

MICHIGAN STATE
UNIVERSITY

Dr. Jennifer Nielsen
AFS Ricker Award Committee
USGS/ Alaska Science Center
1011 East Tudor Rd
Anchorage, AK 99503

22 April, 2008

Dear Dr. Nielsen:

I fully support the nomination of Dr. David Fournier for the William E. Ricker Resource Conservation Award. As the nominating letter attests, Dr. Fournier's publications on assessment theory and methods, and the software tools developed by Dr. Fournier (especially ADMB) have been essential in the widespread application of statistically rigorous integrated stock assessments for marine fisheries throughout the world. I can add that this has become true in the Great Lakes and other inland systems as well. Currently most of the major commercially harvested stocks in the Great Lakes, including lake whitefish, lake trout, yellow perch, and walleye are assessed using ADMB. The software and modeling tools included with ADMB are used in implementing simulation models, which are being used to develop a new family of management strategies for the Great Lakes. ADMB has been essential to my own research program for the past decade. I first began using ADMB during the mid-1990s when I discovered that it could fit stock assessment models hundreds of times faster than alternatives, and more accurately, while offering many of the same built in higher-level functions. The current version of ADMB retains these advantages. Since that time I have learned more about the reverse mode of automatic differentiation on which this software is built, and I can say that I have become increasingly impressed at the accomplishment his development of this tool represents. He brought this tool and the huge advantages associated with the method into widespread use among fishery scientists, during a period when the applicability and value of the method was not widely recognized even among computer scientists specializing in optimization problems. Dr. Fournier is deserving of recognition for his major role in advancing fisheries stock assessment to where it is today, and I hope you receive his nomination favorably.



DEPARTMENT OF
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WILDLIFE

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Sincerely,

The signature is written in a cursive, flowing style in blue ink. It clearly reads "James R. Bence".

James R. Bence
Professor and Co-Director of Quantitative Fisheries Center
Department of Fisheries and Wildlife
Michigan State University