

fishR: Using Program R for Fisheries Analyses



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R is a statistical programming language that has gained favor with many statisticians in a variety of fields. It is free to use and the software is continually being extended, with add-on packages developed by users from around the world (there are currently ~1800 packages in the official R repository with another unknown amount at other “forge” sites).

R is increasingly being used by students and professionals who study fish and fish communities. An unscientific survey found 27, 46, and 55 fisheries-related publications in each of the last three years, with an additional 44 publications that have cited program R already in 2009. In addition, R is increasingly being taught in the fisheries curricula of colleges and universities, an R short course was taught at last year’s national AFS meeting, and another short course will be taught at this year’s meeting in Nashville. We should take note of these trends and fisheries educators should more fully incorporate R into their curricula and students should take advantage of all opportunities to gain experience with R.

Schnute *et al.* (ICES Journal of Marine Science 64 (2007): 1077–1084) said “(t)his remarkable open source project includes a large number of useful algorithms for statistical analysis and modelling, and the high level R language makes coding relatively easy.” While “coding” is not “easy” for all of us, it is generally easier when there are relevant examples to follow.

Thus, I am developing the *fishR* website where resources related to using R for fisheries analyses will be maintained. A functioning prototype of *fishR*, available at www.ncfaculty.net/fishR/, currently consists of four main sections: **General Examples**: several vignettes that describe various traditional fisheries science analyses; **Book Examples**: examples that re-create analyses from fisheries texts. For example, this section currently contains ten R re-creations of analyses in the “boxed examples” of the *Analysis and Interpretation of Freshwater Fisheries Data* book published by AFS; **Journal Examples**: a list of all known fisheries related publications that have cited R including archived data sets and R scripts that allow users to reproduce the analyses of published journal articles; **Packages**: a list of all R packages that perform fisheries-related analyses.

It is my intent that *fishR* will be a resource that contains contributions from a variety of people – students, educators, professional researchers, and professional managers. You can participate in this community in the following ways: **Comment** about areas on the website or identify examples that are unclear, incorrect, or need more explanation; **Suggest** topics where you would like to see example analyses developed or additions to the website that would make it more useful to you; **Contribute Links** to fisheries related packages or citations for fisheries-related journal articles that are not listed; **Contribute examples** of R scripts that contain worked examples of general fisheries topics or examples from books; **Contribute Reproducible Analysis Materials** by submitting data and R scripts that would allow a user to reproduce the analyses used in a journal article.

If you are interested in using R for fisheries analyses then please visit the *fishR* website and use the resources provided there or become involved in its development.

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EDUCATION SECTION

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President's Line

Serve or Be Served: Leadership Roles in the Education Section

It's that time of year for the Education Section — elections! This year, Past-President Donna Parrish and the nominating committee put together a slate of excellent candidates that are willing and more-than-able to serve in officer positions in the Section... but it wasn't an easy task. Of course, we want our most qualified members to serve in officer roles — those with experience, a broad view, creativity, and energy and enthusiasm for our mission. And we have plenty of talented individuals in the Section that could be outstanding officers, but identifying them simply from the membership list is a challenge. Another consideration in identifying candidates is diversity — in demographics, geography, discipline, employment affiliation, and anything else that may bring new ideas to our Section leadership. Then once a potential candidate is identified, they're contacted by the Nominating Committee Chair (the Past-President), and they usually take time to consider if this is the right role and time for them if elected. It's all an involved, but important, process that would be more efficient and perhaps successful if potential officer candidates identified themselves.

Thus, I'm asking you to please consider if and when you might be willing to run for an officer position in our Section. This is a generous commitment of your time, and it can be demanding, but is certainly rewarding. So please consider the goals of the Section, which you presumably support as a member and the different leadership roles that you might fill.

The goals of the Section are to (1) improve the quality of higher education for fisheries scientists; (2) promote exchange of post-secondary education information, techniques, and materials among educators and institutions; and (3) foster improved communication and information exchange among fishery educators, employers, specialists, students, and the public.



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Please plan to attend the 2009 AFS Education Section annual business meeting in Nashville, 5-7PM, Sunday, August 30 in the Belmont Three Room at the Renaissance Hotel. Refreshments will be served!

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