

Nursery Culture of Mangrove Crab Megalopae (*Scylla serrata*) in Pond-Based Net Cages

Pedrita A. Caballero
Rhiannen Marie C. Licera
Kyle Dymmer L. Regatalio
Rheniel Dayrit
Roger Edward P. Mamauag



Southeast Asian Fisheries Development Center
AQUACULTURE DEPARTMENT
Tigbauan 5021, Iloilo, Philippines
www.seafdec.org.ph

Aquaculture Extension Manual No. 77

July 2025

Nursery Culture of Mangrove Crab Megalopae (*Scylla serrata*) in Pond-Based Net Cages

Pedrita A. Caballero
Rhiannen Marie C. Licera
Kyle Dymmer L. Regatalio
Rheniel Dayrit
Roger Edward P. Mamauag



Southeast Asian Fisheries Development Center

AQUACULTURE DEPARTMENT

Tigbauan 5021, Iloilo, Philippines

www.seafdec.org.ph

**Nursery Culture of Mangrove Crab Megalopae
(*Scylla serrata*) in Pond-Based Net Cages**



JULY 2025

ISSN 0115-5369

ISBN 978-971-9931-16-4 (Print)

ISBN 978-971-9931-17-1 (PDF)

Published and printed by:

Southeast Asian Fisheries Development Center
Aquaculture Department

Copyright © 2025
Southeast Asian Fisheries Development Center
Aquaculture Department



Some rights reserved. This work is licensed under the Creative Commons Attribution-NonCommercial-ShareAlike 3.0 IGO License. To view a copy of this license, visit <http://creativecommons.org/licenses/by-nc-sa/3.0/igo/>.

This license requires that reusers of the material give credit to the licensor, the Aquaculture Department of the Southeast Asian Fisheries Development Center. Reusers may distribute, remix, adapt, and build upon the material in any medium or format, for noncommercial purposes only and not in any way that suggests the licensor endorses the reuser. If others modify or adapt the material, they must license the modified material under identical terms.

Cover design by Rex Delsar B. Dianala

Layout by Rossea H. Ledesma

**For comments
and inquiries:** Training and Information Division
SEAFDEC Aquaculture Department
Tigbauan 5021, Iloilo, Philippines

(63-33) 330 7030

(63-33) 330 7031

devcom@seafdec.org.ph, aqdchief@seafdec.org.ph

www.seafdec.org.ph

SEAFDEC Aquaculture Department Library Cataloging-in-Publication Data

Caballero, Pedrita A.

Nursery culture of mangrove crab megalopae (*Scylla serrata*) in pond-based net cages / Pedrita A. Caballero, Rhiannen Marie C. Licera, Kyle Dyer L. Regatalio, Rheniel Dayrit, Roger Edward P. Mamaug. Tigbauan, Iloilo, Philippines : Aquaculture Dept., Southeast Asian Fisheries Development Center, 2025, ©2025.

34 pages : color illustrations. -- (Aquaculture extension manual, 0115-5369 ; no. 77).

Includes bibliographical references.

1. *Scylla serrata* -- Larvae -- Cultures and culture media -- Handbooks, manuals, etc. 2. Aquaculture equipment -- Handbooks, manuals, etc. 3. Aquaculture facilities -- Handbooks, manuals, etc. 4. Aquaculture economics -- Handbooks, manuals, etc. I. Licera, Rhiannen Marie C. II. Regatalio, Kyle Dyer L. III. Dayrit, Rheniel. IV. Mamaug, Roger Edward P. V. Title.

SH 380.4 C33 2025

MGO2025-01

Foreword

The mangrove crab is a high-value commodity with strong demand in both local and export markets. However, the industry remains largely dependent on wild collection as the primary source of crablets for grow-out culture, leading to the depletion of natural crab populations.

Since the 1980s, SEAFDEC/AQD has been conducting research on mangrove crab covering all phases of culture (hatchery, nursery, grow-out, fattening, and soft shell crab production) to address the limitations the mangrove crab industry is facing and to maximize its economic potential. As a result, SEAFDEC/AQD has developed science-based technologies for all phases of culture to support the sustainability of the mangrove crab industry.

SEAFDEC/AQD continues to refine the technologies it developed to improve the biological, ecological, and economic viability for crab farmers. This manual, “Nursery Culture of Mangrove Crab Megalopae (*Scylla serrata*) in Pond-Based Net Cages,” introduces an updated approach, wherein it uses megalopae as the starting stock in pond-based net cage nurseries, to help increase hatchery production cycles and reduce overall production costs.

It is hoped that this manual will serve as a useful guide to crab farmers and encourage investors, aquaculturists, and operators to venture into this lucrative business.

DAN D. BALIAO
Chief, SEAFDEC/AQD

About the Manual

This manual, titled “Nursery Culture of Mangrove Crab Megalopae (*Scylla serrata*) in Pond-Based Net Cages,” is part of SEAFDEC/AQD’s effort to assess the potential of using megalopae as the starting stock in pond-based net cage nurseries. The method is intended to enhance survival rates during the grow-out stage. Given the increasing availability of hatchery-reared megalopae and the high cost of crab instars, the manual also evaluates the cost-effectiveness and practical advantages of using megalopae in nursery operations. Hatchery-sourced megalopae offer key benefits over wild-caught ones, including consistent supply, environmental sustainability, disease-free status, species certainty, and stable pricing. This approach could help increase hatchery production cycles and lower overall production expenses in the crab farming industry.

The manual covers various aspects, including mangrove crab biology, site selection, pond preparation, nursery management, packing and transport procedures, and economic analysis.

The authors hope this resource will serve as a practical guide for crab farmers, farm managers, aquaculture professionals, technicians, and students by providing essential knowledge on science-based aquaculture practices.

Contents

<i>Foreword</i>	v
<i>About the Manual</i>	vi
<i>Introduction</i>	1
<i>Biology of Mangrove Crab</i>	1
<i>Site selection</i>	5
<i>Pond Preparation</i>	6
<i>Shelter and Feeding Tray Fabrication</i>	12
<i>Installation of Net Cage and Shelters</i>	13
<i>Nursery Management</i>	14
<i>Packing for Transport</i>	21
<i>Economic Analysis</i>	22
<i>References and Recommended Readings</i>	28
<i>Acknowledgment</i>	33
<i>About the Authors</i>	33

