Accidental Mortality and Cannibalization of a Nestling Gray Squirrel

Accidents are obscure factors causing mortality in populations of wild animals. It is therefore of value to document and attempt quantification of these phenomena. In the gray squirrel (Sciurus carolinensis pennsylvanicus), cannibalism has been anecdotally reported (Barkalow and Shorten 1973, p. 54). There is, however, little published information concerning this behavior. Here I report the accidental mortality and subsequent cannibalization of a nestling gray squirrel, one of a population under observation at Mount Pleasant Cemetery, Toronto, Ontario.

On 19 August 1974 an adult (18+ months) female was observed transferring her litter; the transfer of two young was witnessed. She grasped the first nestling by the skin of the upper chest while the nestling clung to her by wrapping both hind and fore feet about her neck and lower abdomen respectively. No vocalizations were heard from either animal. This method of carriage was identical to both those observed in the six other litter transfers witnessed by the author, and that described by Barkalow and Shorten (1973, p. 45). The female entered an apparently fresh leaf-nest located about 8 m aboveground in the crotch between the main stem and a side branch of a sugar maple (Acer saccharum). After a period of 1 min the female descended and ran off.

Approximately 2 min later she reappeared with a second nestling held in an identical manner. On reaching the leaf nest she paused, then climbed onto the side branch. At this point the nestling apparently slipped from her, fell, struck several branches, and landed heavily on the ground. On impact it began to give shrill distress cries (see Horwich 1972, p. 8). The volume of the cries rapidly diminished and ended after several seconds with death.

The female began to sniff about her immediate surroundings and, after 1 min, descended. She did not initially approach the dead nestling but eventually sniffed it several times. She grasped the nestling by the skin of the upper chest and then dropped it. After pawing the body several times she again attempted to pick it up. She then moved several metres away and began to feed on fallen maple seed. After eating several, she returned to the body and, grasping it by the nape of the neck, dragged it up onto the base of a monument. She then fed on the nestling. Initially she held it in the typical upright feeding posture. In this position she was seen to work the body in a manner similar to the manipulations involved in opening a shelled nut. This posture alternated with a crouch over the body similar to that described by Horwich (1972, p. 35). After 5 min she dropped the nestling, climbed the tree, and entered the nest. There was fresh blood on the ground where the nestling had fallen.

The nestling was a male, 28–35 days old...
(Uhling 1955). There was a large (1-2 mm) puncture wound on its left side, posterior to the last rib and immediately ventral to the vertebral column. Large hemorrhages surrounded the left kidney, apparently originating from its surface. As there were several sharp projections on the branches that the nestling hit, death was likely a result of the puncture and associated blood loss. The other organs appeared normal. A large amount of subcutaneous fat was present suggesting the nestling was in good health. The female had eaten the entire skull and contents. The majority of the skin covering these areas was left untouched as was the rest of the body.

Litter movements appear to be a common phenomenon in the gray squirrel. Cordes and Barkalow (1972, p. 126) note that the disturbance of a nest will often cause females to transfer their nestlings from the original nest to another. No data were presented on the frequency of such transfers; however, one case was noted of a nestling which was either not moved or was lost during a transfer. In this study a total of 28 successful litters comprising 87 individuals were located prior to weaning of the young. Of these, six litters totaling 14 nestlings were known to have been moved, and only one individual was known to have been lost during transfer.

Dasmann (1964, p. 102) considers accidents to be a small constant mortality factor in wild populations. While the extent of nestling mortality as a result of accident during transfer is difficult to measure, it would appear low, only some 1% of the nestlings being lost to this cause in this study.

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Additions and Rediscoveries of Five Plant Species in Prince Edward Island

Abstract. Two introduced species, Erodium cicutarium and Scrophularia nodosa, are reported for the first time from Prince Edward Island. Angelica atropurpurea is now known from the eastern part of the province, and two introduced species, Conringia orientalis and Tussilago farfara have been rediscovered in the province.

During the summer of 1974, while engaged with the Prince Edward Island Department of Agriculture on a ragweed survey project, the junior author observed and gathered specimens of several interesting plants which proved to be either new records, extension of range, or rediscoveries in the province. These are reported below.

Angelica atropurpurea L.
P.E.I.: Kings County, Murray River (46° 01' N, 62°36' W), single plant on roadside near moist ditch, 13 August 1974. R.B. MacLaren (Herbarium P.E.I. Department of Agriculture, Charlottetown; Photo DAO).

The map in Erskine (1960) shows three locations in the western part of Prince County. The collection reported here is thus the first from the eastern part of the province. Angelica atropurpurea occurs sporadically in rich moist thickets and swamps from southern Labrador south to West Virginia and west through southern Quebec.

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