

Effects of temperature and salinity on four species of northeastern Atlantic scyphistomae (Cnidaria: Scyphozoa)

Chad L. Widmer*, Clive J. Fox, Andrew S. Brierley

*Corresponding author: chad.widmer@pdza.org

Marine Ecology Progress Series 559: 73–88 (2016)

Supplement. Descriptive statistics for results of laboratory experiments testing the effects of temperature and salinity of asexual reproductive output of British scyphistomae. The format of these tables is modelled after Purcell (2007).

Table S1. *Cyanea capillata*: descriptive statistics for results of an 8 week experiment testing the effects of 15 different combinations of temperature and salinity on asexual reproductive output of *C. capillata* scyphistomae.

Salinity	Temperature °C				
	4	9	14	19	23
<u>Total surviving scyphistomae</u>					
21	17	10	11	12	0
27	18	14	16	11	0
34	18	13	10	11	0
<u>Mean no. of podocysts produced scyphistoma⁻¹ (SE)</u>					
21	0.06 (0.06)	0.06 (0.06)	0.10 (0.1)	0.42 (0.19)	0
27	0	0	0.30 (0.2)	0.73 (0.43)	0
34	0	0	0.10 (0.1)	0.35 (0.15)	0
<u>Total strobilating scyphistomae</u>					
21	12	14	2	2	0
27	15	15	1	3	0
34	17	12	2	0	0
<u>Mean number of weeks before strobilation initiated</u>					
21	3.0 (0.43)	1.9 (0.31)	1.0 (0.0)	1.0 (0.0)	NA
27	2.8 (0.29)	1.7 (0.21)	2.0 (0.0)	1.0 (0.0)	NA
34	3.2 (0.43)	2.2 (0.21)	1.0 (0.0)	NA	NA
<u>Mean strobilation duration in weeks (SE)</u>					
21	4.1 (0.38)	2.6 (0.27)	2.5 (0.5)	1.5 (0.5)	NA
27	3.8 (0.37)	2.4 (0.21)	1.0 (NA)	1.0 (0.0)	NA
34	2.7 (0.31)	2.1 (0.39)	1.0 (0.0)	NA	NA
<u>Mean number of ephyrae scyphistoma⁻¹ (SE)</u>					
21	1.7 (0.43)	1.8 (0.28)	0.2 (0.17)	0.2 (0.12)	0
27	2.2 (0.37)	2.3 (0.45)	0.1 (0.06)	0.3 (0.19)	0
34	1.7 (0.23)	1.1 (0.27)	0.3 (0.23)	0.0 (0.0)	0
<u>Total number of ephyrae produced treatment group⁻¹</u>					
21	31	33	4	3	0
27	40	41	5	6	0
34	30	20	1	0	0

Table S2. *Cyanea lamarckii*: descriptive statistics for results of an 8 week experiment testing the effects of 15 different combinations of temperature and salinity on asexual reproductive output of *C. lamarckii* scyphistomae.

Salinity	Temperature °C			
	4	9	14	19
<u>Total surviving scyphistomae</u>				
27	18	17	17	17
34	18	16	17	16
<u>Mean no. of progeny scyphistomae produced parent scyphistoma⁻¹ (SE)</u>				
27	0.33 (0.16)	0.5 (0.23)	0.44 (0.15)	0.28 (0.11)
34	0.83 (0.22)	0.5 (0.25)	0.28 (0.18)	0.50 (0.18)
<u>Mean no. of podocysts produced scyphistoma⁻¹ (SE)</u>				
27	0	0.06 (0.06)	1.50 (0.56)	1.11 (0.35)
34	0	0.17 (0.09)	0.89 (0.44)	1.28 (0.54)
<u>Total strobilating scyphistomae</u>				
27	9	4	0	0
34	6	5	2	0
<u>Mean number of weeks before strobilation initiated</u>				
27	7.11 (0.92)	4.25 (0.95)	NA	NA
34	4.33 (1.05)	2.2 (0.38)	2.0 (0.0)	NA
<u>Mean strobilation duration in weeks (SE)</u>				
27	10.0 (1.17)	3.75 (1.11)	NA	NA
34	10.0 (1.46)	5.60 (0.4)	4.50 (0.5)	NA
<u>Mean number of ephyrae scyphistoma⁻¹ (SE)</u>				
27	7.6 (2.31)	2.0 (1.28)	0	0
34	5.0 (2.24)	5.5 (2.54)	3.83 (2.65)	0
<u>Total number of ephyrae produced treatment group⁻¹</u>				
27	137	36	0	0
34	99	99	69	0

Table S3. *Chrysaora hysoscella*: descriptive statistics for results of an 8 week experiment testing the effects of 15 different combinations of temperature and salinity on asexual reproductive output of *C. lamarckii* scyphistomae.

