

Lifespan, growth rate, and body size across latitude in marine Bivalvia, with implications for Phanerozoic evolution

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Supplementary Material:

Methods

We identified and searched the entire publication runs of 30 peer-reviewed journals (Table S2) likely to contain articles reporting lifespan and/or growth rate data on marine bivalves. We tracked down additional references cited therein, and also retrieved articles cited in previous molluscan lifespan compilations [1-5]. A full list of references is provided at the end of this Supplement. Our database differs from previous attempts in that all entries are derived solely from primary sources, based on natural populations, and we record not only maximum reported lifespan (MLSP), but also von Bertalanffy growth parameters and latitude and longitude of the population sampled. Water depth was also tabulated if provided, along with other population metadata (Table S3). The database consists of observations derived from 1,148

populations. Not all variables are recorded for all populations, but 1,084 report maximum lifespan, 673 report von Bertalanffy k values, and 613 report both of these.

Parameters from the von Bertalanffy growth equation [6] can be used to describe the growth of many marine invertebrates. The standard form of the von Bertalanffy growth equation can be written as:

$$L_t = L_\infty(1 - e^{-k(t-t_0)})$$

where L_t = shell length at time t , L_∞ = asymptotic size, or the size at which growth rate is essentially zero, k = rate at which L_∞ is attained, and t_0 = age at which the bivalve has a size of zero (the x intercept on a plot of size as a function of age). In organisms with indeterminate growth, such as bivalves, a maximum size may not be biologically appropriate, though L_∞ is often treated as such in the literature. Where only age-size data were provided but not curve-fit, we calculated von Bertalanffy growth parameters using the nls procedure in R.

Taxonomy for all entries in the database was verified using the World Online Register of Marine Species (<http://www.marinespecies.org/>). Representatives from 45 bivalve families are included in the database (Table S4), accounting for nearly half of all described families. The most numerous are the Veneridae (n=223), Mytilidae (n=121), Pectinidae (n=116), and Hiatellidae (n=70).

Results and Discussion

Lifespan and growth within taxa

An examination of lifespan versus latitude in species with at least 15 observations spanning more than 10° of latitude (Fig. S2) makes apparent that the pattern in Fig. 2A is not driven by one or a few taxa, but rather is a feature present across the Bivalvia, both within and

across taxa. In 11 of 12 well-sampled species spanning 9 families, the slope of the relationship between maximum within-population lifespan and absolute latitude exceeds zero at a significance of $p < 0.10$. The lower slope of the best-fit line for *Mercenaria* may be an artifact of sampling mainly shallow-water populations along the U.S. Atlantic Coast, which have historically been heavily harvested [7, 8]. The oldest specimen of *Mercenaria mercenaria*, a 106-year-old individual, was collected in water deeper (15m) than had been investigated before [9], suggesting the potential for a different age-latitude relationship in less impacted, deeper-water populations. See discussion on depth below.

Depth versus lifespan, growth rate, and size

Nutrient availability and temperature decrease with depth as they do with latitude, and thus the depth at which an organism lives may also relate to its longevity and growth. In addition, deep-water ecosystems have been described as ecologically distinct from those on the shelf due in part to different evolutionary histories [10], and this could be reflected in differences in lifespan and growth [e.g., 11 for fishes]. Sources report depths for fewer than half of all populations ($N = 425$), and those are often given as approximations or broad ranges. It is possible, therefore, that water depth could introduce variation that is unaccounted for and obscures patterns in lifespan and growth with latitude. Reported data, however, are strongly skewed toward shallow shelf settings (modal depth = 10 m; only 7 populations are recorded from ≥ 200 meters), and there is no reason to believe the remainder to be any different, particularly given that most come from fisheries targets harvested on the shelf. Patterns we report are therefore likely to characterize shallow shelf faunas – there is no systematic bias associated with

including a large number of slope or deep sea taxa from particular regions that could color our results.

While the vast majority of our data come from shelf settings, it is nonetheless possible that effects associated with water depth could be present in the data. Jones et al. [12], e.g., presented data suggesting differences in longevity, growth, and body size between shallow and deep populations of *Spisula solidissima* off New Jersey, but few other systematic studies exist. We restricted our analysis to the well-sampled mid-latitudes (30-60° N and S) so as to minimize conflation with covariates of latitude as much as possible. The relationship between depth and lifespan is positive and significant, but there is no demonstrable relationship between depth and either growth rate or body size (Fig. S4). These results should be treated with caution. Observations from many more populations along broad depth transects at constant latitude are needed to establish the presence or absence of pattern with confidence.

Supplementary Figures:

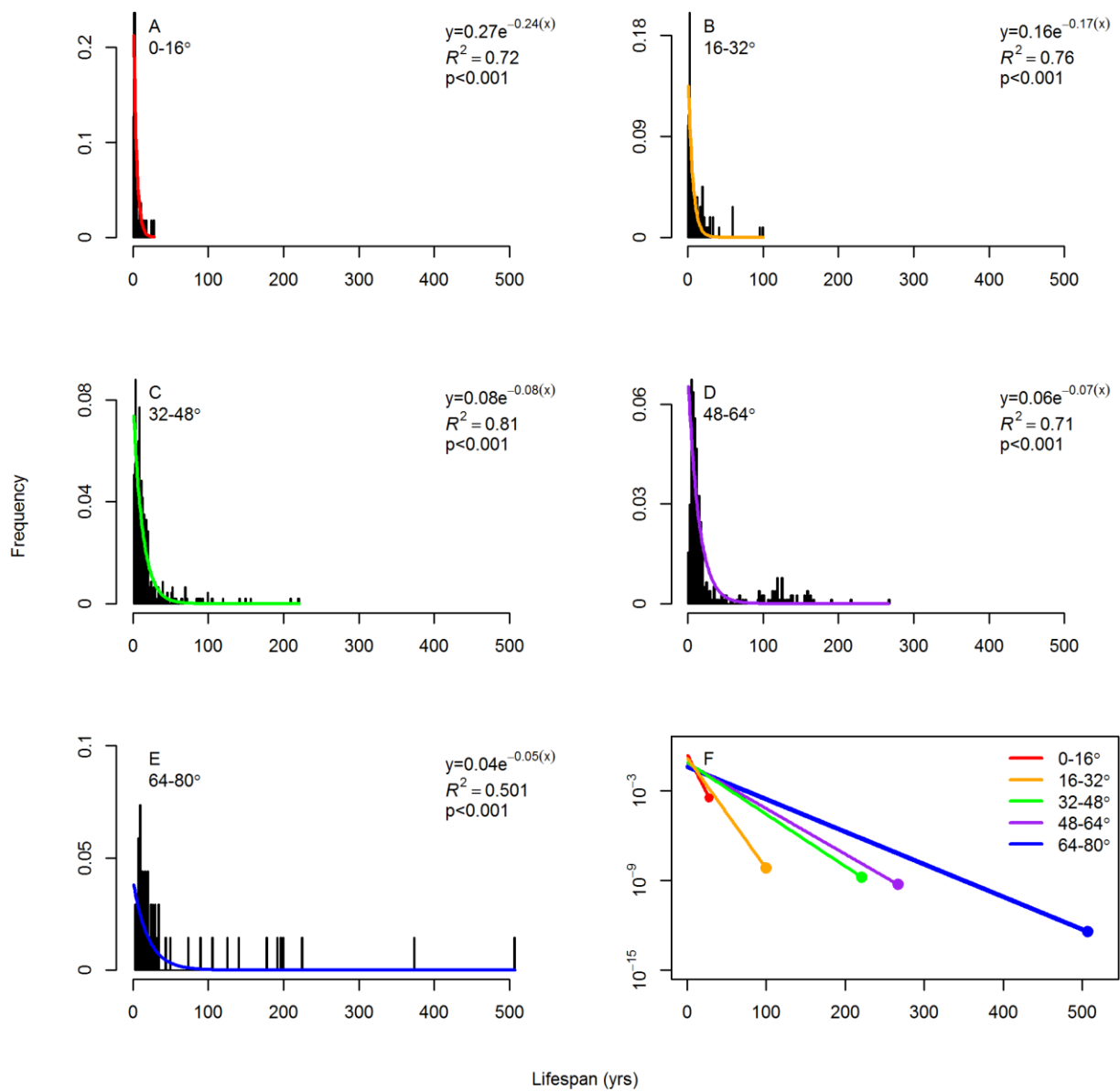


Figure S1. Histograms of population-level maximum lifespans for each 16° latitude bin. Curves are best fit exponential equations. Y-axes vary to best show fits to distribution. Panel F shows all 5 regressions on a log scale, truncated at the observed maximum lifespan for that bin, to illustrate differences in slope (probability of death) with latitude and maximum lifespan. See main text for more discussion.

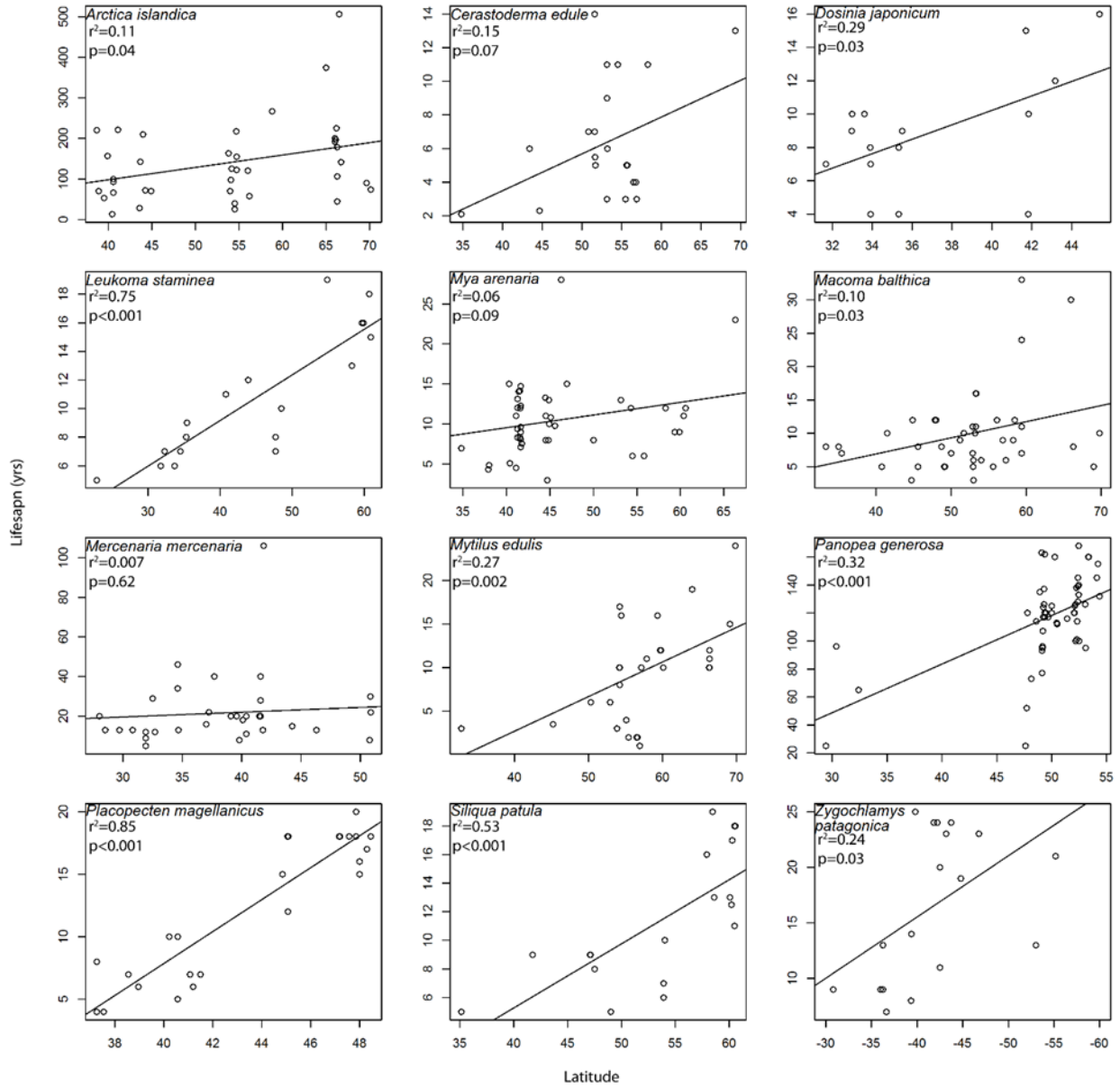


Figure S2. Relationship between latitude and lifespan in 12 species with at least 15 populations spanning $>10^\circ$ of latitude. All but one of the regressions (*Mercenaria*) are significant at the 0.01 level.

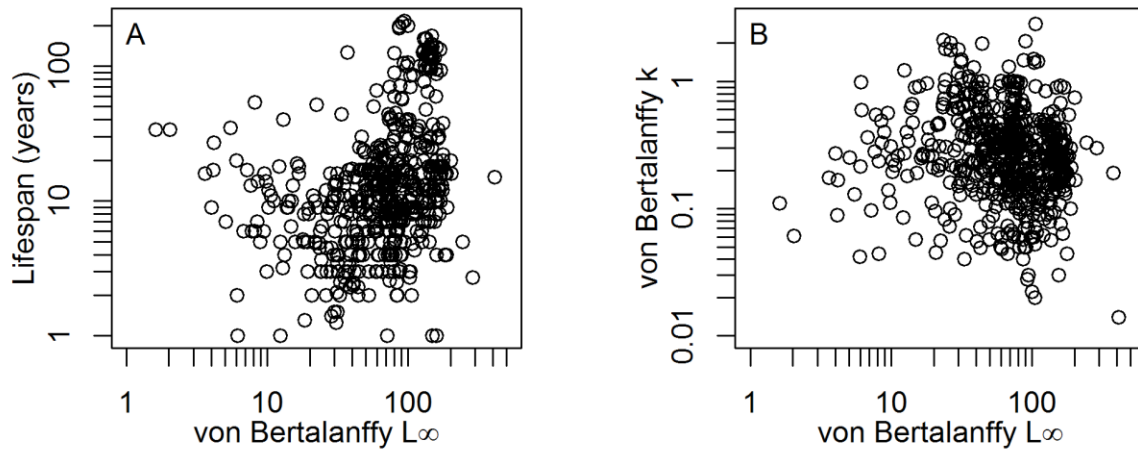


Figure S3. Relationships between maximum body size (approximated by L_{∞}) and lifespan (A) and growth rate (B). Neither of the relationships are statistically significant.

