# Shortlist Master plan Wind Monitoring fish eggs and larvae in the Southern North Sea: Final report *Part B*

C.J.G. van Damme, R. Hoek, D. Beare, L.J. Bolle,

C. Bakker, E. van Barneveld, M. Lohman, E. Os-Koomen,

P. Nijssen, I. Pennock & S. Tribuhl

Report number C098/11



# IMARES Wageningen UR

(IMARES - Institute for Marine Resources & Ecosystem Studies)

Client: Rijkswaterstaat Waterdienst

Postbus 17 8200 AA Lelystad

Publicatiedatum: 12 augustus 2011



#### IMARES is:

- an independent, objective and authoritative institute that provides knowledge necessary for an integrated sustainable protection, exploitation and spatial use of the sea and coastal zones;
- an institute that provides knowledge necessary for an integrated sustainable protection, exploitation and spatial use of the sea and coastal zones;
- a key, proactive player in national and international marine networks (including ICES and EFARO).

P.O. Box 68 1970 AB IJmuiden Phone: +31 (0)317 48 09 00 Fax: +31 (0)317 48 73 26 E-Mail: imares@wur.nl

www.imares.wur.nl

P.O. Box 77
4400 AB Yerseke
Phone: +31 (0)317 48 09 00
Fax: +31 (0)317 48 73 59
E-Mail: imares@wur.nl
www.imares.wur.nl

P.O. Box 57 1780 AB Den Helder Phone: +31 (0)317 48 09 00 Fax: +31 (0)223 63 06 87 E-Mail: imares@wur.nl www.imares.wur.nl P.O. Box 167
1790 AD Den Burg Texel
Phone: +31 (0)317 48 09 00
Fax: +31 (0)317 48 73 62
E-Mail: imares@wur.nl
www.imares.wur.nl

#### © 2011 IMARES Wageningen UR

IMARES, institute of Stichting DLO is registered in the Dutch trade record nr. 09098104, BTW nr. NL 806511618

The Management of IMARES is not responsible for resulting damage, as well as for damage resulting from the application of results or research obtained by IMARES, its clients or any claims related to the application of information found within its research. This report has been made on the request of the client and is wholly the client's property. This report may not be reproduced and/or published partially or in its entirety without the express written consent of the client.

A\_4\_3\_2-V12

#### **Contents**

Contents	3
Appendix A. Egg and larvae spatial and temporal distribution	าร5
Herring Clupea harengus	5
Sprat Sprattus sprattus	9
Pilchard Sardina plichardus	18
Anchovy Engraulis encrasicolus	27
Nillson's pipefish Syngnathus rostellatus	32
Hake Merluccius merluccius	36
Cod like 45	
Cod Gadus morhua	50
Trisopterus like	54
Bib Trisopterus luscus	59
Whiting Merlangius merlangus	68
Tadpole fish Raniceps raninus	77
Rocklings 82	
Four-bearded rockling Enchelyopus cimbrius	87
Five-bearded rockling Ciliata mustela	91
European seabass Dicentrachus labrax	95
Horse mackerel <i>Trachurus trachurus</i>	104
Smooth sandeel Gymnammodytes semisquamatus	113
Greater sandeel Hyperoplus lanceolatus	117
Small sandeel Ammodytes tobianus	121
Lesser sandeel Ammodytes marinus	125
Lesser weever Echiichthys vipera	129
Greater weever Trachinus draco	138
Mackerel Scomber scombrus	147
Gobiidae 151	
Black goby Gobius niger	
Two-spotted goby Gobiusculus flavescens	
Pomatoschistus spp	163
Sand goby Pomatoschistus minutus	167
Common goby Pomatoschistus microps	171
Painted goby Pomatoschistus pictus	175
Transparent goby Aphia minuta	179
Crystal goby Crystallogobius linearis	183

Callionymidae	37
Common dragonet Callionymus lyra	96
Spotted dragonet Callionymus maculatus	)5
Butterfish <i>Pholis gunnellus</i>	)9
Triglidae like 213	
Triglidae 218	
Grey gurnard Eutrigla gurnardus	23
Tub gurnard <i>Trigla lucerna</i>	27
Bull-rout Myoxocephalus scorpius	31
Sea scorpion Taurulus bubalis	35
Sea snail <i>Liparis liparis</i>	39
Montagu's sea snail <i>Liparis montagui</i>	43
Turbot Scophthalmus maximus	17
Brill Scophthalmus rhombus	56
Topknot Zeugopterus punctatus	55
Norwegian topknot <i>Phrynorhombus norvegicus</i>	70
Megrim Lepidorhombus whiffiagonis	79
Arnoglossus like	34
Pleuronectidae	98
Long rough dab Hippoglossoides platessoides	)2
Dab like 311	
Dab Limanda limanda	16
Plaice Pleuronectes platessa	25
Lemon sole <i>Microstomus kitt</i>	34
Witch flounder <i>Glyptocephalus cynoglossus</i>	43
Flounder <i>Platichthys flesus</i>	47
Soleidae 356	
Sole Solea solea	50
Solenette Bualossidium luteum	59

#### Appendix A. Egg and larvae spatial and temporal distributions

Appendix A contains the spatial and temporal distribution maps by species for each egg and larvae development stage. For those species which do not produce pelagic eggs or eggs could not be identified to species only maps for the different larvae stages are shown.

For the explanation of the different stages see the materials and methods section in Part A of the report.

#### Herring Clupea harengus

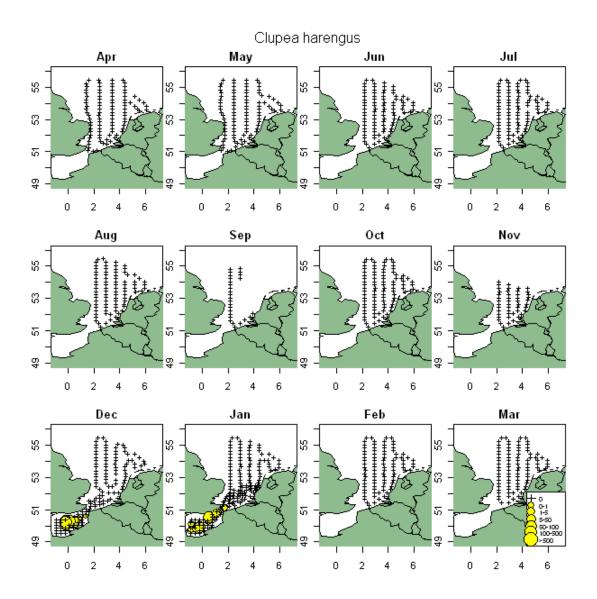


Figure 1a. Spatial and temporal distribution of yolk sac herring larvae.

Report number C098/11 5 of 377

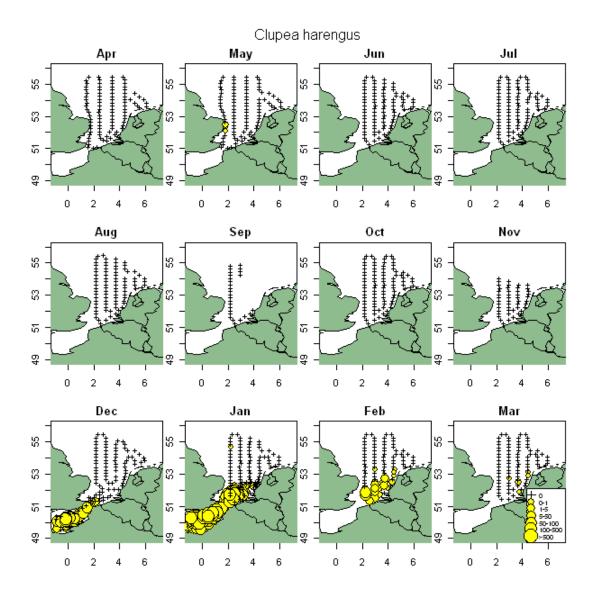


Figure 1b. Spatial and temporal distribution of non-yolk sac herring larvae.

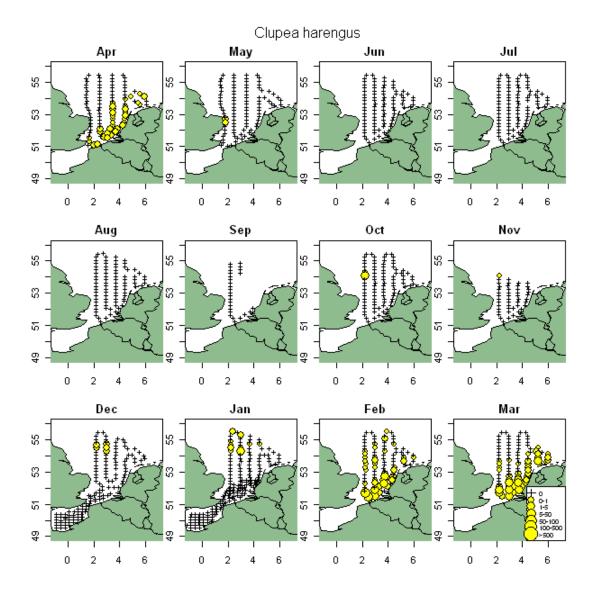


Figure 1c. Spatial and temporal distribution of bent notochord stage herring larvae.

Report number C098/11 7 of 377

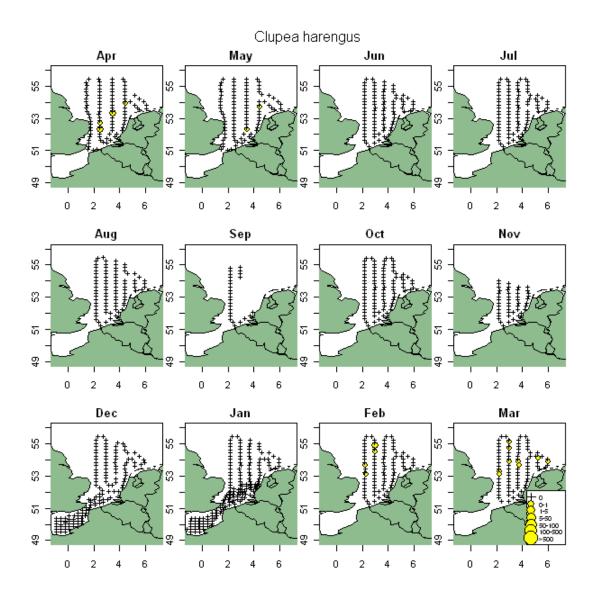


Figure 1d. Spatial and temporal distribution of metamorphosing herring larvae.

# Sprat Sprattus sprattus

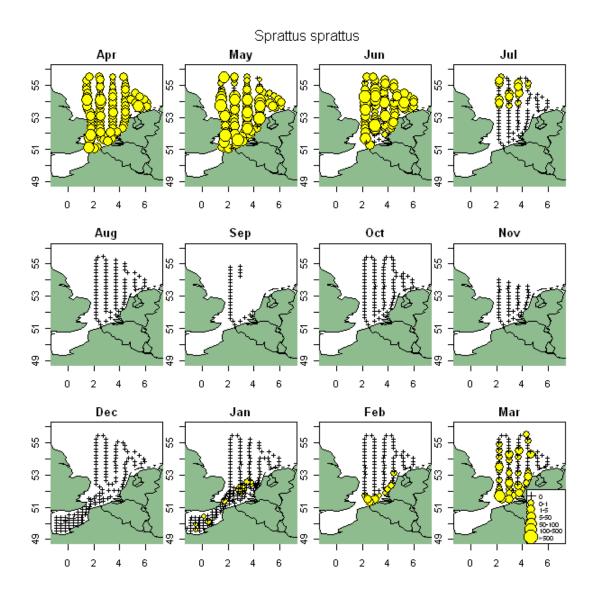


Figure 2a. Spatial and temporal distribution of stage 1 sprat eggs.

Report number C098/11 9 of 377

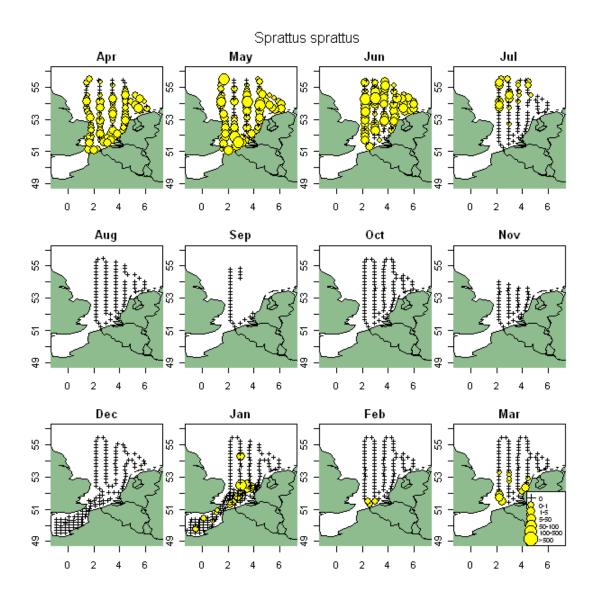


Figure 2b. Spatial and temporal distribution of stage 2 sprat eggs.

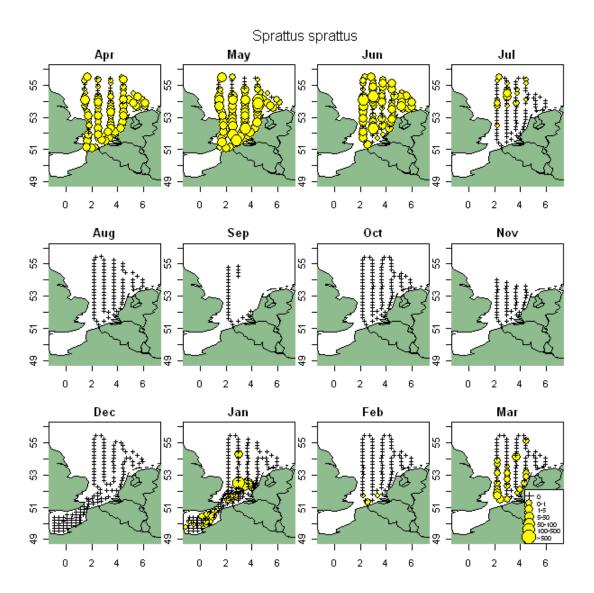


Figure 2c. Spatial and temporal distribution of stage 3 sprat eggs.

Report number C098/11 11 of 377

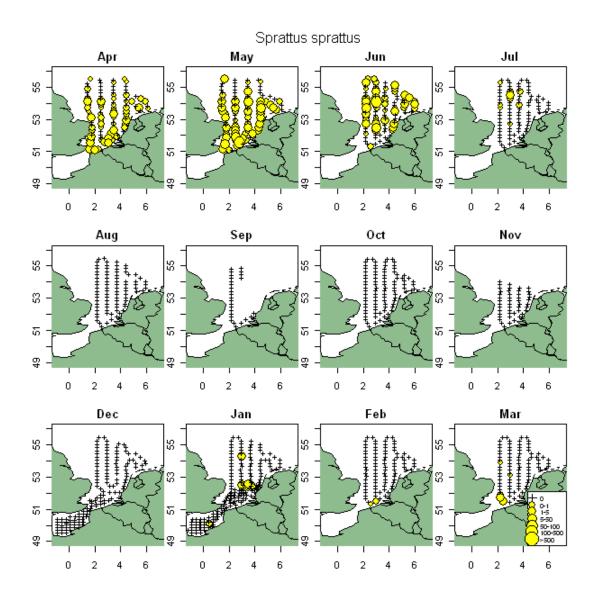


Figure 2d. Spatial and temporal distribution of stage 4 sprat eggs.

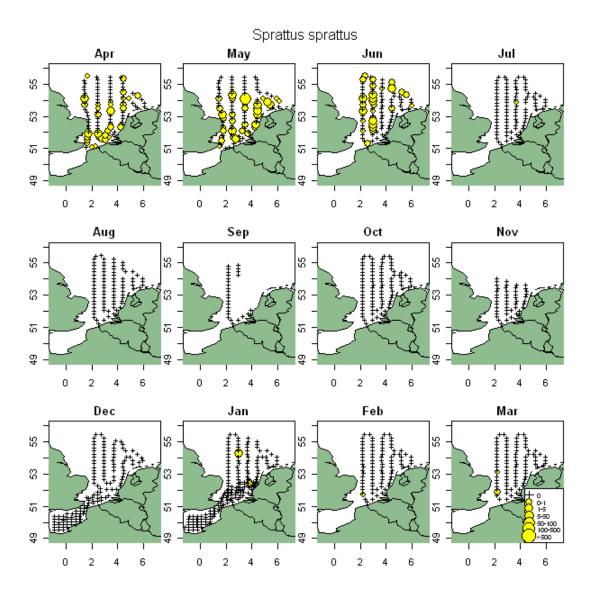


Figure 2e. Spatial and temporal distribution of stage 5 sprat eggs.

Report number C098/11 13 of 377

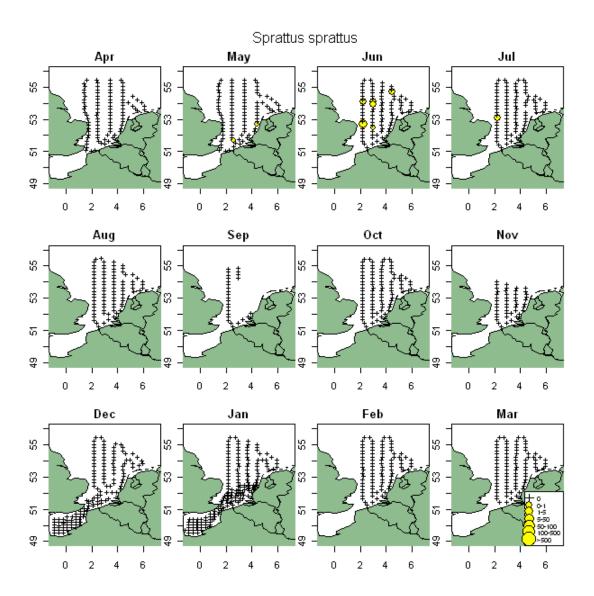


Figure 2f. Spatial and temporal distribution of yolk sac sprat larvae.

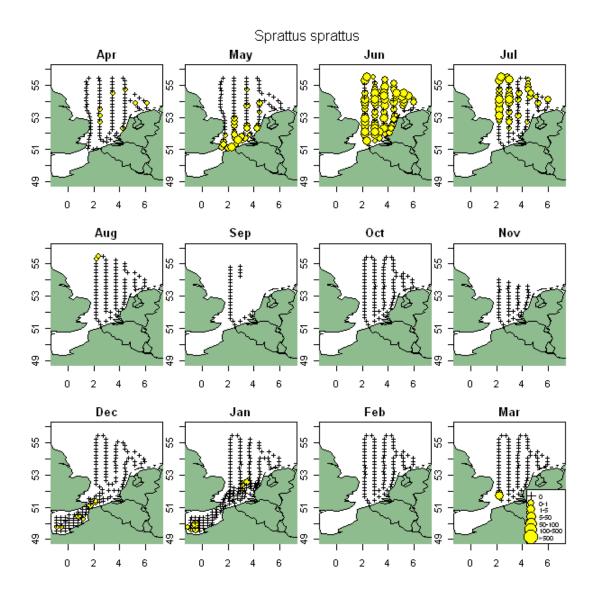


Figure 2g. Spatial and temporal distribution of non-yolk sac sprat larvae.

Report number C098/11 15 of 377

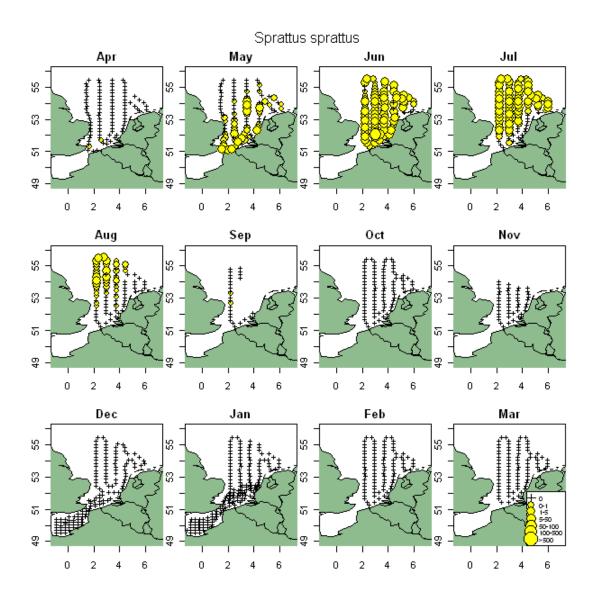


Figure 2h. Spatial and temporal distribution of bent notochord stage sprat larvae.

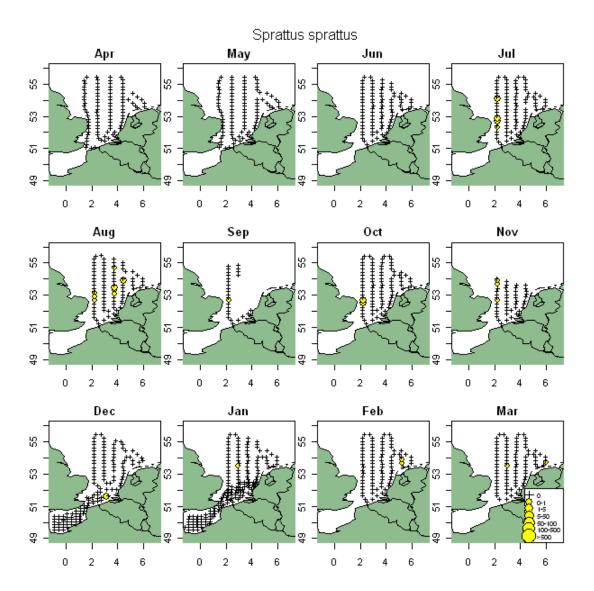


Figure 2i. Spatial and temporal distribution of metamorphosing sprat larvae.

Report number C098/11 17 of 377

#### Pilchard Sardina plichardus

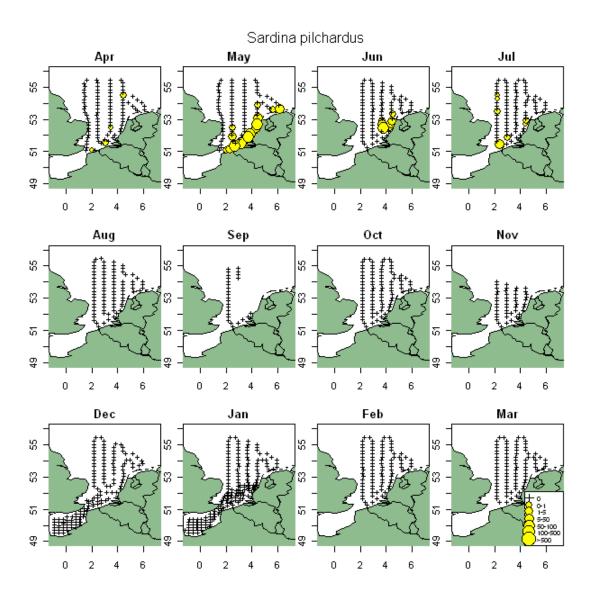


Figure 3a. Spatial and temporal distribution of stage 1 pilchard eggs.

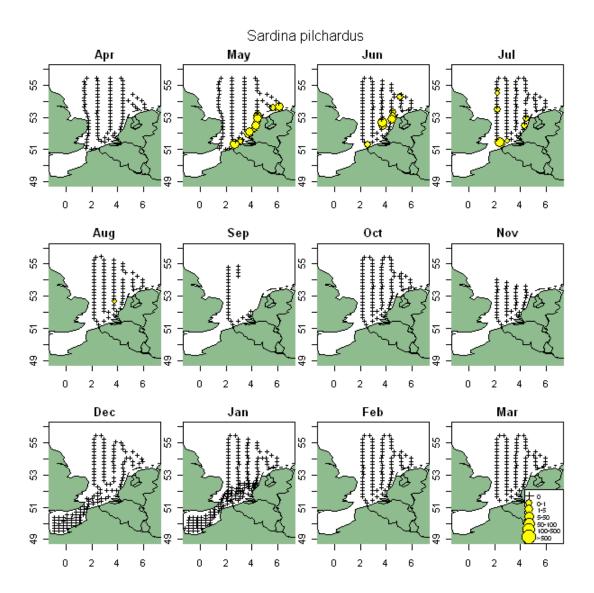


Figure 3b. Spatial and temporal distribution of stage 2 pilchard eggs.

Report number C098/11 19 of 377

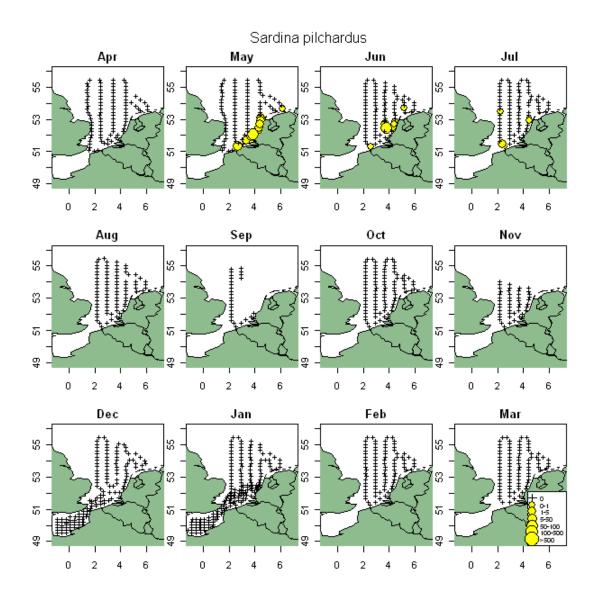


Figure 3c. Spatial and temporal distribution of stage 3 pilchard eggs.

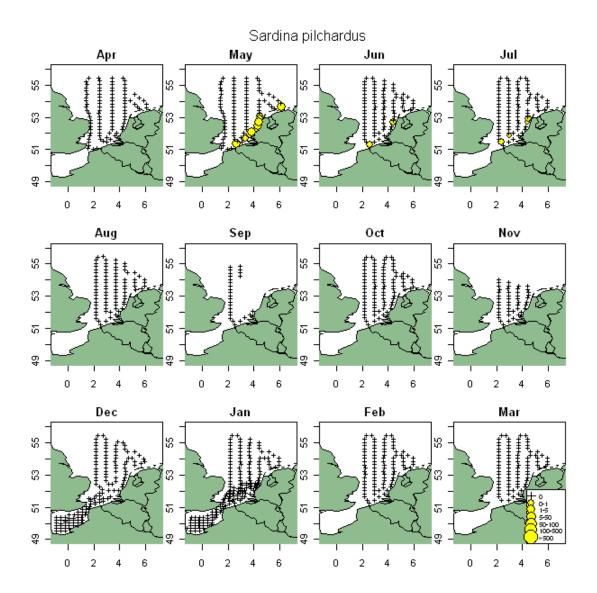


Figure 3d. Spatial and temporal distribution of stage 4 pilchard eggs.

Report number C098/11 21 of 377

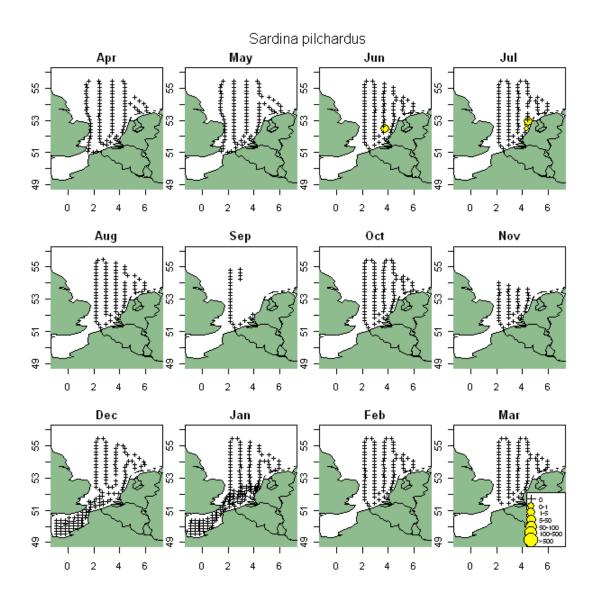


Figure 3e. Spatial and temporal distribution of stage 5 pilchard eggs.

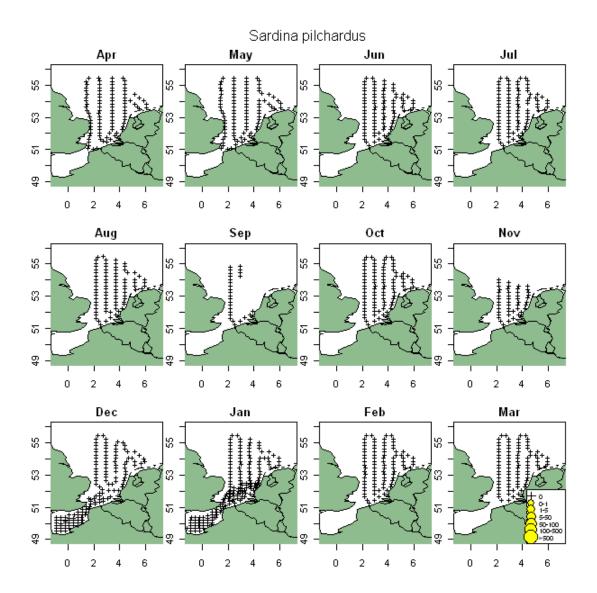


Figure 3f. Spatial and temporal distribution of yolk sac pilchard larvae.

Report number C098/11 23 of 377

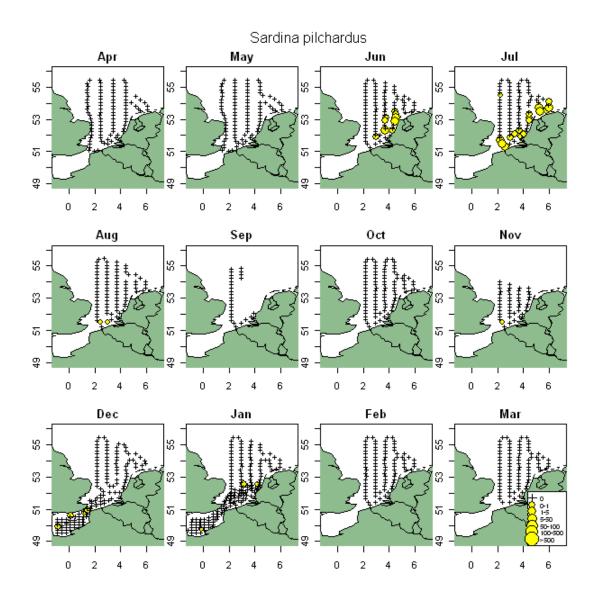


Figure 3g. Spatial and temporal distribution of non-yolk sac pilchard larvae.

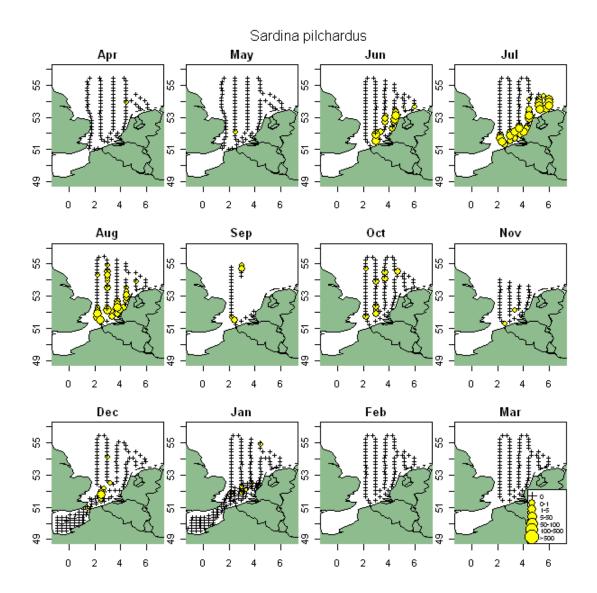


Figure 3h. Spatial and temporal distribution of bent notochord stage pilchard larvae.

Report number C098/11 25 of 377

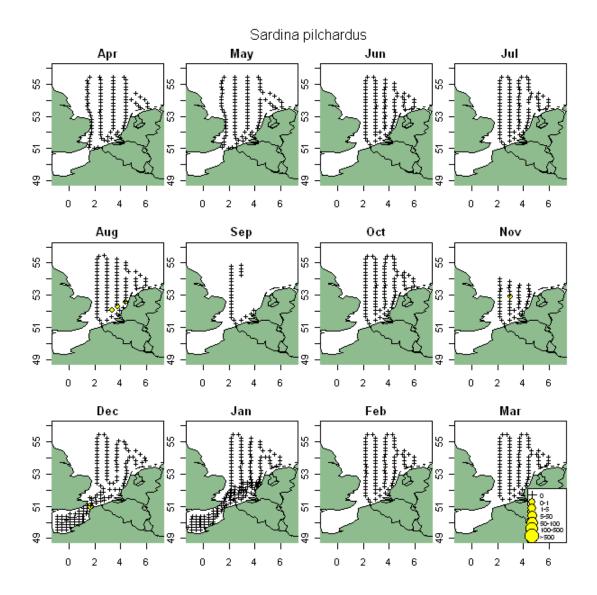


Figure 3i. Spatial and temporal distribution of metamorphosing pilchard larvae.

# Anchovy Engraulis encrasicolus

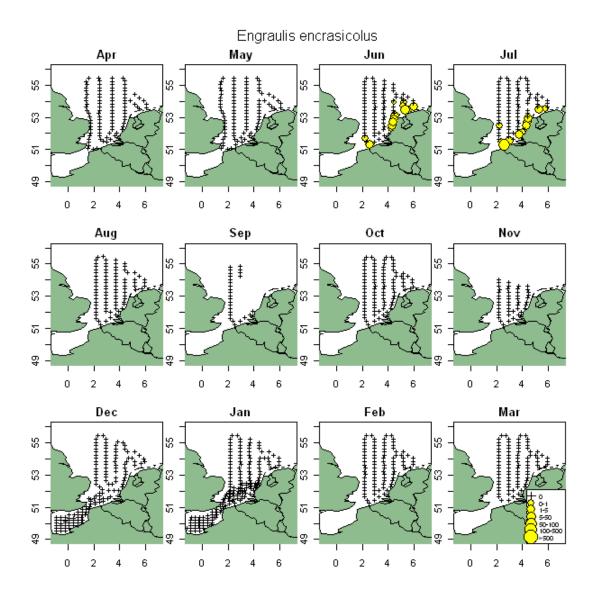


Figure 4a. Spatial and temporal distribution of anchovy eggs.

Report number C098/11 27 of 377

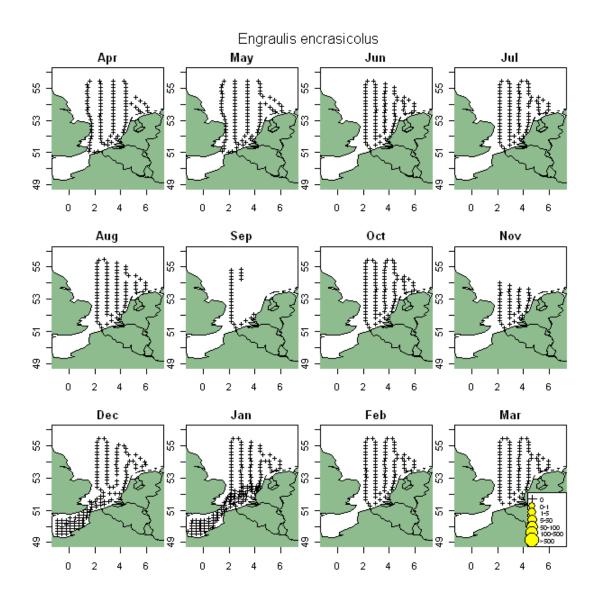


Figure 4b. Spatial and temporal distribution of yolk sac anchovy larvae.

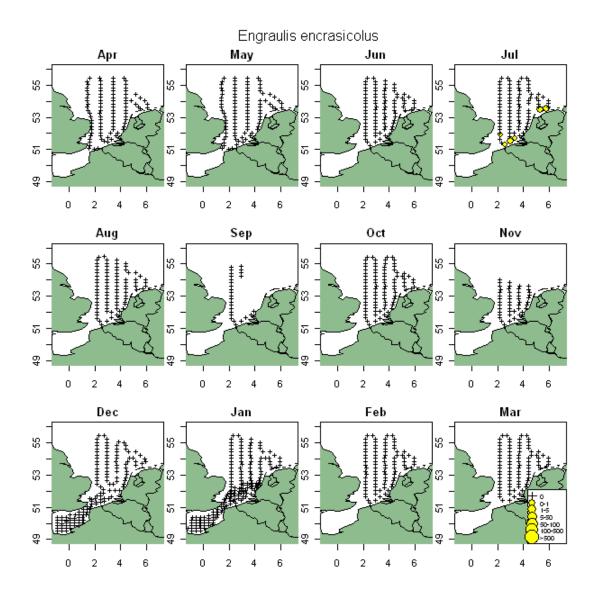


Figure 4c. Spatial and temporal distribution of non-yolk sac anchovy larvae.

Report number C098/11 29 of 377

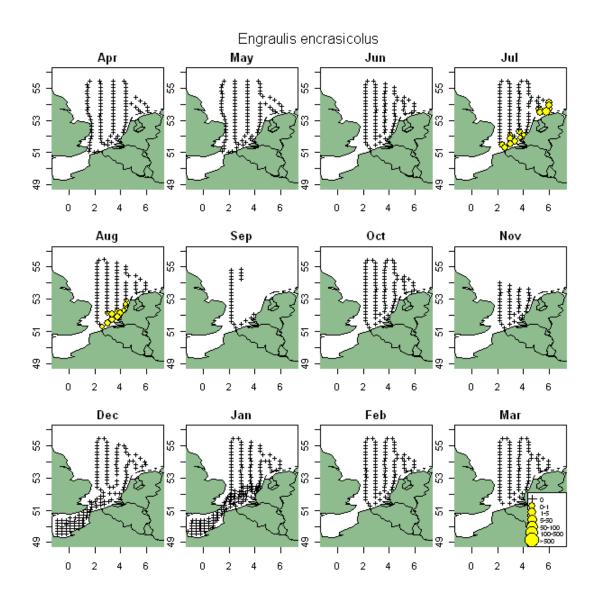


Figure 4d. Spatial and temporal distribution of bent notochord stage anchovy larvae.

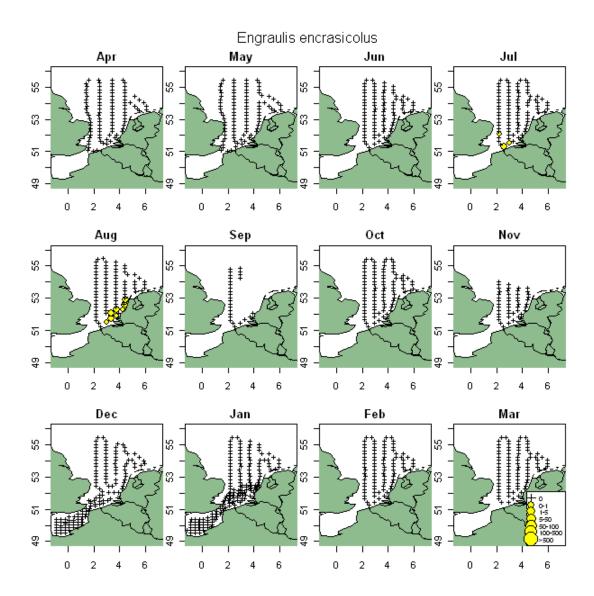


Figure 4e. Spatial and temporal distribution of metamorphosing anchovy larvae.

Report number C098/11 31 of 377

# Nillson's pipefish Syngnathus rostellatus

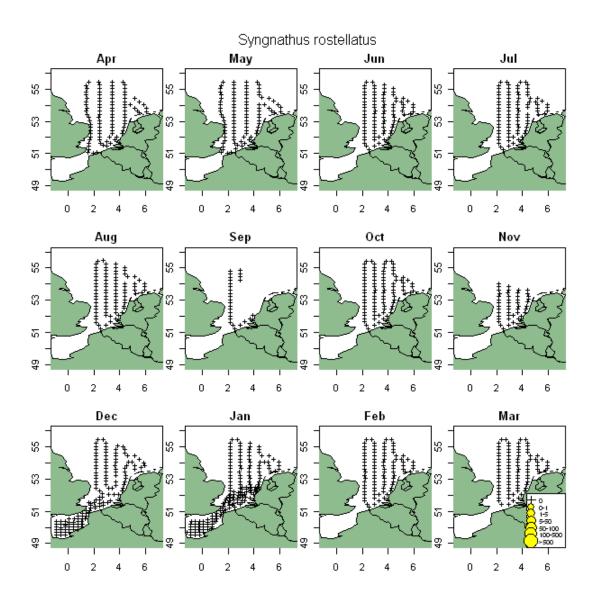


Figure 5a. Spatial and temporal distribution of yolk sac Nillson's pipefish larvae.

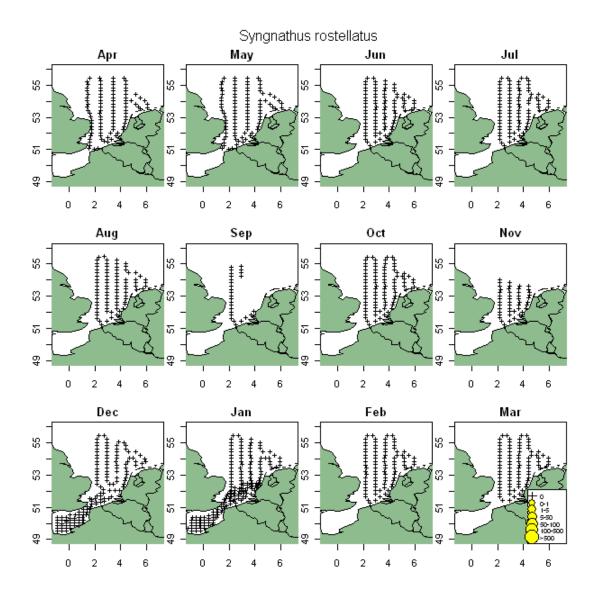


Figure 5b. Spatial and temporal distribution of non-yolk sac Nillson's pipefish larvae.

Report number C098/11 33 of 377

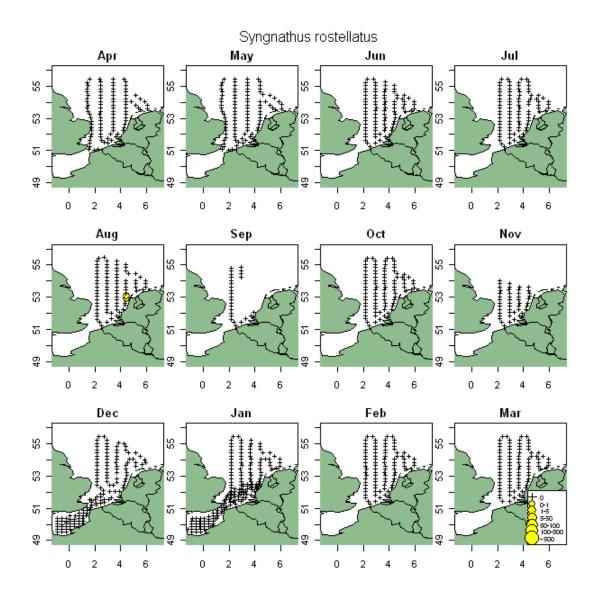


Figure 5c. Spatial and temporal distribution of bent notochord stage Nillson's pipefish larvae.

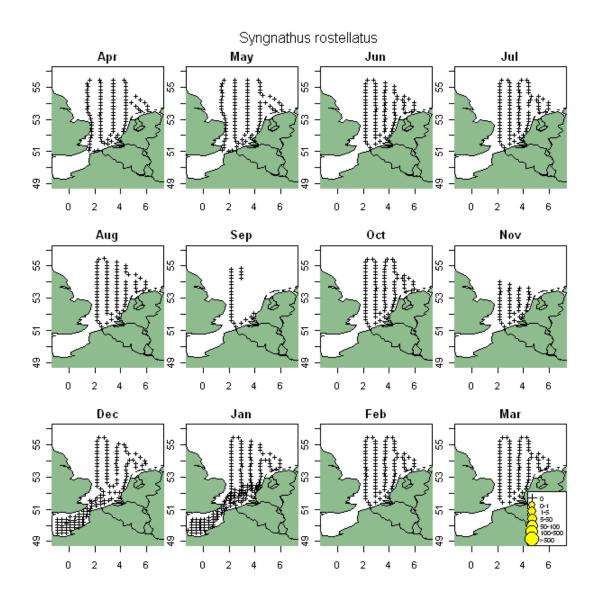


Figure 5d. Spatial and temporal distribution of metamorphosing Nillson's pipefish larvae.

Report number C098/11 35 of 377

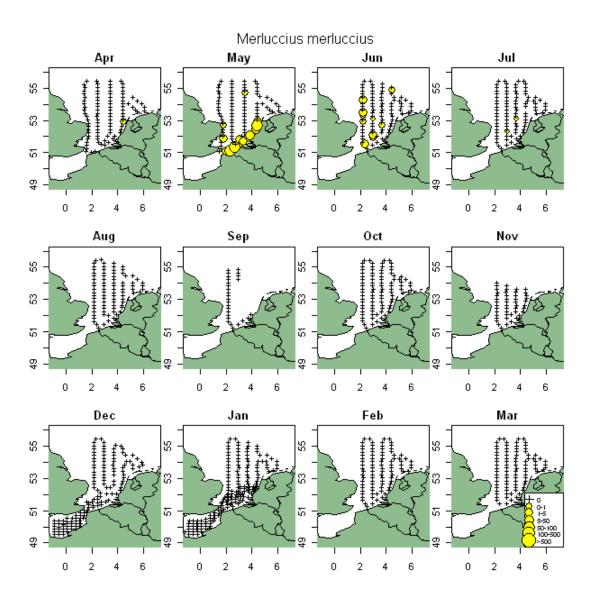


Figure 6a. Spatial and temporal distribution of stage 1 hake eggs.

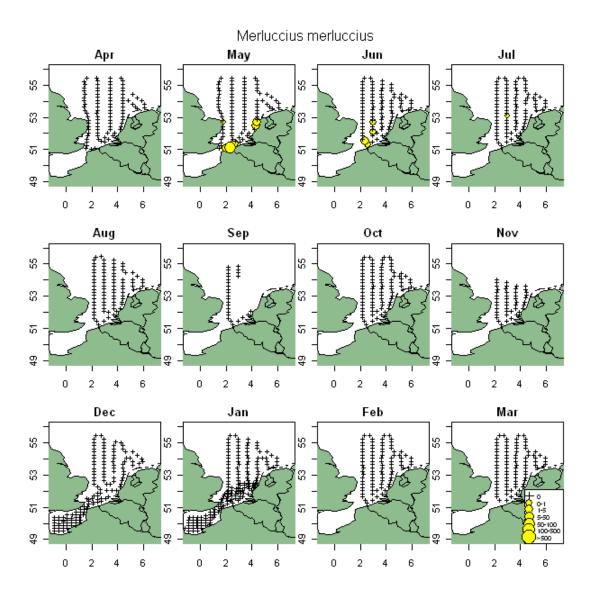


Figure 6b. Spatial and temporal distribution of stage 2 hake eggs.

Report number C098/11 37 of 377

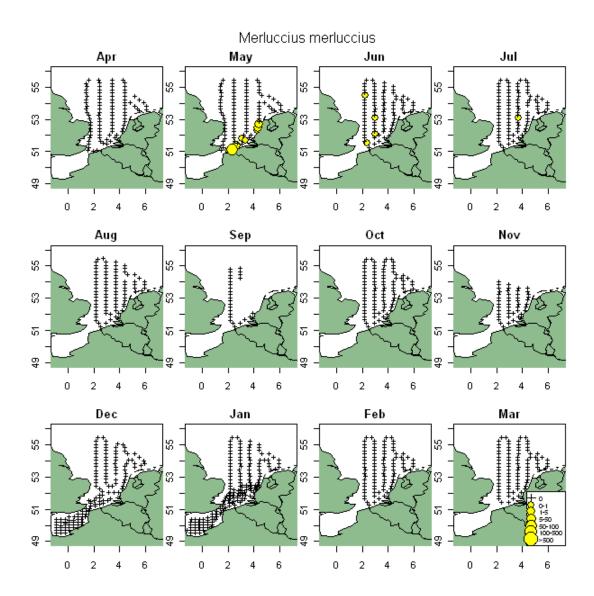


Figure 6c. Spatial and temporal distribution of stage 3 hake eggs.

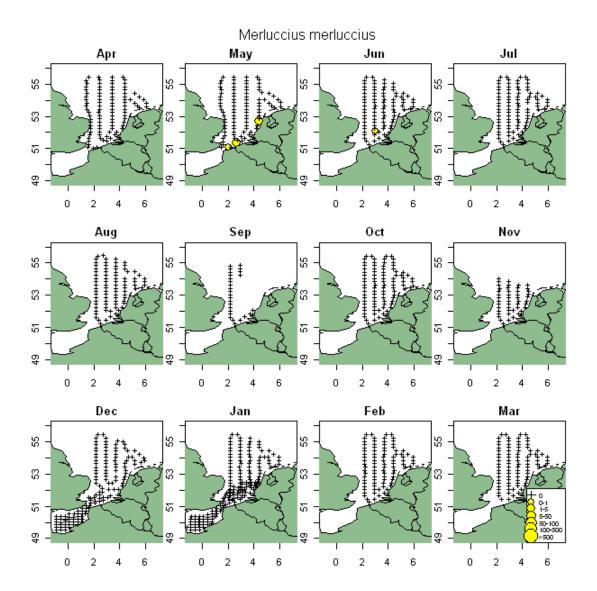


Figure 6d. Spatial and temporal distribution of stage 4 hake eggs.

Report number C098/11 39 of 377

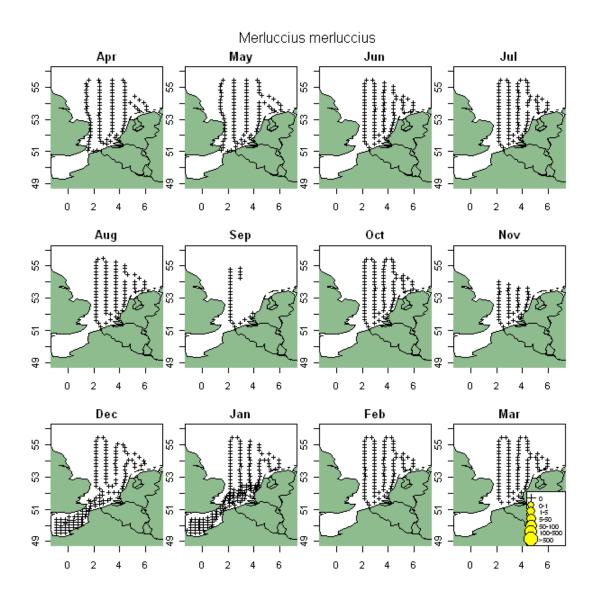


Figure 6e. Spatial and temporal distribution of stage 5 hake eggs.

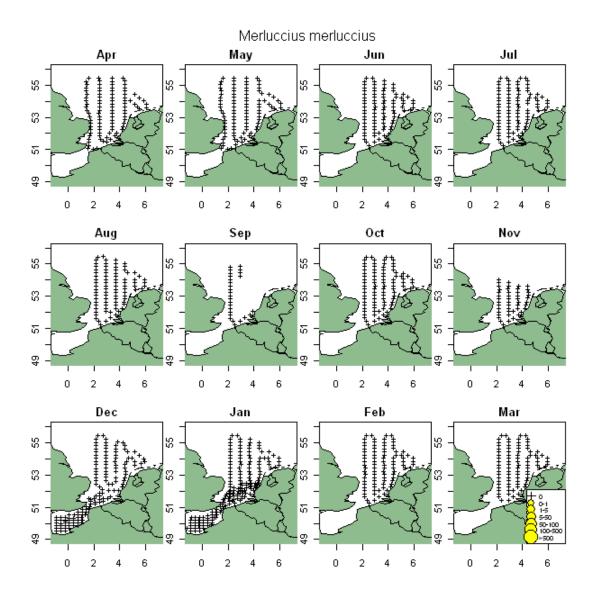


Figure 6f. Spatial and temporal distribution of yolk sac hake larvae.

Report number C098/11 41 of 377

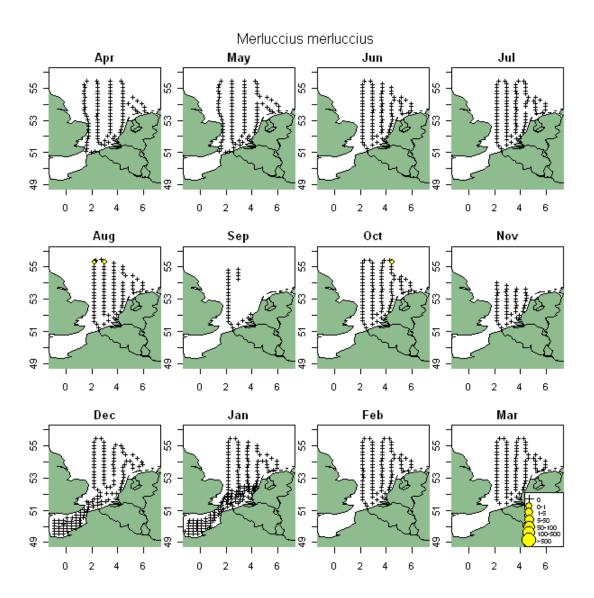


Figure 6g. Spatial and temporal distribution of non-yolk sac hake larvae.

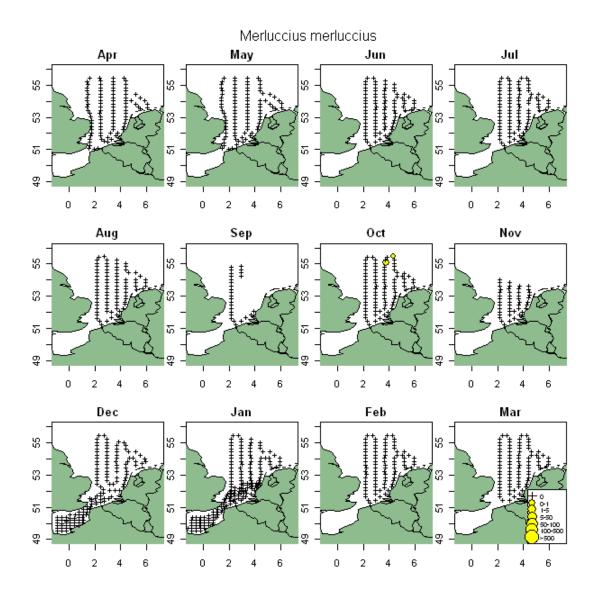


Figure 6h. Spatial and temporal distribution of bent notochord stage hake larvae.

Report number C098/11 43 of 377

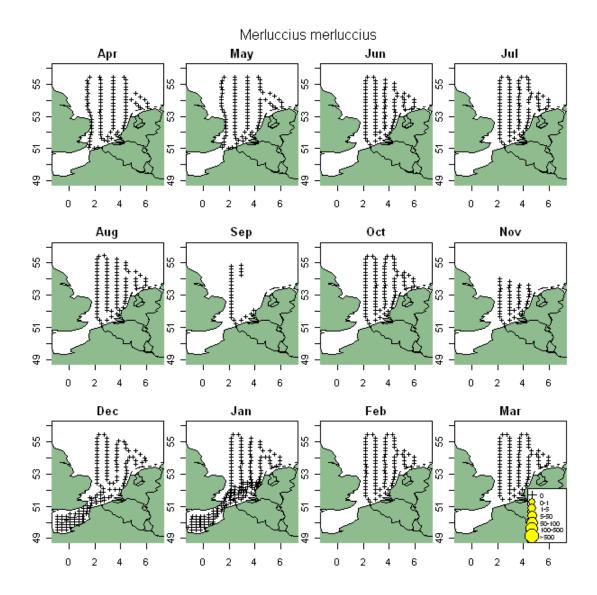


Figure 6i. Spatial and temporal distribution of metamorphosing hake larvae.

## Cod like

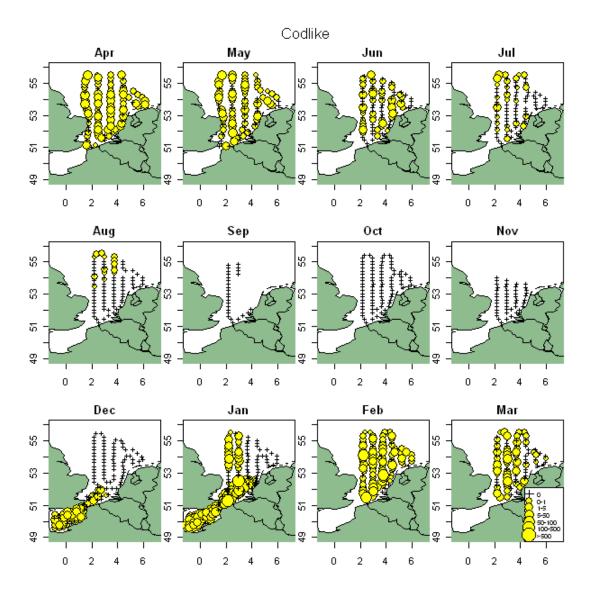


Figure 7a. Spatial and temporal distribution of stage 1 Cod like eggs.

Report number C098/11 45 of 377

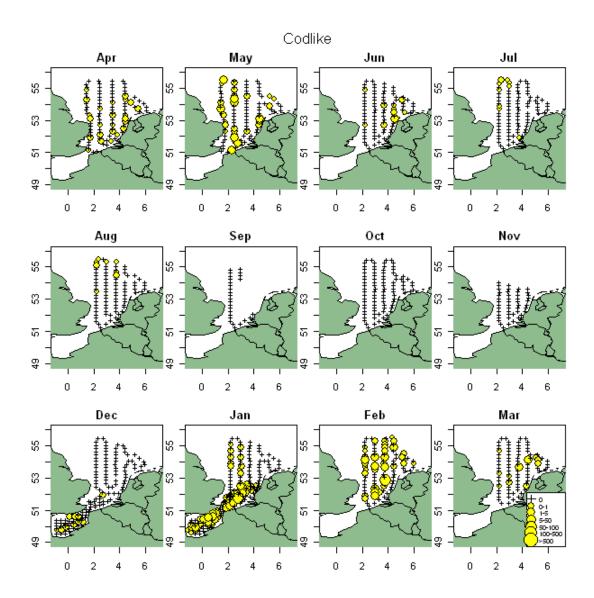


Figure 7b. Spatial and temporal distribution of stage 2 Cod like eggs.

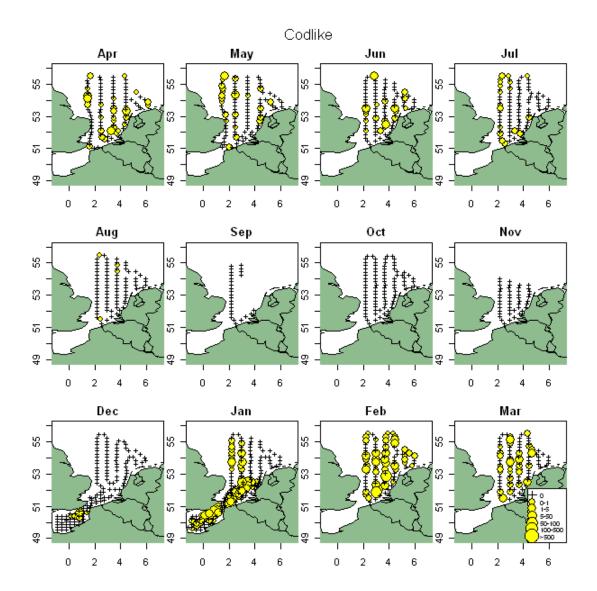


Figure 7c. Spatial and temporal distribution of stage 3 Cod like eggs.

