

Audiovisual Reviews

MARINE FLOWERS: THE BIOSPHERE OF COELENTERATA

1978. International Film Bureau, Inc. (332 South Michigan Avenue, Chicago 60604). 16mm color-sound film. 30 1/2 minutes. Purchase \$400; rental \$20.

Marine Flowers gives a survey of coelenterates (cnidarians) including hydrozoans, scyphozoans, and anthozoans, as well as the closely related ctenophores. Consideration of reef coelenterates provides the opportunity to introduce other forms including polychaetes, echinoderms, and fishes. The film will interest high school and college students and the general public because of the diversity of forms, patterns, and colors chosen. The greatest strength of the film lies in the beauty of its elegant photography. One of the most striking sequences I have ever seen is the presentation of the life cycle of the moon jellyfish. The release of ephyrae from the strobila and the shooting star convulsive movements of the ephyrae are both dynamic and beautiful.

Unfortunately, the educational value of this film is limited in several ways. The introduction emphasizes coelenterates as a group rather than stressing their relationship to other animals. The organization of the film is consistently disjunctive. Editing to combine like forms would not have detracted from the beauty and would have provided greater potential for comparing morphology, behavior, and reproductive activities. To discuss the polyp and medusa stages without considering the planula larva seems inexcusable in an educational film. A number of very interesting symbiotic relationships are presented near the end of the film, but no attempt is made to deal with the specifics of mutualism and commensalism. The film concludes with rather confusing aerial photographs and an equally indistinct conservation message.

The narration includes a number of misleading statements, such as "bones" of coral. The subtitles were helpful although at least one was incorrect; fan worms do not dig holes. The brochure that accompanies the film has several misspelled generic names, e.g. *Beroe* (as *Berol*) and *Hydractinia* (as *Hydractima*). There is no teacher's guide.

The most disturbing negative characteristic is the sound track. The narration

Faith Hickman, Audiovisuals Editor, selects materials and coordinates the review process for this feature. Catherine Marble is her assistant. Their continuing contribution to the journal is deeply appreciated.

Readers interested in becoming audiovisual reviewers are invited to write to Ms. Hickman. General inquiries on this feature should also be addressed directly to her at:

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is uneven and often nearly unintelligible. The background music itself is excellent. It is keyed to the movements of organisms and integrates such diverse solo instruments as the oboe, soprano saxophone, and electric piano. But the music was loud; and when covered with the already indistinct narration, it failed to enhance the presentation.

Marine Flowers is not a strong educational film, but it is a memorable cinematographic experience.

Keith H. Woodwick
California State University
Fresno

THE HUMAN EYE

1978. International Film Bureau, Inc. (332 South Michigan Avenue, Chicago 60604). 16mm color-sound film. 14 minutes. Purchase \$230; rental \$17. Audio cassette \$175. 16mm preview prints available for purchase evaluation.

This film examines the structures and functions of the human eye. Binocular vision is explained and compared to the vision of such animals as birds and whales. Models, animated diagrams, and direct photography of the living eye cleverly portray the most important physical structures as the narrator describes how the eye functions.

Current research on visual learning and memory is discussed with emphasis on the physical link between the eye and

the brain. Stress is also placed on the importance of protecting the eye from injury. A simple explanation of how defective vision can be corrected is given.

The unusual, attractive design, the distinctive narration, and the thorough explanation of the subject make this film very useful in both junior and senior high school life science courses.

Loyce D. Whitson
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ANIMAL BEHAVIOR: THE MECHANISM OF IMPRINTING

1978. Coronet Films (65 East South Water, Chicago 60601). 16mm color-sound film. 14 1/2 minutes. Purchase \$240.

Through time-lapse photography viewers are able to observe a series of dramatic experiments designed to test the phenomenon of "imprinting." Thousands of fertilized duck eggs are placed individually in sound-proof, light-deprived incubator drawers and allowed to hatch totally isolated one from the other. Does this condition affect their behavior after birth? Do they show a need for a parent? To find out, scientists placed each newly hatched duckling in a separate cardboard cylinder and introduced a single, but different, moving object to each environment. What happens when the ducklings discover their first moving object? Does the color, sound, or texture of the moving objects affect the reaction of the baby duck? Does it make any difference if the object is living or nonliving? Silent or producing sound? Is there a distinct and consistent behavior pattern displayed by the ducklings: acceptance? rejection? attachment? detachment? dependence? To find out, vivid and simple experiments are shown. The results support the hypothesis that baby ducks between three and thirty hours old will indeed approach, follow, and become permanently attached to the first moving object they see. Furthermore, when the object

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THE FISHES OF ILLINOIS, by Philip W. Smith. 1979. The University of Illinois Press, Campaign, Illinois. 314 p. \$20.

