

Michael H. Thomas, Ph.D.
Tallahassee, Florida

SUMMARY:

- Extensive experience in resource and environmental economics including research in the area of valuing non-market goods and services using both reveal and stated preference techniques, including travel cost models, random utility models and contingent valuation.
- Modeling of the economic losses and benefits resulting from environmental regulatory changes.
- Experience in assessing the economic losses due to man-caused damages to the environment including resource damage assessments.
- Proven analytical skills with over 25 years of applied statistical analysis in the fields of econometrics and biometrics.
- Excellent communication skills with many professional presentations, 15 years of exceptional college teaching and over a dozen scientific and popular publications, including the editing of a book.

SELECTED ACCOMPLISHMENTS:

Communications

- Fifteen years of experience teaching college statistics, economics and finance courses.
- Teacher of the year, 2000-2001, College of Engineering Sciences, Technology and Agriculture. Florida A&M University. Nominated as the teaching associate of the year for the Ohio State University in 1994, and received numerous superior evaluation ratings by students.
- Conceived, organized and coordinated an economics symposium to discuss Alaska's wildlife value. Several hundred professionals, including several of the nation's foremost resource economists, attended the workshop. The published proceedings were used by Alaskan resource managers to defend the economic viability of wildlife and by the economics faculty at the University of Alaska, Anchorage to teach resource economics.

Research and Analysis

- Developed state-of-the-art econometric demand models capable of withstanding legal challenges. The results of one model were used in litigation resulting from the 1993 oil spill in the Tampa Bay area of Florida. Another model has been used by the state of Florida to predict the economic impacts of more restrictive boating speed zones on boaters and anglers in Florida. Conducted statewide economic impact analysis for the Florida Fish and Wildlife Conservation Commission, the results led to a \$12 million annual increase in their boating program.
- Estimated the marginal benefit of improved hurricane forecasting to people facing severe weather.
- Calculated the economic value of many activities that depend on environmental services including, fishing, hunting, swimming and boating.
- Projected the economic impact of recreational activities to local, state and regional economies.
- Designed sampling procedures and survey instruments needed to gather information required for econometric modeling.
- Conducted extensive research into a diversity of subjects, including agricultural and resource economics, wildlife and forestry issues, and decision theory. Earned a Ph.D. in agricultural economics with master degrees in both forest resources and economics.
- Developed a justification for wildlife conservation programs by researching and developing an economic basis for management actions.

EDUCATION:

Ph.D., Agricultural Economics, The Ohio State University, (1996).

- Major field: Environmental and resource economics
- Dissertation Topic: A new approach to decision making is developed to solve problems where some outcomes are potentially catastrophic.

Master of Arts, Economics, The Ohio State University, (1993).

Master of Forest Resources, The University of Georgia, (1981).

Bachelor of Science, Forest Resources, The University of Georgia, (1975).

EXPERIENCE:

1997 to Present **Florida Agricultural and Mechanical University (Tallahassee, FL)**

Associate Professor, Economics Department and Agribusiness Program

- Responsibilities include: research, grantsmanship and teaching. Conduct original research in the valuation of non-market environmental goods and service. Develop econometric models to document the impacts of environmental policies and emulate consumer choice. Teach graduate and undergraduate course in environmental economics, production economics, management, agricultural marketing, agricultural policy, farm business analysis, principles of economics, managerial finance, money and banking and managerial economics; advise and mentor students in their academic and professional development.

1994 to 1997 **Environmental Economics Research Group (Lansing, MI)**

Consulting Resource Economist

- As part of litigation to recover recreational use-value lost as a result of the 1993 Tampa Bay oil spill, primary duties involved developing a discrete choice demand model for beach use. The subsequent travel cost model was used to estimate welfare loss and participation shifts within the beach-going population following the oil spill. Other duties included designing and implementing aerial and on-ground surveys of area recreationists, developing focus group scripts and survey instruments, and preparing descriptions of methodologies and progress-to-date reports for client usage.

1990 to 1994 **The Ohio State University, Ph.D. program (Columbus, Ohio)**

Graduate Research Associate (1992 to 1994)

- Developed decision protocols to address uncertainty in resource allocation problems as a decision theoretic. Using a principal/agent model, generalized the theory to a decision framework useful to decision-makers facing uncertainty in their day-to-day management of natural resources. The results were published as a Ph.D. dissertation and in the journal *Ecological Economics*.

