

NEST-BUILDING FISHES.

The *anabatidæ* form one of the most remarkable of all species of fishes, owing to their capability of living for a long time out of water, a power which has formed in them some curious habits. The *anabas scandens*, or climbing perch, of India, has been known to live for six days out of its appropriate element; and some will sometimes quit the water and wander over the land, so far from any stream or pond that they were formerly supposed to have dropped from the clouds. The German naturalist Daldorf states that he once saw one of this species which had climbed a tree to a height of five feet; but this is stated by other observers to be an impossibility. This power is due to the peculiar structure of the pharyngeal bones, which, in a cavity in the base of the skull, are dilated into voluminous *laminae*, forming cells in which a supply of water may be carried for the purpose of keeping the gills moist.

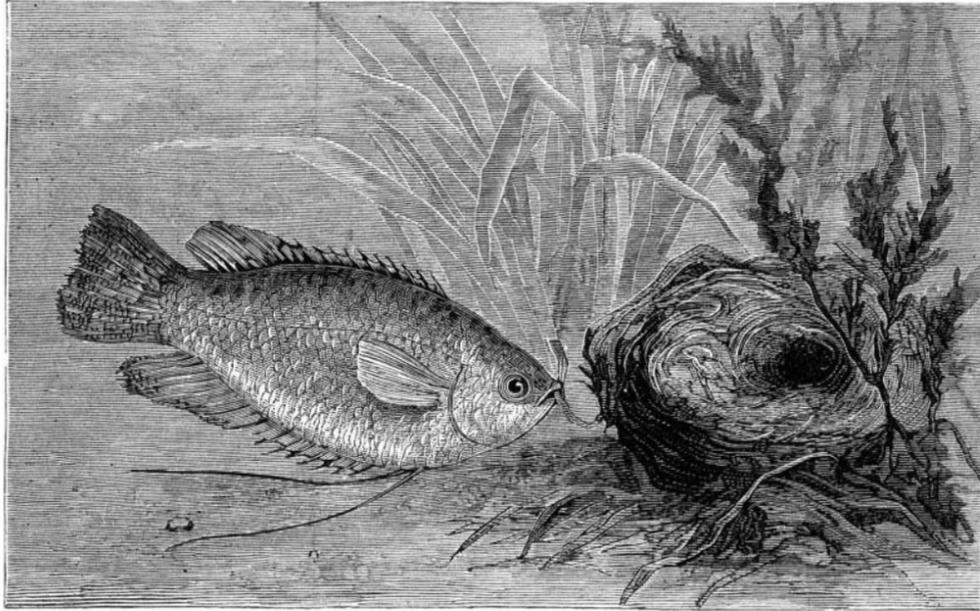
But the gourami's instinct is more peculiar than that of any other member of the tribe. By their united labors, the male and female construct a well built nest, in which the ova are deposited, and which protects the young fry from the thousand enemies by whom infantile fish are pursued and tormented.

The body of the gourami is of a brownish color, varied with some golden tints on its sides; the belly is of a silvery brown. The conformation of the fish is high from its belly to back, and the body is narrow; the head is short, the mouth small and protractile. The scales are large and round. The fish is properly herbivorous, but will eat insects and earth worms; and it is so voracious that, says M. Dabry de Thiersant, the creoles of the Mauritius call it the hog of the river.

The gourami, like most other *anabatidæ*, is found throughout the East Indies, and is a valuable food fish of delicious flavor, resembling that of the European carp.

Many attempts have been made by the French to acclimatize it on this continent, especially in Cayenne; but little success has been met with. In Algiers, other attempts have been made, and greater encouragement followed. At the Cape of Good Hope and in Australia, the experiments were entirely successful.

Our engraving of the gourami and its nest is selected from the pages of *La Nature*.



THE GOURAMI (OSPHRONEMUS OLFAX).

THE SCORPIONS OF EGYPT.