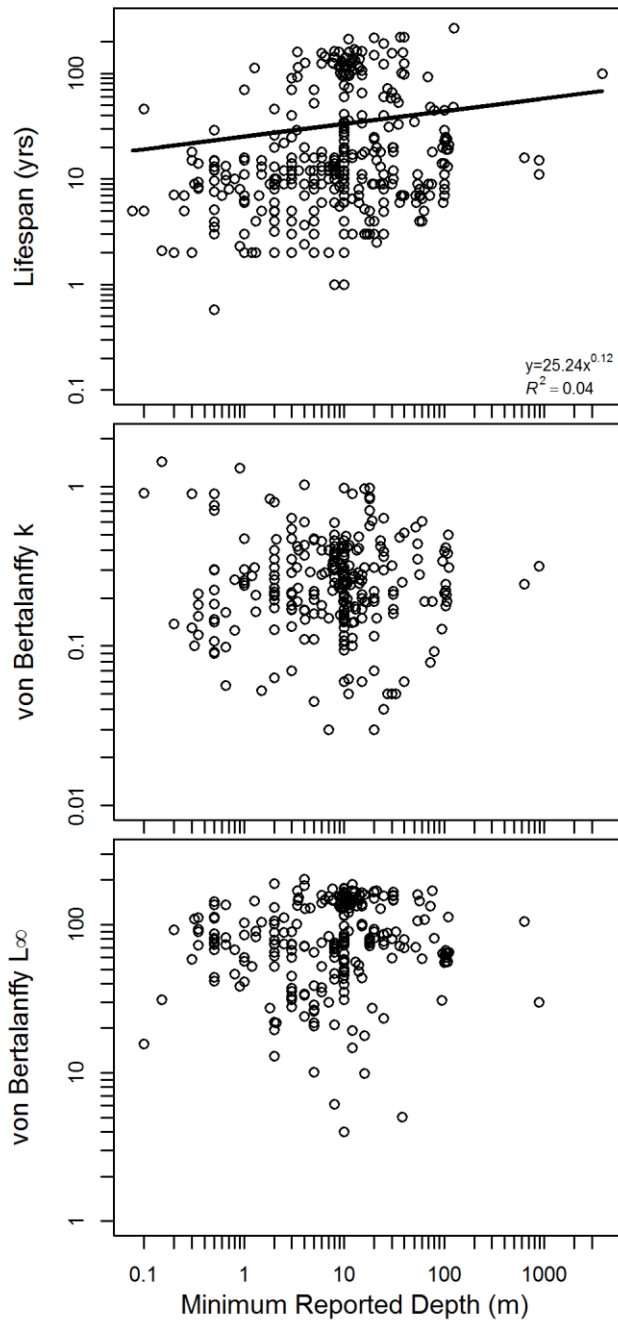


Figure S4. Relationship between water depth and A) maximum lifespan, N=411 observations, B) growth rate, N=278 observations, and C) body size, N=278 observations, for populations between 30° and 60° N and S latitude. Only the trend with lifespan is significant ($p \leq 0.01$).

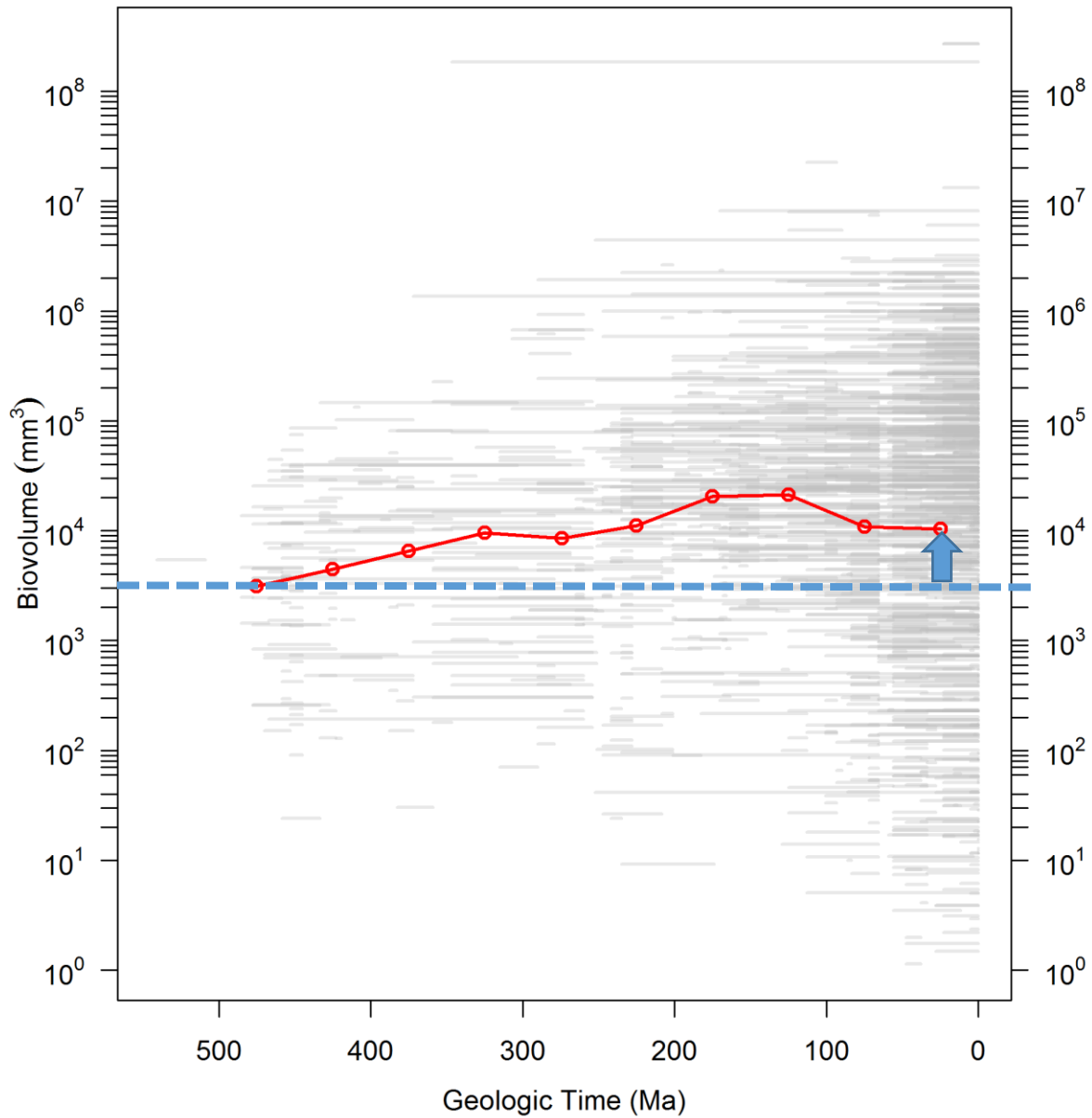


Figure S5. Biovolume of bivalve genera through the Phanerozoic derived from Heim et al. [13], plotted as body size of the largest measured species within each genus over the geologic range of the entire genus. Gray bars are geologic ranges. Red line shows the trend in mean biovolume towards the Recent for 50-million-year time bins, an increase perhaps first noticed by Runnegar [14].

