Chapter 11

Artificial Night Lighting and Fishes

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Human activities subject many aquatic habitats to significant alterations in natural cycles of illumination. More than half of the world’s human population lives within 100 km of an ocean, and most other major human developments are near rivers or lakes (Marsh and Grossa 2002). Coastal zones, lakes, rivers, ponds, and streams are all subject to artificial night lighting from cities, recreation, commerce, and industry. Permanent lights are also found at fish farms in nearshore zones, and cruise ships and recreational boats dot the seas. Fishing boats operate all night, some using high-intensity lights to attract their catch. Humans have altered natural lighting conditions in the most productive and biodiverse portions of aquatic environments.

The alteration of natural lighting regimes could be expected to have a substantial effect on aquatic organisms because light, along with temperature, structures aquatic habitats. Despite the well-known and profound influence of light on the behavior of aquatic organisms, especially invertebrate and vertebrate animals, little research has addressed the consequences of human disruption of diel, lunar, and seasonal cycles of illumination.
Ecological Consequences of Artificial Night Lighting

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