That indefatigable naturalist, Mr. Frank Buckland, has recently published the following account of a fight between a mouse and a scorpion, the illustration (representing the thick of the combat) having been drawn on the spot by a spectator:

"In February, 1868, I received a box by post containing two live scorpions, kindly presented to me by my friend, the late lamented J. Keast Lord, who had caught them under a stone at Heliopolis, in Egypt. Wishing to test the power of the scorpion's sting, I got a glass globe and turned in one of the scorpions. A mouse having been caught in the trap, I thought I might just as well let the scorpion try his powers upon it as the cat. I therefore shook the mouse into the glass with the scorpion. The scorpion, an average-sized one, immediately resisted the affront; and the mouse, who had never evidently seen a scorpion before, did not know whether he was his friend or his enemy. Not liking the continued jumpings of the mouse, the scorpion twisted and began brandishing about his sting. The mouse shortly crossed his path. The scorpion instantly lunged his sting into him. This challenge woke up the mouse, who began to jump up and down like a jack in the box. When he became quiet, the scorpion again attacked the enemy, with his claws extended like the pictures of the scorpion in the zodiac. He made another shot at the mouse, but missed him. I then called 'Time!' to give both combatants a rest. When the mouse had got his wind, I stirred up the scorpion once more, and, as 'the fancy' say, 'he came up smiling.' The mouse during the interval had evidently made up his mind that he would have to fight, and not strike his colors to a scorpion as he would to a cat. When, therefore, the scorpion came within range, the mouse gave a squeak and bit him on the back; the scorpion at the same moment planted his sting well between the mouse's ears on the top of his head (see engraving). The scorpion then tried to retreat, but could not, for one claw had got entangled in the fur of the mouse. The mouse and scorpion then closed, and rolled over each other like two cats fighting, the scorpion continually stabbing the mouse with his sting, his tail going with the velocity of a needle in a sewing machine. When the scorpion got tired, the mouse got hold of his tail with his teeth and gave it a sharp nip. The mouse seized the opportunity, and immediately bit off two of the scorpion's side legs. He then

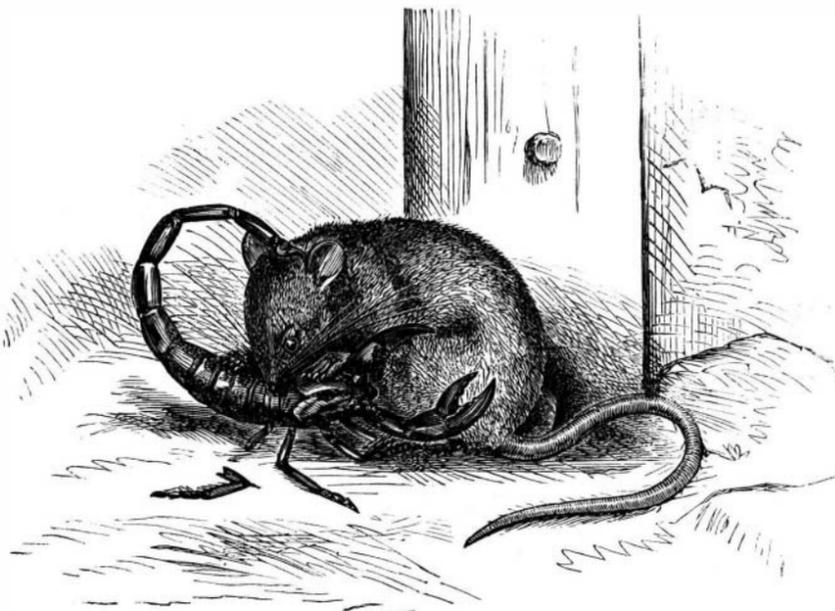
retired, and began to wash his face. I had expected, of course, that the poison of the scorpion would have killed the mouse, but he didn't seem a bit the worse for it. When I examined him the next morning, he was quite lively and well; and had nearly eaten up the whole of the scorpion for his breakfast. Of course I rewarded the mouse for his plucky conduct by giving him some milk, and by letting him go in a place where it was not likely the cat would find him.

"Scorpions are inhabitants of hot climates; they live among stones, logs of wood, etc., in such places, in fact, as those inhabited in England by wood lice and centipedes, etc. They are said to attain the length of twelve inches in Bata-

via; and along the Gold Coast, I have heard (but hardly believe it) they are found as big as a good sized lobster; the general size is about three inches long. It not unfrequently happens that scorpions are brought to England in timber ships, etc., and I have received more than one scorpion thus brought over."

Lily Culture.

