



George Vuke, Editor
Audio Visual Center
Indiana University

Film Review

Plant Pathogenic Fungi, 16mm, 11 minute, sound, color, 1966, Department of Plant Pathology, University of California, Riverside.

This film is highly recommended to those teachers who would like to show fungi as living, dynamic organisms. The production of the film was supervised by Professors D. C. Erwin and J. M. Kraft at Riverside. The excellent cinemicrography and the fascinating time lapse sequences were by Ken Middleham who has photographed many outstanding biology films. The content includes the mating reaction of *Phytophthora*, the formation and swarming of zoospores in *Phytophthora* and *Pythium*, protoplasmic streaming in hyphae of *Pythium*, germinating sclerotia of *Sclerotium rolfsii* and spore formation and germination in *Fusarium solani f. solani*. Sequential development of sore shin (*Rhizoctonia solani*) and the diurnal movement of petioles of cotton plants with the depression of this activity by *Verticillium* is shown by time lapse photography. The film would be useful to high school and college biology teachers, professional mycologists, phytopathologists, and commodity growers.

Announcements

The fourth edition of *A Critical Index of Films and Filmstrips in Conservation* is available for \$1 from O'Hare Books, Ten Bartley Road, Flanders, New Jersey 07836. This excellent publication includes only those selections made after careful evaluation of over 7000 films and filmstrips on conservation by The Conservation Foundation.

In a recent meeting at the National Center for School and College Television, Indiana University, 11 science specialists viewed and discussed 80 television lessons. They noted that the quality of the teaching in a majority of the lessons was not superior to that in many classrooms. They called for increased attention in the selection and training of television teachers. The specialists found subject matter errors and questioned much of the content for television presentation. The group concluded that, at

present, television has many faults and unrecognized potential which need to be explored since television in science education is apparently here to stay.

Under a recent grant from NSF, the American Science Film Association has been named administrator of the U.S.—Japan Science Film Exchange, a part of the cooperative Science program between the two countries. The films exchanged during the first year will be primarily for use in high schools in the areas of biological science, physical science, and applied technical science.

All good teachers realize the importance of "feedback" from the students to determine the effectiveness of their instruction. Syracuse University has a rather elaborate General Electric "Student Response System" designed to provide instant "feedback" to the instructor on the performance and comprehension of his class. Each student in a 97-seat lecture hall has an electronic response panel which enables him to respond to multiple choice questions posed by the instructor during brief pauses in a lecture presentation. The results are displayed to the instructor immediately giving him a measure of the effectiveness of his presentation, as he makes it, and he can alter his presentation accordingly.

A similar student response system for obtaining immediate feedback was developed by Raytheon Learning Systems Company with a typical installation in a 240 seat auditorium at Foot-hill Junior College, Los Altos, California.

Educational Products Information Exchange (EPIE) is a new cooperative endeavor of professionals in education and industry for improving the selection and use of instructional materials and equipment. Their system will help educators decide what products are most likely to perform well in their type of instructional setting based on reports of the performance of these products in similar instructional settings. When fully operational, EPIE will be built around a constantly, updated, computerized information system which will help biology teachers and other educators with the tasks of selecting and using such products as textbooks, audio visual materials and equipment, manipulative materials, computer systems, closed circuit television, etc. For further information write to EPIE, Institute for Educational Development, 52 Vanderbilt Avenue, New York, New York, 10017.

The University of Southern California and the McGraw-Hill Book Company have established a National Information Center for Educational Media (NICEM). The purpose is to catalog and

store in computerized form current and comprehensive data on all types of non-book educational media—motion pictures, filmstrips, recordings, transparencies and similar materials. The first of a number of volumes to be published by McGraw-Hill on materials now in this master file is the *Index to 16mm Educational Films*.

RCA representatives and Stanford educators are collaborating in Palo Alto on a new activity designed to develop computer based instruction (CBI) techniques for individualizing teaching in schools. These techniques range from the simple function of testing to dialogue between student and machine. Write to Dr. Patrick Suppes, RCA Instructional Systems, Palo Alto, California for further information.

Video Tape

As more and more educational use of television is experienced, the versatility and effectiveness of this medium become more evident. In past issues of *ABT* we have discussed the use of an in-classroom system for teaching biology. More and more schools are being built with coaxial cable as part of the standard equipment. This enables a school-wide TV program which usually also includes videotaping equipment.

There are several advantages to this system, and there are some inherent dangers. The advantages first.

In an era when few schools are being constructed with auditorium facilities adequate for total student body assemblies, on-campus TV fills a real need. With either live presentation or tapes, special programs can be given to the whole school. It is also effectively used for announcements, special guidance programs, instructions for completing forms, administering school wide tests (e.g., the Iowa, I.Q.) and for other administrative details.

With a system of this type, it is also possible to program into just one or a group of rooms. With more than one channel it is possible to program as many different presentations as there are channels. Thus, the biology students could view a tape on frog dissection while all U.S. history students were viewing a speech by a state senator. With video tape it is feasible to ask eminent individuals in any field to give an hour or two of their time to producing a tape.

And it need not take longer than that! Some educational TV directors demand detailed scripts, intensive rehearsal, elaborate charts, etc., but most are now willing to accept the impromptu approach. Schools are not production studios. They neither have the facilities nor the finances to produce professional programs. Nor should they try. With this approach, a tape

cut by an ecologist, physiologist or nuclear physicist in your area could be played into the biology classrooms when it would be best used. If you could get the guest speaker in October, but wouldn't be ready to teach that phase until January, you would have the tape to play when it was most meaningful for the students. Hereofore, when we have had the opportunity of securing a guest lecturer, we have taken his presentation whenever possible even if it did not fit the curriculum being taught. This same technique can be used for asking the fire department to demonstrate mouth to mouth resuscitation, a doctor to discuss prevention of disease, a psychologist to talk about mental health, etc. The possibilities are unlimited! And often we would ask an individual for two hours of his time to make a video tape but would not ask him for a day of his time to repeat the same speech for five periods.

Finally, there is the chance to catch excellent commercial programs not shown during school time. Many times there are special programs in prime time that we wish all of our students could see, e.g., the October *Century 21* production "Bionics." Video taping makes this possible and at a time that best fits the schedule.

In a later issue we will develop ideas on how a classroom teacher can effectively use video tape.

Betty Jo Montag
Cupertino High School
Sunnyvale, California

Book Reviews

All unsigned reviews were made by editors.

Human Biology

HUMAN PHYSIOLOGY, 3rd Ed., Morrison, Cornett, Tether, and Gratz, 497 pp., \$6.32, Holt, Rinehart, and Winston, New York, 1966.

A text presumably meant for the high school course in human physiology, and thoroughly revised from two previous editions. Of course, the book is handsomely published with a "Trans-Vision" insert of the human body. The organization is a simple one, starting with the cell and ending with genetics, with the body systems in between. The treatment seems well suited to the high school level.

However, the place of human physiology in the high school curriculum, as represented by this book, must be ascertained before a fair evaluation can take place. For example, there is a chapter on the cell, another on genetics, another on chemistry, and quite a bit of other material one would expect to find in *any* biology course. Further, the treatment is the kind one would