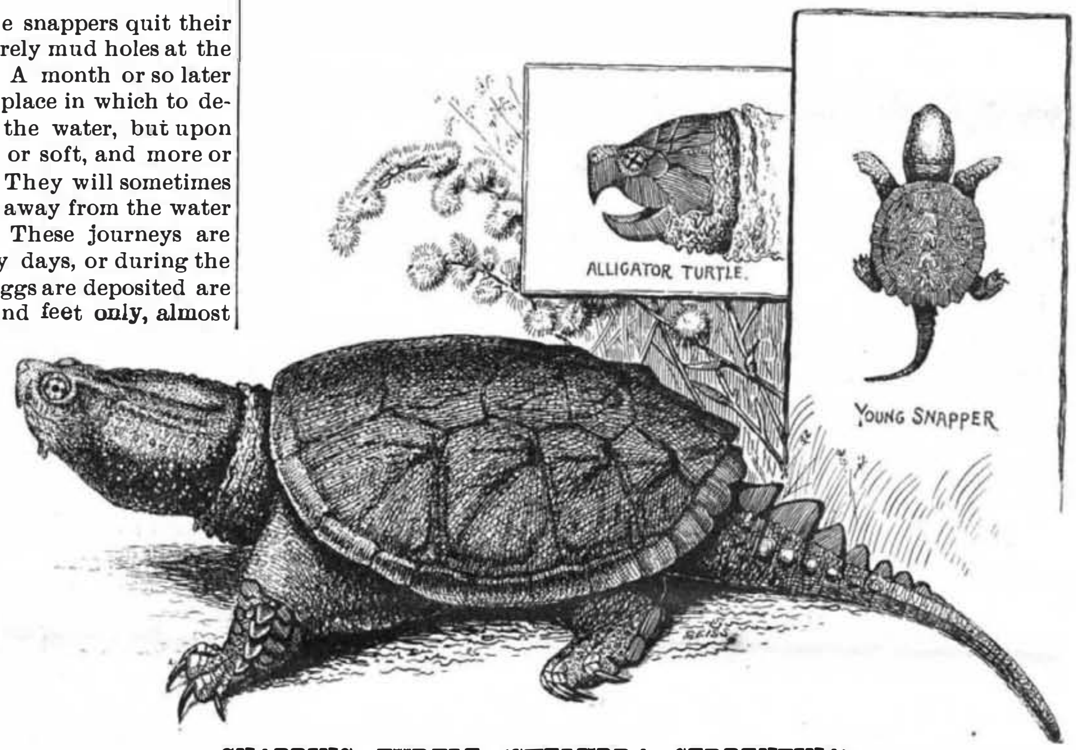
THE SNAPPING TURTLE.

BY C. FEW SEISS.

Although the "snapper," or snapping turtle, is a well known reptile, its life history, owing to its secluded habits, is, as a general rule, but little understood.

It has a long geographical range, being found from Canada to Ecuador, S. A., but is wanting on the Pacific slope of the United States.

During the month of April the snappers quit their winter dormitories, which are merely mud holes at the bottom of some marsh or pond. A month or so later the females search for a suitable place in which to deposit their eggs. This is not in the water, but upon the bank where the soil is sandy or soft, and more or less dry and exposed to the sun. They will sometimes travel a quarter of a mile or more away from the water to find a suitable sandy spot. These journeys are generally made on rainy or cloudy days, or during the night. The holes in which the eggs are deposited are scooped out with the turtle's hind feet only, almost exactly in the same manner as our box or land turtle. While digging, the turtle performs, as it were, a clumsy and slow waltz. The holes are excavated only to the depth to which the leg and foot of the turtle is able to reach. The number of eggs deposited depends upon the size and age of the snapper. From fifteen to nearly double that number have been counted. After the eggs are laid they are carefully covered with sand, and the hole is filled and leveled so perfectly that it cannot be recognized. The eggs vary in size from 1⅛ to 1⅜ inches in length. They are somewhat round or globular in form, and are covered with a tough, leathery skin.



SNAPPING TURTLE (CHELYDRA SERPENTINA).

The little snappers escape from the eggs and dig their way out of the sand, from the middle of June to the 1st of August; and immediately, by direct line, seek the nearest body of water. Instinct seems to tell them the correct route, for they have, I believe, never been found traveling in the wrong direction, although in some instances the water was quite a distance off, and entirely hidden from view.

