

spot, you will find specimens enough to afford you many hours' study. Arabella B. Buckley is one of the students who can see "books in the running brooks, sermons in stones, and good in everything," as is shown by the skill with which she has written "Life and Her Children." Her object in compiling such a book was evidently to make the young acquainted, through systematic study, with the structure and habits of the lower animals.

The first chapter of the book contains a discussion of the lowest class of the animal kingdom—the protamœba. This little creature, which lives in the sea, as well as in pools and puddles, or in any place where stagnant water accumulates, is a transparent, shapeless, microscopic mass. What a wonderful little creature it is! It moves about by pushing out first one part of its slimy body, then another. When it comes in contact with anything that affords it food, it simply draws its body around the creature, and while in this position dissolves and assimilates the soft parts of its victim, afterward opening itself out to cast aside the refuse particles.

The author's next talk is a description of the sponge and its family. What a wonder is this animal, whose skeleton thousands of us are using day after day! For a long time, people thought it a plant, but now it is known to be the frame-work of a slime-animal a step higher than the amœba. When the sponge is found growing on the rocks in its ocean home, it is covered with slime inside and out, which is composed of separate jelly-like individuals much like the amœba. All these individuals form the flesh of a single sponge-animal. Sponges vary in shape and color, and are found clinging to the rocks, growing in submarine caverns, in the warmest parts of the ocean. At first, the sponge is but a single cell, which divides and subdivides, leaving between the cells little canals which afterward open into larger ones. Through the smaller of these cells the food and pure water pass in, while through the larger ones pass out the impure water and refuse particles of food. Thus the sponge eats and digests its food without mouth or stomach, and breathes without lungs.

Following the discussion of the sponge family is a study of the lasso-throwers, including the hydra, the sea-anemone, the jelly-fish, and the corals. The hydra is a delicate little animal; its body is a transparent, cylindrical-shaped tube, with a mouth at the upper end, surrounded by eight tentacles. By the opposite end, it fastens

itself to aqueous plants. Each tentacle is loaded with lasso-cells, with which the hydra stings and paralyzes any other animal that happens in its way. Once having paralyzed the prey, it instantly twists its tentacles around the animal's body, and remains quiet till all struggles cease, when the unfortunate is drawn into the hollow sac that awaits it, is digested, and assimilated. The hydra puts forth living buds from its side, which as soon as their tentacles are grown, drop from the parent animal and shift for themselves. There are, indeed, some very curious things about the hydra; its body may be turned inside out, and still live; it may be cut into a number of small pieces, and each piece will develop into a perfect animal. The name is derived from *hydra*, a mythological serpent or monster having many head, any one of which being cut from its body would be replaced by a new one.

Miss Buckley's fourth talk is on the star-fish and sea-urchin. In a most interesting manner she has outlined the life history of the mantle-covered animals, among the most common of which are oysters, mussels, and clams. Before discussing the fifth, or worm division, which is small in comparison with the others, she has paused "to glance at that curious, wandering, and outcast population of our globe, which finding no shelter in the earth, or sea, or air, have taken up their abode within their fellow creatures and live upon them." Among these parasites are the pea-crab, ticks, water-mites, flukes, and trichinæ, so dangerous in the muscle of the pork.

Having now arrived at the sixth and largest division of the animal kingdom, the author depicts the life history of the "mailed warriors of the sea." Who would conceive that crabs and lobsters, butterflies and bees, and centipedes and spiders, are formed on the same plan? Commonly the name "insect" is applied to animals having wings and six legs, but Miss Buckley has used the term in a broader sense, calling all ringed and joint-footed animals "insects." It is hard to believe that of vertebrates, worms, mollusca, prickly-skinned animals, lasso-throwers, sponges, and lime and flint builders, we have fifty thousand species, or one-fifth of the animal kingdom. The ringed and joint-footed animals comprise the remaining four-fifths, or two hundred fifty thousand species, of which one hundred fifty thousand are the six-legged insects. The author has spoken of these "insects," as "Insect Sippers and Gnawers," and "Insect Suckers and Biters." Among the "Insect