



The Jerlov Award

PRESENTED TO HOWARD R. GORDON

October 29, 2004, at the Ocean Optics XVII
Conference, Fremantle, Australia

Introductory Remarks by Ken Voss, University of Miami, Florida, United States of America

I [Ken Voss] would like to introduce Howard Gordon and describe some of his background.

Howard began his career in experimental atomic spectroscopy, receiving his Ph.D. from Penn State University. After a brief period at the College of William and Mary, Howard came to the University of Miami in 1967. He was hired in Miami to work on a project in experimental ocean optics, and his appointment was initially a joint appointment between the physics department and the Marine School. He fairly quickly realized that there was no advantage to attending duplicate faculty meetings, and while he kept the marine research active, he moved full time to the physics department.

His initial research work at Miami was in experimental ocean optics, looking at light field fluctuations in the water column, measuring and modeling light scattering in the water column, and making measurements of the particle size distribution. During this time he participated in several cruises including a long cruise that anchored in the middle of the Gulf Stream, and a cruise from the United States to Dakar, Senegal. It was during the latter cruise, when his instrument had broken early in the cruise, that he “saw the light” and wrote his first Monte Carlo radiative transfer code (which ran on an HP micro computer, with 16 K RAM). This work allowed him to skip going to sea, and has led to over 40 publications investigating the connections between inherent and apparent optical properties, the optical effects of stratification in the water column, and inversion techniques to obtain IOPs [inherent optical properties] from AOPs [apparent optical properties]. His efforts in this area alone would be an impressive body of work.

However, during the 1970s, one of his former students (Ross McCluney) told Howard about an opportunity in satellite oceanography, specifically a chance to become a member

of the CZCS [Coastal Zone Color Scanner] instrument team. At that time, the idea of ocean color remote sensing didn’t quite enjoy the status and recognition that it does now. But as a member of the CZCS team he developed the atmospheric correction scheme that was used to process the ocean color data from CZCS. This algorithm formed the basis for his work in atmospheric correction, and as satellite capabilities increased, he continued this work, developing the atmospheric correction algorithms for the SeaWiFS and MODIS ocean color satellites. His work in this area has involved both improving and testing the standard algorithms, developing special coupled ocean-atmosphere algorithms, and other computational work to understand the ocean color remote sensing signal. This work has led to over 50 respected publications in the refereed literature.

Through the years Howard has been a member of many national and international instrument science teams. Howard has received many awards for his work with NASA [National Aeronautics and Space Administration], and he is a fellow of both the Optical Society of America and the American Association for the Advancement of Science.

He has also been active as an educator at the University of Miami. He is a well-respected teacher of undergraduate and graduate courses and has mentored many graduate students over the years. His graduate students have gone on to positions at government agencies such as NASA, industry, and academia (in fact his first student, Otis Brown, is currently Dean of the marine school at the University of Miami).

All of this work has established him as a leader in our field. I really doubt that you can write a serious paper in any area of ocean optics without citing one of his early papers, [because] his work has been so central to the advancement of our field in so many areas.



Presentation of the Jerlov Award to Howard Gordon. Left to right: Steve Ackleson (ONR), Paula Bontempi (NASA), Howard Gordon (University of Miami), and Eric Hartwig (TOS).

Howard Gordon's Remarks upon Acceptance

Ken, thank you for your kind words and your efforts on my behalf. They are deeply appreciated.

I want to thank The Oceanography Society for selecting me for the Jerlov Award and making it possible for me to make the long trip here to accept it. I also want to particularly thank Eric [Hartwig] and Jenny [Ramarui] for traveling halfway around the world to make the presentation.

I am very proud to receive this award named for the father of ocean optics and to, at least in this context, be mentioned in the same sentence with Andre Morel and Ray Smith. However, this award really has to be shared with many others.

First, my colleague, friend, and partner in science for the past 15 years, Ken Voss, along with my other colleagues at the University of Miami.

Second, the many wonderful graduate students and postdocs who have worked with me. Among them, Menghua Wang, Karl Moore, and Cyril Moulin are here tonight.

Third, the original CZCS Experiment Team, who put up with me, and with whom I shared the distinction of being considered a member of the lunatic fringe. You should know that in the mid to late 70s there were only a few ocean color believers, and most were on the Team.

These were difficult times. I once heard a very influential and respected scientist in an important CZCS/Ocean Color review

make the statement: "I know of no respectable biologist who believes this [Ocean Color] is important." Charlie Yentsch—the truest believer of all (and thank you for your vision, Charlie)—is the only other actual team member here tonight; however, I always regarded a young enthusiastic (and then, thin) graduate student at the time named Chuck Trees as a Team member as well—he was there from the start and is also here. Other Team members I worked closely with were Dennis Clark, whose untiring effort with MOBY has in my opinion not been adequately recognized by our community, and Ros Austin, who kept us on the right optical track.

Fourth, the many members of the ocean optics and remote sensing communities who over the years have supplied me with ideas, data, and encouragement.

Fifth, ONR and NASA. These two agencies have continuously supported my research effort over the past 30 years, making our work in ocean optics and remote sensing possible.

Finally, my soul mate Toni, who has shared the highs and the lows over the past 29 years. Our first date (and this is a true story) was the day I learned I was chosen for the CZCS Experiment Team. We were engaged a month later, and married just before the first Team meeting.

Thank you again, and I hope to see you all at Ocean Optics XVIII in Santa Fe.