

Report for 2004IN160B: Norms, public opinion, and preservation of non-charismatic aquatic and riparian species

- Other Publications:
 - Raymond, L. and Laura Schneider 2005. Who Wants to Save That? Legitimizing Policies To Protect Non-Charismatic Species. Poster to be presented at the 2005 annual meeting of the American Political Science Association, September 2005, Washington D.C.

Report Follows

Title: Norms, public opinion, and preservation of “non-charismatic” aquatic and riparian species

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PROBLEM AND RESEARCH OBJECTIVES

The protection of endangered species is a growing issue in Indiana. To date, twenty species with habitat in Indiana are listed as endangered, threatened, or candidates for listing under the federal Endangered Species Act (ESA). Of these, six live directly within bodies of water and another six rely on wetlands or coastal areas for all or a substantial part of their habitat. Thus, the majority of endangered species in the state rely directly on rivers, wetlands, or coastal zones for their survival.

For many of these species, the situation is dire. All six mussels on the list are endangered and at critical risk of extinction, and the prospects for the other six aquatic or coastal species are not much better. Both of the species considered in this study face substantial challenges for survival. The Fanshell Mussel (*Cyprogenia stegaria*), found only in large river bottoms, is seriously threatened by dredging, dams, and agricultural and industrial pollution, among other factors. At present, only three of the twelve known populations of the mussel are reproducing (USFWS 1997). The Eastern Massasauga rattlesnake (*Sistrurus c. catenatus*) is a candidate species for listing, meaning that there is substantial biological information that the species is at risk. The ongoing draining of wetlands for farming and urban development, as well as direct hunting and eradication efforts are among the more serious threats faced by the Massasauga (USFWS 1998).

Despite the perilous condition of these species, efforts at recovery have been limited. Public controversy over endangered species protection has grown in the past decades, as habitat demands have placed increasingly strong limitations on private property development and usage (Sheldon 1998, Sax 1997, Mann and Plummer 1995). While public support for the ESA and environmental protection in general remain strong, discontent with the way the act is implemented and enforced have grown. At the same time, a fear of regulation under the ESA combined with a lack of sympathy for certain species has led to perverse strategies by private property owners, including “scorched earth” policies to eradicate any potential endangered wildlife habitat on a parcel or the illegal but reportedly common strategy of “shoot, shovel, and shut up” when finding an actual endangered species on one’s land (Bean 2002, 1997).

In light of these challenges, policy makers in Washington and Indiana have tried to balance the needs of species and private property owners through regulatory innovations like “safe harbor” agreements and habitat conservation plans (Farrier 1995). However, better public education regarding the merits of species conservation is also a crucial part of any successful endangered species policy. Despite the hostile climate, efforts to protect certain high-profile species like California condors or Grizzly Bears continue to receive strong public approval (and the lion’s share of public funding for recovery). Less attractive and low-profile species, however, garner only lukewarm support or even open hostility (Huddy and Gunnthorsdottir 2000). In general, aquatic and riparian species such

as invertebrates (including mollusks), and reptiles are among those with the least funding or public support for recovery (Miller *et al.* 2002, Czech *et al.* 1998). Yet such species are crucial to many aquatic and riparian ecosystems, and also merit protection under the law as much as their more charismatic peers.

Thus, public support for the preservation of these “non-charismatic” species is crucial to maintaining their place in the aquatic ecosystems of Indiana. Yet management agencies are struggling with how to promote the protection of these species among the public. The purpose this project is to identify the relative public appeal of various normative and practical arguments used to justify the protection of endangered species. In this regard it seeks to apply qualitative and quantitative methods to better understand the role of public opinions and ideas about species protection in implementing and legitimating public policy.

The specific **objectives** of the project include the following:

- * Accepting or rejecting the primary research hypothesis that ethical, normative arguments regarding species preservation will be more persuasive than other justifications based on practical principles
- * Identifying what kinds of arguments are most effective at creating or maintaining public support for preservation of “non-charismatic” aquatic and riparian species
- * Identifying to what degree the persuasiveness of such arguments varies among species based on their threatening nature to humans (the Massasauga) or existence largely outside daily human experience or awareness (the Fanshell Mussel)
- * Identifying if age, sex, occupation or other factors have a significant impact on the findings
- * Providing guidance to policy makers and regulatory agencies seeking to garner public support for the preservation of such species under the ESA and other laws.