Report number C098/11 47 of 377

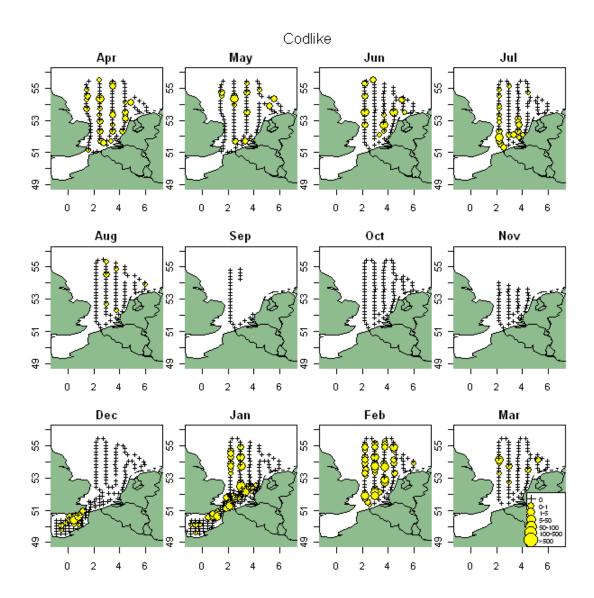


Figure 7d. Spatial and temporal distribution of stage 4 Cod like eggs.

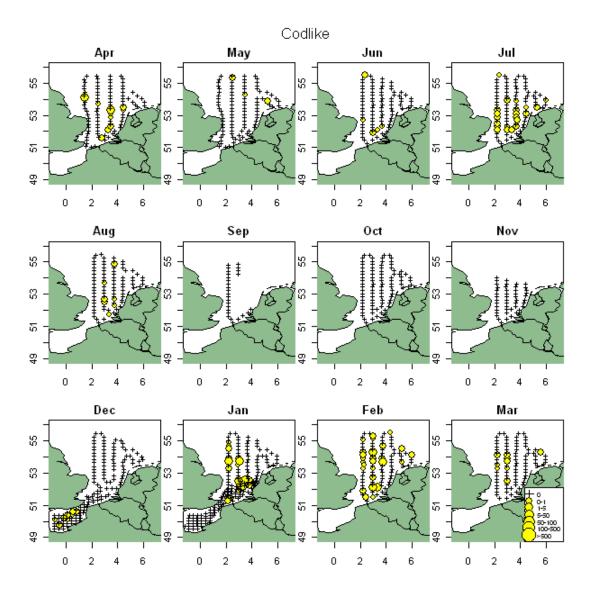


Figure 7e. Spatial and temporal distribution of stage 5 Cod like eggs.

Report number C098/11 49 of 377

## Cod Gadus morhua

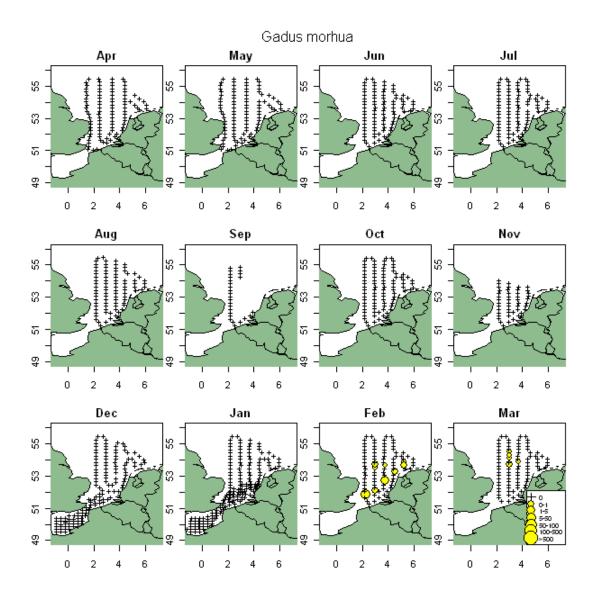


Figure 8a. Spatial and temporal distribution of yolk sac cod larvae.

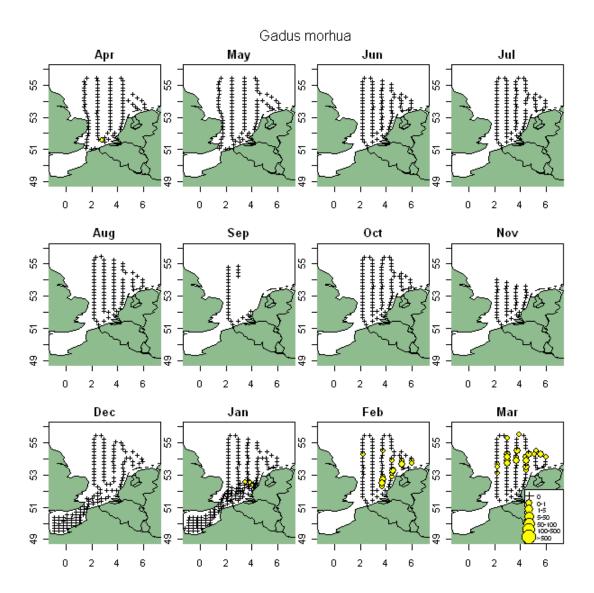


Figure 8b. Spatial and temporal distribution of non-yolk sac cod larvae.

Report number C098/11 51 of 377

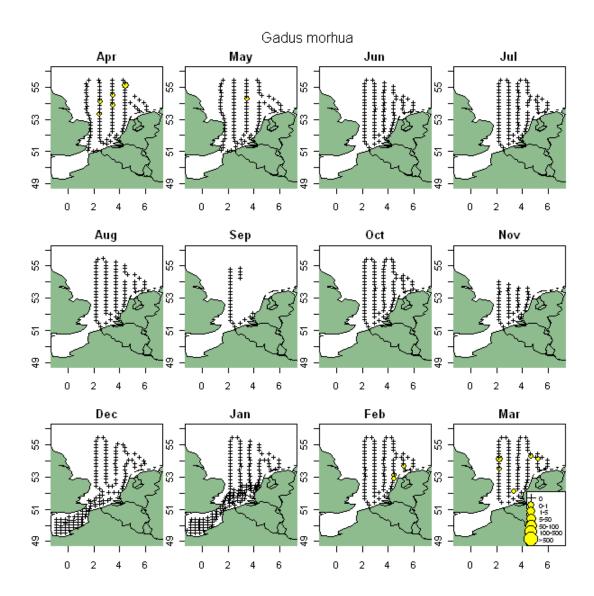


Figure 8c. Spatial and temporal distribution of bent notochord stage cod larvae.

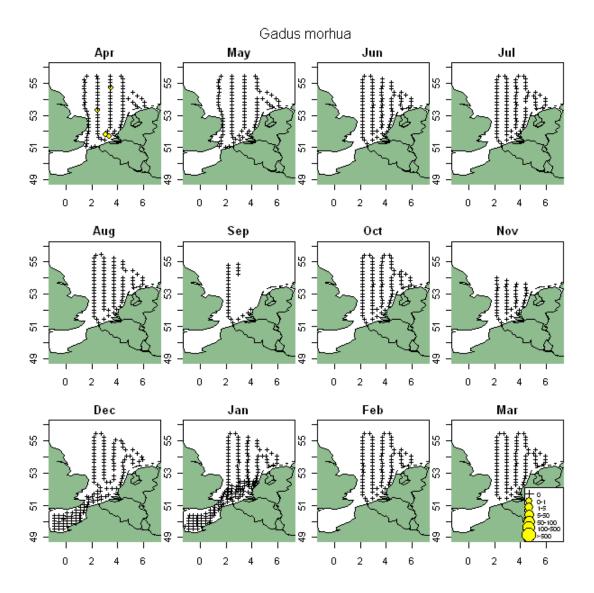


Figure 8d. Spatial and temporal distribution of metamorphosing cod larvae.

Report number C098/11 53 of 377

## Trisopterus like

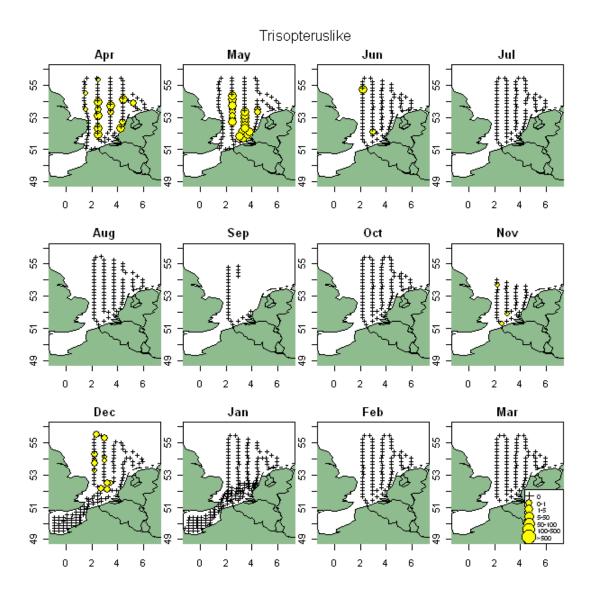


Figure 9a. Spatial and temporal distribution of stage 1 Trisopterus like eggs.

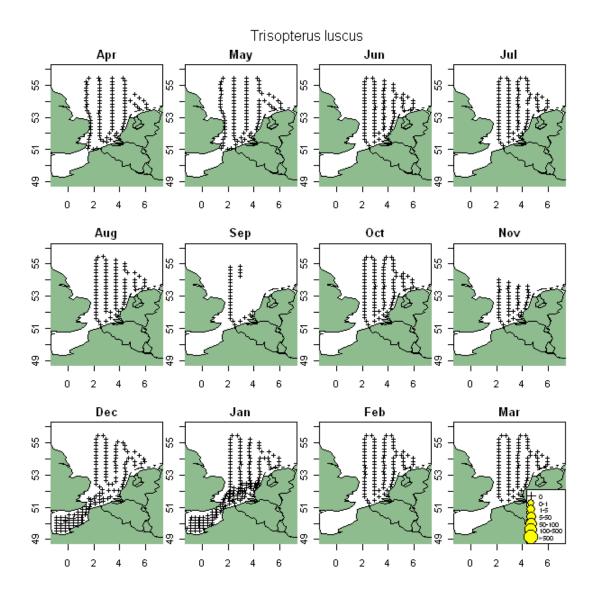


Figure 9b. Spatial and temporal distribution of stage 2 Trisopterus like eggs.

Report number C098/11 55 of 377

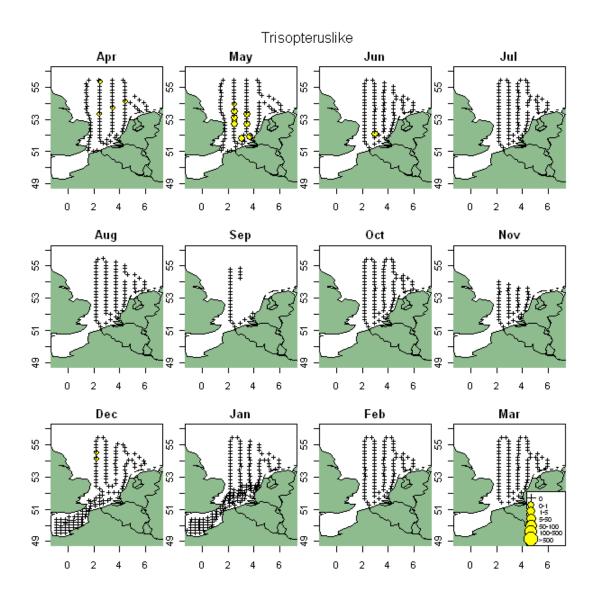


Figure 9c. Spatial and temporal distribution of stage 3 Trisopterus like eggs.

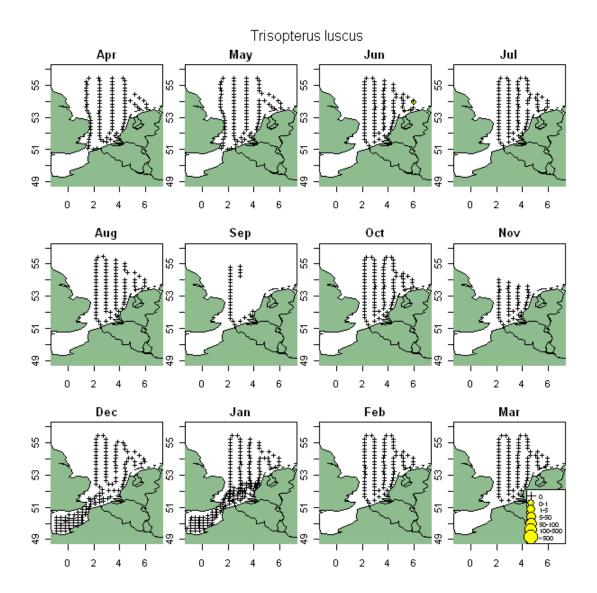


Figure 9d. Spatial and temporal distribution of stage 4 Trisopterus like eggs.

Report number C098/11 57 of 377

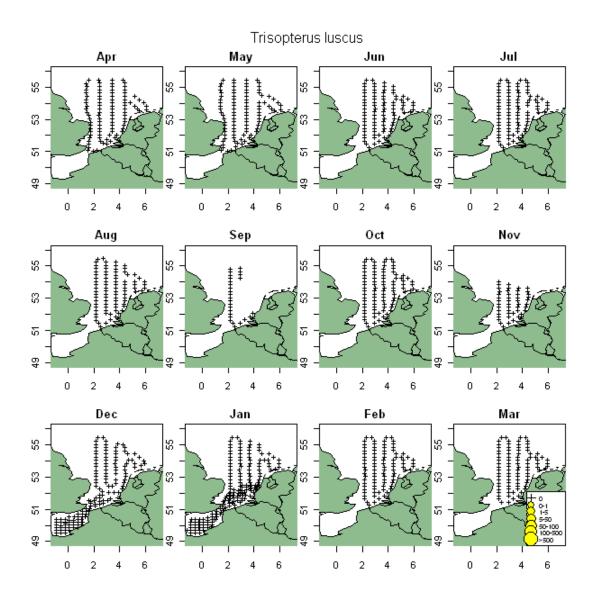


Figure 9e. Spatial and temporal distribution of stage 5 Trisopterus like eggs.

## Bib Trisopterus Iuscus

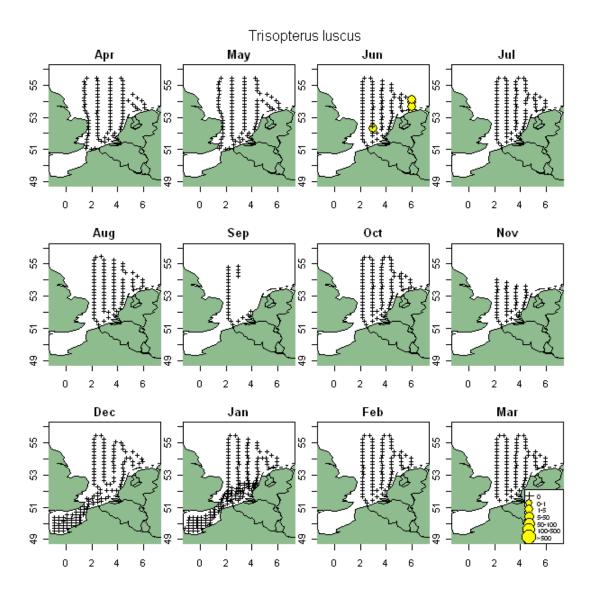


Figure 10a. Spatial and temporal distribution of stage 1 bib eggs.

Report number C098/11 59 of 377

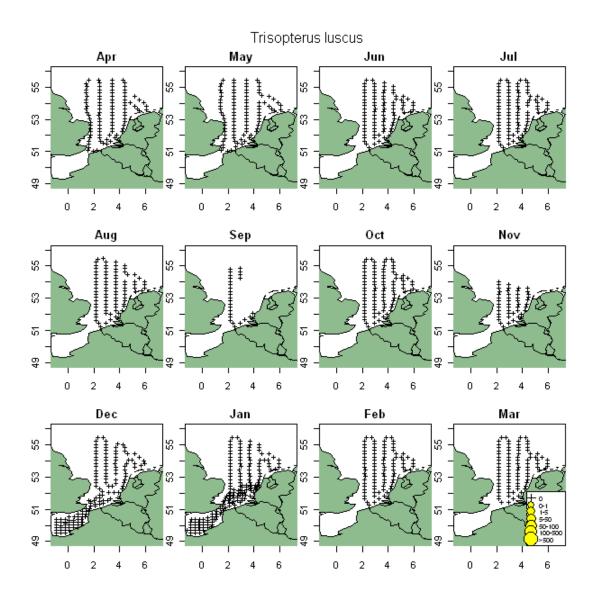


Figure 10b. Spatial and temporal distribution of stage 2 bib eggs.

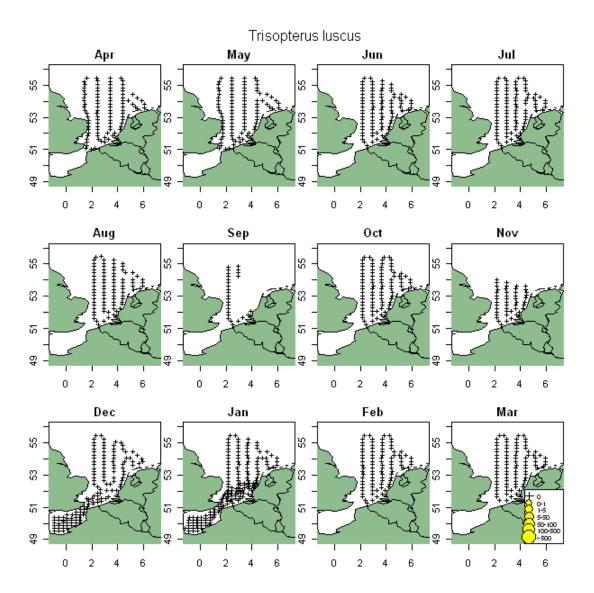


Figure 10c. Spatial and temporal distribution of stage 3 bib eggs.

Report number C098/11 61 of 377

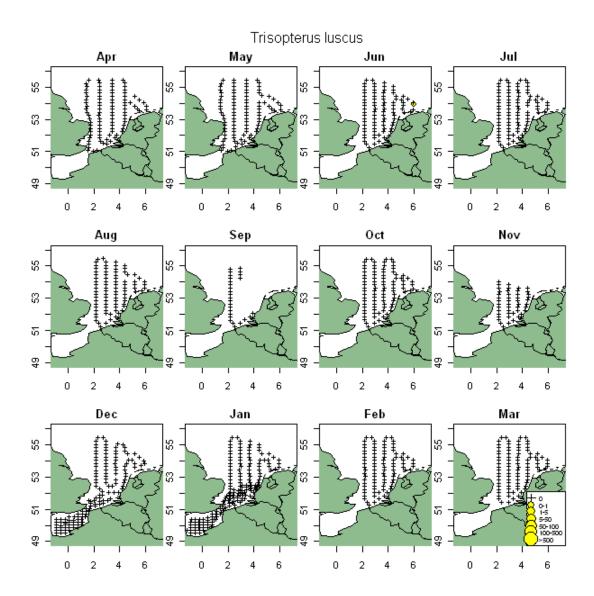


Figure 10d. Spatial and temporal distribution of stage 4 bib eggs.

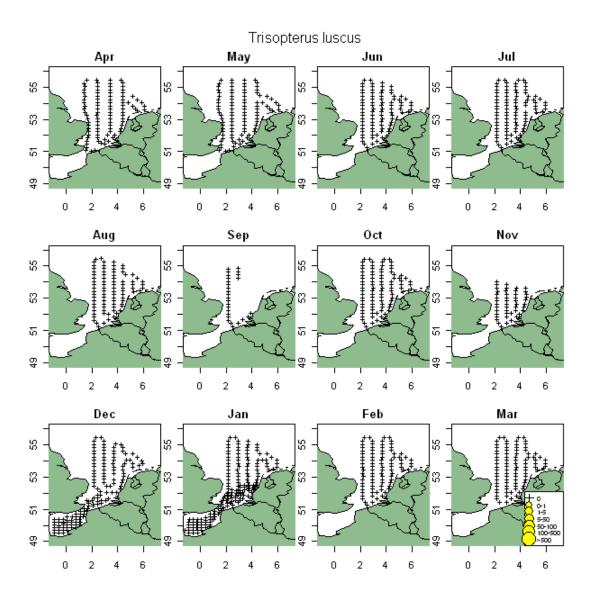


Figure 10e. Spatial and temporal distribution of stage 5 bib eggs.

Report number C098/11 63 of 377

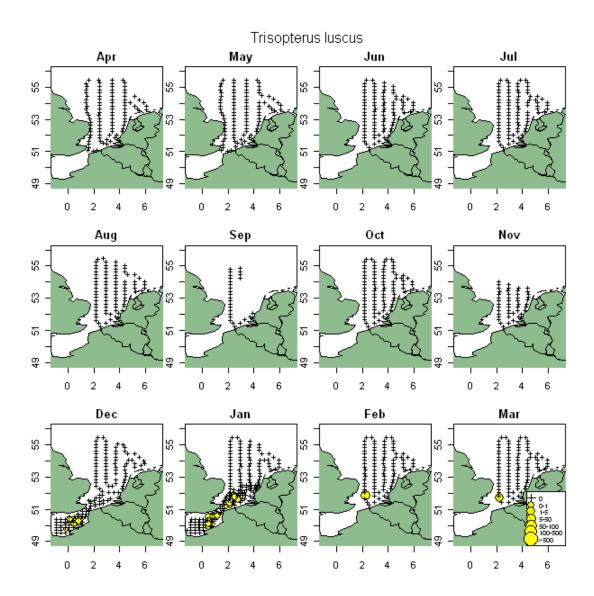


Figure 10f. Spatial and temporal distribution of yolk sac bib larvae.

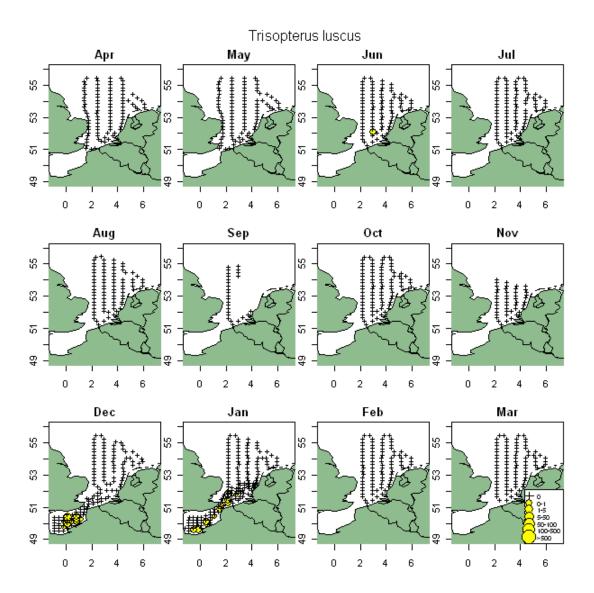


Figure 10g. Spatial and temporal distribution of non-yolk sac bib larvae.

Report number C098/11 65 of 377

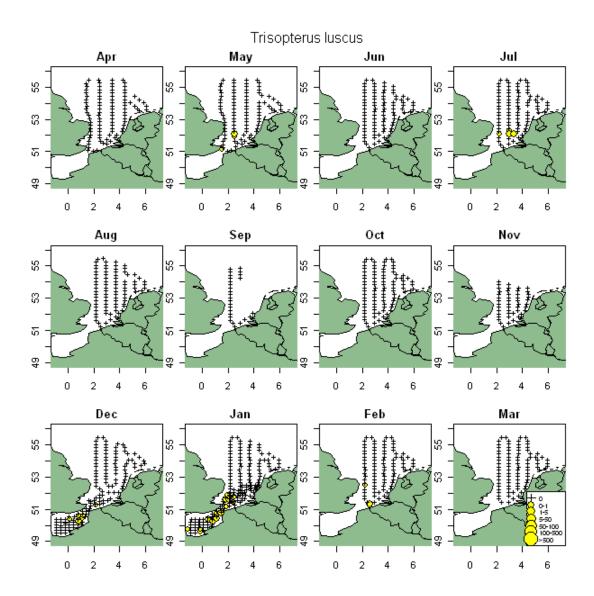


Figure 10h. Spatial and temporal distribution of bent notochord stage bib larvae.

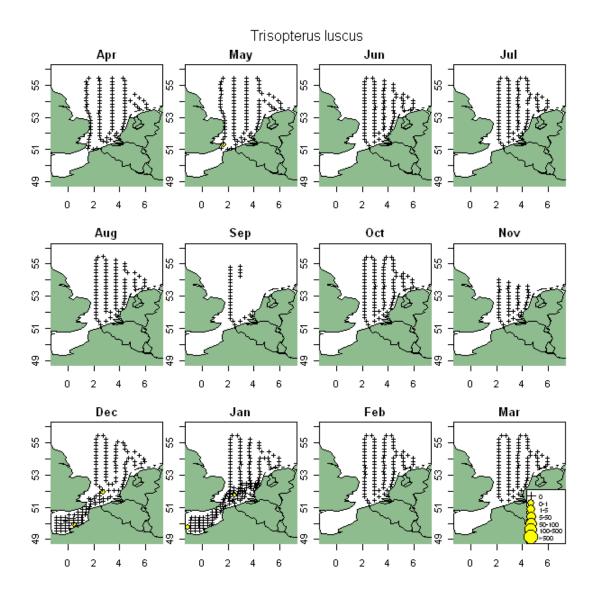


Figure 10i. Spatial and temporal distribution of metamorphosing bib larvae.

Report number C098/11 67 of 377

# Whiting *Merlangius merlangus*

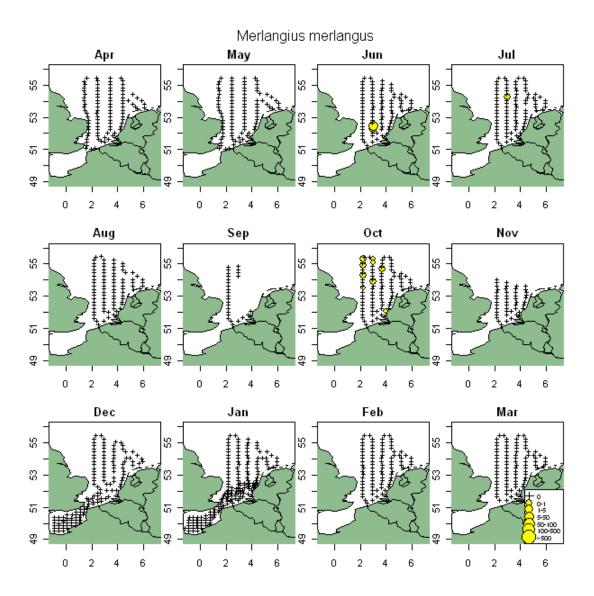


Figure 11a. Spatial and temporal distribution of stage 1 whiting eggs.

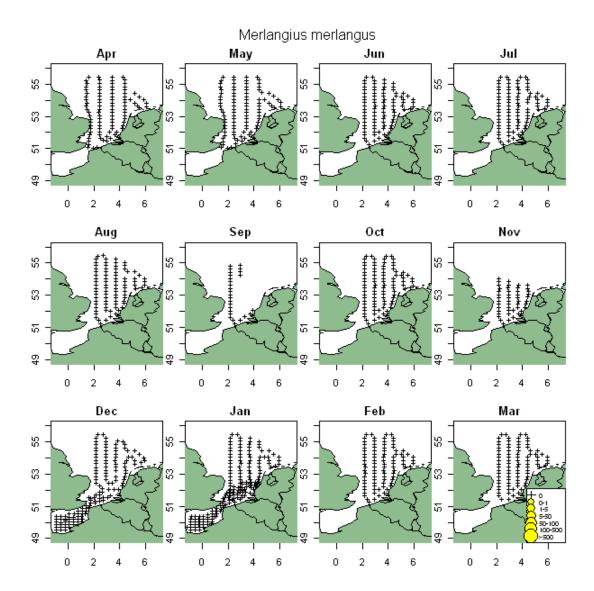


Figure 11b. Spatial and temporal distribution of stage 2 whiting eggs.

Report number C098/11 69 of 377

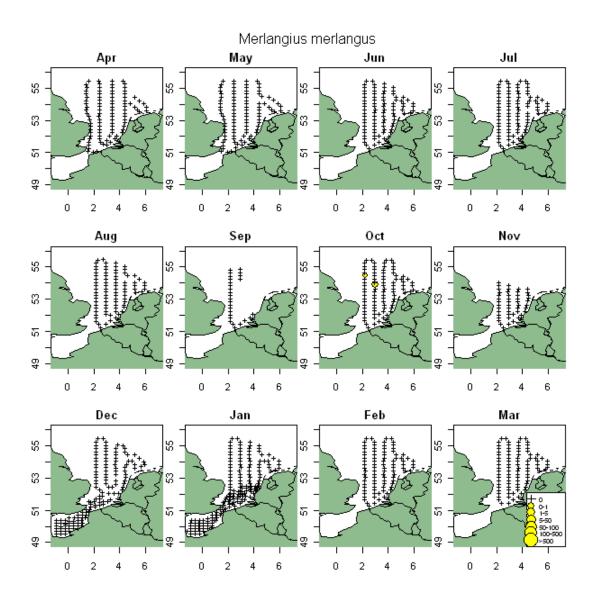


Figure 11c. Spatial and temporal distribution of stage 3 whiting eggs.

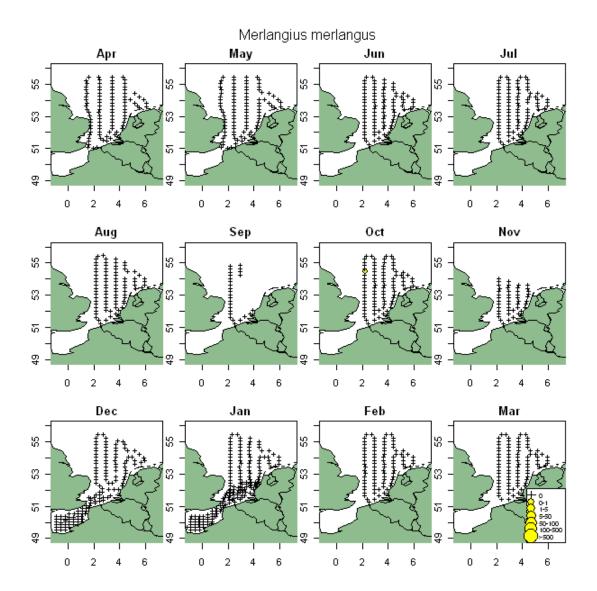


Figure 11d. Spatial and temporal distribution of stage 4 whiting eggs.

Report number C098/11 71 of 377

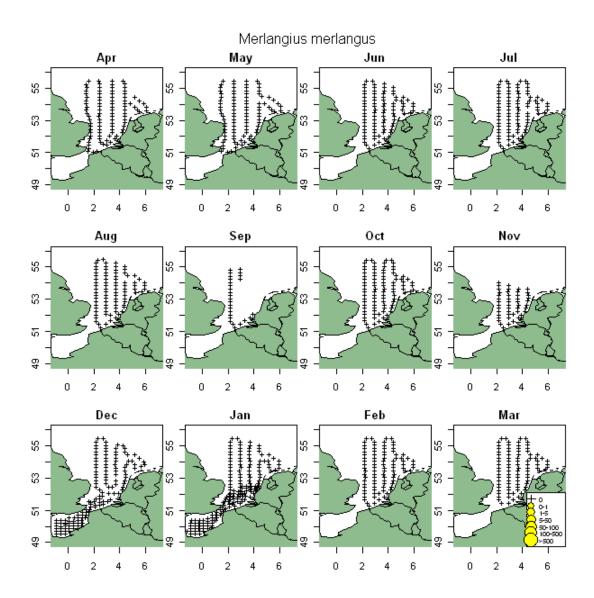


Figure 11e. Spatial and temporal distribution of stage 5 whiting eggs.

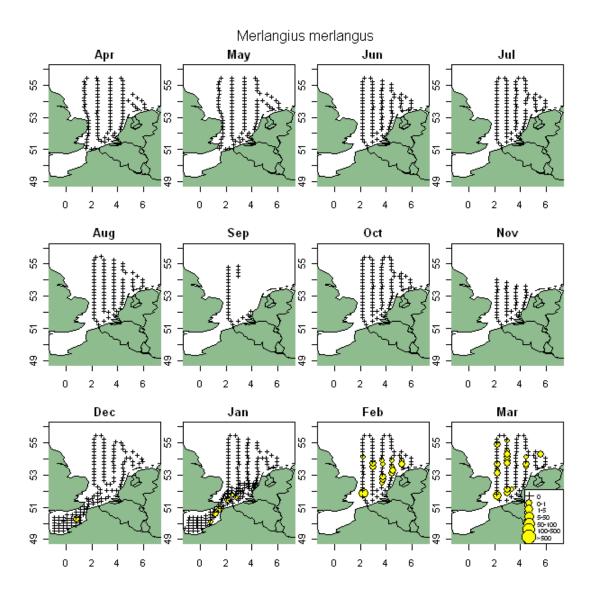


Figure 11f. Spatial and temporal distribution of yolk sac whiting larvae.

Report number C098/11 73 of 377

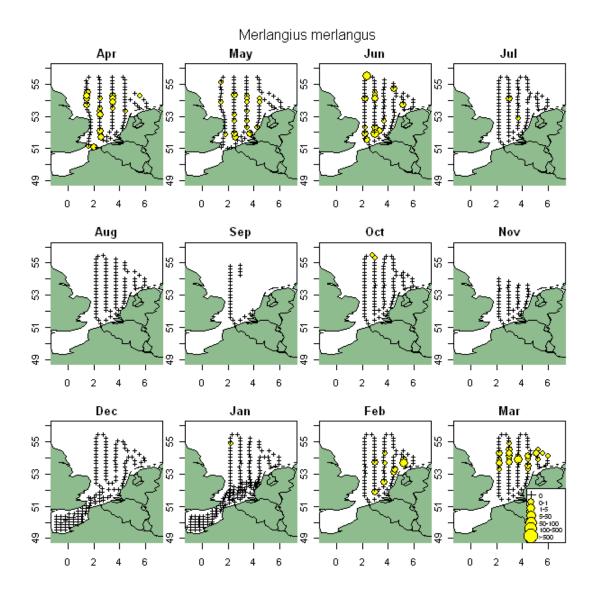


Figure 11g. Spatial and temporal distribution of non-yolk sac whiting larvae.

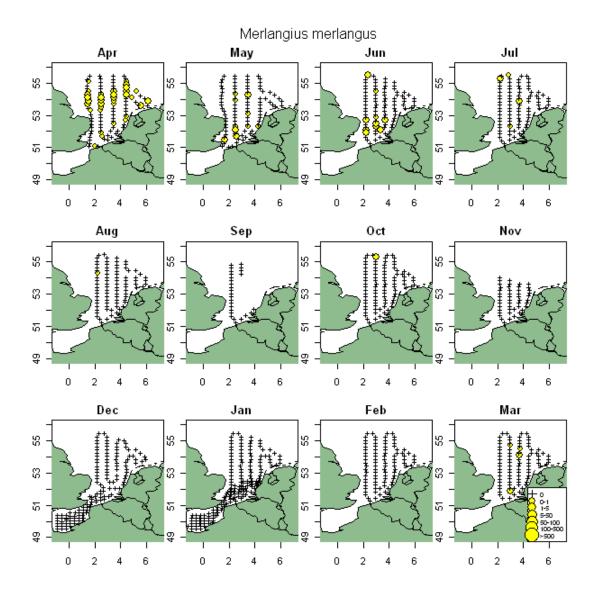


Figure 11h. Spatial and temporal distribution of bent notochord stage whiting larvae.

Report number C098/11 75 of 377

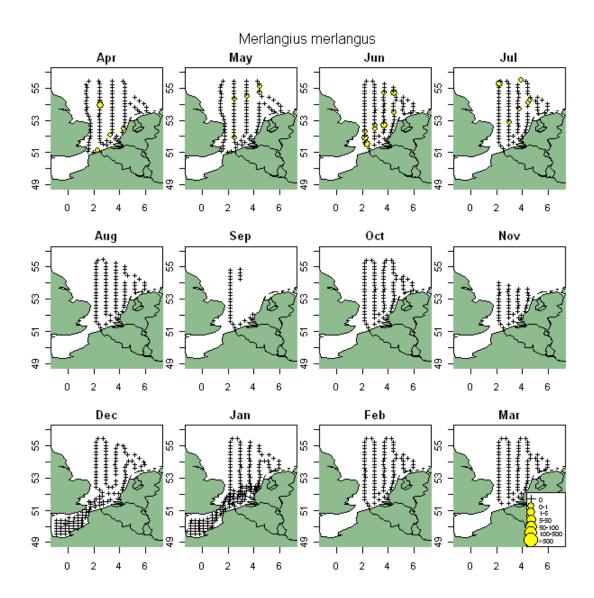


Figure 11i. Spatial and temporal distribution of metamorphosing whiting larvae.

# Tadpole fish Raniceps raninus

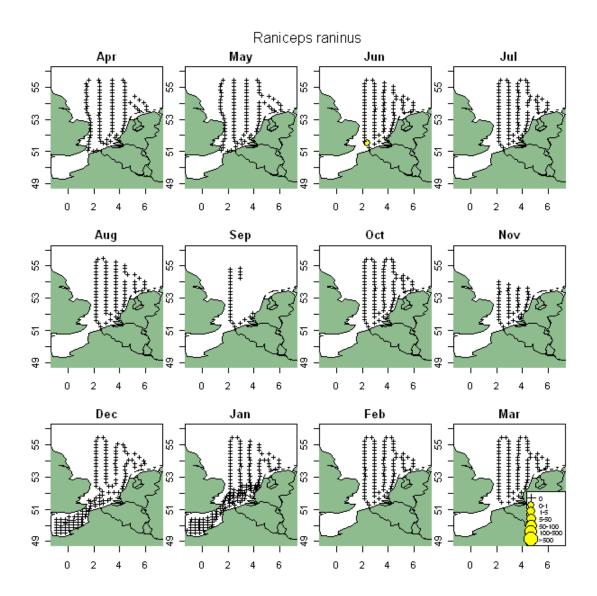


Figure 12a. Spatial and temporal distribution of stage 1 tadpole fish eggs.

Report number C098/11 77 of 377

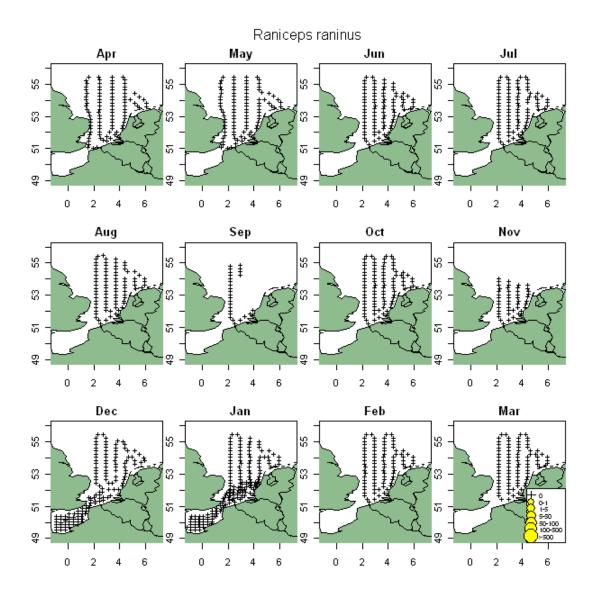


Figure 12b. Spatial and temporal distribution of stage 2 tadpole fish eggs.

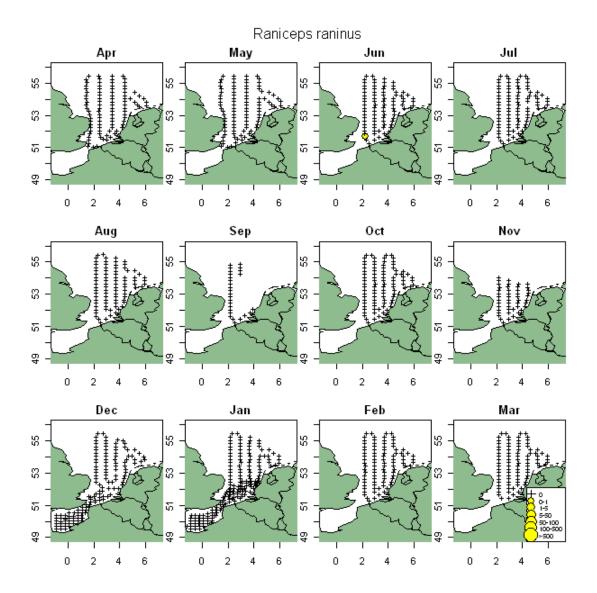


Figure 12c. Spatial and temporal distribution of stage 3 tadpole fish eggs.

Report number C098/11 79 of 377

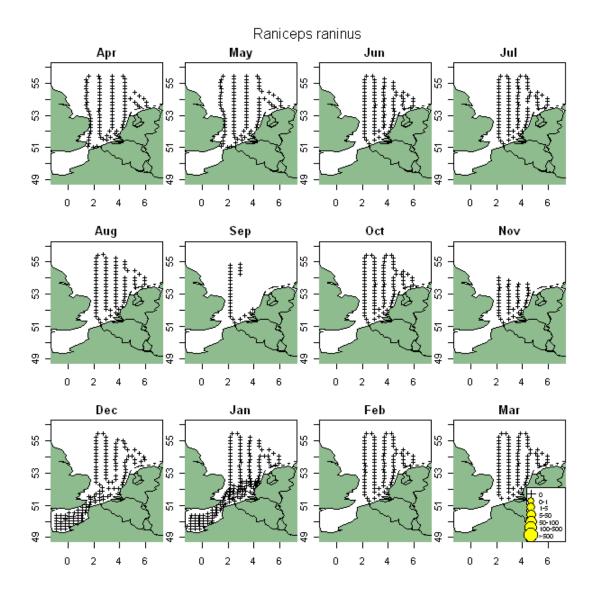


Figure 12d. Spatial and temporal distribution of stage 4 tadpole fish eggs.

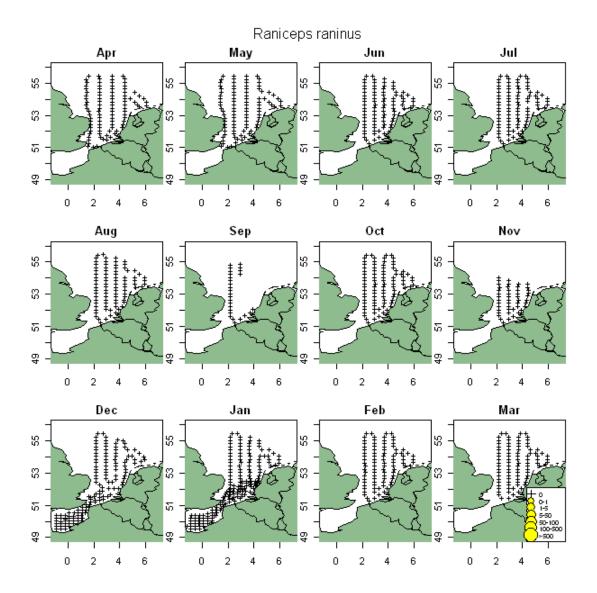


Figure 12e. Spatial and temporal distribution of stage 5 tadpole fish eggs.

Report number C098/11 81 of 377

# Rocklings

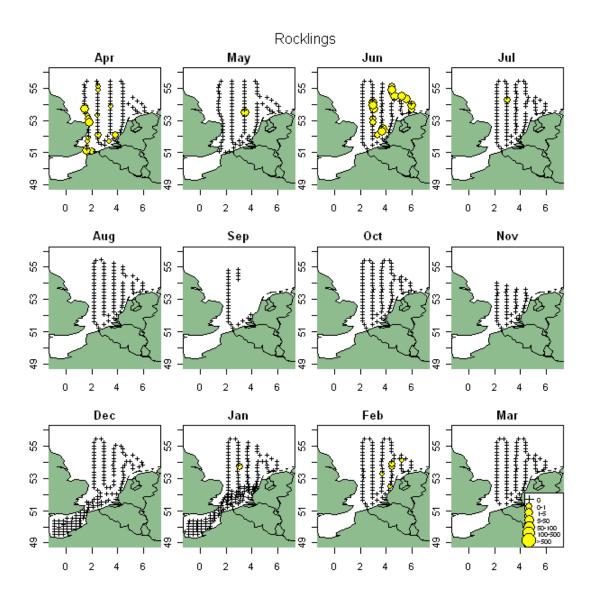


Figure 13a. Spatial and temporal distribution of stage 1 rockling eggs.

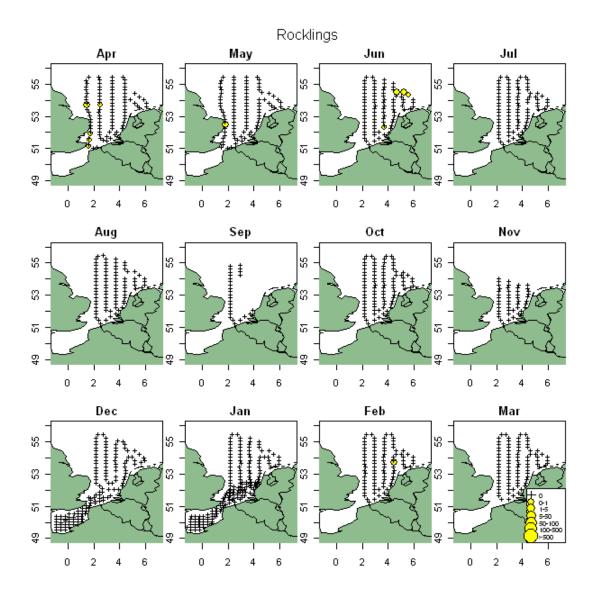


Figure 13b. Spatial and temporal distribution of stage 2 rockling eggs.

Report number C098/11 83 of 377

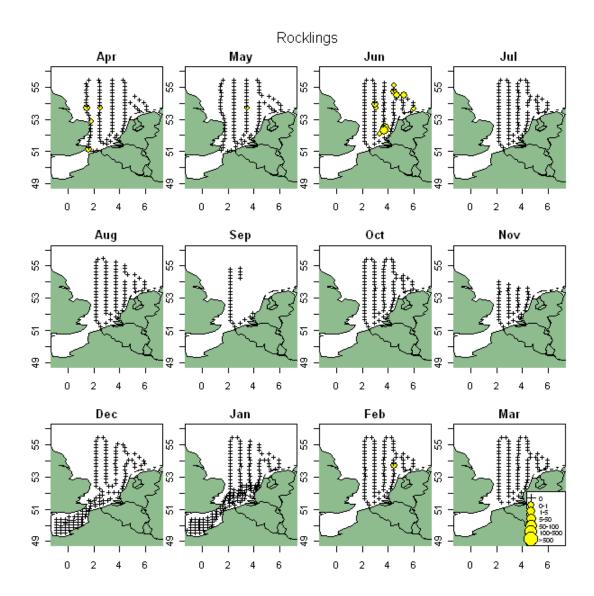


Figure 13c. Spatial and temporal distribution of stage 3 rockling eggs.

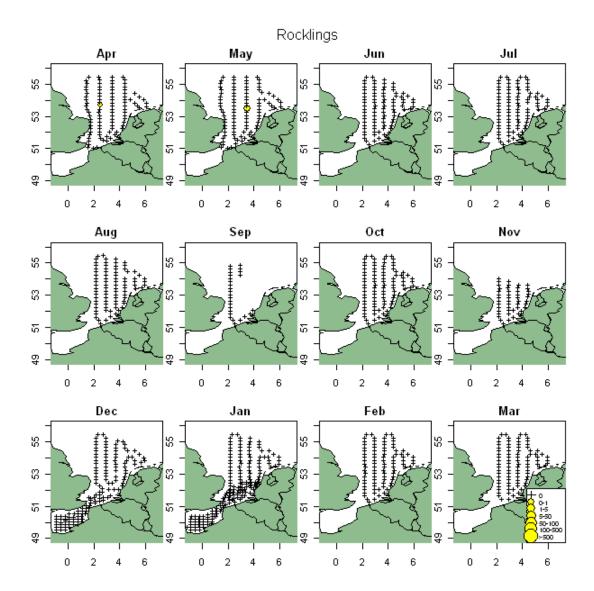


Figure 13d. Spatial and temporal distribution of stage 4 rockling eggs.

Report number C098/11 85 of 377

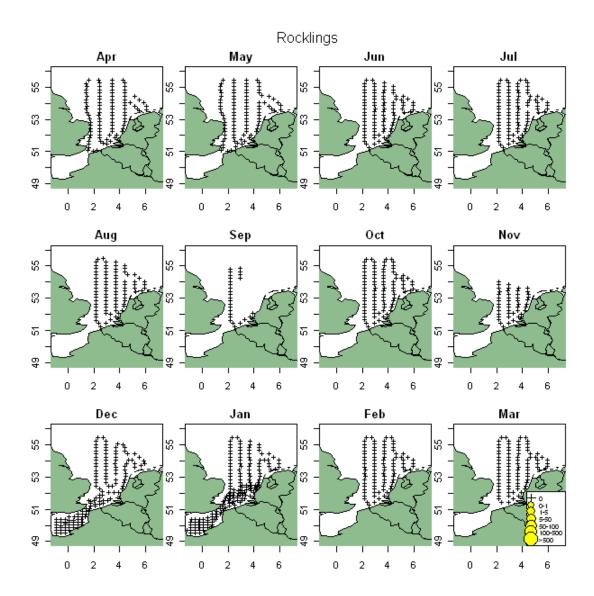


Figure 13e. Spatial and temporal distribution of stage 5 rockling eggs.

# Four-bearded rockling Enchelyopus cimbrius

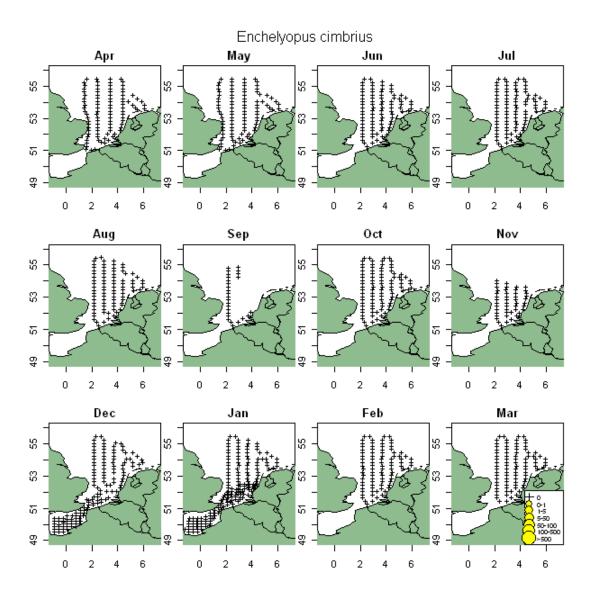


Figure 14a. Spatial and temporal distribution of yolk sac four-bearded rockling larvae.

Report number C098/11 87 of 377

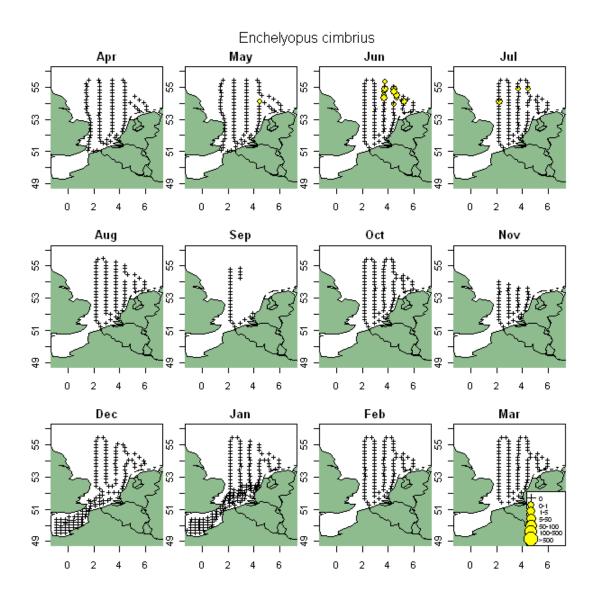


Figure 14b. Spatial and temporal distribution of non-yolk sac four-bearded rockling larvae.

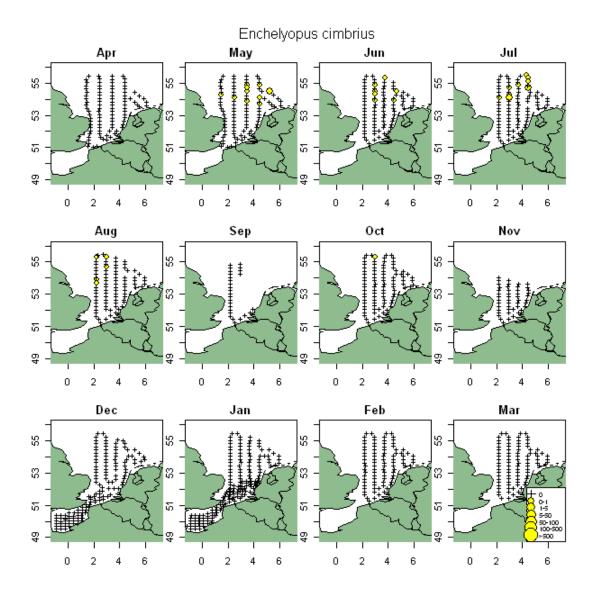


Figure 14c. Spatial and temporal distribution of bent notochord stage four-bearded rockling larvae.

Report number C098/11 89 of 377

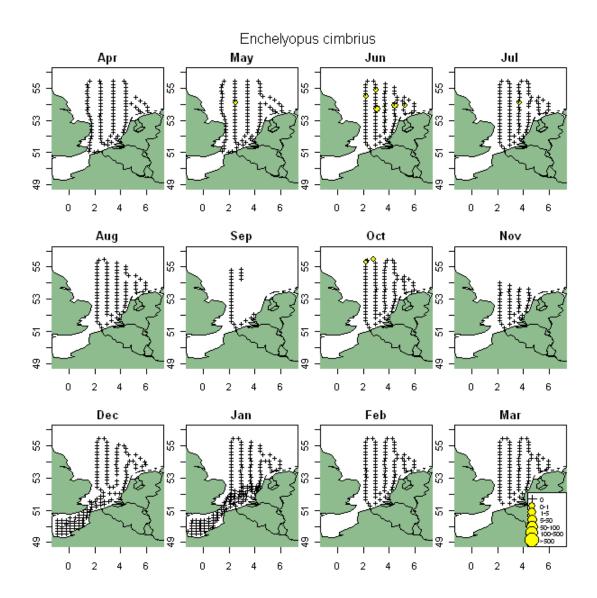


Figure 14d. Spatial and temporal distribution of metamorphosing four-bearded rockling larvae.

# Five-bearded rockling Ciliata mustela

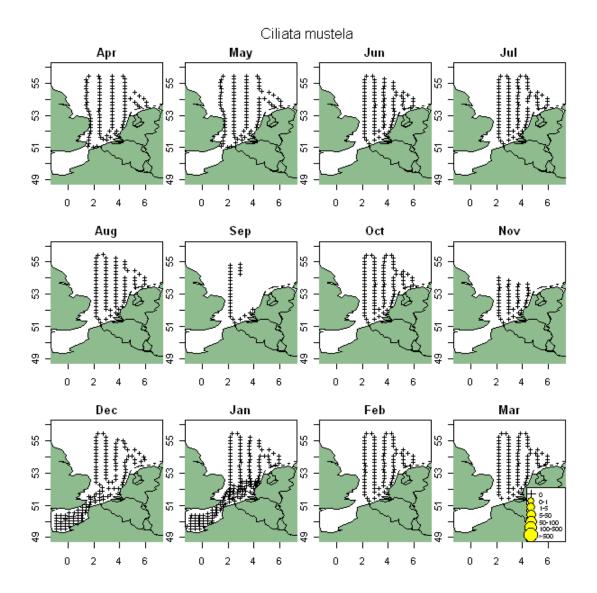


Figure 15a. Spatial and temporal distribution of yolk sac five-bearded rockling larvae.

Report number C098/11 91 of 377

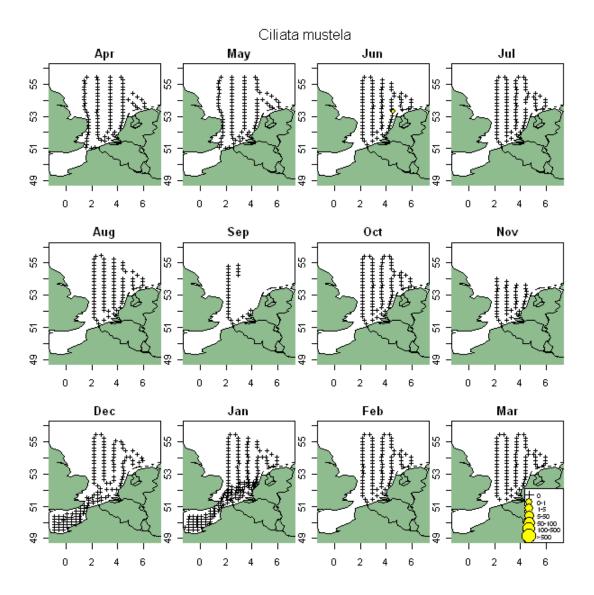


Figure 15b. Spatial and temporal distribution of non-yolk sac five-bearded rockling larvae.

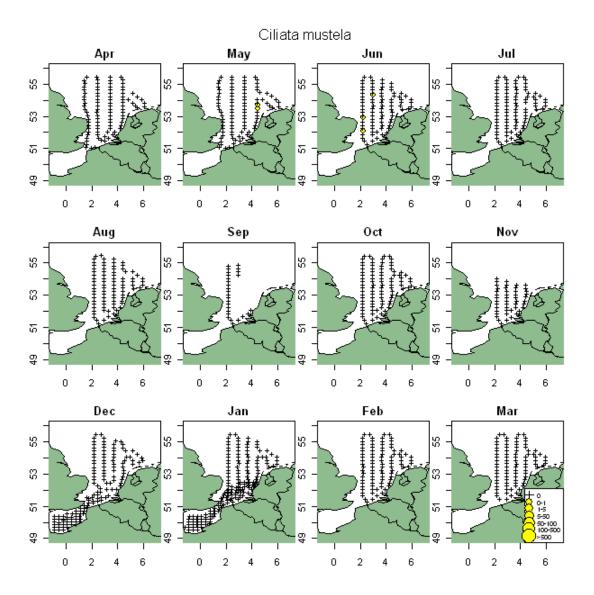


Figure 15c. Spatial and temporal distribution of bent notochord stage five-bearded rockling larvae.

Report number C098/11 93 of 377

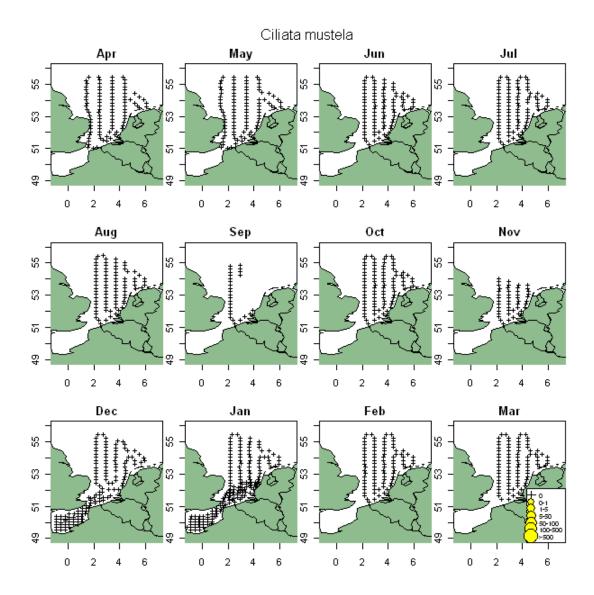


Figure 15d. Spatial and temporal distribution of metamorphosing five-bearded rockling larvae.

