The 1980 Census

The 1980 census questionnaire will arrive in the mail on March 28, according to plans announced by the U.S. Bureau of the Census. It is important that a member of each household complete the questionnaire fully and accurately.

Biology teachers and their students have an interest in the census and the data it will provide; for example, the census will give us information on changes in:

- the rate of population growth;
- the relative numbers of people in different age categories;
- the size of family units;
- the environments in which families live;
- the educational level of the population;
- the lifestyles of Americans;
- the use of energy;
- the health needs of Americans;
- and many other items of interest to biologists.

We can help to make the 1980 census a success by cooperating fully with the request for information. We can use the results in our classes to increase our understanding of concepts about population, education, energy, and the environment.

Joan G. Creager, editor

THE WORLD OF FRESHWATER FISH
by Thomas D. Fegely. 1978. Dodd, Mead, and Company (79 Madison Avenue, New York 10016). 128 p. $5.95 hardback.

Intended for ages 10 and up, this book could be used by anyone interested in freshwater fish. It not only has photographs of fish and some fishermen, but also includes line-drawings of the inside and outside of fish. Technical terms are used throughout and when introduced, the term is italicized and described. The book includes internal and external anatomy explaining the physiology of the unique organs. The functions that allow the fish to successfully fill its ecological niche—breathing, hearing, seeing, tasting, smelling, swimming—are explored. The behavior and enemies of fish are presented as well as a survey of North American freshwater fish, which includes territory, genus, species, and habits. Instructions are included for creating a natural setting in an aquarium for regional fish.

This well-written book emphasizes the ecology of fish, their food value, and their role in recreation. Its pages are packed with information and are easy to read. The book is a valuable reference for all libraries and could be used to introduce, to inform, and to create excitement about *The World of Freshwater Fish.*

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THE MEDUSA AND THE SNAIL
by Lewis Thomas. 1979. The Viking Press (625 Madison Avenue, New York 10022). 175 p. $8.95.

It is a rare scientist who wins the National Book Award, as Lewis Thomas, President of Memorial Sloan-Kettering Cancer Center in New York City, did in 1974 for *The Lives of a Cell: Notes of a Biology Watcher.* It is equally unusual for a scientist to write a collection of essays that becomes a best-seller as Thomas did in 1979. What is it that is unique about this man? I believe it is his ability to convey science as exciting and beautiful and scientists as human and vulnerable. Thomas is a humanistic scientist; or, if you prefer, a scientific humanist.

Thomas's second collection of essays elaborates on many of the themes presented in *Lives.* The title piece, "The Medusa and the Snail" describes the interdependency of two organisms, a tiny jellyfish and a sea slug that live in the Bay of Naples. It is a metaphorical essay because this relationship appears to Thomas "like a vaguely remembered dream . . . of the whole earth at once." We are so intricately connected with one another and with the living things that inhabit the earth with us, Thomas contends, that it is hard to tell where "we" end and "it" begins.

From this beginning, Thomas moves on to comment on the health care system, "a staggering enterprise, in any sense of the adjective." He views the unwieldly size and inefficiency of the system as symptomatic of the American obsession with "Health." We are convinced we are falling apart, and only the health care professionals through the magic of preventive medicine stand between us and disaster. Thomas says this is simply not so. Humans are adaptable and "tough" organisms, and "if we continue to listen to all the talk," the danger is that we will become a "nation of healthy hypochondriacs, living gingerly, worrying ourselves half to death." Thomas's prescription is to get on with solving the myriad *real* problems we face. It sounds like a sensible piece of advice, and we are hearing it straight from the doctor's mouth.

Particular essays always stand out as favorites in any collection. I personally want to thank Thomas for the excellent "Notes on Punctuation." I find we share a

fondness for semicolons and a resentment of exclamation points. Other readers may be more intrigued by Thomas's answer for anxiety, "Transcendental Metaworry (TMW)."

Other essays focus on DNA research, cloning, the salaries of doctors in 1937 (a real eye-opener), the mysteries of embryology, nature's mechanisms for easing the pain of death, a new curriculum for medical schools, and "Thinking About Thinking."

The Medusa and the Snail is outstanding. The writing is elegant; the content, thought-provoking. I highly recommend spending some time with Lewis Thomas.

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INTRODUCTION TO INSECT BIOLOGY AND DIVERSITY

by Howell V. Daly, John T. Doyen and Paul R. Ehrlich. 1978. McGraw-Hill (1221 Avenue of the Americas, New York 10020.) 564 pp., illustrated. $19.50.

Here is a new text for beginning entomology classes. It is well planned and better adapted to a beginning class than any of the other texts with which I am familiar. Its treatment of the subject lies between the strongly anatomy-physiology focused text of Fox and Fox and the equally strong classificatory text of Borror, DeLong, and Triplehorn. The format is good, and the illustrations clear and to the point. The end papers are the only color in the book and are composed of excellent color photographs of the major types of insects.

There are four divisions: "Insects as Organisms" that fulfills its title and aim—a succinct statement of anatomy and physiology with a touch of behaviorism. The second is shorter but contains more information than is found in the average text on: Population biology of insects. This is the best brief summary of the subject (27 pages) that I have read anywhere. It is a field of great interest to me, and I wish that I had written it. This is followed by: Insects in relation to environment, a detailed and timely analysis. All phases of the subject are touched upon: insects and the physical environment, insects and the plant world, insects and the vertebrates, and, insects and other invertebrates. There are numerous lengthy tables in this section that demonstrate the broad insect base for each class of interaction.

The fourth section "Insect Diversity," is devoted to the classification of insects and occupies about half of the text of the book. I was particularly pleased to see several pages devoted to the geological history of insects. This usually is omitted or relegated to a paragraph or table. These authors accept more orders of insects than usual, 32 in place of the usual 27 or so. As the International Commission on Zoological Nomenclature has not gotten around to fixing ordinal names yet, such variation is to be expected. The species is about the only fixed level in taxonomy. The higher you go in the hierachy of names, the more fluid and personal are the acceptable names.

In the treatment of orders are simple keys to the families and brief statements of the salient features of these. Occasionally a genus is mentioned.

The authors of the book have earned the Navy salute, "Well done." They have produced a far-better-than-average text for introductory entomology that will be found useful in colleges. Ehrlich needs no introduction to biologists in general; Daly and Doyen have worked with hymenoptera and coleptera but are primarily devoted teachers. The entire text shows an understanding of the classroom condition and is aimed at educating students, not confounding them.

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