

Social media as a tool for improving research and teaching

Collaboration, networking, and sharing: not only are these essential parts of an ecologist's job, they are also central features of social media. Twitter, Facebook, LinkedIn, blogging, and other examples of social media can be remarkably effective tools for amplifying an ecologist's efforts in research, teaching, and service.

As the number of new journals has exploded, it can be difficult to read (or even locate) all the relevant research. The social media platform Twitter can be a great way to stay on top of new papers, especially those at the edge of your field that you might not monitor closely. Following a few scientists who tweet about new and exciting research on interesting topics is a great place to start. And because it's increasingly common for conference talks to be "live tweeted", meaning that summary points are tweeted during the talk, Twitter can serve as a way to participate in a conference you couldn't attend in person. While following tweets cannot replace actual attendance, Twitter can be a reasonable substitute for some aspects of the experience. Such live tweeting can also have a remarkable effect on amplifying the reach of a conference; at the recent Resilience 2014 conference, Andrew Merrie (@TheGreenMerrie) demonstrated that 300 tweeters at the conference had (potentially) extended the audience to 350 000 readers! In addition to learning about other people's work, Twitter can cause you to think of your own work in a different way – a typical ecology manuscript might contain 5000 words, summarized in a 200-word abstract, and it can be a real (but very rewarding) challenge to condense that down to a 140-character tweet. Paying attention to how people respond can help you tweak your message, or discover ways to frame it more effectively.

Many ecologists use Twitter as an extension of their lab group, to obtain feedback on new ideas or draw inspiration for new projects. In fact, while preparing to write this editorial, I reached out with a request for people to tweet back at me about how they use Twitter and received over three-dozen useful responses. It can also be a great way to get a candid read on the opinions of your community on an issue.

While Twitter can be used to pass relevant information to students in real-time, its other advantage is in increasing student engagement. Margaret Rubega, who teaches ornithology at the University of Connecticut and tweets as @ProfRubega, asks her students to tweet any time they witness interesting bird behavior using the hashtag #birdclass. (Hashtags allow users to follow a particular topic, so anyone can follow the discussion and anyone with a Twitter account can participate.) Her students can learn from one another, some continue to participate after finishing the course, and many non-students join in the discussion. What a great way to make class more valuable and more fun!

Twitter is especially useful for connecting students to a broader community of scientists and other experts. Chris Buddle (@CMBuddle) uses Twitter to encourage his students to engage with people interested in natural history; his students have posted pictures of creatures they couldn't identify and have received ID confirmations from specialists within minutes. Adam Taylor (@2footgiraffe) uses the hashtag #scistuchat to organize monthly conversations between high-school students and professional scientists around the globe. These types of interactions move students from being passive receivers of information to being active participants in the scientific process.

Twitter can also be a way to reach out to researchers that you might not otherwise have access to, such as leaders in your discipline, or to connect with like-minded scholars. I have found an exceptional community of women scientists who are an invaluable source of both advice and company. Moreover, Twitter can provide early career scientists with mentoring otherwise not easily obtained, such as guidance on interviewing for a new faculty job or how to manage one's time as a first-year professor. Twitter can also be a source of community for those physically isolated on a smaller campus or not on a campus at all.

Ultimately, social media provide incredibly powerful tools for an ecologist. They can broaden our professional networks, make our teaching more impactful, and improve our research by helping us hone messages or by highlighting key literature we might otherwise have missed. They also help us with the more human (and fun!) sides of being an ecologist. As Barry Cooke (@cooke_barry) wrote, "Connecting with caring people helps me be less cynical and depressed about forces beyond my control, which is empowering".



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