# European seabass Dicentrachus labrax

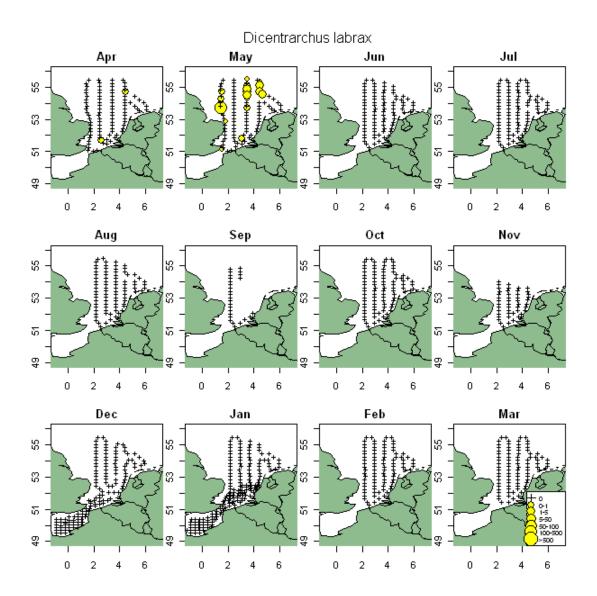


Figure 16a. Spatial and temporal distribution of stage 1 European seabass eggs.

Report number C098/11 95 of 377

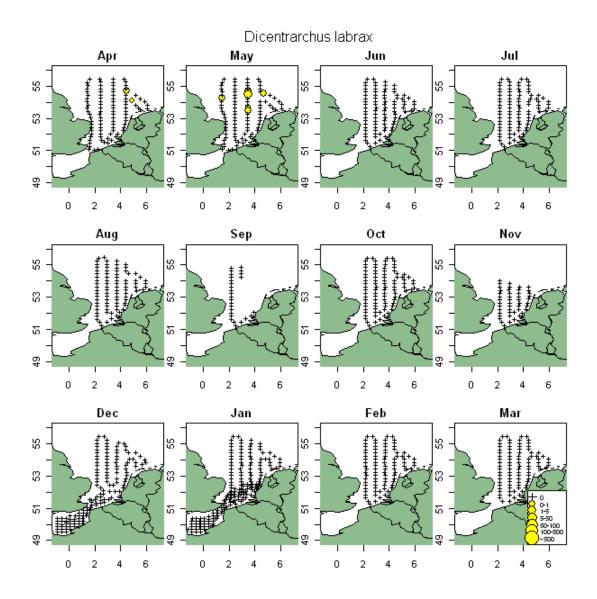


Figure 16b. Spatial and temporal distribution of stage 2 European seabass eggs.

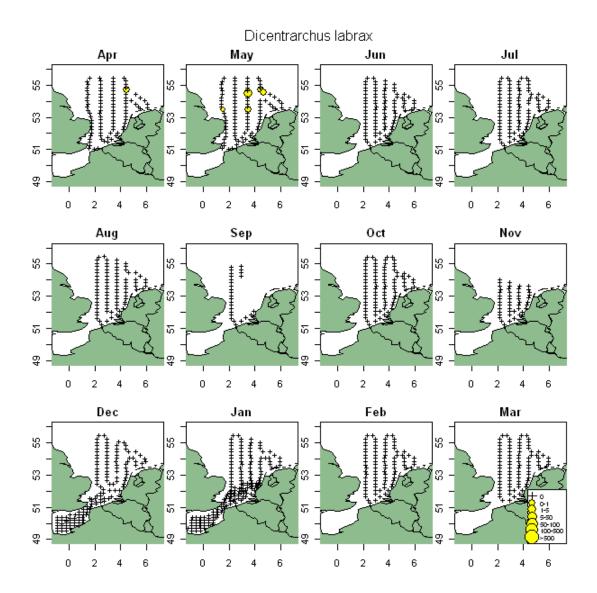


Figure 16c. Spatial and temporal distribution of stage 3 European seabass eggs.

Report number C098/11 97 of 377

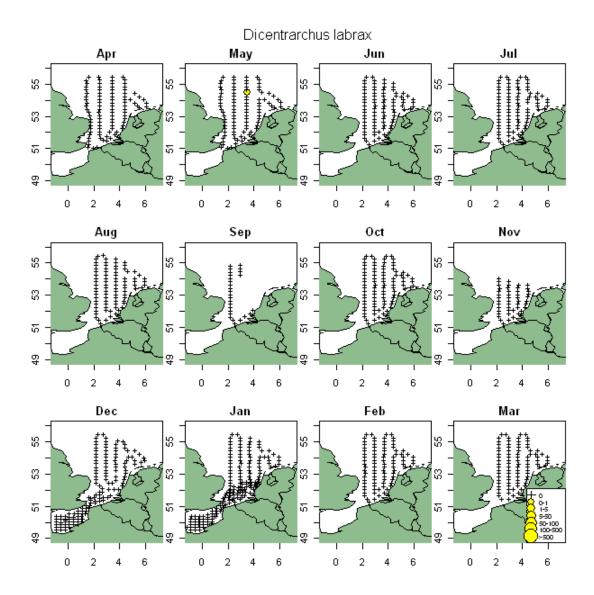


Figure 16d. Spatial and temporal distribution of stage 4 European seabass eggs.

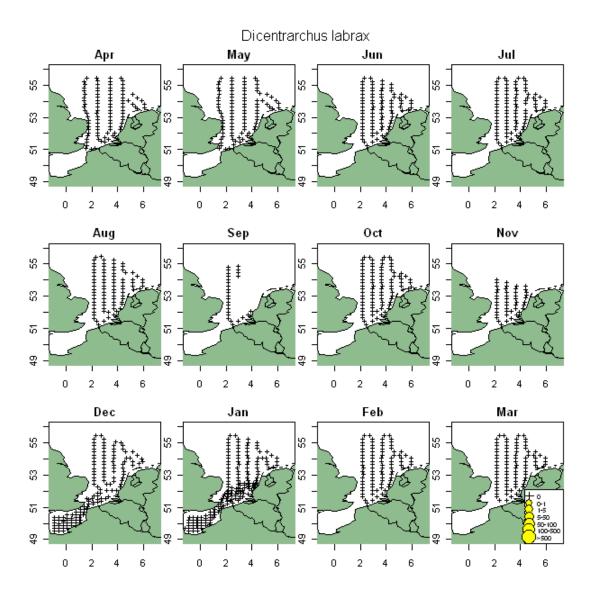


Figure 16e. Spatial and temporal distribution of stage 5 European seabass eggs.

Report number C098/11 99 of 377

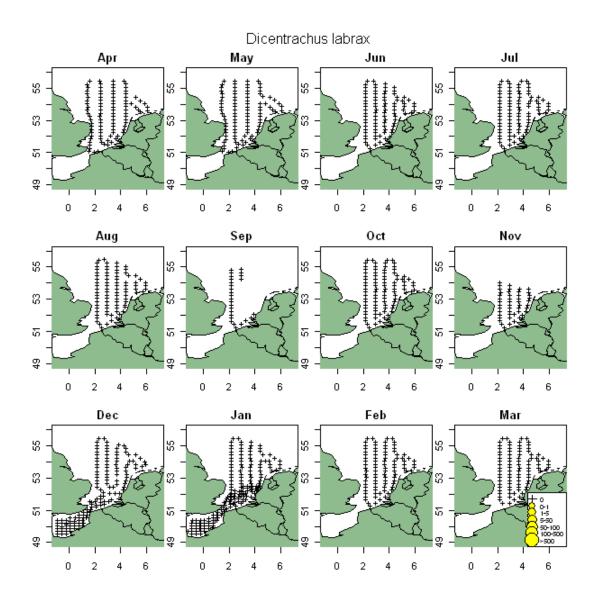


Figure 16f. Spatial and temporal distribution of yolk sac European seabass larvae.

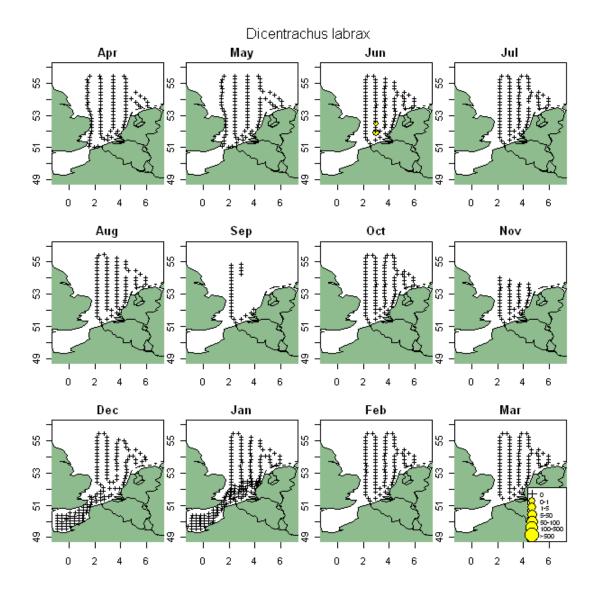


Figure 16g. Spatial and temporal distribution of non-yolk sac European seabass larvae.

Report number C098/11 101 of 377

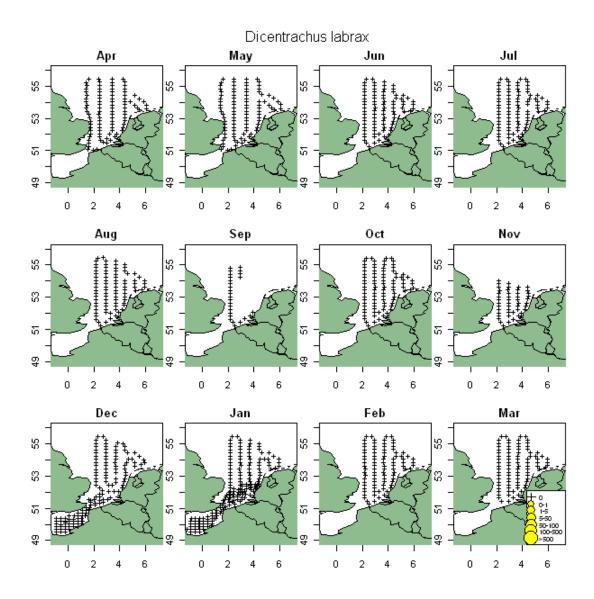


Figure 16h. Spatial and temporal distribution of bent notochord stage European seabass larvae.

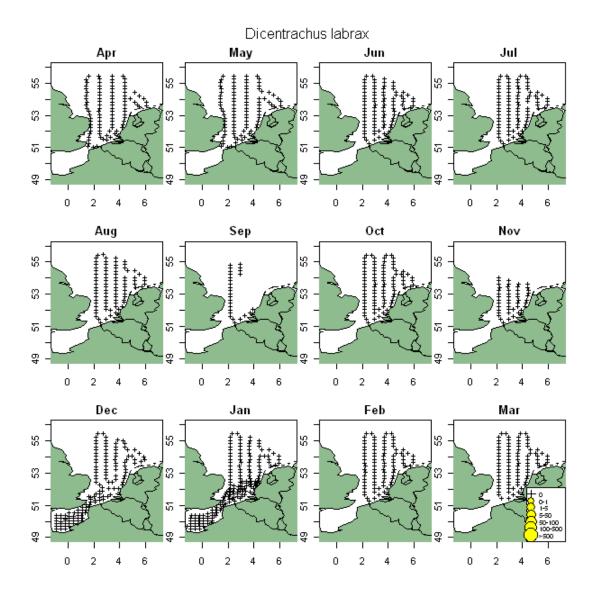


Figure 16i. Spatial and temporal distribution of metamorphosing European seabass larvae.

Report number C098/11 103 of 377

# Horse mackerel Trachurus trachurus

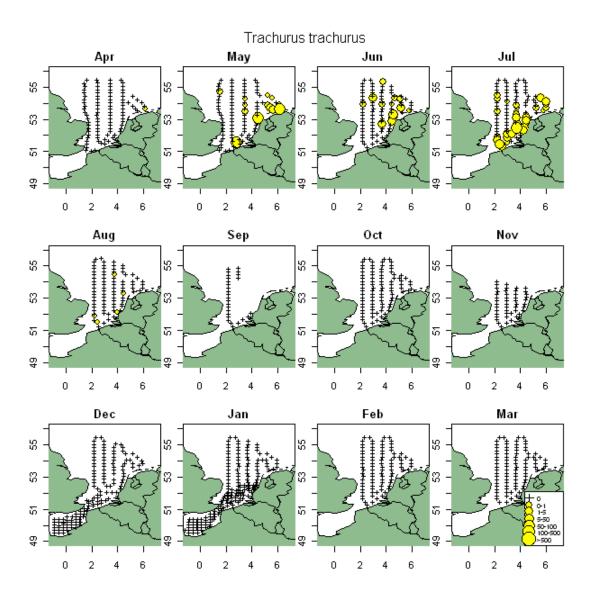


Figure 17a. Spatial and temporal distribution of stage 1 horse mackerel eggs.

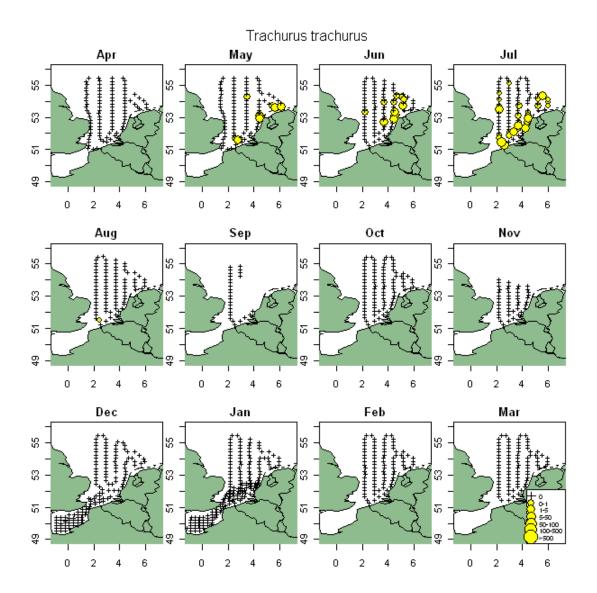


Figure 17b. Spatial and temporal distribution of stage 2 horse mackerel eggs.

Report number C098/11 105 of 377

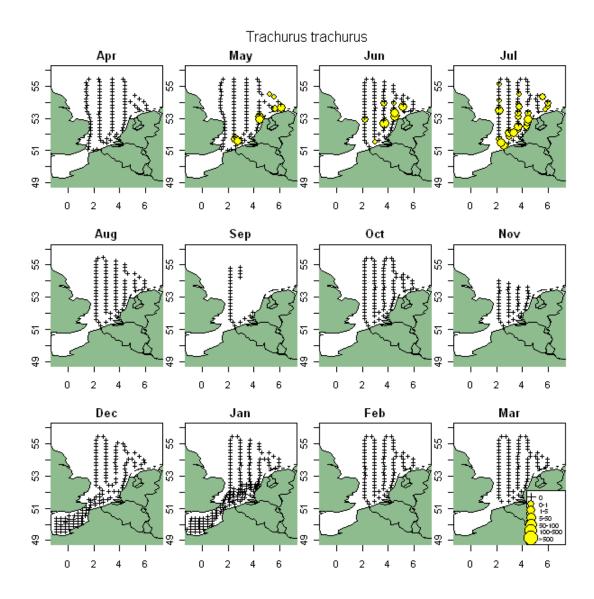


Figure 17c. Spatial and temporal distribution of stage 3 horse mackerel eggs.

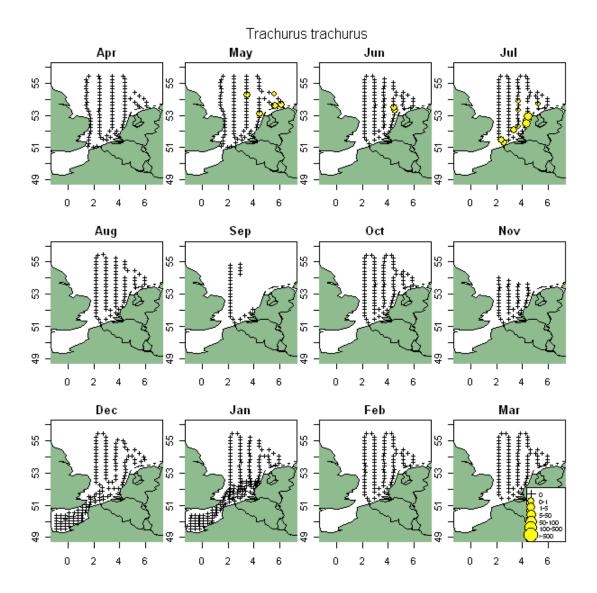


Figure 17d. Spatial and temporal distribution of stage 4 horse mackerel eggs.

Report number C098/11 107 of 377

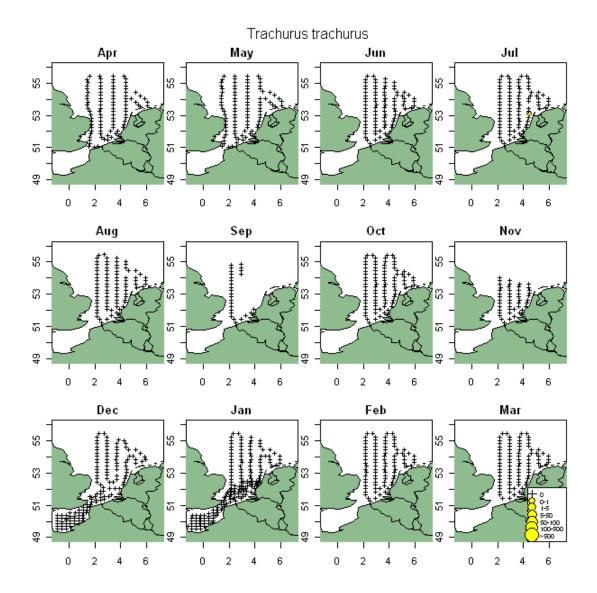


Figure 17e. Spatial and temporal distribution of stage 5 horse mackerel eggs.

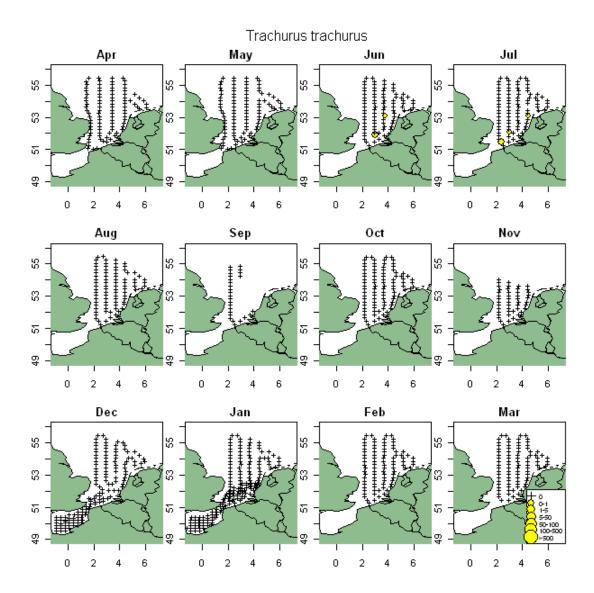


Figure 17f. Spatial and temporal distribution of yolk sac horse mackerel larvae.

Report number C098/11 109 of 377

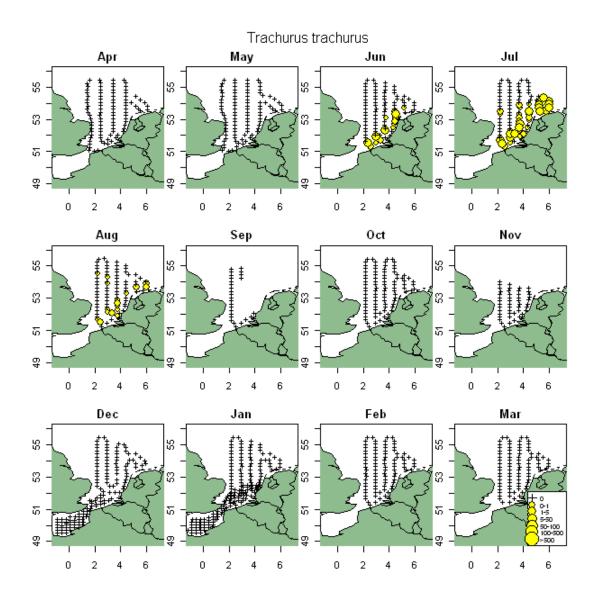


Figure 17g. Spatial and temporal distribution of non-yolk sac horse mackerel larvae.

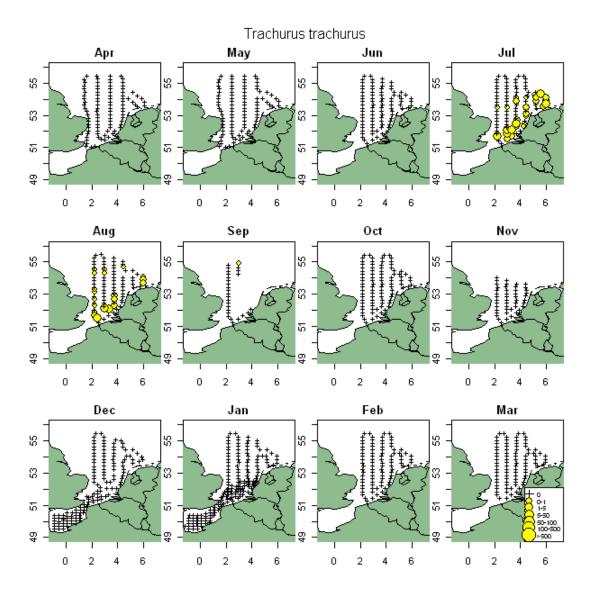


Figure 17h. Spatial and temporal distribution of bent notochord stage horse mackerel larvae.

Report number C098/11 111 of 377

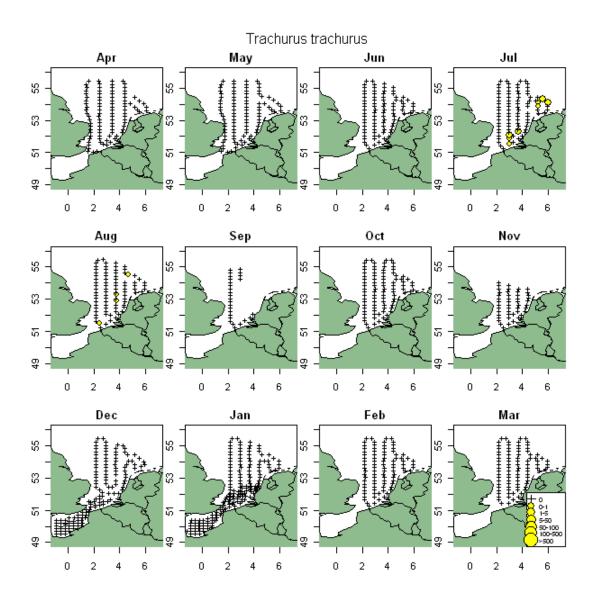


Figure 17i. Spatial and temporal distribution of metamorphosing horse mackerel larvae.

## Smooth sandeel *Gymnammodytes semisquamatus*

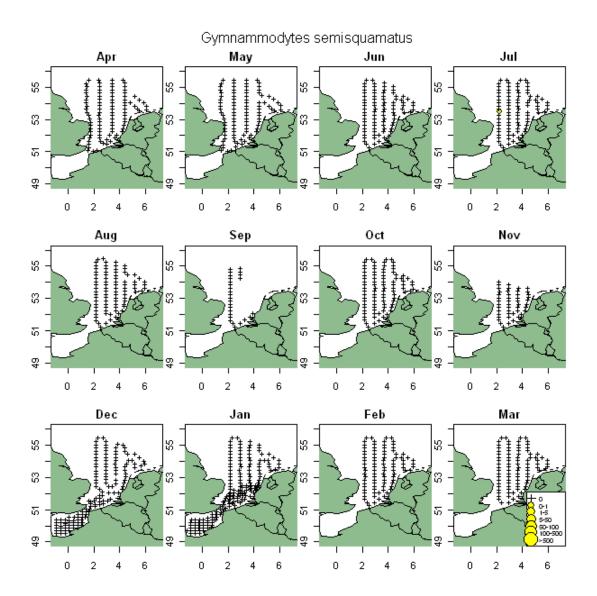


Figure 18a. Spatial and temporal distribution of yolk sac smooth sandeel larvae.

Report number C098/11 113 of 377

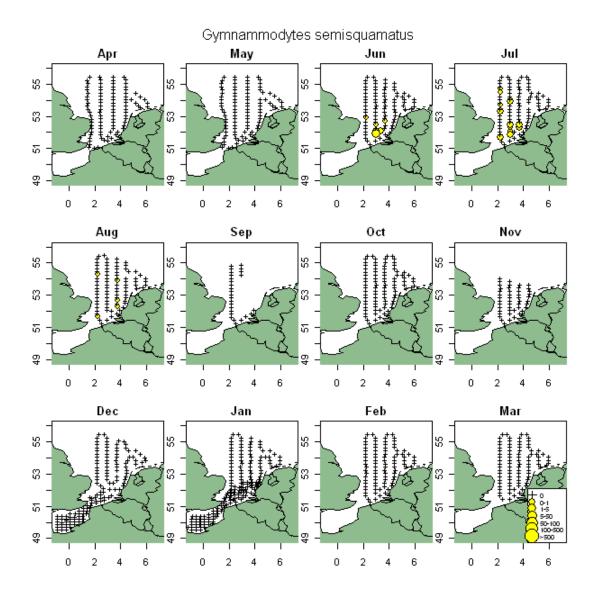


Figure 18b. Spatial and temporal distribution of non-yolk sac smooth sandeel larvae.

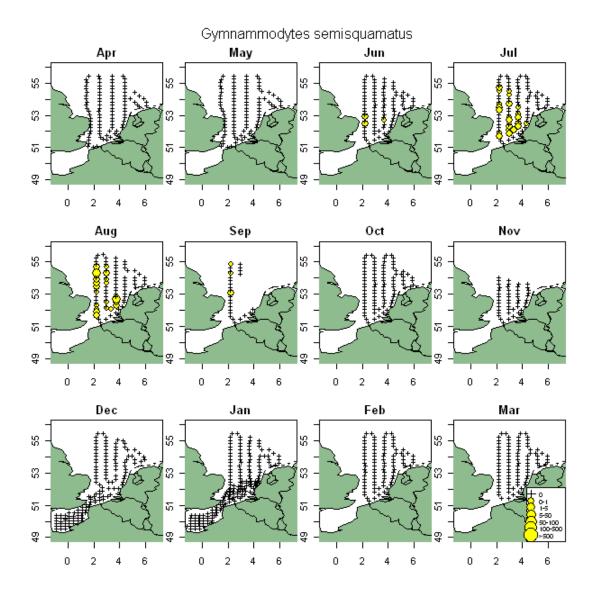


Figure 18c. Spatial and temporal distribution of bent notochord stage smooth sandeel larvae.

Report number C098/11 115 of 377

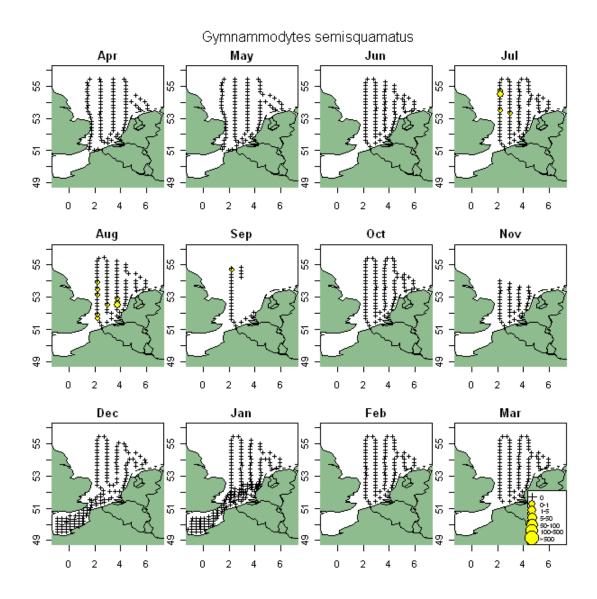


Figure 18d. Spatial and temporal distribution of metamorphosing smooth sandeel larvae.

# Greater sandeel Hyperoplus lanceolatus

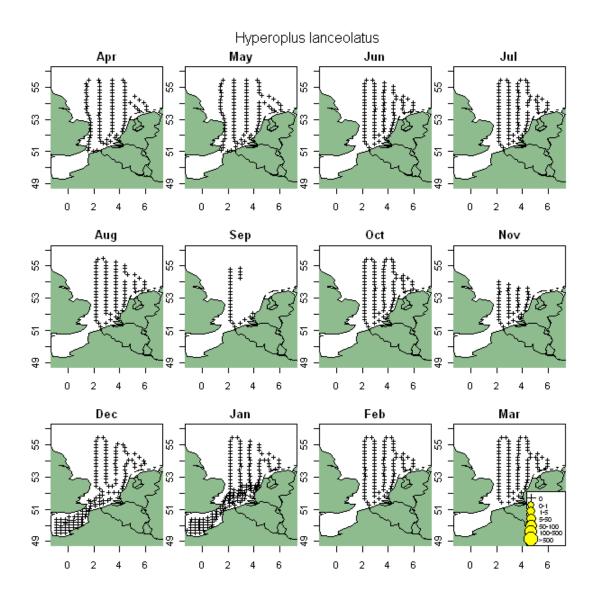


Figure 19a. Spatial and temporal distribution of yolk sac greater sandeel larvae.

Report number C098/11 117 of 377

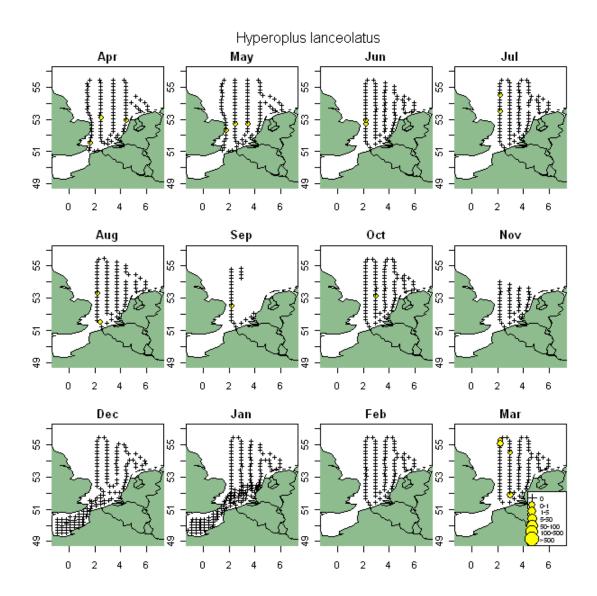


Figure 19b. Spatial and temporal distribution of non-yolk sac greater sandeel larvae.

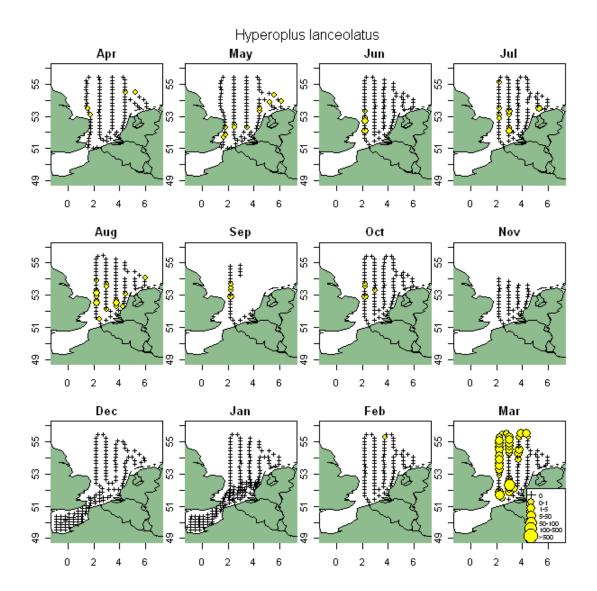


Figure 19c. Spatial and temporal distribution of bent notochord stage greater sandeel larvae.

Report number C098/11 119 of 377

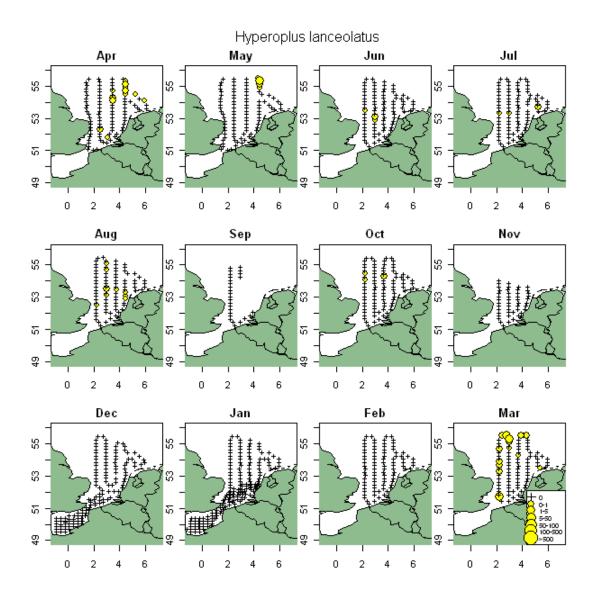


Figure 19d. Spatial and temporal distribution of metamorphosing greater sandeel larvae.

### Small sandeel Ammodytes tobianus

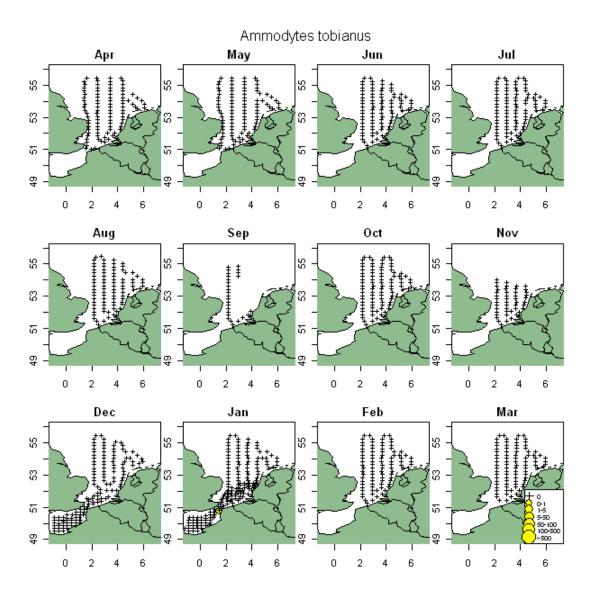


Figure 20a. Spatial and temporal distribution of yolk sac small sandeel larvae.

Report number C098/11 121 of 377

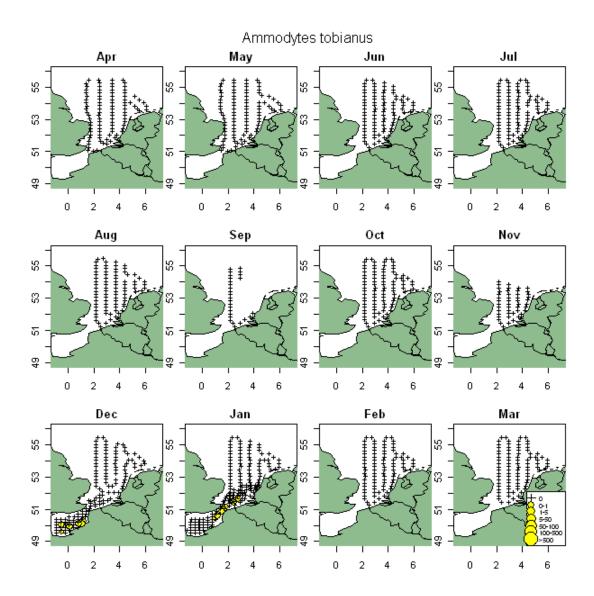


Figure 20b. Spatial and temporal distribution of non-yolk sac small sandeel larvae.

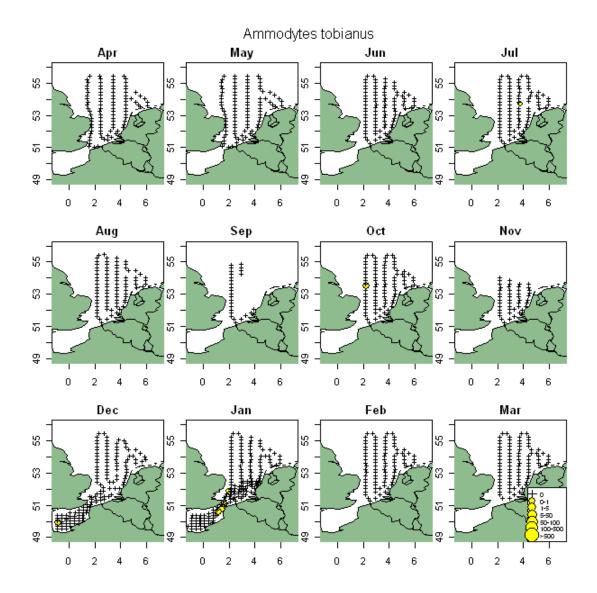


Figure 20c. Spatial and temporal distribution of bent notochord stage small sandeel larvae.

Report number C098/11 123 of 377

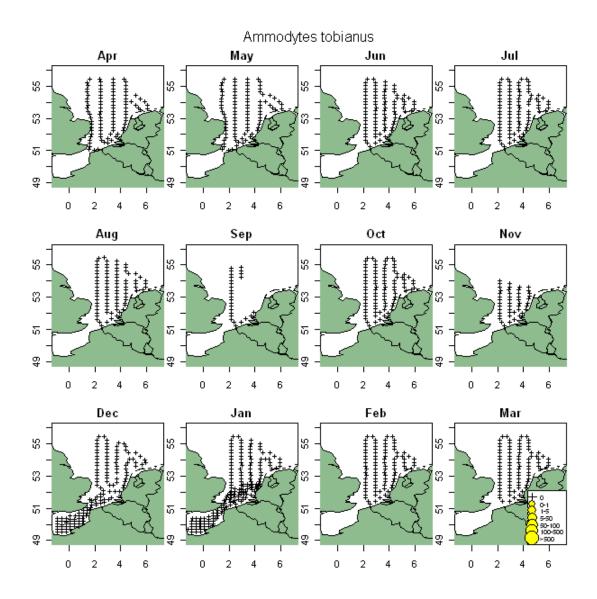


Figure 20d. Spatial and temporal distribution of metamorphosing small sandeel larvae.

### Lesser sandeel Ammodytes marinus

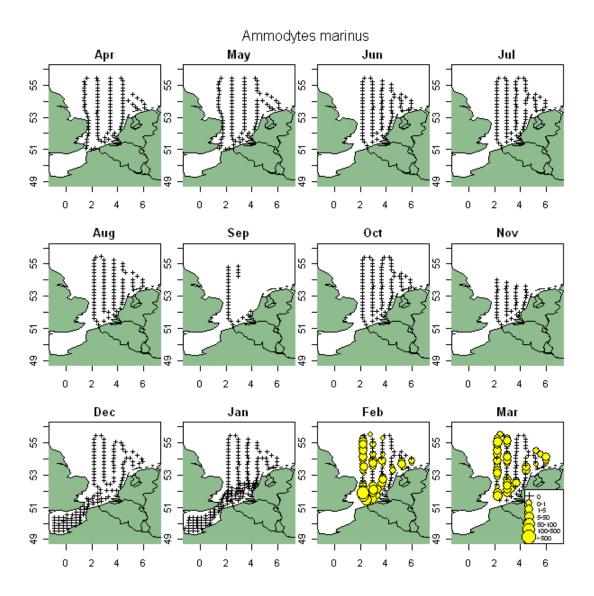


Figure 21a. Spatial and temporal distribution of yolk sac lesser sandeel larvae.

Report number C098/11 125 of 377

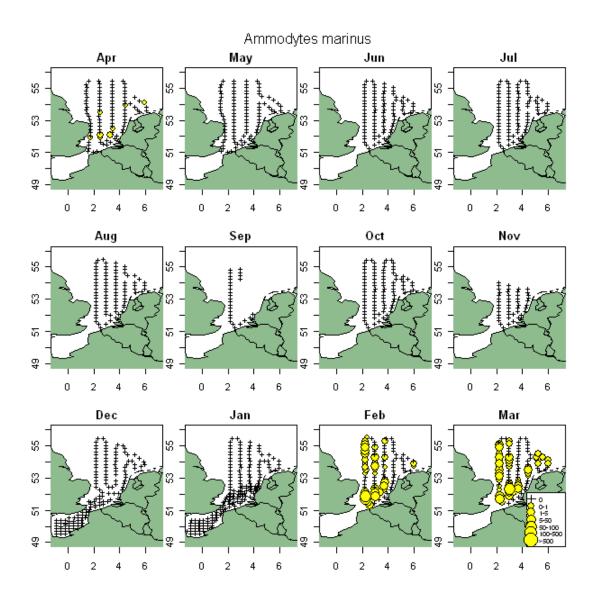


Figure 21b. Spatial and temporal distribution of non-yolk sac lesser sandeel larvae.

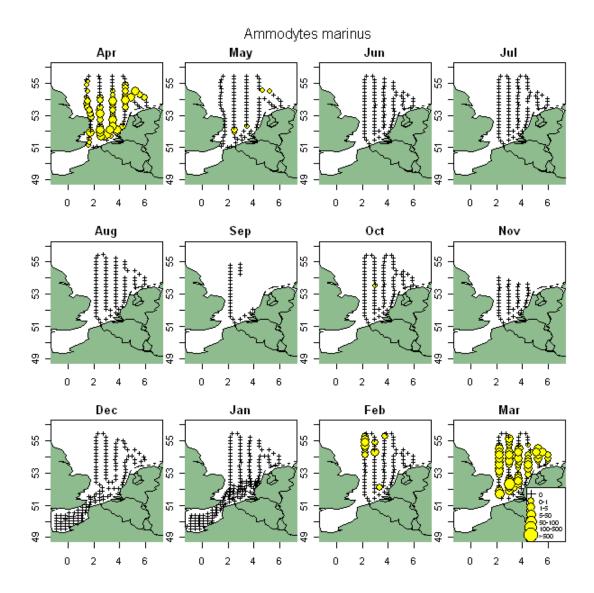


Figure 21c. Spatial and temporal distribution of bent notochord stage lesser sandeel larvae.

Report number C098/11 127 of 377

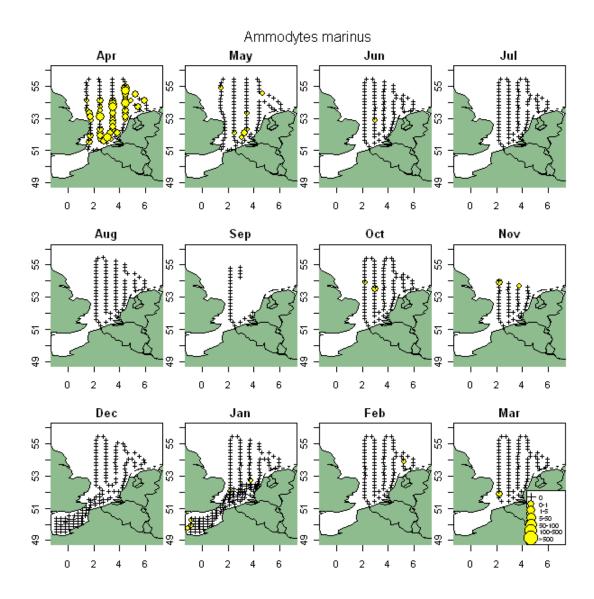


Figure 21d. Spatial and temporal distribution of metamorphosing lesser sandeel larvae.

# Lesser weever Echiichthys vipera

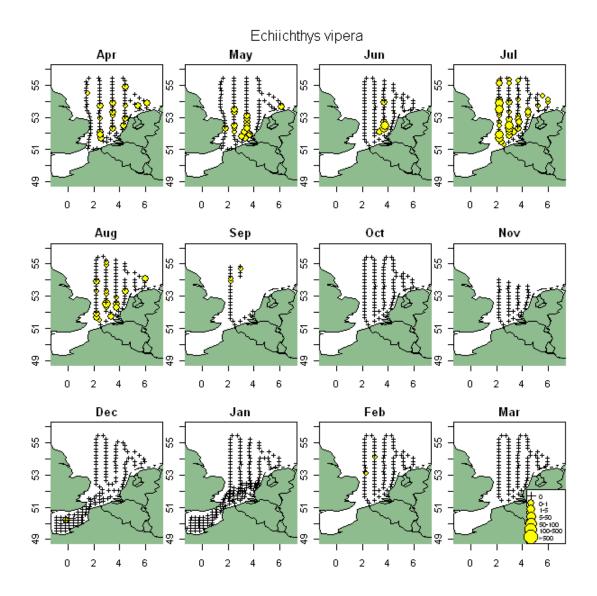


Figure 22a. Spatial and temporal distribution of stage 1 lesser weever eggs.

Report number C098/11 129 of 377

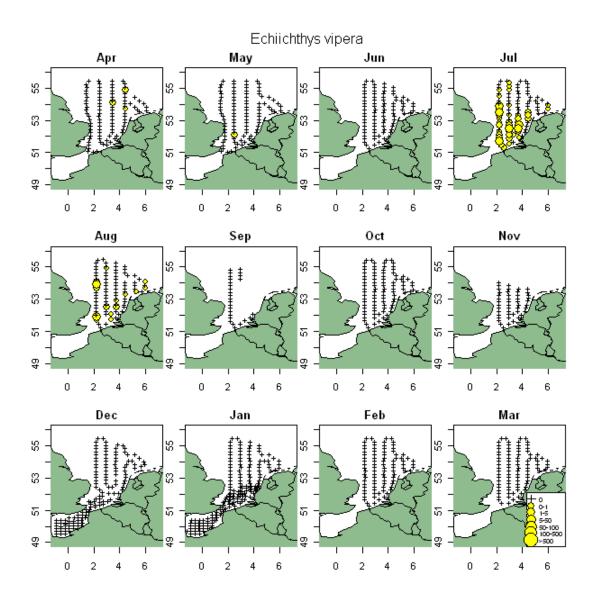


Figure 22b. Spatial and temporal distribution of stage 2 lesser weever eggs.

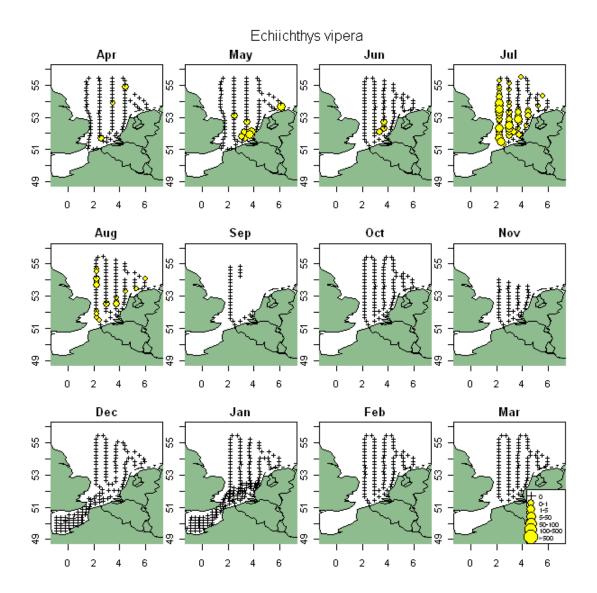


Figure 22c. Spatial and temporal distribution of stage 3 lesser weever eggs.

Report number C098/11 131 of 377

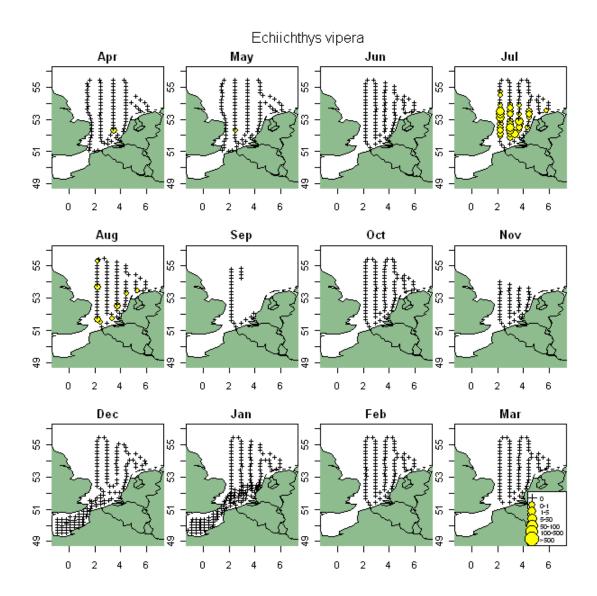


Figure 22d. Spatial and temporal distribution of stage 4 lesser weever eggs.

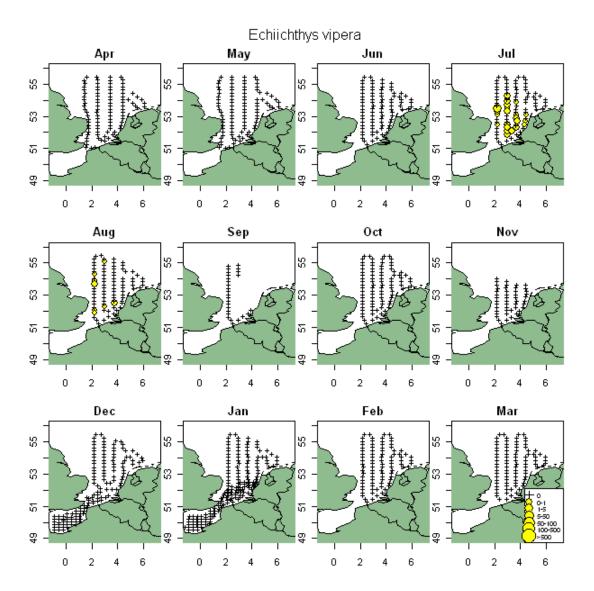


Figure 22e. Spatial and temporal distribution of stage 5 lesser weever eggs.

Report number C098/11 133 of 377

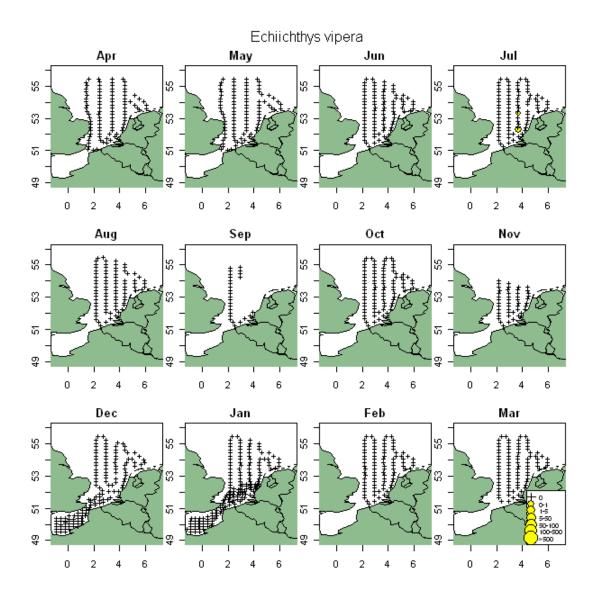


Figure 22f. Spatial and temporal distribution of yolk sac lesser weever larvae.

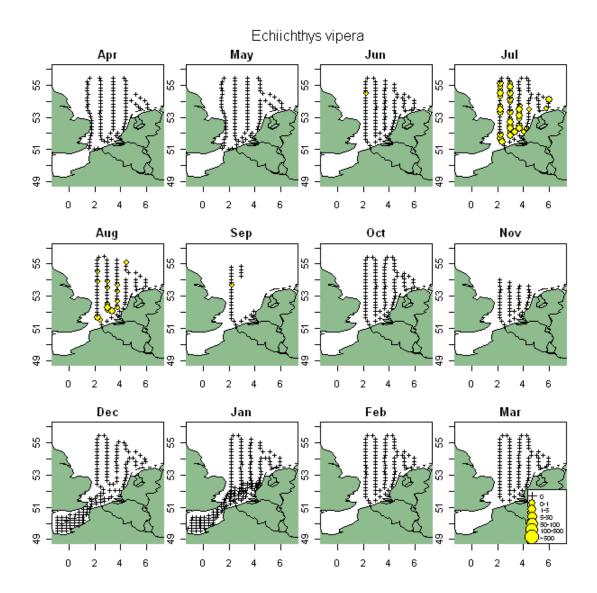


Figure 22g. Spatial and temporal distribution of non-yolk sac lesser weever larvae.

Report number C098/11 135 of 377

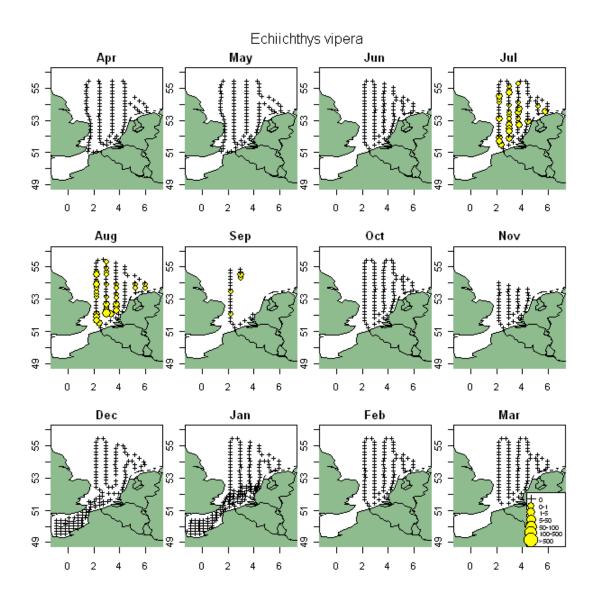


Figure 22h. Spatial and temporal distribution of bent notochord stage lesser weever larvae.

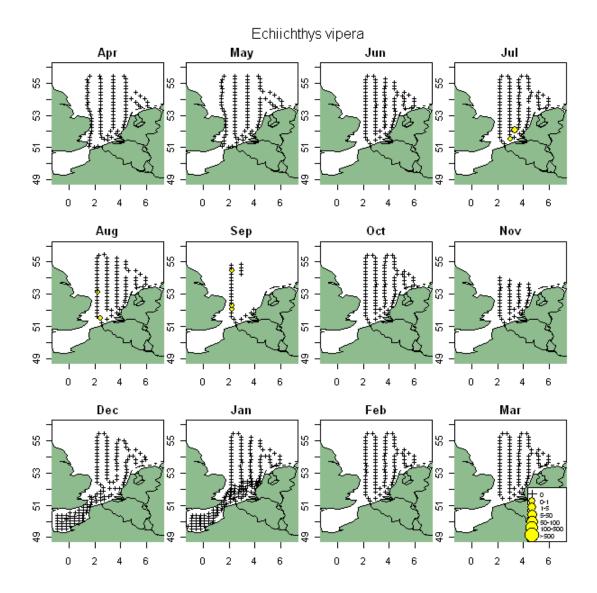


Figure 22i. Spatial and temporal distribution of metamorphosing lesser weever larvae.

Report number C098/11 137 of 377

### Greater weever Trachinus draco

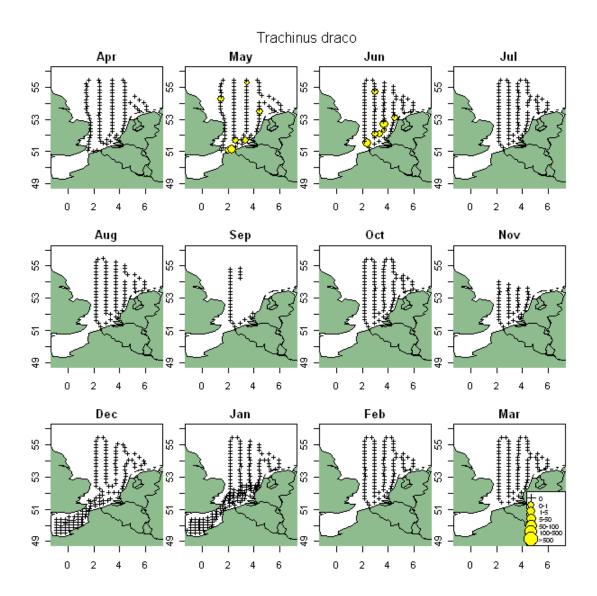


Figure 23a. Spatial and temporal distribution of stage 1 greater weever eggs.

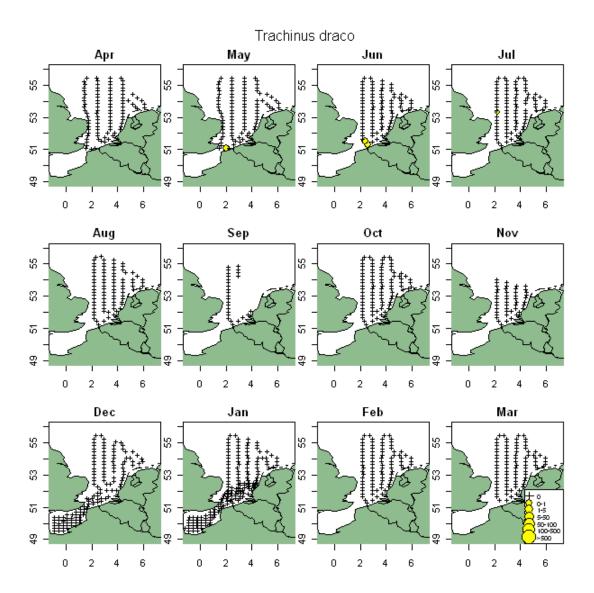


Figure 23b. Spatial and temporal distribution of stage 2 greater weever eggs.

Report number C098/11 139 of 377

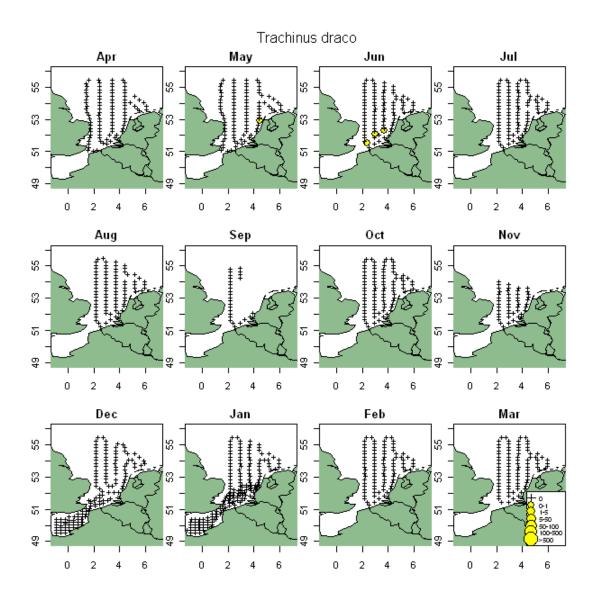


Figure 23c. Spatial and temporal distribution of stage 3 greater weever eggs.

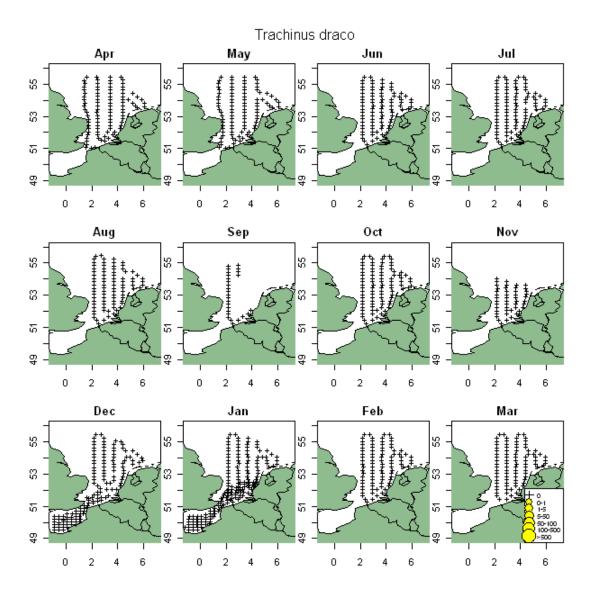


Figure 23d. Spatial and temporal distribution of stage 4 greater weever eggs.

