

beak note, however, resembles the tanager call more closely than it does the thrasher call. I spelled it *prilly* or *prilleh*. There is something musical or pleasing-to-the-ear in its timbre, as suggested in the letters "r" and "l". The vowel sounds are easily determinable. In manner of delivery it is rather lively, and the expression is somewhat querulous or enquiring.

As to the song, which I had opportunity to hear for many successive days, as sung both by "my" Grosbeak and by others in the same general vicinity: never, by any possible stretch of the imagination did I hear a song in the slightest degree bringing to mind the song of the Black-headed Grosbeak, which Ray (p. 178) says it resembles. It is utterly different in timbre, in form, in pitch—in every essential. The timbre of the Black-headed's song is round and smooth and mellow; that of the Pine's is vibrant and musically rough, or "burred" in a silvery-toned sort of way. The song of the Black-headed is easy and fluent; that of the Pine is forced and fricative. In form I have found the song of the Pine Grosbeak far from the elaborate affair described by Ray. The very longest songs I heard were not "varied" to any notable extent, nor were they prolonged enough to contain a "series" of anything, let alone "trills, warblings and mellow flute-like notes." The typical song, so far as I have been able to discover, is a comparatively short "set song", in general form not unsuggestive of the warble of the Cassin Purple Finch. One song, recorded "from life", ran *prée-pr-pr, pr-pr-prée?* This is perhaps shorter than the usual song, yet not much so, I think. One bird ended its song always with a brave *prée-veur!* in perfect imitation of the Olive-sided Flycatcher, this note standing forth when the rest of the song was damped out by distance. I do not know whether this appropriation of the Olive-sided Flycatcher's call was peculiar to this one individual Pine Grosbeak or whether others do the same thing. Finally, the pitch of the Black-headed's song is comparatively low, with a preponderance of mellow "eu" sounds and others from the same general region. The pitch of the Pine's is comparatively high, and is characterized throughout with long-*e* and short-*i* tonals, perpetuating themselves forcibly as if made to go with great pressure through a musically vibrating small orifice.

Museum of Vertebrate Zoology, Berkeley, California, September 8, 1921.

FROM FIELD AND STUDY

The Speed of a Flying Dove.—The automobile has, ere this, been the means of determining the approximate speed of birds (see CONDOR, XXII, p. 186), and once again it comes into play for the same purpose.

The Western Mourning Dove (*Zenaidura macroura marginella*) is considered a fast-flying bird by sportsmen, and it has been said to attain the speed of sixty or seventy miles an hour. This has always seemed an extravagant speculation to me and I firmly believe it so now. That the bird is a difficult wing-shot is due to its erratic flight and small size (feathers not counted) more than to its speed.

This was fairly demonstrated when, on July 28, 1921, I rounded a curve on the boulevard between San Jose and Oakland and almost ran onto a dove. The sudden appearance of the car and noise of the motor frightened the bird so that it crouched for a moment and did not flush until I was almost on top of it. At the moment it flew I slowed down a bit, but the bird was evidently frightened and confused for when it started off to the right, the approaching machine drove it back straight ahead, and an attempt to break to the left resulted likewise. The bird then settled down to the

business of getting away straight ahead. It was flying about twenty-five feet over the road-bed and appeared plainly to be exerting all its energy. During this very short time the bird had gotten about thirty or forty feet ahead of me when I commenced crowding it.

Accelerating my speed until I attained thirty-five miles an hour, I saw I was gaining perceptibly on the bird, and maintained that speed. The dove was evidently resigned to its fate, for it flew straight over the road-bed for about a quarter of a mile, when I came almost under it, and with a violent left-wing stroke it shot off to the right and over the fields. At this instant I was endeavoring to regulate my speed to correspond with that of the bird, but its sudden side-step frustrated this. It is, however, safe to conclude that the dove's flight was in the neighborhood of thirty miles an hour. Certainly it was considerably less than thirty-five miles an hour, and there was no wind to hinder or assist its progress. Moreover its actions were totally unlike those of most doves under similar circumstances. They seldom crouch before flushing, and they usually fly to the right or the left, exhibiting no trace of confusion.

One element of error in the conclusion that the greatest speed of doves is thirty miles an hour remains, namely, that this bird may have been a grown juvenile with as yet undeveloped powers of flight; but it did not appear so to me.—FRANK N. BASSETT, *Alameda, California, August 16, 1921.*

The Intrepid Pewee.—During the week, August 15 to 21, 1921, we were in one of the Fallen Leaf Lodge cottages on the edge of Fallen Leaf Lake, Eldorado County, California. The whole country in that section of the state is generally well wooded. Our cottage was in the midst of fairly large forest trees, consisting of white fir, incense cedar and Jeffrey pine. One of the commonest birds about Fallen Leaf Lake is the Western Wood Pewee (*Myiochanes richardsoni richardsoni*), and one bird of this species had the habit of perching at the very top of a small incense cedar, about twenty-five to thirty feet from the ground, and darting off to catch flying insects, often making a single audible snap during the flight, apparently made with the bill at the instant of taking its prey.

This bird made many spirited attacks upon Blue-fronted Jays (*Cyanocitta stelleri frontalis*). The attacks usually consisted of a series of stoops from some distance and my attention was always drawn to the performance by hearing the snapping noise made by the Pewee, which sounded the same as the noise made in seizing an insect, but repeated rapidly during the attacks. It would not be safe to say that the noise was not made with the wings, but I think that it was not; yet I have a doubt on this point, which I was not able to clear up. Several times the Pewee was seen following flying Jays, but it was not clear whether the Jay was fleeing or the Pewee merely following. In these attacks the Pewee displayed the utmost dexterity, passing through the crowns of the trees without any perceptible loss of speed and dashing directly at, or very close to, the enemy. Its swiftness and accuracy of flight were not less admirable than its intrepid spirit.

The reaction of the Jays to these attacks was to move off as if annoyed or disturbed rather than alarmed, but in some instances the Jays moved off fast enough to give the impression of rapid retreat. The attacks always persisted until the Jay or Jays attacked had left. Once I witnessed an attack upon two Jays and again upon three, neither the size nor the number of enemies seeming to deter the truculence of the diminutive aggressor. This Pewee was under observation for short periods every day for a week and nothing about its behavior indicated that it had a nest or young to protect, and it seemed evident that the attacks on the Jays were entirely offensive.—CLAUDE GIGNOUX, *Berkeley, California, September 17, 1921.*

Birds and Oil in Oklahoma.—Floating oil on the Pacific is not the only trap which birds must avoid if they would live; for in Kansas, Oklahoma and Texas the same sorts of traps exist and annually destroy a considerable quantity of bird-life.

In an oil field there is an inevitable waste of oil. This waste is caused by wild wells, leakage in tanks and pipe lines, cleaning out of old wells, tanks and lines, and simple abandonment of non-merchantable oil. All of this waste collects in artificial ponds which lie along natural drainage courses and after a few weeks standing becomes thick and gummy through the evaporation of the lighter constituents. From the air