

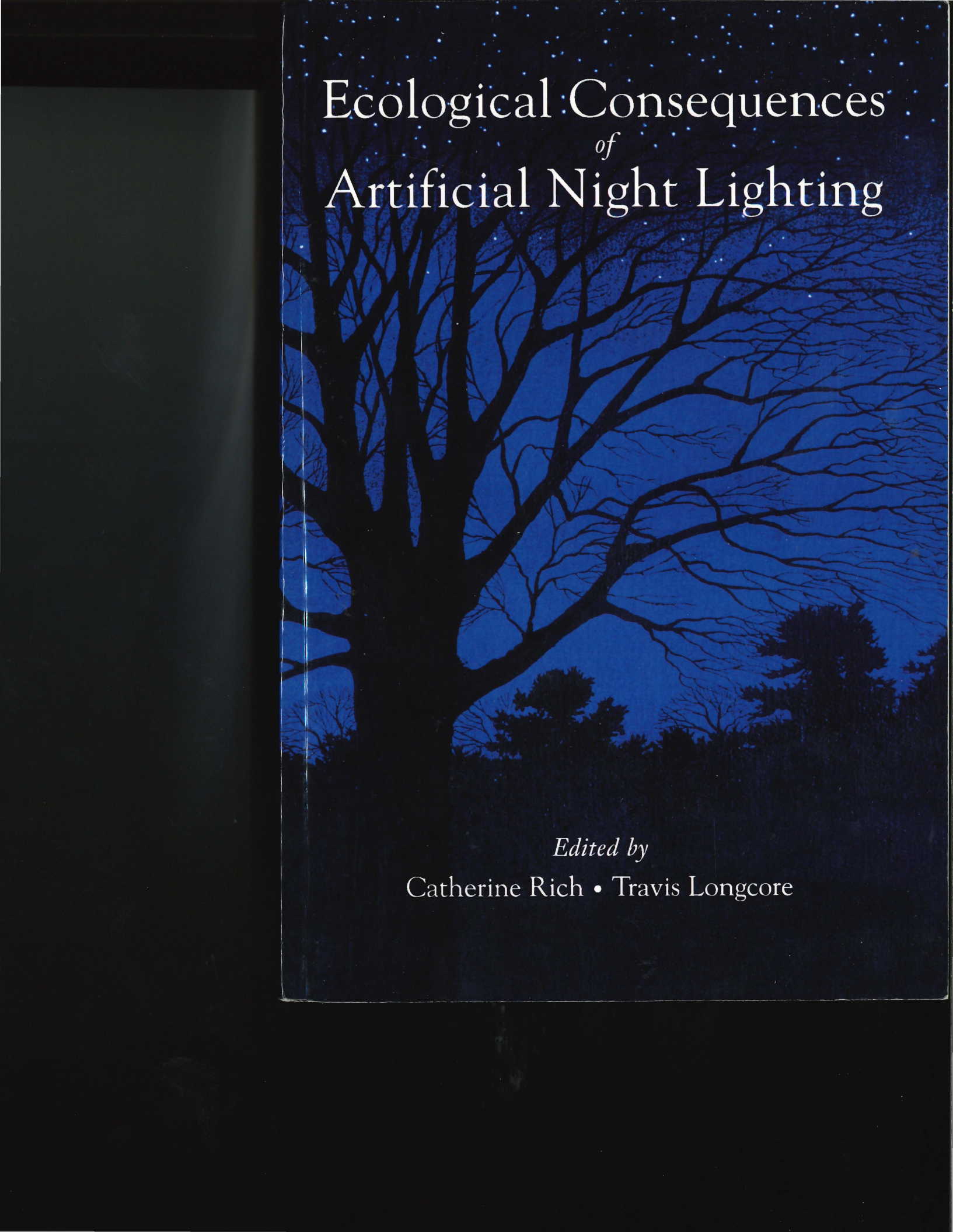
Chapter 13

Effects of Artificial Night Lighting on Moths

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Flight of moths to artificial sources of light is one of the most conspicuous ecological consequences of nocturnal lighting. This behavior carries risks not only for individual moths but also for moth populations. Inventories based on light trapping in natural habitats typically document hundreds of species (Table 13.1). What is the evidence that nocturnal lighting affects moth populations?

Artificial lighting typically accompanies a host of environmental disturbances. Isolating the effects of outdoor lighting on moth populations would be achieved best with studies that systematically vary exposure of habitats to artificial lighting. Controlling lighting and other ecological variables, however, is difficult in the urban and suburban settings where outdoor lighting is concentrated. Abundance and distribution of species of moths fluctuate from year to year, particularly in urban settings (Taylor et al. 1978). Because some noctuids migrate more than a thousand kilometers (Johnson 1969), effects of lighting on dispersal could be diffused over a broad area and escape detection in short-term or geographically limited studies.



Ecological Consequences *of* Artificial Night Lighting

Edited by


Catherine Rich • Travis Longcore

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 **ISLANDPRESS** / Washington • Covelo • London

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in writing from the publisher: Island Press, 1718 Connecticut Avenue, N.W., Suite 300,
Washington, DC 20009.

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Library of Congress Cataloging-in-Publication Data

Ecological consequences of artificial night lighting / edited by Catherine
Rich and Travis Longcore

p. cm.

Includes bibliographical references.

ISBN 1-55963-128-7 (cloth : alk. paper) — ISBN 1-55963-129-5 (pbk. :
alk. paper)

1. Exterior lighting—Environmental aspects. I. Rich, Catherine.

II. Longcore, Travis.


QH545.E98E26 2005

577.27'2—dc22

2005020202

British Cataloguing-in-Publication Data available.

Book design: Brigid Willson

Printed on recycled, acid-free paper 

Manufactured in the United States of America

10 9 8 7 6 5 4 3 2