

HOUSE-CARRIERS UNDER WATER.

BY WILLIAM HAMILTON GIBSON.

(Author of "Pastoral Days," "Happy Hunting-Grounds," etc.)

There is a house-builder that few of us ever see in its home—the caddis. He lives on the pebbly bottom of the stream or the

pieces of floating grass stems or straws, enlarging the tube as its growth requires by slitting up the side and fitting in a strip of new material; afterward perhaps decorating the exterior with a few stray chips or pebbles.

But the most interesting of all are the dwellings of the stone-builders, actual mosaic tubes of carefully selected pebbles, all joined edge to edge, and neatly closed at the rear opening by a carefully fitted pebble of larger size. And one there is, the glassy abode of the smaller caddis, a perfect marvel of mosaic art. A small, slightly curved tube about three quarters of an inch in length, shown directly above the illustration, the crystal palace of the most exquisite and gifted artist among all the caddis fraternity. The tube is composed of minute glassy flat pebbles, joined edge to edge with the most skilful exactness, and is often so transparent



CADDIS FLIES AROUND A CANDLE.

shallows of the pond. Even as we stood upon the black ice at the edge of the dam, gathering our bag-worms, we need only have lain down upon the ice and looked beneath to have seen our caddis crawling upon the bottom, leisurely lugging its stone cottage or log cabin around with it. But who would ever think of going "bug-hunting" in winter? This stream, locked fast and muffled in ice, or bubbling beneath the snow-drift, its overhanging icy border fringe crowding close upon the ripples in the intense cold, would hardly invite the naturalist as a likely field for specimens. The city naturalist who happens to keep an aquarium knows with what difficulty he can keep it stocked in the winter months if he would depend alone upon the dealers in aquarium supplies. A few lizards, polliwogs, and gold-fish are almost their only stock in trade at this season, with perhaps a fine show of green moss in bunches, picked in the woods, which "looks pretty" under water. "But I want some plants, snails, water-beetles, and craw-fish" I said to such a dealer recently. "Oh, you can't get anything of that kind now, you know," he replied. "They're all dead or froze up. We'll have plenty of 'em in the spring."

Nevertheless the film of ice over the pond or stream need be no barrier to the winter naturalist. The mud at the borders of the bank holds a lively harvest, and does not seem to care a snap for the

that when wet the form of the dweller may be seen through its wall. Here may the human worker in stained-glass find his matchless model. An artist too that accomplishes his task without resort to metal frame or solder, the edges of his glass being joined by some insoluble cement of which he holds the secret. The art of the bag-worm appears almost commonplace by the side of this rare product. With its ready reserve of silk it is an easy matter for the bag-worm to weave a mere pouch, while the further attachment of the sticks and leaves is mere pastime; but what shall we say of the intelligence that gleams among the pebbles beneath the water, constructing a mosaic tube about its body, even in the current of the stream. This is what the caddis larva does. This case of the caddis serves as a protection against its enemies; and while the basket-carriers in the trees are keeping an eye out for the birds, dodging into their case and literally "pulling the hole in after them," or drawing it close against a twig, on the approach of the enemy, the caddis is continually on the alert for hungry prowling fish that know a tidbit when they see it. The number of empty shells to be found in every caddis pool would seem to show that the fish know all about caddis. I was once greatly amused at the sly arts of a tiny rockfish in my aquarium that soon left nothing but empty shells to show for



CADDIS HOUSES.

seasons. One good scoop with a stong net will sometimes bring up a veritable summer haul of specimens—fish, frogs, water-beetles, lizards, water-boatmen, dragon larvæ, and occasionally a dainty case of the caddis, resembling one of the group which I have here picked from yonder pool and laid upon the snow. I have a number of these cases before me as I write, and they are really beautiful works of insect art. As a rule, each species of caddis is true to some particular whim in building or in the choice of materials for its domicile. Here are two that seem to have taken a hint from the bag-worms and think there is nothing to compare with sticks and leaves. They are about an inch and a half long. Another carefully selects tubular

my caddis and my snails. His plan of operation was to steal up from behind as the unsuspecting victim was regaling itself in the water, and with a sudden dash grasp the head of his prey, when, after a vigorous shake and determined grip, the shell was released, and the victorious fish retired to its corner among the pondweed to think which of the two yonder—snail or caddis—it would rather have for supper.

I have said that few of us ever see the caddis in its home. And yet he is an old acquaintance with most of us. There are few summer evenings when he does not make himself perfectly at home around our "evening lamp" in the country, that brown circling moth-like insect, with steep-sloping wings, and such a powerfully strong

odor, being in truth the perfected product of these tube-cases beneath the water. A collection of caddis cases makes a very interesting exhibit. I have shown a group of the cases of six foreign species, but it is possible that any one of them may yet reward our search in our native pools. I have found three specimens that closely resemble some of them.

