

Learning to See

The Student, the Fish and Agassiz

by the Student

(This bit of experience with a great teacher is an excellent example of the right method—going directly into the subject itself instead of intro books about the subject of study. Its application to Bible study is obvious).

It was more than fifteen years ago that I entered the laboratory of Professor Agassiz and told him I had enrolled my name in the scientific school as a student of natural history. He asked me a few questions about my object in coming, my antecedents generally, the mode in which I afterwards proposed to use the knowledge I might acquire, and finally, whether I wished to study any special branch. To the latter I replied that while I wished to be well-grounded in all departments of zoology, I purposed to devote myself specially to insects.

“When do you wish to begin?” he asked. “Now,” I replied.

This seemed to please him, and with an energetic, “Very well,” he reached from a shelf a huge jar of specimens in yellow alcohol. “Take this fish,” he said, “and look at it; we call it Haemulon; by and by I will ask what you have seen.” With that he left me, but in a moment returned with explicit instructions as to the care of the object entrusted to me. “No person is fit to be a naturalist,” he said, “who does not know how to take care of specimens.” I was to keep the fish before me in a tin tray, and occasionally moisten the surface of the fish with alcohol from the jar, always taking care to replace the stopper tightly.

In ten minutes I had seen all that could be seen in that fish, and started in search of the professor, who had left the museum. When I returned to my fish it was dry all over. I splashed the fluid over the fish as if to revive it from a fainting-fit and I looked with anxiety for it to return to its normal, sloppy appearance. This little excitement over, nothing was to be done but to return to a steadfast gaze at my mute companion.

Half an hour passed, an hour, another hour; the fish began to look loathsome. I turned it over and around; looked at it in the face—ghastly; from behind, beneath, above, sideways, at a three-quarters view—just as ghastly. I was in despair; at an early hour I concluded that lunch was necessary; so with infinite relief, the fish was carefully replaced in the jar, and for an hour I was free.

On my return, I learned that Professor Agassiz had been at the museum but had gone and would not return for several hours. My fellow students were too busy to be disturbed by continued conversation. Slowly I drew that hideous fish, and with a feeling of desperation again looked at it. I might not use a magnifying glass; instruments of all kinds were interdicted. My two hands, my two eyes, and the fish; it seemed a most limited field. I pushed my fingers down its throat to see how sharp its teeth were. I began to count the scales in the different rows until I was convinced that was nonsense.

At last a happy thought struck me—I would draw the fish, and now with surprise I began to discover new features in the creature. Just then the professor returned. “That is right,” said he, “a pencil is one of the best eyes. I am glad to notice, too, that you keep your specimen wet and your bottle corked.”

With these encouraging words he added, “Well, what is it like?” He listened attentively to my brief rehearsal of the structure of the parts whose names were still unknown to me; the fringed gill arches and movable operculum; the pores of the head, fleshy lips, the lidless eyes; the lateral line, the spinous fin, the forked tail; the compressed and arched body.

