

**The House Wren as an Insect Destroyer.**

The observations I have been able to make during a residence of several years on a farm, have convinced me that the common house wren is really one of our most valuable birds, not, perhaps, for what they have done, but from the possibilities wrapped up in their diminutive bodies. They are quite as social as the purple martin or blue bird, and greatly surpass both of these in the rapidity with which they increase. I began several years ago to provide them with resting places in the vicinity of my buildings. Sometimes I fastened the skull of a horse or ox, or a small box, in a tree top. But latterly I have made it a practice every spring to obtain thirty or forty cigar boxes for this purpose. If the box is long and large, I put a partition across the middle and make a hole through into each apartment. It is very seldom that these boxes are not occupied by one of these little families. In most instances two broods are annually reared in each nesting place. One of my boxes last season turned out three broods of young wrens—six little hungry birds each time, or eighteen in all! I think a cigar box never before did better duty. The lamented Robert Kennicott stated that a single pair of wrens carried to their young about a thousand insects in a single day! Like all young, rapidly growing birds, they are known to be most voracious eaters, living entirely upon insects. The point upon which most stress may be laid is this: That by providing them with nesting places, in our gardens, orchards, or grounds, and not allowing them to be caught by cats or scared away by mischievous boys, we may have scores if not hundreds of them about during most of the time in which insects are destructive. They undoubtedly return to the same localities to rear their young year after year. Last season I had up about thirty of these nesting boxes, and all but two or three, which were not favorably located, were occupied. My crop of wrens could scarcely have been less than one hundred and fifty, and the old birds filled the air with music when they were not on duty in building their nests or feeding their young. The coming spring I intend to put up at least a hundred of these nesting boxes in my orchards and groves, and I have no doubt I shall be repaid a hundred thousand fold for the little labor it costs. As long as they come back so regularly every year and in constantly increasing numbers, and serve me so well, I shall do all in my power to protect and encourage them. And I am of the opinion that when one species of social, useful birds can be made to congregate in such unusual numbers, others will come also. But the hardness, sociability, love of the locality where it was reared, and wonderful fecundity of the little house wren, render it, in my judgment, one of the most valuable of all our insectivorous birds.—*Charles Aldrich, in the American Naturalist.*

**THE LUMP FISH.**

Family Cyclopteridae, a small family, characterized by the ventrals being united into a disk or cup-shaped form. Body smooth and without scales. Eyes placed on each side of the head. The two dorsal fins are so much enveloped in a tuberculous skin as to appear like a hump on the back. Body deep and rough, with bony tubercles.

The shape of the lump fish is suborbicular in outline, compressed towards the dorsal ridge. The body of the fish is soft and flaccid, resembling a lump of jelly. Instead of scales, the body is covered with minute bony tubercles. From the anterior portion of the dorsal ridge, the outline slopes in a concave line to the orbits, where it becomes abruptly declivous to the snout. The space between the orbital ridges, flat. On the top or ridge of the back is a series of large compressed tubercles, and a smaller row on the anterior slope. Other series of tubercles are distributed over the body. The eyes are prominent. The nostrils double, mouth moderately large and broad, the under jaw slightly longest, small blunt teeth, in three or four rows, in front of each jaw; teeth also on the pharyngeals, and a small patch on the base of the tongue, which appeared to be distinct from the pharyngeals.

The dorsal hump, without any vestige of rays, ventrals immediately under the pectorals united into a disk, with a funnel-shaped cavity in the middle; the margins softly dentated. The skin of the lump fish is very thick, the stomach enormously large, intestines very long. No air bladder.

The range of the lump fish is from the polar regions to Cape Hatteras. A spinous variety inhabits the coast of Greenland and the Bay of Fundy. On the Long Island coast the lump fish is called the indigo bag, from the fact of its being of an indigo blue in color. On the Scotch coast it is called the cock-paddle and hen-paddle. In England it is known as the lump sucker and sea owl. On the French coast *licorne de mer*, where it is considered a great delicacy, and is known as a valuable market fish.

The little jelly fishes shown in the illustration as floating near the surface of the water, are known as sarsia, while its hydroid is called

coryne. The sarsia is about the size of a small walnut, with a wide circular opening, through which passes the long proboscis, hanging from the under surface of the disk to a considerable distance below its margin. The four tentacles are of an immense length when compared to the size of the animal.

**AMPHORA OF BRONZE AND WHITE METAL.**

We give an engraving of a fine amphora of French manufacture, classical in design and highly wrought. The body

**AMPHORA OF BRONZE AND WHITE METAL.**

is of bronze, and the medallions and a portion of the ornaments are composed of white metal, giving a rich and striking contrast. It is mostly handwork, and is a truly artistic piece of metal work.