Supplementary Tables:

Table S1. Maximum reported lifespans (MLSP) for species represented in database. References provided in supplementary Excel file.

Species	MLSP (yrs.)	Species	MLSP (yrs.)
<i>Abra alba</i>	4	<i>Barnea parva</i>	6
<i>Abra nitida</i>	8.8	<i>Bathymodiolus childressi</i>	100
<i>Abra prismatica</i>	1.8	<i>Brachidontes variabilis</i>	5
<i>Abra tenuis</i>	2.5	<i>Callista chione</i>	18
<i>Adacnarca nitens</i>	20	<i>Calyptogena magnifica</i>	4
<i>Adamussium colbecki</i>	20	<i>Carditamera affinis</i>	17.25
<i>Aequipecten opercularis</i>	8	<i>Cavatidens omissa</i>	1
<i>Aligena elevata</i>	7	<i>Cerastoderma edule</i>	14
<i>Amarilladesma mactroides</i>	8	<i>Cerastoderma glaucum</i>	6
<i>Amiantis purpurata</i>	25	<i>Chamelea gallina</i>	12
<i>Amusium pleuronectes</i>	2	<i>Chamelea striatula</i>	11
<i>Amygdalum glaberrimum</i>	1	<i>Chione cancellata</i>	6
<i>Anadara broughtonii</i>	20	<i>Chione cortezi</i>	8
<i>Anadara cornea</i>	4	<i>Chione elevata</i>	11
<i>Anadara inaequalis</i>	7	<i>Chione undatella</i>	2
<i>Anadara nobilis</i>	4	<i>Chionista fulctifraga</i>	16
<i>Anadara tuberculosa</i>	25	<i>Chlamys islandica</i>	35
<i>Anodontia alba</i>	2	<i>Chlamys tehuelcha</i>	5
<i>Anomalocardia flexuosa</i>	2.6	<i>Choromytilus chorus</i>	1.25
<i>Anomalodiscus squamosus</i>	3	<i>Choromytilus meridionalis</i>	9
<i>Arca noae</i>	16	<i>Ciliatocardium ciliatum</i>	35
<i>Arca ventricosa</i>	10	<i>Clinocardium nuttallii</i>	16
<i>Arca zebra</i>	10	<i>Corbicula fluminea</i>	4
<i>Arctica islandica</i>	507	<i>Corbula gibba</i>	2
<i>Arcuatula arcuatula</i>	1.5	<i>Crassostrea ariakensis</i>	5
<i>Arcuatula senhousia</i>	2	<i>Crassostrea bilineata</i>	4
<i>Argopecten irradians</i>	2	<i>Crassostrea gigas</i>	7
<i>Argopecten irradians concentricus</i>	2	<i>Crassostrea glomerata</i>	1.25
<i>Argopecten purpuratus</i>	6	<i>Crassostrea rhizophorae</i>	1
<i>Arvella manshurica</i>	9	<i>Crassostrea virginica</i>	6
<i>Asaphis deflorata</i>	7	<i>Crassula aequilatera</i>	5
<i>Astarte arctica</i>	9	<i>Crenella decussata</i>	7
<i>Astarte borealis</i>	10	<i>Crenomytilus grayanus</i>	150
<i>Astarte elliptica</i>	20	<i>Cumingia tellinoides</i>	4
<i>Astarte warhami</i>	3	<i>Cyclocardia ventricosa</i>	12
<i>Atrina vexillum</i>	11	<i>Cyrtodaria siliqua</i>	105
<i>Aulacomya atra</i>	18	<i>Cyrtodaria kurriana</i>	19
<i>Austrovenus stutchburyi</i>	9	<i>Decatopecten radula</i>	8
<i>Barbatia trapezina</i>	6.29	<i>Diplodon chilensis patagonicus</i>	90
<i>Barnea candida</i>	4	<i>Diplodonta aleutica</i>	6

Table S1 cont.

Species	MLSP (yrs.)	Species	MLSP (yrs.)
<i>Divaricella irpex</i>	1	<i>Hiatella arctica</i>	126
<i>Donax cuneatus</i>	3	<i>Katelysia opima</i>	3
<i>Donax denticulatus</i>	1.5	<i>Keenocardium californiense</i>	9
<i>Donax dentifer</i>	4.5	<i>Kurtiella bidentata</i>	7
<i>Donax faba</i>	2	<i>Lasaea adansoni</i>	4
<i>Donax gouldi</i>	3	<i>Laternula elliptica</i>	36
<i>Donax hanleyanus</i>	5.18	<i>Leiosolenus patagonicus</i>	15
<i>Donax incarnatus</i>	2	<i>Leukoma antiqua</i>	16
<i>Donax serra</i>	2	<i>Leukoma grata</i>	14
<i>Donax sordidus</i>	1.4	<i>Leukoma jedoensis</i>	6
<i>Donax spiculum</i>	0.6	<i>Leukoma staminea</i>	19
<i>Donax striatus</i>	2.4	<i>Leukoma thaca</i>	9
<i>Donax trunculus</i>	5	<i>Liocyma fluctuosa</i>	23
<i>Donax variabilis</i>	1	<i>Lissarca miliaris</i>	7
<i>Donax vittatus</i>	8	<i>Lissarca notorcadensis</i>	18
<i>Dosinia concentrica</i>	3	<i>Lithophaga lithophaga</i>	54
<i>Dosinia elegans</i>	6	<i>Loripes lucinalis</i>	4.9
<i>Dosinia exoleta</i>	12	<i>Lunarca ovalis</i>	3
<i>Dosinia hepatica</i>	9	<i>Lyonsia arenosa</i>	7
<i>Dosinia japonicum</i>	16	<i>Lyonsia vniroi</i>	10
<i>Dosinia lupinus</i>	15	<i>Macoma balthica</i>	33
<i>Ensis directus</i>	8.5	<i>Macoma calcarea</i>	18
<i>Ensis macha</i>	9	<i>Macoma lama</i>	8
<i>Ensis magnus</i>	18	<i>Macoma loveni</i>	11
<i>Ensis siliqua</i>	10	<i>Macoma middendorffi</i>	19
<i>Eontia ponderosa</i>	15	<i>Macoma nobilis</i>	3
<i>Equichlamys bifrons</i>	13	<i>Mactra chinensis</i>	12
<i>Eurhomalea exalbida</i>	70	<i>Mactromeris polynyma</i>	60
<i>Eurhomalea rufa</i>	2.5	<i>Megapitaria maculata</i>	10
<i>Ezocallista brevisiphonata</i>	52	<i>Megapitaria squalida</i>	2.5
<i>Fragum fragum</i>	5	<i>Megayoldia thraciaeformis</i>	15
<i>Gafrarium pectinatum</i>	3	<i>Mercenaria campechiensis</i>	28
<i>Gaimardia trapesina</i>	5	<i>Mercenaria mercenaria</i>	106
<i>Gari solida</i>	14.83	<i>Meretrix casta</i>	3
<i>Gemma gemma</i>	6	<i>Mesodesma arctatum</i>	24
<i>Geukensia demissa</i>	24	<i>Mimachlamys gloriosa</i>	4
<i>Glossocardia obesa</i>	8	<i>Mimachlamys varia</i>	6
<i>Glycymeris bimaculata</i>	57	<i>Mizuhopecten yessoensis</i>	15
<i>Glycymeris glycymeris</i>	192	<i>Modiolus modiolus</i>	48
<i>Glycymeris nummaria</i>	20	<i>Mulinia edulis</i>	7

