

Abnormal Mandible in a Flicker.—The specimen of Red-shafted Flicker (*Colaptes cafer collaris*) pictured herewith was taken by two college students near Riverdale, Fresno County, California, February 16, 1936. (See fig. 26.) The bird was found on the ground in a stunned condition. It was curled up with the head under the body and the enormous mandible extending out behind. When taken into the house it revived and flew about. It would alight on the rough wall and peck with the elongated mandible.

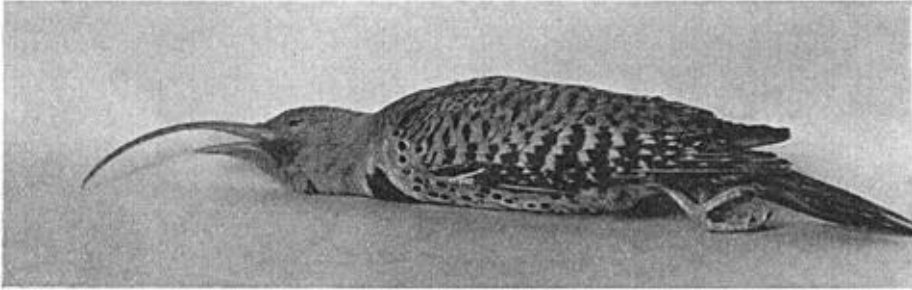


Fig. 26. Red-shafted Flicker, with abnormal upper mandible 8.5 cm. long, taken February 16, 1936, near Riverdale, Fresno County, California.

Only a woodpecker with the food habits of a flicker could have lived to be an adult with such a modified mandible. A meal of ants might just as easily be stirred up with this implement as with the ordinary mandible, perhaps better. The tongue was of normal length.

One of the difficulties the bird would likely encounter would be its inability to excavate resting and nesting holes. It would be dependent on holes it could find ready made. Another difficulty would be the care of the feathers. At least it would appear to be impossible for a bird with such a mandible to reach the preen gland or manipulate the feathers in preening. The bird was heavily infested with lice.

The upper mandible measures 8.5cm. long, whereas a normal mandible is about 3.5 cm. long.—A. E. CULBERTSON, *Fresno State College, Fresno, California, February 21, 1936.*

Marsh Hawk and Red-tail "Playing".—I have often noted a certain Western Red-tailed Hawk (*Buteo borealis calurus*) in the neighborhood of a steep hill rising from the Suisun marshes just west of Cygnus in the Suisun marshes, recognizing this particular bird because of the absence of several feathers in its left wing. On the afternoon of February 9, 1936, I was on the hill investigating what progress had been made by a Horned Owl which on January 26 I had found sitting on one egg, when my attention was directed upwards by a short scream and I saw on looking up two birds soaring in the air, the Red-tail and a Marsh Hawk (*Circus hudsonius*), both in immature plumage. The type of location over which they were flying might be considered the habitat of one as well as the other, being over a steep, wooded hill such as Red-tails like, and at the same time on the edge of the extensive marsh where the Marsh Hawk is at home.

At first, my impression was that the Marsh Hawk was trying to drive the Red-tail away. The former was the more aggressive, or rather the more active, sailing in circles and "figure 8's", often exhibiting the white patch at the base of the tail, the Red-tail seemingly the object of attack. However, upon more extended observation I found that the rather sedate Red-tail was enjoying the affair. If the Marsh Hawk made a large circle, the Red-tail could be seen through the glasses to turn its head, watching with apparent concern lest its companion leave the scene. I could almost "see" the feeling of satisfaction on the part of the Red-tail when he saw the Marsh Hawk returning after a larger circle than usual to swoop toward and fairly close to the Red-tail. The birds seemed almost equal in size except that the broad, rounded wings and fan-shaped tail of the Red-tail made a little larger spread than the longer tail and longer, narrower wings of the marsh inhabitant.

Wind conditions apparently were excellent for sailing, neither bird flapping its wings to any extent; and soar they did to their hearts' content. The two birds gradually rose to a great height, so high that they finally got beyond the range of my field glasses, even though I tried to keep them in view.

Considerable experience in observing Marsh Hawks in flight shows that they usually fly low, at least when in search of mice or other food over the fields and marshes. Though the Red-tail often soars high, I had not before witnessed this apparently playful association between these two species.—EMERSON A. STONER, *Benicia, California, February 18, 1936.*