

~~G. W. N. S. A.~~

2843 - 2867

**Reproduction strategies and distribution of larvae  
and juveniles of benthic soft-bottom invertebrates  
in the Kara Sea (Russian Arctic)**

**Reproduktionsstrategien und Verteilung der Larven  
und Juvenilen der benthischen Weichbodenfauna  
der Karasee (Russische Arktis)**

---

**Ingo Fetzer**

9

**Ber. Polarforsch. Meeresforsch. 496 (2005)  
ISSN 1618 - 3193**

# Contents

<b>Summary</b>	<b>iv</b>
<b>Zusammenfassung</b>	<b>vi</b>
<b>1 Introduction</b>	<b>9</b>
1.1 Life-history traits in marine invertebrates . . . . .	9
1.2 Definition of 'larva' . . . . .	11
1.3 Historical background . . . . .	12
1.4 'Thorson's rule' . . . . .	14
1.5 Ecological implications of reproduction modes . . . . .	15
1.6 Aims of the study and hypotheses . . . . .	16
<b>2 Material and Methods</b>	<b>18</b>
2.1 Study area - environmental conditions . . . . .	18
2.2 Sampling areas . . . . .	21
2.3 Sampling gear and treatment of samples . . . . .	22
2.4 Data handling . . . . .	23
<b>3 Results and Discussion</b>	<b>26</b>
3.1 Sampling . . . . .	26
3.2 Kara Sea ecology . . . . .	26
3.2.1 Zoobenthos . . . . .	26
3.2.2 Juveniles . . . . .	28
3.2.3 Meroplankton . . . . .	29
3.3 Influence of river discharge . . . . .	34
3.3.1 Influence of river discharge on plankton and benthos . . . . .	34
3.3.2 Influence of hydrography on the distribution of larvae . . . . .	35
3.4 Reproduction modes and zoogeographic affiliation . . . . .	40
<b>4 Conclusion and future perspectives</b>	<b>43</b>
<b>5 Publications</b>	<b>45</b>
5.1 Publication I . . . . .	47
5.2 Publication II . . . . .	68
5.3 Publication III . . . . .	99
5.4 Publication IV . . . . .	118
5.5 Publication V . . . . .	147
<b>6 Acknowledgements</b>	<b>178</b>
<b>7 Reference List</b>	<b>180</b>