

# Professional certification: increasing ecologists' effectiveness

The pace with which society must address environmental challenges is increasing due to the ever-multiplying changes associated with climate, land-use practices, and resource management. The causes and consequences of these changes are not going unnoticed by the public. Ecological science underlies these issues and is increasingly being thrust into the limelight, as evidenced by recent front-cover treatments by national news magazines (*Time*, *Newsweek*), more frequent mentions in national and local newspapers, and wide-release movies (eg “An Inconvenient Truth” featuring Al Gore and, more recently, “The 11th Hour”, produced and narrated by Leonardo DiCaprio). The issues associated with environmental change raised by the media, the public, and decision makers are complex and controversial, affecting public policy, the national economy, local and regional resource use, and individual livelihoods. Ecology is central to developing requisite scientific understanding and to communicating that understanding to society. Consequently, ecologists are being brought into the dialogue with increasing frequency via print and television media, judicial testimony, and Capitol Hill briefings, among other avenues. Because of the complexity and controversy surrounding these issues, as well as the social and economic consequences of many of the proposed solutions to perceived problems, scientific credibility is paramount.

How is scientific credibility established? From the viewpoint of those within ecology, credibility is typically based on the reputation of an individual for consistently performing high-quality ecological science. Such a reputation emerges largely from peer review of our scientific and educational achievements, and is measured by many yardsticks throughout a career, including academic institutions attended and degrees attained, professional and academic appointments, proposals funded or contracts awarded, publication record and various citation indices, membership in professional societies, and accumulation of awards and honors. One's scientific credibility as an ecologist is not established overnight, but develops incrementally as we receive the approval of our peers along our chosen career path.

Because the issues surrounding our changing world require that a broad roster of scientific, engineering, and legal experts are brought into the dialogue and to the decision-making table, ecologists must also recognize how professional integrity is established within this larger community. In addition, under many circumstances, time is of the essence and it is not feasible to evaluate every individual's credentials comprehensively. Professional societies associated with science, engineering, and law have addressed this problem by establishing such programs. In regulatory and legal contexts, credibility is often tied quite strongly to professional certification programs. Ecology is a younger discipline than many other relevant fields, such as engineering, and has not, historically, had such a direct, pervasive tie to professional certification. However, as the need for ecological expertise continues to grow rapidly, ecologists must be viewed with the same level of professional legitimacy as our colleagues in engineering, law, and other disciplines in order to be effective. Professional certification is one mechanism that elevates the influence of our profession by demonstrating that ecologists meet high standards in terms of levels of education, ethical conduct, and experience in applying ecological principles in their professional environmental careers in the private or public sector.

The Ecological Society of America (ESA) established its Professional Certification Program in 1981 to recognize ecologists who meet standards in education and experience and who adhere to high ethical standards. Certification is valid for 5 years, at which point an application for re-certification must be submitted; this ensures that certified ecologists remain active and engaged in the field. More than 450 ecologists are now certified at the Associate Ecologist, Ecologist, or Senior Ecologist level. Letters accompanying the applications for re-certification testify to the value of the Professional Certification Program. Indeed, formal certification is required or strongly encouraged by many government agencies, consulting firms, and industry. Academic and non-academic scientists have found that certification is an important consideration when providing expert testimony before courts and Congress, seeking jobs or consulting contracts, and establishing credibility before peers, the media, and the public.

We and our colleagues on the ESA Board of Professional Certification believe that ecological science is critical to understanding our changing environment and to proposing and evaluating potential solutions to the challenges we face. In recognizing that we are at a watershed moment for our profession, ESA has instituted many changes to streamline the certification process. We invite you to visit the ESA website, to apply for Professional Certification, and to encourage your students and colleagues to do the same.



*William K Michener*  
University of New Mexico, Albuquerque, NM



*David D Breshears*  
University of Arizona, Tucson, AZ



*Carolyn T Hunsaker*  
USDA Forest Service, Fresno, CA



*Diane E Wickland*  
National Aeronautics and Space Administration, Washington, DC