Reports—Current Topics—Queries

TEACHER-TRAINING USE OF *ABT* "CREATIONISM" CONTROVERSY

One of the major problems faced in any program designed to prepare future biology teachers is concerned with the nature of science. Most future teachers have a sincere desire to be fair and objective. They do not want to impinge upon any of their students' beliefs. A frequent result of this sincerity and sensitiveness is that they lose their own objectivity in the teaching of biology as a science dealing with phenomena of the real world.

Until recently I found it difficult to handle this problem. Prospective teachers as well as in-service teachers when discussing evolution were more than willing to give equal time to creationism or any other topic students wished to discuss as alternatives to evolution. My students were more than willing to bend their knowledge of the nature of science and its implications for biology teaching.

The recent interlocution in *American Biology Teacher* concerning special creation vs. evolution has proven to be a fertile subject for discussion. Use is made of the articles and letters in an effort to illustrate what science is not. Because I teach in California, I begin with the local comedy of errors by distributing photocopies of page 106 of *Science Framework for California Public Schools*—the guide for science instruction in the state. This page carries the suggestion that "some of the scientific data . . . may be best explained by a creation theory. . . ." The students, in their usual state of servility, agreed that although the definition of theory is stretched and the rationale is misleading, "theories of creation" should be included in their biology courses. This short introductory discussion is then followed with an assignment from the reading list (see below). Students are encouraged to read the material in the sequence given. The members of the class discuss each article or letter before the next assignment is given. The discussions usually take less than half of the class period, so time is available for other activities.

By the time the prospective teachers have perused and discussed each disquisition, including Robinson's article, "Incommensurability of Evolution and Special Creation," the neophyte educators not only have a better idea of the implications the nature of science has for their biology-teaching but also have learned something of the personalities involved in biologic education.

I doubt that any of the students ever abandoned any notions of special creation because of the course. However, I believe that they saw ". . . that the theologic way of knowing represents a distinctly different and incommensurable process of developing knowledge from that of the natural sciences" (Robinson, p. 538) and thus does not belong in a biology course.

READING ASSIGNMENTS. Volume, number, and page references are to 1970–71 issues of *American Biology Teacher.*

Introduction

CALIFORNIA STATE DEPARTMENT OF EDUCATION. 1970. *Science framework for California public schools, kindergarten—grades one through twelve.* Published by the department, Sacramento, Calif. P. 106.

Assignment 1

GISH, D. T. A challenge to neo-Darwinism. 32 (8): 495-497.
MAYR, E. [Letter.] 33 (1): 49-50.
MAYER, W. V. [Letter.] 33 (1): 50-51.

Assignment 2

HADOW, H. H. [Letter.] 33 (2): 112.
WING, F. [Letter.] 33 (5): 301-302.
HOLT, R. V. [Letter.] 33 (5): 302-303.
TURNAGE, M. [Letter.] 33 (5): 303.

Assignment 3

GISH, D. T. [Letter.] 33 (6): 362-363.
NICHOL, E. [Letter.] 33 (9): 556.

Assignment 4

ROBINSON, J. T. Incommensurability of evolution and special creation. 33 (9): 535-538.

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A SIMPLE DEMONSTRATION OF DIGESTION AND ABSORPTION

Many laboratory manuals provide techniques for the demonstration of digestion—particularly of carbohydrate digestion, because of the simplicity and ease of performing tests for starch and sugar. However, few, if any, suggest an experimental demonstration to show that digestion is essential to absorption. The following simple portion of a laboratory study of digestion and the digestive system of animals has been set up to do this.

Two lengths of dialysis tubing are cut and sealed at one end. Into each of these a starch (wheat starch) solution is poured. Diastase or saliva is added to one, but no enzyme mixture is added to the other. The open end is then sealed, and these closed bags are placed in beakers of distilled water. After a period of several hours the water surrounding the bags is sampled by pipette and tested for starch, using Lugol's iodine solution. These tests should be nega-