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Why Biology?: Editorial

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WHY BIOLOGY?

EDITORIAL

Recently, a young woman of strong antivivisectionist convictions entered the office of a professor of biology and asked if she might buy some cats which he was keeping for dissection. Upon his refusal of her request—for cats have a way of becoming scarce when wanted for anatomical purposes—she said caustically: "You biologists are regular butchers. Unless one is going to be a doctor or a teacher of biology, what good can it possibly do to know the insides of a cat?"

The biologist explained mildly that dissection of an animal similar in structure to the human animal was supposed to give the student a better knowledge of his own internal workings, and thereby to dispel the fog of native ignorance, but upon this she departed, wrathful and unconvinced, and her going left him pondering.

"Biologists are butchers!" A hard saying, and with some truth! "Unless one is going to be a doctor or a teacher of biology, what good can it do to know the insides of a cat?" Or of any other animal, for that matter. The young woman had asked a sharp question. What good, indeed?

Before his inner eye there flashed that countless host of frogs, guinea pigs, dogs, cats, and rabbits that are sacrificed every year to teach the principles of biology to an ever increasing horde. Butchers? Yes, unless such slaughter could be justified by knowledge gained. But could it? Did not the majority of his students forget most of the first half of a term's work before the second half was completed? He tried to think of one of his former students who

might now, after an absence of a year or two, be able to give the complete details of the circulation of a frog. Or, having forgotten it, was the student any better off for having known it in the first place?

He had repeatedly demonstrated the appendix of various animals to his classes, but how many of them now could tell whether the human appendix was attached to the stomach or to the caecum? What difference did it make anyhow? In case of trouble, the surgeon would find it, and the patient's chance for recovery would not be lessened by his ignorance of the latitude and longitude of the offending organ.

He had explained the principles of heredity to many students, but he knew that in spite of Mendel and his disciples, sentiment, and not chromosomes, would continue to be Cupid's most dependable ammunition. He had explained the mysteries of sex, but well he knew that such knowledge did not make for morality—that instead, it led rather to contraception and prophylaxis. He had taught that understanding of life dispersed fear—knowing full well meanwhile that a smattering of half-digested biological facts often induced morbid symptom-chasing, and a fearful, uncritical examination of every wave of physical change. And as he thought over these things he was troubled.

Then suddenly his mental machinery shifted and he saw the other side of the matter. Perhaps his students didn't retain more than five per cent of what he taught them. Perhaps the majority of them were not qualified to be biologists in the first place. But were there not a few who, having had biology, now saw life in a way they had never seen it before? Would not these same few now stop to look at an earthworm with interest and understanding, whereas before they had avoided it in fear and disgust? Would not these same few also be trying to tell others of the enjoyment to be had from knowing the living creatures about them?

Yet a bolder thought came to him. Might not one of his students inspired by the subject go further into it by far than his instructor had ever done—go on into it until he had un-

earthed something of great value to the human race?

And as he thought over these things he was comforted.

PERMANENT ACHIEVEMENTS OF SCIENCE

(Continued from page 3)

which is already long, might be greatly extended. Space does not permit further discussion. Suffice it to say that in every field of science there is already an imposing structure, a large portion of which may well prove permanent. Even a casual survey of any field will show that there is not stagnation, but change, and that the more frequent course of events is development rather than revolution. The announcement of a new and important discovery is followed by additions or alterations as the disclosure of new facts may require. In this respect science resembles not the potter who discards a broken or misshapen vessel and begins anew, but it is rather like the tailor, who, in fitting a coat which lacks a little of perfection on the first trial does not throw away the piece and begin all over again, but cuts away a little here, lets out a seam for slightly greater fullness there, and so at length brings forth a garment which fits the form with reasonable correctness everywhere.

W. H. Kadesch

NARCOTICS

The law requires that the nature and effects of both stimulants and narcotics be taught in the public schools. A short time ago the writer asked a dozen college students to describe the nature of the effects of narcotics, and to give the extent of their use. The replies were all much alike. All seemed to have a hazy idea that narcotics put a person into a stupor and that while in this condition the addict dreamed rosy dreams and had a pleasant time generally. Likewise most of the dozen seemed to have the impression that the use of narcotics was largely limited to movie stars and hoboes. Apparently the law was not much observed when these people were in the elementary schools. With this in mind, and with the hope of being

of some assistance to the teachers of the state who try to teach the effects of narcotics, the following brief discussion of the subject has been prepared.

Narcotics is a general term for substances which in healthy animals produce stupor that may pass into unconsciousness with complete paralysis and end in death. In man, any drug which produces sleep or stupor and at the same time relieves pain is known as a narcotic. The continued excessive use of them will cause a mental paralysis and finally death. Most of the narcotics used at the present time are derivatives of opium. Opium is produced from the opium poppy. About 350 tons of opium are required each year for legitimate medicinal use. Statistics show that over 8,000 tons are manufactured yearly so there must be approximately 7,650 tons that go into illegitimate trade. In addition to this, narcotics from sources other than opium swell the total to a rather staggering figure.

Practically all the civilized nations of the world manufacture some opium or its derivatives, and all except the United States and Soviet Russia have some for export. The principal opium poppy growing countries are Persia, China, and India. The people of Persia apparently depend upon the sale of opium for a considerable portion of their income so are naturally unwilling to discontinue its growth. Some attempts have been made to limit the growth of poppies in China and India but with indifferent success. The number of factories making narcotic drugs is quite small and the location of practically all of them is known. It is quite generally greed that if we are going to limit the sale of narcotics it must be done by preventing its production and manufacture, rather than by trying to prevent smuggling and private sale. The value of a small quantity of narcotics is so great that means of bringing them into the United States and selling them will be found as long as willing purchasers with money to pay for them can be secured. This is an international problem, but its solution can be hastened by education.

In general, the narcotic habit is more serious and more difficult to overcome than the habit of using al-