METHODOLOGY AND PRINCIPAL FINDINGS

This project combines quantitative and qualitative approaches to test the research hypotheses. The initial stage of the research was composed of four focus groups session regarding participant attitudes toward protection of the two noncharismatic aquatic species in question, two other non-aquatic species (the Indiana Bat and the Bald Eagle) used for comparison purposes, as well as of endangered species in general. Focus groups were led by the PI, and were conducted for approximately one hour each. They were taped, and the recordings were then transcribed for subsequent analysis. Each included a similar set of questions regarding endangered species conservation in general, property rights, and the conservation of specific species found in Tippecanoe County.

Each session took place with a distinct group with some interest in the issue of endangered species conservation. The first session was a group of Purdue students interested in environmental matters and active in the campus greens chapter. The second was with a local “environment” committee of the Lafayette Chamber of Commerce. The third was with a group of members of a local environmental organization (the NICHES land trust), and the fourth was with a group of farmers working in Tippecanoe county. All subjects received \$20 compensation for their participation.

The second stage of the project was a detailed direct mail survey sent to approximately 995 households in Tippecanoe County. Addresses were selected randomly from a sample frame composed of the more than 54,000 property owners of record in the county recorded at the county courthouse. The survey itself was a 12-page instrument composed of questions regarding endangered species conservation and property rights. Questions were drawn from the initial focus group instrument, with revisions and adjustments based on findings emerging from those sessions. All surveys were mailed with cover letters and postage-paid return envelopes, working in collaboration with Purdue’s mailing services department. Although data collection is ongoing for the survey, to date we have obtained approximately 420 completed surveys for a response rate of more than 42%. We are still hopeful of getting a final return rate of 50%.

Specific findings from the project are limited in the current reporting period, since most data analysis of the surveys in particular will take place this summer. However, some tentative initial results did emerge from the initial focus group sessions including the following:

- 1 The hypothesis that moral arguments are a stronger justification for non-charismatic species gets limited support from the focus groups. Instead, ecological reasons are strongest.
- 2 In general, there was a strong split on reasons to preserve species among the groups. Moral and Ecological reasons were strongest for Environmentalists, Ecological and Practical reasons were strongest for business interests and farmers.
- 3 Ecological reasons seem the strongest overall for preserving species; symbolic reasons were weakest.
- 4 Environmentalists find that reasons to protect do not vary by species (charismatic or not), others argue against this idea.
- 5 Surprisingly, there is strong support for financial compensation for private owners to protect species, at least in some circumstances, among all groups
- 6 Eagle seen as most important species to conserve among non-environmentalists, Mussel as most important among environmentalists.

- 7 Eagle is the most appealing species to non-environmentalists, Bat or “all equally appealing” most common view among environmentalists.
- 8 Eastern Massasauga seems to be least appealing or “charismatic” to all groups.
- 9 Eagle least important to protect among environmentalists, but not other groups.

SIGNIFICANCE of the PROJECT

When completed, the primary result of this proposal will be the determination of what arguments are most persuasive to the public for preserving non-charismatic, water-based endangered species. By supporting or rejecting the project’s basic hypothesis—that an ethical justification for protecting such species is the most effective way to sway public opinion—the project will make a specific contribution to those trying to design, implement, and legitimate such policies. Currently, the FWS and other agencies and advocates tend to rely more on practical reasoning regarding the value of endangered species to human beings, rather than more ethical arguments, in promoting their policies. If this study’s primary hypothesis is confirmed, the validity of this particular strategy will be placed in doubt. Instead, agencies and policy makers may want to return to more basic, normative arguments to encourage support for and cooperation regarding their endangered species policies in this context. Thus, one practical result of the project would be information on public attitudes and beliefs regarding endangered species common to aquatic habitats. These results should help policy makers and agency personnel alike in their efforts to protect various species like the Massasauga, the Fantail, or other aquatic and riparian creatures and their threatened habitats.

