

**Spatial and Temporal Changes in the Lake Michigan
Chinook Salmon Fishery, 1985-1996**

Darren M. Benjamin and James R. Bence

*Michigan State University
13 Natural Resources
East Lansing, Michigan 48824*

Abstract.—The chinook salmon population in Lake Michigan underwent dramatic changes between 1986 and 1996. These changes were most directly felt by the sport fishery, as harvest and harvest rates for chinook salmon began declining in 1987, triggering a decline in sport fishery effort, which led to a cycle of further declines in harvest. Greatest declines in the fishery were seen in the Michigan waters of the lake along the eastern shoreline, where chinook salmon harvest declined by 95%. Complete collapse of the entire salmonine sport fishery, however, was avoided. The fishery that was once dominated by chinook salmon harvest was able to diversify and maintain high harvest rates by targeting other salmonine species. Part of the reason for spatial differences in trends in the chinook salmon fishery was due to changes in the spatial distribution of chinook salmon, as evidenced by spatial differences in harvest rate trends. It is likely that chinook salmon concentrated in the western regions of the lake in response to spatial changes in the distribution of alewives, their primary forage.