

## Refining the Biologist's Sense of Identity

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# BioScience

## Organisms from Molecules to the Environment

American Institute of Biological Sciences

### Refining the Biologist's Sense of Identity

While the biological sciences cover a broad terrain of ideas and subjects, we who explore that terrain have always defined ourselves as biologists. We might include an adjective that clarifies the level at which we study (e.g., molecular biologist) or the methods with which we're most comfortable (e.g., mathematical biologist), but the noun has always been "biologist."

Over the years, the number of adjectives has grown—we now have, among others, computational biologists, structural biologists, and systems biologists—and the definition of "biologist" has become ever broader, as has the range of background and expertise applied to research in biology. This dynamism and the progress it has catalyzed have inspired a new report from the National Research Council titled *A New Biology for the 21st Century*. As was noted in this space last November (<http://caliber.ucpress.net/doi/full/10.1525/bio.2009.59.10.1>), the report calls for an increased effort to nurture collaborations among different types of scientists who study living systems, defining the "New Biology" as the "reintegration of the subdisciplines of biology and integration into biology of physicists, chemists, computer scientists, engineers, and mathematicians."

The report will inspire a range of reactions among biologists. Some of us may be uneasy with the report's subtle urging of biology to become more like engineering. And some of us may roll our eyes, because the New Biology is already upon us in so many arenas, from collaborations at the various synthesis centers to the range of author expertise in a typical journal issue.

But we should set any such reservations aside and embrace this report. For one reason, the report supports the reintegration of our subdisciplines; if we believe in the noun, "biologist," we surely believe that integration of our adjectival knowledge is important. For another reason, to advance the New Biology, the report urges a set of life-science research missions that is catholic in its breadth and vital in its importance to society. We surely want to support a clarion call for a substantially increased investment in fundamental life science and its applications.

The report does test our sense of identity, because in the New Biology, almost anyone can be a biologist. This calls us to focus on what that noun means. In particular, it asks us to balance the noun and our many adjectives. In practical terms, the challenge in both research and training is balancing depth in a specialty—how much emphasis to give the adjective—against breadth of understanding—how solid to make the noun.

This challenge is not really new, and AIBS has long been immersed in helping biologists answer it (witness its pioneering role in helping to develop the National Ecological Observatory Network—a massive research and educational effort that exemplifies the New Biology). AIBS, through its member societies, includes a very wide range of biologists and is the organization best suited to help advance the New Biology. During this year, I hope to bolster this effort, keeping more focus on the noun and less on this "newest" adjective. After all, when it comes to a passion for studying living systems, we *are* all biologists.

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