

# MICHAEL T. KINNISON - CURRICULUM VITAE – SEPTEMBER 2006

## WORK ADDRESS:

Dr. Michael T. Kinnison  
Dept. of Biological Sciences  
313 Murray Hall  
University of Maine  
Orono, ME 04469

Phone: 207-581-2575  
Fax: 207-581-2537

## HOME ADDRESS:

165 Forest Avenue  
Orono, ME 04473

Phone: 207-866-3032

E-mail: [michael.kinnison@umit.maine.edu](mailto:michael.kinnison@umit.maine.edu)  
Website: <http://kinnison.umaine-biology.net/>

## CURRENT POSITIONS:

- Assistant Professor of Biological Sciences (Graduate Faculty)
- Curator of Fish Collections
- Maine Agricultural and Forestry Experiment Station
- Cooperating Member of School of Marine Sciences
- Ecology and Environmental Sciences Program
- Conservation Biology Program
- Maine Atlantic Salmon Technical Advisory Committee

## GRADUATE EDUCATION:

Doctor of Philosophy – 1999 – Life history divergence and population structure of New Zealand chinook salmon: a study of contemporary microevolution. 169 pp. University of Washington. Advisor: Dr. Thomas P. Quinn

Master of Science – 1997 - Population differentiation in chinook salmon introduced to New Zealand: evidence from morphological, reproductive and early life history characters. 181 pp. University of Washington. Advisor: Dr. Thomas P. Quinn

## UNDERGRADUATE EDUCATION:

Degree: Bachelor of Science - Summa Cum Laude - 1993  
Major: Marine and Freshwater Biology  
Institution: University of New Hampshire

## ACADEMIC HONORS:

Undergraduate: Dean's List (all semesters)

University Honors Program  
Member Phi Kappa Phi  
President's Award for Academic Achievement  
Honors Achievement Award  
Graduated Summa Cum Laude

Graduate: School of Fisheries Recruitment Award  
Recipient of H. Mason Keeler Fellowship  
Recipient of Faculty Memorial Fellowship  
Recipient of Faculty Merit Award (highest award given by school)

Post-Graduate: First Croasdale Fellow in Ecology (Dartmouth College)

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## PROFESSIONAL SOCIETIES:

Society for the Study of Evolution, American Society of Naturalists, American Fisheries Society, Gilbert Ichthyological Society, American Society of Ichthyologists and Herpetologist, European Society for Evolutionary Biology.

## TEACHING EXPERIENCE (not including teaching assistantships)

- Vertebrate Biology (Dartmouth and U-Maine) – Winter 2000, 2001, Fall 2002-2005
- developed course on the evolution, anatomy and natural history of vertebrates.
  - included coordination of lectures, exams, hands-on specimen examination, course projects, field trips and teaching assistants.
- Animal Behavior (Dartmouth) – Spring 2000
- presented series of lectures on genetic and environmental basis for behavior
- Ecology and Evolution (Dartmouth) – Fall 2000, Fall 2001
- co-instructed introductory course on ecology and evolution
  - developed lectures and exams and helped coordinated lab materials and teaching assistants
- Evolution and Ecology Seminar (U-Maine) – Spring 2003-11-03
- co-instructed graduate student seminar on current research in ecology and evolution
- Professionalism in Biology Seminar (U-Maine) – Spring 2004, Fall 2005
- co-instructed seminar class on professional development in biology
- Experimental Aquatic Ecology (U-Maine) – Fall 2004
- co-instructed lecture, reading and field work course on aquatic ecology
- Senior Paper in Ecology and Environmental Sciences (U-Maine) – Spring 2005
- led seniors in a semester long writing project as a capstone experience for their program.