Table S1 cont.

Species	MLSP (yrs.)	Species	MLSP (yrs.)
<i>Mulinia lateralis</i>	0.58	<i>Pholas dactylus</i>	14
<i>Musculus discors</i>	9	<i>Phreagena kilmeri</i>	16
<i>Musculus niger</i>	19	<i>Pillucina neglecta</i>	1.5
<i>Mya arenaria</i>	28	<i>Pinctada imbricata</i>	7
<i>Mya baxteri</i>	30	<i>Pinctada imbricata fucata</i>	6
<i>Mya pseudoarenaria</i>	26	<i>Pinctada imbricata radiata</i>	4
<i>Mya truncata</i>	50	<i>Pinctada margaritifera</i>	5
<i>Mysella cuneata</i>	4	<i>Pinctada maxima</i>	20
<i>Mysella kurilensis</i>	9	<i>Pinna bicolor</i>	12
<i>Mysella planulata</i>	4	<i>Pinna nobilis</i>	26
<i>Mytilus californianus</i>	6	<i>Placopecten magellanicus</i>	20
<i>Mytilus coruscus</i>	29	<i>Polititapes aureus</i>	5
<i>Mytilus edulis</i>	24	<i>Polititapes rhomboides</i>	11
<i>Mytilus edulis planulatus</i>	3	<i>Portlandia arctica</i>	7
<i>Mytilus galloprovincialis</i>	20	<i>Potamocorbula adusta</i>	1.71
<i>Mytilus trossulus</i>	13	<i>Protapes gallus</i>	3
<i>Nucula paulula</i>	1	<i>Protothaca euglypta</i>	15
<i>Nucula turgida</i>	10	<i>Pteria colymbus</i>	1
<i>Nuculana minuta</i>	9	<i>Pteria penguin</i>	2.7
<i>Nuculana pernula</i>	11	<i>Ptericolaria pholadiformis</i>	10
<i>Ostrea chilensis</i>	8	<i>Rangia cuneata</i>	8
<i>Ostrea edulis</i>	16	<i>Reloncavia chilencia</i>	1
<i>Ostrea puelchana</i>	6.5	<i>Ruditapes decussatus</i>	8
<i>Panomya ampla</i>	11	<i>Ruditapes philippinarum</i>	16
<i>Panopea abbreviata</i>	86	<i>Saxidomus gigantea</i>	20
<i>Panopea generosa</i>	168	<i>Saxidomus purpurata</i>	9
<i>Panopea globosa</i>	60	<i>Scrobicularia plana</i>	18
<i>Panopea zelandica</i>	85	<i>Semele lenticularis</i>	13
<i>Paphia laterisulca</i>	3	<i>Semele solida</i>	9
<i>Paphia undulata</i>	3	<i>Senilia senilis</i>	30
<i>Paphies donacina</i>	5	<i>Septifer virgatus</i>	12
<i>Paphies ventricosa</i>	7	<i>Serripes groenlandicus</i>	39
<i>Parvicardium exiguum</i>	1	<i>Siliqua alta</i>	18
<i>Patinopecten caurinus</i>	19	<i>Siliqua patula</i>	19
<i>Pecten albus</i>	3	<i>Siliqua pulchella</i>	2
<i>Pecten fumatus</i>	16	<i>Solemya sp.</i>	1
<i>Pecten jacobaeus</i>	13	<i>Sphenia sincera</i>	3
<i>Pecten maximus</i>	22	<i>Spisula discors</i>	9
<i>Perna perna</i>	9.03	<i>Spisula murchisoni</i>	7
<i>Perna viridis</i>	3	<i>Spisula sachalinensis</i>	70

Table S1 cont.

Species	MLSP (yrs.)	Species	MLSP (yrs.)
<i>Spisula solida</i>	13	<i>Timoclea micra</i>	1
<i>Spisula solidissima</i>	37	<i>Tindaria callistiformis</i>	100
<i>Spisula solidissima similis</i>	5.5	<i>Tivela mactroides</i>	3.3
<i>Spisula subtruncata</i>	4	<i>Tivela stultorum</i>	53
<i>Spisula voyi</i>	52	<i>Tresus capax</i>	16
<i>Spondylus limbatus</i>	16	<i>Tresus nuttallii</i>	16
<i>Tagelus divisus</i>	2.5	<i>Tridacna crocea</i>	60
<i>Tagelus dombeii</i>	10	<i>Tridacna darsa</i>	30
<i>Tawera elliptica</i>	23	<i>Tridacna gigas</i>	60
<i>Tawera mawsoni</i>	14	<i>Tridacna maxima</i>	28
<i>Tawera sphaericula</i>	9	<i>Venerupis bruguieri</i>	6.5
<i>Tegillarca granosa</i>	7.5	<i>Venerupis corrugata</i>	10
<i>Tellina capsoides</i>	3	<i>Venerupis japonica</i>	10
<i>Tellina cuspis</i>	4	<i>Venus verrucosa</i>	16
<i>Tellina exotica</i>	1	<i>Xenostrobus pulex</i>	3
<i>Tellina fabula</i>	6	<i>Ylistrum balloti</i>	3
<i>Tellina liliana</i>	1	<i>Ylistrum japonicum</i>	2
<i>Tellina lutea</i>	41	<i>Yoldia amygdalea hyperborea</i>	9
<i>Tellina martinicensis</i>	2	<i>Yoldia eightsi</i>	65
<i>Tellina piratica</i>	2	<i>Yoldia limatula</i>	4
<i>Tellina tenuis</i>	7	<i>Yoldia myalis</i>	11
<i>Teredo navalis</i>	2	<i>Yoldia notabilis</i>	17
<i>Theora lubrica</i>	1.8	<i>Yoldia seminuda</i>	14
<i>Thracia septentrionalis</i>	11	<i>Zirfaea pilsbryi</i>	7
<i>Thyasira flexuosa</i>	3.2	<i>Zygochlamys patagonica</i>	25
<i>Thyasira gouldi</i>	2		

Table S2. List of journals and years for which exhaustive searches were completed.

