Expect the unexpected: private-sector careers

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In 2009, I was listening to an alumni career talk during grad school, hearing from sustainability specialists who went into professions ranging from environmental consulting, to government advising, to various roles in the private sector. I remember thinking that working for a corporation was the last thing I would be interested in. I couldn't have been more wrong. Eight years later, having worked on sustainability issues in nonprofit and government settings and seeing the pivotal role the private sector plays in what I was trying to achieve, I find myself with a private-sector career, working with agricultural sourcing teams to more effectively address environmental and societal issues. – *Emily Kunen*

While in my third year as an undergrad, I participated in an NSF-funded Research Experiences for Undergraduates (REU), where I learned how science happened on a day-to-day basis. This experience made me realize that I did not want to do research. I loved science, but I also loved opportunities to interact with others to help solve their problems. The REU taught me it is OK to love science and not attend graduate school right away or pursue a career in academia. I eventually did earn an MBA with an emphasis in environmental science, which has been a great fit for my career goals. I use the knowledge I gained in my undergraduate work every day – even though my title is not "scientist" – by supporting the delivery of products that help scientists find answers to questions with direct consequences for the environment and its inhabitants. – *Kayla Kemp-Smith*

As an ecologist, you may be well-suited to a meaningful, high-impact, and successful career in the private sector. With experience studying interactions between organisms within specific environments and your ability to view environments as complex and interconnected systems with trade-offs and imperfect solutions, you can bring important perspectives to business operations and help translate technical and scientific information into the language spoken across businesses.

We aim to share insights from our own experiences in private-sector career paths, which, in general terms, take place in non-governmental business environments. Our careers have led us each to very different realms of the private sector: Emily's experience in NGOs and government led her to private industry, while Kayla developed a career in scientific instrumentation sales. Yet we found similarities in our observations of the experiences and characteristics that make for successful industry careers.

Our informal poll of private-sector peers and coworkers revealed that while some had been steered toward private-sector opportunities, many ecologists, environmental scientists, and environmental engineers did not consider or were even shamed for considering a private-sector career. The image of the uncompromisingly profit-driven corporate machine burning down forests and paving over wetlands is pervasive. The reality, however, is that the private sector greatly affects and is affected by ecosystem health and so there is an incredible range of meaningful private-sector jobs for those who possess a scientific understanding of ecology and ecosystems. We are just two individuals among many whose environmental backgrounds have led them to jobs in industry.

Within the private sector, ecologists can go on to become researchers, environmental consultants, environmental planners, product managers, marketing specialists, scientists, and more. For companies that deal directly with researchers, a strong understanding of science is critically important. Corporations with environmental or sustainability goals also have job opportunities to develop and implement ecological strategies, which may require a more general understanding of ecology; scientists in these roles may work to analyze and address impacts of product sourcing, energy consumption, waste production, or land-use management. This field is growing rapidly; GreenBiz's 2016 State of the Profession report (www.greenbiz.com/report/state-profession-2016) on sustainability professionals within companies found that in over 40% of the companies surveyed, headcounts and budgets for sustainability teams were growing and sustainability leaders were gaining more influence in their companies. This growth may indicate that ecologists are influencing private industry in another positive way – by helping to develop innovative, ecologically friendly business models.

Contrary to our initial perceptions, we found that companies are well positioned to positively integrate and scale ecologically friendly practices into sustainable business models (leading to the current trend toward public–private partnerships). In our careers, we have found that for many businesses hiring ecologists, the company is not looking to greenwash (where marketing or advertising is used to portray a business's practices as environmentally

Figure 1. *Staff from LI-COR Biosciences explain to a customer how he can study invasive species with a portable photosynthesis system.*

friendly), but rather to address environmental issues that require someone with specific technical knowledge (Figure 1). We found ourselves in private-sector jobs not surrounded by colleagues heartlessly seeking profits, but with coworkers who share our environmental values. As a word of caution, however, it is important to evaluate a company for how its products and services impact the world and how its corporate values align with your own before considering working there. Examine the company's public positioning on key issues as well as how close the environmental specialists sit to the core business.

A background in science, coupled with strong communication skills and a desire to learn, are essential when seeking a private-sector job. Ecologists, as systems thinkers, will find the greatest success in being able to effectively communicate across disciplines and understand how the various pieces of the business fit together. We found that our coursework in ecological systems also prepared us for the processes of "corporate ecology". A decision or change in one part of the company, whether it involves the selection of raw materials or structuring of a sale, will affect numerous other departments, stakeholders, and business decisions. Applying systems thinking in this setting prepared us to think about how decisions might have far-reaching impacts, and to engage the right stakeholders in that process, which is a transferrable skill that has been valuable in our careers.

For students considering a private-sector career, scientific research experience is a key asset, even if you will not be conducting full-time research. Companies that require a degree in science want their employee to actually know how to do science. Research experience can highlight your transferable skills, including the ability to conquer obstacles, troubleshoot issues, work with others, analyze data, follow procedures, and communicate scientific information to a variety of audiences. Beyond knowing the science, it is critical that you are well versed in the application of the science, including how it relates to business, policy, economics, and society.

During our undergraduate studies, we both sought opportunities to gain experience through research and internships. Opportunities such as REUs expose students to research, especially for those whose home institutions lack an active research program. Looking back, the REUs we were involved in provided us with several skills that are pertinent to our positions today. For example, at the end of each of our REUs, we were required to assemble and present a poster describing the research we took part in during the eight-week period. The process of compiling our thoughts, reviewing the data, and synthesizing it into a few paragraphs that we could then discuss with any person from any background was an invaluable experience. Today, we use these same skills to communicate complex information to a variety of stakeholders.

Internships are another way to gain experience in research, in applying science, and in the interactions between scientists and other stakeholders. An internship at a private company can provide insight into whether this career path is right for you. Beyond direct experience, you can learn about different types of jobs by staying up-to-date with industry trends and news. As part of your job search, follow industry news and events to keep up with which organizations are doing what. Industry websites, LinkedIn, Twitter, or other social media pages are great resources for this information.

Overall, the most important advice we can offer is to educate yourself about career opportunities, have an idea of what you want to do with your degree, but above all, be open to the unexpected! Our journeys within the private sector taught us the critical importance of keeping an open mind when opportunities arose to use our scientific knowledge in ways we never would have expected. We discovered that ecologically adept individuals are not compromising their values when they choose a career in the private sector. Instead, they can fill roles that require an understanding of how ecology can inform real-world business decisions to drive positive change for the environment.

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