

# Social Media for Fisheries Science and Management Professionals: How to Use It and Why You Should

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Social media has revolutionized how people communicate with one another. This has important implications for science, environmental advocacy, and natural resource management, with numerous documented professional benefits for people in each of these fields. Some fisheries management professionals have been wary of social media use, in no small part due to unfamiliarity. The goal of this paper is to summarize the professional benefits of social media usage that are applicable for fisheries science and management professionals and to provide a detailed guide for those who wish to get started. Though many Web 2.0 tools exist, this paper will focus on the use of Facebook, Twitter, and blogs.

## INTRODUCTION

Social media and Web 2.0 (i.e., the shift in Internet design from static content to content that users can interact with) tools have revolutionized the way that people communicate with one another (Shirky 2008). If properly utilized, this communications revolution has the potential to benefit scientists, educators, environmental advocates, and natural resources managers in a variety of ways (Wilson 2016). By encouraging collaboration and rapid feedback from peers, social media can aid scientists in every step of writing a scientific paper (Darling et al. 2013). By following reliable sources, including scientific journals and expert researchers, social media can allow users to keep up with the latest research in their field of interest (Parsons et al. 2014). Government agencies can use social media tools to provide information to stakeholders (Sayce et al. 2013; Henry 2018, this issue) and to receive rapid feedback from stakeholders (Parsons et al. 2014). These tools can also be used by environmental non-profits to mobilize stakeholders to advocate in support of a particular policy solution (Thaler et al. 2012).

The potential benefits of social media usage for fisheries science and management are clear (Claussen et al. 2013; Midway and Cooney 2013), but despite a stated desire from the American Fisheries Society (AFS) to engage in more public outreach (Osborne-Gowey 2014a, 2014b), these tools have not yet been widely adopted by the fisheries science and management community relative to other related disciplines. Scientific disciplines with many representatives using Twitter include ecology, conservation biology, and the zoological sciences but do not include fisheries science and management (Collins et al. 2016). According to the unified theory of use and acceptance of technology model, a common reason for not adopting potentially useful technology is a lack of familiarity with the benefits of those tools, as well as a concern that learning how to use those tools could prove challenging (Gruzd et al. 2012). Indeed, 36% of academics who use social media felt that the most common reason why their peers do not use social media is a lack of understanding of how it works (Collins et al. 2016), and this concern was specifically noted for AFS members by Osborne-Gowey (2014a, 2014b).

With this in mind, the goal of this paper is to provide a list of benefits and a guide to getting started with social media for fisheries science and management professionals. Many social media and associated Web 2.0 tools exist and are used for science communication (see Bik and Goldstein [2013] for a detailed guide to many of these). These include Tumblr (text and images), Instagram (photographs), YouTube and Vimeo (video), and LinkedIn (primarily a resume and job search site, but there is a link-sharing feature). This paper will focus on three of the most widely used and potentially useful tools as identified by Collins et al. (2016). These include (1) Twitter, (2) Facebook groups and pages, and (3) blogs.

## TWITTER

Twitter is a social media and microblogging site that allows users to send short, character-limited messages called

tweets. These tweets may contain images, links to other Web sites (including news articles or scientific journal articles), or hashtags (which can be thought of as analogous to scientific journal keywords). Tweets posted by a user can be seen by anyone who “follows” that user on Twitter. Users do not need to manually approve followers, and following is not automatically reciprocal (i.e., if someone follows you, you do not automatically subscribe to their tweets).

Tweets can also be “retweeted” or shared with attribution. A retweet results in people who follow the user who retweeted it being able to see the tweet even if they do not follow the original user who posted the tweet. By including a user’s Twitter handle in a tweet, that user will see the tweet even if they do not follow you. See Shiffman (2012) for a detailed walkthrough of these and other key terms associated with Twitter.

## Creating a Twitter Account

The process of creating a Twitter account is straightforward and can be done in minutes by clicking the “sign up” button from Twitter.com. Users must choose a Twitter handle and provide a biography. Some users choose a handle that is based on their name, such as @TrevorABranch (Trevor Branch, University of Washington). Others have handles that describe their work, such as @Fish\_Scientist (Danielle Dixson, University of Delaware). Still others have a combination, such as @RARlinghausFish (Robert Arlinghaus, Humboldt University). Organizations or agencies typically use the name of their agency, such as @NOAAFisheries (National Oceanic and Atmospheric Administration Fisheries) or @SCDNR (South Carolina Department of Natural Resources).