Great numbers of snapping turtles are sold in our markets. They are served upon the tables of our hotels and eating houses in the form of soup or stewed "snapper," but, I believe, in no other way. For my part, I do not consider it a savory dish, and always omit it from my bills of fare. I would suggest snapper salad instead of lobster salad, as the latter valuable animal is becoming so rapidly exterminated. Vinegar and high seasoning might destroy that somewhat rank and musky flavor which snapper generally possesses.

I have noticed on several occasions the mode practiced by some farmers of "fattening" snappers previous to killing them for the pot. After they are caught they are kept for some weeks in the tank or hogshead containing sour milk, kitchen slops, etc., which is kept for feeding the hogs. It is not natural that such unsavory surroundings should produce much fat, and it certainly does not add to the health and happiness of the captive turtle.

The snapper has a voracious appetite. Everything in the animal line that he is able to master is included in his menu. To the breeder of ducks and geese he is a great pest. Rising stealthily beneath the swimming duckling he seizes it by the feet, pulls it under the water, and drags it off to some convenient spot, where it is devoured. The snapper also has the habit of lying in wait for its prey in some secluded hole under the bank; and when a fish, young muskrat, eel, or frog passes his retreat, he darts out his long neck, and, simultaneously throwing his whole body forward, catches in his jaws the unsuspecting victim. Although carnivorous in habits, the snapper has been known to pull and eat berries from bushes which overhung the water.

The snapping turtle is remarkably tenacious of life. Its head, though completely severed from its body, will seize with its jaws a stick or other object that is placed near enough for it to grasp. Indeed, I have seen a head that was able to use its jaws the day after it had been detached from its body.

The shell or carapax of the snapper adult measures from 9 inches to over 2 feet in length. Dr. De Kay gives 4 feet as the maximum size, but I have never known one so large. An old individual caught in the Schuylkill River above Philadelphia weighed 24 pounds, which was considered very large for this locality.

There are two species of snapping turtles found in the United States—the one here described (*Chelydra serpentina*) and the great-headed or alligator snapper (*Macrochelys lacertina*), found only in the Mississippi River, its tributary streams, and the rivers of the Gulf States. The latter can be distinguished by its enormously large head, which is covered with smooth, symmetrical plates, while the head of the common snapper is covered with a rather rough but soft skin.

WEIGHING A GAS.

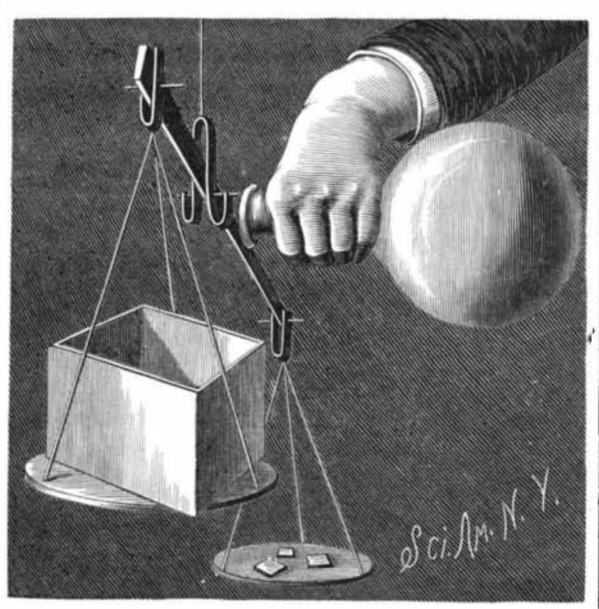
T. O'CONOR SLOANE, PH.D.

The identical action of steam and water in the reaction engines named Barker's mill and Hero's engine has already been used to illustrate the possession of mass by fluids and gases. Mass acted on by gravity produces weight; therefore, if the possession of absolute weight by a gas be shown, another demonstration in the same line is produced. In the cut is illustrated a simply constructed apparatus for proving that carbonic acid gas possesses weight. It consists of a delicate balance provided with a box or receptacle for the gas and with a weight or taring pan. It is thus constructed.

A thin piece of wood is used for the beam. A piece three feet long, two inches wide, and an eighth or a quarter of an inch thick is good. Through the center of one of the sides a longitudinal line, which must be perfectly straight, is drawn. This determines the position of the fulcrum and of the supports of the balance frame. The center of the line is found, and a needle is driven through it as nearly perpendicular to the plane of the wood as possible. The easiest way to insert it is to first make a hole part way through with the small blade of a penknife. Then, with a pair of pliers, the needle can be grasped and forced through. The point for about an eighth of an inch should now be broken off, lest it prove annoying.

