

AV Reviews

Rachel Hays

Department Editor

Cryptic fauna of marine sand. 1992. American Society of Zoologists in cooperation with The National Museum of Natural History, Smithsonian Institution (P.O. Box 809169, Chicago, IL 60680-9169). VHS. 20 min. Purchase \$30.

 Using current research at the Smithsonian Marine Station at Link Port, Fort Pierce, Florida, the American Association of Zoologists has developed an exceptional teaching video. The biodiversity theme links 22 phyla found in marine sands and provides insights into the ecological adaptations that are peculiar to the physical forces acting on these organisms. The photography is excellent; it provides a clear concept of size and motion and often suggests reasons for specific anatomical characteristics. Students will be able to follow the minimally technical narrative. The phylogenetic approach makes it easy to visualize and compare the increasing complexity of organisms in successive phyla. The cryptic organisms presented represent phyla rarely seen. This would be an excellent video for courses in General Biology, General Zoology or Invertebrate Zoology. The addition of teacher or user guides would be advantageous, but they are not available.

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Living cells: Structure, diversity, and evolution. 1993. Sinauer Associates, Inc. (23 Plumtree Rd., Sunderland, MA 01375-0407). 2-sided videodisc. Purchase: \$350.

 This videodisc is uniformly of extremely high quality. Cells and organelles are photographed using both light microscopy and electron microscopy. Brightfield, darkfield, phase contrast, differential interference contrast, immunofluorescence, and con-focal light microscopy were all used in ways that delight the eye. In four of the chapters, con-focal light microscopy combined with immunofluorescence and computer-generated graphics superbly illustrate the three-dimensionality of the cell. Many of the sequences were photographed in time lapse, but others were shown in real time. Scanning electron microscopy and transmission electron microscopy were also used at the end of each chapter to show additional detail.

Produced for high school and introductory college courses, the videodisc can be a valuable aid to the biology curriculum. Although much more of the material can be used with honors or advanced placement students in high school, many of the film sequences will be of value to the general high school biology student. In addition to high schools and majors courses at the introductory level, I think it could be used in cytology courses even at the graduate level.

There are 29 chapters on the two-sided videodisc, and two sound tracks on both sides. One of the sound tracks is for high schools and the other is for college. Except for a few vocabulary words that I didn't consider necessary, the two tracks are identical. All of the major cellular organelles are explored in considerable detail, and the photography is stunning.

The accompanying instructor's guide, copyright 1994, provides background information, a subject index, a

bar code directory, and bar codes. These are valuable additions to the videodisc. The videodisc operates with Level I, II or III video players. If you have a scanner, the bar codes are also available for use. As an aid to students, bar codes can be attached to handouts. Students can scan what they read about in the handout, and then see that subject or process on the video screen. Although software for interfacing a computer with the videodisc player is not packaged with the videodisc using HyperCard stacks for computer multimedia presentations, any such software that you may already have can be used. This would allow you or a student to design a lesson that is both interactive and a snug fit with the existing curriculum. Such presentations are likely to be even more effective than those produced by using handouts and bar codes.

Only two major errors were detected. I would think that any presentation of this caliber would be certain to use a five kingdom approach, but the narrator appears to only use three kingdoms—plant, animal and protist. Also, in many of the video sequences, sizes of cells were left to the imagination. It would not be difficult to include these in a rerecording of the master disc. Additionally, there were a few minor errors that I noticed, but these are of the type that can be found in almost any such presentation. For instance, the amoeba is referred to as a unicellular "animal" rather than a protist. Another point that never ceases to pester me is the anthropomorphism found in such phrases as when the narrator points out that the amoeba "looks for food."

The videodisc compares favorably with most others on the market. If your budget will allow the purchase of such a piece of software, I don't think you will be disappointed.

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