Salinity	Temperature °C				
	4	9	14	19	23
<u>Total surviving scyphistomae</u>					
27	0	18	18	18	18
34	0	18	18	18	18
<u>Mean no. of podocysts produced scyphistoma⁻¹ (SE)</u>					
27	0	0.06 (0.06)	0.22 (0.13)	0.83 (0.25)	3.0 (0.55)
34	0	0.11 (0.11)	1.0 (0.24)	1.94 (0.39)	2.9 (0.38)
<u>Total strobilating scyphistomae</u>					
27	0	5	9	5	2
34	0	9	7	5	1
<u>Mean number of weeks before strobilation initiated</u>					
27	NA	4.2 (0.97)	3.6 (0.33)	4.2 (1.07)	3.5 (0.5)
34	NA	4.0 (0.37)	3.0 (0.44)	4.0 (1.0)	2.0 (NA)
<u>Mean strobilation duration in weeks (SE)</u>					
27	NA	4.0 (0.78)	2.0 (0.33)	1.4 (0.25)	1.5 (0.5)
34	NA	3.5 (0.29)	2.2 (0.47)	1.4 (0.25)	1.0 (NA)
<u>Mean number of ephyrae scyphistoma⁻¹ (SE)</u>					
27	0	0.72 (0.33)	1.83 (0.49)	0.78 (0.32)	0.79 (0.56)
34	0	1.33 (0.38)	1.94 (0.66)	1.33 (0.59)	0.22 (0.22)
<u>Total number of ephyrae produced treatment group⁻¹</u>					
27	0	13	33	14	14
34	0	24	35	24	4

Table S4. *Aurelia aurita*: descriptive statistics for results of an 8 week experiment testing the effects of 15 different combinations of temperature and salinity on asexual reproductive output.

Salinity	Temperature °C				
	4	9	14	19	23
<u>Total surviving scyphistomae</u>					
21	15	15	15	15	15
27	15	15	14	15	15
34	15	15	14	14	15
<u>Mean no. of progeny scyphistoma produced scyphistoma⁻¹ (SE)</u>					
21	0 (0.0)	0.8 (0.29)	0.6 (0.18)	0.7 (0.28)	0.6 (0.19)
27	0.1 (0.09)	0.5 (0.19)	0.5 (0.16)	0.6 (0.25)	0.5 (0.16)
34	0.5 (0.22)	0.7 (0.26)	0.7 (0.30)	0.2 (0.11)	0.5 (0.27)
<u>Mean no. of podocysts produced scyphistoma⁻¹ (SE)</u>					
21	0.0	0.27 (0.12)	0.33 (0.16)	0.0	0.0
27	0.07 (0.07)	0.27 (0.15)	0.0	0.07 (0.07)	0.4 (0.21)
34	0.0	0.13 (0.09)	0.21 (0.16)	0.29 (0.16)	0.13 (0.09)
<u>Total strobilating scyphistomae</u>					
21	14	0	0	0	0
27	13	0	0	0	0
34	9	0	0	0	0
<u>Mean number of weeks before strobilation initiated</u>					
21	7.5 (0.14)	NA	NA	NA	NA
27	6.0 (0.3)	NA	NA	NA	NA
34	7.0 (0.5)	NA	NA	NA	NA
<u>Mean strobilation duration in weeks (SE)</u>					
21	10.9 (0.46)	NA	NA	NA	NA
27	9.9 (0.45)	NA	NA	NA	NA
34	8.4 (0.49)	NA	NA	NA	NA
<u>Mean number of ephyrae scyphistoma⁻¹ (SE)</u>					
21	16.0 (1.9)	0	0	0	0
27	19.27 (2.4)	0	0	0	0
34	10.87 (2.6)	0	0	0	0
<u>Total number of ephyrae produced treatment group⁻¹</u>					
21	240	0	0	0	0
27	289	0	0	0	0
34	163	0	0	0	0