CURRICULUM VITAE

Name: **Jessica Mary Andrews** *Date of Birth*: November 16th, 1973

Contact: jessica@stams.strath.ac.uk *Address*: STAMS, Livingstone Tower
(44-141)572-3698 26 Richmond St.
http://www.stams.strath.ac.uk/∼jessica Glasgow, UK, G1 1XH

Citizenship: Canadian *Maiden Name*: Bridson

EDUCATION:

1998-2002 Ph.D. in Statistics and Modelling Science: University of Strathclyde, Glasgow (with Dr. S. Blythe and Prof. W. Gurney)
Thesis Title: *The Effect of Fishing on the Evolution of North Sea Cod*

1996-1998 M.Sc. in Mathematics : McGill University, Montreal (with Dr. O. Kharlampovich)
Thesis Title: *The Conjugacy Problem in the Lyndon's Group*

1991-1995 B.Sc. (honours), first class, in mathematics: Queen's University, Kingston

1993-1994 3rd year of B.Sc. : University of Strathclyde, Glasgow, Scotland

WORK EXPERIENCE:

Oct 2001- Present: Research Assistant at the University of Strathclyde.
I have created a spatially explicit physiologically structured demographic model for cod in UK waters in conjunction with Prof. W. Gurney and biologists from two marine labs in the UK as part of grant MF0247. A major component of the work has been to determine models of adult movement which will reproduce the spatial distributions of cod found by ICES surveys. This model will provide insight into the condition of the stocks and predictive capabilities for assessing different protection methods for cod.

Jan 97- May 2001: Teaching Assistant at McGill and the University of Strathclyde (See teaching experience).

June95- July 96: Research Assistant at DFO, St. John's, Nfld.
I worked with Dr. R. Myers studying ricker oscillations in worldwide fish populations, with special attention paid to Pacific salmon, and examined spatial scales of correlation in recruitment variability.

November 95- June 96: Research Assistant at Memorial University, St. John's, Nfld.
Contracted by Dr. D. May to examine the AFAP training program for unemployed fishermen. I helped set up a database on the AFAP training program and began a statistical analysis of its impact on unemployed fishermen.

May 93- August 93: NSERC Research Assistant at Memorial University, St. John's , Nfld.
I worked with Dr. G. Sabin on an electric circuit problem with suspected chaotic behaviour, developed a graphing program in FORTRAN, and experimented with the HeNCe programming package.

May 92- August 92: Research assistant at DFO, St. John's, Nfld.
I worked with Dr. R. Myers on the statistical analysis of world fish populations, resulting in a technical paper. This work has been continued and the data is now provided on Ram Myers stock and recruitment website (http://fish.dal.ca/ myers/welcome.html) which is frequently cited.

TEACHING EXPERIENCE:

I have been involved in teaching tutorials and practicals in a wide range of courses including algebraic methods, calculus, statistics and population modelling. This has involved setting midterm exams, marking both midterms and final exams,and marking both oral and written reports.

The main first year statistics course at Strathclyde has been solely computer based for the last three years, and as a result labs are a key focus of interaction with the students. I have been in charge of three of these labs each week, each having 40 to 50 students, which also involved supervising other teaching assistants. I have also helped to run many modelling practicals aimed at undergraduates and masters students, which involved writing programs in Pascal through a differential equations package named SOLVER.

PROFESSIONAL ACTIVITIES:

I have reviewed for Canadian Journal of Fisheries and Aquatic Sciences and the Journal of Biological Systems.

I recently co-supervised a Masters in Environmental Science student who created a spatial model for sandeels on the east coast of Scotland using my cod model as a base.

I organise the departmental lunchtime seminar series and seminar day.

PUBLICATIONS:

Andrews, J., S. Blythe, and W.S.C. Gurney 2004. Stability Analysis of a Continuous Age structured model with specific reference to North Sea Cod. Journal of Biological Systems. In press.

Myers, R., **J. Andrews**, and K. Bowen 2004. Do Fish Populations Cycle? A Meta-analytic Approach Applied to 306 Time-Series. Ecology. In press.

