IN THE WOODS.

We have been afraid that our good friend Mr. Old Grub had wandered away so far in his Grubbing that he had forgotten to come home to us; but fortunately, just as we were planning a search party for him, in he walked, all bespattered with mud from the woods, but as rosy and bright as a northern sky. We are glad that the dear old gentleman turned up again. He brings us always something fresh from his rambles.

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ABOUT TREES.

Why does a tree die when we cut the bark? Because the inner bark contains the life of the plant. If it be cut at one side of the tree, that side of the tree above the cut will wither and die of starvation. All its food is cut off. All its larders are closed. If we cut the bark all round, the whole tree dies.

The outer bark is called the rind. In some trees, as in the birch and the beech, this rind is thin. In others, as in the maple, the elm, and the basswood, it is thick. In others, again, such as the ash, and the spruce the rind is scaly.

The inner bark is the true bark,—the seat of life,—the place where the new buds are born and nourished. The bark does not grow so fast as the wood, and so it gets often torn and furrowed by the wood bursting it out of its way. In some trees the outer parts of the bark are constantly being thrown off by exposure to the weather. These are replaced by layers of the inner bark.

The wood also consists of two parts: the outer or *soft wood*, and the interior or *heart wood*. The latter is usually firmer in texture and darker in colour. Any day you may count the layers of the wood. They are distinctly seen. A new one is formed every year, close in to the inner bark, and that is how we can tell just how old a tree is.

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ABOUT WATER.

What is its colour, when the water is pure?

It is blue. Blue is its natural colour. In very deep ocean the water is deep blue. The greenish tint near the shore is caused by the nearness of the bottom. The sky is blue; the distant mountains are blue; things seen through a great space of air are blue; because the particles of vapour in the air, through which these objects are seen, are blue. The greater the moisture in the air,—the more particles of vapour in the air,—the deeper the blue of the mountains and the sky.

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In talking about trees I might have said that the rinds are stripped off for the fishermen. In the latter part of May, when the sealing voyage is over, crews prepare for the cod-fishery. They go into the woods to cut young spruce rinds. They get them about five feet long. When the trees are young the rind is easily stripped off. They are then pressed out flat, and used to cover piles of fish in wet weather.

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ABOUT THE OTTER.

It is said to be slow. But it is not so slow as we think. It gives itself a kind of lift now and then, in a very curious fashion, and pushes along, with a run and a slide. In some countries the people tame it and construct it into a fisherman for them. It is a capital fisher. The otter is the only animal sportsman, the only *lower* animal that kills for amusement and not for food. How it dives for the gleaming prey. Even when it is hungry it eats only the head and the shoulder,—the otter's bite.

THE TIGER-BEETLE.

BY GRAEME STEWART, TORONTO, AGED THIRTEEN.

The ravages of the Dragon-flies and Ant-lions are well known, but those of the Tiger-beetle are not so generally understood. Yet it is as fierce and formidable to insect life as both together. In its larvæ, *i.e.*, in its maggot state, it is a soft, small, white grub with a hump on its back, and a hook attached. It does not look as if it could catch an insect, but what it lacks in speed it makes up for in cunning. It digs a hole about one foot deep and half an inch in diameter, and hangs by its hook near the top. As soon as some unwary ant or other small insect approaches its burrow, it darts out its formidable jaws and carries its luckless victim to the bottom of its den and sucks its juices, leaving the hard parts untouched.

It then resumes its watch at the mouth of its lair. When the time comes it spins itself a case of silk and sand and lies apparently dead at the bottom of its hole. But, while seemingly dead, all its internal parts are changing, and, when ready, the beautiful iridescent beetle crawls out of its old skin and resumes its search after prey. Now, not by traps, but partly by stealth and partly by open warfare.

A little beetle seems unfitted for this; but let us look at it for a while. Catch it, if you can, for it is very swift and quickly flies up. See its shining green mail, and what mail it is! So hard as to be difficult to pierce with a pin, so light as not to impede its motions in the least, and so well jointed as not to have one vulnerable part. "In fine," as J. G. Wood says, "such a suit of armour as no monarch ever possessed and no artist ever conceived."

This is its defensive armour. Let us now look at its offensive weapons. They consist of its jaws which are curved and sharp, and move horizontally. They are made of a hard, green substance like horn. Approach your finger to them and they are opened nearly in a straight line. It cannot hurt our thick skins; but imagine it tearing a fly. When it wishes to attack its prey it creeps up and then with one spring grips its victim in its jaws and sucks its juices. But you say,

"How can a little beetle catch prey?" I will answer you thus:—

"You must not look upon the Tiger-beetle as sluggish. It can run more swiftly than anything else of its size except perhaps an ant, and takes wing as easily as a fly."

Woe to any unfortunate insect that crosses its path; for its appetite is never satiated, and there are few which can escape it by flight. So we must end this brief account of one of the most wonderful beings ever made, whose history might take a volume to itself and leave much unsaid.

YOUNG SALMON.

A Society, of course with a very hard name, is stocking the rivers of France with salmon, and have commenced on a large scale upon the rivers that flow into the Mediterranean. One hundred thousand eggs were sent from California, and placed in the salmon egg nurseries. Here little baby salmon is born, and when he can attend to himself he is turned out into the sea rivers, thousands of them at a time.

Why don't our young Canadian salmon go to show them a thing or two in France?