Though often overlooked by new users, the biography is important if your goal is to use Twitter to communicate your expertise to stakeholders, to the media, or to policy-makers. The biography should identify your credentials (e.g., @JaneLubchenco’s biography reads “Marine Biologist @OSU, former head of NOAA” while @TrevorABranch’s biography reads “Associate professor @UW” and the biography of @MadForSharks reads “grad student @UBCOceans studying Mediterranean shark fishing”). It can include a single link, which professionals often use to link to their official department or agency biography Web site.

## Who Should You Follow on Twitter?

A user’s Twitter experience is defined largely by who they choose to follow. Even if someone chooses to rarely or never tweet themselves, Twitter can be professionally useful by allowing that user to follow relevant sources of information from their field. Trevor Branch maintains a Twitter “list” of 176 professors of marine ecology, marine biology, and fisheries who are active on Twitter (accessible at <https://twitter.com/TrevorABranch/lists/fish-marine-faculty>), and AFS maintains lists of Twitter users from the fisheries nonprofit world (<https://twitter.com/AmFisheriesSoc/lists/fisheries-ngos>) and industry (<https://twitter.com/AmFisheriesSoc/lists/>

industry-groups). This list of Twitter users could be a good starting point for new users from the field of fisheries science and management. Observing who the users you follow interact with will likely result in you choosing to follow more users. There are also many scientific journals, science journalists, and natural resource management agencies who use Twitter.

### What to Share on Twitter?


In addition to following relevant sources of information from their field, fisheries science and management professionals can use Twitter to share information themselves. For example, you can summarize key points from new literature (Figure 1A). Users can also use Twitter to share their own new research (Figure 1B), and widely shared papers are correlated with high citation rates (Peoples et al. 2016). Users can use Twitter to share updates from their field research expeditions (Figure 1C), which can generate public interest in marine science. Except in the rare cases where an employer's workplace policies prohibit sharing personal information on an associated professional social media account, the author of this paper does not personally recommend creating a separate account for an individual's personal versus professional activities, though he does recommend keeping personal content away from institutional (organization, lab, or business name) accounts, if possible.

This tool can be used to share a variety of other information that can be useful to people interested in fisheries science and management, including job advertisements (Figure 2A) and calls for proposals for grants and scholarships (Figure 2B). Twitter is also useful for experts seeking to correct misrepresentations of their field in the media (Figure 2C). Indeed, many journalists are active on Twitter (McClain and Neeley 2014; Parsons et al. 2014), which can be useful for getting journalists to correct inaccurate information.

### FACEBOOK FAN PAGES AND GROUPS

In some ways, Facebook is a more limited tool for large-scale public outreach than Twitter. Unlike Twitter, contacts on Facebook must be manually approved and are reciprocal (i.e., if someone requests to be your Facebook "friend," you need to approve it, and such approval generally means that you see their updates and they see yours). Additionally, Facebook's home screen "news feed" is curated by a proprietary algorithm, which means that unlike Twitter, Facebook users do not see every post made by their contacts. The primary advantage of Facebook for networking and outreach is that it is much more widely used than Twitter (79% of U.S. adults use Facebook versus the 24% that use Twitter [Pew Internet and Society 2016]).

Facebook offers two additional features that may be of interest to fisheries science and management professionals: fan pages and groups. Fan pages offer an interface that is in some

**A**  **Trevor A. Branch**  
@TrevorABranch Following

Steady decline in the diversity of fisheries that individual vessels participate in, US west coast [tandfonline.com/doi/abs/10.1088 ...](http://tandfonline.com/doi/abs/10.1088)