Instructor (1993 to 1994)

- Taught an undergraduate introductory statistics class and supervised a teaching associate. Guest lectured for both Ph.D. and senior level agricultural economics courses. Nominated by the Agricultural Economics Department chairman as Ohio State University Teaching Associate of the Year, finishing in the top one-percent of finalists.

EXPERIENCE: (continued)

Teaching Associate (1990 to 1992)

- Assisted in designing and teaching a computer-based statistics class to undergraduates. This involved developing the course's computer material and teaching a once-a-week lab.

1982 to **Alaska Department of Fish and Game (Juneau, Alaska)**

1990 Biometrician

- Provided biometrics support for wildlife biologists.
- As a member of the management staff, routinely supported other resource managers in solving wildlife management problems.
- Trained regional staff in the use of SAS, Lotus 123, MS Word, dBASE III, SPSS, and FORTRAN.
- Designed and conducted economic surveys of hunters in Alaska.
- Developed travel cost models to estimate consumer surplus from hunting.
- Developed population models used by wildlife managers.
- Supervised the purchase and installation of 20 microcomputers.
- Hired and supervised a computer programmer.

1982 **U.S. Forest Service, Shoshone National Forest (Cody, Wyoming)**

Operations Research Analyst

- Worked with staff resource managers to link forest and range land management practices to resource outputs. This effort provided many of the necessary components for an interdisciplinary linear program used in resource management (FORPLAN).

1979 to **U.S. Forest Service, Programs and Legislation (Washington, DC)**

1982 Forester

- Developed and modified an interdisciplinary linear model designed to track interactions of natural resources and management practices at the national level.

1977 to **U.S. Fish and Wildlife Service (St. Marks, Florida)**

1978 Forester

- Collected biological survey data and assisted staff biologists and foresters in the revision of the St. Marks National Wildlife Refuge management plan.

FUNDED GRANTS AND CONTRACTS:

2006: International Hurricane Research Center and NOAA. "Web-based Survey to Determine the Economic Value of Hurricane Forecast Attributes." Principal Investigator: Michael Thomas, Co-investigators: Dave Letson, University of Miami and Edward Mahoney, Michigan State University. Funds awarded, \$80,000.

2005: Florida Fish and Wildlife Conservation Commission. "An Assessment of Boating Access in the State of Florida: An Inventory and Economic Evaluation. Principle Investigator: University of Massachusetts, Co-investigators: University of Michigan, Resource Economics Research, Florida Atlantic University, Bordner Research and Environmental Economics (Michael Thomas). Funds awarded, \$1,200,000.

- 2005: US Department of Agriculture, APHIS. "A Survey of Cattle Producers to Determine the Economic Impact of Tropical Soda Apple on the Florida Cattle Industry." Principal Investigator: Michael Thomas. Funds awarded \$25,000.
2005. International Hurricane Research Center and NOAA. "Determining the Value of Improved Hurricane Forecasting: Revealed Preference Model." Principal Investigator: Michael Thomas, Co-investigator: Dave Letson, University of Miami. Funds awarded \$142,000.
2004. International Hurricane Research Center. "Determining the Value of Improved Hurricane Forecasting: Theoretical Framework." Principal Investigator: Michael Thomas, Co-investigator: Dave Letson, University of Miami. Funds awarded \$94,000.
- 2004: US Department of Agriculture, APHIS. "The Economic Impact of Tropical Soda Apple on the Florida Cattle Industry." Principal Investigator: Michael Thomas. Funds awarded \$30,000.
- 2003: US Department of Agriculture, ERS. "Assurance Bonds as a Tool to Manage Risks Associated with the Intentional Releases of Exotic Species." Principal Investigator: Michael Thomas, Co-investigator, Nick Stratis. Funds awarded \$50,000.
2001. Florida Fish and Wildlife Conservation Commission: "Assessing the Economic Impacts of Wildlife Management Areas within the State of Florida." Principal Investigator: Michael H. Thomas, Co-investigator: David Harding. Funds awarded \$12,000.
2000. Florida Fish and Wildlife Conservation Commission: "Determining the Economic Impact of a Proposed Manatee Policy on the Value of Recreational Boating in Brevard County." Principal Investigator: Michael H. Thomas. Funds awarded \$6,500.
2000. Florida Fish and Wildlife Conservation Commission: "Assessing the Economic Impacts of Public Piers and Boat Ramps." Principal Investigator: Michael H. Thomas, Co-investigator: Nick Stratis. Funds awarded \$93,000.

