

AMERICAN ROBIN DEFENDS FRUIT RESOURCE AGAINST CEDAR WAXWINGS

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Abstract.—In central Minnesota an American Robin (*Turdus migratorius*) defended a fruit-bearing crabapple tree successfully against up to 15 Cedar Waxwings (*Bombycilla cedrorum*) during the first 2 wks of April. Defense of the tree against larger groups was unsuccessful. Such defense of fruit by birds may be more common than the literature suggests.

PETIROJO (*TURDUS MIGRATORIUS*) DEFIENDE RECURSOS ALIMENTICIOS DE UN *BOMBYCILLA CEDRORUM*

Sinopsis.—En estudio que se llevó a cabo durante las primeras dos semanas de abril de 1986 en Minnesota, se observó a un petirojo (*Turdus migratorius*) defender de especímenes de *Bombycilla cedrorum* las frutas de un árbol de *Pyrus* sp. El ave fué exitosa en defenzas contra grupos de *B. cedrorum* hasta de 15 individuos. Sin embargo, no pudo defender los recursos alimenticios de grupos mayores a 30 individuos.

Despite extensive study of fruit-eating birds, few species have been reported to defend fruit-bearing plants (Pratt 1984). The importance of fruit in the diet of American Robins (*Turdus migratorius*) is well known (e.g., Bent 1949:25, Roberts 1932:115, Wheelwright 1986), yet their defense of fruit resources is undocumented. We observed a robin defend an ornamental crabapple tree (*Pyrus* sp.) against flocks of Cedar Waxwings (*Bombycilla cedrorum*) over a two-week period.

The activity occurred between 31 Mar. and 13 Apr. 1986 near St. Cloud, Minnesota (44°33'N, 94°48'W). At this time, flocks of Cedar Waxwings were passing through the area and robins were returning to breed. Most snow cover had disappeared, but the ground remained partially frozen. The crabapple tree on which the activity centered was laden with several hundred red fruits, each about 2 cm in diameter. We observed the activity from a window about 3 m from the trunk of the tree. Observations were not systematic, but occurred frequently throughout the day; total observation time averaged about 2 h/d.

On the morning of 31 Mar., a flock of 12-15 Cedar Waxwings landed in the crabapple tree. A robin in the tree called loudly several times and then began attacking and chasing the waxwings. With repeated aerial attacks, the robin prevented them from relanding in the tree. Two more robins approached on the ground, but neither fed nor joined in the attacks.

Eventually the waxwings landed further away in other trees and then left the yard. No waxwings were seen in the yard during the next 2 d.

On 3 Apr. at 1400, a single robin successfully defended the crabapple tree against groups of 6–10 Cedar Waxwings. In the next week, we saw a robin evict 4–8 waxwings (morning, 6 Apr.), 1–5 waxwings (morning, 7 Apr.), 2 waxwings (morning, 8 Apr.), 1 Purple Finch (*Carpodacus purpureus*) (1540, 9 Apr.), and 1 Blue Jay (*Cyanocitta cristata*) and 1 waxwing (1730, 10 Apr.).

On 12 Apr. at 0645, a flock of 36 Cedar Waxwings alighted in the tree and began feeding. A nearby robin did not attack them. At 0655, a robin eating fruits on the ground beneath the tree began to chase the waxwings, first from the ground and then from the branches. The waxwings continued to return; as one group was chased to neighboring trees, another group alighted and fed in the crabapple tree. By 0657 the robin's attacks had subsided and 40 waxwings were counted feeding in the tree or beneath it. By 0710 only 3 fruits remained on the branches and most of the waxwings were feeding on the ground. During the next 3 h, a robin returned several times to the ground beneath the tree, sometimes feeding with the waxwings and other times chasing them. By 1000, 24–30 waxwings remained on the ground and the robin left the area. At 1500, 1 waxwing was in the tree, and a robin again launched an aerial attack. By 13 Apr., no fruits remained on the tree, and no waxwings were observed. A robin continued to feed occasionally on crabapple remnants beneath the tree.

Because the robins were not banded or otherwise individually distinguished, we cannot say for certain that the same bird was responsible for the aggressive defense observed throughout the two weeks. The fact that only one robin behaved aggressively at any one time, however, suggests this was most likely the case.

In summary, a robin successfully defended a fruit tree from flocks of up to 15 waxwings, but apparently failed when flock size exceeded 30. Moore (1977) reported that Northern Mockingbirds (*Mimus polyglottos*) usually succeeded in defending fruit resources from solitary intruders but not flocks of Cedar Waxwings, robins, or European Starlings (*Sturnus vulgaris*). Likewise, Snow and Snow (1984) reported that Mistle Thrushes (*Turdus viscivorus*) successfully defended fruit-bearing plants until they were overwhelmed by large and persistent flocks of other frugivores.

Defense of fruit by robins and other fruit-eating birds may be more common than the literature suggests, especially for short periods (Pratt 1984) or when alternative food supplies are scarce (e.g., during winter and early spring in temperate zones). Underestimating the incidence of fruit defense by birds may lead to errors in theoretical studies concerning frugivore interactions and seed dispersal patterns.

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NOTES AND NEWS

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