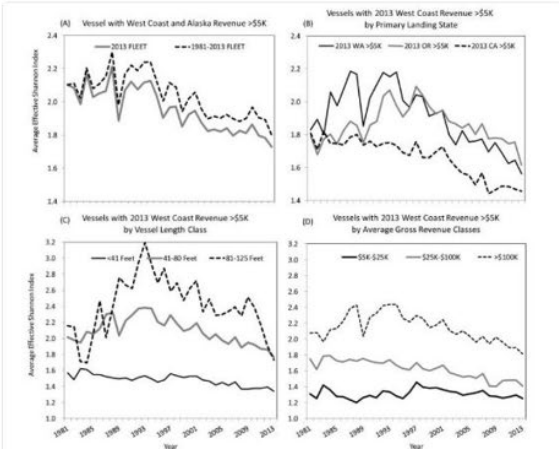





Figure 2. Trends in average diversification measured by the effective Shannon index (A) for US West Coast and Alaska fishing vessels with average revenue over \$5,000 and for vessels with 2013 West Coast Revenues over \$5,000 by (B) primary West Coast landing state, (C) vessel length classes, and (D) average gross revenues classes.

RETWEETS 8 LIKES 7 


4:48 PM - 19 Oct 2016

**B**  **Loren McClenachan**  
@LMcClenachan Following


New paper: The time is right for #fairtrade fish! (msg me if you'd like a copy) [onlinelibrary.wiley.com/doi/10.1111/fa ...](http://onlinelibrary.wiley.com/doi/10.1111/fa...)


RETWEETS 3 LIKES 2 

11:48 AM - 25 Feb 2016

**C**  **Tobey Curtis**  
@MojoShark Following

165 Thorny Skates tagged this week as part of our research with @CenterOceanLife #FlatSharkFriday



RETWEETS 37 LIKES 67 

9:19 AM - 18 Nov 2016

Figure 1. Examples of scientists using Twitter to communicate research, including (A) @TrevorABranch sharing a new paper and a key figure associated with it; (B) @LMcClenachan sharing a new paper that she wrote, increasing the accessibility of her work; and (C) @MojoShark sharing photographs and updates of his field research.



Figure 2. Examples of other uses for Twitter, including (A) Isabelle Cote @RedLipBlenny advertising a graduate school position, (B) @FloridaSeaGrant advertising a scholarship that can fund student research, and (C) @CFoodUW, a project of the University of Washington, correcting inaccurate information about global fisheries from a mainstream media article in a series of thread-tweets.

respects similar to Twitter (i.e., if a user “likes” your page, they see your updates without you needing to manually approve it, and you do not see their updates). Facebook groups allow for users with similar interests to communicate with one another whether or not they are “friends” with one another.

#### How to Create a Facebook Fan Page or Facebook Group

If you already have a personal Facebook account, it is simple to create a fan page by logging into your personal account and going to [www.Facebook.com/pages/create](http://www.Facebook.com/pages/create). Pick a category for your page and pick a name for your page (note: you can only change the name once in the entire lifetime of the page so choose carefully). You will then be asked to add a short description (similar to a Twitter biography) as well as photos. Once this is set up, you can share content through an interface very similar to the personal Facebook profile.

Individual scientists or labs can create a Facebook fan page, and these tools are also used by scientific journals (Figure 3A), professional societies (Figure 3C), and natural resource management agencies (Figure 3B, D), as well as environmental nonprofits. Due to the newsfeed algorithm, all the users who like your page will not see every one of your updates unless you pay to “boost” the post, however. For this and other reasons, an evaluation found Facebook fan pages lacking as a mechanism for outreach (Fauville et al. 2015). A list of Facebook groups that may be of interest to fisheries science professionals can be found at <https://storify.com/WhySharksMatter>.

There are a variety possible privacy settings that allow group administrators to restrict who can join the group and who can post to the group. Users can also adjust group settings

so that they receive a Facebook notification any time there is a post made to that group. These groups can be useful for tasks such as professional development discussions, requests for collaboration, or sharing a new research paper with colleagues. There are groups for members of certain professional societies (e.g., AFS operates a Facebook group). There are also groups for people who share a particular research discipline regardless of professional affiliation (e.g., there is a Facebook group called “Ichthyology”). The author, who is an administrator for another professional society’s Facebook group, recommends careful consideration of privacy settings and active comment thread management to avoid heated discussions on irrelevant subjects.

#### What to Share on a Facebook Fan Page or Facebook group

As with Twitter, you can share a variety of professionally relevant types of content on your Facebook fan page or in your Facebook group, with the added advantage of no character limits. The Facebook group for which the author is an administrator also hosts monthly professional development chats, in which any early-career member can ask questions and more-senior members post responses.