Journal	Years Searched	Journal	Years Searched	Journal	Years Searched
Advances in Marine Biology	1963-present	U.S. Fisheries Bulletin	1881-present	Journal of the Marine Biological Association of the U.K.	1888-present
Aquatic Biology	2007-present	Fisheries Research	1982-present	Marine Biology	1967-present
Australian Journal of Marine and Freshwater Research	1950-present	Helgoland Marine Research	1937-present	Marine Ecology	1980-present
Bulletin of Marine Science	1951-present	Indian Journal of Fisheries	1965-present	Marine Ecology Progress Series	1979-present
Canadian Journal of Zoology	1929-present	Indian Journal of Marine Science	2001-2014	Marine Fisheries Review	1971-2014
Chesapeake Science	1960-1977	Journal of Experimental Marine Biology and Ecology	1967-present	Netherlands Journal of Sea Research	1961-1995
Estuaries	1977-2005	Journal of Marine Science	1903-present	New Zealand Journal of Marine and Freshwater Research	1967-present
Estuaries and Coasts	2006-2013	Journal of Molluscan Studies	1893-present	Polar Biology	1983-present
Estuarine and Coastal Marine Science	1973-1980	Journal of Sea Research	1996-present	Proceedings of the National Shellfisheries Association	1954-1980
Estuarine, Coastal and Shelf Science	1981-present	Journal of Shellfish Research	1981-present	The Biological Bulletin	1897-present

Table S3. Parameters recorded in the lifespan database (see MossSupplData.xls), as provided by the authors.

Family- Accepted family

Given genus – Genus supplied in text

Given species –Species supplied in text

Accepted genus – Genus according to WoRMS

Accepted species –Species according to WoRMS

MLSP – Maximum lifespan of each population presented in source

IP- Scale of study, I=Individual, P=population

N- number of individuals if population

Location – Geographic name

Latitude – Decimal degrees

Longitude – Decimal degrees

Minimum depth - meters

Maximum depth - meters

Linf – Parameter of von Bertalanffy growth equation

K – Parameter of von Bertalanffy growth equation

t_0 - Parameter of von Bertalanffy growth equation

Vbmethod – Method of estimating von Bertalanffy growth equation; L=length frequency analysis,

M=growth bands produced at shell margin, H=growth bands in hinge, R=mark and recapture

Author

Year

Paper title

Journal

Comments – from enterer

Table S4. Number of observations for each family recorded in the database.

Family	n	Family	n	Family	n
Veneridae	223	Astartidae	10	Vesicomyidae	2
Mytilidae	121	Philobryidae	10	Lasaeidae	1
Pectinidae	116	Yoldiidae	9	Nassariidae	1
Cardiidae	73	Glycymerididae	7	Nuculidae	1
Hiatellidae	70	Montacutidae	7	Solemyidae	1
Mactridae	70	Pholadidae	5	Spondylidae	1
Tellinidae	68	Nuculanidae	5	Teredinidae	1
Myidae	51	Psammobiidae	4	Thraciidae	1
Donacidae	42	Carditidae	3	Tindariidae	1
Arcticidae	39	Corbulidae	3	Trapezidae	1
Arcidae	28	Thyasiridae	3	Undulinidae	1
Semelidae	28	Latemulidae	3		
Pharidae	24	Ungulinidae	3		
Ostreidae	24	Cyamiidae	2		
Pinnidae	22	Cyrenidae	2		
Pteriidae	14	Lucinidae	2		
Mesodesmatidae	12	Lyonsiidae	2		
Solenidae	11	Solecurtidae	2		

Supplementary References

- [1] Kidwell, S. & Rothfus, T. 2010 The living, the dead, and the expected dead: variation in life span yields little bias of proportional abundances in bivalve death assemblages. *Paleobiology* **36**, 615-640.
- [2] Comfort, A. 1957 The duration of life in molluscs. *Proceedings of the Malacological Society of London* **32**, 219-241.
- [3] Heller, J. 1990 Longevity in molluscs. *Malacologia* **31**, 259-295.
- [4] Powell, E. & Stanton, R.J. 1985 Estimating biomass and energy flow of molluscs in palaeo-communities. *Palaeontology* **28**, 1-34.
- [5] Robertson, A. 1979 The relationship between annual production: biomass ratios and lifespans for marine macrobenthos. *Oecologia* **38**, 193-202.
- [6] von Bertalanffy, L. 1938 A quantitative theory of organic growth (inquiries on growth laws II). *Human Biology* **10**, 181-213.
- [7] Quitmyer, I.R. & Jones, D.S. 1997 The sclerochronology of hard clams, *Mercenaria* spp., from the South-Eastern U.S.A.: A method of elucidating the zooarchaeological records of seasonal resources procurement and seasonality in prehistoric shell middens. *Journal of Archaeological Science* **24**, 825-840.
- [8] Rice. 1992 *The Northern Quahog. The Biology of Mercenaria mercenaria*, Rhode Island Sea Grant.
- [9] Ridgway, I.D., Richardson, C.A., Enos, E., Ungvari, Z., Austad, S.N., Philipp, E.E.R. & Csiszar, A. 2011 New Species Longevity Record for the Northern Quahog (=Hard Clam), *Mercenaria mercenaria*. *Journal of Shellfish Research* **30**, 35-38. (doi:10.2983/035.030.0106).
- [10] Jablonski, D., Sepkoski, J.J., Bottjer, D. & Sheehan, P. 1983 Onshore-offshore patterns in the evolution of Phanerozoic shelf communities. *Science* **222**, 1123-1125.
- [11] Koslow, J. 2000 Continental slope and deep-sea fisheries: implications for a fragile ecosystem. *ICES Journal of Marine Science* **57**, 548-557. (doi:10.1006/jmsc.2000.0722).
- [12] Jones, D.S., Thompson, I. & Ambrose, W. 1978 Age and growth rate determinations for the Atlantic surf clam *Spisula solidissima* (Bivalvia:Maत्रacea), based on internal growth lines in shell cross-sections. *Marine Biology* **47**, 63-70.
- [13] Heim, N., Knope, M., Schaal, E., Wang, S. & Payne, J. 2015 Cope's rule in the evolution of marine animals. *Science* **347**, 867-870.
- [14] Runnegar, B. 1985 Origin and early history of mollusks. In *Short Course on Mollusks* (eds. D.J. Bottjer, C.S. Hickman & P.D. Ward). Orlando, Florida, University of Tennessee Department of Geological Sciences Studies in Geology.

