

THE VALUES AND MANAGEMENT OF BEAVER
IN
RHODE ISLAND
Bronson Griscom
Center for Environmental Studies
Brown University
May 1992

Abstract :

As of this year, 1992, beaver populations in Rhode Island have risen to an estimated 400 and are expected to grow exponentially until reaching carrying capacity, unless otherwise limited. Beavers transformation of forest into wetland habitat through the damming of streams is the source of immediate costs as well as long term broad benefits to Rhode Islanders. The incipient beaver management plan will determine, through regulation of trapping, future beaver populations in Rhode Island, and thus the costs and benefits derived from beaver in this state. If this plan is similar to that of neighboring states, beaver populations will be maintained at a healthy level, but substantially below carrying capacity.

This thesis uses the disciplines of biology, economics, and history to answer the two-fold question: Do high beaver populations (at carrying capacity) provide a net benefit to Rhode Islanders, and if so, what interest groups can be expected to limit future beaver populations? A subject for further research is the question that follows from these: if high beaver populations do provide a net benefit to Rhode Islanders, how do we internalize the externalities and mitigate the interest groups that intend to limit beaver populations for the greater good of the general Rhode Island population?

Within the discipline of biology I explore the impact of beaver on the forest ecosystem. Beaver are responsible for a patchwork of wetland habitats in various successional stages. These habitats increase the diversity of vegetation and wildlife, alter the long term geomorphology and provide other wetland associated impacts upon the Rhode Island forest community. Within the discipline of economics I consider beaver-associated costs (primarily the cost of response to beaver nuisance complaints) and values (primarily recreation as well as wetlands associated values such as flood control and groundwater recharge). The values of high beaver populations appear to significantly outweigh the costs. Finally a look at the history of wildlife management gives insight into the forces at play limiting beaver populations in New England.

Unexpected results from this thesis came not from the determination that beaver are of significant net benefit to Rhode Islanders (and thus that beaver populations should be allowed to exist at carrying capacity), but from the observation that the private landowner is the interest group limiting beaver populations, and the "trapper" interest group is not only not a force limiting beaver populations, but, along with hunters, the most organized interest group supporting high beaver populations. Birdwatchers/ wildlife observers, and the general public are other groups benefitting from beaver. A successful beaver management plan depends upon hunter/trapper and wildlife observer recreational interest groups working in concert rather than in conflict to fully express their interests in high beaver populations.