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Editor and Advisory Board

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THE PLIGHT OF THE BIOLOGIST

EDITORIAL

This is indeed an age of science! For the past three hundred years, man has wooed the Goddess of Nature and so ardent has been his wooing, like Sampson of old, she has finally told him her secrets of power. She has given him gasoline, and by its controlled explosions he has overcome space, has lifted himself into the air to shame the birds in their native haunts, has gone beneath the sea in ships to outswim the very fishes. She has unlocked for him the age-long secrets of coal, and from it he has taken colors Solomon and Sheba never dreamed of, from it he has made explosives to rock the foundations of the solid earth; he has caught its power in dynamos and has turned the fearsome night into day. By her gifts of the lens and of radium, he has penetrated the mysteries of the infinitely great and the infinitely little; he has looked into the depths of the star and of the cell. In a thousand laboratories he has toiled to know the secret springs of life, and has driven back Death for the average man for twenty years.

With the chest of the scientist, and the physical scientist in particular, thus gleaming with the medals of achievement, is it any wonder that the layman is overawed? Is not Science to him a talisman, a thing to conjure with, a key to the very thunderbolts of heaven?

But, unfortunately, Biology has not kept pace with the physical sciences. True, it, too, has done wonders! By its researches we know the animal body as never before. We

know minutely the development of the body from egg to adult. We know the basis of hereditary characters and something of the manner of their distribution. We know something of the causes of diseases, and how to prevent them. We have entered and explored the secret recesses of the body and can remove surgically almost anything from it except a bad conscience; we have even looked into our ancestry and think we know in part from whence we came.

But in spite of his achievements, every thinking biologist knows that he has penetrated only the fringe of things; he is yet barred from the mysteries of life itself. Chemistry and physics promised him aid in the interpretation of life, but they have here fallen by the wayside. No animal is a pure machine; the glib mechanistic explanations of life of the past century are as dead as the dinosaurs! What then? The modern biologist defines life only in terms of its working. He sees an animal metabolizing, growing, reproducing, and because of these things, he says that it is alive. But this is no definition of life; it is merely telling what a living thing can do. Neither is he much better off when he comes to tell how some of the individual parts of a living creature work. Take, for example, the cerebral cortex, that thin, crumpled veil of gray stuff enveloping the human brain. Neurologists and psychologists have been examining this structure for over fifty years. They have cut it into thin sections, stained it in all manner of ways, searched it minutely with powerful lenses; and as a result of all this pother and puttering, they have learned that it is made up of millions of delicately branching interlaced cells. They cannot decide whether or not these cell processes actually touch each other or merely approximate it. They know that these cells receive impulses and are capable of retaining effects, but they do not know what an impulse is or what is retained.

Some parts of the cortex seem concerned with one function, some with another, but whole areas of it in fact seem to have no ascribable function whatever, and may actually