## PROFESSIONAL EXPERIENCE:

- 2005 – on Biological Sciences Policy Advisory Committee
- 2005 – on Biological Sciences (Murray Hall) Building Manager
- 2002 – on Assistant professor – University of Maine (Orono)
- 2002 – on Maine Atlantic Salmon Technical Advisory Committee
- 2002 – on Curator of University of Maine Fish Collection
- 2002 – 2005 Institutional Animal Care and Use Committee
- 2003 – on Faculty mentor to University of Maine Chapter of American Fisheries Society
- 1999 – 2001 Croasdale fellow in ecology – Dartmouth College
- 1999 – 2001 Guest editor of journal *Genetica*
- Edited issue and book: "Microevolution: rate, pattern, process".
- 1993 – 1999 M.S. Thesis and Ph.D. Dissertation - University of Washington
- 1996 – 1999 Graduate student representative of Instructional Quality Committee
- Helped to restructure graduate program curriculum and examinations procedures
  - Helped develop graduate seminar series
  - Co-developed course (Fish 507a) on evolutionarily significant units and conservation
- 1996 – 1999 Council member of Fisheries Integrated Network of Students
- 1998 Teaching Assistant for "Salmonid Life-History and Evolution" course (Eval. = 4.5 with 5 = best possible score)
- 1996 – 1997 Representative of student committee formed to address graduate school review
- 1995 Coordinator of 6th Annual Graduate Student Symposium (University of Washington)

## PEER REVIEWED PUBLICATIONS:

## MICHAEL T. KINNISON - CURRICULUM VITAE – SEPTEMBER 2006

- Hendry, A.P., M.L. Kelly, **M.T. Kinnison** and D.N. Reznick. 2006. Parallel evolution of the sexes? Effects of predation and habitat on guppy body shape. *Journal of Evolutionary Biology*. 19:741-754.
- Millar, N.P., D.N. Reznick, **M.T. Kinnison** and A.P. Hendry. 2006. Disentangling the selective factors that act on male colour in wild guppies. *Oikos* 113:1-12.
- Crispo, E., P. Bentzen, D.N. Reznick, **M.T. Kinnison**, and A.P. Hendry. 2006. The relative influence of natural selection and geography on gene flow in guppies. *Molecular Ecology*. 15:49-62.
- Stockwell, C.A., **M.T. Kinnison** and A.P. Hendry. 2005. Evolutionary Restoration Ecology. In *Foundations of Restoration Ecology*. D. Falk, M. Palmer, J. Zedler eds. Island Press. In Press
- Paterson, I.G., E. Crispo, **M.T. Kinnison**, A.P. Hendry and P. Bentzen. 2005. Characterization of tetranucleotide markers in the guppy (*Poecilia reticulata*). *Molecular Ecology Notes*. In Press.
- Kinnison, M.T.**, and A.P. Hendry. 2004. From Macro to micro: tempo and mode in salmon evolution. In A. Hendry and S. Stearns eds. *Evolution Illuminated: Salmon and their Relatives*. Oxford University Press.
- Einum, S., **M.T. Kinnison** and A.P. Hendry. 2004. Evolution of egg size and number. In A. Hendry and S. Stearns eds. *Evolution Illuminated: Salmon and their Relatives*. Oxford University Press.
- Hendry, A.P., V. Castric, M.J. Unwin, **M.T. Kinnison**, T.P. Quinn. 2004. Philopatry and dispersal: homing vs. straying in salmonids. In A. Hendry and S. Stearns eds. *Evolution Illuminated: Salmon and their Relatives*. Oxford University Press.
- Kinnison, M.T.**, M.J. Unwin and T.P. Quinn. 2003. Migratory costs and contemporary evolution of reproductive allocation in male chinook salmon. *Journal of Evolutionary Biology*. 16:1257-1269.
- Stockwell, C.A., A.P. Hendry and **M.T. Kinnison**. 2003. Contemporary evolution meets conservation biology. *Trends in Ecology and Evolution*. 18:94-101.
- Unwin, M.J., **M.T. Kinnison**, N.C. Boustead and T.P. Quinn. 2003. Genetic control over survival in Pacific salmon (*Oncorhynchus* spp.): experimental evidence between and within populations of New Zealand chinook salmon (*O. tshawytscha*). *Canadian Journal of Fisheries and Aquatic Sciences*. 60:1-11.
- Kinnison, M.T.**, P. Bentzen, M.J. Unwin and T.P. Quinn. 2002. Reconstructing recent divergence: evaluating non-equilibrium population structure in New Zealand chinook salmon. *Molecular Ecology* 11:739-754.
- Pascual, M., **M. Kinnison**, C. Riva Rosi. 2002. First documented case of anadromy in a population of introduced rainbow trout in Patagonia: response to comment. *Transactions of the American Fisheries Society*. 131:585-588.
- Kinnison, M.T.** and A.P. Hendry. 2001. The pace of modern life II: from rates of contemporary microevolution to pattern and process. *Genetica* 112-113:145-164
- Quinn, T.P., **M.T. Kinnison** and M.J. Unwin. 2001. Evolution of chinook salmon (*Oncorhynchus tshawytscha*) populations in New Zealand: Pattern, Rate and Process. *Genetica* 112-113:493-513.