At each end a needle is passed through the beam in the same way, care being taken to keep them exactly on a line with the center one, or a little below it. This amount should not exceed the diameter of the central needle. The best plan is to try to have them all on one line.

This gives the beam for a balance. The suspension



WEIGHING A GAS.

piece is made of tin, bent into a U-shape, with its ends turned back upon themselves. Holes are made for the needle to go through. Notches are made in the upturned ends. This is not strictly necessary, as it is enough if the ends are bent so as to come exactly on a line with the bottoms of the apertures in the tin. Both ends and the two apertures must be on the same line. This piece is sprung over the needle, so that it shall extend across both upturned ends, as shown in the cut, and the suspension piece is provided for.

Similar pieces of tin are arranged for the end needles, but these need no retractile ends. Balance pans, made of light wood or cardboard, are suspended from these end pieces. The great object is to keep the whole construction as light as possible. A box for holding the gas is made out of light, stiff paper, to rest on or take the place of one pan. A tight brown paper bag is as good as anything for this purpose. A clew to its size may be found in the sensitiveness of the balance. One hundred cubic inches of carbonic acid gas weigh about 17 grains in excess of the air displaced. By trying it with weights, the minimum weight with which the balance will turn can be found. Enough cubic inches of carbonic acid gas to far exceed this in its effective weight should be allowed for. Thus, if it is found that the balance turns well with 17 grains in one pan after it has been brought into exact equilibrium, 100 cubic inches of gas would be none too much. The rule is, of course, the more gas used the better, because it will weigh more.

The gas is made by the action of hydrochloric acid on limestone, and is collected by displacement of air in a flask with as wide a neck as possible. The quantity formed is ascertained by lowering a small flame, such as a taper, or even paper alumette, into the flask. The point where this is extinguished marks the level of the gas. When the flask is completely filled, it is corked or covered with a paper cap.

The balance is now accurately tared, the box or bag being in its place. The flask is uncorked and the gas poured into the bag. As nothing can be seen, the surest way is to turn the flask at once nearly over, with its neck below and within the edge of the mouth of the box. As the gas pours in, if the hand is placed in the current, it can be felt. The gas gradually enters the box, and in a few seconds that side of the balance preponderates, and descends. For its simplicity, few experiments are more effective.

The weight of the gas can further be illustrated by pouring it into tumblers or beakers. From them, by means of straws or glass tubes, it can be taken into the mouth, producing the well known soda water taste.

This experiment is usually shown in chemical courses, but it really belongs to physics. The supposition is that a certain knowledge of chemistry is needed to make the gas. But this is easily done by any one, and the method is described in all textbooks of chemistry. A small bottle is fitted with a perforated cork. Some fragments of marble are placed in it, covered with water, and some muriatic acid is added. The gas immediately begins to come off. The cork is placed in the bottle, and by a glass and rubber tube the gas is conducted through the aperture in the cork, and led to the bottom of the flask. There it sinks and rests almost like water.

Washboards.

A reporter on the Cleveland, O., *Leader* had a talk with the traveling agent of one of the largest washboard factories in the United States the other day. Said he: "Millions of washboards are made and sold in the United States every year, and at least 7,200,000 are sold yearly between the Allegheny Mountains and Missouri River. There are two factories in Cleveland which turn out 200 dozen washboards a day, one in Toledo which turns out over a million a year. There are at least twenty different varieties of washboards, and the best washboards are made in the West. The Eastern factories make their washboards of pine. The best wood for washboards is the cottonwood or the sycamore. Pine is too soft, and white pine is too expensive. The best washboards are made with dovetailed heads with wire nails driven across the grain of the wood. You can buy the poorer class as low as 80 cents a dozen at wholesale, and the better boards cost as high as $2.15 a dozen. Double washboards are those that have zinc ridges on both sides. The prices of these run from $1.60 to $3 per dozen. At retail washboards cost 25, 30, 35, 40, and 50 cents apiece. The first washboards were made of wood entirely, and our washerwomen used to pound the dirt out of the clothes with a stick by laying them on a board. The first washboards made of zinc were put upon the market about twenty-five years ago, and the style first invented is found the best to-day."

HON. ABRAM S. HEWITT, our new mayor-elect, says that "for the first time in the history of this country, the day's wages of a mechanic can buy a barrel of flour."