

Ecology 101

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SCIENCE EDUCATION REFORM

State Systemic Initiatives (SSI) is a program funded by the National Science Foundation (NSF) aimed at genuine improvement in science and mathematics education. There are about 25 states that now have programs. Additionally, there are five or six “Son-of-SSI” programs that are just about to come on line. What’s it all about?

You may remember that a “call-to-arms” for improvement in science and mathematics education was issued in 1983 by the National Commission on Excellence in Education

in its report entitled *A Nation at Risk*. Up to that point, the NSF had all but stopped funding educational initiatives. Now, approximately 10 years later, most of us live in states that are “rethinking” and “redesigning” the way we teach science and mathematics.

At this point in time, ecologists have an opportunity to influence our respective state initiatives toward strengthening ecology education at all levels (K through 16). As professional ecologists, we can offer to work on boards, committees, working groups, etc.

Ecologists take pride in and value long-term studies. We should approach the eminent educational reforms in our respective states in this same manner. An example of critical issues being considered are the national standards being developed by the National Research Council, the National Council of Teachers of Mathematics, the American Association for the Advancement of Science, and the National Science Teachers Association.

Another example of educational reform being considered country-wide is the content of the Baccalaureate core curriculum, education curriculum, and the area of concentration (major). Should prospective science teachers major in a discipline and then seek certification to teach by taking 9-20 hours in Education courses? Should they major in Education and minor in a science discipline?

Perhaps the Ecological Society of America could recommend national standards for science education. Additionally, each state will be developing standards of science and mathematics education. At a minimum, call your local college or university’s science education unit and ask what you can do to contribute to your state’s systemic initiatives in science and mathematics education. I promise you will be amazed at what I sense to be a genuine analysis of what we are doing and how we can do it better.

Harold Ornes