AV NEWS

Edited by George Vuke
Audio-Visual Center, Indiana University

Attack patterns of sharks, 16 mm, 30 min., color, 1966. National Educational Television, Audio-Visual Center, Indiana University, Bloomington, Ind.

This film is primarily a record of experimentation. The experimental organism is an unusual one, but the principles of investigation used by Perry Gilbert, chairman of the Shark Research Panel of AIBS at the American Museum of Natural History's marine laboratory on Bimini, an island 50 miles east of Miami, could be widely applied. Gilbert investigates the roles of vibration, smell, and sight in assisting sharks to locate food. When studied by means of EKG and EEG apparatus and techniques, the smell stimulus is shown to elicit brain activity rather than change in heartbeat rate. Simple but ingenious experimentation eliminates one sense while testing another. Excellent photography records all aspects of shark handling and experimentation. Although direct usefulness is quite limited, some teachers may wish to use this film as a fine example of valid experimentation.

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Reptiles and amphibians, 16 mm, 52 min. (part I, 27 min.; part II, 25 min.), color, 1968. Produced by the National Geographical Society; distributed by McGraw-Hill Films.

Both parts are highly informative, technically excellent, and visually beautiful—characteristics that are typical of productions by the National Geographic Society. Opening scenes of part I introduce the reptiles and amphibians as vertebrates and discuss characteristics common to both groups. The next sequence begins with the first appearance of amphibians in the water and the evolution of lungs to replace their gills. However, the amphibians, unlike the more highly evolved reptiles, still depend on water for reproduction. A short history of reptilian evolution includes the restoration of large dinosaurs found in the U.S. by J. R. McDonald. An animated sequence, of questionable instructional value, depicts a battle between two of the giants. The reptiles are classified into four groups: crocodiles and alligators, turtles and tortoises, lizards, and the most diverse and highly evolved group, snakes. The film presents environmental adaptations and survival mechanisms in a number of interesting ways; for example, a rattlesnake successfully hunts a gopher, and chameleons battle for territorial rights.

Part II begins with the spring rains and the end of a winter's hibernation; during this period, amphibians awaken. Large frogs, ravenously hungry, seemingly devour every living thing in sight before beginning courtship. The courtship activities of the European newt are also shown. Development of an egg into a tadpole is presented through time-lapse photography. Highly interesting environmental, territorial, and behavioral characteristics are presented throughout the film; subjects include the marine iguana (adaptation to feeding in the sea), the nearly extinct giant tortoise, and the Komodo dragon. Finally, the film reports on an experiment in the western U.S., where all animals in a natural 20-acre plot were identified and marked, and then continually bombarded with radiation. Results of this project to date are interesting and probably would promote class discussion.

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The undersea world of Jacques Cousteau, now available from Ealing Film-Loops in 13-cartridged Super-8 film loops for use with the Technicolor projectors or on Super-8 reels for use with Kodak Ektagraphic projectors.

Many biology teachers undoubtedly have seen on ABC television the excellent underwater photography of Cousteau and the crew of "Calypso," their floating marine laboratory. As suggested by the titles, most of the film loops investigate various kinds of behavior—protective, territorial, predatory—of a variety of marine animals including sharks, whales, and turtles. Other loops in the series are more descriptive, showing inhabitants of a particular marine environment. The loops should promote discussion concerning adaptation, behavior, and the techniques used in collecting data. Each is silent, color, approximately 3 min. 40 sec., and $24.95. Phillippe Cousteau prepared the excellent film notes, which are on each film container. A brochure describing each of the loops is available from Ealing. The loops are the following:

Deep Sea Diving: Exploring the Undersea World is introductory: diving techniques and equipment are shown. *Fishes* shows the sting ray, moray eel, grouper, bumphead parrotfish, porcupine fish, butterfly fish, European angelfish, trumpetfish, whitetip shark, and a diver riding on the back of a whale shark. In *Giants of the Deep: Whale Behavior* the divers track and tag a finback whale and a baby sperm whale by following a buoy, which is attached to a small harpoon. *Investigating Shark Behavior* shows eight species of sharks and then compares the effectiveness of shark repellants and the shark bag. *Shark Feeding Frenzy* is a dramatic film in which divers in a cage excite the sharks to a frenzy by spearing a fish; however, the sharks also attack the divers. *Reproductive Behavior of the Turtle* shows copulation, laying of eggs, and the desperate journey of the exhausted green turtle back to the sea. *The Struggle for Survival: Hatching Turtles* dramatically shows the tense struggle of the newly hatched green turtles to reach the sea before capture by the large numbers of frigatebirds. In *Conservation: Man Helps Young Turtles* men collect young green turtles, protect them from the frigatebirds, and release them in the sea: this replaces some of the turtles exploited by man. In *Wonders of the Coral Jungle* divers swim past a variety of beautiful corals and photograph a sea slug, sea urchins, a sea star, a porcupine fish, a moray eel, and a triggerfish guarding her eggs. *Coral Reef Community* shows a unicorn fish and a sea urchin being escorted by damselfish seeking protection. The mystery of a small undersea "volcano" is solved by uncovering a tiny mantis shrimp. In *Investigating Predatory Behavior,* fish of various species are inserted in a plastic bubble and the attacks of a grouper are observed. *(Investigating Protective Behavior* and *Investigating Territorial Behavior* were not previewed.)

G. J. V.

Audio-video tutorial program in principles of biology, 10 min., color, 1967. State University of New York at Brockport.

This is an excellent short film to promote discussion concerning equipment, materials, and procedures used in a successful audio-video tutorial program for students in a semester-long, 13-block beginning biology course. Students sign in to one of 24 carrels, listen to information and directions on tapes, use study guides and texts, and conduct experiments. In addition to the materials in the carrels, the program has 40 special lecture tapes, a self-testing center, a display center, and a studio from which live TV lectures or videotapes are broadcast. The chief instructor is available in the lab for discussion of problems with individual students. The students also meet with the instructor in small groups at the beginning of each week to review the preceding week's tutorial and to receive a background for the next tutorial. When the film was made it was estimated that approximately 1,000 students would be studying general biology at Brockport State University by the audio-video tutorial method in the near future.

G. J. V.