#### BLOGS

Blogs, short for “web logs,” can be thought of as an online newspaper, and blog “posts” are analogous to newspaper articles. Science blogs are typically written by scientific experts, including practicing scientists and journalists with expertise in this topic. Some blogs are intended as a form of public education and outreach (Jarreau 2015). Other blogs focus on reaching other members of the writer’s technical

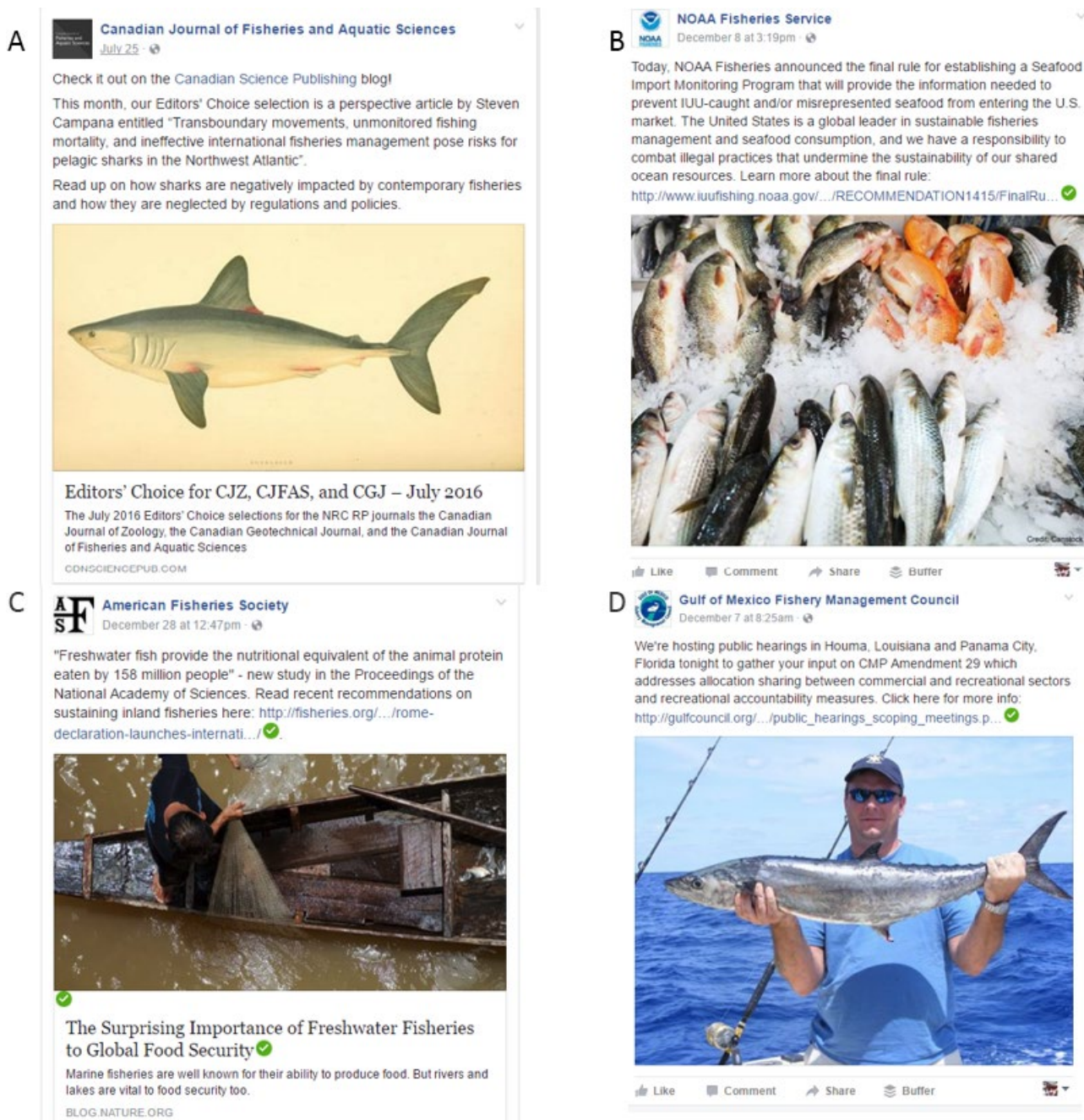


Figure 3. Examples of posts made to Facebook fan pages in 2016. (A) The Canadian Journal of Fisheries and Aquatic Sciences fan page is promoting a new paper published in their journal. (B) The National Marine Fisheries Service is advertising a new report about illegal, unreported, and unregulated fishing. (C) The American Fisheries Society is sharing a news article about freshwater fisheries. (D) The Gulf of Mexico Fishery Management Council is advertising an upcoming public hearing that may be of interest to stakeholders. Facebook users can comment on these posts, allowing for interactions with the institution or individual running that page.

discipline rather than the interested general public. Blogs allow academics to bypass traditional gatekeepers (such as a university press office) by getting their unedited expert message directly to interested readers (Shanahan 2011).

### How to Create a Blog

One of the most common, most easily used, and most flexible blog management platforms is Wordpress ([wordpress.com](http://wordpress.com)). To create a blog, simply go to [wordpress.com](http://wordpress.com) and click

“get started.” Enter a name and brief description for your blog, and then choose one of many free “themes” that best fit your design needs. Once this is created, you will be able to easily create a new blog post, which can include a variety of content (suggestions described below).

### What to Post in a Blog

Blog writers can cover topics that they feel are important but ignored by the mainstream media or can correct



A

the fisheries blog on facebook / @fisheriesblog / about us  
/ we recommend / fish stories / publications

## BLENDING A FISHERIES SCIENCE CAREER AS A MOM AND MILITARY SPOUSE: THE CHALLENGES OF MY ROAD LESS TRAVELED

August 8, 2016 · by dksackett · in The Fisheries Blog ·

*I was recently encouraged by a close friend to share the challenges and successes of the path I have chosen as a fisheries scientist, mom, and military spouse. To be honest, this path wasn't the plan, but after falling in love and marrying into the military, I found I needed to pave my own trail to continue the pursuit of research science and combine my personal and professional loves. Below I detail some of my specific challenges and how I have tried to overcome them.*



