

SPRINGER BRIEFS IN PLANT SCIENCE

Natalie G. Mueller

# Mound Centers and Seed Security

A Comparative Analysis  
of Botanical Assemblages  
from Middle Woodland  
Sites in the Lower  
Illinois Valley



Springer

# SpringerBriefs in Plant Science

For further volumes:  
<http://www.springer.com/series/10080>



Natalie G. Mueller

# Mound Centers and Seed Security

A Comparative Analysis of Botanical  
Assemblages from Middle Woodland  
Sites in the Lower Illinois Valley

 Springer

Natalie G. Mueller  
Department of Anthropology  
Washington University in Saint Louis  
St. Louis, MO, USA

ISSN 2192-1229 ISSN 2192-1210 (electronic)  
ISBN 978-1-4614-5920-0 ISBN 978-1-4614-5921-7 (eBook)  
DOI 10.1007/978-1-4614-5921-7  
Springer New York Heidelberg Dordrecht London

Library of Congress Control Number: 2012950778

© Springer Science+Business Media New York 2013

This work is subject to copyright. All rights are reserved by the Publisher, whether the whole or part of the material is concerned, specifically the rights of translation, reprinting, reuse of illustrations, recitation, broadcasting, reproduction on microfilms or in any other physical way, and transmission or information storage and retrieval, electronic adaptation, computer software, or by similar or dissimilar methodology now known or hereafter developed. Exempted from this legal reservation are brief excerpts in connection with reviews or scholarly analysis or material supplied specifically for the purpose of being entered and executed on a computer system, for exclusive use by the purchaser of the work. Duplication of this publication or parts thereof is permitted only under the provisions of the Copyright Law of the Publisher's location, in its current version, and permission for use must always be obtained from Springer. Permissions for use may be obtained through RightsLink at the Copyright Clearance Center. Violations are liable to prosecution under the respective Copyright Law.

The use of general descriptive names, registered names, trademarks, service marks, etc. in this publication does not imply, even in the absence of a specific statement, that such names are exempt from the relevant protective laws and regulations and therefore free for general use.

While the advice and information in this book are believed to be true and accurate at the date of publication, neither the authors nor the editors nor the publisher can accept any legal responsibility for any errors or omissions that may be made. The publisher makes no warranty, express or implied, with respect to the material contained herein.

Printed on acid-free paper

Springer is part of Springer Science+Business Media ([www.springer.com](http://www.springer.com))

# Contents

<b>Mound Centers and Seed Security: A Comparative Analysis of Botanical Assemblages from Middle Woodland Sites in the Lower Illinois Valley</b> .....	1
What Is Hopewell?: The Lower Illinois Valley in a Regional Context .....	6
Middle Woodland Subsistence and Settlement in the Lower Illinois Valley.....	9
The Eastern Agricultural Complex .....	12
Settlement Structure and Site Function.....	15
Plant Use at Mound House .....	21
Previous Investigations .....	21
Methods.....	23
Results.....	25
Comparative Analysis .....	39
Non-mound Habitation Sites.....	39
Other Mound Centers.....	49
Conclusions: Mounds and Seed Exchange .....	55
References.....	60
<b>Appendix</b> .....	65



# Mound Centers and Seed Security: A Comparative Analysis of Botanical Assemblages from Middle Woodland Sites in the Lower Illinois Valley

## Contents

What Is Hopewell?: The Lower Illinois Valley in a Regional Context .....	6
Middle Woodland Subsistence and Settlement in the Lower Illinois Valley .....	9
The Eastern Agricultural Complex .....	12
Settlement Structure and Site Function.....	15
Plant Use at Mound House .....	21
Previous Investigations .....	21
Methods.....	23
Results.....	25
Comparative Analysis .....	39
Non-mound Habitation Sites.....	39
Other Mound Centers.....	49
Conclusions: Mounds and Seed Exchange .....	55
References.....	60

The earthen mounds built by the Middle Woodland inhabitants of the Eastern Woodlands have been the focus of archaeological research for more than a century. Within these mounds, excavations have revealed naturalistic art worked on exotic materials from points as distant Wyoming, Ontario, and the Gulf Coast (Carr 2006b). At the turn of the twentieth century, the makers of this 2,000-year-old art and architecture were named the Hopewell culture and envisioned as a cohesive and highly sophisticated society inhabiting southern Ohio (Moorehead 1892). In the century since, Hopewell has been transformed into a descriptor of a complex network of exchange and interaction spanning the river valleys of the Eastern Woodlands.

Concurrent with this interpretive shift, paleoethnobotanical research has shown that Middle Woodland societies produced crops of native seeds (referred to as the Eastern Agricultural Complex) before the introduction of maize to eastern North America. This study examines the botanical remains recovered from the Mound House site in the Lower Illinois River Valley (LIV), one point of articulation in the network of Hopewellian interaction. I compare the patterning of plant remains at