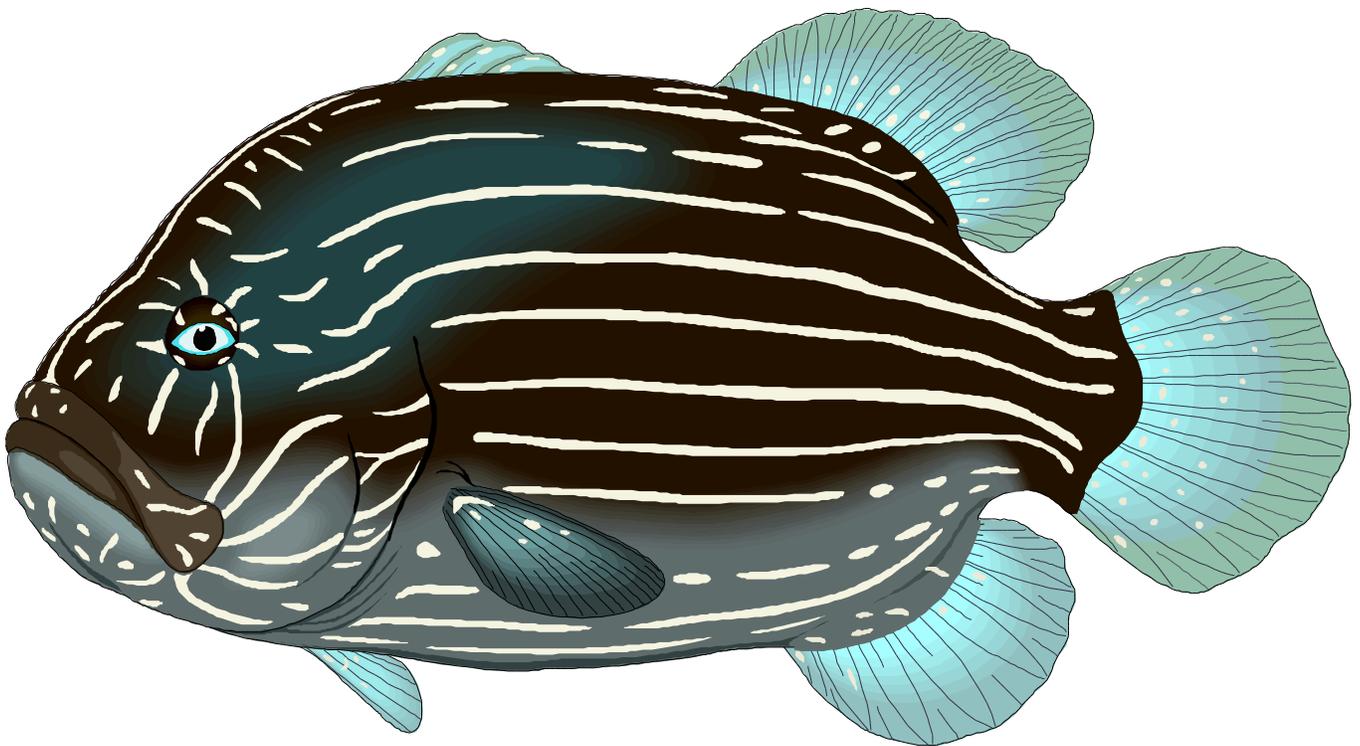
When I had finished, he waited as if expecting more, and then with an air of disappointment he said, “You have not looked very carefully. Why, you have not seen the most conspicuous features of the animal which is as plainly before your eyes as the fish itself. Look again; look again!” And with that he left me to my misery.

I was piqued, I was mortified. Still more of what wretched fish? But now I set myself to the task with a will and discovered one new thing after another, until I saw how just the professor’s criticism had been. The afternoon passed quickly, and towards its close the professor inquired, “Do you see it yet?” “No,” I replied. “I am certain I do not, but I see how little I saw before.” “That is next best,” said he earnestly, “but I won’t hear you now; put away your fish and go home; perhaps you will be ready with a better answer in the morning. I will examine you before you look at the fish.”

This was disconcerting; not only must I think of my fish all night, studying, without the object before me, but I must somehow discover this unknown but most visible feature. The cordial greeting from the professor the next morning was reassuring; here was a man who seemed to be quite as anxious as I that I should see for myself what he saw. “Do you perhaps mean,” I asked, “that the fish has symmetrical sides with paired organs?” His thoroughly pleased, “Of course, of course!” repaid the wakeful hours the previous night. I then ventured to ask what I should do next.

“Oh,” he said, “look at your fish!” and then he left me to my own devices. In a little more than an hour he returned and heard my new catalogue. “That is good, that is good!” he repeated, but that is not all; go on.” And so for three long days he placed that fish before my eyes, forbidding me to look at anything else, or to use any artificial aid. “Look, look, look,” was his repeated injunction.

This was the best entomological lesson I ever had—a lesson whose influence has extended to the details of every subsequent study; a legacy the professor has left to me, as he left to others, of inestimable value, which we could not buy, which we cannot part. A year afterwards, some of us were amusing ourselves with chalking outlandish beasts upon the board. The professor came in shortly after and was much amused. He looked at the fishes. “Haemulons, every one of them,” he said; Mr. _____ drew them.” True; to this day, if I attempt to draw a fish, I can draw nothing but Haemulons.



From the Appendix of American Poems, Houghton, Osgood & Co., 1880.

Questions for Discussion:

- 1) What was the student's initial reaction to the professor's first lesson? _____
- 2) What did the professor do to encourage the student to look some more? _____
- 3) How did the student learn to see better? _____
- 4) How can this story be applied to Bible Study? _____
- 5) How could a pencil help your daily reading of Matthew and other assignments? _____