Report number C098/11 141 of 377

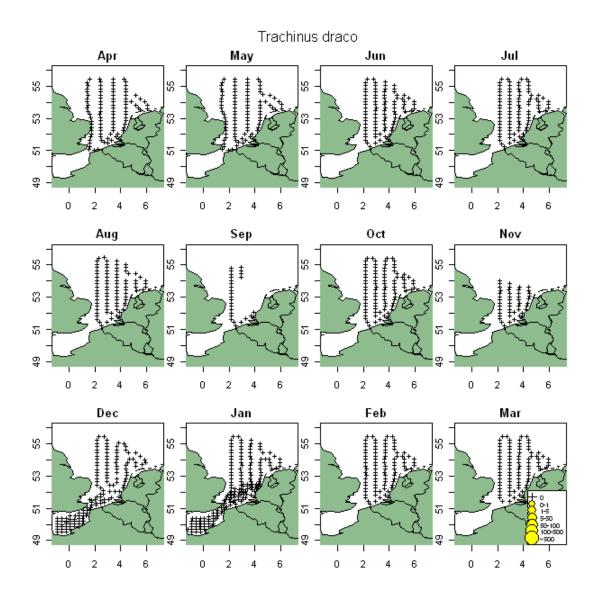


Figure 23e. Spatial and temporal distribution of stage 5 greater weever eggs.

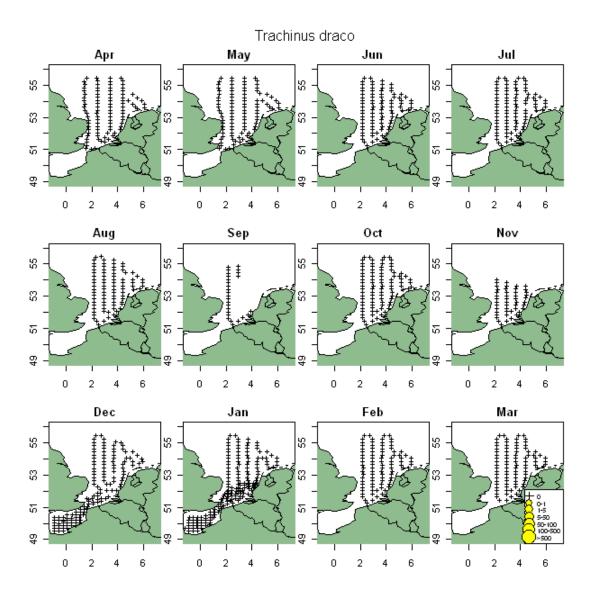


Figure 23f. Spatial and temporal distribution of yolk sac greater weever larvae.

Report number C098/11 143 of 377

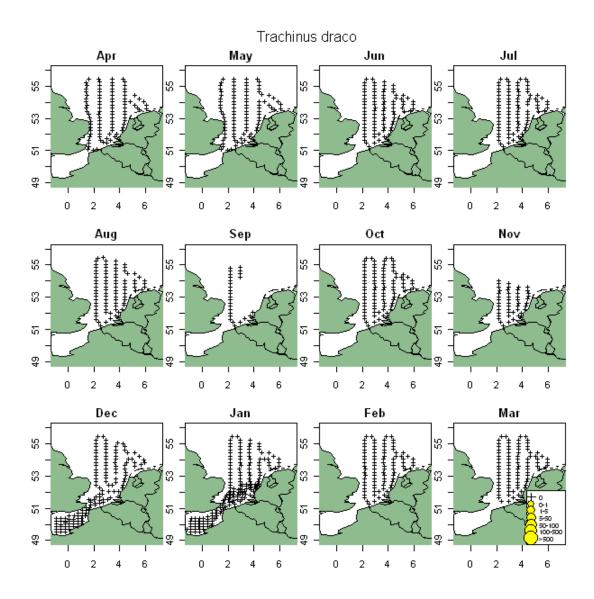


Figure 23g. Spatial and temporal distribution of non-yolk sac greater weever larvae.

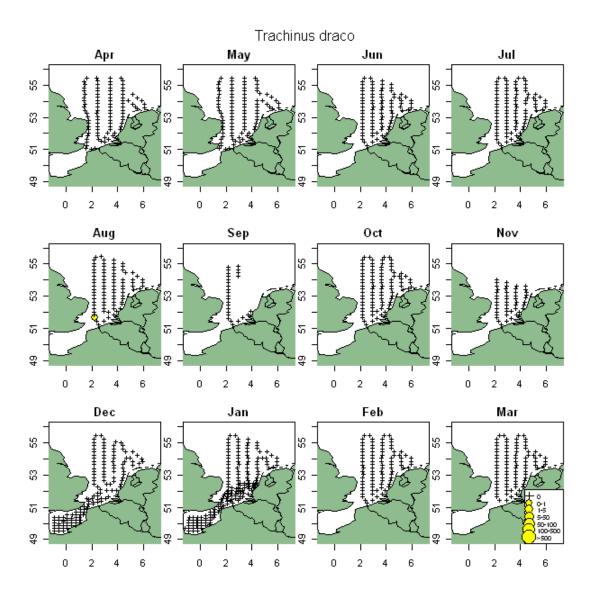


Figure 23h. Spatial and temporal distribution of bent notochord stage greater weever larvae.

Report number C098/11 145 of 377

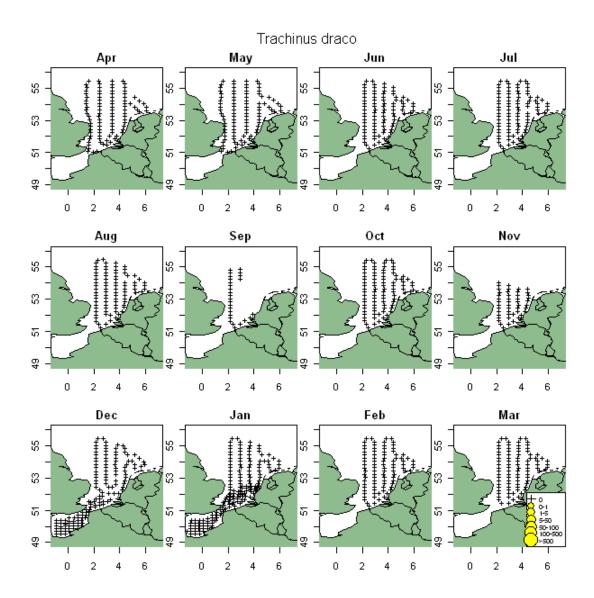


Figure 23i. Spatial and temporal distribution of metamorphosing greater weever larvae.

### Mackerel Scomber scombrus

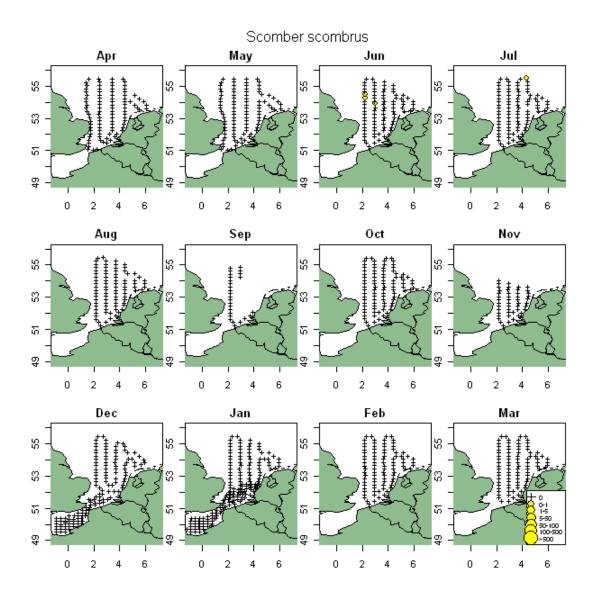


Figure 24a. Spatial and temporal distribution of yolk sac mackerel larvae.

Report number C098/11 147 of 377

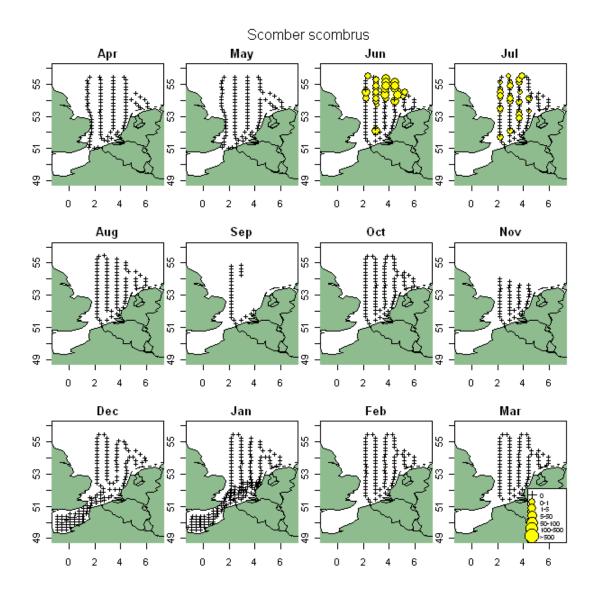


Figure 24b. Spatial and temporal distribution of non-yolk sac mackerel larvae.

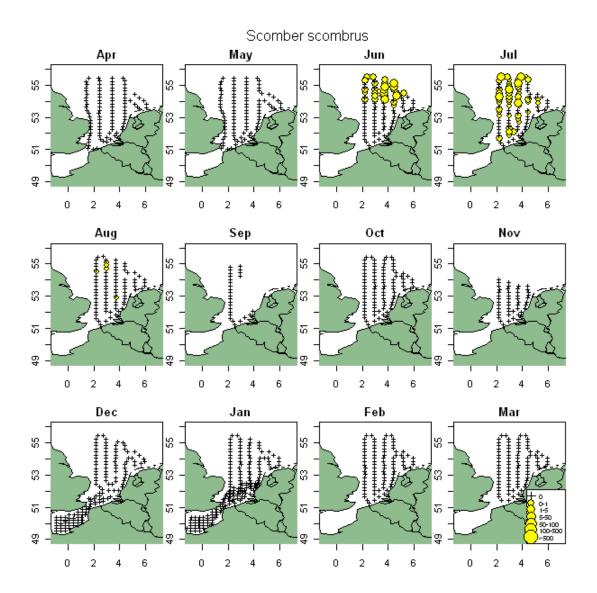


Figure 24c. Spatial and temporal distribution of bent notochord stage mackerel larvae.

Report number C098/11 149 of 377

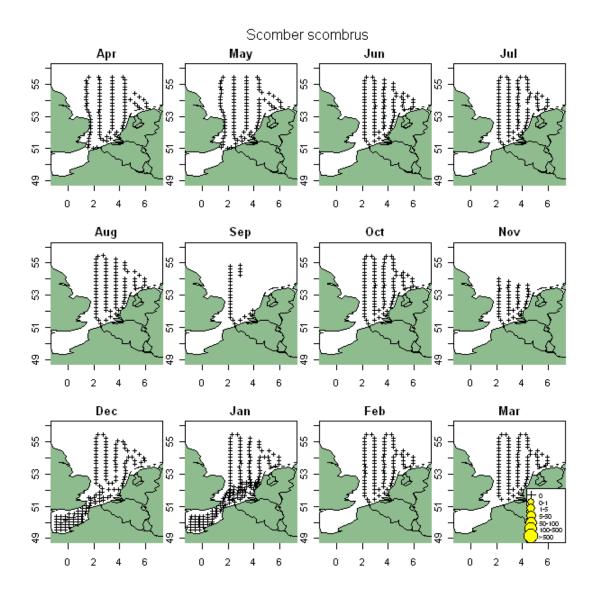
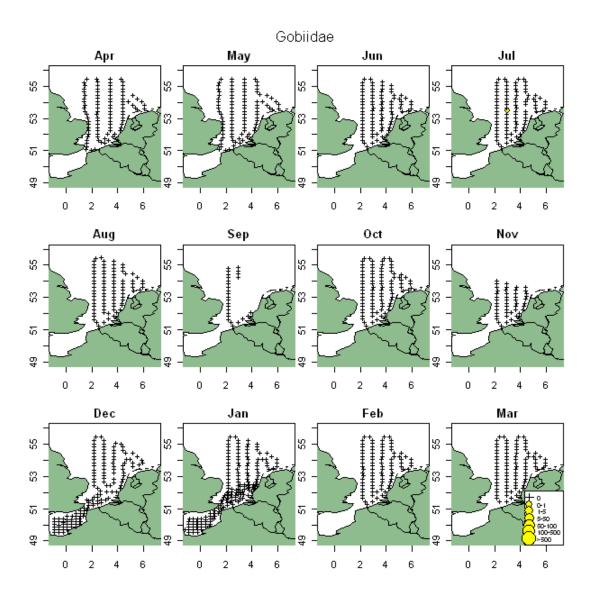


Figure 24d. Spatial and temporal distribution of metamorphosing mackerel larvae.

### Gobiidae



 $\label{thm:continuous} \mbox{Figure 25a. Spatial and temporal distribution of yolk sac Gobiidae larvae.}$ 

Report number C098/11 151 of 377

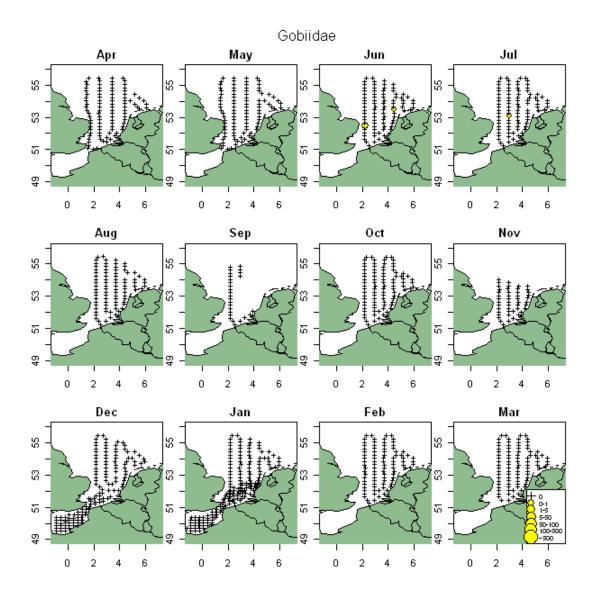


Figure 25b. Spatial and temporal distribution of non-yolk sac Gobiidae larvae.

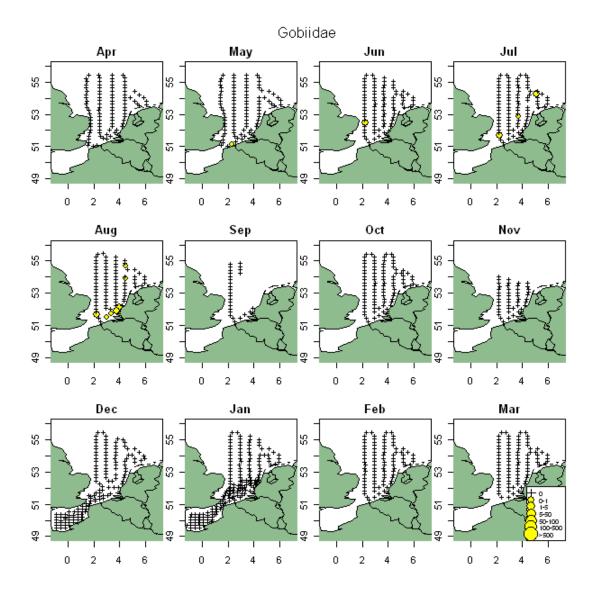


Figure 25c. Spatial and temporal distribution of bent notochord stage Gobiidae larvae.

Report number C098/11 153 of 377

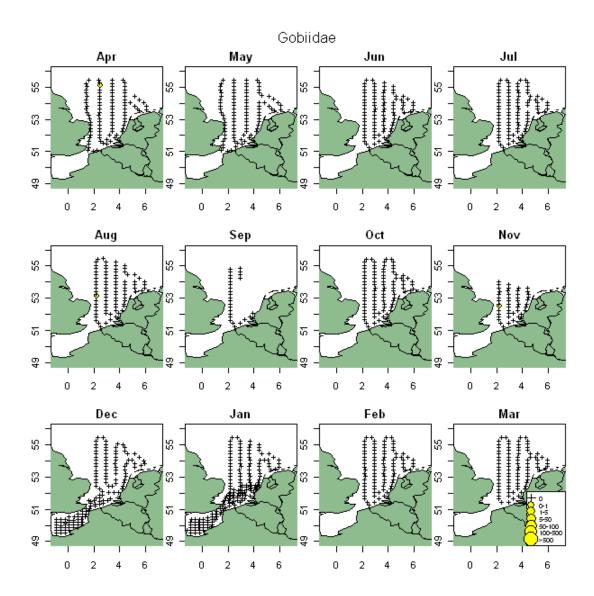


Figure 25d. Spatial and temporal distribution of metamorphosing Gobiidae larvae.

# Black goby Gobius niger

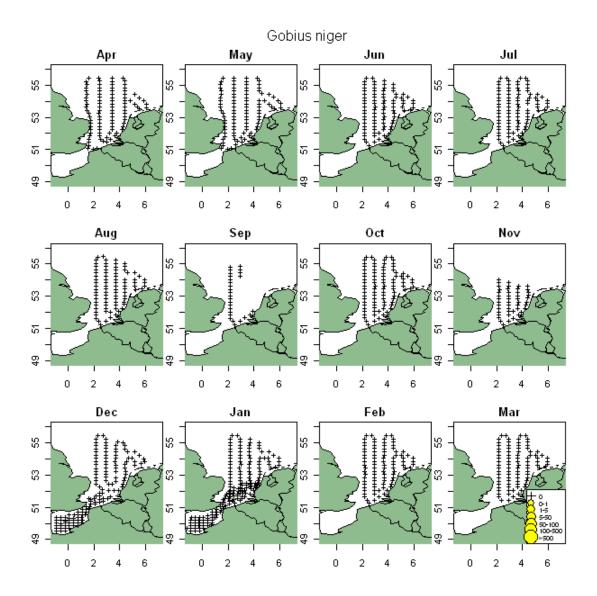


Figure 26a. Spatial and temporal distribution of yolk sac black goby larvae.

Report number C098/11 155 of 377

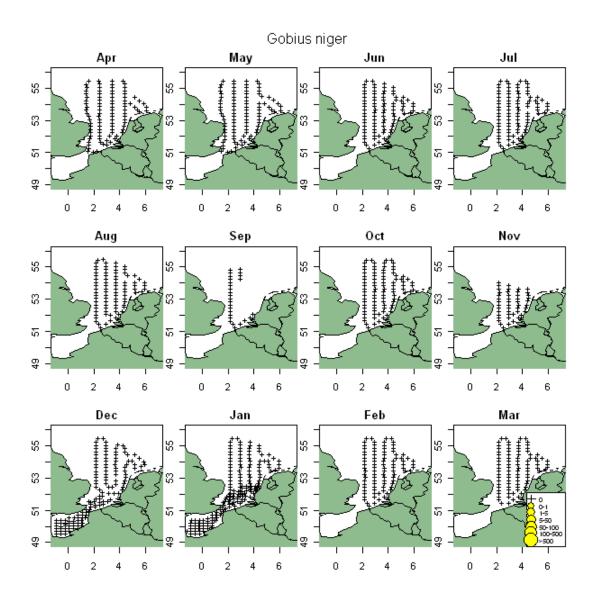


Figure 26b. Spatial and temporal distribution of non-yolk sac black goby larvae.

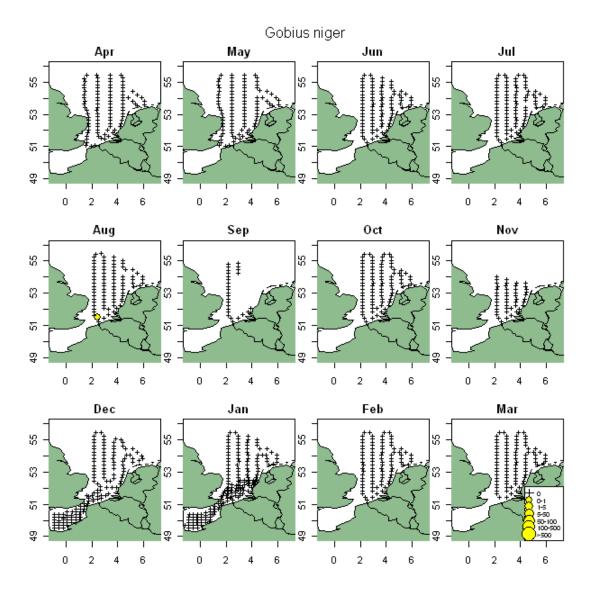


Figure 26c. Spatial and temporal distribution of bent notochord stage black goby larvae.

Report number C098/11 157 of 377

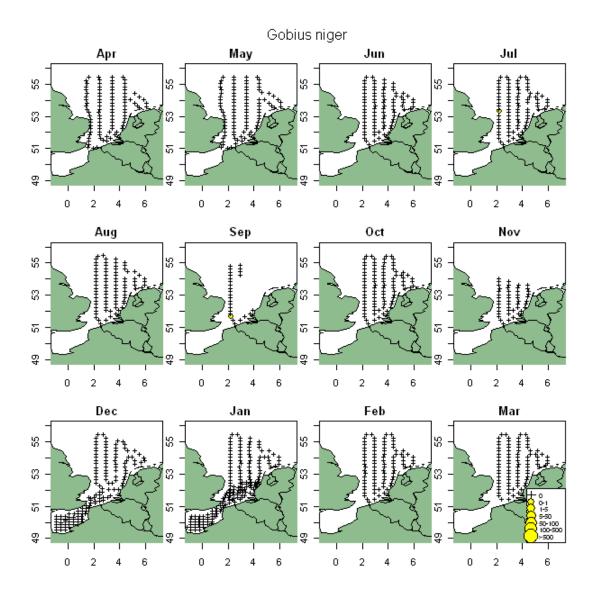


Figure 26d. Spatial and temporal distribution of metamorphosing black goby larvae.

## Two-spotted goby Gobiusculus flavescens

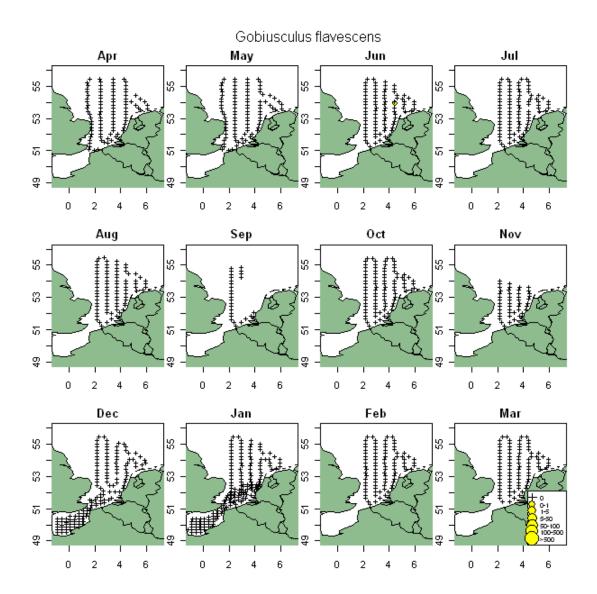


Figure 27a. Spatial and temporal distribution of yolk sac two-spotted goby larvae.

Report number C098/11 159 of 377

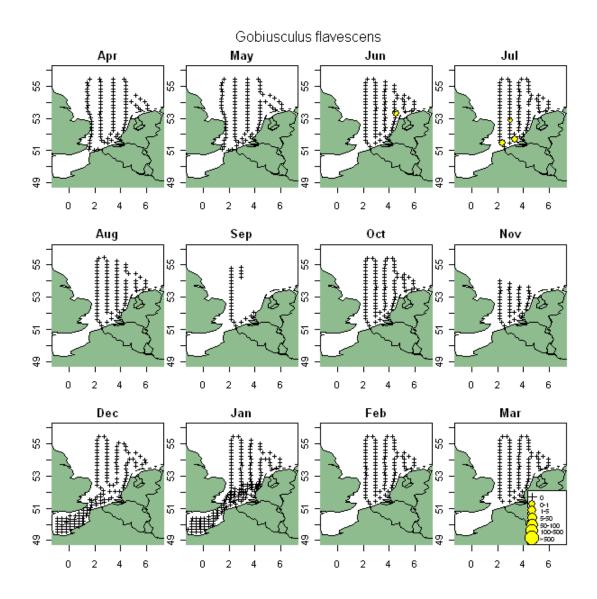


Figure 27b. Spatial and temporal distribution of non-yolk sac two-spotted goby larvae.

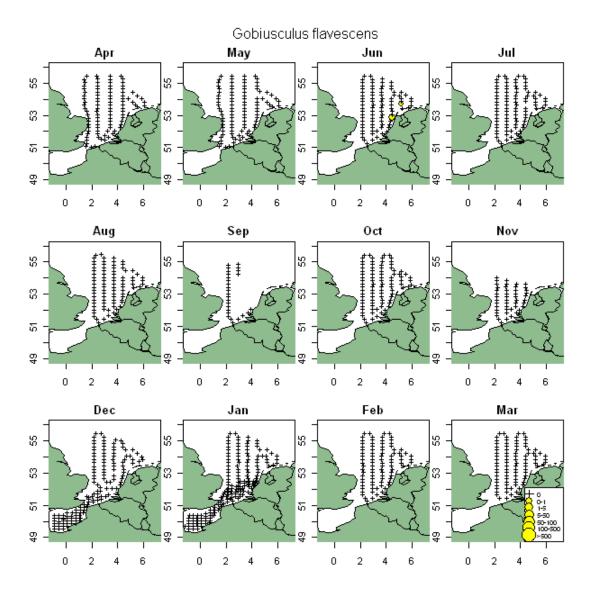


Figure 27c. Spatial and temporal distribution of bent notochord stage two-spotted goby larvae.

Report number C098/11 161 of 377

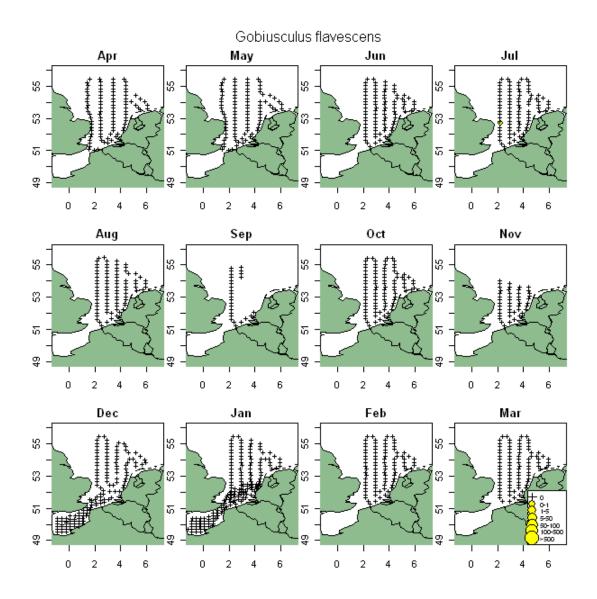


Figure 27d. Spatial and temporal distribution of metamorphosing two-spotted goby larvae.

### Pomatoschistus spp.

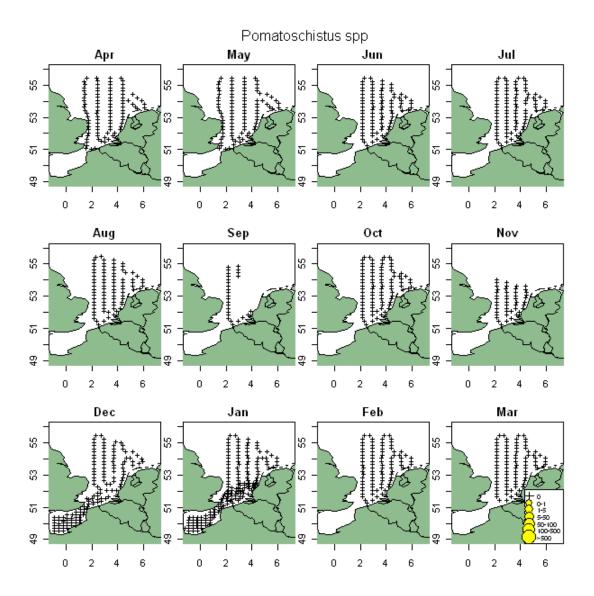


Figure 28a. Spatial and temporal distribution of yolk sac pomatoschistus spp. larvae.

Report number C098/11 163 of 377

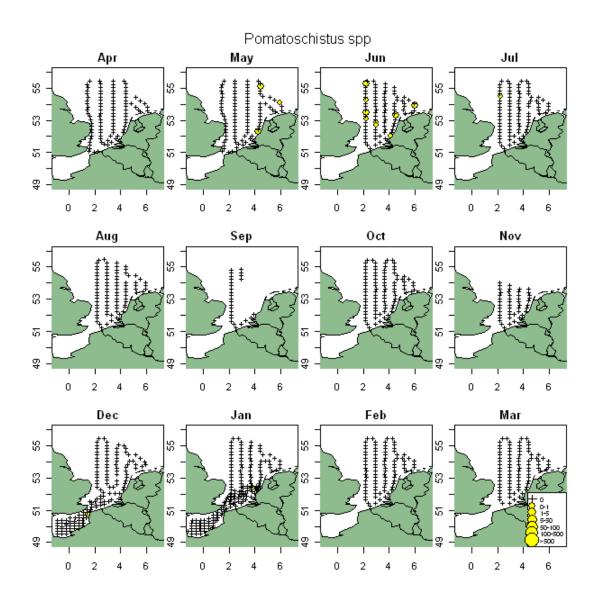


Figure 28b. Spatial and temporal distribution of non-yolk sac pomatoschistus spp. larvae.

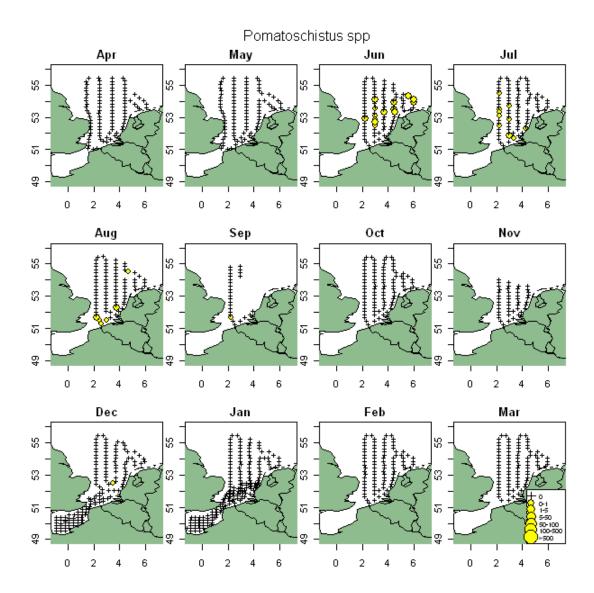


Figure 28c. Spatial and temporal distribution of bent notochord stage pomatoschistus spp. larvae.

Report number C098/11 165 of 377

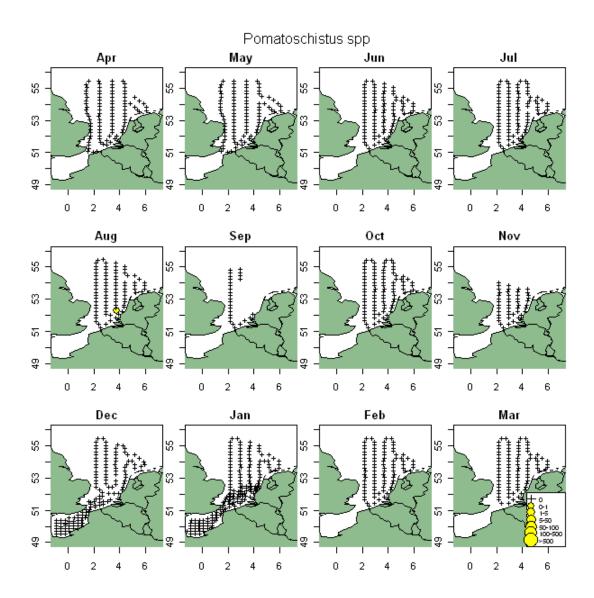


Figure 28d. Spatial and temporal distribution of metamorphosing pomatoschistus spp. larvae.

# Sand goby *Pomatoschistus minutus*

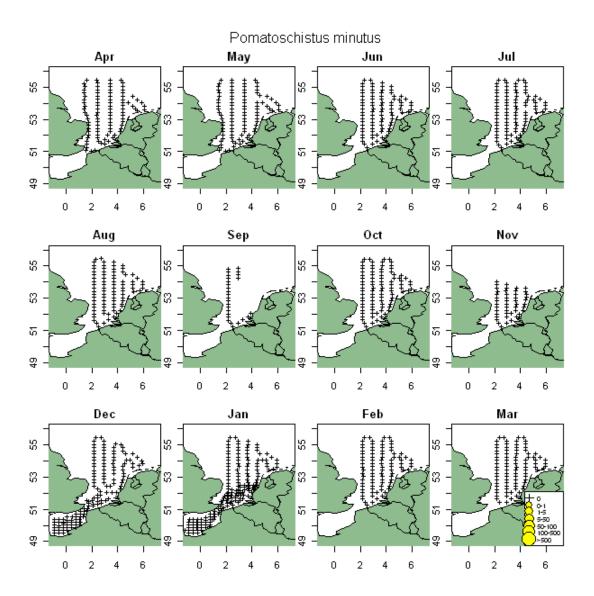


Figure 29a. Spatial and temporal distribution of yolk sac sand goby larvae.

Report number C098/11 167 of 377

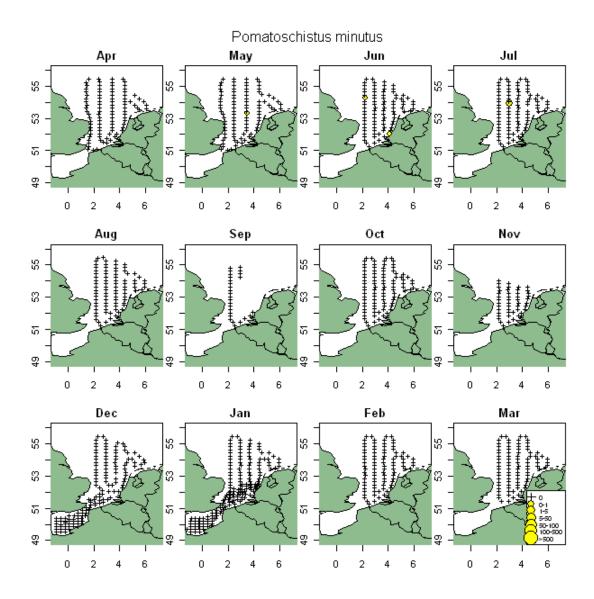


Figure 29b. Spatial and temporal distribution of non-yolk sac sand goby larvae.

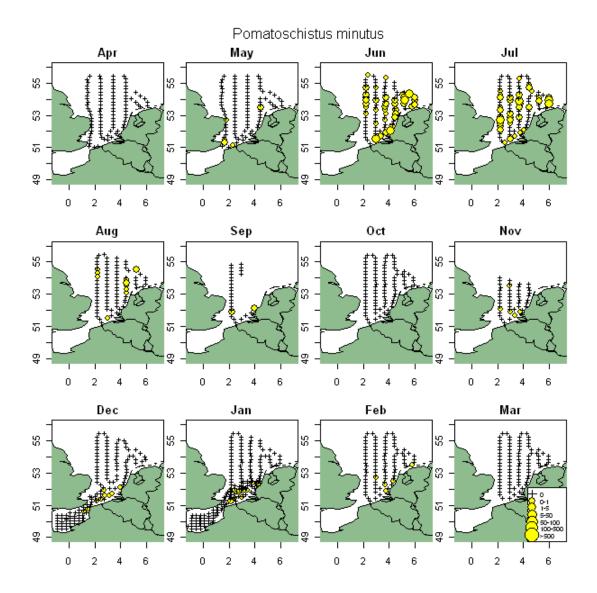


Figure 29c. Spatial and temporal distribution of bent notochord stage sand goby larvae.

Report number C098/11 169 of 377

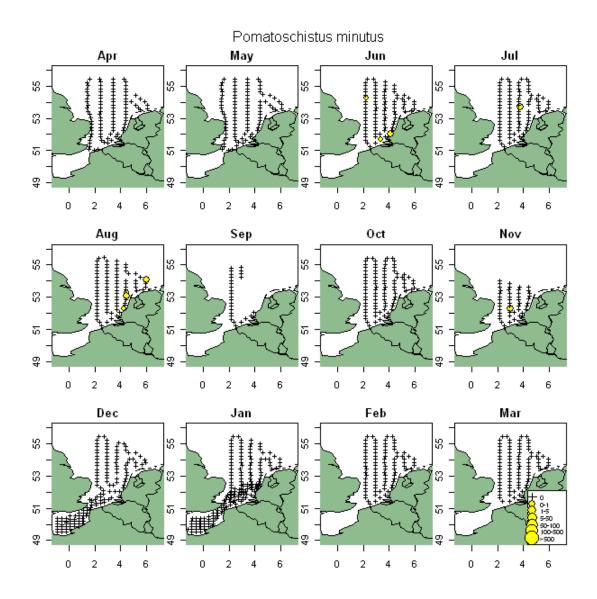


Figure 29d. Spatial and temporal distribution of metamorphosing sand goby larvae.

# Common goby *Pomatoschistus microps*

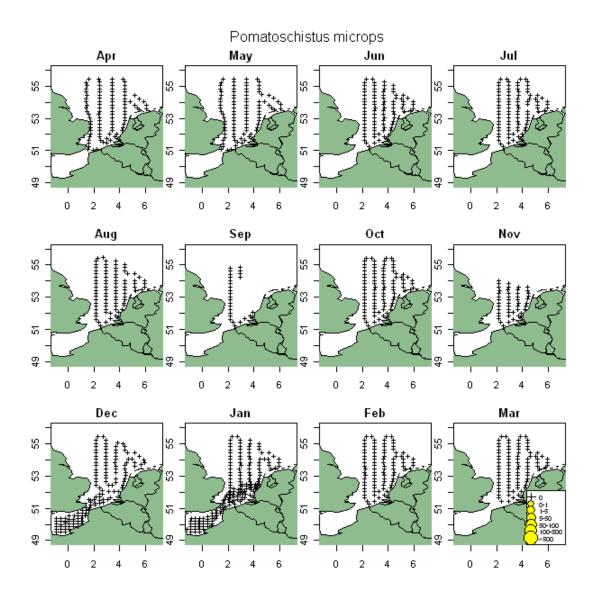


Figure 30a. Spatial and temporal distribution of yolk sac common goby larvae.

Report number C098/11 171 of 377

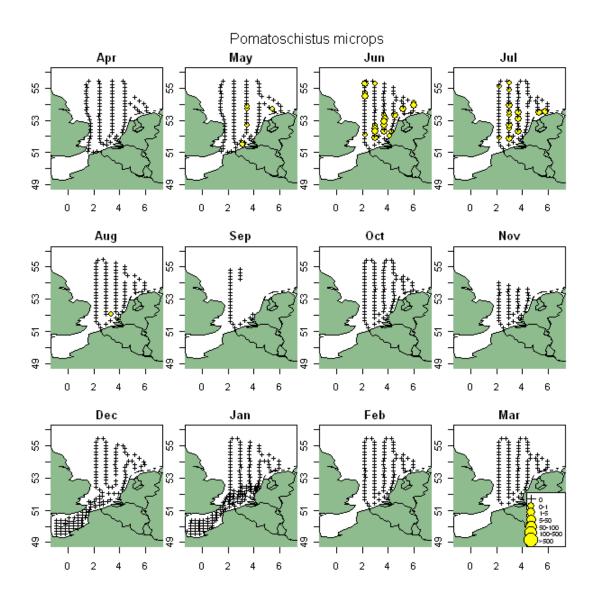


Figure 30b. Spatial and temporal distribution of non-yolk sac common goby larvae.

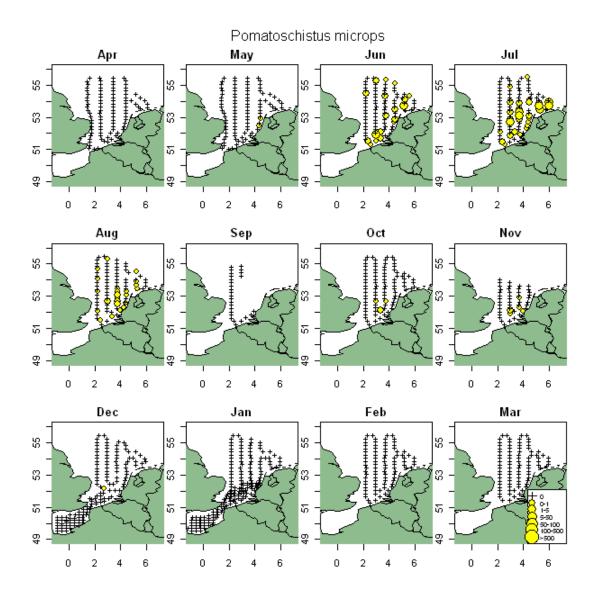


Figure 30c. Spatial and temporal distribution of bent notochord stage common goby larvae.

Report number C098/11 173 of 377

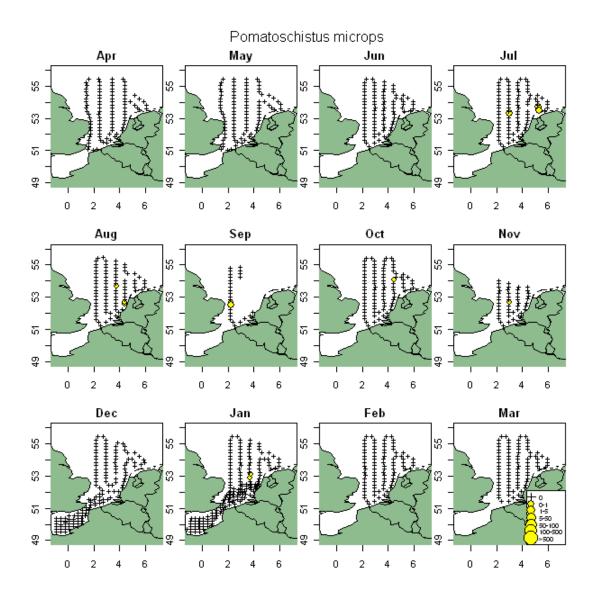


Figure 30d. Spatial and temporal distribution of metamorphosing common goby larvae.

# Painted goby Pomatoschistus pictus

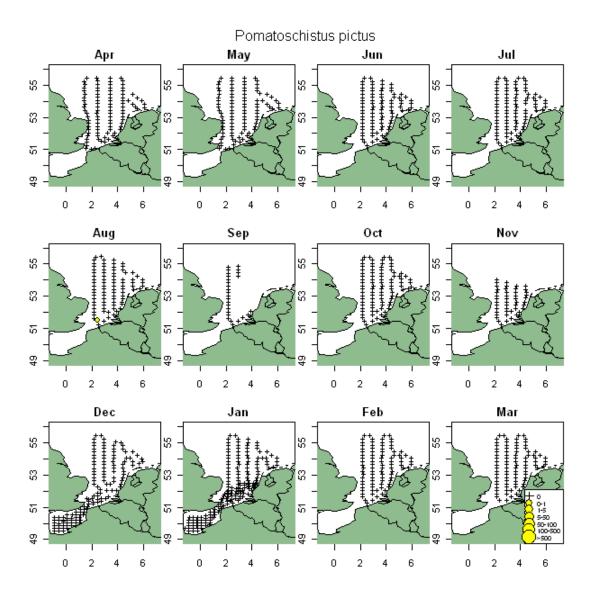


Figure 31a. Spatial and temporal distribution of yolk sac painted goby larvae.

Report number C098/11 175 of 377

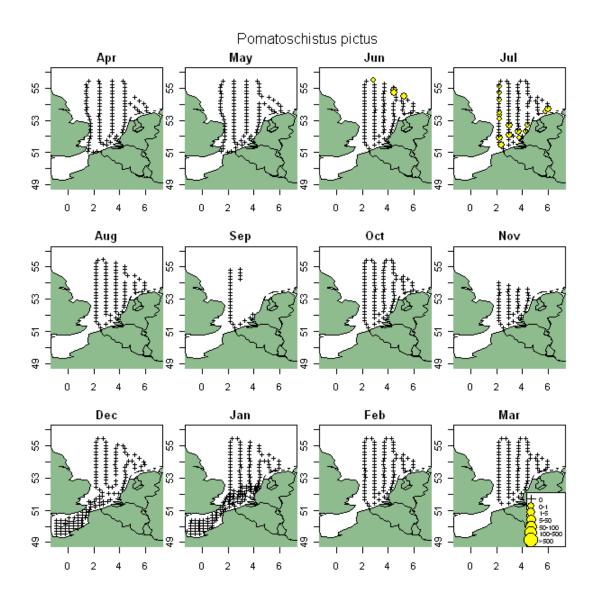


Figure 31b. Spatial and temporal distribution of non-yolk sac painted goby larvae.

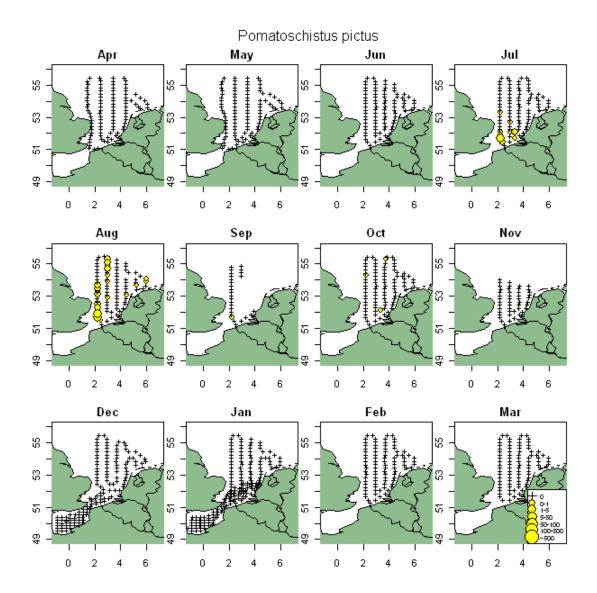


Figure 31c. Spatial and temporal distribution of bent notochord stage painted goby larvae.

Report number C098/11 177 of 377

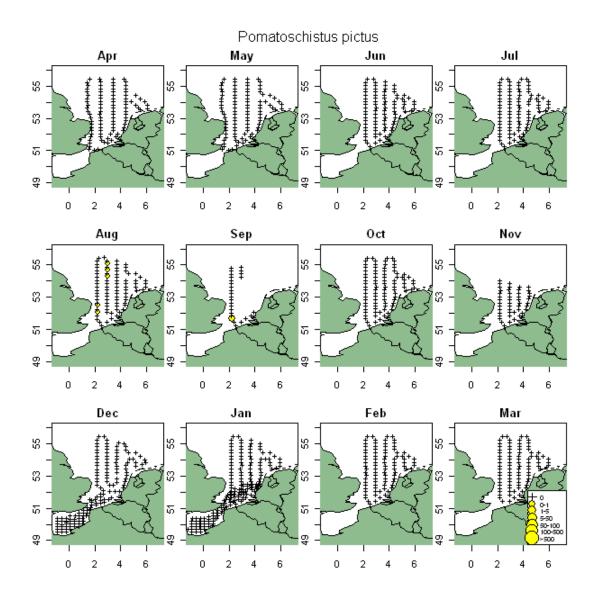


Figure 31d. Spatial and temporal distribution of metamorphosing painted goby larvae.

# Transparent goby Aphia minuta

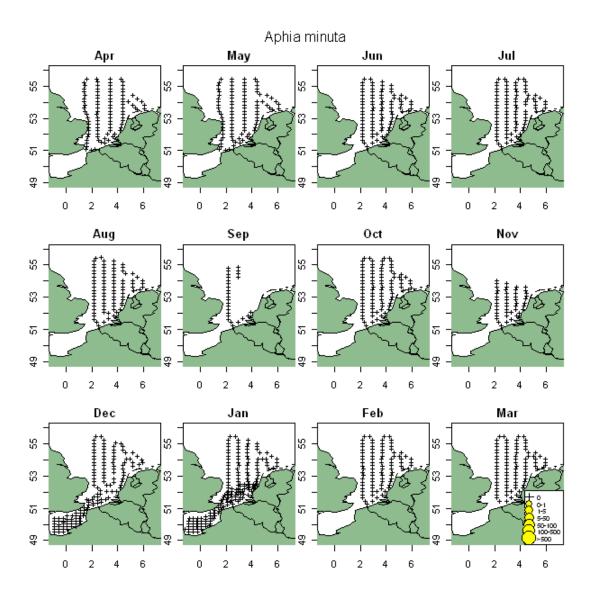


Figure 32a. Spatial and temporal distribution of yolk sac transparent goby larvae.

Report number C098/11 179 of 377

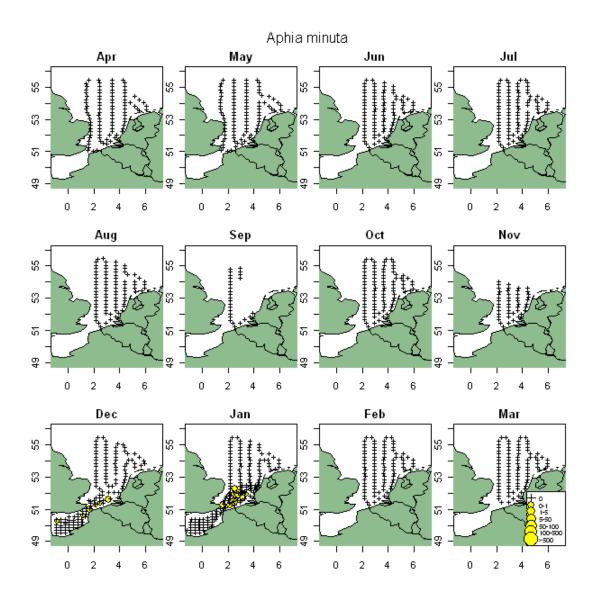


Figure 32b. Spatial and temporal distribution of non-yolk sac transparent goby larvae.

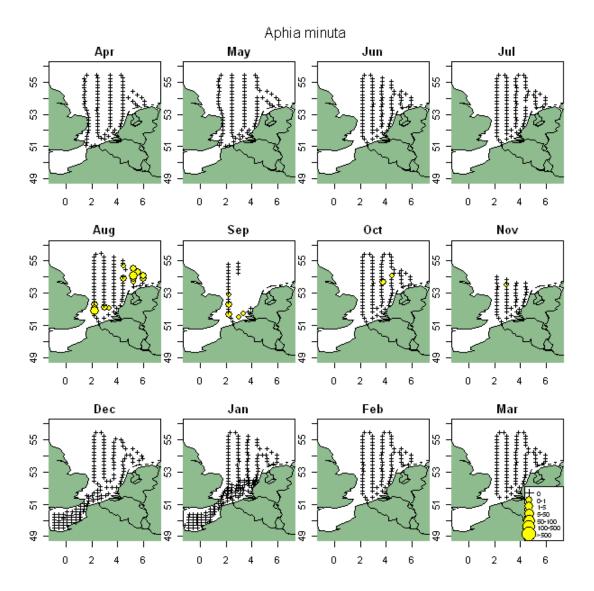


Figure 32c. Spatial and temporal distribution of bent notochord stage transparent goby larvae.

Report number C098/11 181 of 377

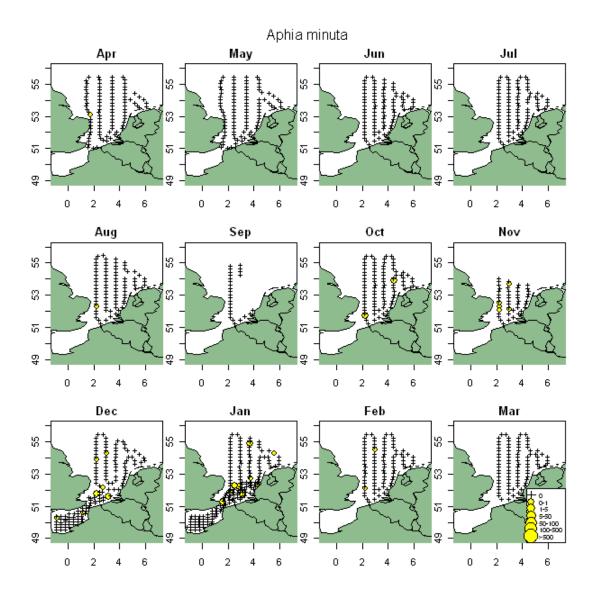


Figure 32d. Spatial and temporal distribution of metamorphosing transparent goby larvae.

## Crystal goby Crystallogobius linearis

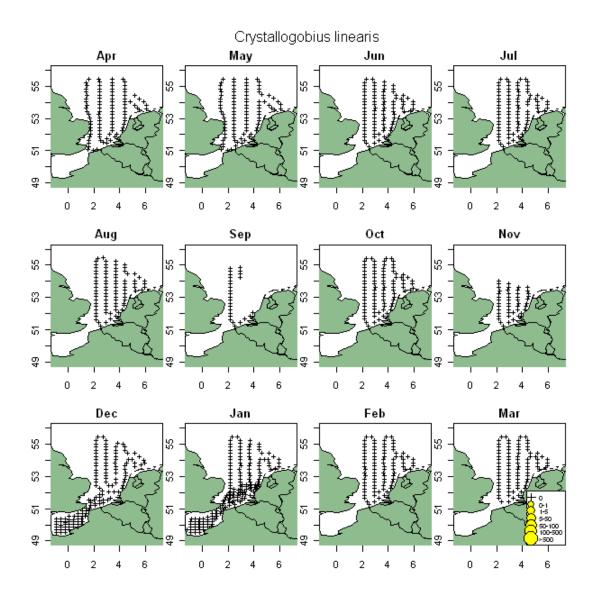


Figure 33a. Spatial and temporal distribution of yolk sac crystal goby larvae.

Report number C098/11 183 of 377

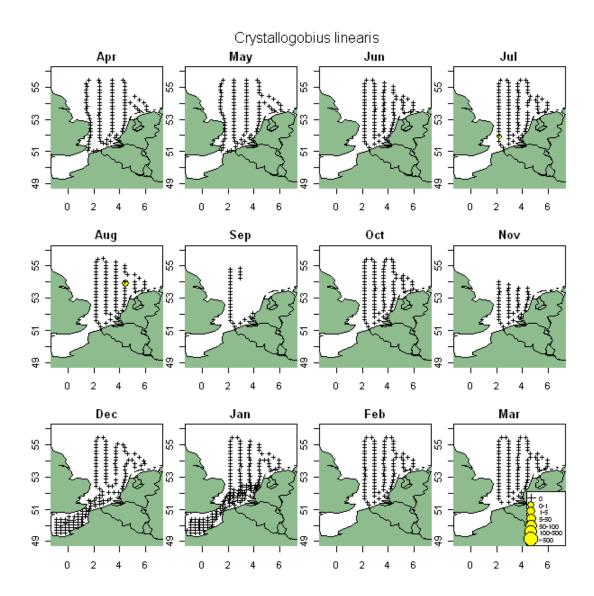


Figure 33b. Spatial and temporal distribution of non-yolk sac crystal goby larvae.

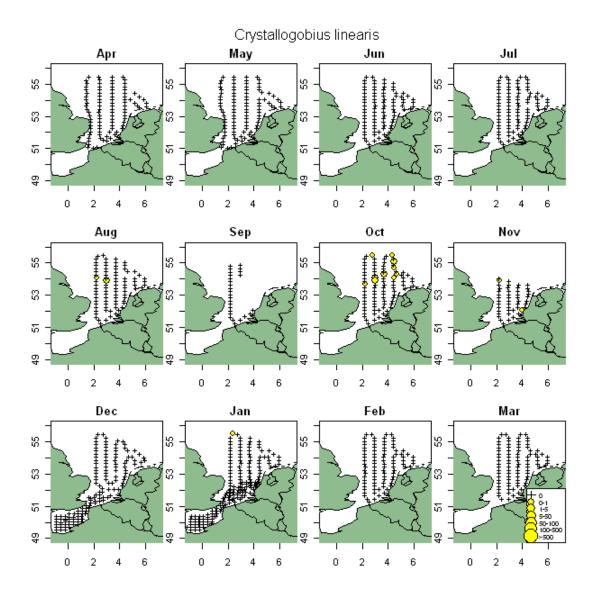


Figure 33c. Spatial and temporal distribution of bent notochord stage crystal goby larvae.

Report number C098/11 185 of 377

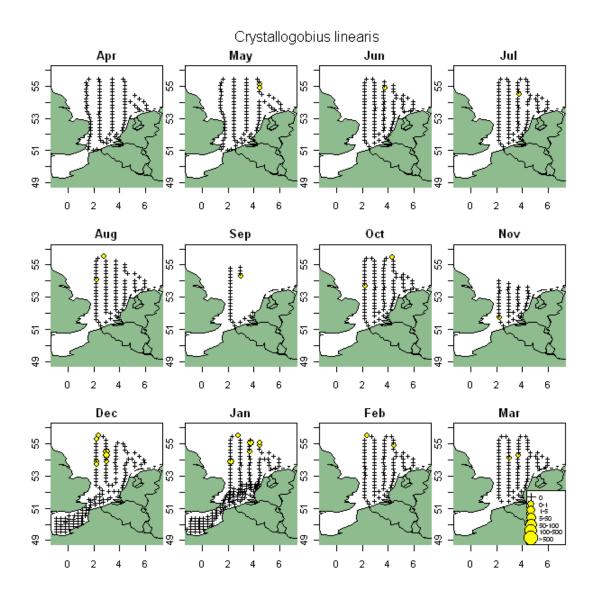


Figure 34d. Spatial and temporal distribution of metamorphosing crystal goby larvae.

## Callionymidae

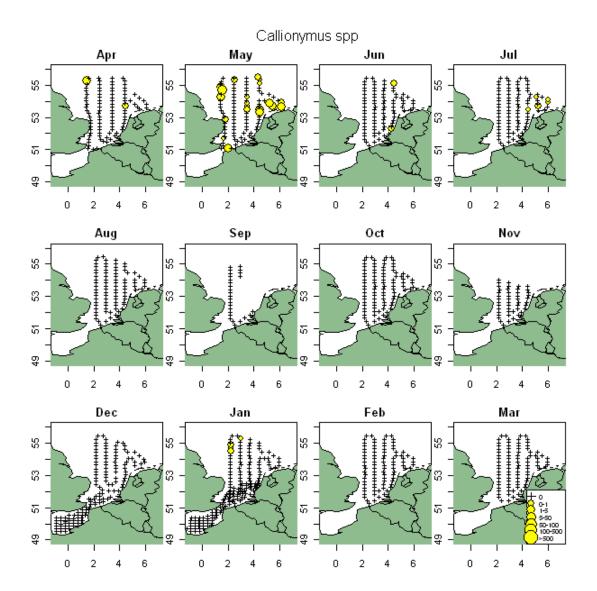


Figure 35a. Spatial and temporal distribution of stage 1 Callionymidae eggs.

Report number C098/11 187 of 377

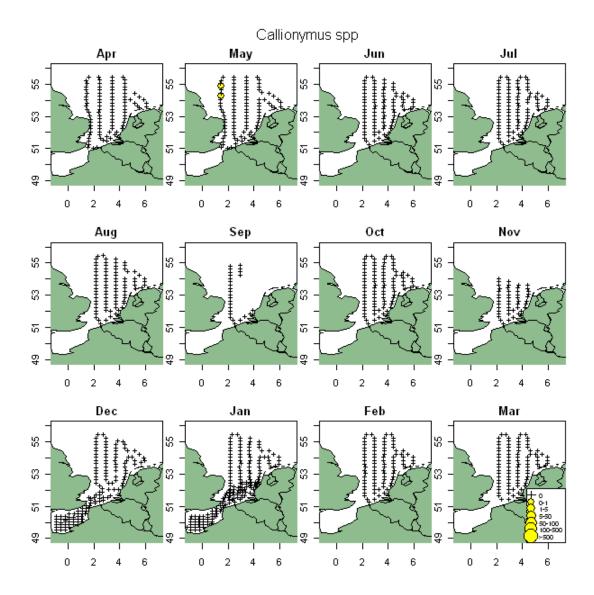


Figure 35b. Spatial and temporal distribution of stage 2 Callionymidae eggs.