In addition, the research will also provide more general insights regarding public opinion about endangered species. Other non-charismatic species include, in some contexts, land-based reptiles and invertebrates as well as large predator species like the Florida Panther or the Gray Wolf. The results of this study should hold interesting implications for those trying to support and craft policies to protect these other endangered species, beyond the aquatic and coastal areas of the state of Indiana. Finally, this project will offer interesting results regarding the role of normative ideas in political life and policy in general. Normative ideas appear to play a central role in the creation and implementation of many public policies, both environmental and not, yet the specific role of these normative ideas in shaping such policy processes and outcomes remains poorly understood (Raymond 2003). To the degree that normative ideas play an important role in public acceptance of endangered species preservation, that finding will also bear on this larger intellectual question.

STUDENTS (id as to grad or undergrad),

The project has been supported for the entire academic year by Laura Schneider, a 3rd year PhD student in Political Science. Laura is a co-author on the upcoming conference

presentation for the project, and will also co-author any journal articles that result from the project. Although funding for the project ends in May, she will remain involved throughout the summer and fall of 2005 in writing and revising any results.

Thesis titles, papers, and abstracts.

Who Wants to Save That? Legitimizing Policies To Protect “Non-Charismatic” Species
Poster to be presented at the 2005 annual meeting of the American Political Science Association, September 2005, Washington D.C.

Abstract:

Consistent with the 2005 APSA conference theme, the mobilization of public support is critical to the democratic legitimation of any public policy. How to best mobilize such support is a difficult question. Policies like the Endangered Species Act struggle with this issue, particularly with regard to the protection of “non-charismatic” species of reptiles, mollusks, and invertebrates. Recovery efforts for the Bald Eagle or Chinook Salmon benefit from public approval and substantial funding, even as other endangered species go without (Miller *et al.* 2002; Baker 1999). This is not surprising—scholars have shown that physically attractive, “charismatic” species of mammals and birds evoke greater public approval than less appealing species (Huddy and Gunthorsdottir 2000; Czech *et al.* 1998; Kellert 1996). Thus, the present research question: what arguments would mobilize the greatest public support and legitimation for policies faced with the difficult task of protecting non-charismatic endangered species?

The study turns to the literature on the role of ethical norms in policymaking for a promising alternative (Raymond 2003, 2001; Ostrom 2000, 1998; Elster 1992). “Norms” in this context are generally defined as non-legal rules of behavior that are culturally determined, commonly held, and socially enforced (Coleman 1990). Scholars have established that *ethical* norms of justice and fairness influence human attitudes and behavior even in the face of substantial personal costs (Ahn *et al.* 2003; Eavey 1991; Hoffman & Spitzer 1985). Normative ideas appear to play a central role in the creation and implementation of public policies, both environmental and not, yet the specific political role of these normative ideas remains poorly understood (Raymond 2003). Such norms seem to offer a promising alternative for mobilizing support in the context of non-charismatic species, however, where fear and ignorance pose significant emotional and psychological barriers to a species’ protection.

Thus, the hypothesis investigated by this paper is that policy makers could increase public support for biodiversity policies *by explicitly promoting an ethical argument* that extinction is morally wrong. Specifically, the paper documents public attitudes about protection of two “non-charismatic” endangered species: the Eastern Massasauga Rattlesnake, and the Fanshell Mussel. The paper marshals qualitative and quantitative data from a series of four focus groups and a mail survey of 1,000 residents of Tippecanoe County, Indiana, to test what arguments are most or least persuasive in supporting protection of these species.

The paper is of theoretical and practical significance. Normative ideas of fairness have been shown to be important to obtaining the public’s “contingent consent” to other

coercive policies like military conscription (Levi 1997). Studying the role of other ethical norms in this context will expand our understanding of how widely moral ideas affect policy legitimation in general. In addition, better knowledge of these public attitudes should aid the implementation and legitimation of endangered species policies. Currently, agencies emphasize practical arguments for conserving such non-charismatic species, with little success (USFWS 2003; Plater 1997). Yet non-charismatic species like snakes and shellfish are equally important to ecosystems, making this research all the more policy-relevant.

