

THE BROWN BAT.

BY C. FEW SEISS.

The brown bat (*scotophilus fuscus*, Beauvois) appears to be the most common vespertilion in the city of Philadelphia. It ceases to hibernate as soon as the first warm days of spring arrive, that is, about the latter part of March or the first of April, but I have, on two instances, observed it flying about at twilight as early as the middle of February. At one time, February 13, 1869, when the thermometer marked 60° in the shade.

This animal, unlike its near relations, the aves, has no need of a nest, and therefore does not construct one. The brown bat has one or two young at a birth, generally the former, and as with the other species, they are placed by the mother amid the fur upon her breast, as soon as they come into the world, where they remain clinging until they are able to fly and provide for themselves. When the mother bat is flying about in search of insect food, or during the day when she is sleeping in some unfrequented loft, clinging head downwards, to a rafter, she always has her baby bat with her.

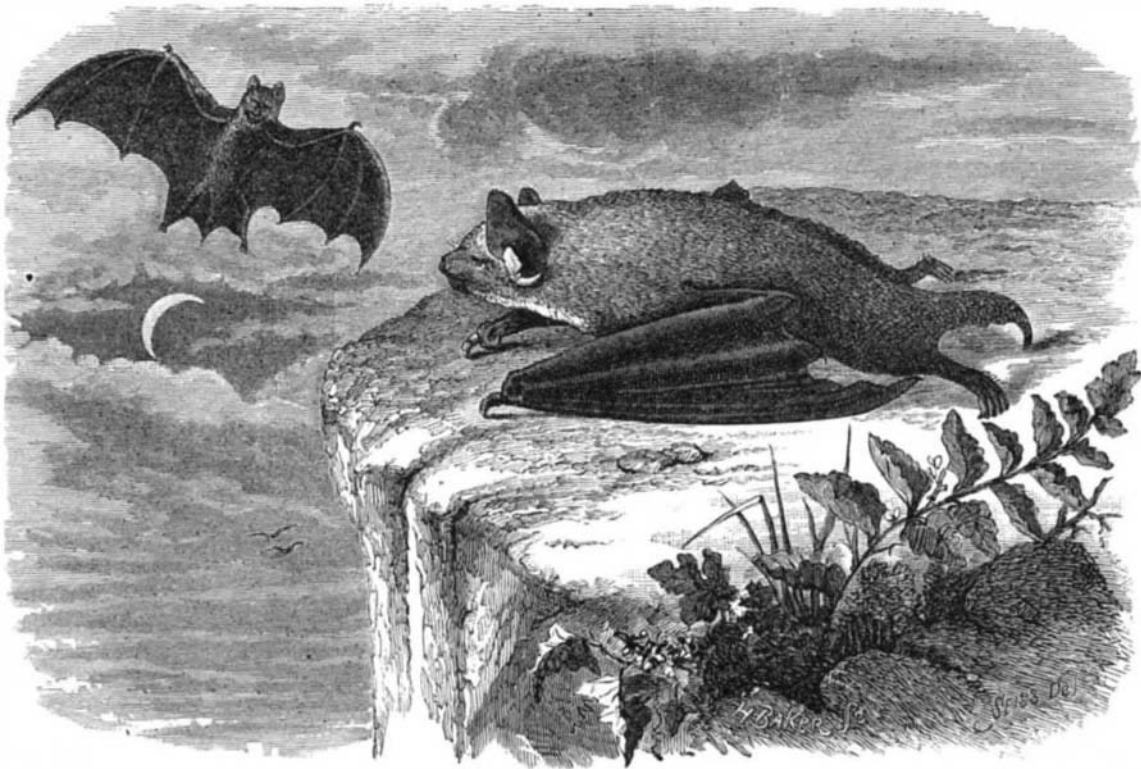
We had a male bat of this species in captivity last spring; I was amused at his actions when placed in the revolving wheel of a white

mouse cage, and was surprised to find him able to cause the wheel to revolve quite rapidly; though his gait was indeed ludicrous, being an awkward stumbling waddle. And to add more grace to his motions, he would fall every few minutes, and the momentum of the wheel would carry him completely around, before he could regain his footing. He was an irritable little brute. When any one would touch his cage he would squeak violently, at the same time showing in rage his sharp teeth. He refused to eat all the flies caught for him, and died of self-starvation and thirst combined, in three days after his capture. Therefore as "a cage bird" he was not a success.

Our bat, when on the floor of his cage, rested or moved upon all fours, as represented in the engraving; but seemed to prefer hanging by his feet from the side or top of the cage, head downwards, with his wings folded against his body. He, as with all living bats I ever experimented with, was

able to spring up and take wing from a level floor. I state this because it has been asserted that bats can only take wing by dropping from some elevated position, and never from a flat surface.

I once heard a gentleman, who had "gone through college," describe a bat to a lady as "only a mouse with wings."



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If he had said a little hyena with wings, or better still, a flying mole, his description or comparison would have been nearer the truth. Look into a bat's mouth, and you will observe four sharp canine teeth as in the higher *carnivora*; not four long chisel-shaped incisors, and no canines, as in the *rodentia*.

The dental formula of the brown bat is—

Incisors, $\frac{2 \cdot 2}{3 \cdot 3}$; canines, $\frac{1 \cdot 1}{1 \cdot 1}$; molars, $\frac{4 \cdot 4}{5 \cdot 5} = 32$ teeth.

WOOD ENGRAVING IN JAPAN.

The art of wood engraving, which has been brought to such perfection in our day, is comparatively a modern art, at least in our Western civilization, where the earliest wood cut extant dates from 1423. The Chinese, however, have illustrated their printed books with engravings from wood blocks for ages. It is claimed, and we have no disposition to dis-

pute the claim, that their artists during the reign of the renowned Emperor WuWang, who was contemporary with Samuel when he judged Israel, B.C. 1120, adorned the current literature of that day with their wood engravings. They have used pictures cut from wood to illustrate their books for many centuries, and have even during many ages practised printing in colors, which is a recent art in Europe. We say nothing now of the style either of these engravings or painting, for to our taste the drawing is rude, the perspective imperfect, and the coloring brilliant, not to say gaudy; we only give them the credit of having cultivated their artistic talents from an antiquity so remote that our modern art, of which we boast so much, dwarfs almost into nonage by its side.

In Japan, when a wood cut is to be made, the subject is first drawn on a thin piece of paper with Indian ink and a Japanese paint brush. The drawing is then reversed and pasted on the wood, which is not hard like our boxwood, but extremely soft. The paper is oiled and left on the wood till the engraving is finished. All the black lines in the drawing are thus left in relief. The block is then washed and covered with printing ink made of lamp-black and glue. The printing is performed by laying a clean sheet of paper on the

block and pressing the surface by hand, with a round tool covered with a dry leaf. In this way thousands of copies are printed.

An example of the large returns which a small invention may often bring in is found in the experience of Mr. Charles Cahoon, who recently died at Portland, Maine—a man of much inventive ability and persistent determination. It is said that he realized \$60,000 out of a little lamp-burner, which had an appliance for lifting the chimney so that the wick could be reached for lighting or the mouth of the lamp for filling. This saved the frequent removal of the chimney while hot, and so doubtless prevented many fingers from being burned, and many chimneys from being broken. Simple as was this device, Mr. Cahoon studied hard over it, and nearly lost his eyesight by persistent watching of the lamp flame under different conditions.



A JAPANESE WOOD ENGRAVER AT WORK.