

starvation, the lack of food being due in its turn to a scarcity of ground squirrels (gophers) and to the unusual number of hawks nesting in the district.

The curious habit of the old birds in gathering a green leafy bough and placing it in the nest, characteristic of Swainson's hawk also, is very marked in the Red-tail, a fresh bough being gathered at least once daily during the time when the young are small. There has been some doubt hitherto as to the cause of this habit, but by observing the nestlings I am led to believe that the bough acts as a sun shade, as the young have been seen to repeatedly pull the bough over themselves and crouch beneath it. Doubtless it also acts as a shield and hides the young from their enemies. The leaves are also occasionally eaten.

As the young develop they acquire a good deal of boldness and defend themselves with both beak and claws. They have a habit of closely watching the intruder backing up meanwhile at the approach of a hand; then suddenly they leap forward with wings outstretched and it requires a rapid movement to escape their onslaught. The old birds make no efforts to defend their young, but fly high overhead uttering loud cries which are, at times, answered in a shriller key by the young beneath. In the fall these birds may be seen resting upon trees and telephone posts, looking very un-Red-tailed in appearance and superficially very like the young of Swainson's hawk. Towards the middle of October they make their way steadily southward and by the end of the month have practically all passed beyond our borders.

The food habits of hawks have been discussed on many occasions and the examination of stomachs by Fisher and others in the United States shows that all our large buzzard-like hawks, such as the Red-tail, Rough-legged and Swainson's hawks, are extremely useful. In discussing these from the standpoint of the prairie farmers, however, we have to take into consideration the fact that the prairie provinces are largely grain producing. Secondly, that they are infested by several species of ground squirrel which are quite unknown in eastern Canada and which take heavy toll from the grain fields. Thus our problems in regard to hawks are quite unlike those of the east and it seems a mistake to unite these in an article of this sort.

As the Red-tailed hawk is more an inhabitant of woodlands than the other species mentioned above it naturally follows that it is not so much a hunter of the plains, hence the prairie ground squirrels do not form so large a proportion of its food. They are, however, taken in quite large numbers and are supplemented by wood-loving kinds such as Franklin's ground squirrel, the common red squirrel and by mice. The food habits are also much more difficult to ascertain owing to the thorough manner in which the parents clean up the nest and to