## Southern Fried Science

1411 words • 6~9 min read

## B Background information on our "trophy fishing for species threatened with extinction" paper

Andrew and I (along with several co-authors) have a new paper out in the journal Marine Policy entitled "Trophy Fishing for Species Threatened with Extinction: A way Forward Based on a History of Conservation." You can read the paper [here](#), and view the official press release [here](#) (will be up soon).



A giant pangasius, one of the Endangered species of fish that is targeted by trophy fishermen. Photo by user GV\_Fishing, Wikimedia Commons

We believe that this is an important topic that does not get enough attention, and we wrote the paper to review the scope of the problem, propose an easily achievable solution, and facilitate a long overdue discussion. Although we intentionally wrote the paper to be accessible to anyone, this blog post serves to explain the concepts and issues in the paper even further. We are happy to answer any questions people have about the paper, just ask them in the comments section below.

Figure 4. Examples of blog posts, including (A) a post on The Fisheries Blog describing work-life balance in fisheries and (B) a post on Southern Fried Science, where the author of this paper writes, which served as a virtual press release for a new paper.

inaccuracies in mainstream media coverage of their field of expertise (e.g., Thaler and Shiffman 2015). Blogs can provide professional advice (Figure 4A) or can serve as an informal press release for a new paper (Figure 4B). Blogs can provide updates on the status of a research project or field expedition or an example of "broader impacts" for a National Science Foundation grant. Blog administrators may also offer colleagues who do not have a blog of their own an opportunity to write "guest posts." Blog posts can include hyperlinks to news articles or scientific papers, images, and videos, among other multimedia content.

### CONCLUSIONS

Twitter, Facebook, and blogs can offer many advantages for fisheries science and management professionals willing to use them. Though it is my intent for this guide to serve as a basic introduction to point new users in the right direction, there are many possible uses for these tools (e.g., professional development and networking, sharing new research, advertising jobs and grants, public outreach, and more) and many strategies for effectively implementing your professional goals using these tools. After learning the basics from guides such as this one, the best way to get started is to observe what others are doing and decide what works best for you.

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