MORTAL GODS, by Jonathan Fast. 1978. New American Library, New York. 154 p. \$1.75.

ARTHROPOD PHYLOGENY, by A. P. Gupta, ed. 1979. Van Nostrand Reinhold, New York. 762 p. \$29.50.

SPACE TECHNOLOGY SPINOFFS, by Gene Gurney. 1979. Franklin Watts, Inc. New York. 96 p. \$5.45.

SEARCH FOR LIFE BEYOND EARTH, by Dinah Moche. 1979. Franklin Watts, Inc., New York. 96 p. \$4.90.

SEXUAL EXCITEMENT, SEXUAL PEACE, by Suzanne Sarnoff and Irving Sarnoff. 1979. M. Evans and Company, New York. 320 p. \$12.50.

GARDENING WITHOUT SOIL, by Sarah R. Reidman. 1979. Franklin Watts, Inc., New York. 64 p. \$5.45.

ANTHROPOLOGY PHYLOGENY WITH SPECIAL REFERENCE TO INSECTS, by H. Bruce Boudreaux. 1979. John Wiley and Sons, Inc., New York. 320 p. \$21.50.

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is removed the ducklings register distress by excited peeping. They resume calm peeping when the object is returned. Once imprinted to the surrogate parent, do they become confused when placed in an environment with other ducks and imprinted objects? By color-coding several ducklings and imprinted objects and putting them together 24 hours later, the result is clear. Each duck has formed a detailed enough image of its own "imprint" to remember and distinguish it precisely from the others. The film ends by illustrating that what happens in the laboratory also occurs in nature. It demonstrates that to scientists imprinting is important as a link between instinct and learning.

The film is delightful. Illustrations are simple, vividly colorful, and memorable. The narrator succeeds in capturing and holding the attention of audiences of all ages. Elementary children who viewed the film could hardly wait to ask their parents for permission to have a fertilized duck egg to hatch at home. Secondary students eagerly followed the process of embryonic development of fertilized duck eggs to hatching, and thus to "imprinting," in the biology laboratory. The film is also suitable for use at the college level to illustrate specific behavioral patterns. It inspires viewers to do further research on animal behavior.

Trees: The Tallest, Biggest and Oldest

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The film uses sound teaching strategies. Each experiment is preceded by several cogent questions. Each new experiment builds on the one preceding and includes proper controls. The design of each experiment develops from testable hypotheses. The use of a graph showing propensity to imprint with age is excellently constructed and in itself serves to "imprint" an important concept in the minds of the learners.

One notable deficiency in the film is the absence of review segments and summation of previous experiments following a series. This is not a fatal flaw, however, especially in a short film. A well-prepared instructor will be able to provide for appropriate closures in later discussions.

With unusual clarity, this film succeeds in combining humor and enjoyment with sophisticated scientific principles. I recommend it highly.

Sister Corinne Clay
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Fresno

METRICS, MEASUREMENT FOR TODAY

1977. Benchmark Films, Inc. (145 Scarborough Road, Briarcliff Manor, New York 10510). 16mm color-sound film. Part I-History, Length, Decimals; Part II-Volume; Part III-Mass, Temperature. 32 minutes. Purchase \$495; rental \$54.

Each of these films emphasizes a different aspect of metric measurement, thus allowing individual topic reinforcement. All parts use the most commonly used prefixes in a unique attention-getting manner (kilo-hect-deka-deci-centi-milli). Ten-fold relationships and movement of the decimal are repeated several times in the films.

The films are brief. This brevity is advantageous because it permits teachers to use the films in several ways—as advanced organizers, as supplements to regular classroom activities, or as follow-up, reinforcement, or review exercises. But the brevity is also a disadvantage because it limits the use of the films as major teaching devices. The teacher's guide is limited but does provide basic information, including suggested activities and a bibliography.

The films are most useful at the junior high and senior high levels, with limited value for older learners. If combined with other instructional devices and techniques, these programs could be used very effectively.

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