

OYSTER GROW-OUT CAGES FUNCTION AS ARTIFICIAL
REEFS FOR TEMPERATE FISHES

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A THESIS SUBMITTED IN PARTIAL FULFILLMENT OF THE
REQUIREMENTS FOR THE DEGREE OF
MASTER OF SCIENCE

IN

ENVIRONMENTAL SCIENCES

UNIVERSITY OF RHODE ISLAND

2006

Abstract

Inshore nursery habitats are important for many coastal fish populations. Since aquaculture facilities are often located in or around these inshore habitats, it is important to evaluate the effects of aquaculture facilities on nearby natural habitats and to describe the habitat value of the aquaculture gear itself. Oyster grow-out cages are colonized by fishes normally associated with rocky reefs; in this study, in 2004 and 2005, three habitats were compared by performing trap surveys on 3 aquaculture sites, 6 natural reefs, and 1 artificial reef purposely built for fish habitat. The relative abundance of black sea bass *Centropristis striata* and cunner *Tautogalabrus adspersus* were similar in both habitats, whereas scup *Stenotomus chrysops* and tautog *Tautoga onitis* were more abundant on aquaculture sites than on natural reefs. A mark-recapture study indicated that scup grew at higher rates on the natural habitat, but had higher apparent survival on aquaculture sites. Based on these criteria, the habitat value of oyster grow-out cages for temperate fish is apparently positive compared to other locally available natural habitats in Narragansett Bay.