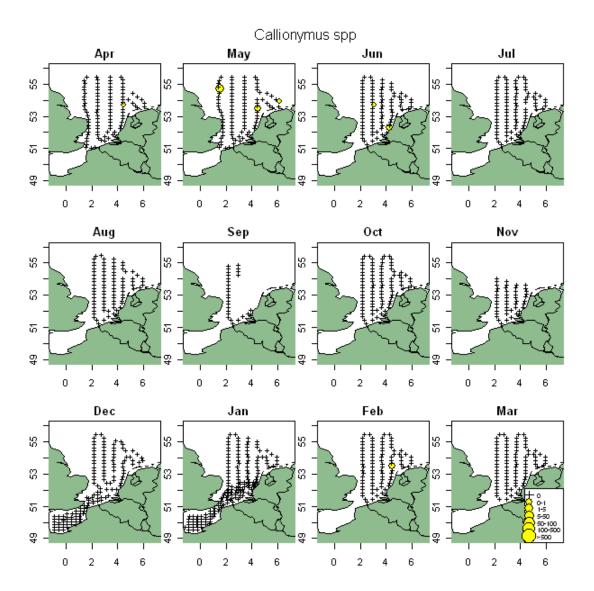


Figure 35c. Spatial and temporal distribution of stage 3 Callionymidae eggs.

Report number C098/11 189 of 377

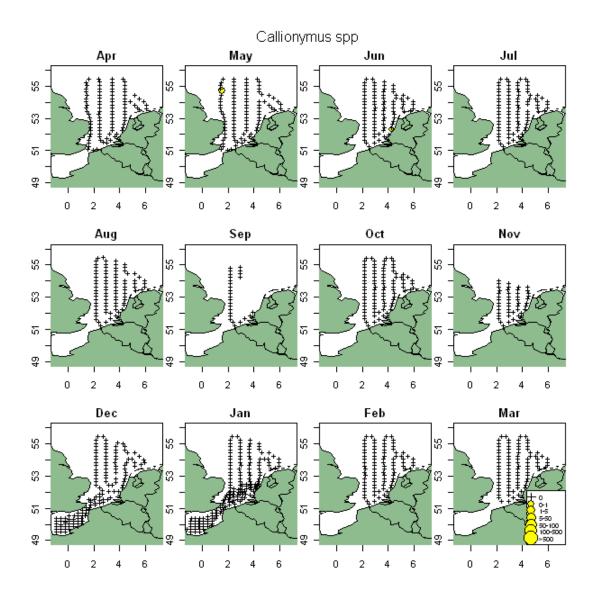


Figure 35d. Spatial and temporal distribution of stage 4 Callionymidae eggs.

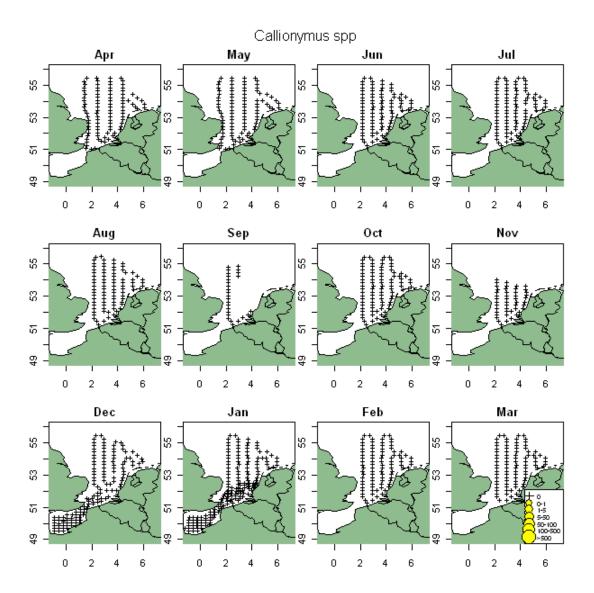


Figure 35e. Spatial and temporal distribution of stage 5 Callionymidae eggs.

Report number C098/11 191 of 377

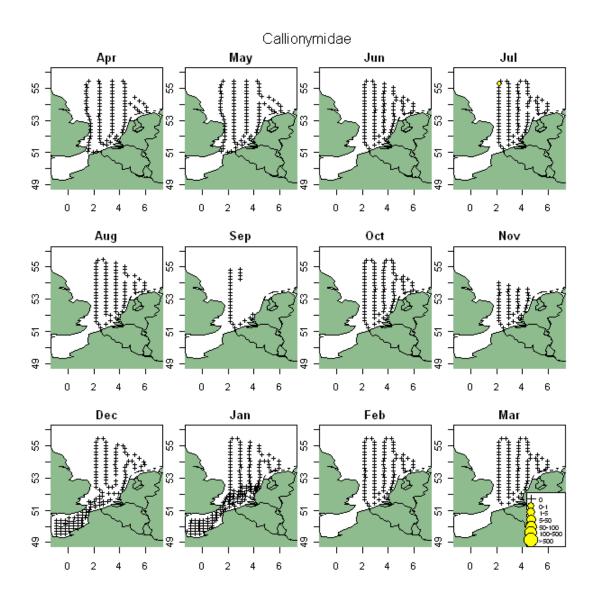


Figure 35f. Spatial and temporal distribution of yolk sac Callionymidae larvae.

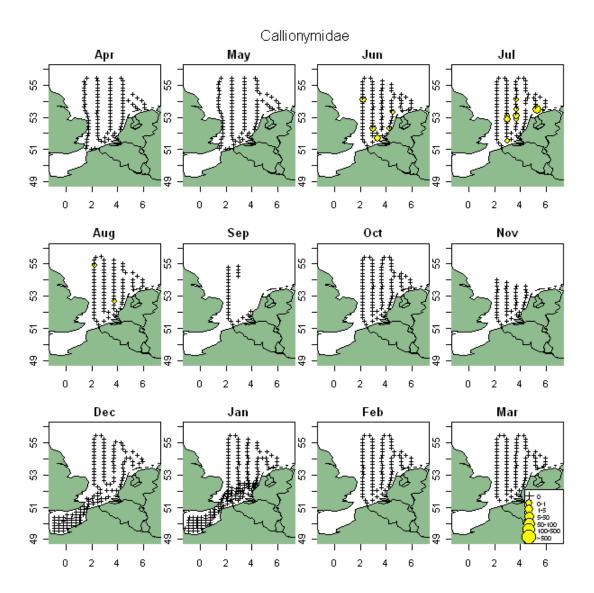


Figure 35g. Spatial and temporal distribution of non-yolk sac Callionymidae larvae.

Report number C098/11 193 of 377

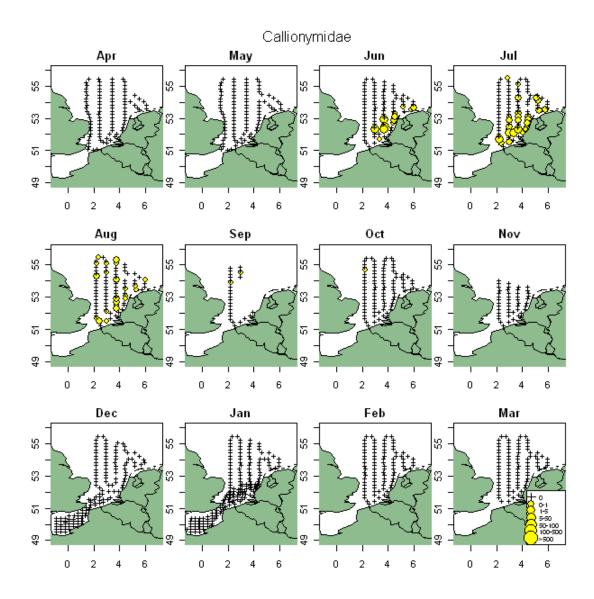


Figure 35h. Spatial and temporal distribution of bent notochord stage Callionymidae larvae.

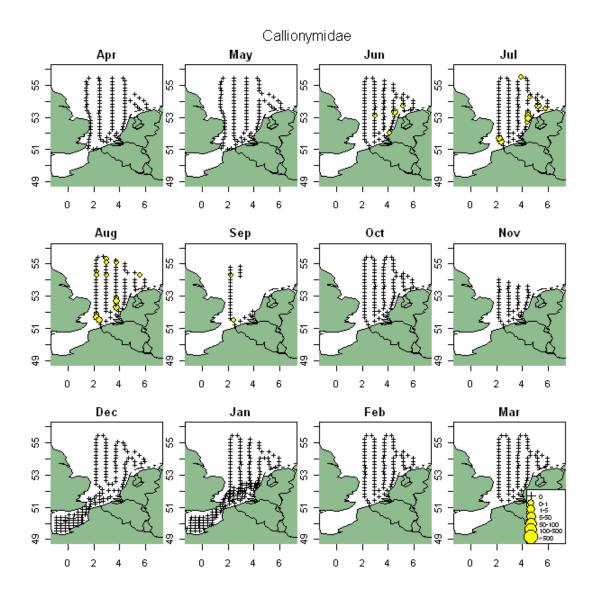


Figure 35i. Spatial and temporal distribution of metamorphosing Callionymidae larvae.

Report number C098/11 195 of 377

# Common dragonet Callionymus lyra

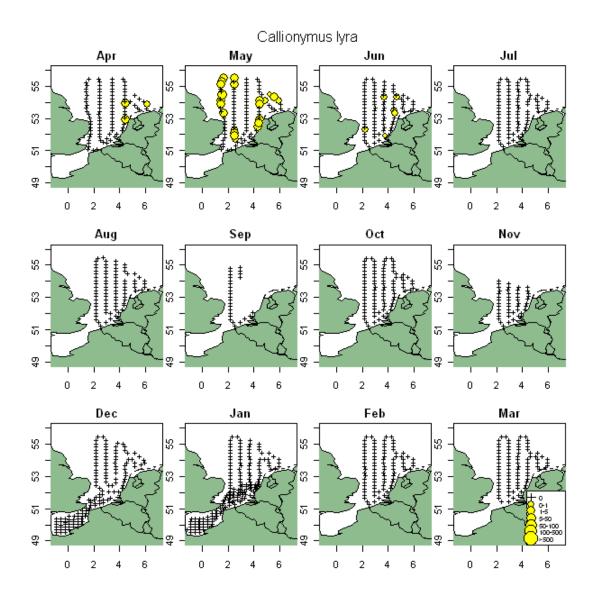


Figure 36a. Spatial and temporal distribution of stage 1 common dragonet eggs.

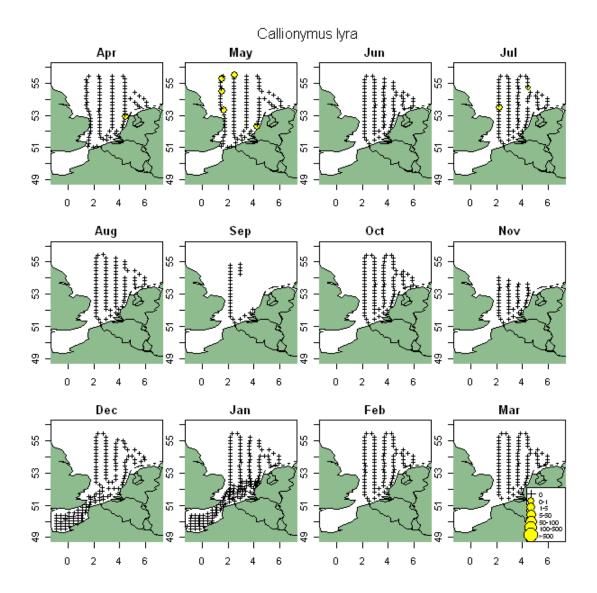


Figure 36b. Spatial and temporal distribution of stage 2 common dragonet eggs.

Report number C098/11 197 of 377

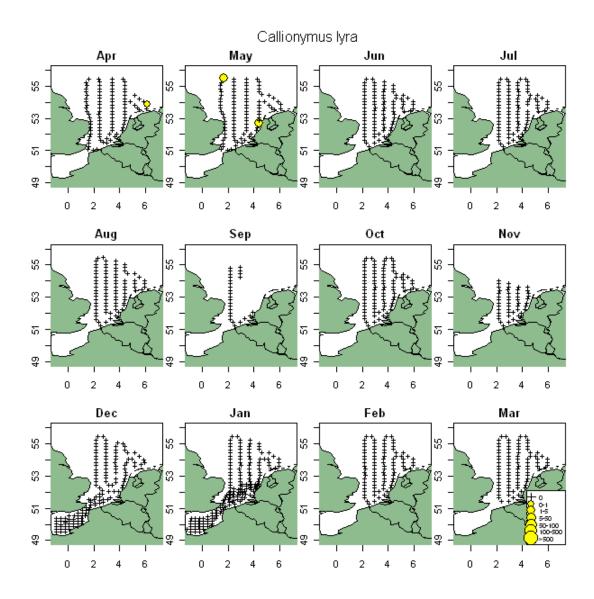


Figure 36c. Spatial and temporal distribution of stage 3 common dragonet eggs.

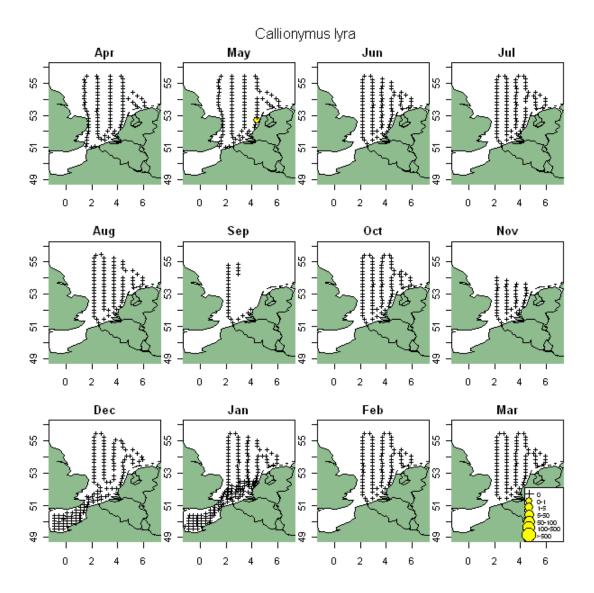


Figure 36d. Spatial and temporal distribution of stage 4 common dragonet eggs.

Report number C098/11 199 of 377

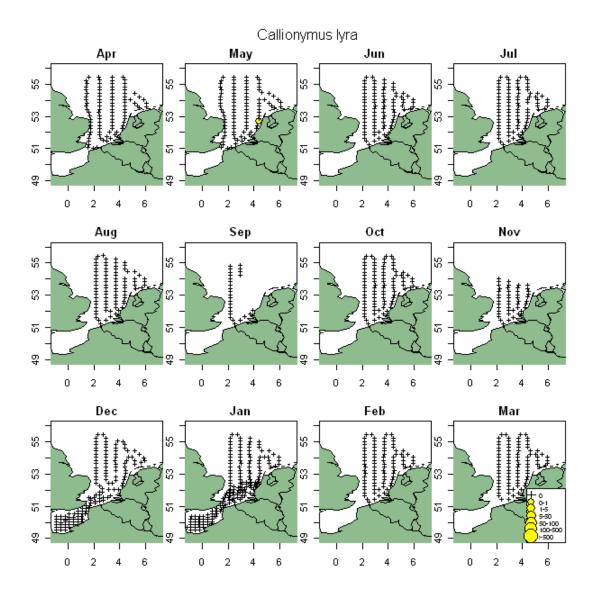


Figure 36e. Spatial and temporal distribution of stage 5 common dragonet eggs.

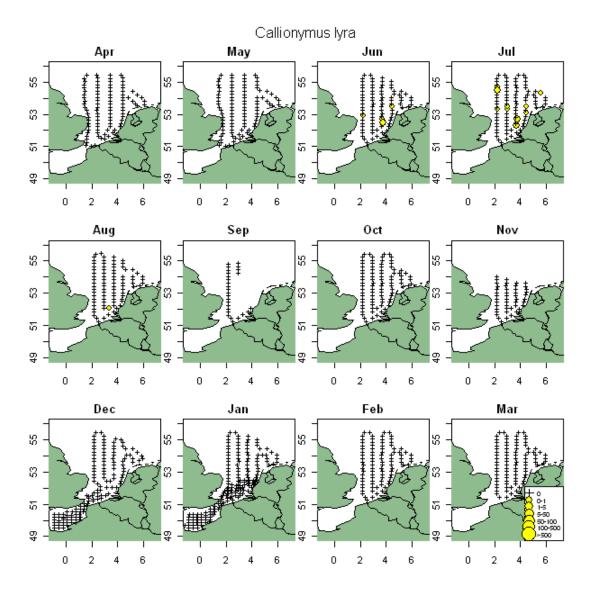


Figure 36f. Spatial and temporal distribution of yolk sac common dragonet larvae.

Report number C098/11 201 of 377

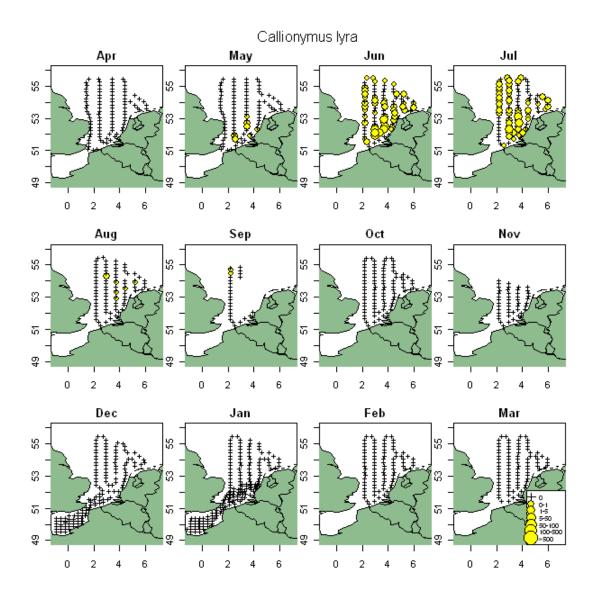


Figure 36g. Spatial and temporal distribution of non-yolk sac common dragonet larvae.

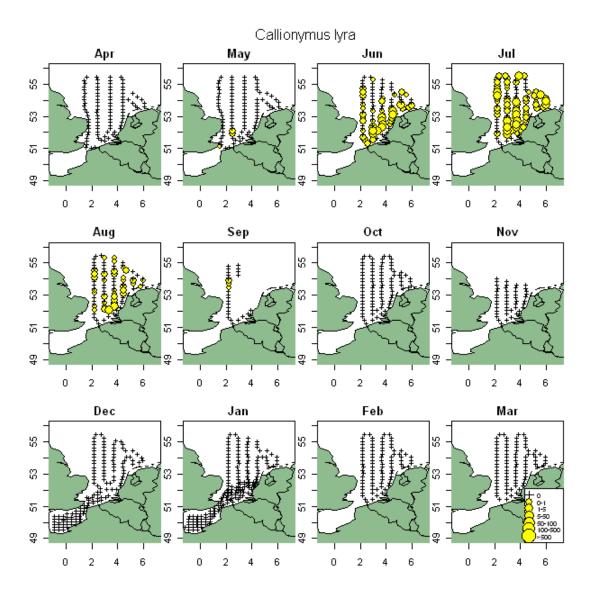


Figure 36h. Spatial and temporal distribution of bent notochord stage common dragonet larvae.

Report number C098/11 203 of 377

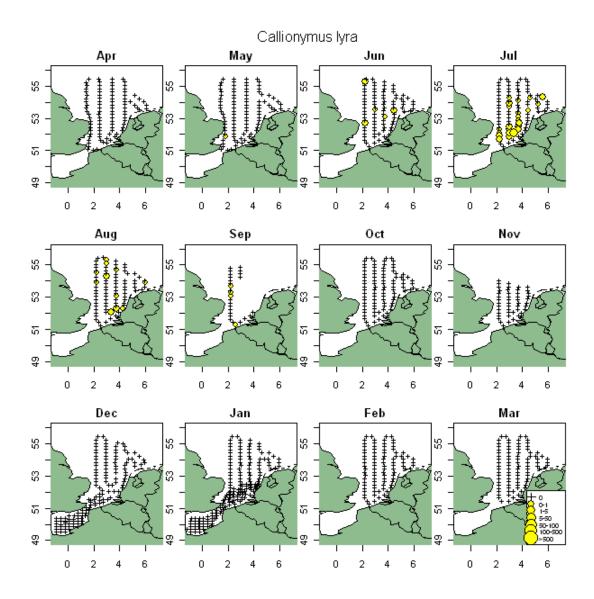


Figure 36i. Spatial and temporal distribution of metamorphosing common dragonet larvae.

#### Spotted dragonet Callionymus maculatus

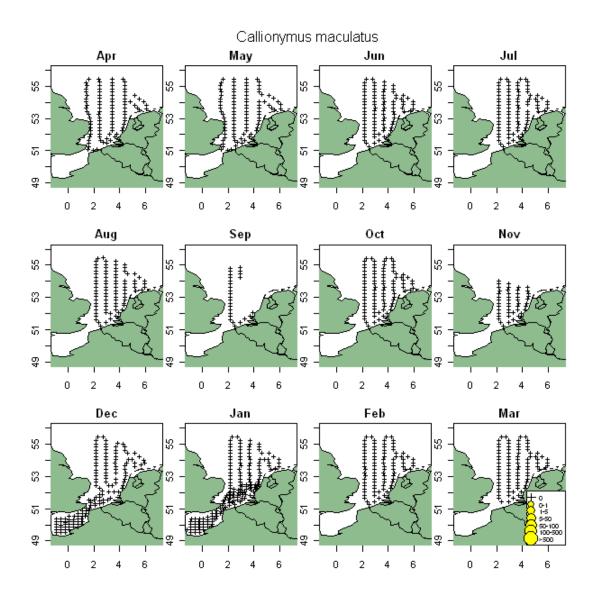


Figure 37a. Spatial and temporal distribution of yolk sac spotted dragonet larvae.

Report number C098/11 205 of 377

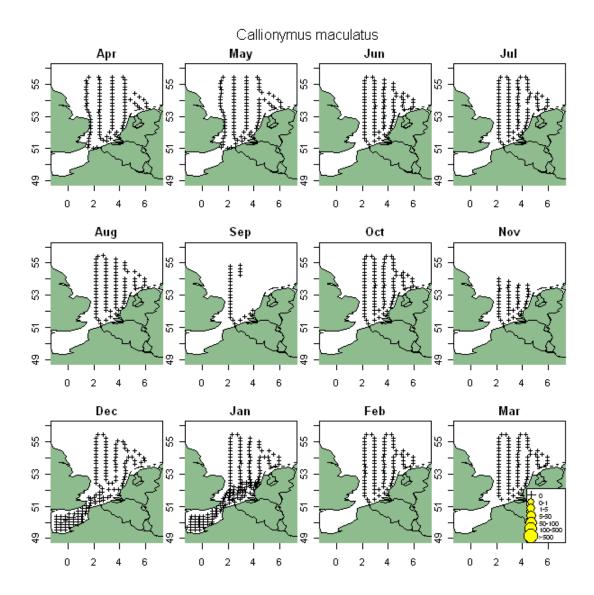


Figure 37b. Spatial and temporal distribution of non-yolk sac spotted dragonet larvae.

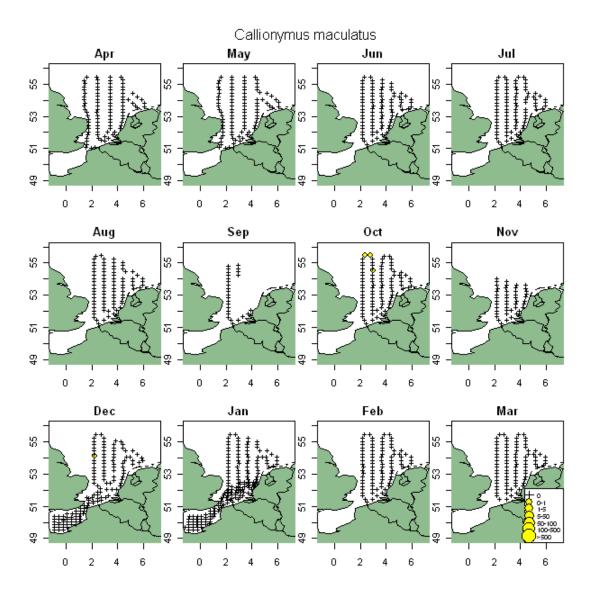


Figure 37c. Spatial and temporal distribution of bent notochord stage spotted dragonet larvae.

Report number C098/11 207 of 377

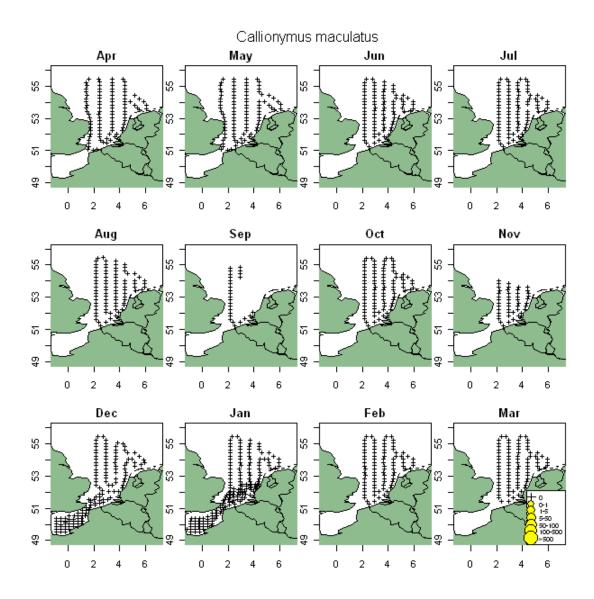


Figure 37d. Spatial and temporal distribution of metamorphosing spotted dragonet larvae.

## Butterfish *Pholis gunnellus*

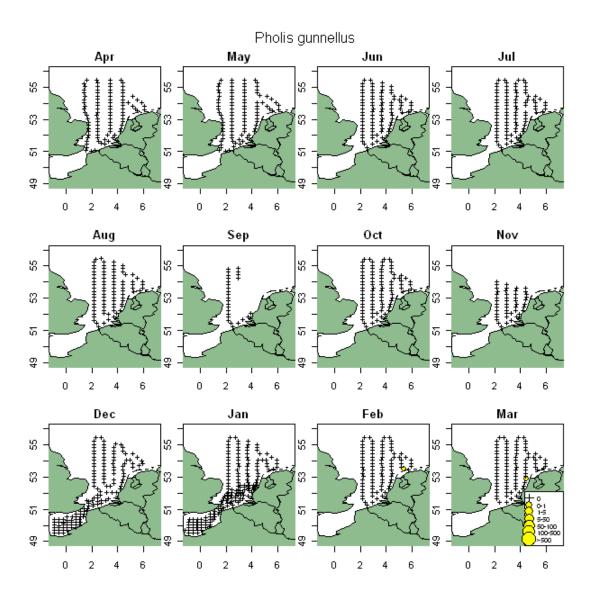


Figure 38a. Spatial and temporal distribution of yolk sac butterfish larvae.

Report number C098/11 209 of 377

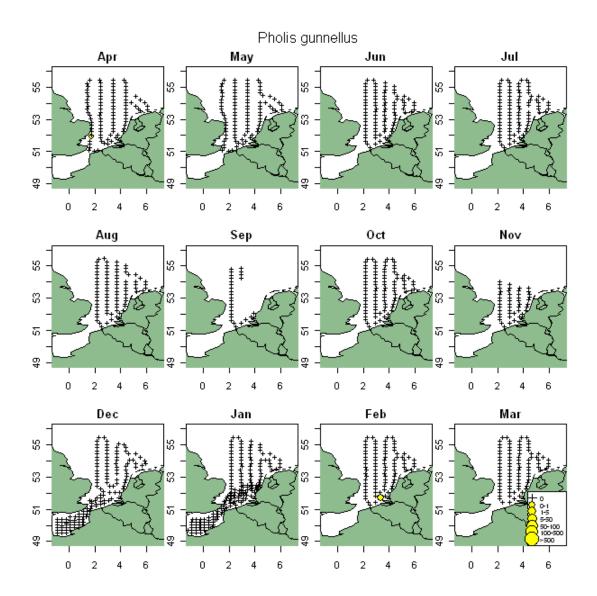


Figure 38b. Spatial and temporal distribution of non-yolk sac butterfish larvae.

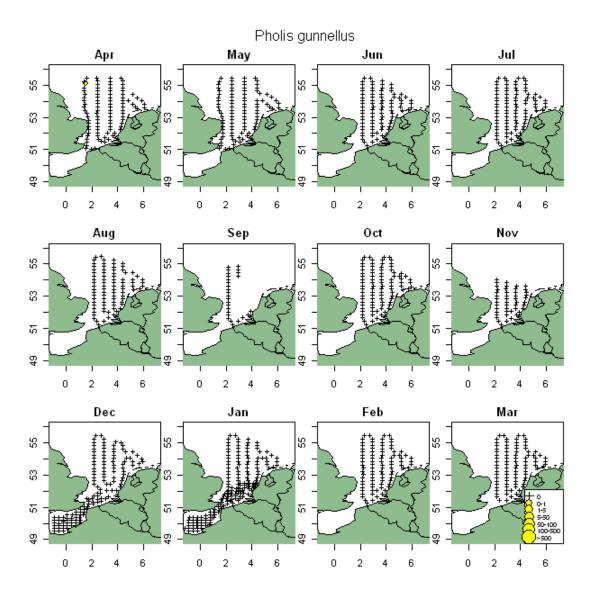


Figure 38c. Spatial and temporal distribution of bent notochord stage butterfish larvae.

Report number C098/11 211 of 377

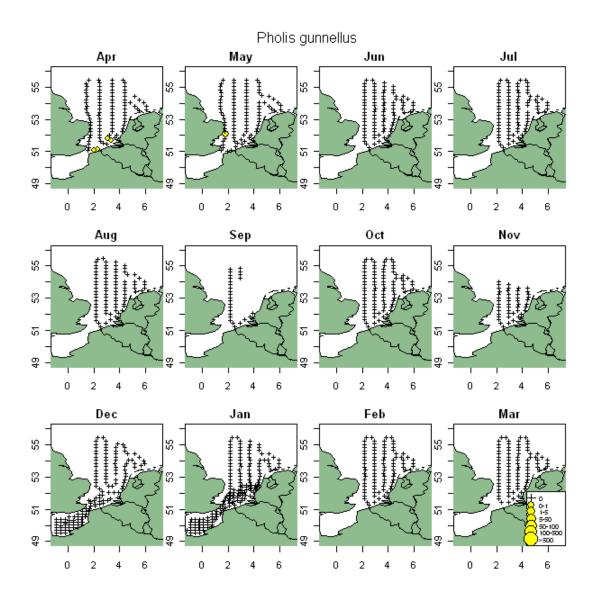


Figure 38d. Spatial and temporal distribution of metamorphosing butterfish larvae.

## Triglidae like

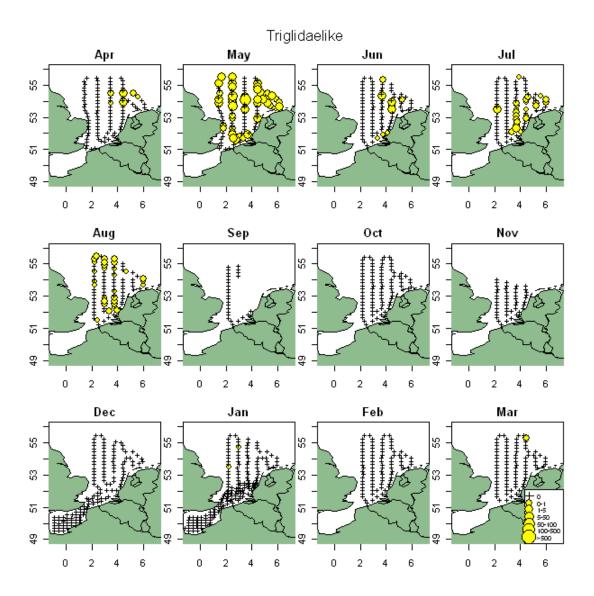


Figure 39a. Spatial and temporal distribution of stage 1 Triglidae like eggs.

Report number C098/11 213 of 377

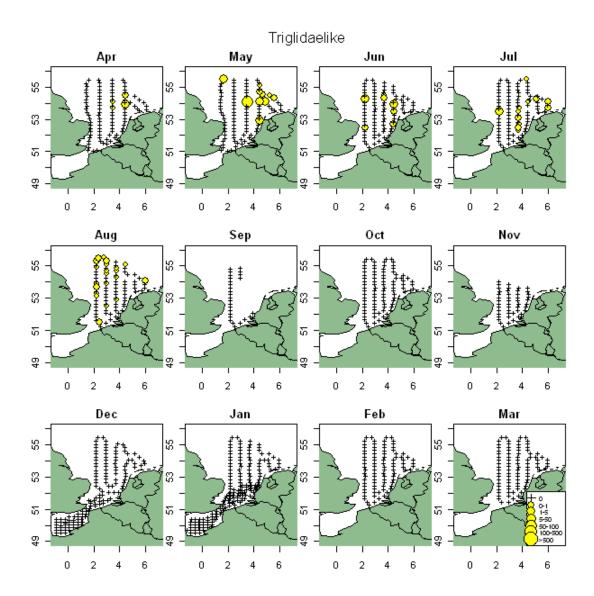


Figure 39b. Spatial and temporal distribution of stage 2 Triglidae like eggs.

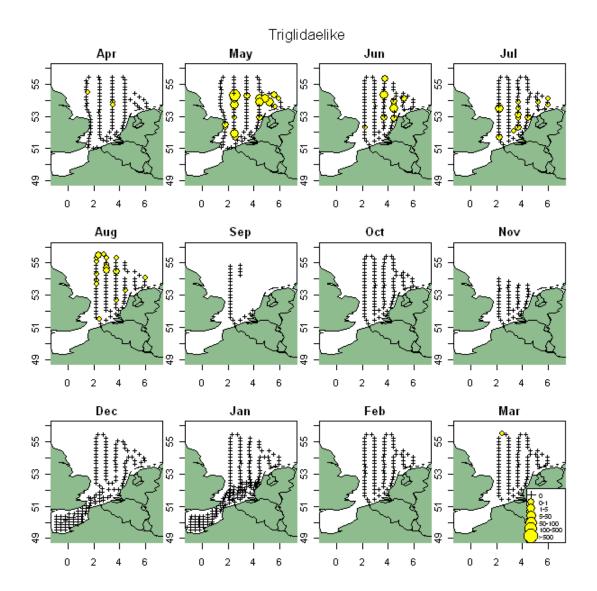


Figure 39c. Spatial and temporal distribution of stage 3 Triglidae like eggs.

Report number C098/11 215 of 377

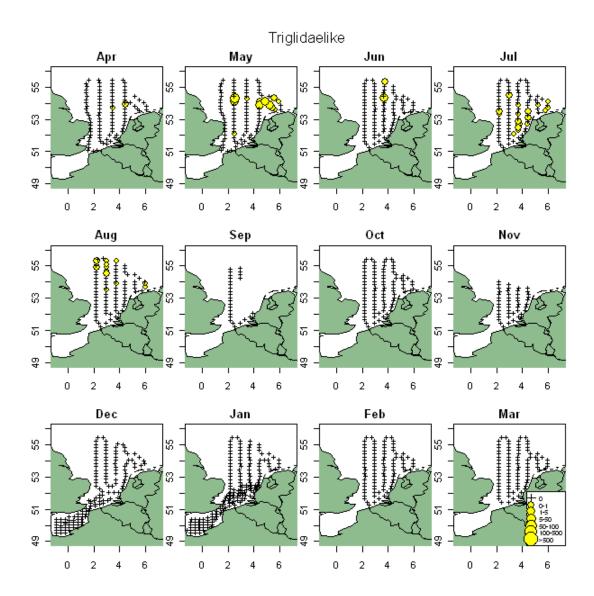


Figure 39d. Spatial and temporal distribution of stage 4 Triglidae like eggs.

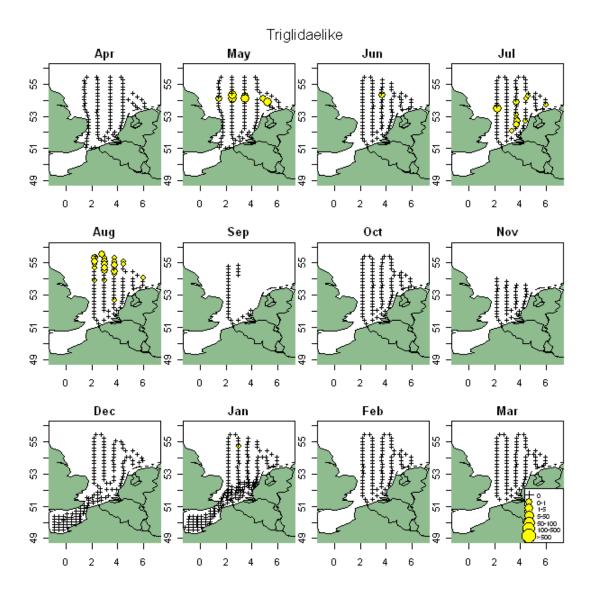


Figure 39e. Spatial and temporal distribution of stage 5 Triglidae like eggs.

Report number C098/11 217 of 377

# Triglidae

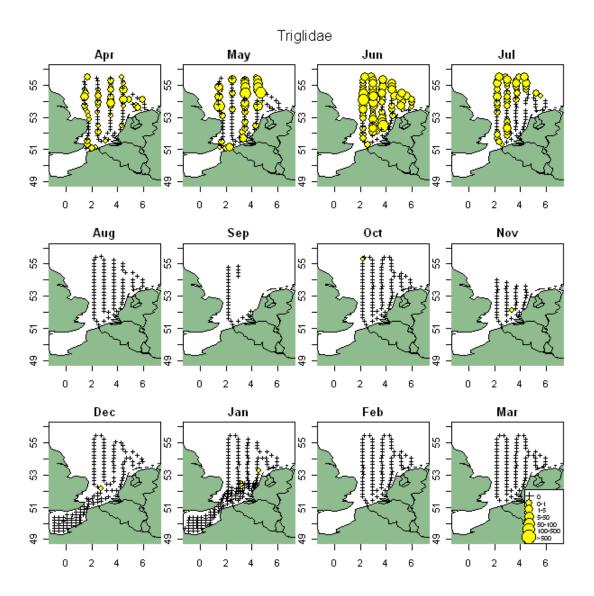


Figure 40a. Spatial and temporal distribution of stage 1 triglidae eggs.

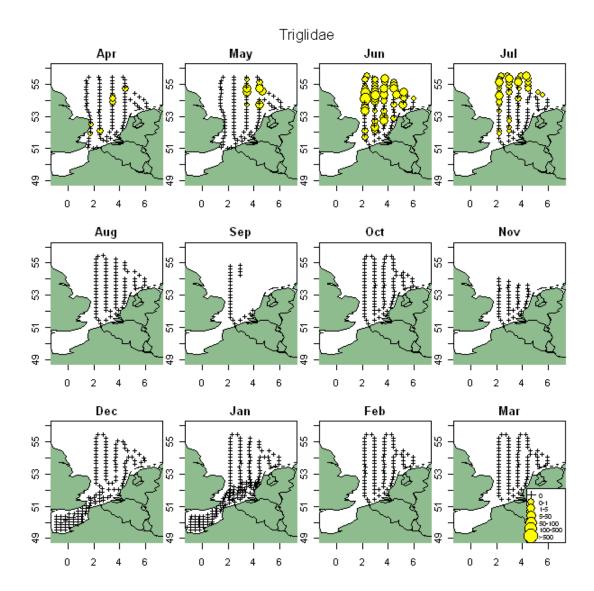


Figure 40b. Spatial and temporal distribution of stage 2 triglidae eggs.

Report number C098/11 219 of 377

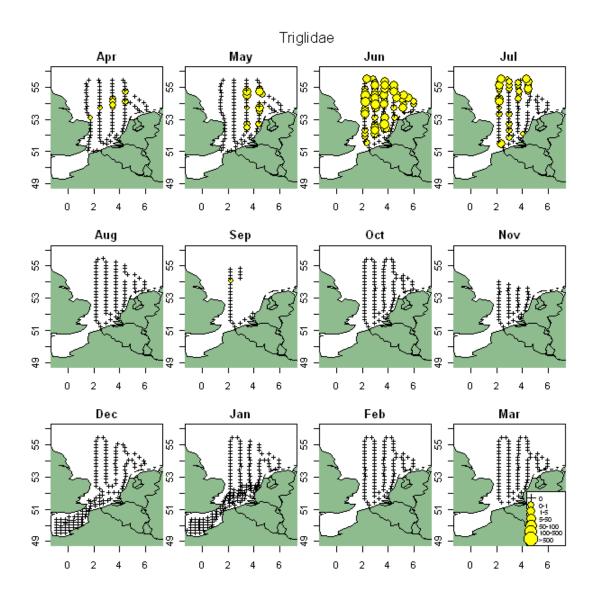


Figure 40c. Spatial and temporal distribution of stage 3 triglidae eggs.

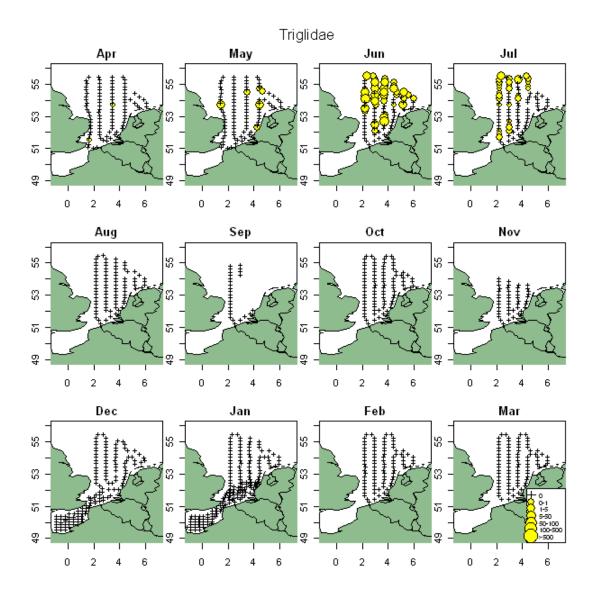


Figure 40d. Spatial and temporal distribution of stage 4 triglidae eggs.

Report number C098/11 221 of 377

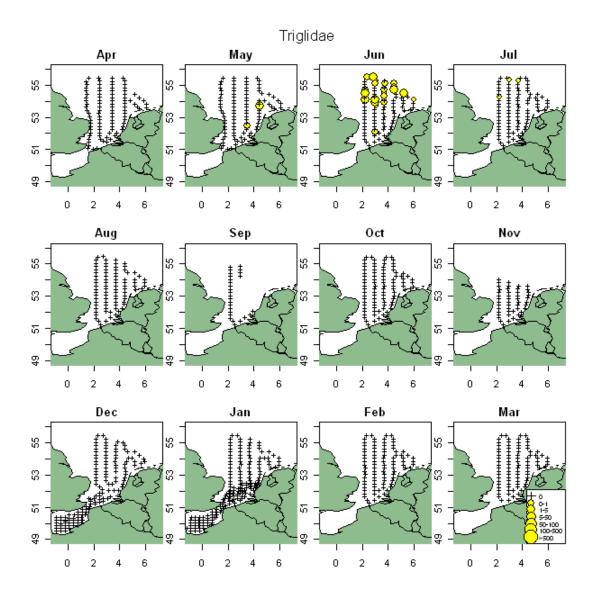


Figure 40e. Spatial and temporal distribution of stage 5 triglidae eggs.

## Grey gurnard Eutrigla gurnardus

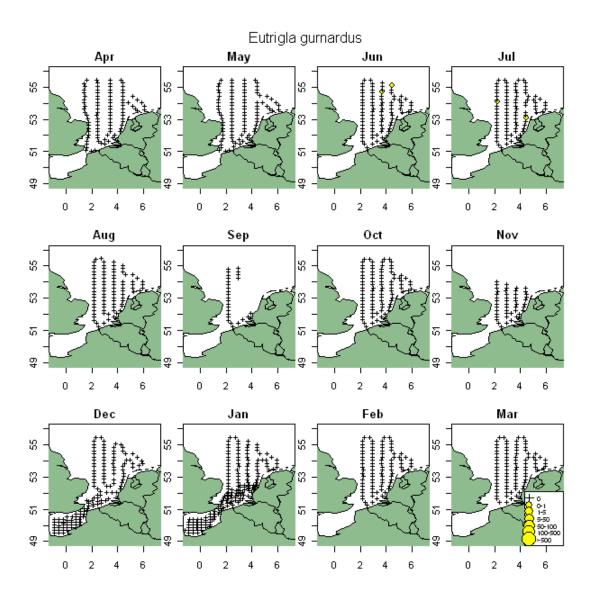


Figure 41a. Spatial and temporal distribution of yolk sac grey gurnard larvae.

Report number C098/11 223 of 377

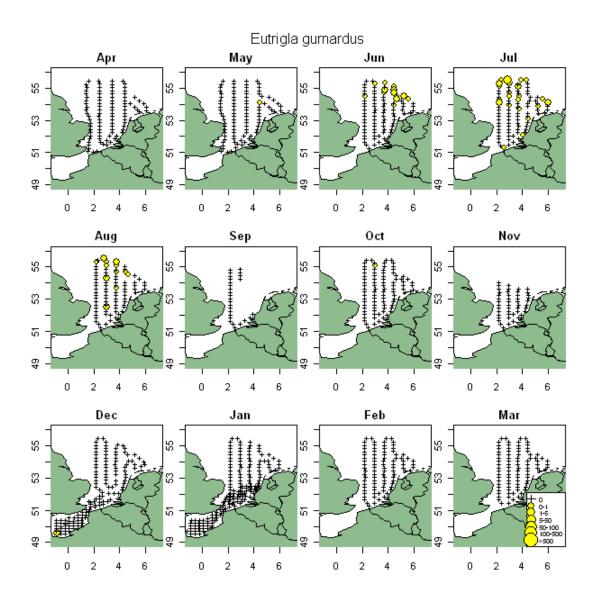


Figure 41b. Spatial and temporal distribution of non-yolk sac grey gurnard larvae.

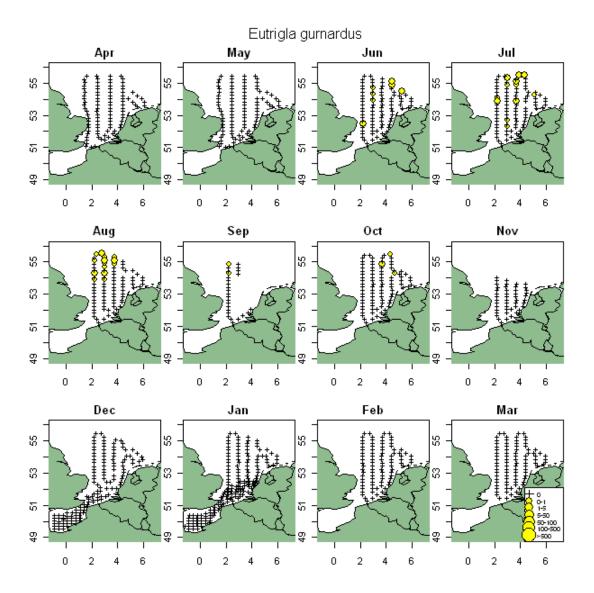


Figure 41c. Spatial and temporal distribution of bent notochord stage grey gurnard larvae.

Report number C098/11 225 of 377

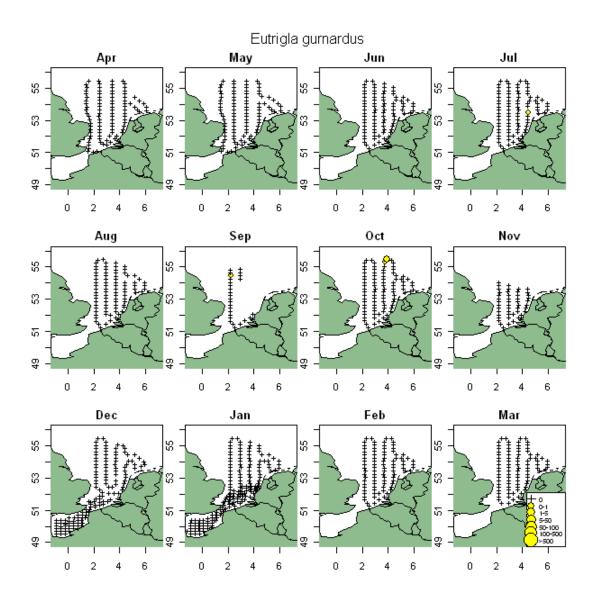


Figure 41d. Spatial and temporal distribution of metamorphosing grey gurnard larvae.

## Tub gurnard Trigla lucerna

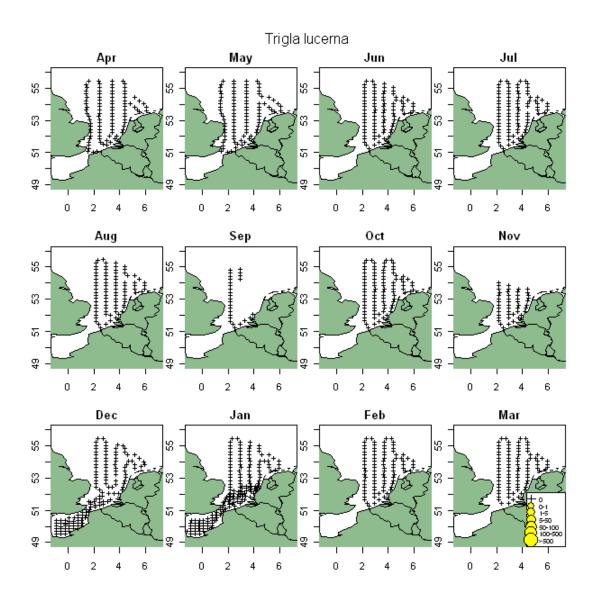


Figure 42a. Spatial and temporal distribution of yolk sac tub gurnard larvae.

Report number C098/11 227 of 377

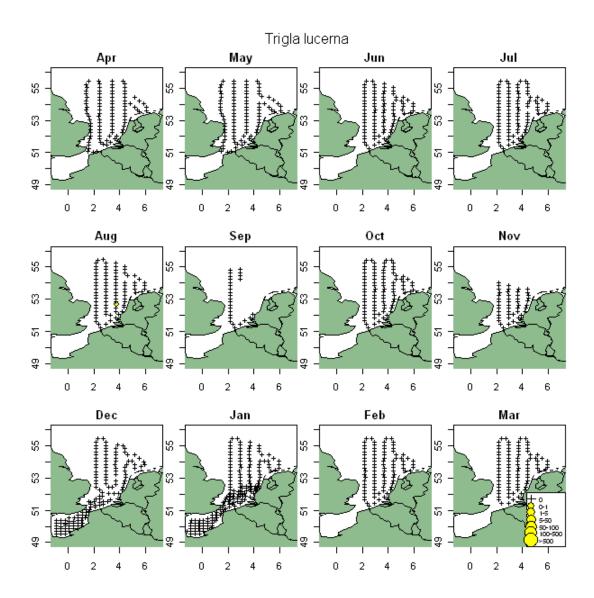


Figure 42b. Spatial and temporal distribution of non-yolk sac tub gurnard larvae.

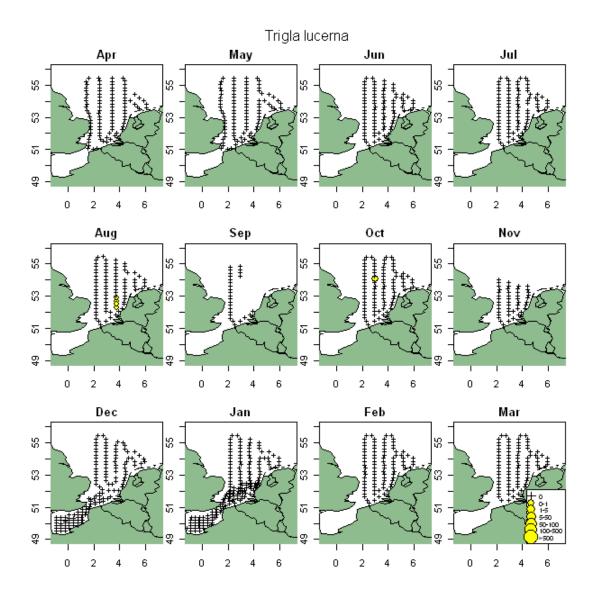


Figure 42c. Spatial and temporal distribution of bent notochord stage tub gurnard larvae.

Report number C098/11 229 of 377

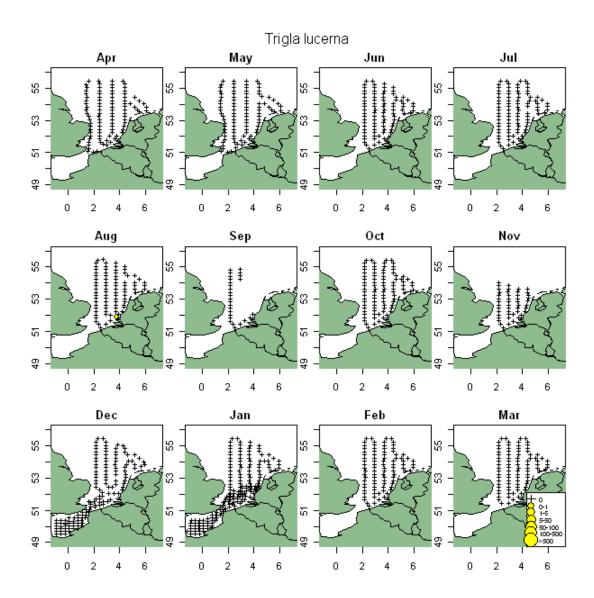


Figure 42d. Spatial and temporal distribution of metamorphosing tub gurnard larvae.

## Bull-rout Myoxocephalus scorpius

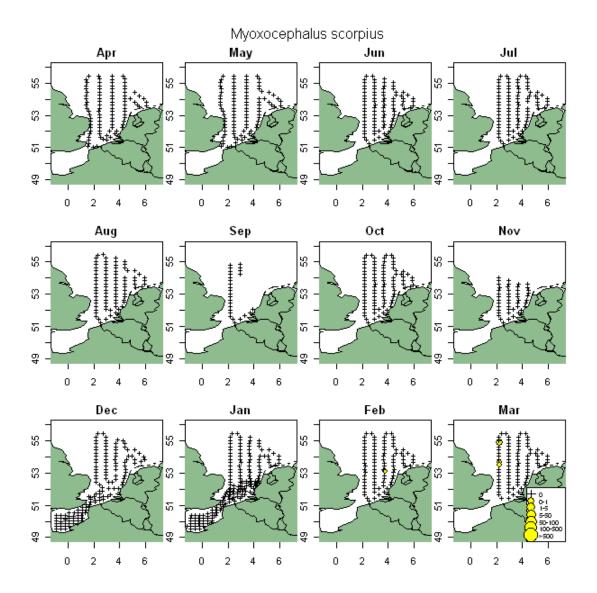


Figure 43a. Spatial and temporal distribution of yolk sac bull-rout larvae.

Report number C098/11 231 of 377

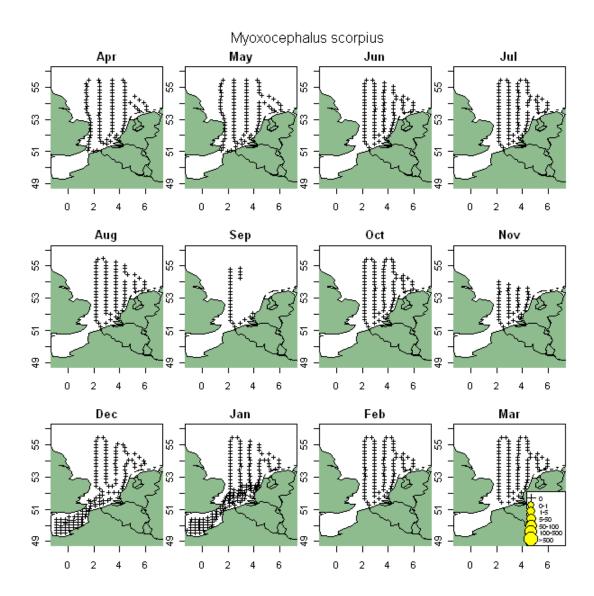


Figure 43b. Spatial and temporal distribution of non-yolk sac bull-rout larvae.

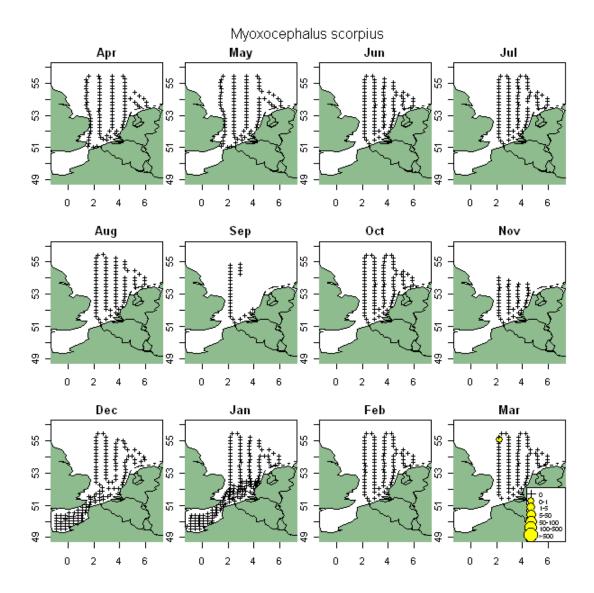


Figure 43c. Spatial and temporal distribution of bent notochord stage bull-rout larvae.

Report number C098/11 233 of 377

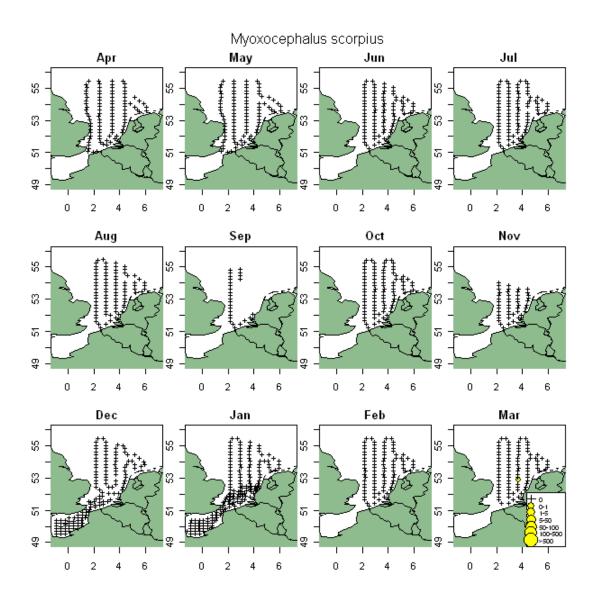


Figure 43d. Spatial and temporal distribution of metamorphosing bull-rout larvae.

### Sea scorpion Taurulus bubalis

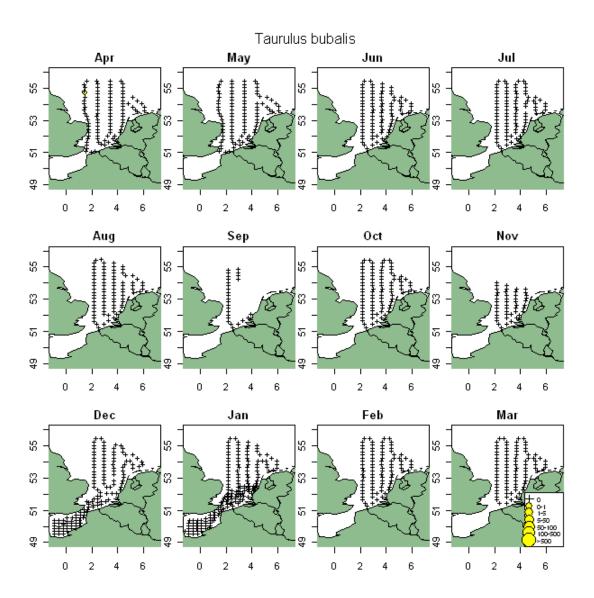


Figure 44a. Spatial and temporal distribution of yolk sac sea scorpion larvae.