## MICHAEL T. KINNISON - CURRICULUM VITAE – SEPTEMBER 2006

- Hendry, A.P. and **M.T. Kinnison**. 2001. An introduction to microevolution: rate, pattern, process. *Genetica* 112-113:1-8.
- Pascual, M., P. Bentzen, C.R. Rossi, G. Mackey, **M.T. Kinnison** and R. Walker. 2001. First documented case of anadromy in a population of introduced rainbow trout in Patagonia, Argentina. *Transactions of the American Fisheries Society* 130:53-67.
- Kinnison, M.T.**, M.J. Unwin, A.P. Hendry and T.P. Quinn. 2001. Migratory costs and the evolution of egg size and number in introduced and indigenous salmon populations. *Evolution* 55:1656-1667.
- Unwin, M.J., T.P. Quinn, **M.T. Kinnison**, and N.C. Boustead. 2000. Divergence in juvenile growth and life history in two recently colonised and partially isolated chinook salmon populations. *Journal of Fish Biology* 57:943-960.
- Quinn, T.P., M.J. Unwin and **M.T. Kinnison**. 2000. Evolution of temporal isolation in the wild: genetic divergence in timing of migration and breeding by introduced chinook salmon populations. *Evolution*. 54:1372-1385.
- Kinnison, M.T.**, M.J. Unwin and F. Jara. 2000. Macroscopic intersexuality in salmonid fishes. *New Zealand Journal of Marine and Freshwater Research*. 34:125-134.
- Hendry, A.P. and **M.T. Kinnison**. 1999. The pace of modern life: measuring rates of contemporary microevolution. *Evolution*. 53:1637-1653.
- Quinn, T.P. and **M.T. Kinnison**. 1999. Size-selective and sex-selective predation by brown bears on sockeye salmon. *Oecologia*. 121:273-282.
- Unwin, M.J., **M.T. Kinnison** and T.P. Quinn. 1999. Exceptions to semelparity: post-maturity survival, morphology and energetics of male chinook salmon. *Canadian Journal of Fisheries and Aquatic Sciences*. 56:1172-1181.
- Kinnison, M.T.**, M.J. Unwin and T.P. Quinn. 1999. Growth and salinity tolerance of underyearling chinook salmon (*Oncorhynchus tshawytscha*) from two introduced New Zealand populations. *Canadian Journal of Zoology*. 76:2219-2226.
- Kinnison, M.T.**, M.J. Unwin, W.K. Hershberger and T.P. Quinn. 1998. Egg size, fecundity and early development rate of two New Zealand chinook salmon (*Oncorhynchus tshawytscha*) populations. *Canadian Journal of Fisheries and Aquatic Sciences*. 55:1946-1953.
- Kinnison, M.T.**, M.J. Unwin, N. Boustead and T.P. Quinn. 1998. Population-specific variation in body dimensions of adult chinook salmon (*Oncorhynchus tshawytscha*) from New Zealand and a related Sacramento River population, 90 years after introduction. *Canadian Journal of Fisheries and Aquatic Sciences*. 55:554-563.
- Hendry, A.P. and **M.T. Kinnison**. 1998. Taking time with micro-evolution. *Trends in Ecology and Evolution*. 13(2):76-77.
- Jury, S.H., **M.T. Kinnison**, W.H. Howell and W.H. Watson. 1994. The behavior of lobsters in response to reduced salinity. *Journal of Experimental Marine Biology and Ecology*. 176(2):167-185.
- Jury, S.H., **M.T. Kinnison**, W.H. Howell and W.H. Watson. 1994. The effects of reduced salinity on lobster (*Homarus americanus* Milne-Edwards) metabolism: implications for estuarine populations. *Journal of Experimental Marine Biology and Ecology*. 180(1):23-37.