Primary sources for database:

- [1] Abada-Boudjema, Y., Altes, J. & Moueza, M. 1984 Growth of two species of mussels, *Mytilus galloprovincialis* and *Perna perna* in a natural mussel bed in the Bay of Algiers. *Haliotis* **14**, 33-38.
- [2] Abada-Boudjema, Y.-M. & Dauvin, J.-C. 1995 Recruitment and life span of two natural mussel populations *Perna perna* (Linnaeus) and *Mytilus galloprovincialis* (Lamarck) from the Algerian coast. *Journal of Molluscan Studies* **61**, 467-481.
- [3] Abele, D., Strahl, J., Brey, T. & Philipp, E.E. 2008 Imperceptible senescence: ageing in the ocean quahog *Arctica islandica*. *Free radical research* **42**, 474-480. (doi:10.1080/10715760802108849).
- [4] Adam, M.E. 1990 Shell growth in some Nile bivalves. *Journal of Molluscan Studies* **56**, 301-308.
- [5] Alagarwami, K. 1966 Studies on some aspects of biology of the wedge-clam, *Donax faba* Gmelin from Mandapam Coast in the Gulf of Mannar. *Journal of the Marine Biological Association of India* **8**, 56-75.
- [6] Al-Barwani, S.M., Arshad, A., Amin, S.M.N., Japar, S.B., Siraj, S.S. & Yap, C.K. 2007 Population dynamics of the green mussel *Perna viridis* from the high spat-fall coastal water of Malacca, Peninsular Malaysia. *Fisheries Research* **84**, 147-152. (doi:10.1016/j.fishres.2006.10.021).
- [7] Aldrige, D.C. 1999 The morphology, growth and reproduction of Unionidae (Bivalvia) in a Fenland waterway. *Journal of Molluscan Studies* **65**, 47-60.
- [8] Allen, J.A. 1952 Observations on *Nucula turgida* Marshall and *N. moorei* Winckworth. *Journal of the Marine Biological Association of the United Kingdom* **31**, 515-529.
- [9] Allen, J.A. 1969 Observations on size composition and breeding of Northumberland populations of *Zirphaea crispata* (Pholadidae : Bivalvia). *Marine Biology* **3**, 269-275.
- [10] Amaro, T., Duineveld, G., Bergman, M. & Witbaard, R. 2003 Growth variations in the bivalve *Mya truncata*: a tool to trace changes in the Frisian Front macrofauna (southern North Sea)? *Helgoland Marine Research* **57**, 132-138. (doi:10.1007/s10152-003-0150-6).
- [11] Ambrogi, R. & Ambrogi, A.O. 1985 The estimation of secondary production of the marine bivalve *Spisula subtruncata* (Da Costa) in the area of the Po River Delta. *Marine Ecology* **6**, 239-250.
- [12] Ambrose, W.G., Renaud, P.E., Locke, W.L., Cottier, F.R., Berge, J., Carroll, M.L., Levin, B. & Ryan, S. 2011 Growth line deposition and variability in growth of two circumpolar bivalves (*Serripes groenlandicus*, and *Clinocardium ciliatum*). *Polar Biology* **35**, 345-354. (doi:10.1007/s00300-011-1080-4).
- [13] Ansell, A.D. 1961 Reproduction, growth and mortality of *Venus striatula* (Da Costa) in Kames Bay, Millport. *Journal of the Marine Biological Association of the United Kingdom* **41**, 191-215.
- [14] Ansell, A.D. 1972 Distribution, growth and seasonal changes in biochemical composition for the bivalve *Donax vittatus* (da Costa) from Kames Bay, Millport. *Journal of Experimental Marine Biology and Ecology* **10**, 137-150.
- [15] Ansell, A.D. & Lagardere, F. 1980 Observations on the Biology of *Donax trunculus* and *D. vittatus* at Ile d'Oleron (French Atlantic Coast). *Marine Biology* **57**, 287-300.
- [16] Ansell, A.D., Parulekar, A.H. & Allen, J.A. 1978 On the rate of growth of *Nuculana minuta* (Muller) (Bivalvia; Nuculanidae). *Journal of Molluscan Studies* **44**, 71-82.

- [17] Ansell, A.D., Sivadas, P., Narayanan, B. & Trevallion, A. 1972 The ecology of two sandy beaches in South West India. III. Observations on the population of *Donax incarnatus* and *D. spiculum*. *Marine Biology* **17**, 318-322.
- [18] Anthony, J.L., Kesler, D.H., Downing, W.L. & Downing, J.A. 2001 Length-specific growth rates in freshwater mussels (Bivalvia:Unionidae): extreme longevity or generalized growth cessation? *Freshwater Biology* **46**, 1349-1399.
- [19] Antipova, T.V. 1978 Production of populations of some bivalves in the southeastern Barents Sea and the southern Kara Sea. *Okeanologiya* **18**, 737-741.
- [20] Anwar, N.A., Richardson, C.A. & Seed, R. 1990 Age determination, growth rate and population structure of the horse mussel *Modiolus modiolus*. *Journal of the Marine Biological Association of the United Kingdom* **70**, 441-457.
- [21] Appeldoorn, R.S. 1983 Variation in the growth rate of *Mya arenaria* and its relationship to the environment as analyzed through principal components analysis and the omega parameters of the von Bertalanffy equations. *Fishery Bulletin* **81**, 75-84.
- [22] Appeldoorn, R.S. 1995 Covariation in life-history parameters of soft-shell clams (*Mya arenaria*) along a latitudinal gradient. *ICES Marine Science Symposium* **199**, 19-25.
- [23] Appukuttan, K.K., Aravindan, C.M., Yohanan, T.M. & Balasubramanian, N.K. 1999 Population dynamics of an exploited stock of the clam *Paphia malabarica* of Astamudi Estuary (South India). *The Fourth Indian Fisheries Forum Proceedings*, 31-34.
- [24] Aragón-Noriega, E.A., Calderon-Aguilera, L.E. & Pérez-Valencia, S.A. 2015 Modeling growth of the Cortes Geoduck *Panopea globosa* from unexploited and exploited beds in the northern Gulf of California. *Journal of Shellfish Research* **34**, 119-127. (doi:10.2983/035.034.0115).
- [25] Argente, F.A.T. & Estacion, J. 2014 Effect of different harvesting practices on the dynamics of *Paphia textile* (Gmelin 1792) (Bivalvia: Veneridae) populations at two sites in Zamboanga del Norte, Southern Philippines. *Environmental and Experimental Biology* **12**, 113-120.
- [26] Arneri, E., Giannetti, G. & Antolini, B. 1998 Age determination and growth of *Venus verrucosa* L. (Bivalvia: Veneridae) in the southern Adriatic and the Aegean Sea. *Fisheries Research* **38**, 193-198.
- [27] Arnold, W.S., Marelli, D.C., Bert, T.M., Jones, D.S. & Quitmyer, I.R. 1991 Habitat-specific growth of hard clams *Mercenaria mercenaria* (L.) from the Indian River, Florida. *Journal of Experimental Marine Biology and Ecology* **147**, 245-265.
- [28] Arrieche, D. & Prieto, A. 2006 Parametros poblacionales del guacuco *Tivela mactroides* (Bivalvia:Veneridae) de Playa Caicara, Estado Anzoategui, Venezuela. *Ciencias Marinas* **32**, 285-296.
- [29] Bachelet, G. 1980 Growth and recruitment of the Tellinid bivalve *Macoma balthica* at the southern limit of its geographical distribution, the Gironde Estuary (SW France). *Marine Biology* **59**, 105-117.
- [30] Bachelet, G. 1989 Recruitment in *Abra tenuis* (Montagu) (Bivalvia, Semelidae) a species with direct development and a protracted meiobenthic phase. In *23rd European Marine Biology Symposium* (School of Biological Sciences, University of Wales).
- [31] Bagur, M., Richardson, C.A., Gutiérrez, J.L., Arribas, L.P., Doldan, M.S. & Palomo, M.G. 2013 Age, growth and mortality in four populations of the boring bivalve *Lithophaga patagonica* from Argentina. *Journal of Sea Research* **81**, 49-56. (doi:10.1016/j.seares.2013.04.003).
- [32] Bailey, R.C. & Green, R.H. 1988 Within-basin variation in the shell morphology and growth rate of a freshwater mussel. *Canadian Journal of Zoology* **66**, 1704-1708.