Report number C098/11 235 of 377

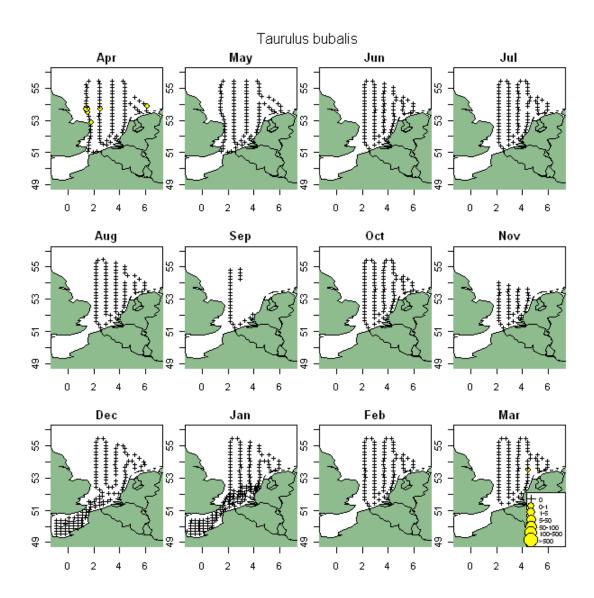


Figure 44b. Spatial and temporal distribution of non-yolk sac sea scorpion larvae.

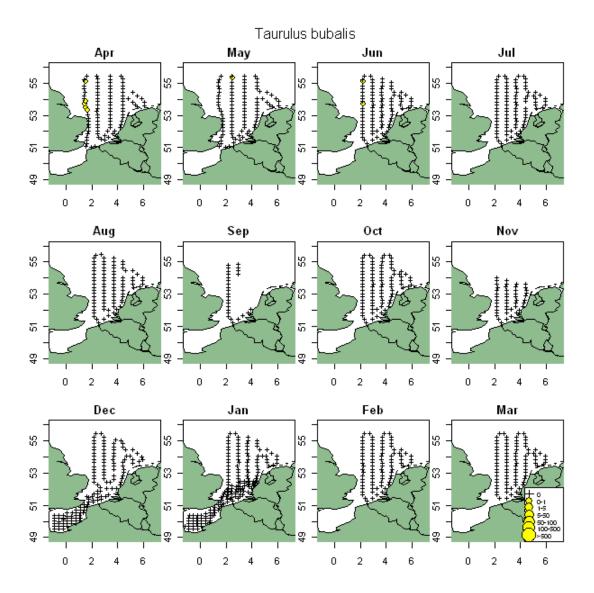


Figure 44c. Spatial and temporal distribution of bent notochord stage sea scorpion larvae.

Report number C098/11 237 of 377

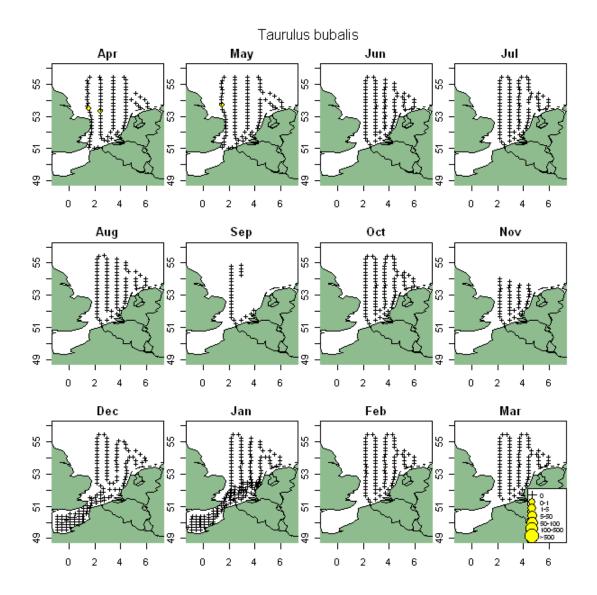


Figure 44d. Spatial and temporal distribution of metamorphosing sea scorpion larvae.

### Sea snail Liparis liparis

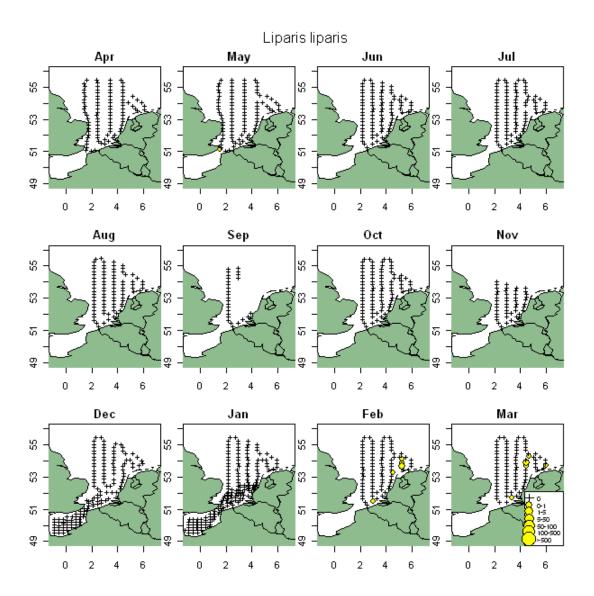


Figure 45a. Spatial and temporal distribution of yolk sac sea snail larvae.

Report number C098/11 239 of 377

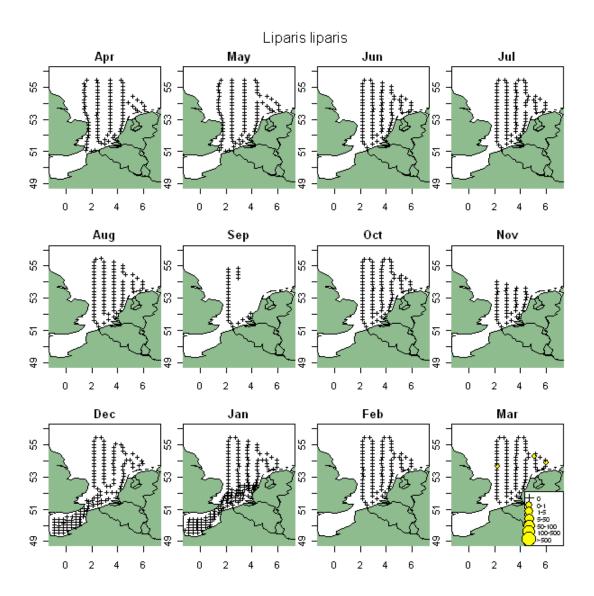


Figure 45b. Spatial and temporal distribution of non-yolk sac sea snail larvae.

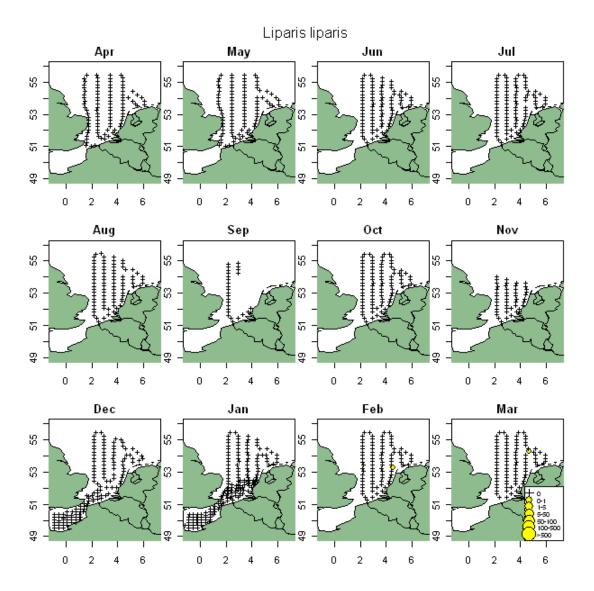


Figure 45c. Spatial and temporal distribution of bent notochord stage sea snail larvae.

Report number C098/11 241 of 377

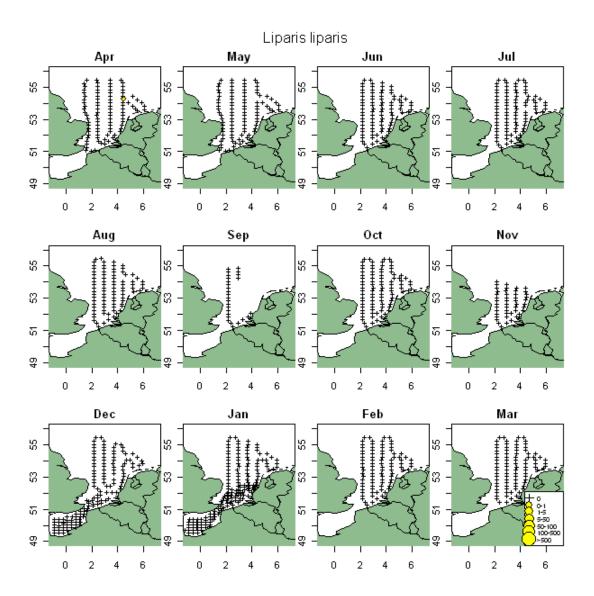


Figure 45d. Spatial and temporal distribution of metamorphosing sea snail larvae.

## Montagu's sea snail *Liparis montagui*

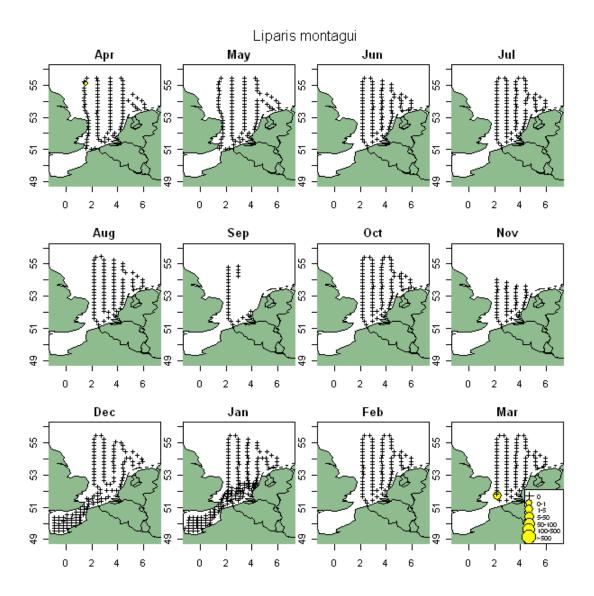


Figure 46a. Spatial and temporal distribution of yolk sac Montagu's sea snail larvae.

Report number C098/11 243 of 377

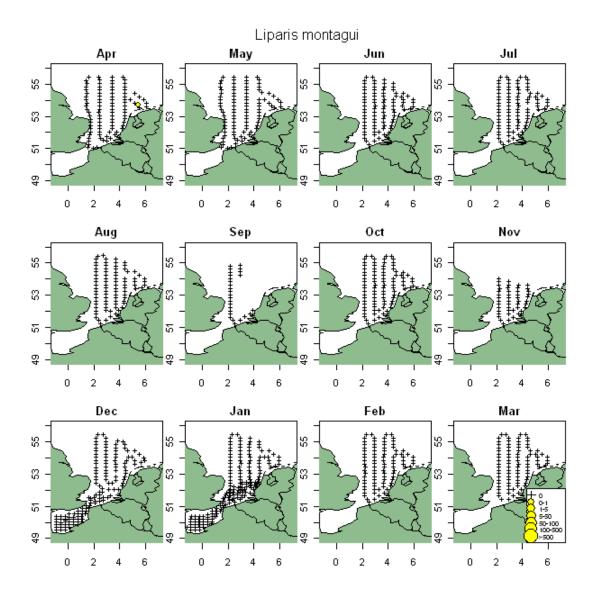


Figure 46b. Spatial and temporal distribution of non-yolk sac Montagu's seasnail larvae.

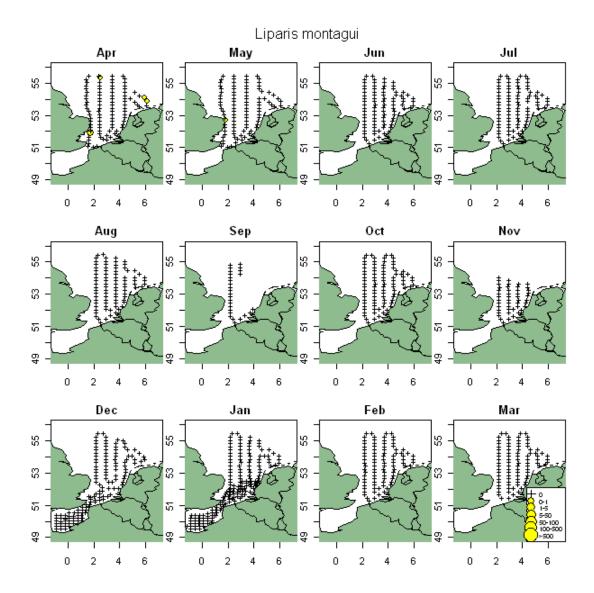


Figure 46c. Spatial and temporal distribution of bent notochord stage Montagu's sea snail larvae.

Report number C098/11 245 of 377

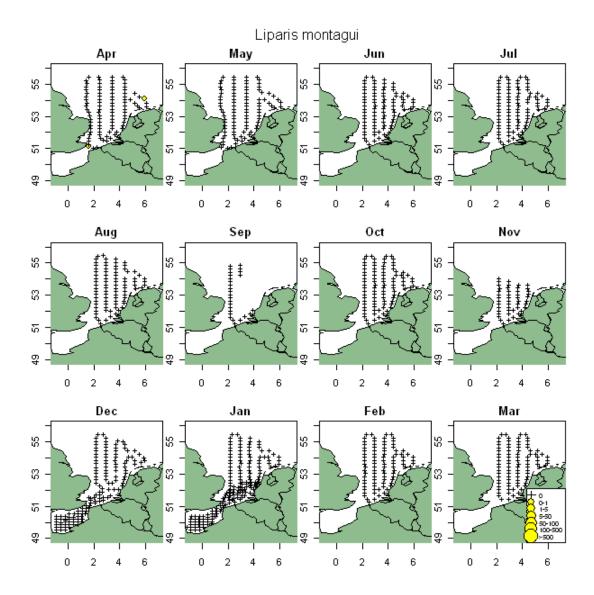


Figure 46d. Spatial and temporal distribution of metamorphosing Montagu's sea snail larvae.

### Turbot Scophthalmus maximus

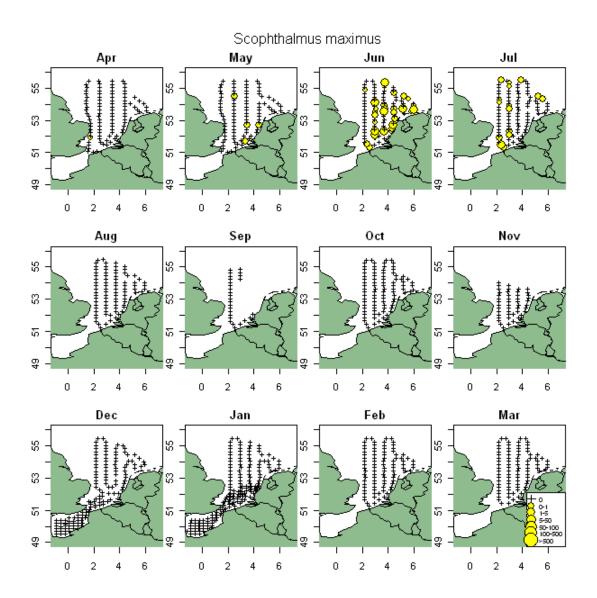


Figure 47a. Spatial and temporal distribution of stage 1 turbot eggs.

Report number C098/11 247 of 377

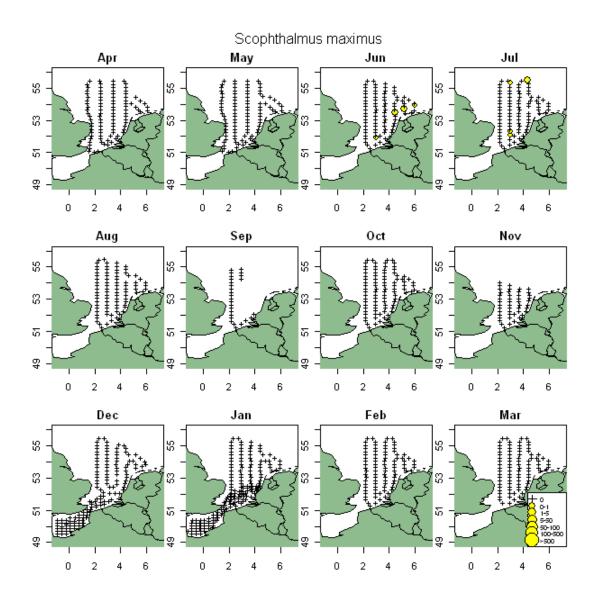


Figure 47b. Spatial and temporal distribution of stage 2 turbot eggs.

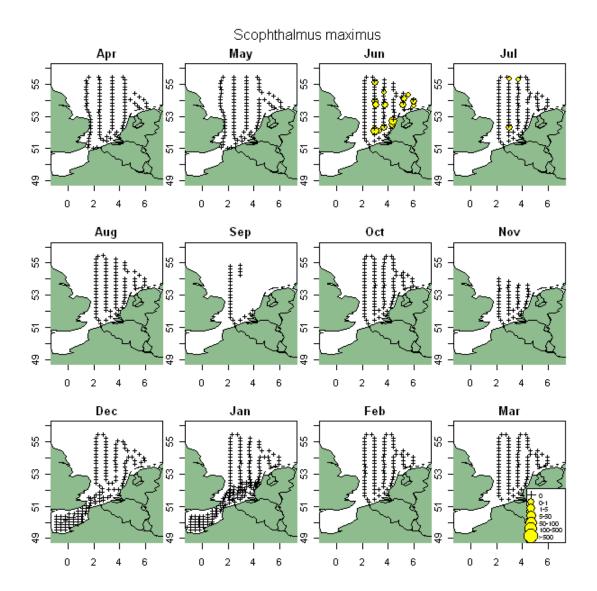


Figure 47c. Spatial and temporal distribution of stage 3 turbot eggs.

Report number C098/11 249 of 377

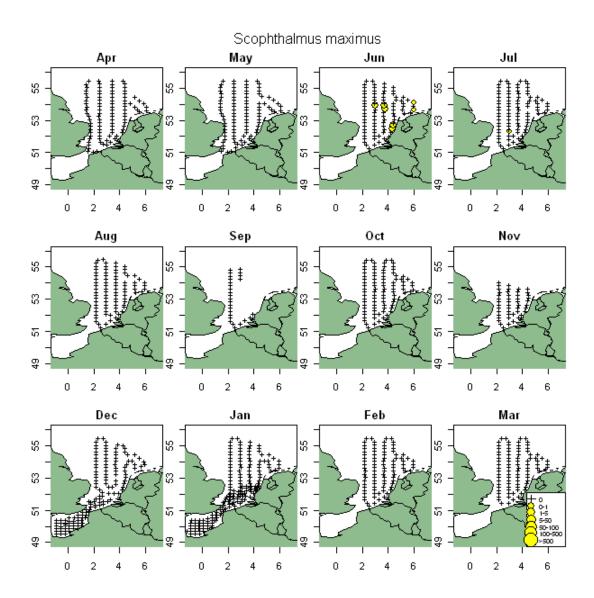


Figure 47d. Spatial and temporal distribution of stage 4 turbot eggs.

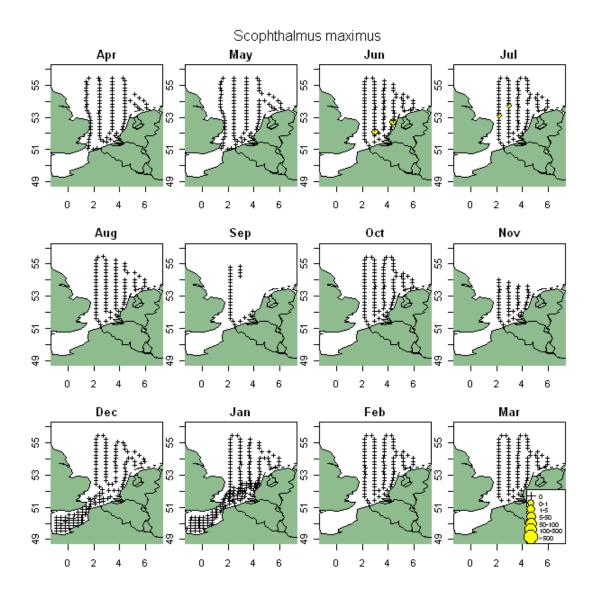


Figure 47e. Spatial and temporal distribution of stage 5 turbot eggs.

Report number C098/11 251 of 377

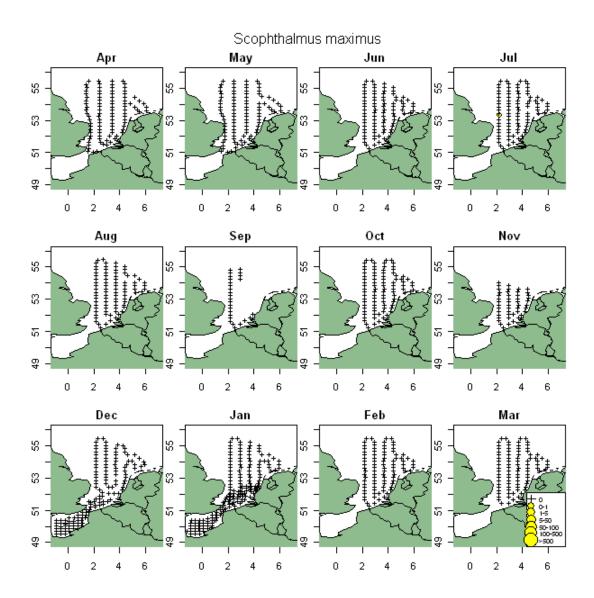


Figure 47f. Spatial and temporal distribution of yolk sac turbot larvae.

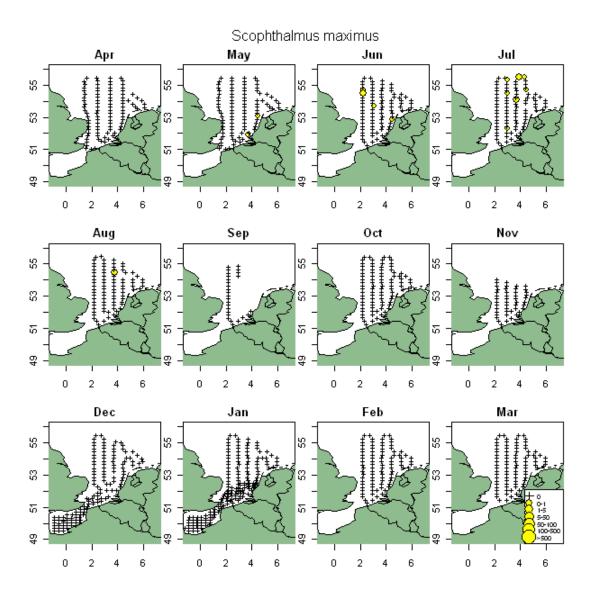


Figure 47g. Spatial and temporal distribution of non-yolk sac turbot larvae.

Report number C098/11 253 of 377

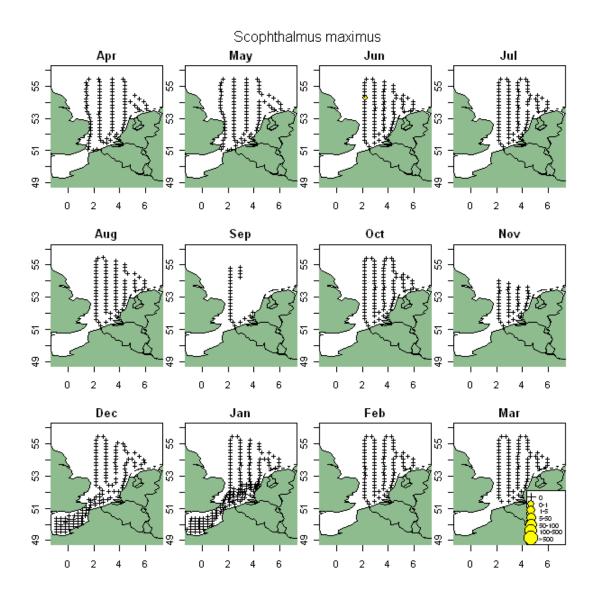


Figure 47h. Spatial and temporal distribution of bent notochord stage turbot larvae.

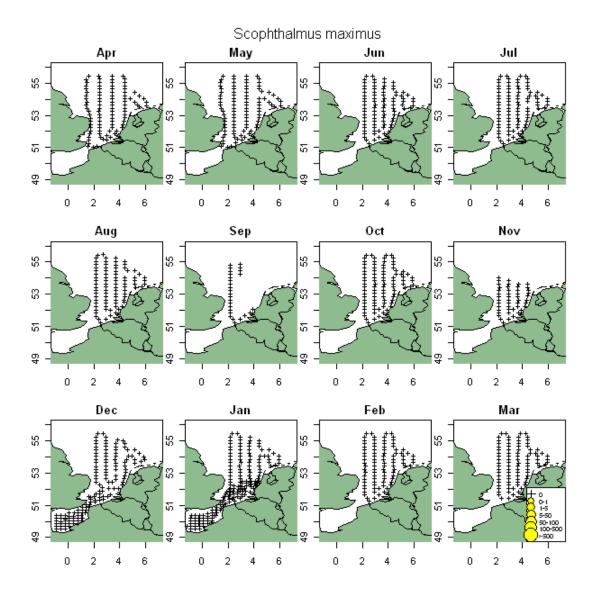


Figure 47i. Spatial and temporal distribution of metamorphosing turbot larvae.

Report number C098/11 255 of 377

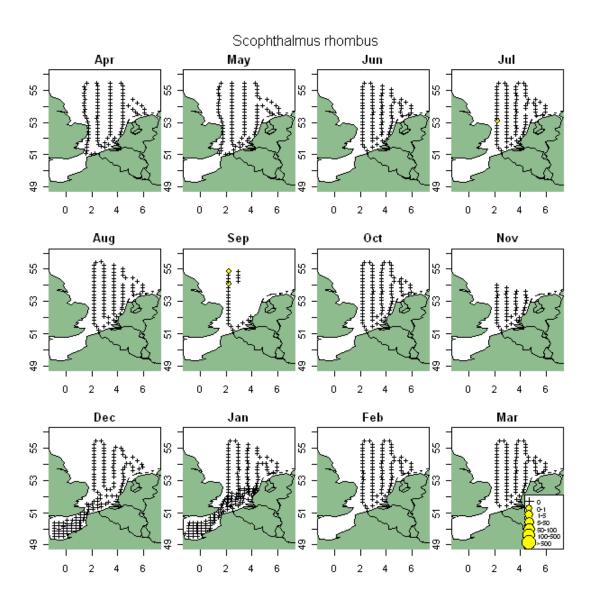


Figure 48a. Spatial and temporal distribution of stage 1 brill eggs.

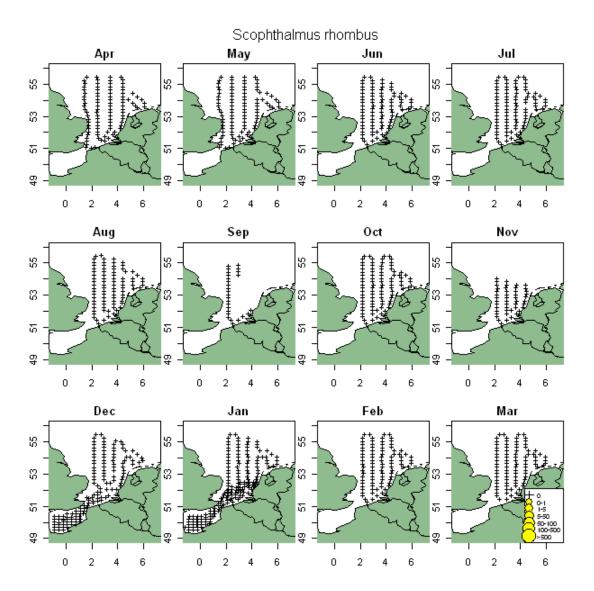


Figure 48b. Spatial and temporal distribution of stage 2 brill eggs.

Report number C098/11 257 of 377

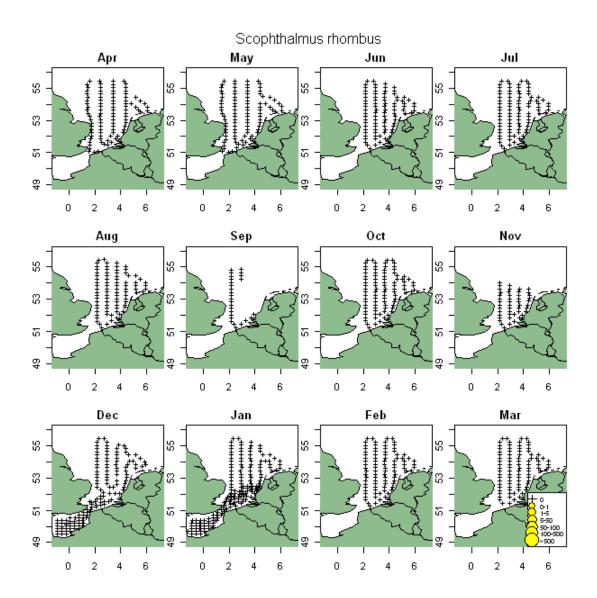


Figure 48c. Spatial and temporal distribution of stage 3 brill eggs.

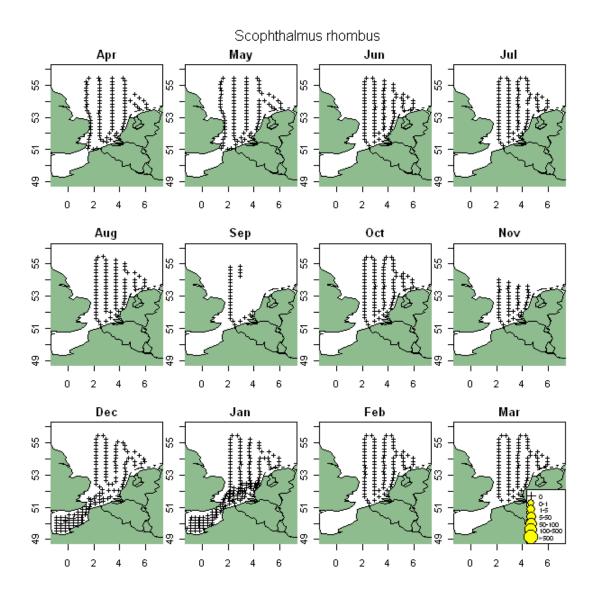


Figure 48d. Spatial and temporal distribution of stage 4 brill eggs.

Report number C098/11 259 of 377

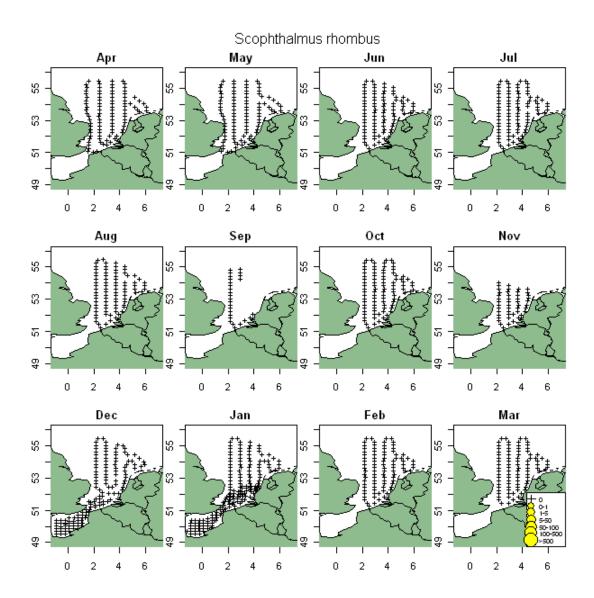


Figure 48e. Spatial and temporal distribution of stage 5 brill eggs.

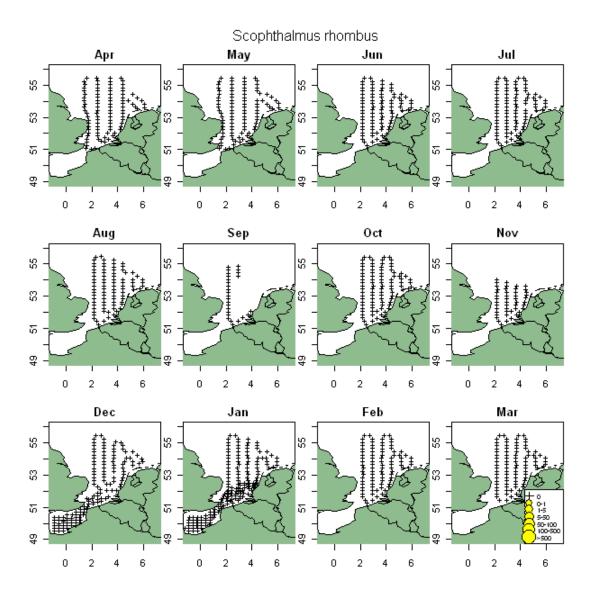


Figure 48f. Spatial and temporal distribution of yolk sac brill larvae.

Report number C098/11 261 of 377

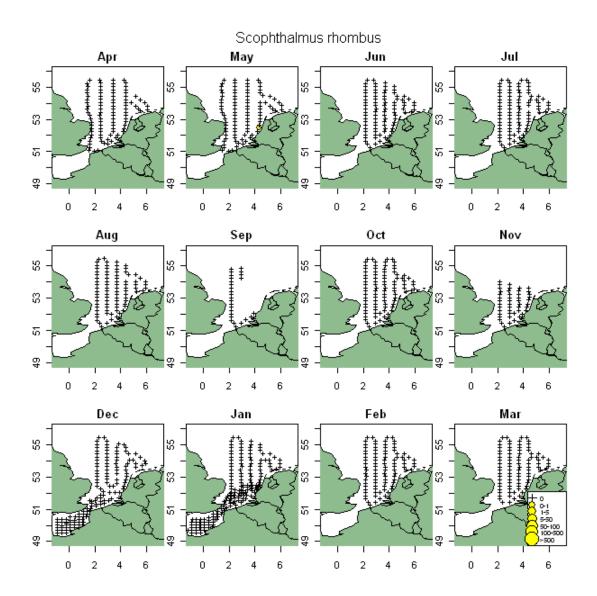


Figure 48g. Spatial and temporal distribution of non-yolk sac brill larvae.

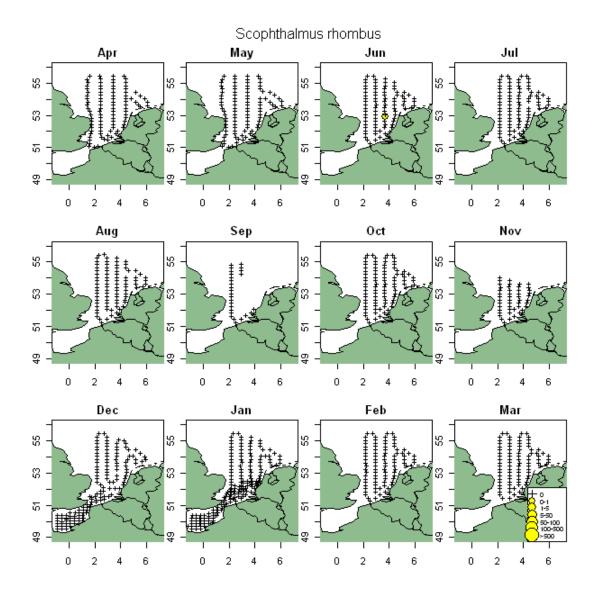


Figure 48h. Spatial and temporal distribution of bent notochord stage brill larvae.

Report number C098/11 263 of 377

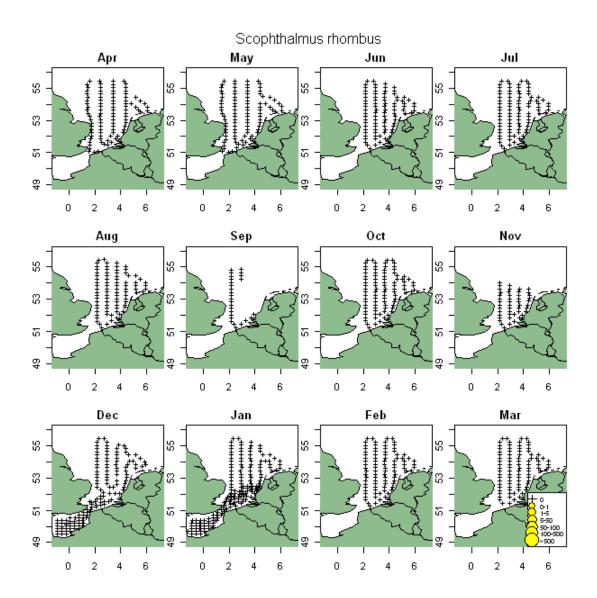


Figure 48i. Spatial and temporal distribution of metamorphosing brill larvae.

## Topknot Zeugopterus punctatus

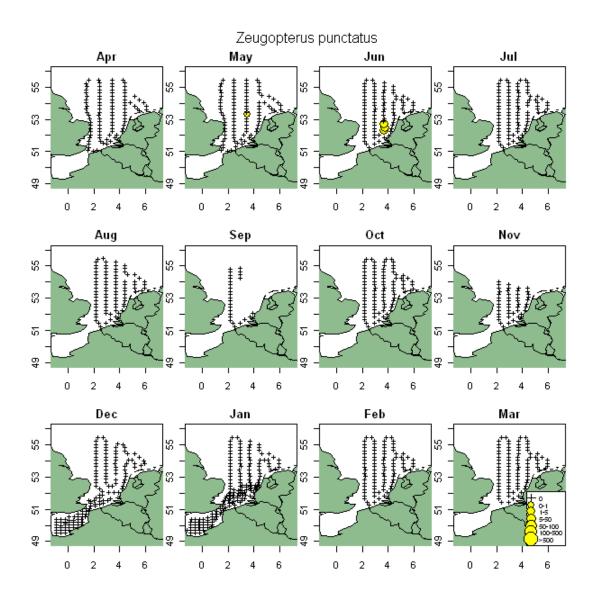


Figure 49a. Spatial and temporal distribution of stage 1 topknot eggs.

Report number C098/11 265 of 377

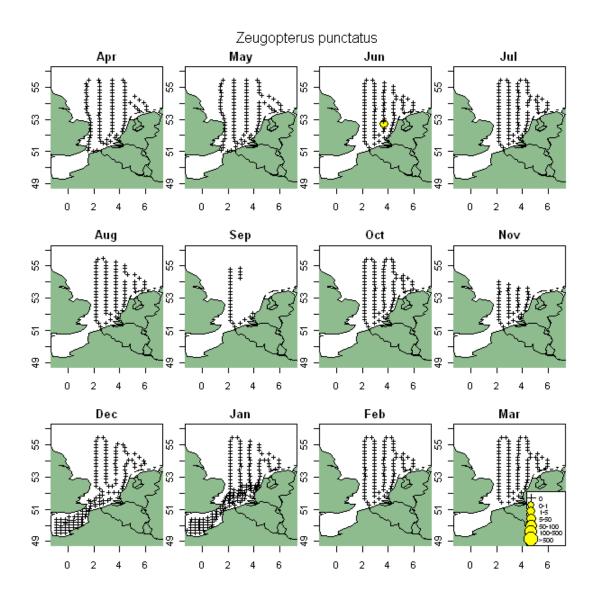


Figure 49b. Spatial and temporal distribution of stage 2 topknot eggs.

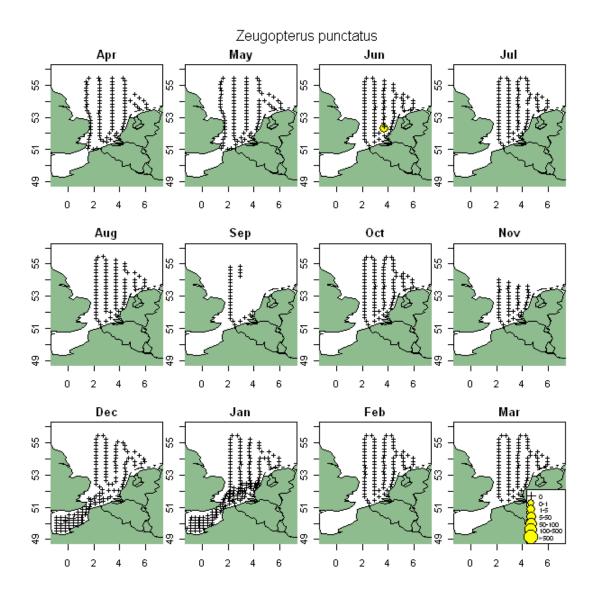


Figure 49c. Spatial and temporal distribution of stage 3 topknot eggs.

Report number C098/11 267 of 377

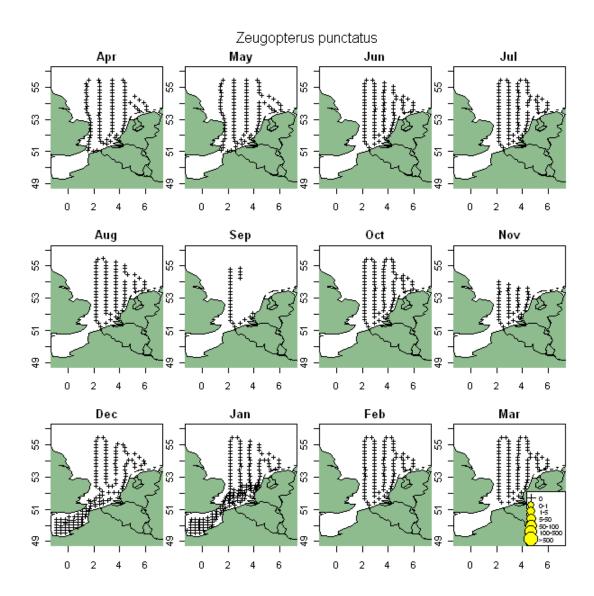


Figure 49d. Spatial and temporal distribution of stage 4 topknot eggs.

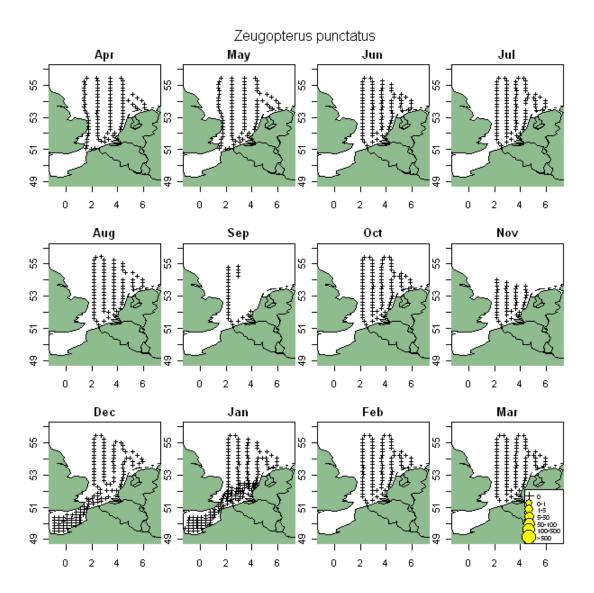


Figure 49e. Spatial and temporal distribution of stage 5 topknot eggs.

Report number C098/11 269 of 377

## Norwegian topknot *Phrynorhombus norvegicus*

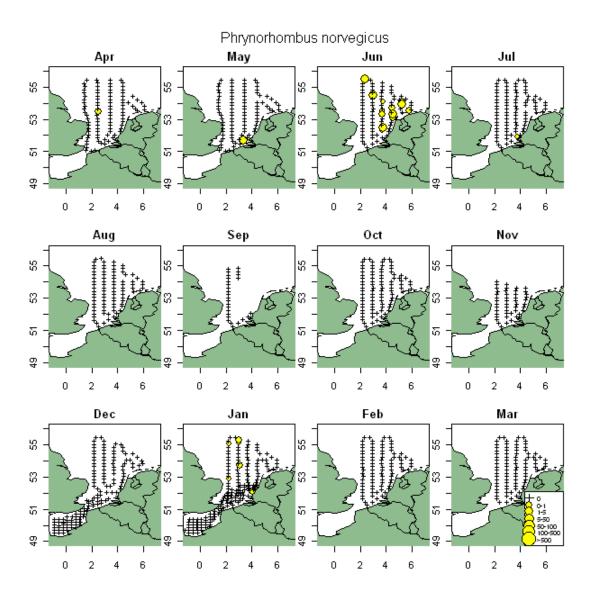


Figure 50a. Spatial and temporal distribution of stage 1 Norwegian topknot eggs.

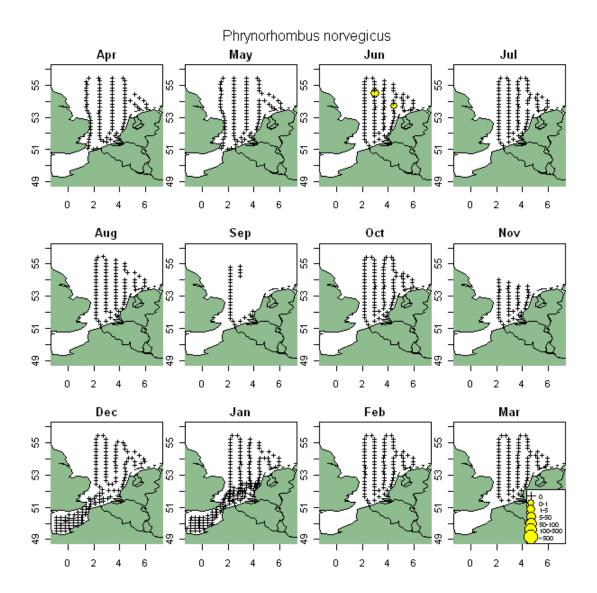


Figure 50b. Spatial and temporal distribution of stage 2 Norwegian topknot eggs.

Report number C098/11 271 of 377

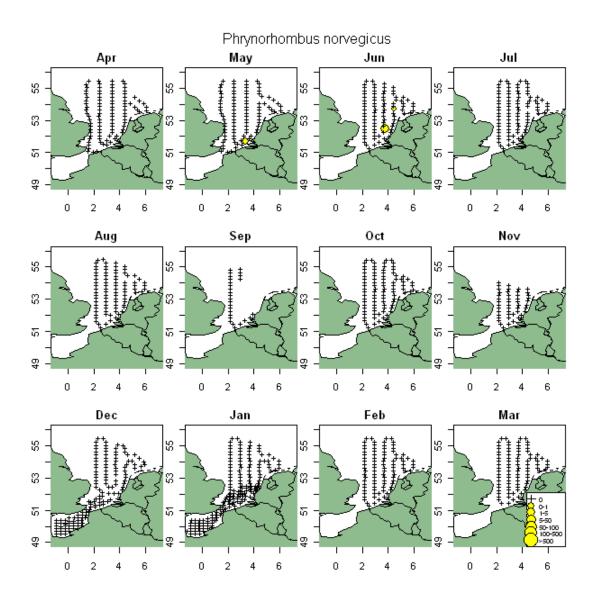


Figure 50c. Spatial and temporal distribution of stage 3 Norwegian topknot eggs.

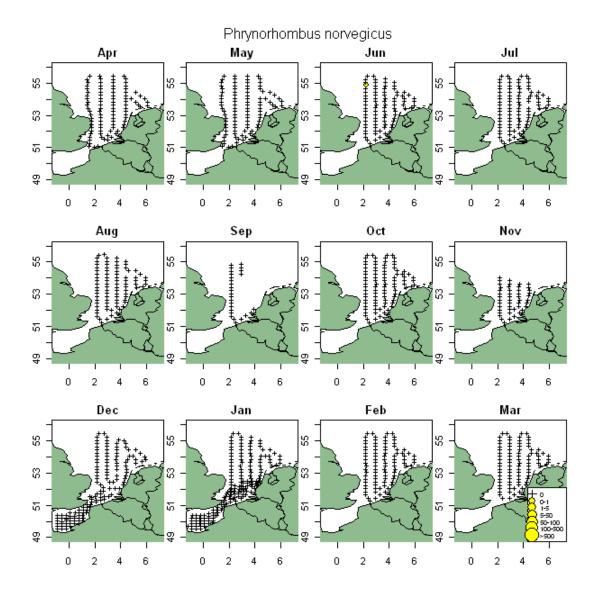


Figure 50d. Spatial and temporal distribution of stage 4 Norwegian topknot eggs.

Report number C098/11 273 of 377

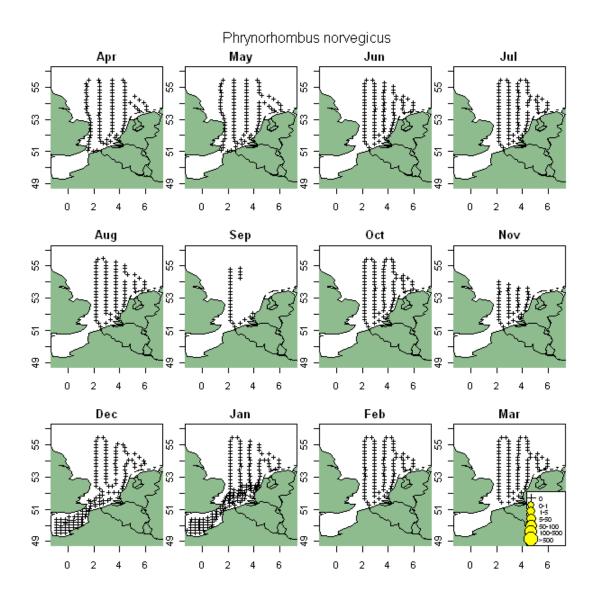


Figure 50e. Spatial and temporal distribution of stage 5 Norwegian topknot eggs.

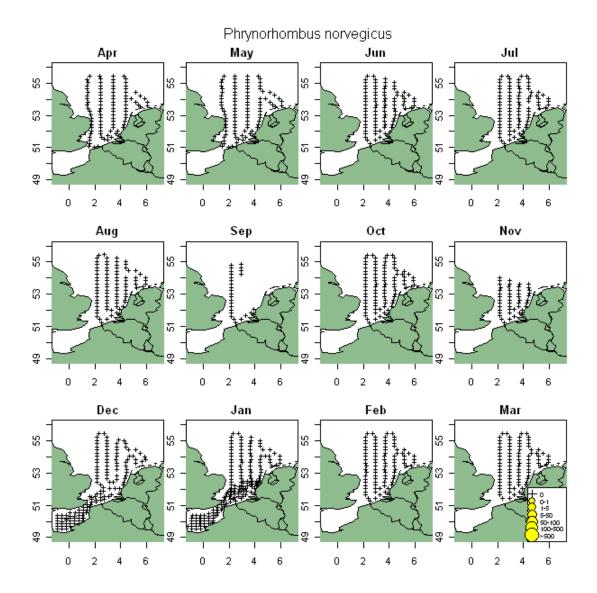


Figure 50f. Spatial and temporal distribution of yolk sac Norwegian topknot larvae.

Report number C098/11 275 of 377

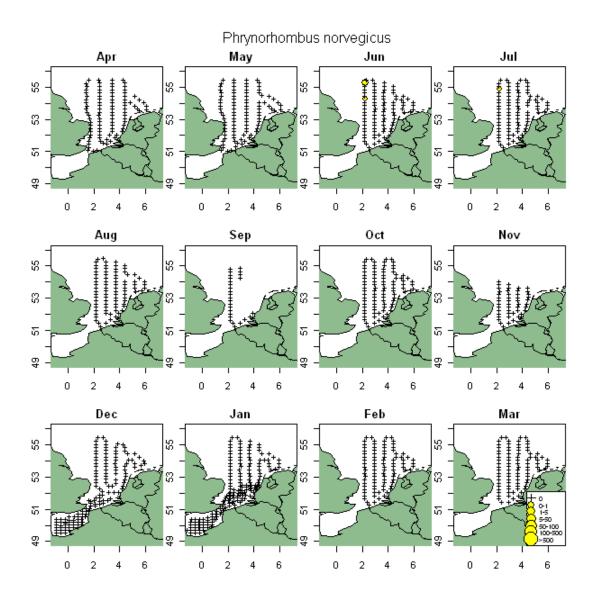


Figure 50g. Spatial and temporal distribution of non-yolk sac Norwegian topknot larvae.

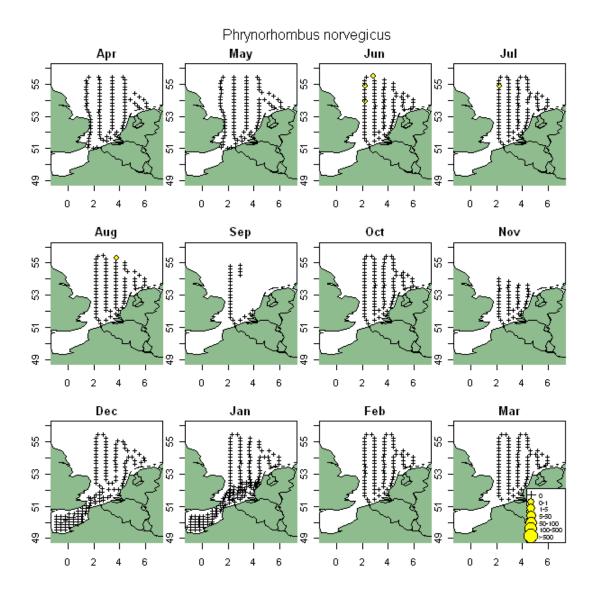


Figure 50h. Spatial and temporal distribution of bent notochord stage Norwegian topknot larvae.

Report number C098/11 277 of 377

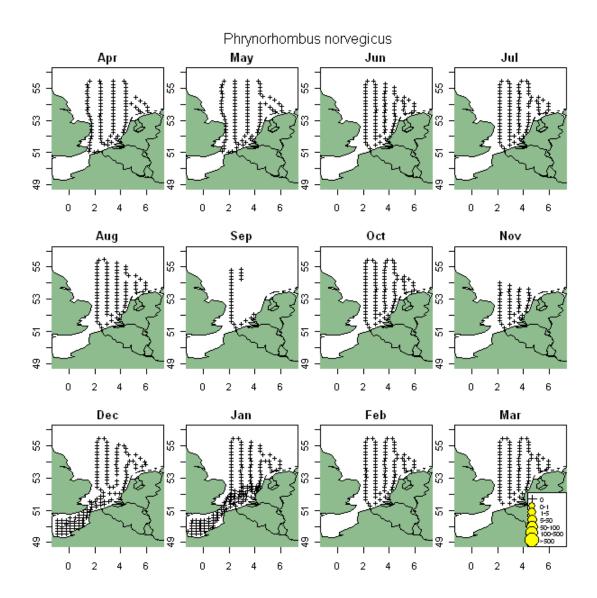


Figure 50i. Spatial and temporal distribution of metamorphosing Norwegian topknot larvae.

## Megrim Lepidorhombus whiffiagonis

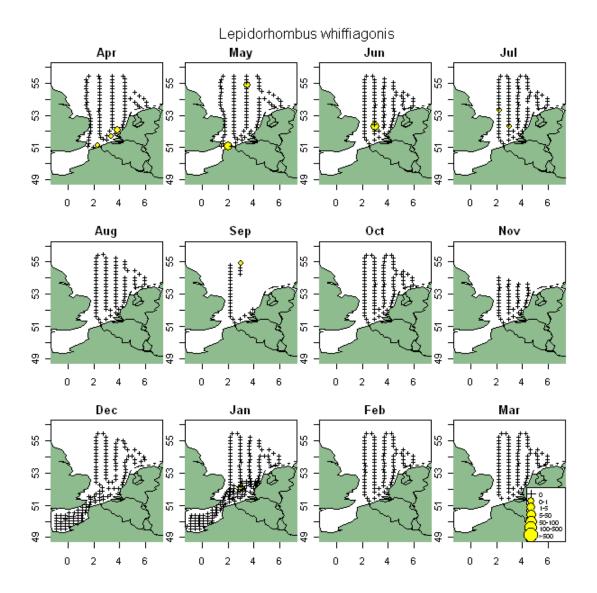


Figure 51a. Spatial and temporal distribution of stage 1 megrim eggs.

Report number C098/11 279 of 377

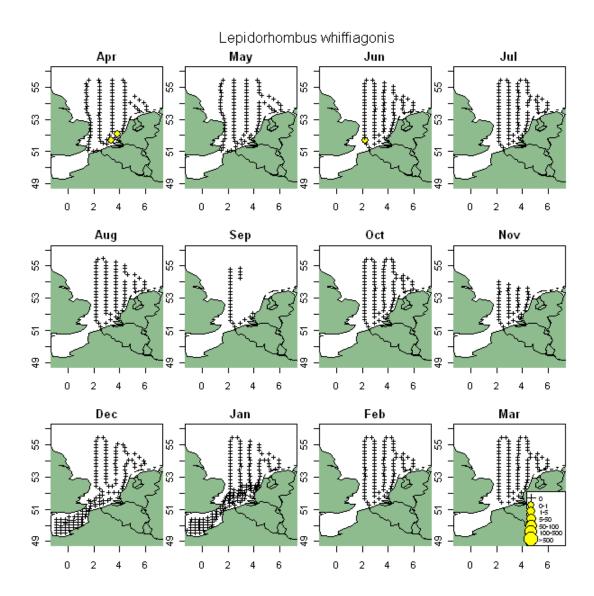


Figure 51b. Spatial and temporal distribution of stage 2 megrim eggs.

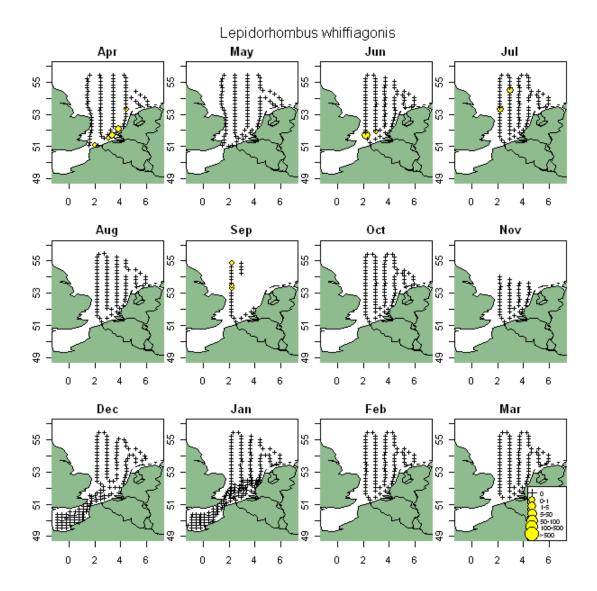


Figure 51c. Spatial and temporal distribution of stage 3 megrim eggs.

Report number C098/11 281 of 377

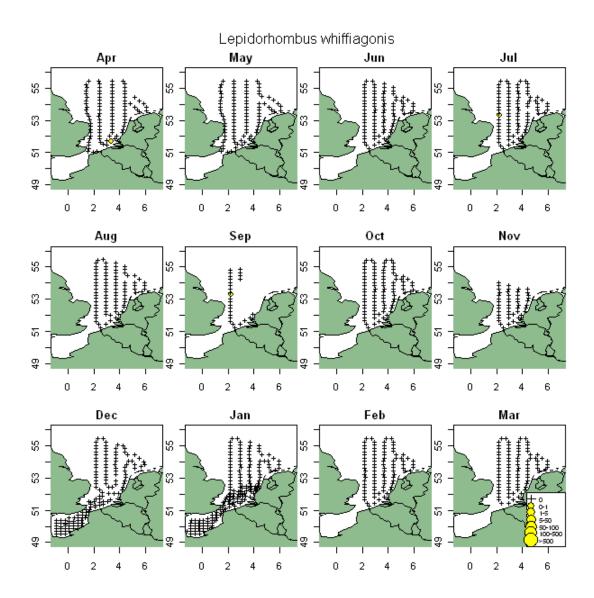


Figure 51d. Spatial and temporal distribution of stage 4 megrim eggs.

