

sult. (2) The approximate number of trials made of each method before reaching your conclusion.

V. How does Pretending to Cry, on the part of the parent, affect the child: (a) As a deterrent from disobedience?

(b) In making him sorry for obedience? (Try this experiment but a few times, and only on children from two to four years old.)

VI. Observe the child's comments on hearing the following stories, and endeavor to elicit his moral judgment regarding each of the two incidents:

(a) One day a lady gave a stick of nice, red candy to a little girl, named Bessie (or to a little boy, named Robbie, if the child to whom you are telling the story is a boy). Bessie took the candy home and showed it to her mamma. Her mamma said, "How nice it looks; you must give it to me, to eat." Bessie said, "I won't! the lady gave the candy to me, and I want it myself." Then mamma took the candy away from Bessie and whipped her because she wouldn't give the candy to mamma. (Will the child see the arbitrariness of the command and of the punishment?)

(b) One day mamma gave Bessie (or Robbie) a pitcher full of milk, and told her to carry it into the pantry and put it on the shelf. Bessie walked very carefully, so as not to spill the milk; but when she came to the pantry door her little sister, Ella (or his little brother, Jamie), ran against her and made her drop the pitcher. The pitcher broke all to pieces, and the milk ran all over the floor. Then mamma scolded Bessie and sent her into the bedroom, because she broke the pitcher and spilled the milk. (Will the child see the injustice in the mother's treatment of Bessie? If so, what treatment will the child propose?)

Remarks: (1) Tell the stories to children from three to six and one-half years old. (2) Tell the two stories at different times and to each child separately. (3) In trying to elicit the child's judgment, be careful not to suggest ideas.

General Information. By way of introduction to your record of the results of the above experiments, state: (a) The child's *nationality*. (b) His *age in months* when the several experi-

ments are tried. (c) Whether he is a *normally strong* and healthy child, physically and mentally. If not, in what way he is less well or strong than the average child. (d) His *peculiarities of temperament*, especially how far he is naturally *irritable, obstinate or domineering*.

Parents who are willing to aid in the above investigation are requested to send at once to the undersigned: (a) their own names and addresses. (b) The names and respective ages (in months) of the children that are to be observed.

The information secured in response to this paper will be used in a general and statistical way, without publication of names.

It is hoped your observations may be completed, and the report of results sent in, within two, or, at most, three months after your receipt of this paper; but as much time should be taken as is necessary for accurate and full results. Address, J. F. MORSE.

WISCONSIN UNIVERSITY, MADISON, WIS.

SCIENTIFIC LITERATURE.

Frail Children of the Air. Excursions into the world of butterflies. By SAMUEL HUBBARD SCUDDER. Boston and New York, Houghton, Mifflin Co. 1895. \$1 50.

This will prove a delightful book for the coming summer season. Although its title may not be especially descriptive of the contents, the book is devoted to an account of the more interesting peculiarities in the structure, lives, and habits of our commoner butterflies. The subjects treated are the following: Butterflies in disguise, the struggle for existence in the genus *Basilarchia*, deceptive devices among caterpillars, butterflies as botanists, the names of butterflies, color-relations of chrysalids to their surroundings, the White Mountains of New Hampshire as a home for butterflies, butterfly sounds, nests and other structures made by caterpillars, postures of butterflies at rest and asleep, the eggs of butterflies, psychological peculiarities in our butterflies, social caterpillars, the fixity of habit in butterflies, how butterflies pass the winter, the oldest butterfly inhabitants of New England, protective coloring in caterpillars, aromatic butterflies, the ways of butterflies, and similar topics. Those

who are fortunate enough to possess or to have seen Dr. Scudder's great work: 'The butterflies of the eastern United States and Canada,' a work so costly as to have but a limited circulation, will recognize these chapters, which form the delightful excursions of the two volumes of text. They are charmingly written, and are mainly the result of the author's own observations, and in their present form deserve the widest reading. It would prove a beautiful present for a boy or girl interested in insects, and also afford pleasant summer reading for older minds, since few technical terms are used.

There are a number of plates containing figures reproduced from the larger work. In the matter of index, printing, paper and general appearance we not only have no fault to find, but everything to commend.

A. S. P.

Third Report of the Board of Managers of the New York State Colonization Society, by O. F. COOK, Fulton Professor of Natural Sciences in Liberia College. 1896. 8°, 100 pp.

This report is a plain recital of careful observation on plants, animals, and men in the Republic of Liberia; the observations are recorded in simple, straightforward fashion, and are of considerable interest and value, albeit in an unexpected medium.

Over 30 pages are devoted to the flora and fauna; 30 or 40 plants are identified in an annotated list, and the notes touch on a variety of characteristics and uses of the plants and their products; *e. g.*, it is pointed out that the seeds of the mangrove germinate on the trees, sending out long sharp-pointed radicles, which hang pendent until the weight breaks attachments, when they drop into the mud and are thus planted right side up and so firmly as to resist tidal currents; *Urena lobata* 'is protected by ants for the sake of a secretion which is elaborated and exuded by a small gland at the base of the midvein'; the banana and bread fruit flourish, yet their products cannot be made exclusive articles of diet, as is commonly supposed, etc. There is a surprising dearth of mosses and parasitic fungi and lichens in Liberian forests, and it is noted that 'in nearly all natural groups the number of species is much larger than in the same area in North America, even

though the number of individuals may be less for the group as a whole' (page 5). There is a comforting dearth, also, of snakes, mosquitoes, flies and minor pestiferous insects, which seems to be correlated with the wealth of ants, both in species and individuals. The habits of the 'driver' ants, the natural scavengers of the district, are described in detail, as are those of the termites, which appear to cultivate a fungus to supply food for the young and the queens. It is noted that the chimpanzees (called by the natives 'old-time people') dig land crabs out of their burrows and crack them on stones,* and are said also to crack nuts between stones, 'quite man fashion,' and to grasp the python by the neck and bruise its head with a stone (page 22).

The social conditions of Liberia are described in fair detail; and it is shown that, while slavery is prohibited by the Liberian constitution, there is a modified slavery of hiring service which has degraded the servitors and still more seriously enfeebled the served, who 'rarely gain habits of industry or self-reliance, and with no proper school advantages * * * reach maturity too often as examples of physical and mental weakness' (page 45). Even more interesting is the naïve description of the 'missionary slave trade,' from which it appears that evangelization begins with actual purchase of the youth whom it is desired to Christianize and civilize! "In the interior of Liberia [slave] boys 12 and 14 years old were offered me for goods of a cash value of about \$3. Girls come at about twice the price. * * * When it comes to buying free children of their parents the price may exceed the figures mentioned" (page 40). "The only apparent reason why this department of the slave trade has not assumed proportions sufficient to attract general attention, has been the lack of funds in the hands of the would-be buyers" (page 38). In

* Major Battersby, in describing the 'Pets and Pests of the Barbadoes' (*Chambers Journal*, March 14, 1896), mentions a Capuchin monkey which captures crabs in related fashion: "His method * * * is to knock it about with his paw by quick pats until it is sufficiently dazed to give him a chance of smashing its claw with a large stone" (*Literary Digest*, Vol. XII., 1896, p. 717).