References

- Ahn, T. K., E. Ostrom, J. M. Walker. 2003. Heterogeneous Preferences and Collective Action. *Public Choice* 117: 295-314.
- Baker, B. 1999. Spending on the Endangered Species Act—Too Much or Not Enough? *Bioscience* 49: 279.
- Bean, M. J. 1997. Sustainability and The Law: An Assessment of the Endangered Species Act. *Nature and Human Society*. Ed. P. Raven. Washington D.C., NRC: 493-499.
- Bean, M. J. 2002. Overcoming Unintended Consequences of Endangered Species Regulation. *Idaho Law Review* 38: 409-420.
- Coleman, J. S. 1990. Norm-Generating Structures. In *The Limits of Rationality*, eds. K. S. Cook, M. Levi. Chicago: University of Chicago Press.
- Czech, B., P. R. Krausman, R. Borkhataria. 1998. Social Construction, Political Power, and the Allocation of Benefits to Endangered Species. *Conservation Biology* 12(5): 1103-1112.
- Eavey, C. L. 1991. Patterns of Distribution in Spatial Games. *Rationality and Society* 3: 450-474.
- Elster, J. 1992. *Local Justice: How Institutions Allocate Scarce Goods and Necessary Burdens*. New York: Russell Sage Press.
- Farrier, D. 1995. Conserving Biodiversity on Private Land: Incentives for Management or Compensation for Lost Expectations? *Harvard Environmental Law Review* 19: 303-408.
- Hoffman, E. and M. L. Spitzer. 1985. Entitlements, Rights, and Fairness: An Experimental Examination of Subjects' Concepts of Distributive Justice. *Journal of Legal Studies* XIV: 259-297.
- Huddy, L. and A. H. Gunnthorsdottir. 2000. The Persuasive Effects of Emotive Visual Imagery: Superficial Manipulation or the Product of Passionate Reason? *Political Psychology* 21(4): 745-778.
- Kellert, S. R. 1996. *The Value of Life*. Washington D.C.: Island Press.
- Levi, M. 1997. *Consent, Dissent, and Patriotism*. Cambridge: Cambridge University Press.
- Mann, C. C. and M. L. Plummer. 1995. *Noah's Choice: The Future of Endangered Species*. New York: Knopf.
- Miller, J. K., J. M. Scott, C. R. Miller, L. R. Waits. 2002. The Endangered Species Act: Dollars and Sense? *Bioscience* 52(2): 163-168.
- Ostrom, E. 2000. Collective Action and the Evolution of Social Norms. *The Journal of*

Economic Perspectives 14(3): 137-158.

- Ostrom, E. 1998. A Behavioral Approach to the Rational Choice Theory of Collective Action: Presidential Address, American Political Science Association, 1997. *American Political Science Review* 92(1): 1-22.
- Plater, Z. J. B. 1997. "The Embattled Social Utilities of the Endangered Species Act--A Noah Presumption and Caution Against Putting Gasmasks on the Canaries in the Coalmine." *Environmental Law* 27: 845-876.
- Raymond, L. 2003. *Private Rights in Public Resources: Equity and Property Allocation in Market-Based Environmental Policy*. Washington D.C.: Resources For the Future Press.
- Raymond, L. 2001. Equity Norms in Environmental Politics: Allocating SO2 Emission Rights. Presented at the 2001 *American Political Science Association Annual Meeting*.
- Sax, J. L. 1997. The Ecosystem Approach: New Departures for Land and Water, Closing Remarks. *Ecology Law Quarterly* 24: 883-886.
- Sheldon, K. P. 1998. Habitat Conservation Planning: Addressing the Achilles Heel of the Endangered Species Act. *NYU Environmental Law Journal* 6: 279-340.
- USFWS. 2003. *Fact Sheet: Eastern Massasauga Rattlesnake*.
- USFWS. 1998. *Status Assessment for the Eastern Massasauga (Sistrurus c. catenatus)*.
- USFWS. 1997. *Fact Sheet: Fanshell Mussel (Cyprogenia stegaria)*.