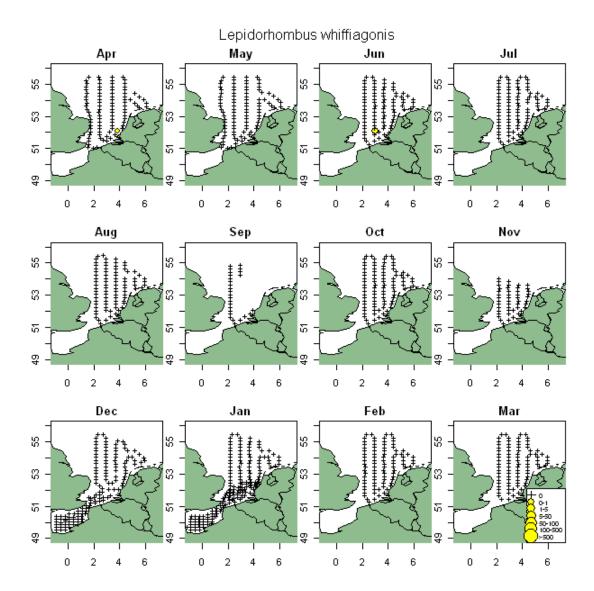


Figure 51e. Spatial and temporal distribution of stage 5 megrim eggs.

Report number C098/11 283 of 377

## Arnoglossus like

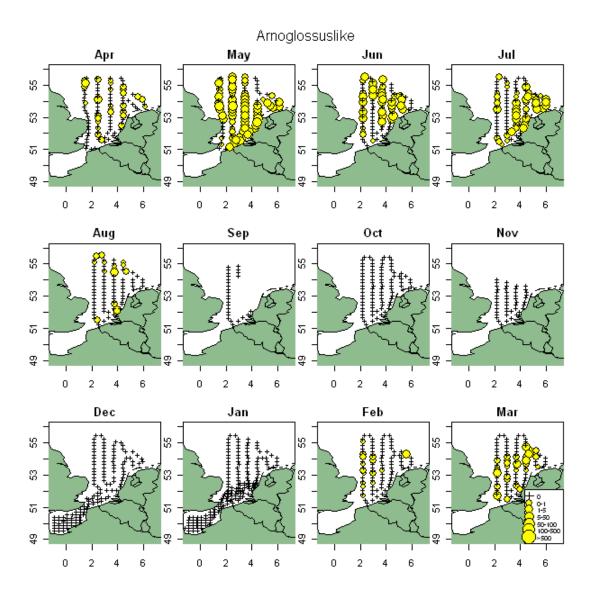


Figure 52a. Spatial and temporal distribution of stage 1 Arnoglossus like eggs.

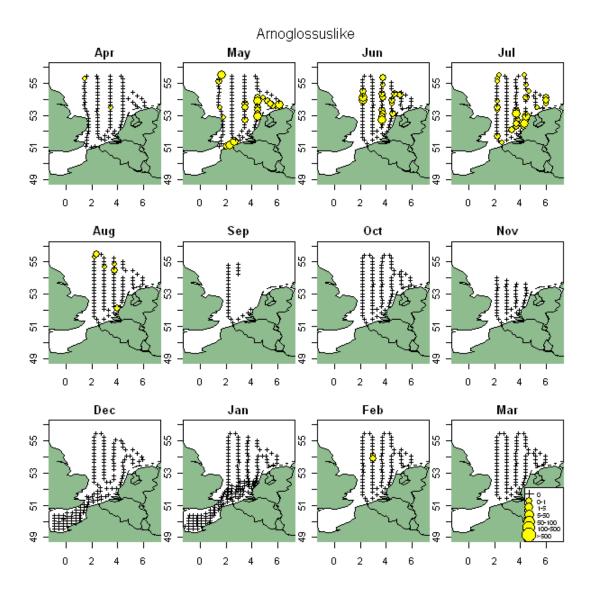


Figure 52b. Spatial and temporal distribution of stage 2 Arnoglossus like eggs.

Report number C098/11 285 of 377

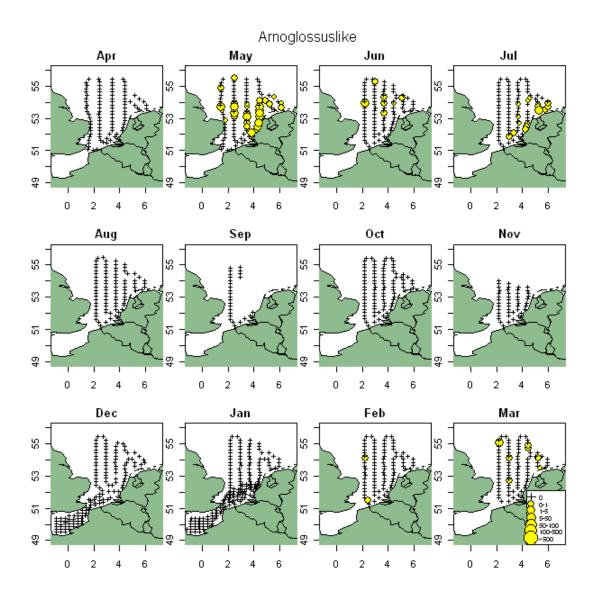


Figure 52c. Spatial and temporal distribution of stage 3 Arnoglossus like eggs.

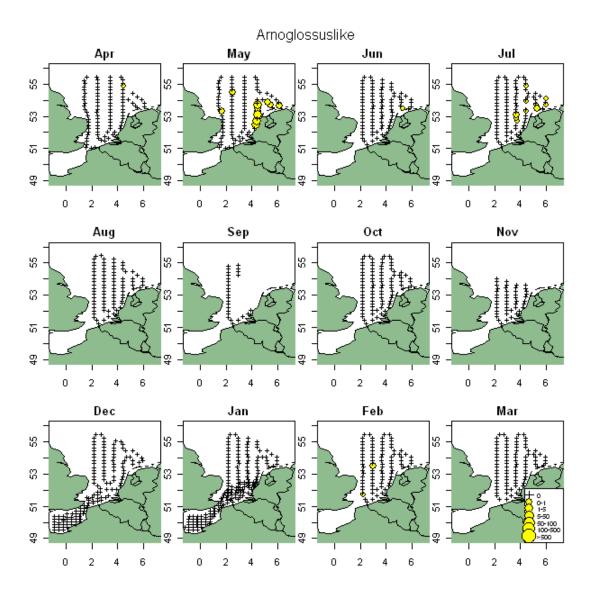


Figure 52d. Spatial and temporal distribution of stage 4 Arnoglossus like eggs.

Report number C098/11 287 of 377

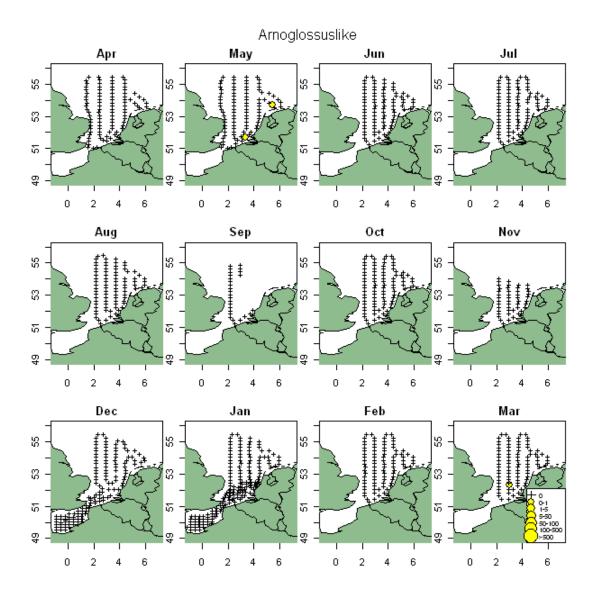


Figure 52e. Spatial and temporal distribution of stage 5 Arnoglossus like eggs.

## Scaldfish Arnoglossus laterna

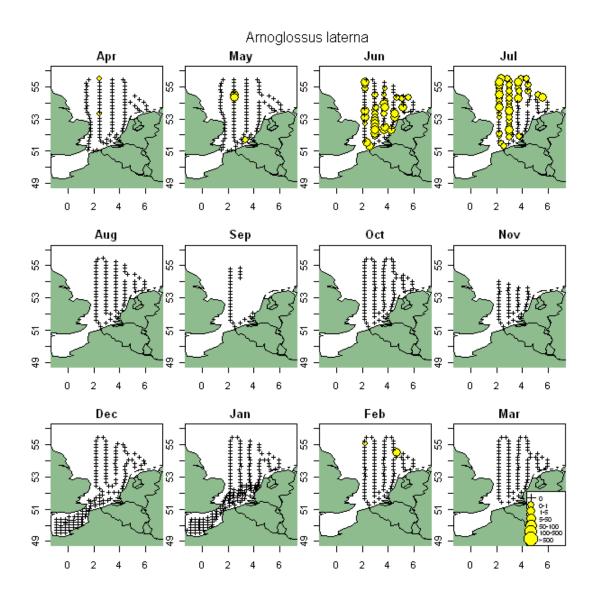


Figure 53a. Spatial and temporal distribution of stage 1 scaldfish eggs.

Report number C098/11 289 of 377

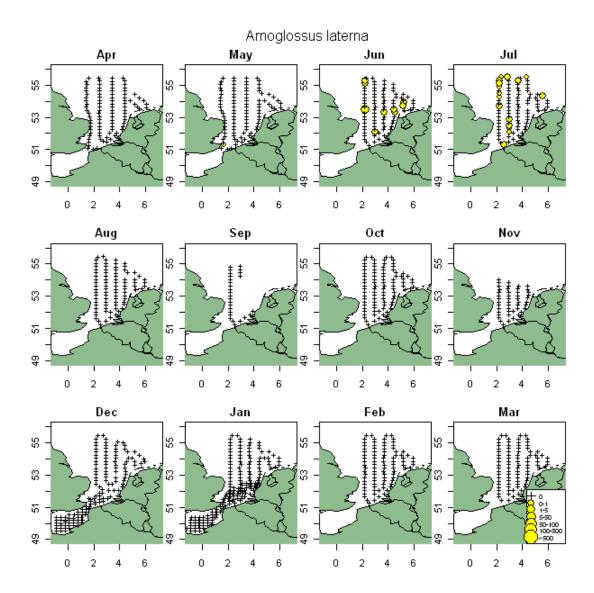


Figure 53b. Spatial and temporal distribution of stage 2 scaldfish eggs.

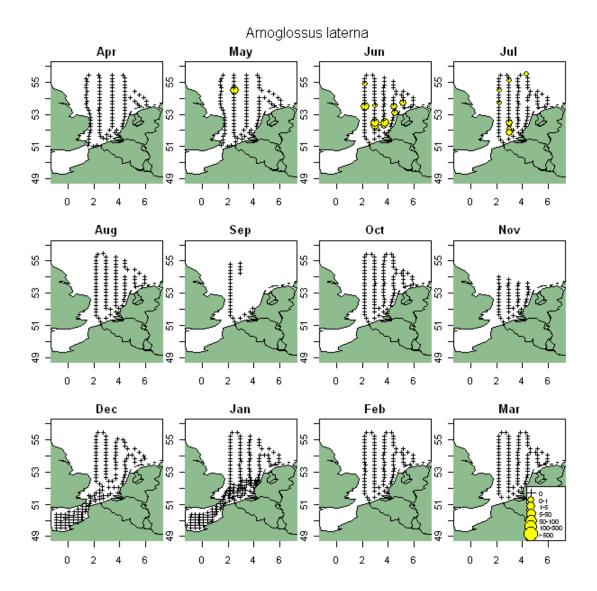


Figure 53c. Spatial and temporal distribution of stage 3 scaldfish eggs.

Report number C098/11 291 of 377

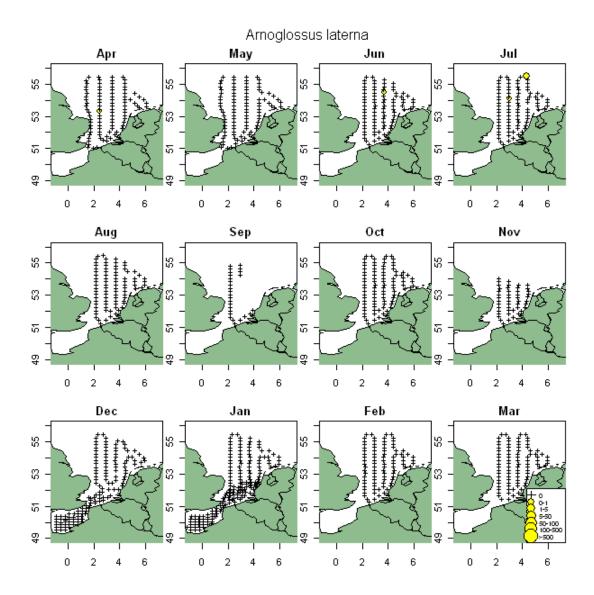


Figure 53d. Spatial and temporal distribution of stage 4 scaldfish eggs.

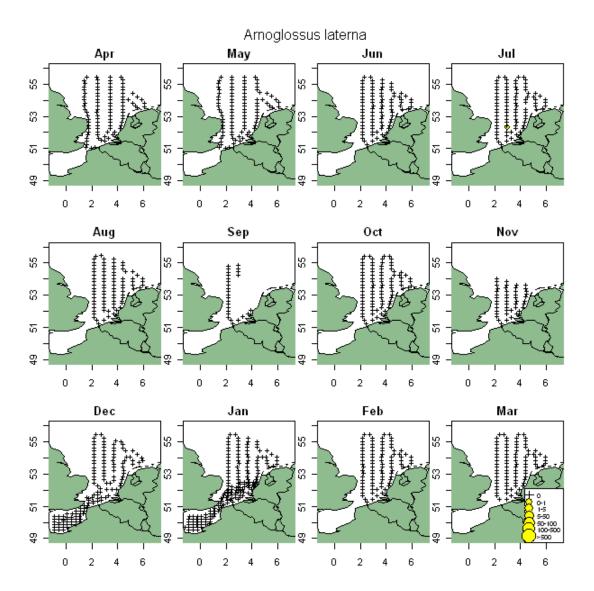


Figure 53e. Spatial and temporal distribution of stage 5 scaldfish eggs.

Report number C098/11 293 of 377

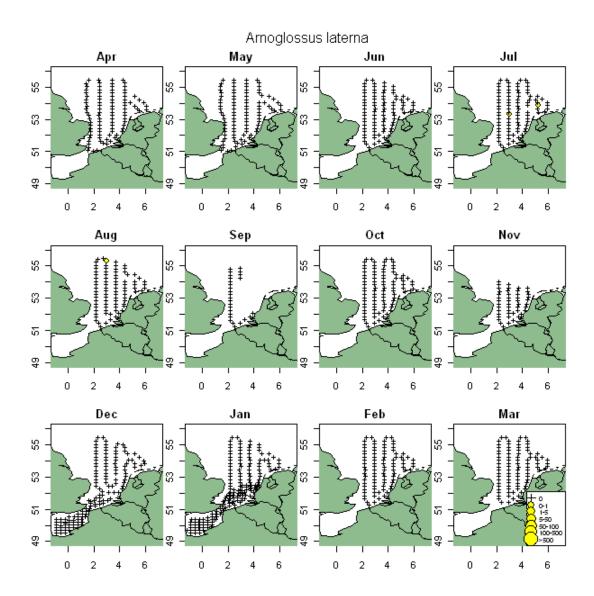


Figure 53f. Spatial and temporal distribution of yolk sac scaldfish larvae.

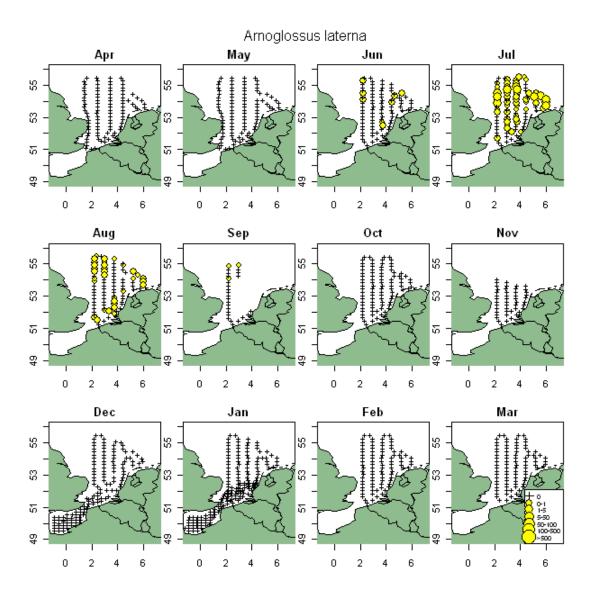


Figure 53g. Spatial and temporal distribution of non-yolk sac scaldfish larvae.

Report number C098/11 295 of 377

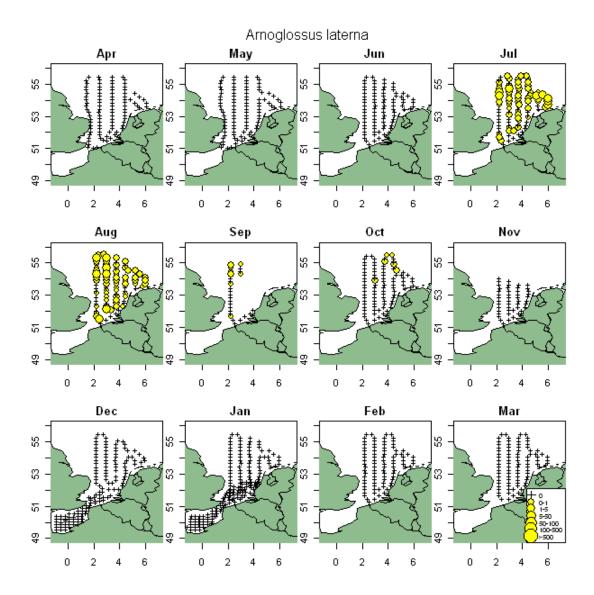


Figure 53h. Spatial and temporal distribution of bent notochord stage scaldfish larvae.

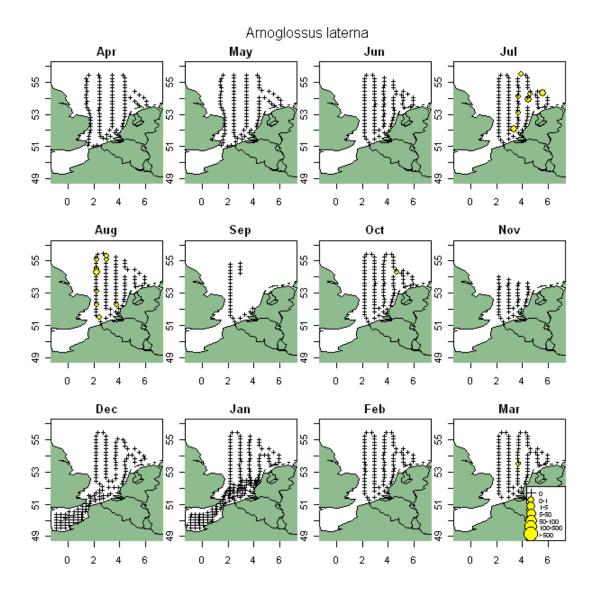


Figure 53i. Spatial and temporal distribution of metamorphosing scaldfish larvae.

Report number C098/11 297 of 377

## Pleuronectidae

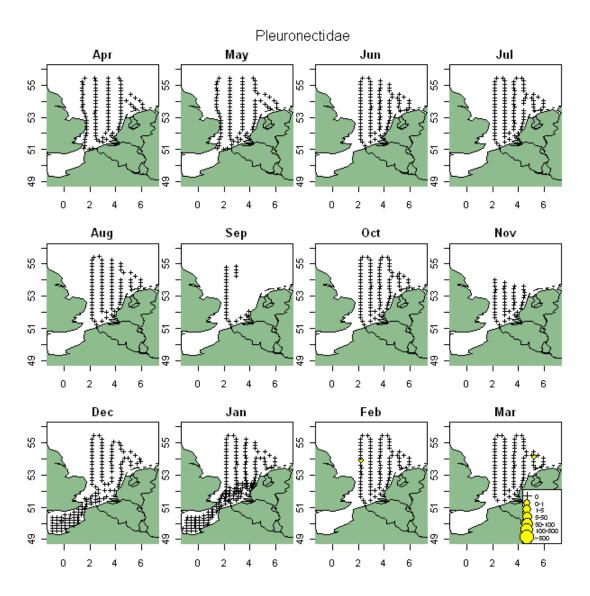


Figure 54a. Spatial and temporal distribution of yolk sac pleuronectidae larvae.

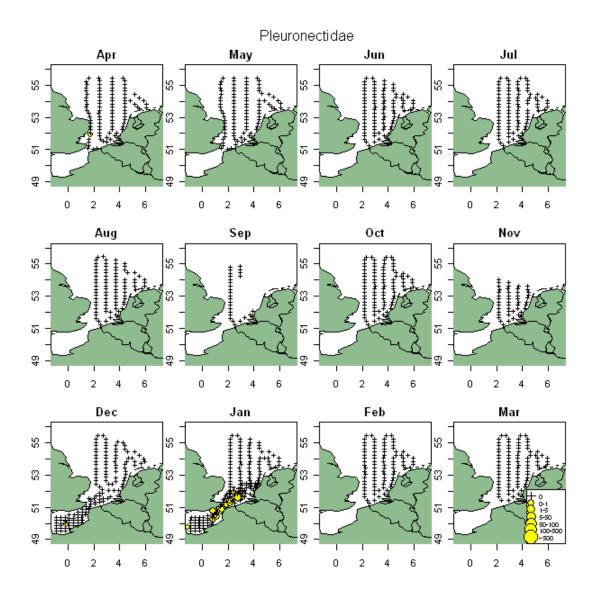


Figure 54b. Spatial and temporal distribution of non-yolk sac pleuronectidae larvae.

Report number C098/11 299 of 377

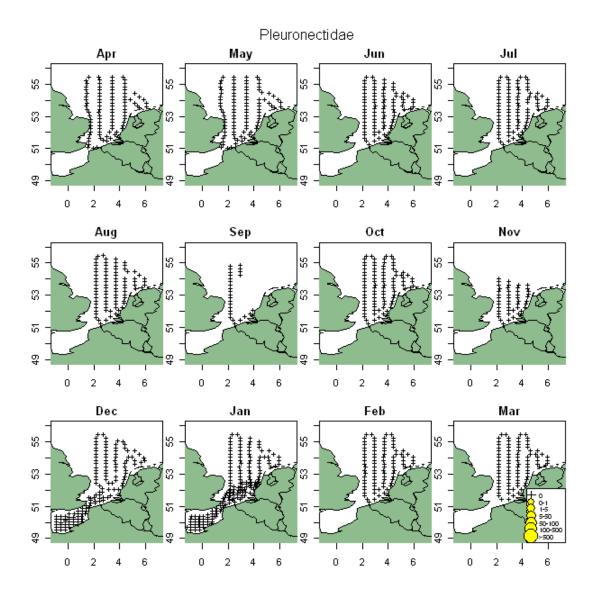


Figure 54c. Spatial and temporal distribution of bent notochord stage pleuronectidae larvae.

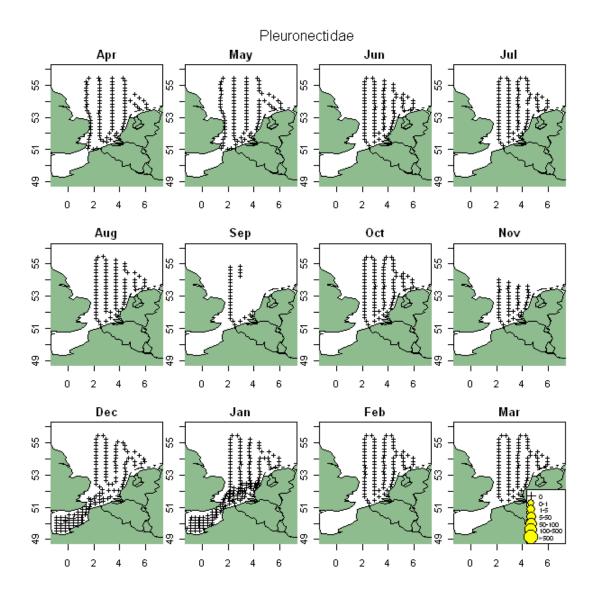


Figure 54d. Spatial and temporal distribution of metamorphosing pleuronectidae larvae.

Report number C098/11 301 of 377

# Long rough dab *Hippoglossoides platessoides*

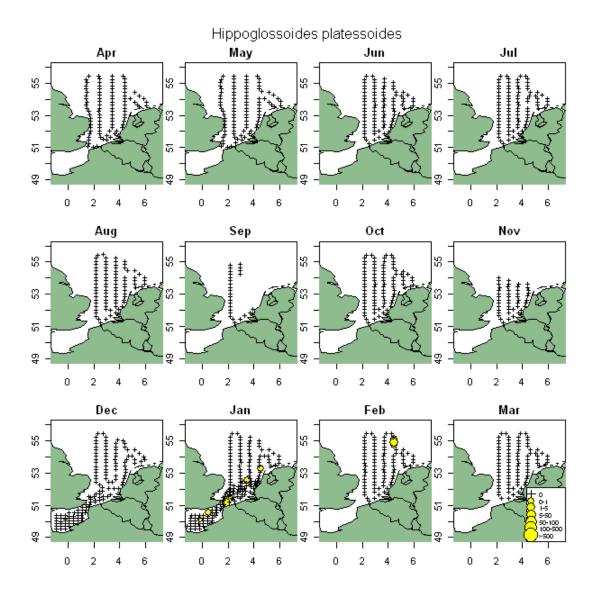


Figure 55a. Spatial and temporal distribution of stage 1 long rough dab eggs.

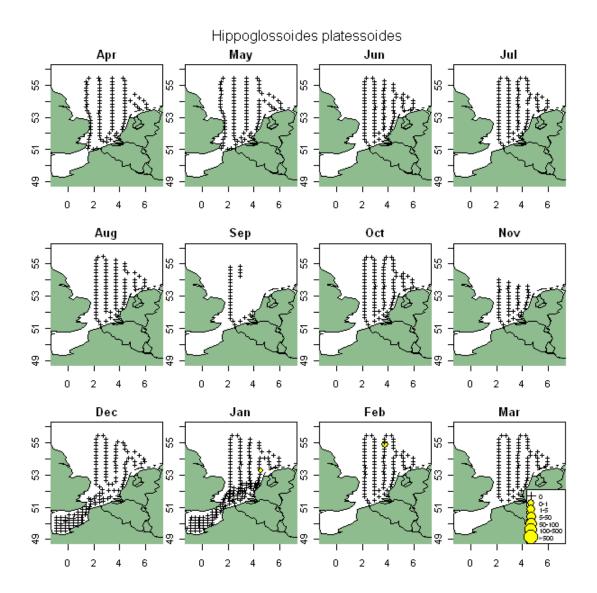


Figure 55b. Spatial and temporal distribution of stage 2 long rough dab eggs.

Report number C098/11 303 of 377

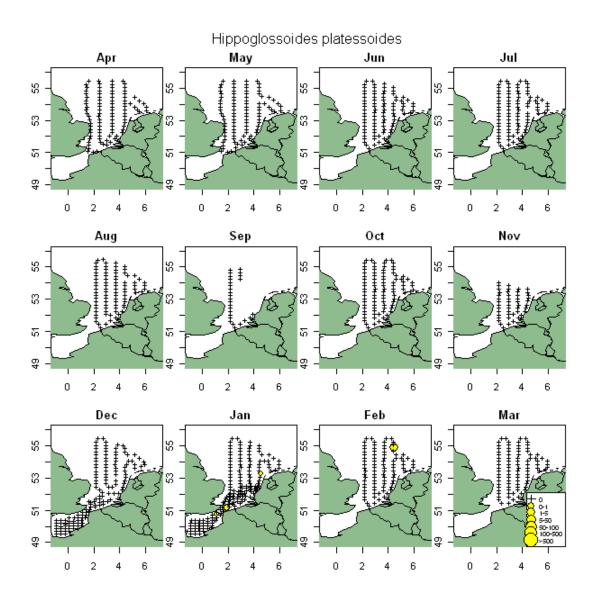


Figure 55c. Spatial and temporal distribution of stage 3 long rough dab eggs.

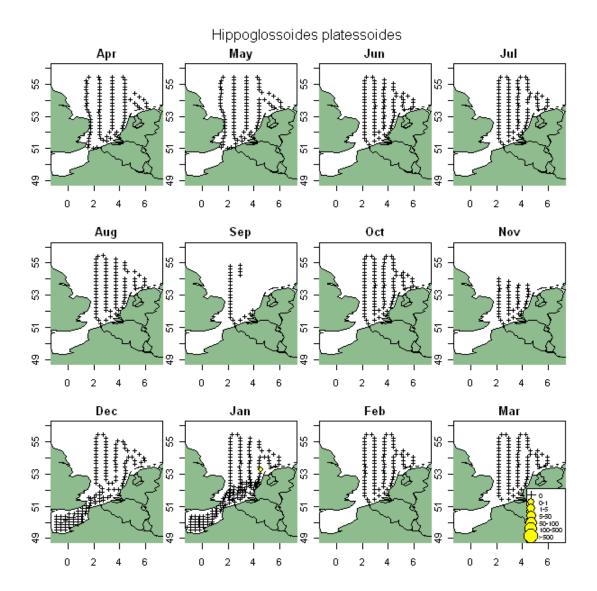


Figure 55d. Spatial and temporal distribution of stage 4 long rough dab eggs.

Report number C098/11 305 of 377

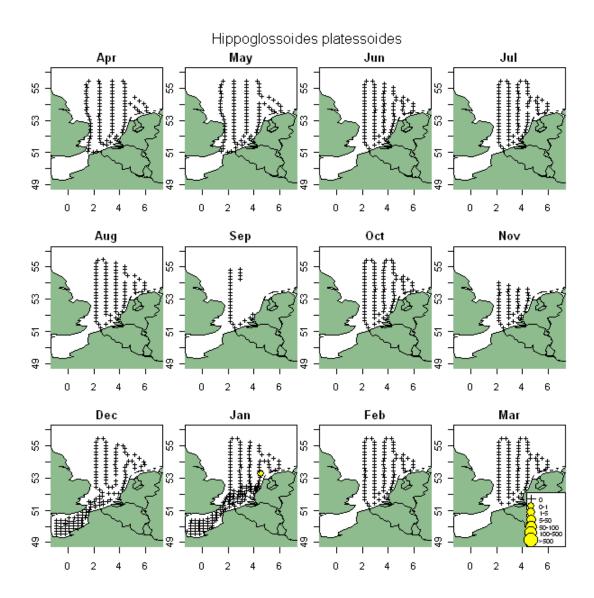


Figure 55e. Spatial and temporal distribution of stage 5 long rough dab eggs.

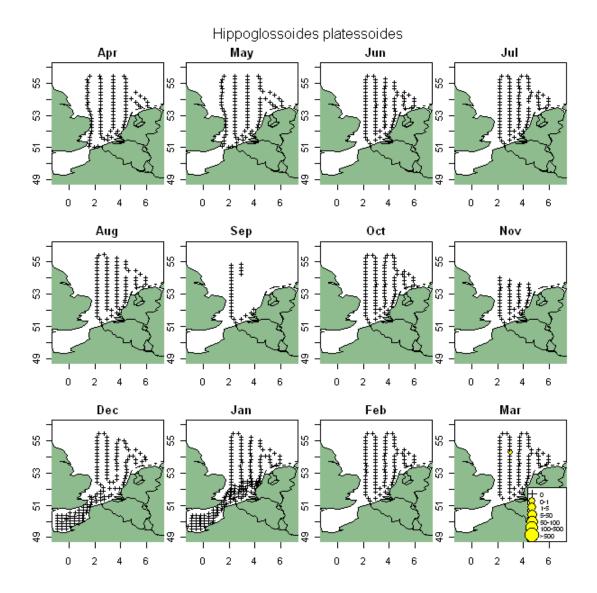


Figure 55f. Spatial and temporal distribution of yolk sac long rough dab larvae.

Report number C098/11 307 of 377

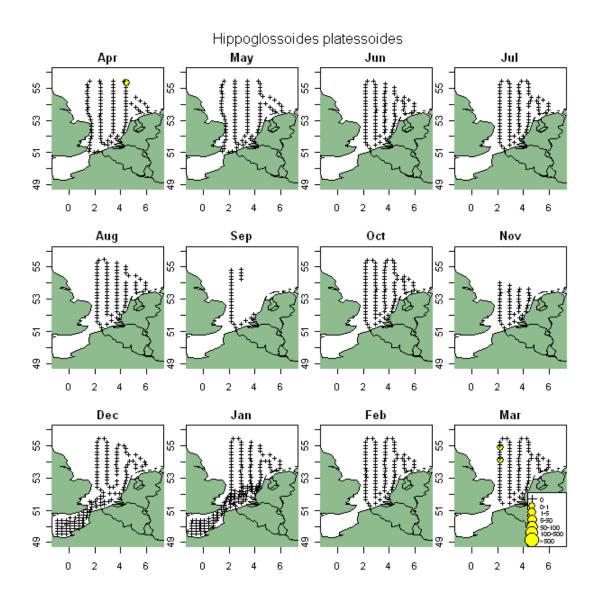


Figure 55g. Spatial and temporal distribution of non-yolk sac long rough dab larvae.

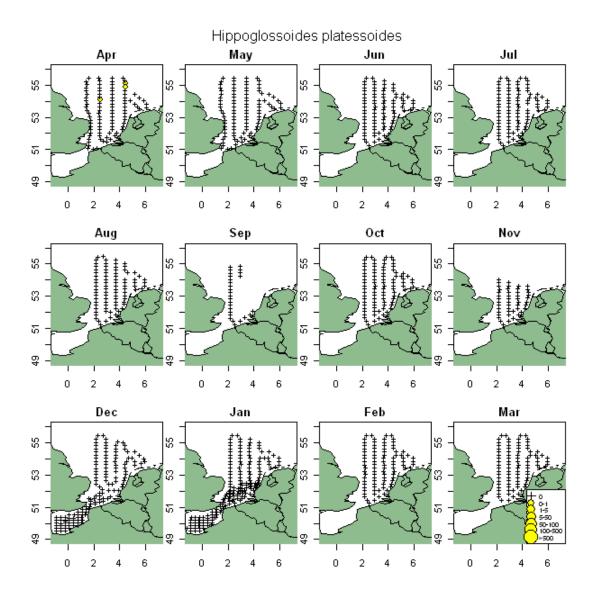


Figure 55h. Spatial and temporal distribution of bent notochord stage long rough dab larvae.

Report number C098/11 309 of 377

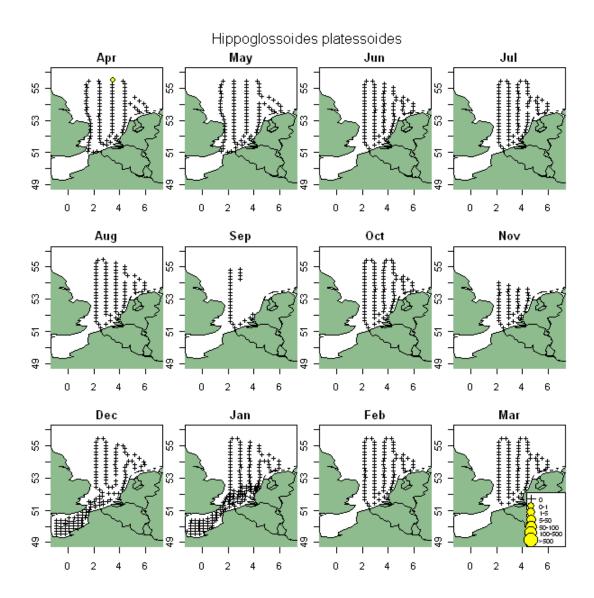


Figure 55i. Spatial and temporal distribution of metamorphosing long rough dab larvae.

## Dab like

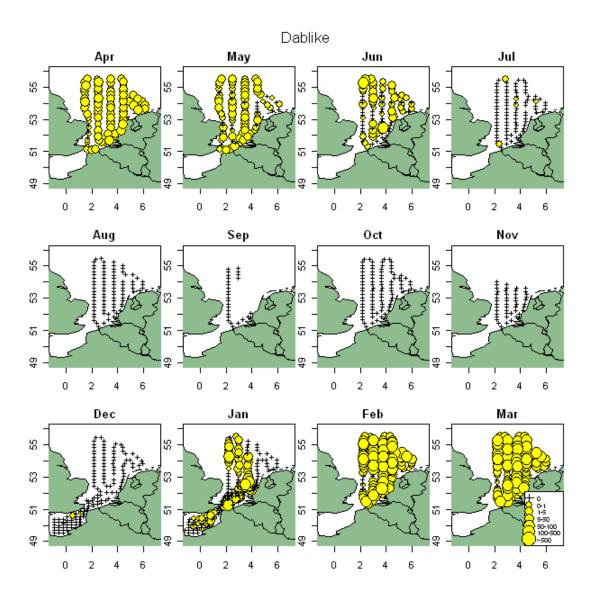


Figure 56a. Spatial and temporal distribution of stage 1 Dab like eggs.

Report number C098/11 311 of 377

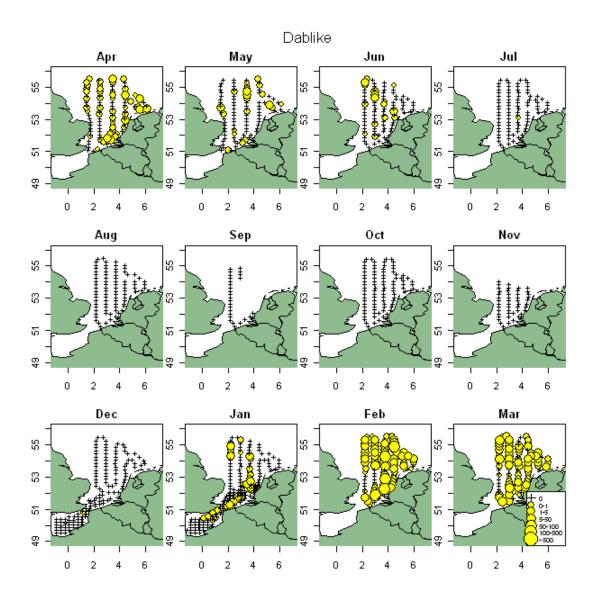


Figure 56b. Spatial and temporal distribution of stage 2 Dab like eggs.

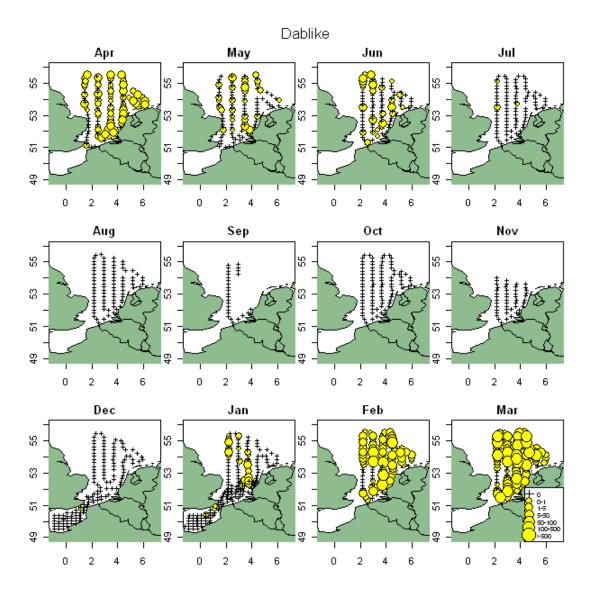


Figure 56c. Spatial and temporal distribution of stage 3 Dab like eggs.

Report number C098/11 313 of 377

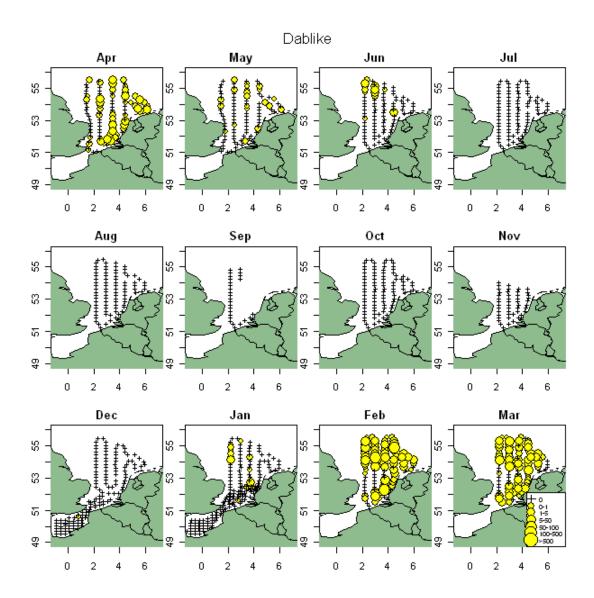


Figure 56d. Spatial and temporal distribution of stage 4 Dab like eggs.

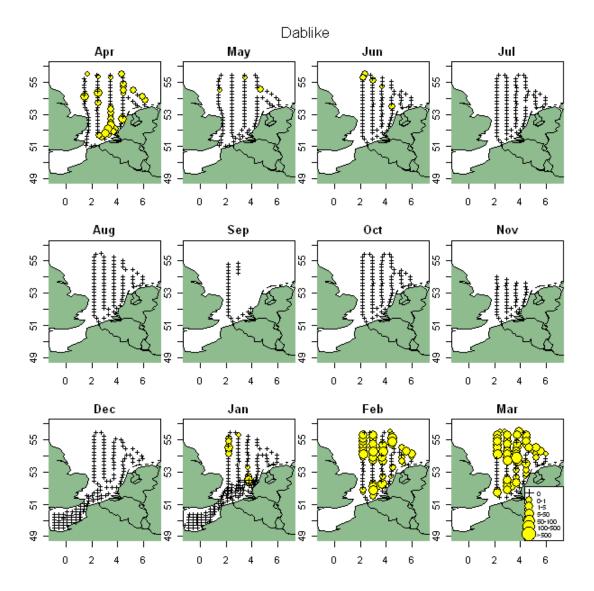


Figure 56e. Spatial and temporal distribution of stage 5 Dab like eggs.

Report number C098/11 315 of 377

## Dab *Limanda limanda*

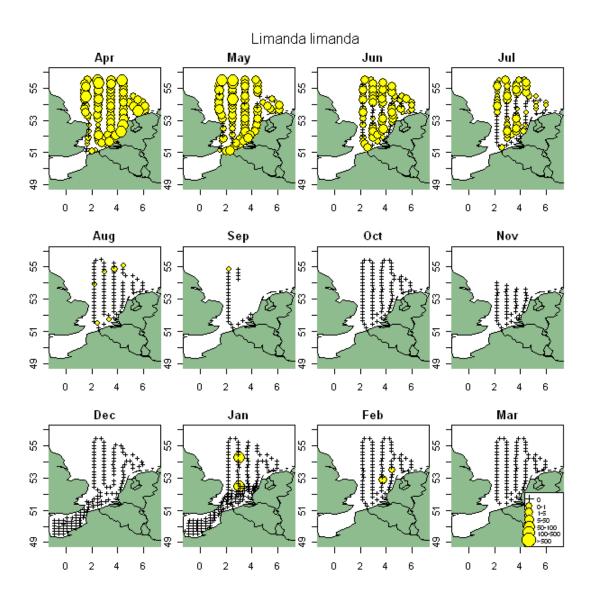


Figure 57a. Spatial and temporal distribution of stage 1 dab eggs.

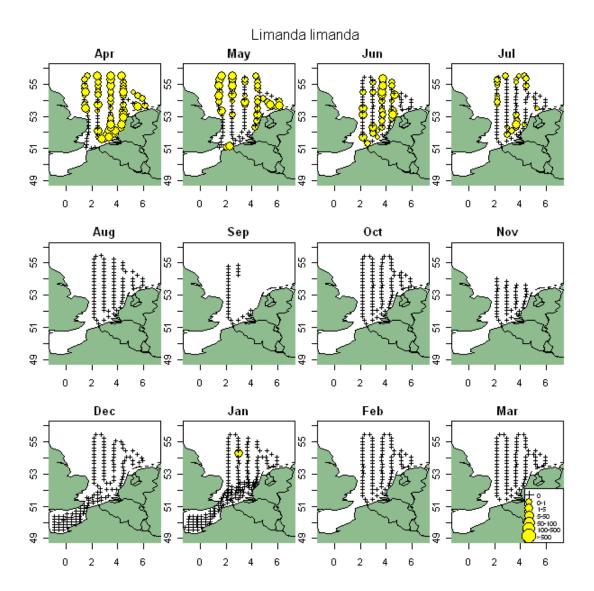


Figure 57b. Spatial and temporal distribution of stage 2 dab eggs.

Report number C098/11 317 of 377

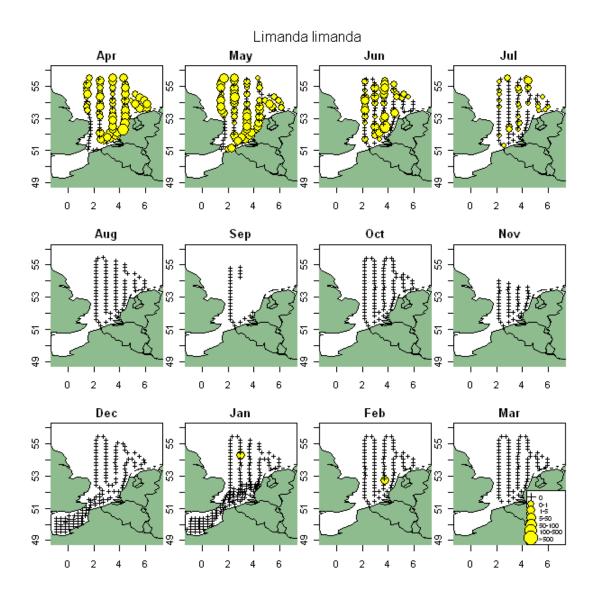


Figure 57c. Spatial and temporal distribution of stage 3 dab eggs.

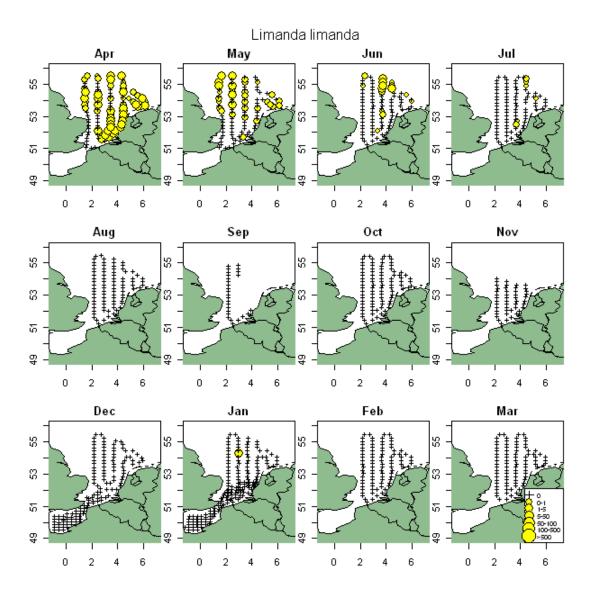


Figure 57d. Spatial and temporal distribution of stage 4 dab eggs.

Report number C098/11 319 of 377

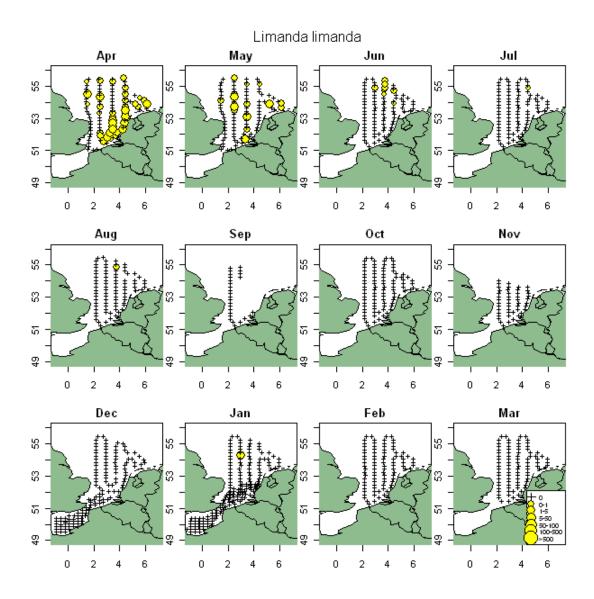


Figure 57e. Spatial and temporal distribution of stage 5 dab eggs.

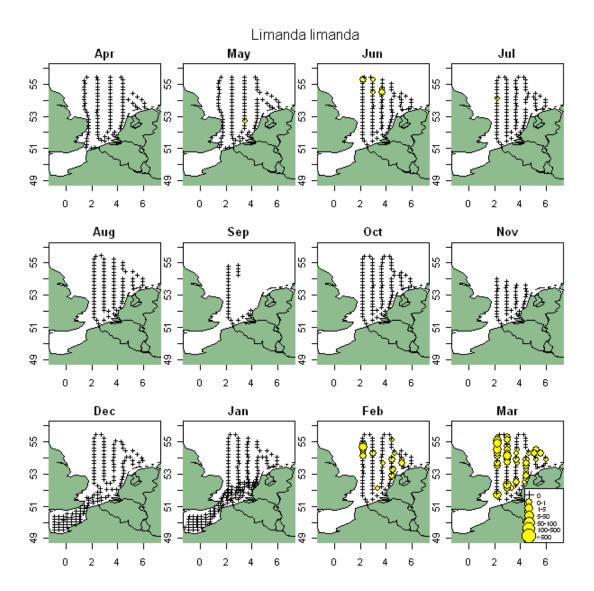


Figure 57f. Spatial and temporal distribution of yolk sac dab larvae.

Report number C098/11 321 of 377

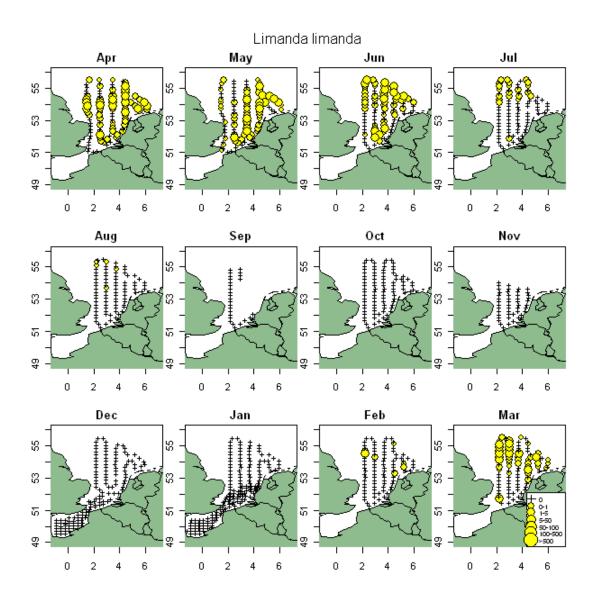


Figure 57g. Spatial and temporal distribution of non-yolk sac dab larvae.

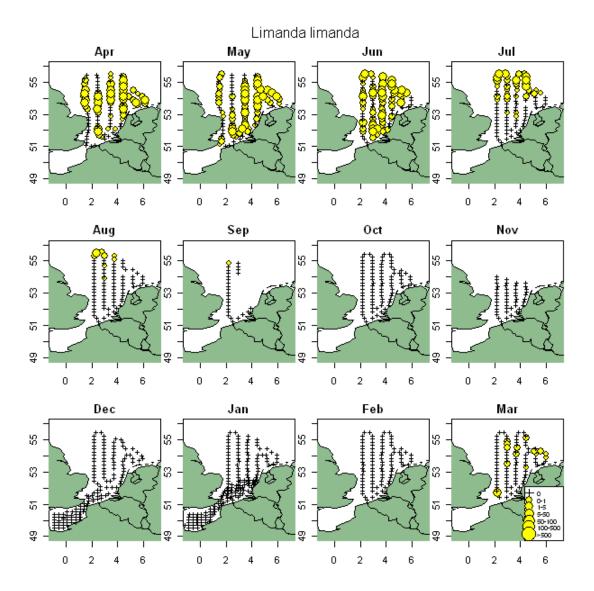


Figure 57h. Spatial and temporal distribution of bent notochord stage dab larvae.

Report number C098/11 323 of 377

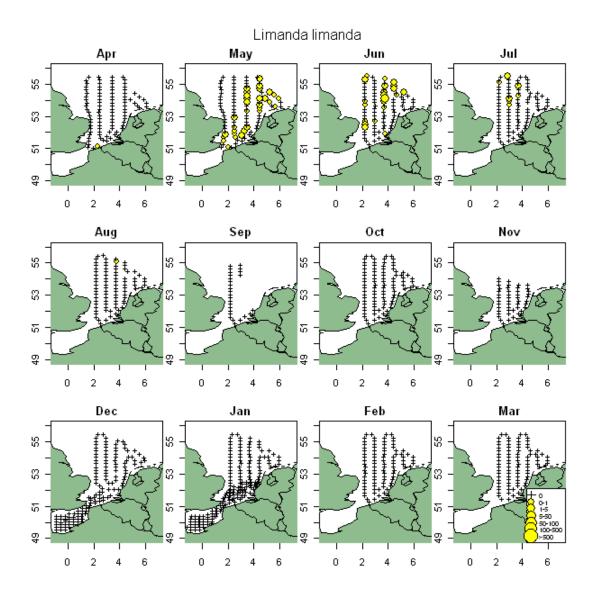


Figure 57i. Spatial and temporal distribution of metamorphosing dab larvae.

## Plaice Pleuronectes platessa

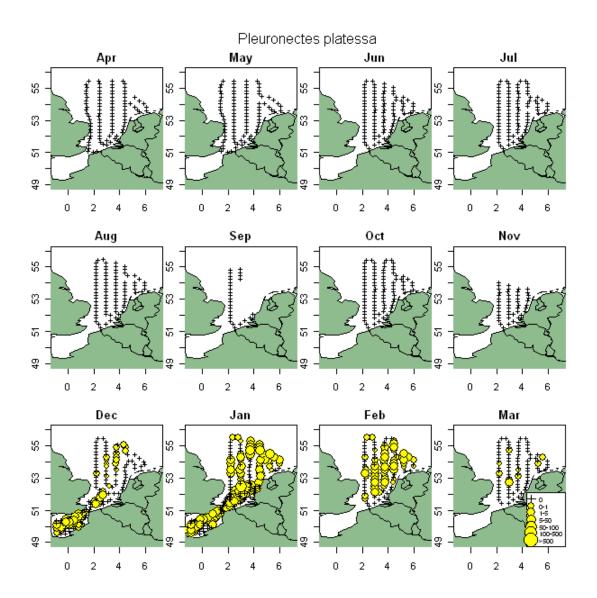


Figure 58a. Spatial and temporal distribution of stage 1 plaice eggs.

Report number C098/11 325 of 377

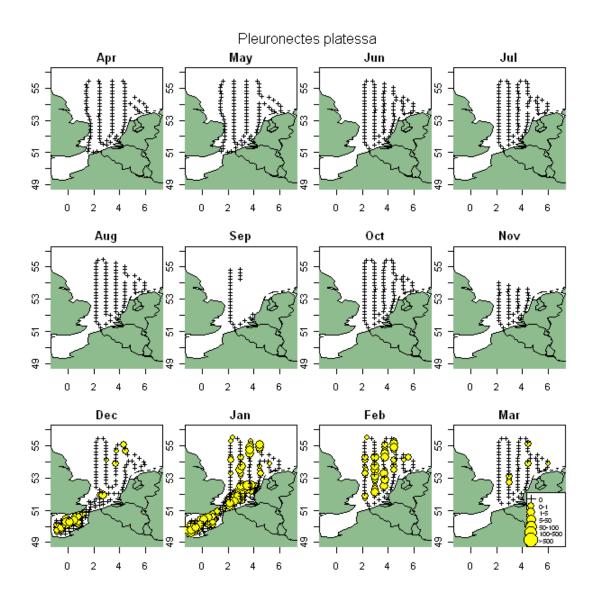


Figure 58b. Spatial and temporal distribution of stage 2 plaice eggs.

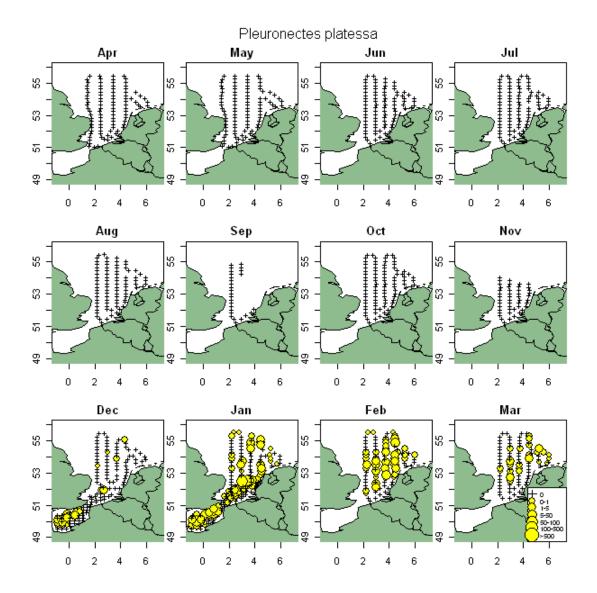


Figure 58c. Spatial and temporal distribution of stage 3 plaice eggs.

Report number C098/11 327 of 377

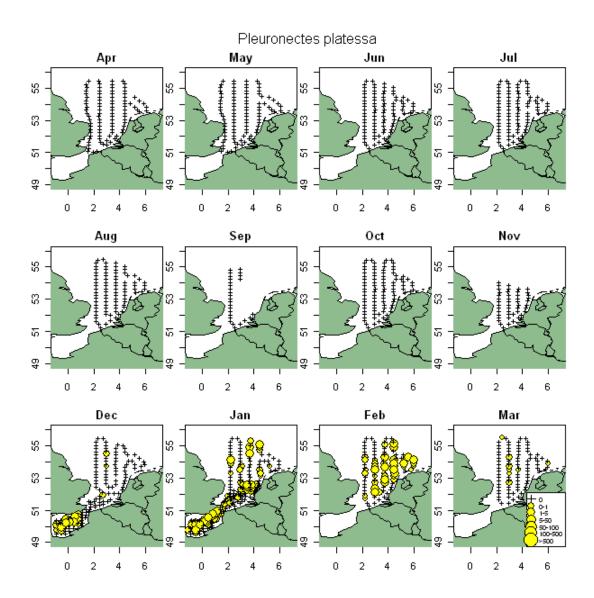


Figure 58d. Spatial and temporal distribution of stage 4 plaice eggs.

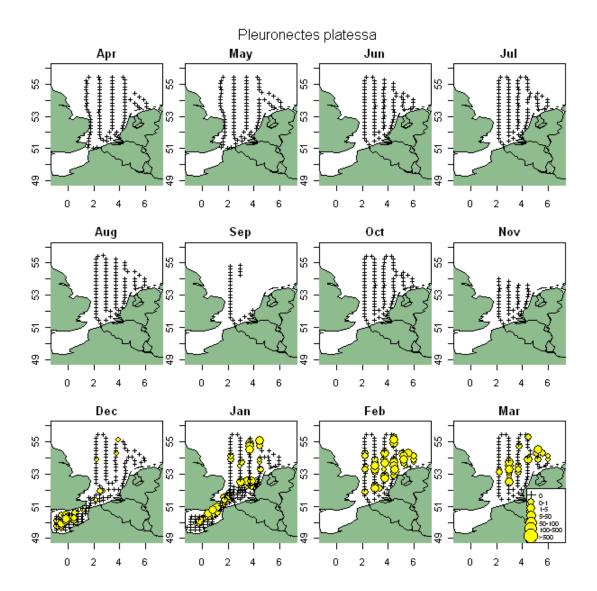


Figure 58e. Spatial and temporal distribution of stage 5 plaice eggs.

Report number C098/11 329 of 377

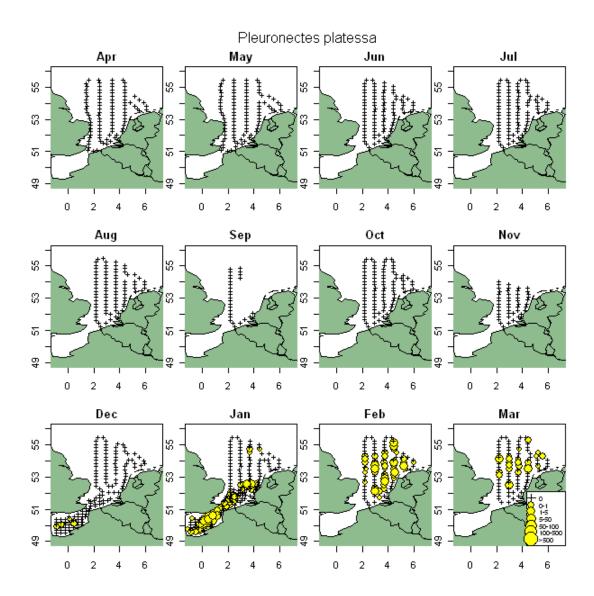


Figure 58f. Spatial and temporal distribution of yolk sac plaice larvae.

