), nest relief displays, feeding rates of young, nest and egg care, patterns timed to daily cycles, and even weather and light conditions. Quantitation is essential, and, although many devices have been used to record such activities as nest attentiveness (see Speirs and Andoff, 1958), most events at nests must be recorded visually.

A complete record of all activities at a nest is unlikely except by team efforts (Pettingill, 1963), and variation in observers or in the alertness of any one observer over a long period may reduce accuracy. Moreover in colonial species the availability of several nests offers a unique opportunity for gathering data but an almost impossible recording task for one person. Observation and recording efficiency presumably is inverse to the number of nests watched or to the complexity and number of events occurring at a single nest.

For these reasons Weller started in 1963 to develop a time-lapse 8-mm movie camera for recording events at nests. Problems with the timing device reduced the quality and reliability of the results. A timer eventually was built incorporating a mechanical automobile clock wound electrically about every 2½ minutes. The winding device was used as an electrical contact to activate a solenoid on the single-frame socket of a Nikkorex Zoom 8-mm movie camera. More recently, portable battery-operated time-lapse units have become available, and some are even built

[1] Journal Paper No. J-6700 of the Iowa Agriculture and Home Economics Experiment Station, Ames, Iowa. Project 1504.