MANUSCRIPTS IN REVIEW/PREPARATION:

## MICHAEL T. KINNISON - CURRICULUM VITAE – SEPTEMBER 2006

Gordon, S.P., D.N. Reznick, **M.T. Kinnison**, M.J. Bryant, K. Rasanen, D.J. Weese, N.P. Millar and A.P. Hendry. *In Review*. Adaptation rapidly improves survival in an experimental introduction of wild guppies. *Science*. Submitted 9/06.

**Kinnison, M.T.** and N.G. Hairston, Jr. *In Review*. Eco-evolutionary conservation biology: contemporary evolution and the dynamics of persistence. *Functional Ecology (Invited)*. Submitted 8/06

**Kinnison, M.T.**, C.A. Stockwell and A.P. Hendry. *In Review*. Contemporary evolution meets conservation biology II: impediments to integration and application. *Ecological Research (Invited)*. Submitted 9/06

**Kinnison, M.T.**, M.J. Unwin and T.P. Quinn. *In Review*. Rapid evolution versus habitat quality contributions to invasion: experimental evaluation. *Proceedings of the Royal Society of London, B*. Submitted 9/06.

Ozgo, M. and **M.T. Kinnison**. *In Review*. Contingency and determinism during rapid convergent evolution in the land snail, *Cepaea nemoralis*. *Evolutionary Ecology*. Submitted 6/06.

### PUBLISHED REPORTS:

Hey, J., E.L. Brannon, D.E. Campton, R.W. Doyle, I.A. Fleming, **M.T. Kinnison**, R. Lande, J. Olsen, D.P. Philipp, J. Travis, C.C. Wood and H. Doremus. 2005. Considering life history, behavioural and ecological complexity in defining conservation units for Pacific Salmon: an independent panel report, requested by NOAA Fisheries.

Bartron, M., D. Buckley, T. King, T. King, **M. Kinnison**, G. Mackey, T. Sheehan, G. Marancik and K. Beland. 2006. Captive broodstock management plan For Atlantic salmon at Craig Brook National Fish Hatchery. United States Fish and Wild Service.

### BOOKS AND EDITED VOLUMES:

Hendry, A.P and **M.T. Kinnison** (Invited Editors). 2001. Microevolution: rate, pattern, process. *Genetica* (special issue). 30+ invited contributors. Also appearing in book form in the *Contemporary Issues in Genetics and Evolution Series*, by Kluwer Academic Publishers. (More info on-line @ <http://www.zoology.ubc.ca/~ahendry/microtitles.html>)

### PRESENTATIONS DIRECTLY GIVEN BY M. KINNISON (\*Invited)

\*Kinnison, M.T. 2006. The evolutionary population ecology of fish invaders: traits, vital rates and the fate of populations. Center of Excellence Program, Hokkaido University, Sapporo, Japan.