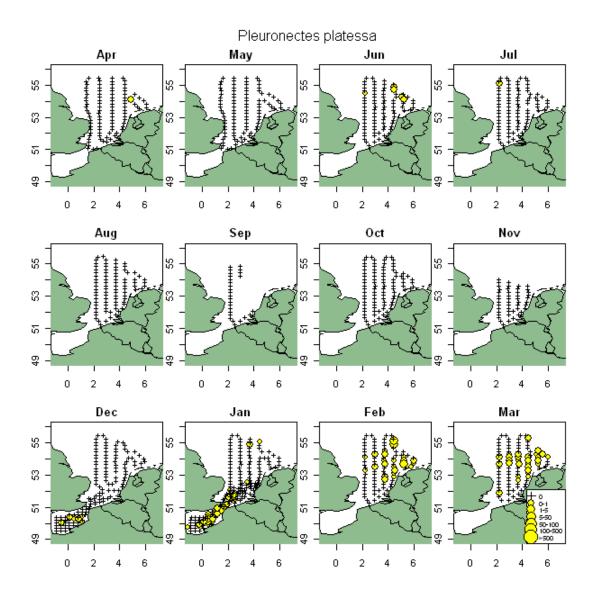


Figure 58g. Spatial and temporal distribution of non-yolk sac plaice larvae.

Report number C098/11 331 of 377

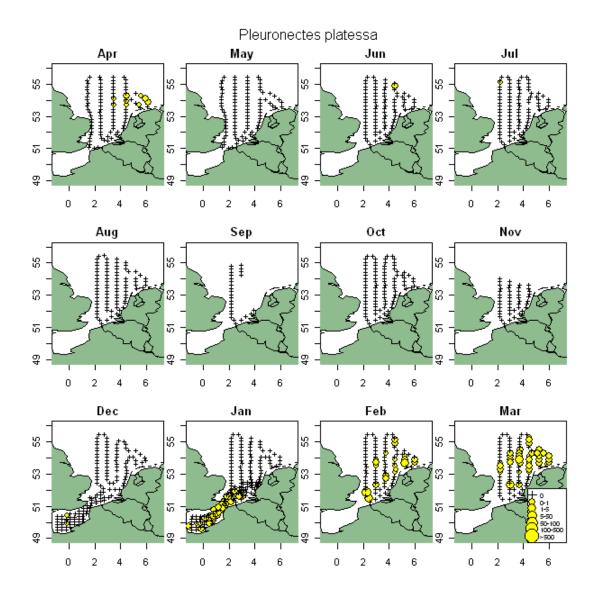


Figure 58h. Spatial and temporal distribution of bent notochord stage plaice larvae.

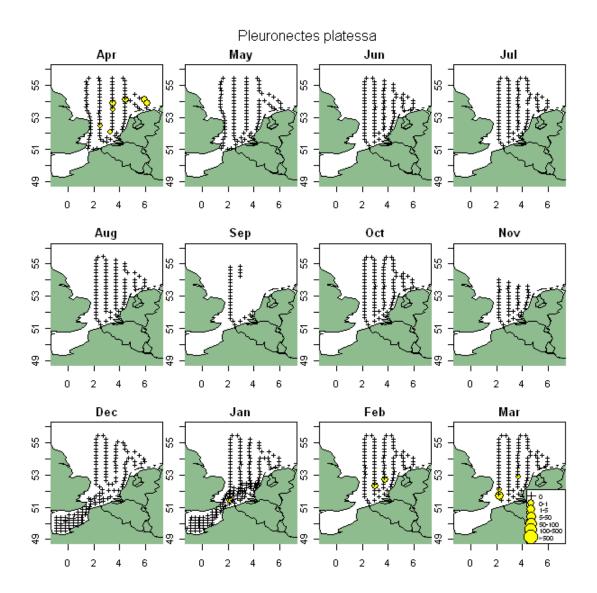


Figure 58i. Spatial and temporal distribution of metamorphosing plaice larvae.

Report number C098/11 333 of 377

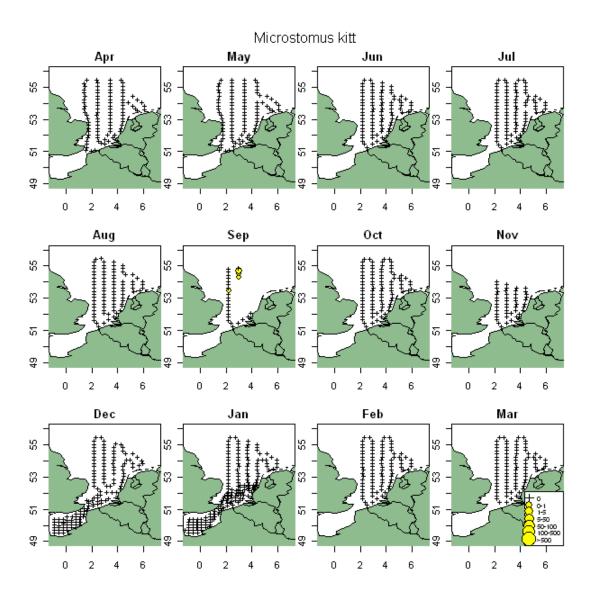


Figure 59a. Spatial and temporal distribution of stage 1 lemon sole eggs.

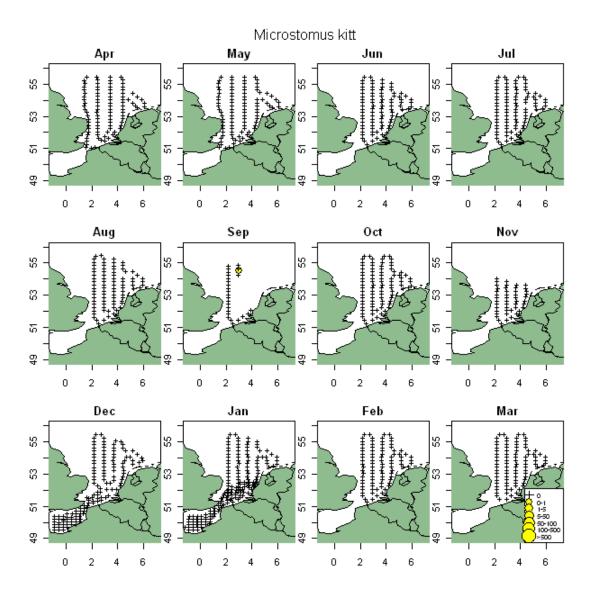


Figure 59b. Spatial and temporal distribution of stage 2 lemon sole eggs.

Report number C098/11 335 of 377

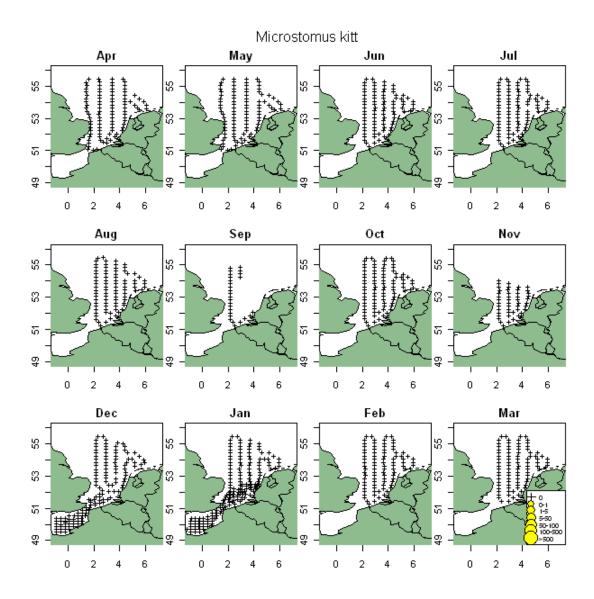


Figure 59c. Spatial and temporal distribution of stage 3 lemon sole eggs.

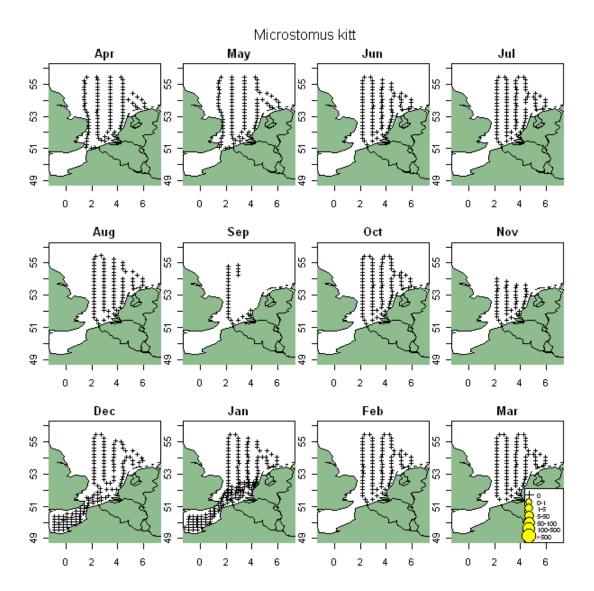


Figure 59d. Spatial and temporal distribution of stage 4 lemon sole eggs.

Report number C098/11 337 of 377

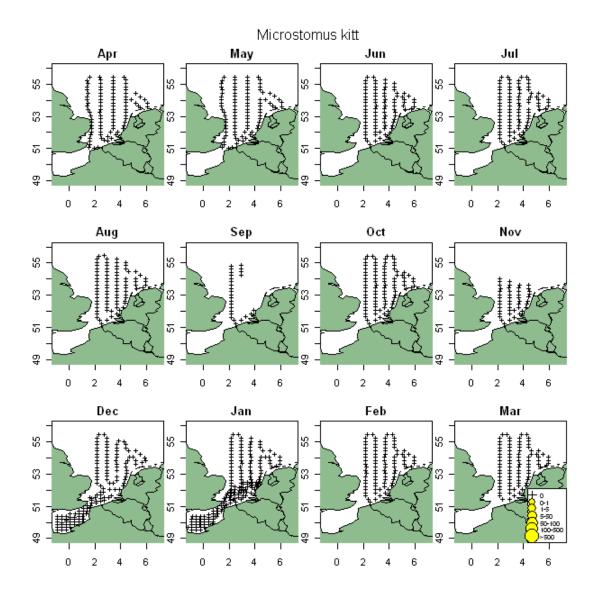


Figure 59e. Spatial and temporal distribution of stage 5 lemon sole eggs.

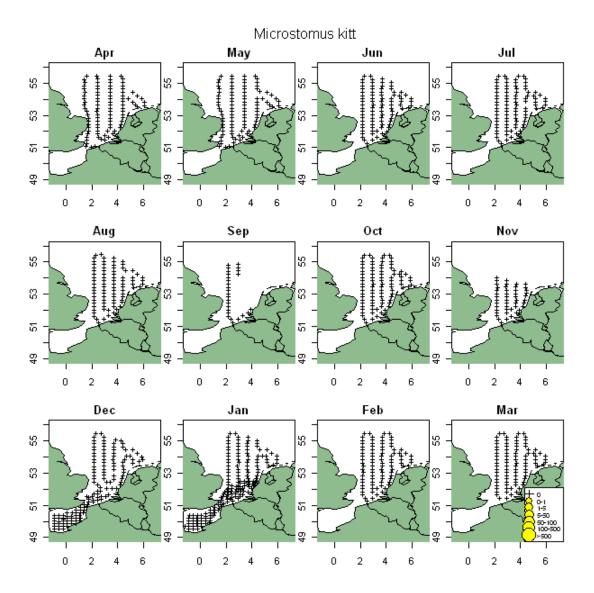


Figure 59f. Spatial and temporal distribution of yolk sac lemon sole larvae.

Report number C098/11 339 of 377

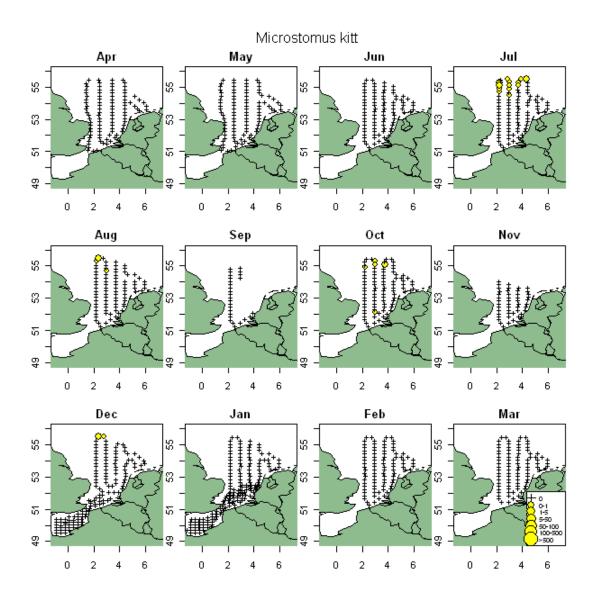


Figure 59g. Spatial and temporal distribution of non-yolk sac lemon sole larvae.

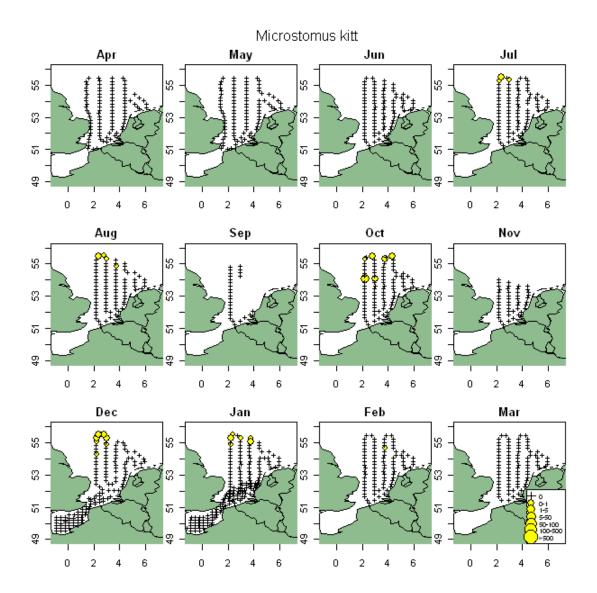


Figure 59h. Spatial and temporal distribution of bent notochord stage lemon sole larvae.

Report number C098/11 341 of 377

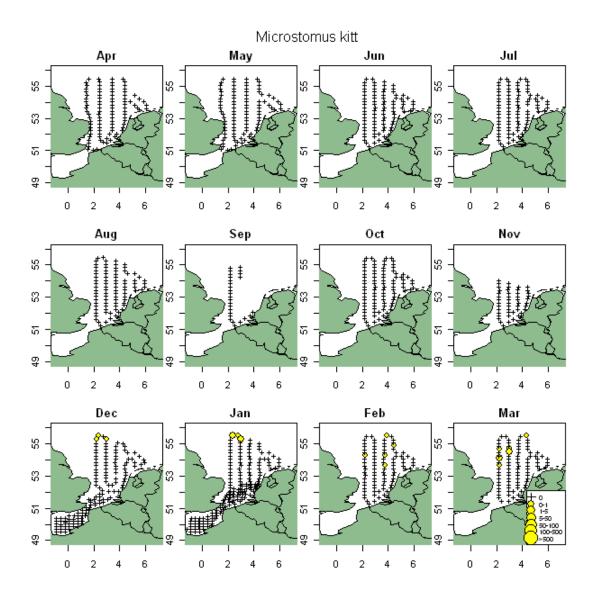


Figure 59i. Spatial and temporal distribution of metamorphosing lemon sole larvae.

## Witch flounder Glyptocephalus cynoglossus

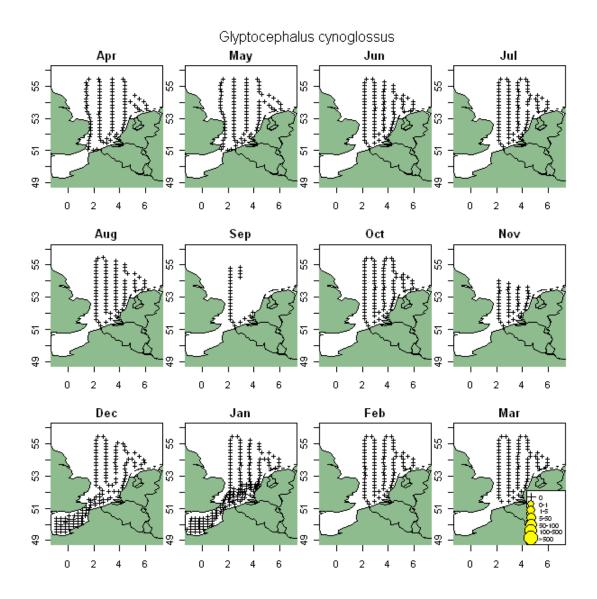


Figure 60a. Spatial and temporal distribution of yolk sac witch flounder larvae.

Report number C098/11 343 of 377

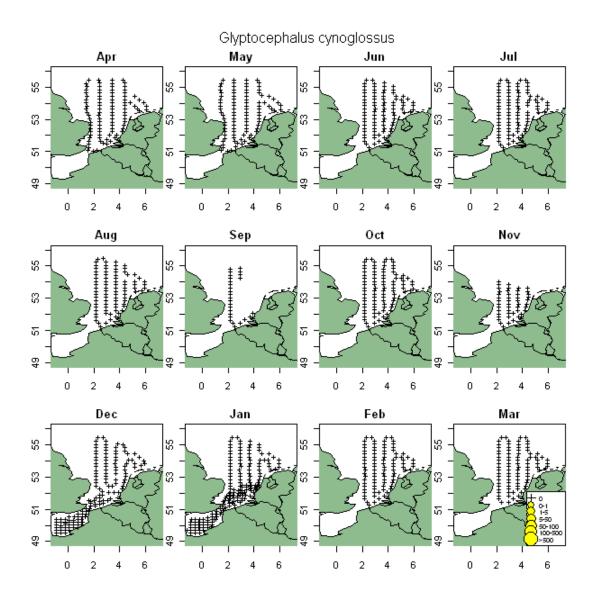


Figure 60b. Spatial and temporal distribution of non-yolk sac witch flounder larvae.

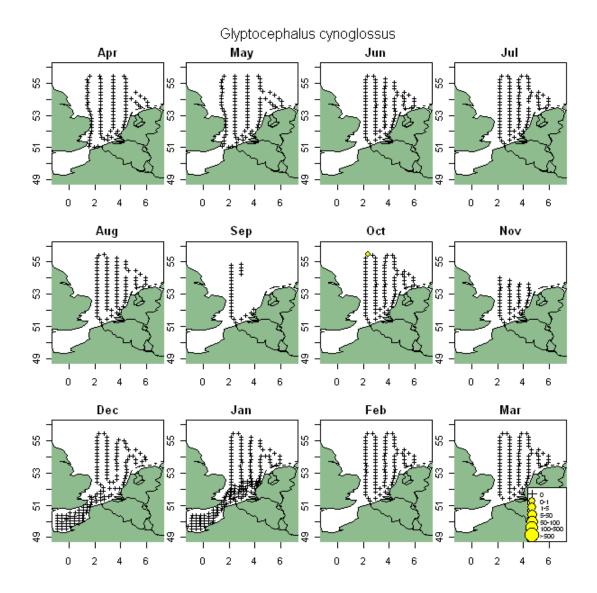


Figure 60c. Spatial and temporal distribution of bent notochord stage witch flounder larvae.

Report number C098/11 345 of 377

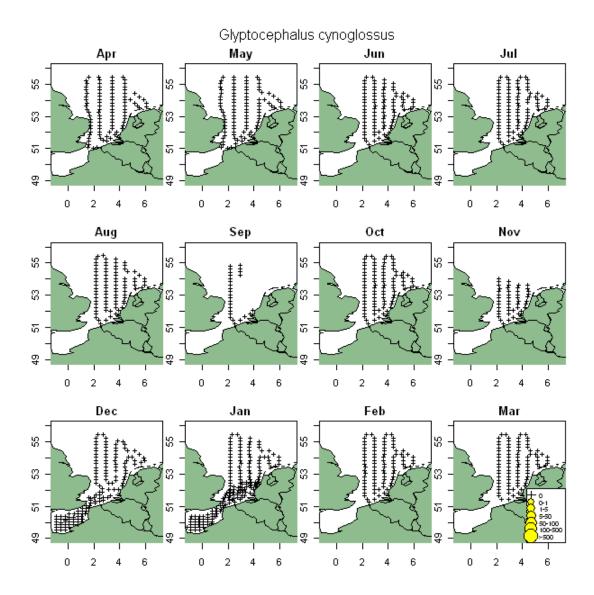


Figure 60d. Spatial and temporal distribution of metamorphosing witch flounder larvae.

## Flounder Platichthys flesus

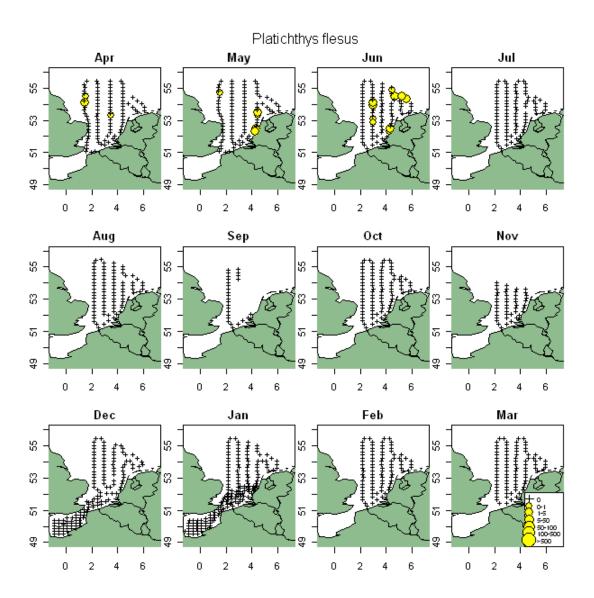


Figure 61a. Spatial and temporal distribution of stage 1 flounder eggs.

Report number C098/11 347 of 377

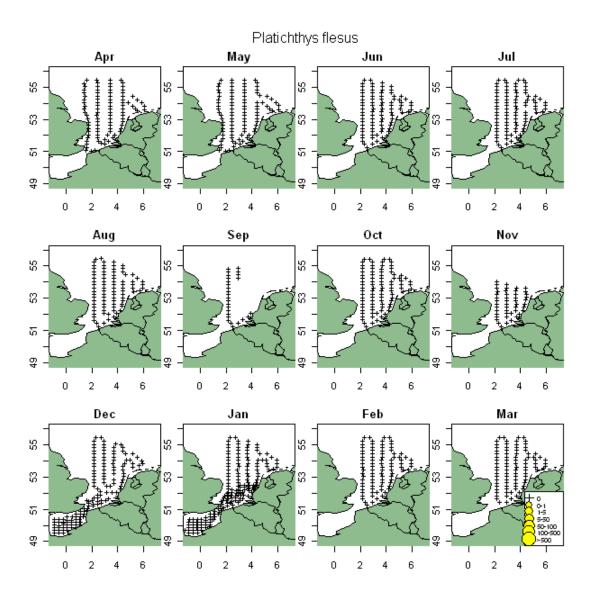


Figure 61b. Spatial and temporal distribution of stage 2 flounder eggs.

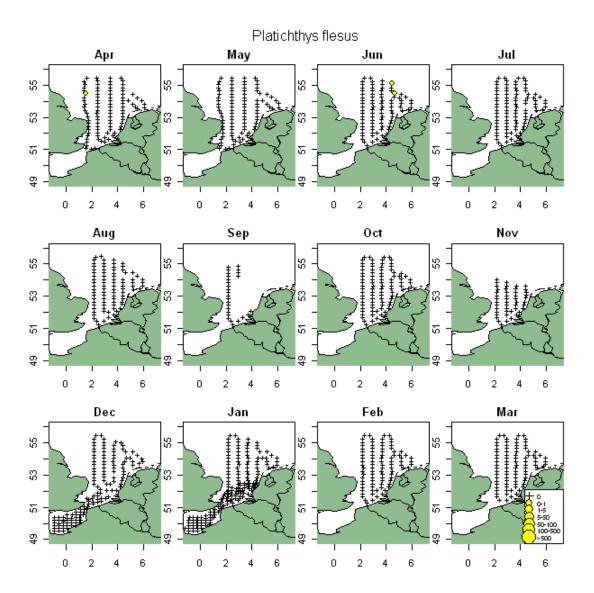


Figure 61c. Spatial and temporal distribution of stage 3 flounder eggs.

Report number C098/11 349 of 377

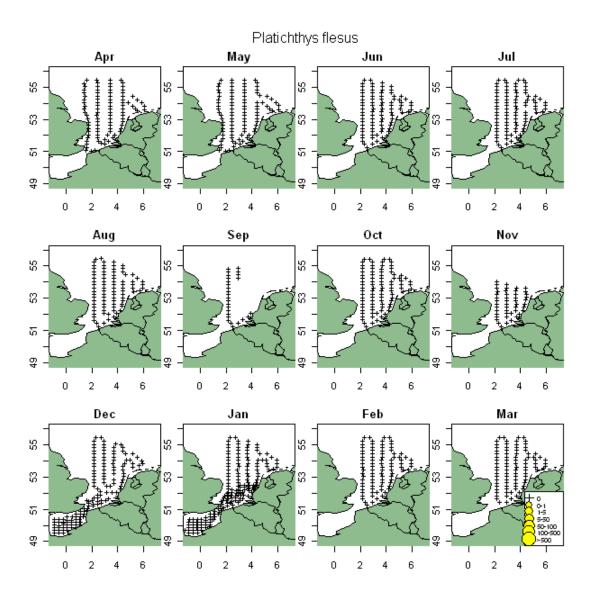


Figure 61d. Spatial and temporal distribution of stage 4 flounder eggs.

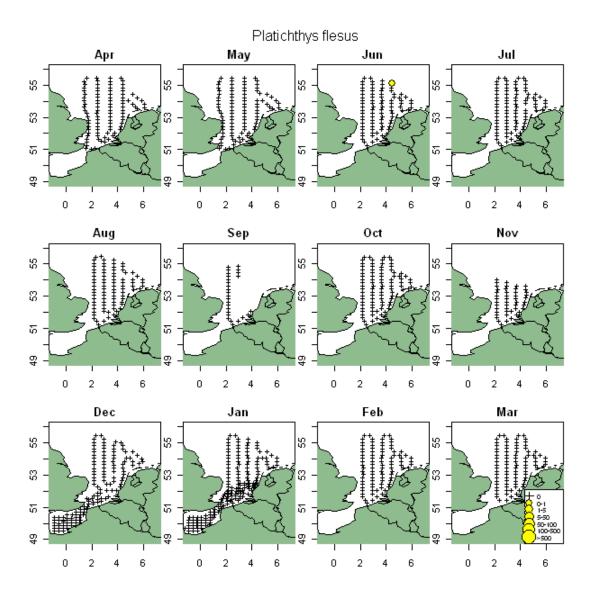


Figure 61e. Spatial and temporal distribution of stage 5 flounder eggs.

Report number C098/11 351 of 377

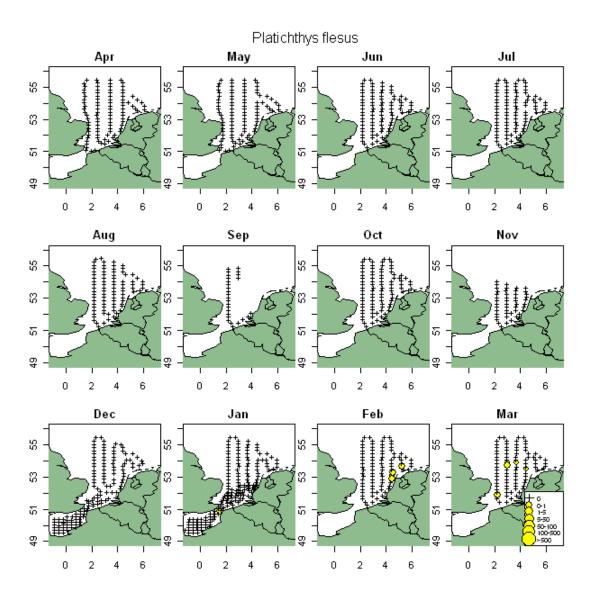


Figure 61f. Spatial and temporal distribution of yolk sac flounder larvae.

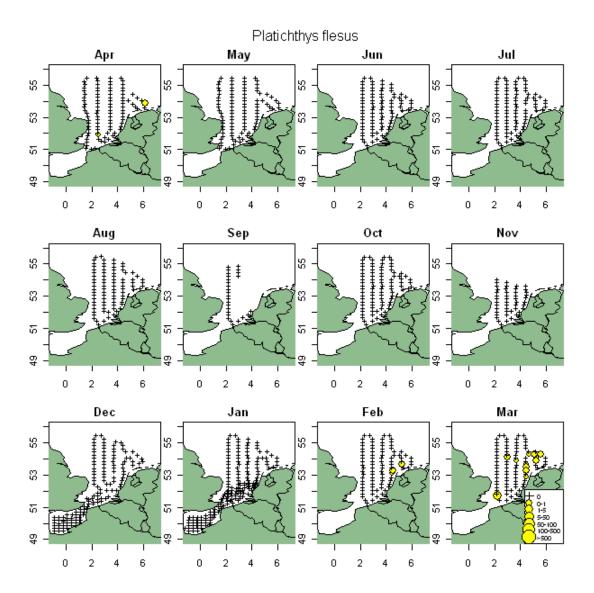


Figure 61g. Spatial and temporal distribution of non-yolk sac flounder larvae.

Report number C098/11 353 of 377

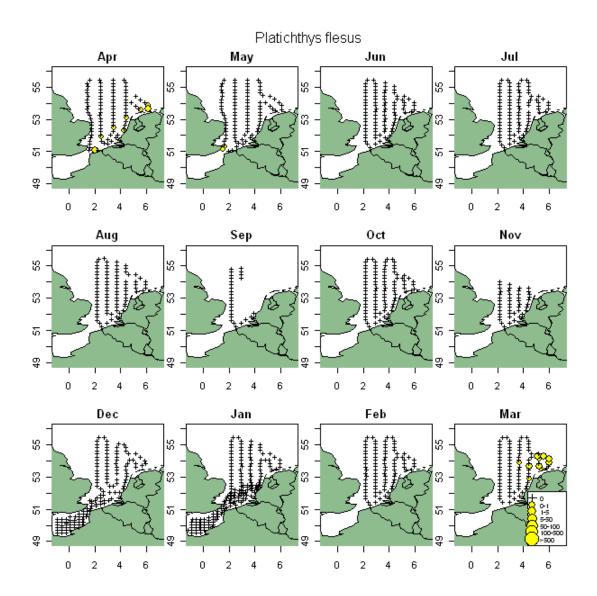


Figure 61h. Spatial and temporal distribution of bent notochord stage flounder larvae.

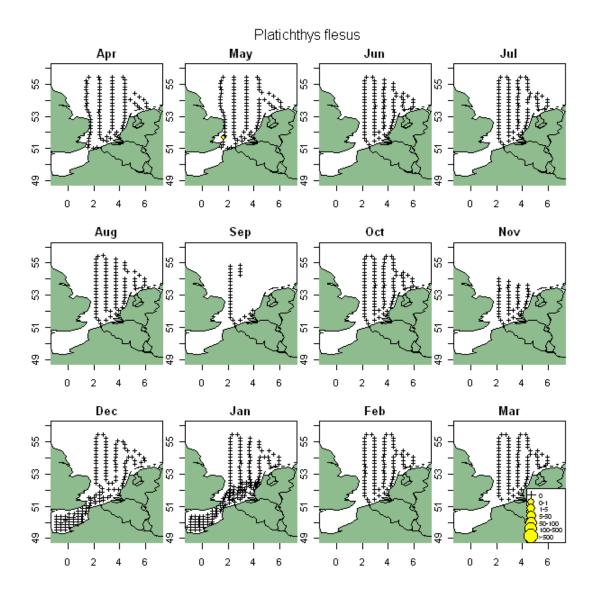


Figure 61i. Spatial and temporal distribution of metamorphosing flounder larvae.

Report number C098/11 355 of 377

## Soleidae

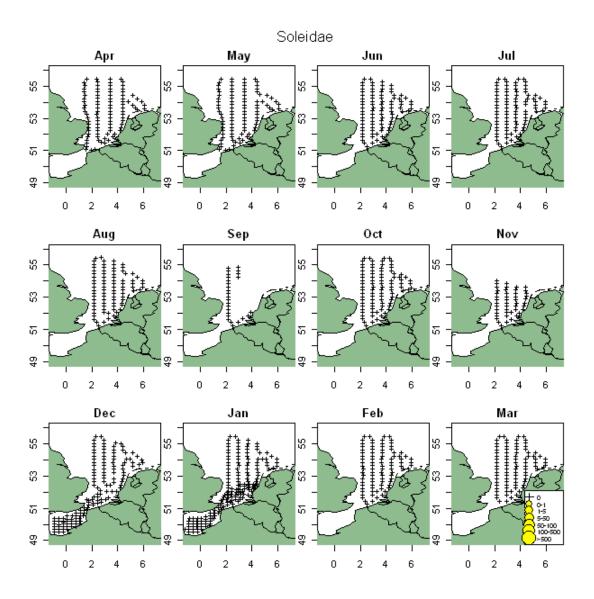


Figure 62a. Spatial and temporal distribution of yolk sac soleidae larvae.

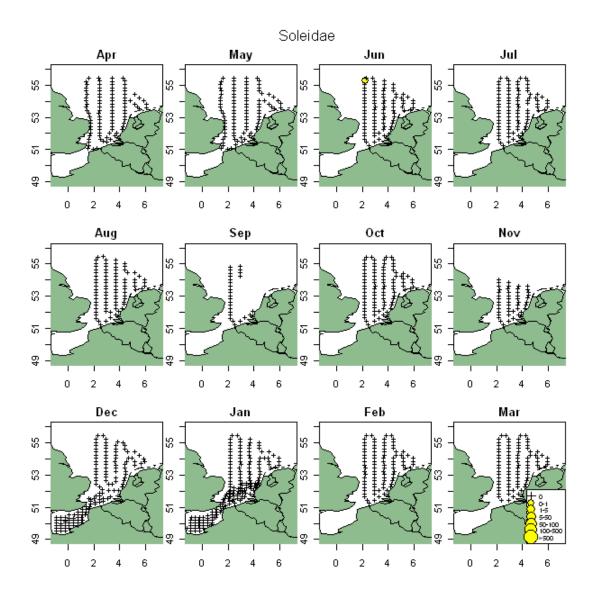


Figure 62b. Spatial and temporal distribution of non-yolk sac soleidae larvae.

Report number C098/11 357 of 377

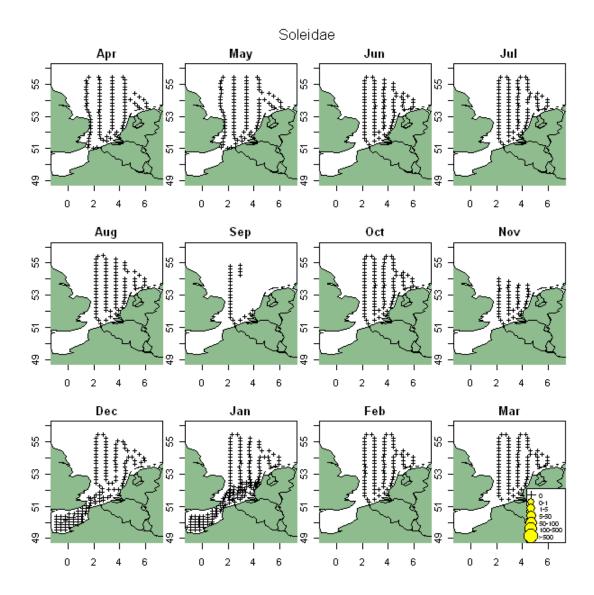


Figure 62c. Spatial and temporal distribution of bent notochord stage soleidae larvae.

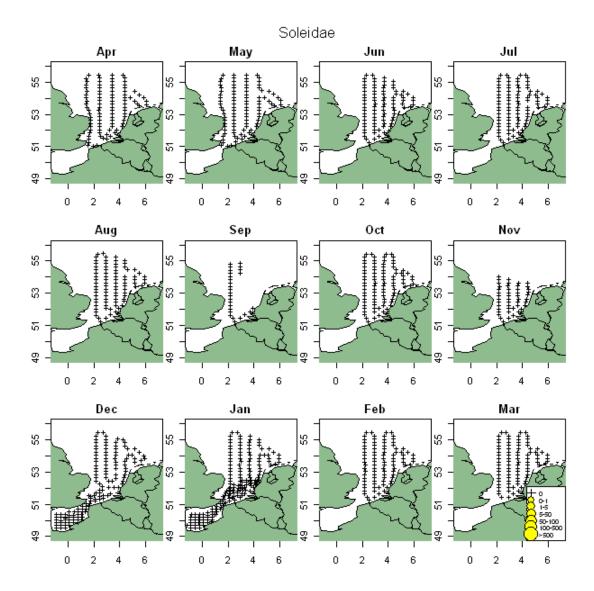


Figure 62d. Spatial and temporal distribution of metamorphosing soleidae larvae.

Report number C098/11 359 of 377

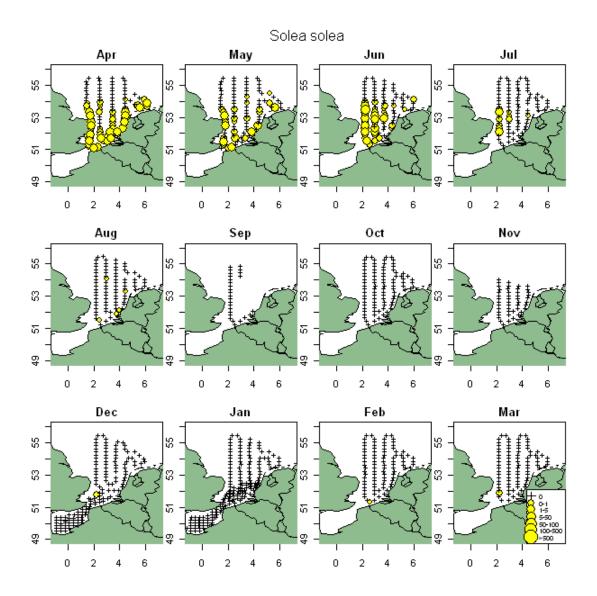


Figure 63a. Spatial and temporal distribution of stage 1 sole eggs.

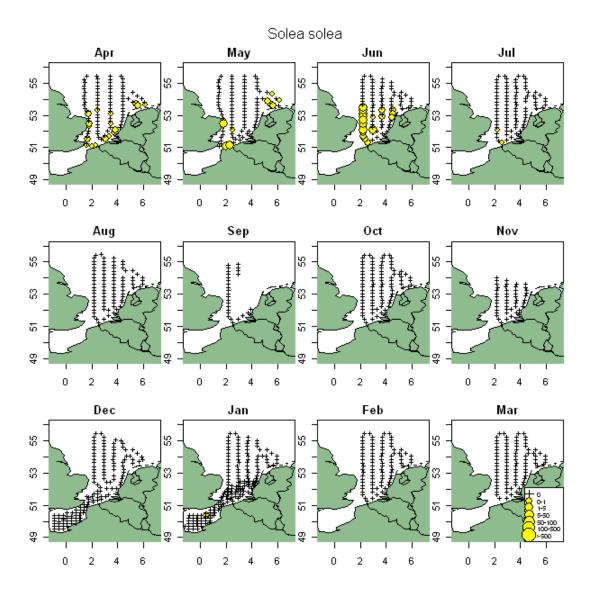


Figure 63b. Spatial and temporal distribution of stage 2 sole eggs.

Report number C098/11 361 of 377

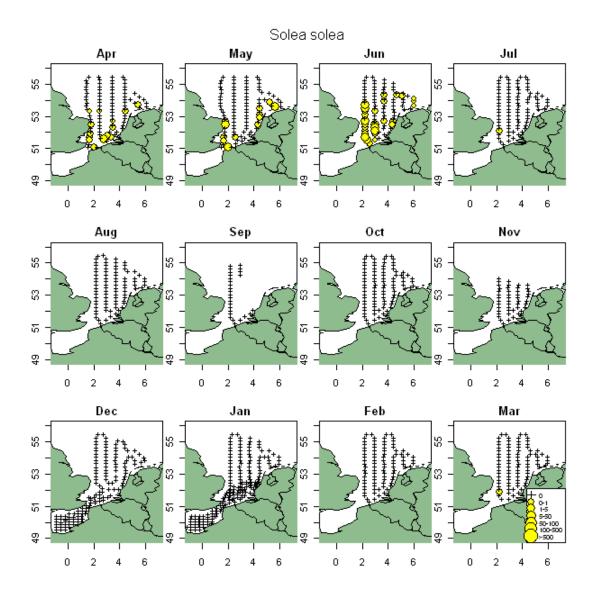


Figure 63c. Spatial and temporal distribution of stage 3 sole eggs.

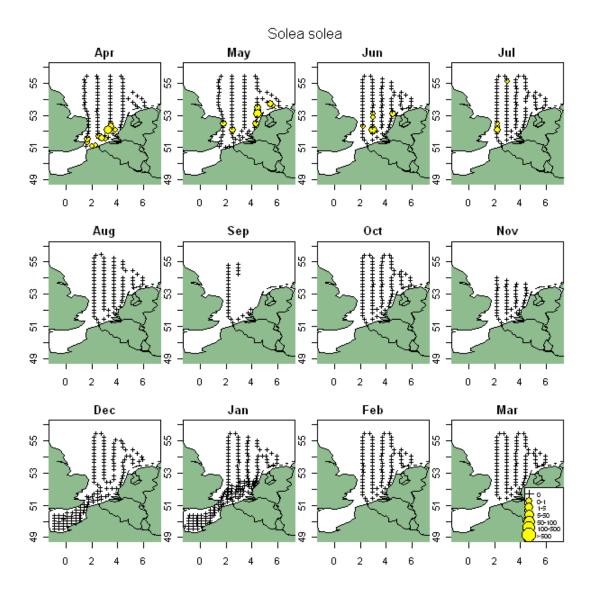


Figure 63d. Spatial and temporal distribution of stage 4 sole eggs.

Report number C098/11 363 of 377

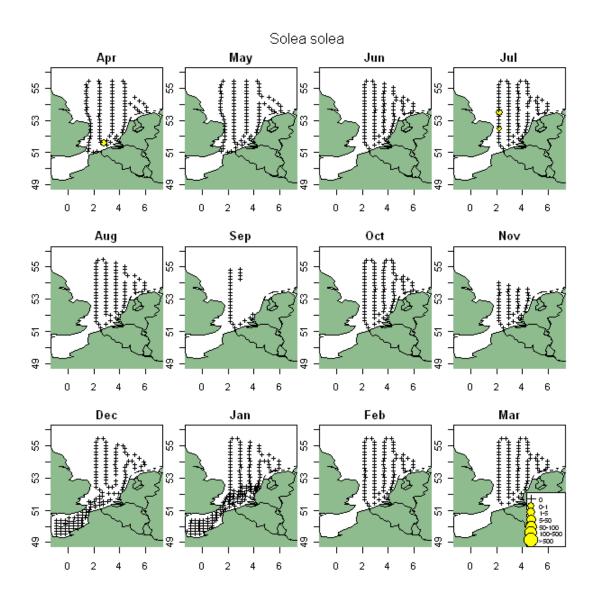


Figure 63e. Spatial and temporal distribution of stage 5 sole eggs.

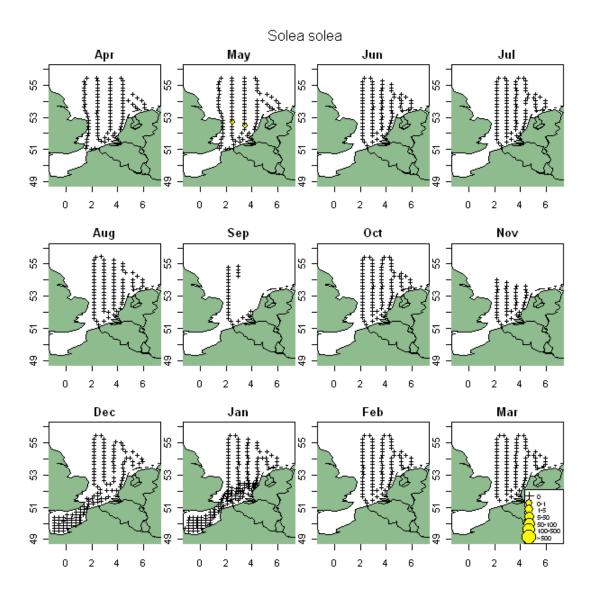


Figure 63f. Spatial and temporal distribution of yolk sac sole larvae.

Report number C098/11 365 of 377

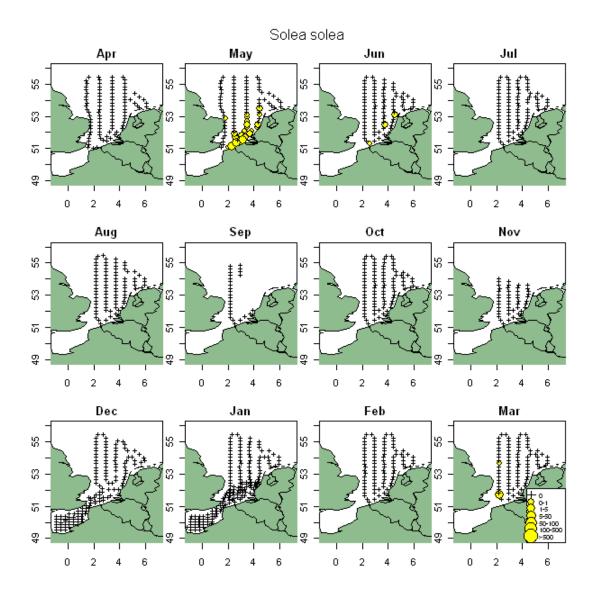


Figure 63g. Spatial and temporal distribution of non-yolk sac sole larvae.

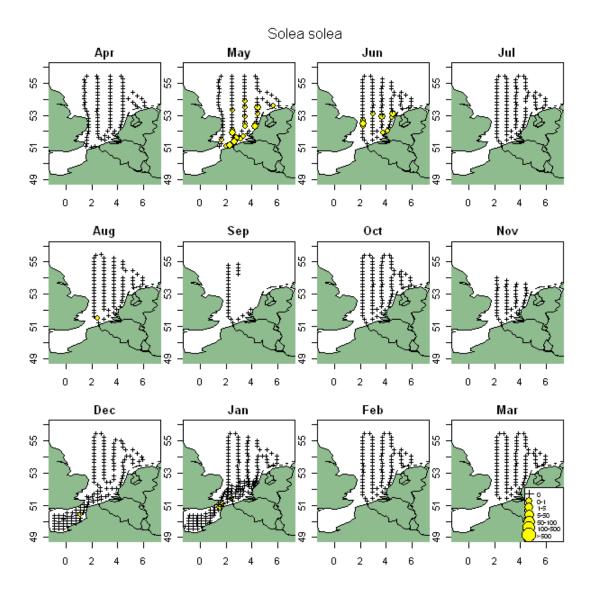


Figure 63h. Spatial and temporal distribution of bent notochord stage sole larvae.

Report number C098/11 367 of 377

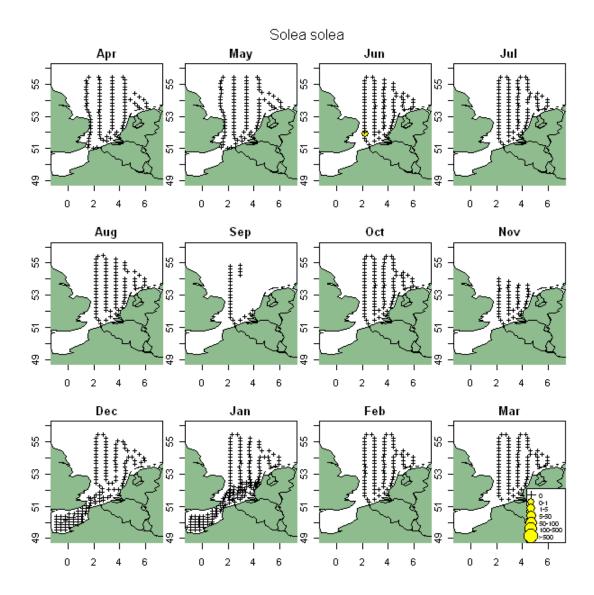


Figure 63i. Spatial and temporal distribution of metamorphosing sole larvae.

## Solenette Buglossidium luteum

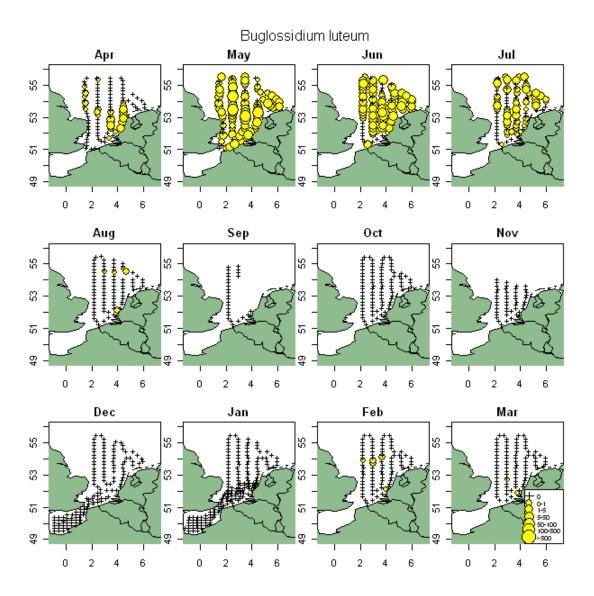


Figure 64a. Spatial and temporal distribution of stage 1 solenette eggs.

Report number C098/11 369 of 377

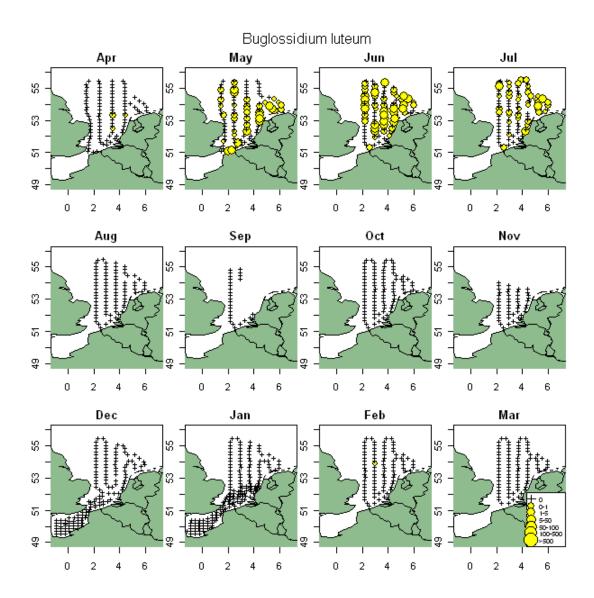


Figure 64b. Spatial and temporal distribution of stage 2 solenette eggs.

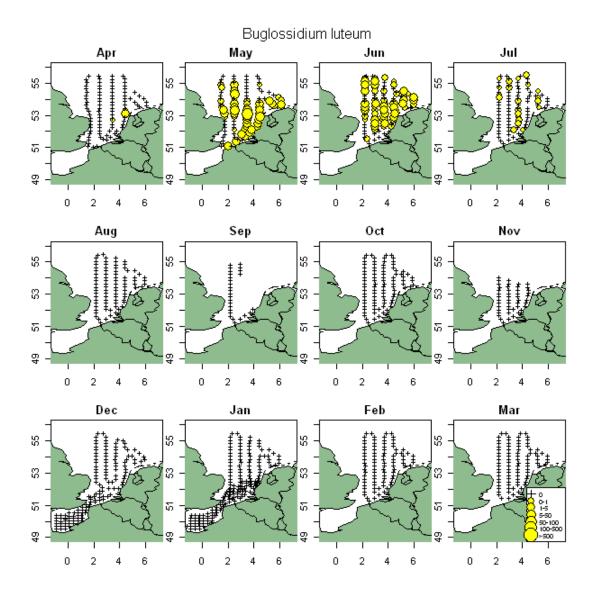


Figure 64c. Spatial and temporal distribution of stage 3 solenette eggs.

Report number C098/11 371 of 377

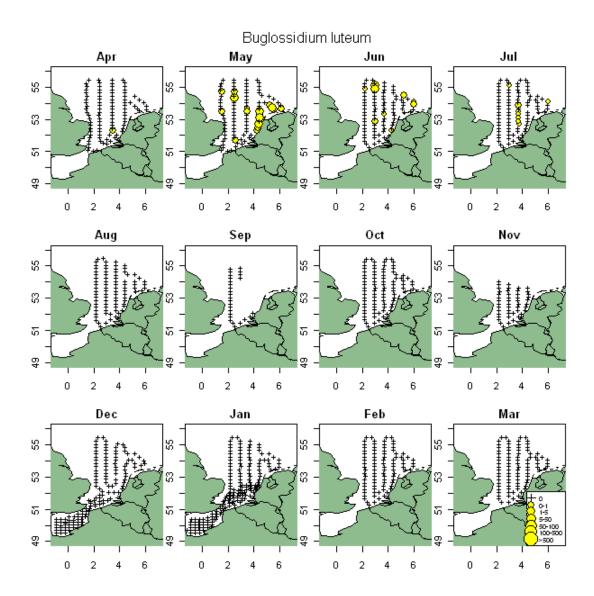


Figure 64d. Spatial and temporal distribution of stage 4 solenette eggs.

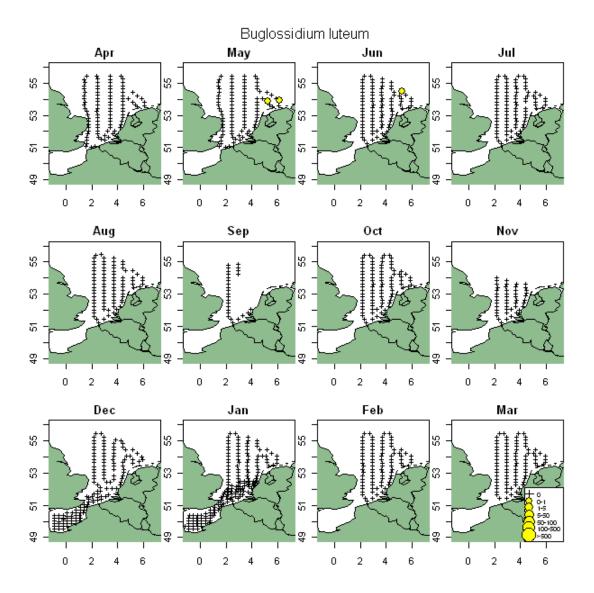


Figure 64e. Spatial and temporal distribution of stage 5 solenette eggs.

Report number C098/11 373 of 377

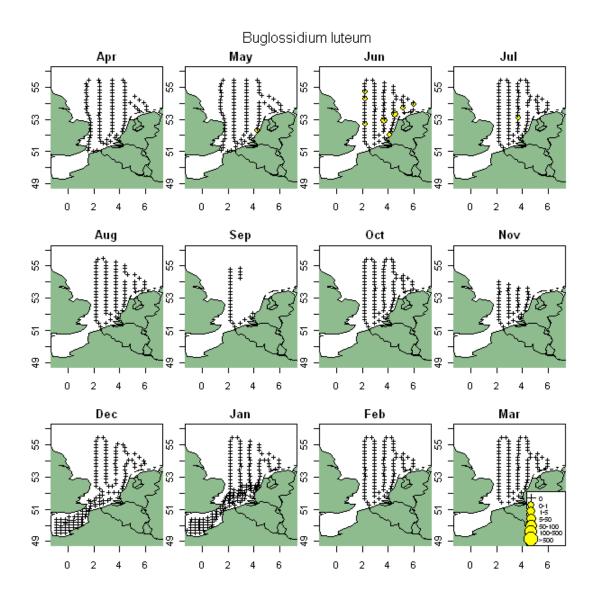


Figure 64f. Spatial and temporal distribution of yolk sac solenette larvae.

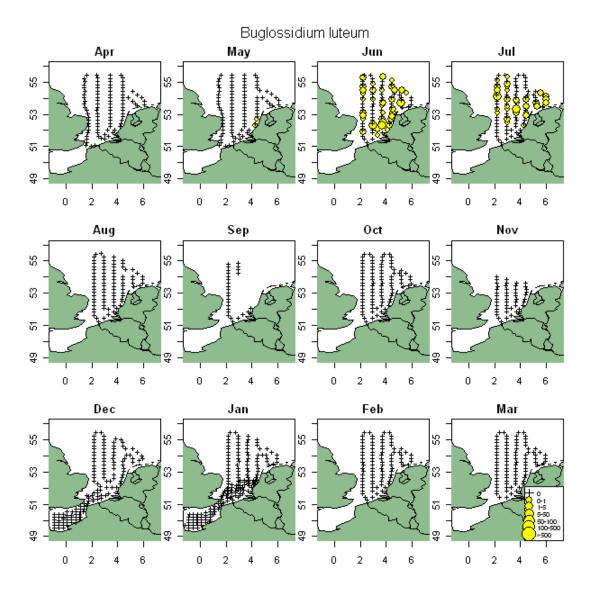


Figure 64g. Spatial and temporal distribution of non-yolk sac solenette larvae.

Report number C098/11 375 of 377

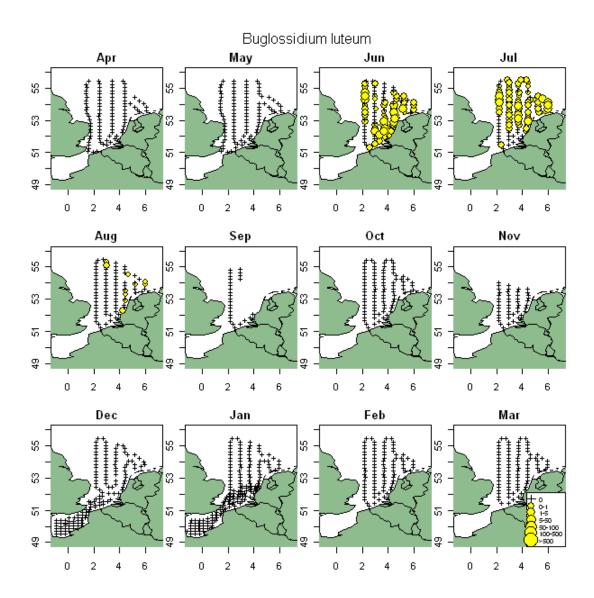


Figure 64h. Spatial and temporal distribution of bent notochord stage solenette larvae.

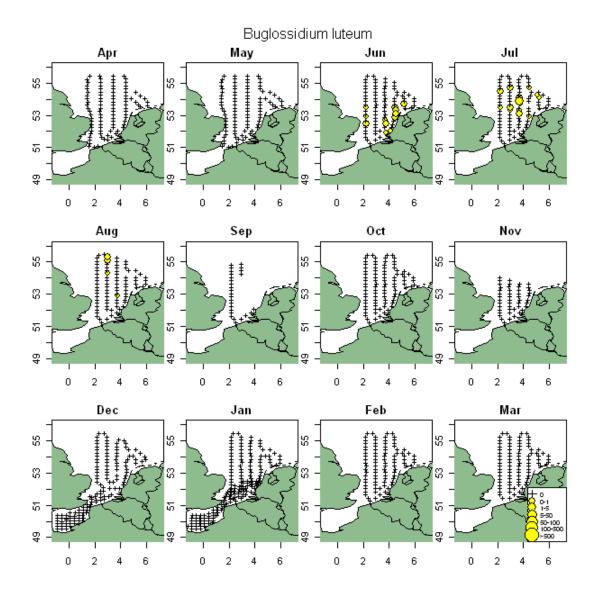


Figure 64i. Spatial and temporal distribution of metamorphosing solenette larvae.

Report number C098/11 377 of 377