

February 10, 1897.

Dear Dr. Jarrett:

We, my Kindergarten children and I, are very fond of the story of David, but we don't begin with his killing the giant, nor are we unduly interested in that episode. We love to hear of David, the faithful shepherd boy, who led his sheep through "green pastures" and "beside the still waters;" who, when "there came a lion, and a bear, and took a lamb out of the flock," thought not of himself but of the safety of his lambs, and pursued the wild beast and overcame it and delivered the lamb. Here the faithfulness of David and the rescue of the lamb appeal to the children more strongly than the killing.

But David was not only faithful and courageous. He was gentle. He sang sweet songs, and played so cunningly on the harp that he soothed the sick and troubled king.

And he was obedient and returned to his sheep when his brothers went to war. And when he was sent with presents to the camp, and saw the giant Goliath defying his people, and saw that they were afraid, for the honor of his country he fought the giant and with God's help he won the victory.

But David never would have dared to fight the giant if he had not been brave and faithful in caring for his sheep. His strength and courage came from overcoming while he was young.

We have our sheep to care for, and our bears and lions to overcome right in the Kindergarten room. If, some day when the children are at work, you hear a little man call out: "I've killed a bear!" you may know that some piece of work has been rescued from the bear called Discouragement, which threatened to spoil it. Our ears, our eyes, our lips, our hands must be kept from the clutches of the beast of prey. We must begin to grow strong and brave now. Perhaps we may be needed to fight for the home of our country some day. "He that is faithful in that which is least is faithful also in much." That is why we tell the story of David and Goliath.

J. M. W.

More About Buds.

The Science Committee were much gratified at the interest taken in the "buds" by the teachers who were present at the February "At Home." Indeed, the supply of twigs for distribution was hardly equal to the demand. Twenty or more of the "Alumnæ School Representatives" were present, and through their agency, we trust that many school-rooms have been brightened by a "bit of outdoors," and that many sharp little eyes are

watching the daily unfolding of baby leaves. Will not some of them tell the "News" what the children thought of their winter bouquets? Many teachers spoke of finding the little talk on "Buds" in last month's issue helpful, and asked for further suggestions, which we gladly give.

Having discovered all that your twigs have to tell you of their past history, as shown by the leaf-scars, and by the rings left by the buds of former years, carefully watch the new leaves as they emerge from the protecting scales, and note the way in which they have been packed away. This is technically known as veneration, or *præfoliation*. The most common method is a simple folding together of the two halves of the blade along the midrib, as in the Oak, Hazel, Magnolia, and the leaflets of the Horsechestnut. In the Tulip tree, you will find this folding at the midrib, and, in addition, the upper half of the leaf is bent down over the lower. Was ever more exquisite packing than this? As the leaves develop, watch how the scales of the bud become the stipules at the base of the full-grown leaf. This is one of the numberless examples of Dame Nature's economy; she never makes new things when those she has can be modified to serve the purpose. A useful ethical lesson lies hidden away in the Tulip tree buds, too, you see.

If you have Apple, Pear, Sycamore or Honeysuckle buds, you will find the halves of the blade not folded together, but rolled in to the midrib, or central vein of the leaf, while in the Cherry the blade is rolled up from one margin. You will find that still other leaves have been packed away like little closed fans, as the Maple and Currant, and, in a way, the Birch and Alder, too. Perhaps, however, the prettiest of all the modes of veneration is the circinate, which is found in baby ferns—these are coiled up from the apex downward, and look like shepherd's crooks.

If you have very large buds, as those of the Horsechestnut, Hickory or Magnolia, dissect one before it opens, that you may see the leaves in their winter quarters. As the new branch develops, have the children decide where growth takes place first—at the top, or at the base. Then, when the leaves are fully extended, turn their attention to the shape, the margin, the veining, the apex and base, and lead them to classify the different leaves according to similarity in shape or in veining.

