measurement; moreover, standards change. Science has modified and is still changing the ideas of culture that men hold, and this evolution makes it all the more difficult to find a common ground upon which all can stand when considering things concerning it. This much is clear, however, that no one existing course of educational training has a monopoly of cultural methods; nor will the college course necessarily secure its attainment because of its personal quality. Further, culture is the result of a life, and the most that can be expected of a college course is to open the students' eyes to its real worth, to start them rightly with certain leanings and aptitudes, and furnish them with the means of a continuous growth toward its maturity.

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Herein lies our responsibility.

"KEEPING THEM DOWN."

BY EDWARD F. BIGELOW.

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"Well, I suppose that is all right, but please tell me how I am going to get them down again?" she said in a low tone to the superintendent, as I went out of the school room. The words were not intended for my ears, but I caught them, and they touched me, every bit of me.

She was a teacher who thoroughly believed in discipline. Every action in the school flavored of militarism. She was famous throughout the town for her good government. When the superintendent and I entered the room she came forward very primly (and I thought grimly—but perhaps that was imaginative, the result of the casual remark of the superintendent, "You will have to be a little careful with this teacher. She is great on discipline and routine and says that she doesn't believe in modern fads." The good old methods of the days when Webster's blue-covered spellin' book was paramount were good enough for her.)

After acknowledging the introduction, she turned and said:

"Now, children, this is Mr. Bigelow. He knows everything about the trees, and flowers, and birds, and bugs, and such things, and he has come here to tell you all about them. (A large contract, I thought.) Lay aside your books and papers; now sit up and fold your arms and pay strict attention. You must be very still. He is going to talk for three quarters of an hour, and he will tell us a great many interesting things, I am sure."

After a minute or two made noisy by the putting of books into desks, one could almost painfully hear the *tick-tock* of the clock. The teacher turned to me, and, as she nodded her head, said:

"Now, Mr. Bigelow."

Then she went to the opposite corner and stood there with eagle eye wide expanded to detect the earliest sign of disorder. In the meantime she had sent an assistant to the rear of the room. I paused for a moment to enjoy the air of expectancy and the almost breathless stillness. I noted the glistening eyes of a few, and the soldier-like indifference of most of the pupils. Three or four big boys in the rear seats had especially attracted my attention, by the look, half of disgust, half of protest with which they had swung books out of sight, and stuffed their hands into their pockets. I had seen that look before! I knew how to translate it into "Oh, this is going to be a goody-goody talk telling us how we ought to enjoy this beautiful world and be very grateful to the One that has given it all to us, etc." With an air of resignation, they leaned back, and I remembered the factory that we had just passed, and what the superintendent had told me of the dull work, the long hours and the low pay of the operatives.

Then I said:

"I'm trying to find out how young folks feed their pet animals. Will some one please tell me what he thinks is the best for his especial pets? A friend of animals has written to me that bread-and-milk should not be fed to any pet animal, and I am trying to learn about the experience of others. Will some one please speak and tell me?"

Simple as this inquiry was, it had the effect of a bomb shell. The mental attitude was completely upset and I had to wait a minute for it to settle. Here was every one, other than myself,

expecting a sermon on the wonders and beauties of nature. The young folks had from earliest childhood been told and told again, with so much of line upon line and precept upon precept, that I felt almost culpable as I thus jerked their minds "the other end to." They to give information and I to be the learner! Impossible! It took a minute for the idea to penetrate, for the hands to come out of the pockets and the legs to be drawn up, while looks of astonishment passed from one to another. Faces brightened, eyes began to sparkle, a hand here and there came up hesitatingly. I had touched the known in a place dear to the hearts of those young people. The matter of food was soon explained. Then what stories of dogs, cats, parrots, canaries, hens, rabbits, and even of a pet crow. The story of this crow's capture led to an experience related by one of the big boys about his dog and a woodchuck killed in the stone wall and how the little woodchucks were brought home. I was delighted; the superintendent's countenance beamed with pleasure—I saw that he was convinced—and later I was not surprised to have him write to me, "We have room for the kind of Nature Study you exemplified." But the teachers were alarmed—almost excited. The eagerness of some of the children to tell experiences actually pushed them out of the seat and several steps forward with outstretched hand. Oh the joy of telling! the joy of being appreciated, of being recognized as actually knowing something worth listening to! Every mind woke up, because each was appealed to individually and every one eager to respond. The assistant expressed volumes when she whispered to me as I shook her hand in parting, that she "didn't think that those children knew so much."

But the principal apologetically said to me, "Why, I never saw them act so badly. I'm afraid you'll think we don't have any order. I was ashamed to have two or three talking at once."

To her I said, that they had been only a little over-eager in telling me their experiences. But to you I say that I commend the young folks. I regretted that there was only one opportunity of telling, that there must be a condensation of what should have been extended.

The principal then made the remark to the superintendent, as already quoted, at the beginning of my article.

O principal, and perhaps you, O teacher, who read this. Discipline, instruction are for your school, as a whole. Nature study is for the pupil—this one, that one—a recognition and development of individuality. Restrain *and* develop. Let me repeat; not one, but both. Not everlastingly keeping them down but sometimes letting—helping, encouraging—to spring up. That is why I appeal to you for informal “Nature Study,” for the very young folks, not instruction in science, however elementary, dilute or interesting you are able to make it. For when it comes from you, it is in the keeping down, the filling up. Think and do sometimes from the child’s standpoint. That in relation to natural objects is “Nature Study.” Let it spring up in eagerness—waking up the whole child life.

BIRD STUDY IN OUR COURSES IN ZOOLOGY.

BY GILBERT H. TRAFTON.

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To the use of the college method of dissection in our elementary courses in zoölogy, often employed by the newly made graduate, there is widespread objection. This objection is implied and a positive statement made of the substitute to be used in such books as Jordan and Kellogg’s “Animal Life,” The writer believes that books of this class will revolutionize the teaching of elementary zoölogy and mark an epoch in its history. The plan of this book, together with its companion, “Animal Forms,” closely parallels the course now generally recommended in botany, the first half year being devoted to the ecology and general problems of plant and animal life and the second half year being occupied by a study of types.

Ecology, which occupies an important place in this modern spirit of zoölogy, may be defined as the relation of animals to their surroundings. One of the most important features in these surroundings is the human element, so that the mutual relations of animals and ourselves form an important phase of this subject;