PAPERS AND PUBLICATIONS PUBLISHED, UNPUBLISHED (WORKING) AND PENDING:

- Thomas, M.H. and T.R. Hanson. (2007) "Evaluating the Policy to Restrict the Potentially Invasive Black Carp (*Mylopharyngodon piceus*): A Decision Protocol with Assurance Bonding." *Journal of Environmental Planning and Management*. Vol. 50(1).
- Milla, K., M.H. Thomas, W.G. Ansine, N.L Bruton, P. Goldsmith and N. Stratis. (Pending) "The Environmental Effects of the Swine Industry on Residential Property Value in North Carolina." *Journal of Environmental Planning and Management*. In review, 2006.
- Harwell, M., J. Gentile, M. Reiter, M. Thomas, D. Letson, C. Forthman and J. Schalles. (Pending). "Understanding Coupled Human-Environment Systems: Use of Conceptual Models for Environmental Decision-Making," Unpublished paper, pending review for inclusion in a special edition of *Urban Ecology*.

PAPERS AND PUBLICATIONS (continued)

- McTigue, T., M. Harwell, J. Gentile, M. Thomas, and C. Forthman. (Pending). "A Synthesis in the Use of Conceptual Models for Environmental Decision-Making," Unpublished paper, pending review for inclusion in a special edition of *Urban Ecology*.
- Milla, K, M.H. Thomas and W. Ansine (2005) Evaluating the Effect of Proximity to Hog Farms on Residential Property Values: A GIS – Based Hedonic Price Model Approach. *URISA Journal* Vol. 17(1).
- Thomas, M.H. (Pending). "Minorities, an Underutilized Market Segment in Resource-Based Recreation: Potential Economic Returns to Directed Marketing," to be published by the U.S. Forest Service, Southeastern Experiment Station as a Technical Report in the proceedings of the symposium titled "Celebrating Minority Professionals in Forestry and Natural Resources." Accepted for publication 2004, final edits December 2006.
- Thomas, M.H. (2004 unpublished working paper). "A New Protocol Governing the Use of Nonindigenous Species in Aquaculture: The Case for Revocable Actions."
- Thomas, M.H. and M.A. Reiter. (2004 unpublished working paper). "Determining the Value of Economics in Determining the Value of the Environment: A Dialogue."
- Fleming, R.A. and M.H. Thomas (2004). "New Regulations Governing Concentrated Animal Feeding Operations Require New Solutions: A Discussion," *Journal of Agricultural and Applied Economics*. Vol. 36 No. 2 pp 313 – 316.
- Thomas, M.H., and N. Stratis (2002). "Compensating Variation for Recreational Policy: A Random Utility Approach to Boating in Florida." *Marine Resource Economics*; Vol. 17(1).
- Thomas, M.H. and N. Stratis (2002). "The Cost of Manatee Protection: A Compensating Variation Approach to Lost Boating Opportunity in Florida." In *Issues of Wildlife Economics and the Ecology-Economics Interface*, proceedings of the SERA IEG-30 meetings, published by the Southern Rural Development Center, Mississippi State University, Starkville, MS.
- Thomas, M.H., and N. Stratis (2001). "The Cost of Manatee Protection: A Compensating Variation Approach to Lost Boating Opportunity in Florida." Proceedings of the Southern Extension Research Association Information Exchange Group 30.
- Thomas, M.H., and N. Stratis (2001). "The Cost of Manatee Protection: A Compensating Variation Approach to Lost Boating Opportunity in Florida." Proceedings of the Southern Extension Research Association Information Exchange Group 30.
- Thomas, M.H., W. Ansine, N. Bruton, P. Goldsmith, K. Milla and N. Stratis (2001). "An Hedonic Price Model to Determine the Discommodity of Swine Odor," Proceedings of the 2001 Meetings of the American Agricultural Economics Association, August 5-8, 2001, Chicago, IL.
- Thomas, M.H. and E. Chambers (2001). "An Assessment of the Value of Florida's Public Boat Ramps and Piers," Proceedings of the 2001 Meetings of the Southern Agricultural Economics Association, Fort Worth, Texas