Hedger, R., E. McKenzie, M.Heath, P. Wright, B. Scott, A. Gallego and **J. Andrews** 2004. Analysis of the spatial distributions of mature cod (Gadus morhua) and haddock (Melanogrammus aeglefinus) abundance in the North Sea(1980-1999) using Generalised Additive Models. Fisheries Research. In press.

Myers, R.A., G. Mertz, **J.M. Bridson** and M.J. Bradford 1998. Simple dynamics underlie sockeye salmon (*Oncorhynchus nerka*) cycles. Can. J. Fish. Aquat. Sci. 55:2355-2364.

Myers, R.A., G. Mertz and **J.M. Bridson** 1997. Spatial scales of interannual recruitment variations of marine, anadromous, and freshwater fish. Can. J. Fish. Aquat. Sci. 54: 1400-1407.

Myers, R.A., M. J. Bradford, G. Mertz and **J.M. Bridson** 1997. Estimating Delayed density-dependent mortality in sockeye salmon (*Oncorhynchus nerka*); a meta-analytic approach. Can. J. Fish. Aquat. Sci. 54:2449-2463.

Technical Reports:

Myers, R.A., G. Mertz and **J.M. Bridson** 1996. Spatial scales of interannual recruitment variations of marine, anadromous, and freshwater fish. ICES CM 1996/O:18

Myers, R.A., **J. Bridson** and N.J. Barrowman 1995. Summary of Worldwide Spawner and Recruitment Data. Can. Tech. Rep. Fish. Aquat. Sci. 2024: iv +327 p

Other Publications:

Marine Fisheries Commission, Department for Environment, Food and Rural Affairs, Research and Development, Annual Project Report - Financial Year 2002/2003 MF0427 - Population dynamics models of European cod stocks

A Phenotypic Model for Cod , http://www.stams.strath.ac.uk/research/activities/theoecol/projects/cod.

Publications in Preparation:

Andrews, J. , W.S.C. Gurney, M.Heath and A. Gallego. Modelling the spatial demography of Cod on the U.K. continental shelf. In preparation to be submitted to Fisheries Oceanography.

Myers, R., M. Bradford and **J. Andrews**. Delayed Density-Dependent Mortality in Pink Salmon (Oncorhynchus gorbuscha). In final revisions before submittal.

McKenzie, E., **J. Andrews**, R. D. Hedger, M.R. Heath, P.J. Wright, B.E. Scott, and A. Gallego. Patterns of cod (Gadus morhua) and haddock (Melanogrammus aeglefinus) in the North Sea. In preparation for submittal to Fisheries Oceanography

CONFERENCES ATTENDED:

June 26th-30th 2000: Resource Management Association conference, Wageningen, Netherlands
I presented a talk entitled 'A Phenotypic Competition Model for North Sea Cod' and was co-winner of the best student talk prize.

September 30th- October 1st 1999: Postgraduate conference on Marine Science
I presented a poster entitled 'A Population Model for North Sea Cod'

June 23rd-25th 1999: Resource Management Association conference, Halifax, Canada.
I presented a talk entitled 'What causes population cycles in Sockeye salmon'

HONOURS/AWARDS:

2000 Best Student Talk at RMA conference in Wageningen, Netherlands
1998 University of Strathclyde Standard Award
UGF Scholarship from the University of British Columbia (not taken)
Dean's Honours List- McGill University
1996 McGill University entry scholarship
1993 University of Strathclyde Exchange
NSERC Summer Research Assistant Award
1991 Trillium Scholarship from Queen's University
Newfoundland electoral district scholarship
Highest Average in French Immersion Award

ACTIVITIES:

I am a member of the Strathclyde Chamber Choir which will soon launch its first CD. During my 4 years in the choir we have visited Europe 4 times and frequently replaced Cathedral choirs.

I am a keen photographer and have recently had a photo of Koln published in the Colchester Evening Gazette and will shortly have a picture of Cawdor Castle in a bilingual edition of Macbeth published by Pearson Education.