MY STORY.

BY A PISTOL.

When I was about twelve years old, I decided that I was old enough to own and carry a pistol. Other boys not as tall as I was could boast the ownership of a pistol; so one evening, as father was drawing on his gloves, I astonished him by asking permission to buy a pistol.

"A pistol! Whom do you want to shoot?"

"No one, sir. I only want to learn to shoot properly."

"What do you call proper shooting, my son?"

"Hit what you aim at, of course."

"Indeed, some people hit things they do not aim at."

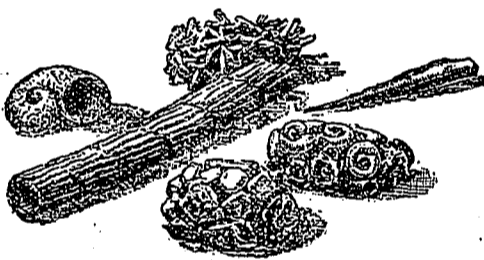
"Certainly; but I should try to avoid blunders."

"My son, I don't think you have any real need of a pistol."

"But, father, suppose I should meet a mad dog, or a—gorilla?"

Father smiled. "John," said he, "I am a great deal older than you, and I have never met either a mad dog or a gorilla; whenever I do I will get you a pistol, not before."

Where there is a will there is a way. My will was good enough, if I could only contrive the way, so I kept planning over and over how to get the coveted treasure. After I went to bed, I lay awake thinking of nothing but a pistol. I had been in bed about thirty minutes when there came a rap at my door; supposing it was my mother, I said, "Come in." What was



FOREIGN CADDIS CASES.

my astonishment to see a pistol walk in. I rubbed my eyes to assure myself that I was not asleep; then I sat up in bed.

"How do you do?" said the pistol, walking up and seating himself on my bed. I stammered out something about not expecting company.

"Of course, it is an unusual hour for callers, but, knowing how much you wanted a pistol, I felt it my duty to come immediately."

"I believe I prefer a dumb pistol," I faltered.

"Ha! ha! one that won't fire, with a gorilla within two feet of you."

"I—I mean, sir, one that can't walk off and leave me, you know."

"Well," said the pistol, "I did not suppose you would want me, no one does when he hears my story. It is a very sad one, and I never tell it to any one but boys."

And without further delay he began: "When I was quite young, a very foolish father bought me for his son John. He was about your age and size. He was very kind to me, handled me tenderly; kept me well polished, fed me well, took me with him almost everywhere he went,

except to school. This the principal positively forbade; but as my education was born with me, all completed, I did not care about going to school. I was allowed to go to all the horse-races, fairs, circuses, etc. I even went to church once when the twins were christened, and when Miss Bess was married I occupied a place on the mantel where I could see the wedding ceremony. Ah! those were happy days."

Here the pistol stopped as if unable to continue.

"Will you please finish your story, Mr. Pistol," I ventured to remark.

"Ah! yes; I was thinking of the last time I accompanied my young master. It was the night of the Fourth of July. We went out to have a good time. All the boys were out sending up sky-rockets, etc., etc. In the midst of the fun, two of the boys got into a quarrel about some fire-crackers. My master was called up for a witness. One of the boys disputed his word; this brought on another quarrel. My master called the boy a liar, whereupon the boy struck my master; then—Oh, the horror of that moment!—my master drew me out of his pocket, and before I could utter a remonstrance, fired! There was one piercing shriek. The boy fell dead at my master's feet. Then the horrible cry of murder rang out. My master dropped me and fled for his life. I tried to conceal myself under the sidewalk, but I was found and brought into court as a witness against my loved young master. I was forced to speak the truth, and after a long trial the jury brought in a verdict of 'guilty.' Oh, it makes me heart-sick whenever I think of it! How white my young master was, and when the verdict was rendered he fainted. Then the father cried out: Oh, it was all my fault! If I had not bought that miserable pistol! Oh, my poor boy! Then everybody began to cry. That was the last time I ever saw my beloved master. Since then I have had several owners. The next one shot himself in the leg by his careless handling of me. The next one fired me off accidentally in the house, and scared the baby into fits. My next owner, in trying to kill a chicken for dinner, shot his neighbor's pet dog, and had to pay ten dollars to keep it out of a law-suit. The next man who got possession of me came near killing his wife, supposing her to be a burglar. Just now I don't belong to anybody; my last owner lost me after paying eight dollars for me. I hope no one will ever find me. I was born an unlucky creature. I don't think I was ever of any real use to anybody."

On the contrary, I have been the indirect cause of a great deal of trouble. I have caused the death of one person, imprisoned one, wounded a third, threw the baby into fits, killed a pet dog, made enemies of friends, narrowly escaped killing a man's