PAPERS AND PUBLICATIONS (continued)

- Thomas, M.H., and Alan Randall (2000). "Intentional Introductions of Nonindigenous Species: A Principal/Agent Model and Protocol for Revocable Decisions." *Ecological Economics* 34, 333-345.
- Thomas, M.H. (1996). "Revocability in Decision-Making: A Protocol for the Release of Nonindigenous Aquatic Species." Ph.D. dissertation, School of Agricultural Economics and Rural Sociology, The Ohio State University, Columbus, OH., 84 pp.
- Thomas, M.H.. (1994) "Policy and the Invasion of Non-Indigenous Marine Species: Use of the Safe Minimum Standard Decision Rule." Proceedings of the 1993 Conference and Workshop, Nonindigenous Estuarine and Marine Organisms (NEMO). U.S. Dept. of Commerce, Seattle, WA, 115-118
- Peterson, G.L., C.S. Swanson, M.W. McCollum and M.H. Thomas (1992). *Valuing Wildlife Resources in Alaska*, Westview Press, Boulder CO, 357 pp.
- Thomas, M.H., S.M. Miller, and W.L. Pamplin (1992). "An Agency Review and Perspective on the Importance of Economic Information in Wildlife Management," in: *Valuing Wildlife Resources in Alaska*, Eds. G.L. Peterson, C.S. Swanson, D.W. McCollum and M.H. Thomas, Westview Press, Boulder CO, 4-24.
- Loomis, J.B. and M.H. Thomas (1992). "Pricing and Revenue Capture: Converting Willingness to Pay into State and Private Revenue," in: *Valuing Wildlife Resources in Alaska*, Eds. G.L. Peterson, C.S. Swanson, D.W. McCollum and M.H. Thomas, Westview Press, Boulder CO, 255-274.
- Randall, A., and M.H. Thomas (1991). "The Role and Limits of Economics in Decision-Making Regarding Non-Indigenous Species," Report to U.S. Congress, Office of Technology Assessment, 51 pp.
- Donnelly, D.M. and M.H. Thomas (1991). "Net Economic Value of Hunting Grizzly and Brown Bear in Alaska," unpublished manuscript, Rocky Mountain Forest and Range Experiment Station, USDA Forest Service.
- Swanson, C.S., M.H. Thomas, and D. Donnelly (1989). "Economic Value of Big Game Hunting in Southeast Alaska," Resource Bulletin, RM-16, Rocky Mt. Forest and Range Exp. Sta., U.S. Forest Service, 11 pp.
- Fay, G. and M.H. Thomas (1986). "Deer Hunter Economic Expenditure and Use Survey, Southeast Alaska," Habitat Tech. Rpt. 86-10, Alaska Dept. of Fish and Game, Juneau, Alaska, 121 pp.
- Fay, G. and M.H. Thomas (1986). "Goat Hunter Economic Expenditure and Use Survey, Southeast Alaska," Habitat Tech. Rpt. 86-9, Alaska Dept. of Fish and Game, Juneau, Alaska, 70 pp.
- Fay, G. and M.H. Thomas (1986). "Moose Hunter Economic Expenditure and Use Survey, Southeast Alaska," Habitat Tech. Rpt. 86-8, Alaska Dept. of Fish and Game, Juneau, Alaska, 76 pp.

PAPERS AND PUBLICATIONS (continued)

Thomas, M.H.. (1985). "Hunting: Economic Expenditures and Benefits in Southeast Alaska," Alaska Fish and Game, Vol. 20, No.1.

Schoen, J.W., M.D. Kirchoff, and M.H. Thomas (1985). "Seasonal Distribution and Habitat Use by Sitka Black-Tailed Deer in Southeastern Alaska," Fed. Aid in Wildlife Restoration, Final Rpt., Proj. W-17-11, Job 2.6R, Alaska Dept. of Fish and Game, Juneau, Alaska, 44 pp.