If you have Alder, Hazel, Willow or Birch twigs, you will be likely to have some of the flower catkins, and can then study the flowers before the leaves develop. In the Alder, Hazel and Birch, the long, drooping catkins are the staminate ones, while the pistillate are much smaller and are erect. You can tell the staminate by the yellow powder (pollen) which falls from the nu-

merous stamens. When that has all been shed, the work of the staminate catkins is over, and they dry up and fall off, while the pistillate continue growing until they become the fully developed fruit. You may know the Alder by its clusters of reddish-brown staminate catkins, and just above them, on the same branch, the three or four short pistillate ones. When the latter are mature, you can see what look like short crimson hairs all over them; these are the ends of the pistils (styles and stigmas). The staminate catkins of the Hazel are yellowish, and commonly grow singly, close to the stem. The pistillate are like small scaly buds, showing the long crimson recurved stigmas, and look very unlike the hazel-nuts they will become next fall.

If you have Willow twigs, when the catkins or "pussies" develop, you will find either little yellow stamens coming out from the gray "fur," or tiny green threads (styles and stigmas), showing that the catkins are pistillate. You will never find both on the same branch, however, as in the Alder, Birch and Hazel, nor on the same tree. In the Willow and Poplar, one tree will bear nothing but stamens, another nothing but pistils. They are like the people in a Quaker meeting-house—all the women on one side, all the men on the other.

If your children are old enough, it will be interesting to dwell on the fertilization of these early flowers—how, in almost all cases, the pollen is scattered by the wind. Lead them to see what an advantage it is to a wind-fertilized plant to have its flowers in long, pendulous catkins, and to have them develop before the leaves; to notice, also, that they are dull and inconspicuous, as there are no insects early in the season, to be attracted by bright colors.

Why cannot every class-room have a "spring note-book," in which the development of the buds can be noted from day to day? This would lead to accuracy and to more consecutive work; while it might be illustrated by drawings of the bud in its various stages of growth. The interest of the children can be still further stimulated by reading to them about "buds" and the spring-time. There are several delightful pages on this subject in John Burrough's book, "A Year in the Fields." (Miss Grace Beach, a member of the Science Committee, made a number of copies of these pages, that were given to the teachers who were interested, at the February "At Home.") Where could one get a more graphic or charming description of the spring than in Lowell's "Bigelow Papers," No. six, entitled "Sunthin' in the Pastoral Line"? After watching Willow and Horsechestnut buds develop, what child will not appreciate this, for instance:

"Then saffern swarms swing off from all the willers,
So plump they look like yaller caterpillars;
Then gray hors-ches'nuts' leetle hands unfold,
Softer 'n a baby's be at three days old."

A. R. NORTHROP.

The Natural Science Committee cordially invites the Alumnæ School Representatives and other teachers who are interested in extending the study of Nature in the Schools, to be present at the "At Home" on Friday, March 12th. There will be branches there for distribution—a larger supply and greater variety than in February—and the committee also hopes to have a number of birds' nests and fruits to be distributed among those teachers who can make use of them in their class-rooms. ALICE M. ISAACS,

Chairman.

To Branches and Members of I. K. U.

There has been so much discussion in reference to the right *size* and *use* of Kindergarten material, that it seems desirable to get a consensus of opinion from within our own ranks.

Will you therefore kindly help us to an intelligent discussion of the matter by answering *very soon* the following questions, giving to many the results of your own observations and experience? A report based on these returns will be made at the St. Louis meeting, April 19th, 20th and 21st. Presidents and officers of branches are requested to circulate these papers among individual members, or to make the questions a topic for discussion at regular meetings:

1. Do you think it desirable to enlarge the 1st, 2d, 3d, 4th and 5th Gifts? Reasons.
2. Do you use stick-laying? How? Objections, if any.
3. Do you follow a sequence of games? Illustrate your method.
4. What games do you find most valuable? Where do you find them?
5. Do you use the Frœbel drawing? Reasons *pro* and *con*.
6. What do you sew? Materials used.
7. Do you use perforating? Reasons *pro* and *con*.
8. Do you use the Mother Play in your Kindergarten? How?
9. Do you use a program? How do you make it?
10. Have you found any help from Child Study literature and discussions? What have you done in this direction?

Please send your answers to any or all of these questions to Lucy Wheelock, 284 Dartmouth street, Boston, or to the Secretary, Sara E. Wiltse, West Roxbury, Mass.