\*Kinnison, M.T. 2006. The evolutionary population ecology of fish invaders: traits, vital rates and the fate of populations. Japanese Ecological Society, Niigata, Japan.

Bailey, M. and M. Kinnison. 2006 Selective Mortality in hatchery-produced salmon fry in Maine. *3rd Maine Atlantic Salmon Technical Advisory Committee Research Forum*. University of Maine, Orono, ME.

\*Kinnison, M.T. 2005. Consequences of contemporary evolution: experimental insights from wild fish populations. University of New Hampshire, Zoology Department Seminar.

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- \*Kinnison, M.T. 2005. Consequences of contemporary evolution: experimental insights from wild fish populations. Yale University, Ecology and Evolutionary Biology Departmental Seminar.
- \*Kinnison, M.T. 2005. Contemporary evolution versus ecology as determinants of population performance in an exotic fish. Symposium on “Evolution over Ecological Time Scales”. Ecological Society of America Meeting, Montreal.
- \*Kinnison, M.T. 2005. Tempo and Mode of Contemporary Evolution. Panelist for workshop on defining complex units of conservation. Seattle, Washington.
- Kinnison, M.T. 2004. Evolution of fitness in New Zealand salmon and the "value" of contemporary adaptation. Ecological and Evolutionary Ethology of Fishes Meeting, Iceland.
- \*Kinnison, M.T. 2004. Travel and sex on a tight budget: migration and the evolution of reproductive allocation and fitness. Dalhousie University, Biology Departmental Seminar
- \*Kinnison, M.T. 2004. Travel and sex on a tight budget: migration, reproductive allocation and fitness in salmon. University of New Brunswick, Fredericton, Departmental Seminar.
- \*Kinnison, M.T., N. Wilke and T. King. 2003. Loss of molecular and trait variation in six populations of endangered Maine Salmon. 133<sup>rd</sup> Meeting of the American Fisheries Society, Quebec City, Canada.
- \*Kinnison, M.T. 2003. Travel and sex on a tight budget: migration and the evolution of reproductive allocation and fitness. University of Southern Maine, Departmental Seminar
- Kinnison, M.T. 2003. Adaptive divergence in New Zealand salmon and the fitness value of contemporary evolution. Society for the Study of Evolution, Chico, California.
- \*Kinnison, M.T. 2003. Travel and sex on a tight budget: migration and the evolution of reproductive allocation in salmon. Departmental Seminar - Organismal and Evolutionary Biology Program, University of Massachusetts, Amherst.
- \*Kinnison, M.T. 2003. Travel and sex on a tight budget: migration and the evolution of reproductive allocation in salmon. Departmental Seminar – Biological Sciences, Laval University, Quebec.
- \*Kinnison, M.T. 2003. Genetic marking: principles and practice. Presentation to Maine Aquaculture Association.
- \*Kinnison, M.T., M.J. Unwin and T.P. Quinn. 2002. Travel and sex on a tight budget: migratory costs and the evolution of reproductive allocation in salmon. Ecology and Evolutionary Ethology of Fishes 2002. Quebec City, Quebec, Canada.
- \*Kinnison, M.T. 2001. Contemporary evolution in salmon: evidence and conservation implications. University of Maine Wildlife Department, Orono, ME.
- \*Kinnison, M.T. 2001. Travel and sex and on tight budget: migration and the evolution of reproductive allocation in salmon populations. University of Toronto Biology Department, Canada.
- Kinnison, M.T., and A.P. Hendry. 2001. Big Picture on the small scale: inferences from compiled rates of rapid evolution in the wild. Society for the Study of Evolution. Knoxville, Tennessee.
- \*Kinnison, M.T. 2001. Contemporary microevolution: evidence and implications for salmonid conservation. S.O. Conte Anadromous Fish Research Center. Turners Falls, Massachusetts.

