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Turkeys come, the old man Lee who kept tame turkeys told us of an amusing experience he had had the previous night. He had gone up the gulch back of his house and while there had seen an old gobbler, and thought he'd drive him home. But when approached the turkey ran away from home — and when chased got up and flew! Surprised at this strange behaviour the old man went on down to the ranch. Passing his hen house he looked in and — there was his gobbler inside! Perhaps the turkey he had chased was one whose tracks we had seen on Willow Creek!



## NOTES ON THE FRUIT-EATING HABITS OF THE SAGE THRASHER IN THE YAKIMA VALLEY.

BY CLARENCE HAMILTON KENNEDY.

THE broad sage-covered stretches of the lower Yakima Valley, with the barren hills enclosing it, lie in the Transition and Upper Sonoran Zones. Only a narrow strip a few miles wide down the center of the valley has been reclaimed by irrigation and the brown desert displaced by green fields and orchards.

It is in this sage brush land above the irrigated area that the Sage Thrashers (*Oreoscoptes montanus*), after arriving in the spring, nest and live until the young are capable of extended flight. During the nesting period they are the best singers of any of the sage brush inhabitants. They are also the most wary, for seldom can a person on foot approach one nearer than fifty yards.

During the latter half of May, families of Sage Thrashers drift down into the irrigated ranches and begin their season of fruit-eating with the black-cap raspberries, which are then beginning to ripen. By this time the young, though still associating with the older birds, are capable of searching out their own food. With this independence of the young, the habits of the Sage Thrashers change very markedly. After this the snatches of whimsical song are rarely heard. From birds with a burst of song after every

short flight they change to the most silent of birds. During the entire summer's observation I have heard no call of any kind and on but two occasions during this period have I heard a short burst of song. Their shyness also leaves them. They become as approachable as Robins in an eastern dooryard. They will sit and without fear eat berries within a few feet of pickers.

Immediately following the raspberries come the blackberries. Both are devoured with equal readiness. Sour red berries are eaten as readily as the riper black ones. The berries are eaten

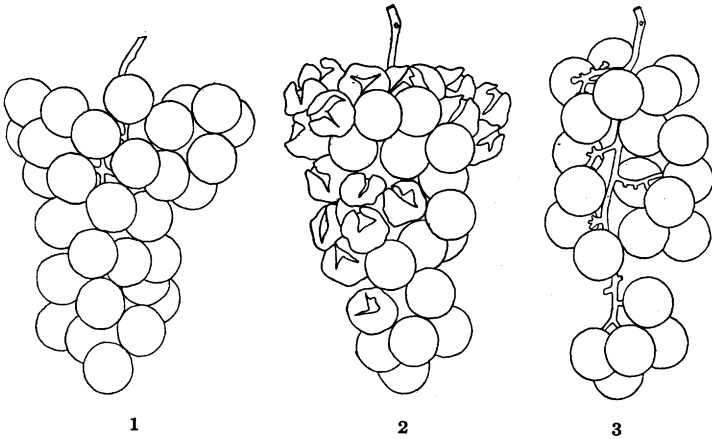


Fig. 1. A perfect bunch of Campbell's Early grapes.  
 " 2. Campbell's Early damaged by Sage Thrashers.  
 " 3. A damaged cluster after having been trimmed.

whole and because of their size many of those picked off fall to the ground and are lost. After the blackberry season there is a period of two or three weeks when no small fruits are ripe. During this time the Thrashers stay about the ranches but content themselves with an insect diet.

At the end of this interim, the latter part of July, the early grapes begin to color. At first they pass unnoticed but by the time one half of the clusters are purple the Thrashers have commenced to peck them. Usually they break the skin and sip the juice but occasionally a grape is eaten whole. After the feeding on grapes commences the vineyard is never free from Thrashers, which fly

up from the vines to near posts and silently watch any intruder. While during the earlier summer they flock in what are probably family groups, during the latter part of the summer no flocking occurs, though as many as a dozen individuals may be seen in the vineyard at one time, which on being driven out fly each in a different direction.

On this ranch there are 140 vines of Campbell's Early. The actual loss in weight of grapes through bird damage was 25 %, but the loss in profits was not less than 50 % because of the large item of labor in trimming damaged clusters, and the loss in fancy value through the unattractive appearance of the trimmed bunches (Figs. 1-3). By September 1 the Campbell's Early were gone, and the Thrashers began to eat the foreign (*Vitis vinifera*) grapes in a mixed vineyard, the black varieties of which were beginning to color. The black varieties, Black Hamburg, Cornichou and Ramonia were damaged, as was also the Flame Tokay, a red grape. At no time did the birds injure any green or yellowish varieties, for among the *vinifera* varieties the Muscat, Malaga and Thompson's Seedless were untouched, while among the domestic varieties, the green-colored Moore's Diamond and Niagara were uninjured. Of red grapes the foreign Flame Tokays were damaged some just after coloring and while yet sour, but the red honey-like Delawares were untouched. The 140 vines of Campbell's Early, which were so badly damaged, were in the center of four acres of Concord grapes, which were entirely untouched. The explanation of this seems to be that the Thrashers prefer a grape with the two characteristics, a dark color and sourness. Concord grapes lose their acidity on first turning color, while Campbell's Early have a sprightly sub-acid flavor until fully ripe. Furthermore the red Flame Tokays were unmolested after they had ripened to sweetness.

Ten stomachs were examined with the following results:—

Fruit in Stomach	Insects in Stomach
<sup>1</sup> 1 Grape pulp, skin, 2 seeds	1 locust
2 Grape pulp, skin, 4 seeds	1 large beetle, numerous ants
3 Grape pulp, —, 4 seeds	
4 Grape pulp, skin, 2 seeds	
5 Grape skin	1 locust, 3 ants, remains of other ants

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<sup>1</sup> Nos. 1-5 killed Aug. 20, 10 A. M. to 3 P. M.;

	Fruit in Stomach	Insects in Stomach
16	2 Grape skins, 1 seed	1 beetle
7	Grape skin, Chinese lettuce seed	
8	Grape skin	1 ant
9	Grape skin, 3 seeds	1 beetle, 2 ants
10	Grape skin, 1 seed and mountain ash berry	

Thinking that the Sage Thrashers' preference for sour tastes might extend to their insect diet, locusts and ants were tasted. A locust infusion had a delicate and surprisingly pleasant flavor but without a trace of sourness, while the ants had a flavor almost identical with that of castor oil.

The Thrashers taken on August 20 were in the midst of moult, while those taken on September 2 were nearly through moulting. A severe gale (sand storm) occurred on September 14. On September 15 small flocks of Thrashers were seen in roadside weed patches (an unusual place to find Thrashers), after which none were seen except one lone Thrasher seen in the vineyard two different days in November.

The Thrashers were assisted to some extent in their depredations on the early grapes by Bullock's Orioles. After the Thrashers had left for the south, Robins, while flocking preparatory to migrating, injured the very late grapes.

Sunnyside, Wash.

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<sup>1</sup> Nos. 6-10 killed Sept. 2, 6:30 A. M.