

of Santa Barbara. The bird was shot upon the grounds of the Guadalupe Gun Club at Guadalupe, Santa Barbara County, California, January 14, 1921, and was shipped to me in the flesh for mounting. It was in full plumage, with a marked development of coloration. The carcass, and such parts of the skeleton as were not required for mounting, we forwarded to the University of California Museum of Vertebrate Zoology, with the hope that they might prove of value to the research department there.—A. E. COLBURN, *Los Angeles, California, February 5, 1921.*

A Feeding Habit of the Varied Thrush.—From a ground-floor window of the Museum of Vertebrate Zoology, one commands a view of a bit of ground made shady and leaf-matted by a little grove of planted *Pittosporum* which hugs the eastern side of the building. Abundant rains this winter have kept this leaf-mat water-logged.

Here on January 10, 1921, I watched a Varied Thrush, presumably subspecies *naevius* of *Ixoreus naevius*, as it foraged among the dead leaves. For a little of the time the bird was working within ten feet of my eyes.

Its constant mode was as follows: A short jump forward as it grasped debris in its beak, and a return jump so immediate that the whole was almost a single movement. A clump of debris, sometimes quite a clod, flew backward at one side or the other with each return jump. Usually the debris described a low arc, landing ten or twelve inches away, sometimes more, frequently less. Often successive plucks landed material on alternating sides of the bird with a slight corresponding change of body axis in each succeeding pause. Perhaps as often the leaves were landed for several times successively on the same side of the bird. Each pluck was followed by a moment of "frozen" pause, with head at about body level, after which the bird either repeated the operation or proceeded to devour the food which it had uncovered.

There was no movement of the wings and I was unable to perceive any intentional moving of debris by the feet. Naturally, tiny bits were occasionally disturbed by a claw in the backward jump. But, as a matter of fact, the feet rarely touched the leafy carpet once the bird had started, for it "swept" a rather clean swath down to dirt, like a carelessly shovelled path through the snow. This path was roughly three to five inches wide and decidedly tortuous, and the bird at times even reversed its progress to work over ground already cleaned, and to later start off on a side tangent.

Food seemed to be abundant as the bird picked up and swallowed frequently, apparently tiny morsels and good sized morsels, though I could not determine their exact nature. From its manner of picking and swallowing I guessed that it was eating such lower insect life as was uncovered, and possibly vegetational germinations which look so grub-like. Later I examined this ground, and found, when the leaves were scratched away, an abundance of worm and insect life, mostly larval, and some tiny plant germinations as well.

Naturally a "path" like this bird made would only occur in just such a situation, viz., a complete mat of dead leaves, water-soaked, and with abundant food concealed in and beneath them. Birds working on sod or bare earth concentrate their efforts on scattered spots, and often spend some moments on one hole, making the dirt fly as did the leaves.

On January 15, another bird which I watched from the same station, confirmed this manner of feeding. It moved even greater masses of material (variable moisture content no doubt affects the tenacity of the leaf mat), and at one time pulled away a leaf mass as big as its body. Once, when activity indicated a big morsel, a jay (*Aphe-locoma californica oocleptica*) suddenly descended from the tree above, and would surely have alighted on the thrush's back had not the latter scooted off just in time. Two rods away the thrush at once proceeded with its feeding. I noted, too, that the jay had arrived an instant late, and after a disappointed scrutiny of the "diggings" it flew.—J. EUGENE LAW, *Berkeley, California, February 16, 1921.*

Anent Red-winged Blackbirds.—About a year ago, after considerable urging on the part of ornithological friends (?), I undertook a somewhat comprehensive study of the races of the *Agelaius phoeniceus* group, with the idea of possibly being able to find some more exact formulae for their determination and of perhaps being able to consolidate some of the present subdivisions. This work has been carried on as opportunity