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- Kinnison, M.T., and A.P. Hendry. 2000. Rapid evolution: comparative analysis of evolutionary rates, selection and genetic variation. Society for the Study of Evolution. Bloomington, Indiana.
- \*Kinnison, M.T., M.J. Unwin, N.C. Boustead and T.P. Quinn. 2000. Aspects of size and growth in the divergence of new salmon populations. International congress on the biology of fish. Aberdeen, Scotland.
- \*Kinnison, M.T. 1999. A century-long experiment in population evolution: exploring the New Zealand salmon transplant. University of British Columbia, Departmental Conservation Seminar.
- \*Kinnison, M.T., T.P. Quinn, and M.J. Unwin. 1998. A century-long experiment in population evolution: the New Zealand salmon transplant. American Fisheries Society 128<sup>th</sup> Annual Meeting, Hartford, CT. (Reviewed in TREE 1999, vol. 14, no. 2).
- Kinnison, M. T., Quinn, T. P., Unwin, M. J. 1998. A century-long experiment in population evolution: the New Zealand salmon transplant. Ecological and Evolutionary Ethology of Fishes Conference, Seattle, WA.
- Kinnison, M.T., M.J. Unwin and T.P. Quinn. 1997. The evolution of adult traits in New Zealand chinook salmon populations. American Fisheries Society 127<sup>th</sup> Meeting, Monterey, CA.
- Kinnison, M.T., M.J. Unwin, T.P. Quinn, W.K. Hershberger and N. Boustead. Inter-population variation in reproductive and early development characters of two introduced populations of New Zealand chinook salmon with comparisons to a related Sacramento River lineage. 77<sup>th</sup> Annual Meeting of the American Society of Ichthyologists and Herpetologists. Seattle, WA.
- Kinnison, M.T. 1997. Thesis Defense. Population differentiation in chinook salmon introduced to New Zealand: evidence from morphological, reproductive and early life history characters. University of Washington, School of Fisheries, Seattle, WA.
- Oral Presentations at 1997, 1998 and 1999 Pacific Ecology Conferences.
- Oral Presentations at 5<sup>th</sup>, 7<sup>th</sup>, 8<sup>th</sup> Graduate Student Symposia (Top doctoral presentation at 8<sup>th</sup> )
- Oral Presentations at 1994 and 1998 Gilbert Ichthyological Society Conferences
- Kinnison, M.T., S.H. Jury, W.H. Howell and W.H. Watson. 1992. Behavioral responses of lobsters to low salinity. 20th Annual Marine Benthic Ecology Meeting, Newport, RI.

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### PROFESSIONAL REFERENCES:

Dr. Thomas Quinn  
University of Washington,  
School of Aquatic and Fishery Sciences, 355020  
Seattle, WA 98195  
206-543-9042  
[tquinn@u.washington.edu](mailto:tquinn@u.washington.edu)

Dr. Benjamin Letcher  
Conte Anadromous Fish Research Center  
U.S. Geological Survey  
Biological Resources Division  
P.O. Box 796 – One Migratory Way  
Turners Falls, MA 01376  
413-863-3803  
[ben\\_lecher@usgs.gov](mailto:ben_lecher@usgs.gov)

Dr. Robin Waples  
NOAA NW Fisheries Science Center  
2725 Montlake Blvd. E.  
Seattle, WA 98112  
206-860-3200

Dr. Mark McPeck  
Department of Biological Sciences  
Dartmouth College  
Hanover, NH 03755  
603-646-2389  
[mark.a.mcpeek@dartmouth.edu](mailto:mark.a.mcpeek@dartmouth.edu) Dr. Theodore

Dr. David Reznick  
Department of Biology  
University of California  
Riverside, CA 92521  
909-787-5820  
[gupy@citrus.ucr.edu](mailto:gupy@citrus.ucr.edu)

Martin J. Unwin  
National Institute of Water and Atmosphere  
PO Box 8602, Christchurch, New Zealand  
64-3-348-8987  
[m.unwin@niwa.cri.nz](mailto:m.unwin@niwa.cri.nz)