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SYMPOSIUM: ANIMAL MIGRATION CONSERVATION

SYMPOSIUM ESSAY

The extinction prevention focus of natural resources policy diverts attention from important issues of ecological integrity and adaptation to climate change. Animal migration conservation serves as a bridge from the imperiled species problem to the more spatially and temporally difficult problems surrounding climate change adaptation. Conserving abundant animal migrations both strengthens the resilience of the ecosystems in which they function and tests the resilience of social institutions responsible for adaptation. This essay synthesizes the findings of a two-year, interdisciplinary study of animal migration conservation. It also introduces the articles that follow in this symposium issue, which is a result of the study.

SYMPOSIUM ARTICLES

SCIENTIFIC RESEARCH AGENDA

Identifying important "migratory species" and the characteristics of their migrations might sound like a simple starting point for efforts to conserve and protect animal migrations. However, migrations are dynamic phenomena that vary over space and time, and migratory behaviors can vary substantially among closely related species, subspecies, races, or populations, and even among individual animals within a single population. The migratory behaviors of populations or individuals can also change rapidly—or be lost entirely—in response to habitat alteration or climate change. These complexities present

at different points in space and time. No single decision maker has full control over the set of human actions that will determine the overall status of the migratory species—or even the outcomes valued by that single decision maker. Recognizing this interdependence, human decision makers will tend to behave strategically. In other words, their decisions regarding the best way to achieve their individually-valued objectives will depend on the expected actions and reactions of the other relevant actors. This interplay can take a variety of forms—ranging from individual decisions on compliance, or not, with hunting regulations as a function of the likelihood of getting caught and the severity of the resulting punishment, to the strategic positions of individual nations in negotiating treaties on habitat conservation or fishery management. The policy problem thus entails designing an appropriate set of incentives for each of the decision-making entities to channel their actions towards mutually satisfactory and environmentally-responsible outcomes. A changing climate can complicate this task by altering the migratory behavior or reproductive success of the animals that a policy or agreement is attempting to manage. This Article will survey a range of policy situations in which the efficacy of a policy, treaty or other agreement could be undermined by strategic behavior—in particular strategic reactions to the effects of changing environmental conditions.

COLLABORATION CASE STUDIES

This paper examines the protection of the lower 48's longest mammal migration as a possible prototype for the conservation of other land mammal migrations. This case suggests that while collaboration among diverse stakeholders is a worthy aspiration, is not necessary for the protection of all migratory species. Key findings include utilizing symbolic politics to build social connectivity and addressing migratory challenges through parallel (or a portfolio) of solutions.

In 2001, some 137 Pennsylvania communities across a dozen counties joined with the Audubon Society and dozens of other nonprofit organizations in an umbrella "coalition" of citizens alarmed by what they saw as the gradual destruction of one of the most significant wildlife habitat strongholds in the Northeast: the Kittatinny Ridge. Its 500+ square miles traversing Pennsylvania are recognized as a "globally significant" migratory flyway which aids scores of migrant species in spring and fall and supplies interior forest habitat to many more year-round. The Kittatinny Coalition (KC) works from a common plan for the permanent conservation of the ridge as forested space. Their internal plurality and diversity keeps entities like the KC in a