**Recent Facts about Smallpox.**

An interesting illustration of the value of revaccination is afforded by a report just furnished, at the instance of the Local Government Board of London, by the chief medical officer of the General Post Office. This report relates to an average number of 10,504 persons permanently employed in the postal service in London, all of whom have been re-

quired to undergo revaccination on admission to the service, unless that operation had been performed within seven years previously. Among these persons during the ten years 1870-1879 there has not been a single fatal case of smallpox, and in only ten instances have there been non-fatal attacks, all of which were of a very slight character. In the telegraph department, where the enforcement of revaccination has not been carried out with quite the same completeness, twelve cases have occurred in the same period among a staff averaging 1,458 in number. Eight of these attacks were of persons who had not been revaccinated, and one proved fatal. The remaining four were of revaccinated persons, who all perfectly recovered without pitting. This experience, like that of the nurses at the smallpox hospitals, seems to show that revaccinated persons enjoy absolute immunity from severe attacks of smallpox, and that their risk of catching that disease at all, even in its most modified form, is infinitesimal.

**Heath's Discoveries in South America.**

PROF. JOHN D. PARKER, KANSAS CITY, MO.

Since the death of Prof. Orton in South America, his assistant, Dr. Ivon D. Heath, and his brother, Dr. E. R. Heath, have both taken a deep interest in completing the unfinished work of that expedition. Prof. Orton had formed the purpose of conducting his expedition through the unexplored portion of the Beni River, over which there has always hung such an uncertainty and superstitious fear. But just before he reached this portion of his journey, the soldiers, whom he had hired and paid in advance for his whole expedition, intimidated by superstitious fear, suddenly presented their bayonets at the breast of Prof. Orton, refused to go any further, and returned home. Prof. Orton was, therefore, compelled to abandon his expedition, and returned almost heart-broken to die of weariness and disappointment on the legendary lake of Titicaca.

About three years ago, Dr. E. R. Heath returned to South America to complete, if possible, Prof. Orton's work, and explore this unknown region, the *terra incognita* of South America. It was hoped that some geographical society would aid in this important work, but while plans were being laid to secure material assistance, Dr. E. R. Heath undertook and solved the problem himself.

On December 28, 1880, Dr. Heath, of Wyandotte, Kansas, received a letter hastily written by his brother, dated Reyes, Bolivia, on the river Beni, Aug. 3, 1880, on the day of his embarkation for the rubber camps and the unknown country further below. He wrote that he was just setting out to explore this unknown region, and that three months would tell the tale of his success or defeat.

On March 19, Dr. Ivon D. Heath received another letter from his brother in South America, announcing that his expedition had proved a complete success. The following extract will be interesting from this letter, which is dated Reyes, Bolivia, Dec. 20, 1880:

"The question of the Beni is solved. This work of Prof. Orton is finished. I made the trip from Cabinas (rubber camps on the Madi) in a canoe with two Indians. I left Cabinas September 27, and, after delays from sickness of my men, at 8 A. M., October 8, discovered a new river entering from the south, and at mid-day of the 8th arrived at the junction of the Madre de Dios with the Beni. No other white man has ever seen the mouth of this magnificent river. Crude measurements gave 735 feet for the width of the Beni, and 2,350 for that of the Madre de Dios. Took careful observations for latitude and longitude. At 6:50 A.M. of the 9th I passed the mouth of a river the size of the Yacuma, entering from the north, to which I gave the name Orton.

"At night we slept on a sand bar joined to a large island. On the 10th we passed this island, and at 8 A.M. another large one, and at 10 A.M. came to a line of rocks obstructing the river and making rapids. One mile further down we came to the main fall, which exhibits a perpendicular descent of the entire river of thirty feet. We occupied the remainder of the 10th in drawing our little craft over the rocks to the waters below. With much risk we passed the waves below the falls and camped. On the morning of October 11 we passed some rocks in the river corresponding to the rapids of the Palo Grande of the river Mamoré, but which, here, offer no serious obstructions to navigation. At 10 A.M., October 11, 1880, we arrived at the mouth of the Beni—that is, at the junction of the Beni and Mamore rivers. From thence we ascended the Mamore, 300 miles, to Exaltacion and Santa Ana, and from Santa Ana to this place, 200 miles west over the pampas; brought my boat on an ox cart.

"Here I am safe and sound, with a map of the three rivers—Beni, Mamoré, and Yacuma. From the river Madi to the mouth of the Beni there are but four families of Pacavara Indians in the place of 'multitudes of man-eating savages,' as every man, woman, and child in Bolivia has believed during many scores of years. Rubber gatherers are already



**THE LUMP FISH.**—(*Cyclopterus lumpus*.)