Much non-success in the cultivation of lilies arises from working in too much fresh manure, which has come in contact with the bulbs and caused them to decay. If the following treatment is given them, but little fear of failure need be apprehended: In the fall, after the stems are ripened off or killed down with frost, lift all the bulbs; and if the soil is of a loamy nature, procure some fresh muck (the most preferable being that in which the native lily luxuriates) and shake all roots or weeds, etc., out of it; then put a good covering of it on the bed, also a good manuring of well decayed manure, and trench the bed about 18 inches deep, keeping the manure well to the bottom of the trench, so that most of it shall be below the base of the bulbs, incorporating at the same time the peat or muck well with the soil. After the trenching is done, level the bed on the sur-



FIGHT BETWEEN A SCORPION AND A MOUSE.

face, and plant the bulbs in rows, about one foot apart for small bulbs, larger ones further, and about the same distance in the rows, putting them into the ground from six to eight inches deep. Before severe frosts set in, cover with a good protection of rough horse manure or any such material, which will help to keep them from getting too much frost. In the spring, before the bulbs start, remove the covering and they will come up strong and vigorous. When planting the bulbs, surround each one with a good handful of river sand.—*Cultivator and Country Gentleman.*

To remove grease stains from silk hats, use first turpentine and then alcohol.

Naphtha, Benzine, and Gasoline.

The distinction between the three above-named articles, which exists only in degree of their specific gravity, is clearly set forth in *The Grocer* as follows:

"Among the chief products of petroleum, which enter largely into every-day trade, and about which very little is known even by those who handle them, are naphtha, benzine, and gasoline, all of which are the first results of the distillation of petroleum. The application of the three names is oftentimes confused, though there is a practical difference between the products, which may be easily determined by the simple use of an hydrometer. The first result of petroleum distillation shows a gravity of 90°, and the distillation from that down to 80° gives what is known as gasoline, which is used almost exclusively in patent gas machines for the manufacture of burning gas, a very fine light being obtained from its use. It is also employed as a carbonizer of coal gas, and, when properly applied at the meter, and with improved burners, it adds greatly to the richness of the flame. The gas companies use gasoline as an admixture for their product, in which case it becomes an adulterant, because of the imperfect means employed in its use.

The distillation from about 74° down to 68° is termed benzine, which is largely used by painters as a substitute for spirits of turpentine; the latter, being more oily, produces a much heavier paint, giving a better finish and being much more durable, but benzine is a quick dryer, and, being cheap, is especially adapted to rapid and low-priced work. The scouring establishments also use very large quantities of this product, and it is deodorized and sold in small bottles, under various names, for removing grease from clothing and similar purposes. When first taken from the still it is highly odorous, and that disagreeable feature is only removed by means of re-distillation and treatment with sulphuric acid. The goods that are bottled and retailed in that way frequently have some fragrant perfume added to counteract the pungent odor, which cannot be entirely removed from the benzine by any manner of treatment. Benzine is sometimes used for burning, but is exceedingly dangerous, and should never be employed for that purpose.

The heavier gravity product of the still, ranging from 62° to 65°, is termed naphtha, and is the lowest distillation unmixed with oil, which distills over at about 62°. Naphtha is used in the manufacture of varnish, oil cloths, and patent leathers. It is also largely employed in connection with india rubber, of which it is the only perfect solvent, being vastly superior to spirits of turpentine. We have shown in this brief space the proper gravity of these different products, and persons who have occasion to use any of them can easily protect themselves against impositions by applying the hydrometer test to which we have already alluded.

The finer burning oils are made from distillation ranging from 51° down to 45°. Most of the high test oils show a gravity of about 47° to 48°, but this is too heavy for a very fine free-burning oil, and the finest product made has a gravity test of 50°, and a fire test of 150° Fah. This gives a perfect light, and may be used with absolute safety. The low priced kerosene oils, testing down as low as 110° Fah., and under, and of 46° to 48°, are being superseded by the better grades; and the good results are shown in the very rare reports of injury to life or limb from the use of an article which, because of its impurity and danger was, a few years ago, very generally condemned."

Cleaning Silk.

The following mode of cleaning silk garments has been successfully tested. The garment must first be ripped and dusted. Have a large flat board; over it spread an old sheet. Take half a cup ox gall, half a cup ammonia, and half a pint tepid soft water. Sponge the silk with this on both sides, especially the soiled spots. Having finished sponging, roll it on a round stick like a broom handle, being careful not to have any wrinkles. Silk thus washed, and thoroughly dried, needs no ironing and has a luster like new silk. Not only silk but

merino, barège, or any woolen goods, may be thus treated with the best results

FOR the benefit of people who, like a large proportion of the inhabitants of this city, reside in localities where disagreeable odors from slaughterhouses, oil works, or bone boiling establishments are prevalent, we have tried various fumigating compounds, such as pastilles, etc., in order to determine which best overcomes such stenches. We find none so efficacious as simple burnt coffee. Grind the roasted berries moderately fine, moisten the powder slightly, and throw 1 oz. or so on a pan of hot coals. The odor seems to remain in a room even when the windows are opened.