- [33] Baird, M.S. 2000 Life History of the Spectaclecase, *Cumberlandia monodonta* Say, 1829 (Bivalvia, Unionoidea, Margaritiferidae), Southwestern Missouri State University.
- [34] Baird, R.H. 1966 Notes on an scallop (*Pecten maximus*) population in Holyhead Harbour. *Journal of the Marine Biological Association of the United Kingdom* **46**, 33-47.
- [35] Balasubramanian, K. & Natarajan, R. 1988 Age and growth of *Meretrix casta* (Chemnitz) in Vellar Estuary, Parangipettai. *CMFRI Bulletin* **1**, 145-147.
- [36] Baquero-Cardenas, E. & Masso-Rojas, J. 1988 Variaciones poblacionales y reproduccion de dos poblacion de *Chione undatella* (Sowerby, 1835), bajo diferentes regimenes de pesca en la Bahía de La Paz, B.C.S., Mexico. *Ciencia Pesquera* **6**, 51-67.
- [37] Barkai, A. & Branch, G.M. 1989 Growth and mortality of the mussels *Choromytilus meridionalis* (Krauss) and *Aulacomya ater* (Molina) as indicators of biotic conditions. *Journal of Molluscan Studies* **55**, 329-342.
- [38] Barry, J.P., Whaling, P.J. & Kochevar, R.K. 2007 Growth, production, and mortality of the chemosynthetic vesicomid bivalve, *Calypptogena kilmeri* from cold seeps off central California. *Marine Ecology* **28**, 169-182. (doi:10.1111/j.1439-0485.2007.00119.x).
- [39] Bauer, G. 1983 Age structure, age specific mortality rates and population trend of the freshwater pearl mussel (*Margaritifera margaritifera*) in North Bavaria. *Archiv für Hydrobiologie* **98**, 523-532.
- [40] Bauer, G. 1987 Reproductive strategy of the freshwater pearl mussel *Margaritifera margaritifera*. *Journal of Animal Ecology* **56**, 691-704.
- [41] Bayne, B.L. & Worrall, C.M. 1980 Growth and production of mussels *Mytilus edulis* from two populations. *Marine Ecology Progress Series* **3**, 317-328.
- [42] Beal, B.F. 2006 Biotic and abiotic factors influencing growth and survival of wild and cultured individuals of the softshell clam (*Mya arenaria* L.) in eastern Maine. *Journal of Shellfish Research* **25**, 461-474. (doi:10.2983/0730-8000(2006)25[461:baafig]2.0.co;2).
- [43] Bechtol, W.R. & Gustafson, R.L. 1998 Abundance, recruitment and mortality of Pacific littleneck clams *Protothaca staminea* at Chugachik Island, Alaska. *Journal of Shellfish Research* **17**, 1003-1008.
- [44] Begum, S., Basova, L., Heilmayer, O., Philipp, E., Abele, D. & Brey, T. 2010 Growth and energy budget models of the bivalve *Arctica islandica* at six different sites in the northeast Atlantic realm. *Journal of Shellfish Research* **29**, 107-115.
- [45] Belding, D. 1909 The growth and habits of the sea clam (*Mactra solidissima*) *Reports of the Commissioner of Fish and Game*, 26-41.
- [46] Berg, C.J. & Alatalo, P. 1985 Biology of the tropical bivalve *Asaphis deflorata* (Linne, 1758). *Bulletin of Marine Science* **37**, 827-838.
- [47] Bergh, G. 1974 Production of *Macoma balthica* (L.) (Lamellibranchiata) and notes on other ecologically important animals in Tvären Bay in the Baltic. *Zoon* **2**.
- [48] Berkman, P.A. 1990 The population biology of the Antarctic scallop, *Adamussium colbecki* (Smith 1902) at New Harbor, Ross Sea. In *Antarctic Ecosystems* (pp. 281-288. Berlin Heidelberg, Springer
- [49] Bert, T.M., Arnold, W.S., Wilbur, A.E., Seyoum, S., McMillen-Jackson, A.L., Stephenson, S.P., Weisberg, R.H. & Yarbro, L.A. 2014 Florida Gulf Bay Scallop (*Argopecten irradians concentricus*) population genetic structure: form, variation, and influential factors. *Journal of Shellfish Research* **33**, 99-136. (doi:10.2983/035.033.0112).
- [50] Bertness, M.D. 1980 Growth and mortality in the ribbed mussel *Geukensia demissa* (Bivalvia:Mytilidae). *The Veliger* **23**, 62-69.

- [51] Beukema, J.J. 1989 Bias in estimates of maximum lifespan, with an example of the edible cockle, *Cerastoderma edule*. *Netherlands Journal of Zoology* **39**, 79-85.
- [52] Beukema, J.J. & Dekker, R. 1995 Dynamics and growth of a recent invader into European coastal waters: The American razor clam *Ensis directus*. *Journal of the Marine Biological Association of the United Kingdom* **75**, 351-362.
- [53] Blanchard, A. & Feder, H.M. 2000 Shell growth of *Mytilus trossulus* Gould, 1850, in Port Valdez, Alaska. *The Veliger* **43**, 34-42.
- [54] Blicher, M.E., Sejr, M.K. & Høglund, S. 2013 Population structure of *Mytilus edulis* in the intertidal zone in a sub-Arctic fjord, SW Greenland. *Marine Ecology Progress Series* **487**, 89-100. (doi:10.3354/meps10317).
- [55] Boltacheva, N.A. & Mazlumyan, S.A. 2003 The growth and longevity of *Chamelea gallina* (Mollusca, Veneridae) in the Black Sea. *Vestnik Zoologii* **37**, 71-74.
- [56] Bonham, K. 1965 Growth rate of giant clam *Tridacna gigas* at Bikini Atoll as revealed by radioautography. *Science* **149**, 300-302.
- [57] Borrero, F.J. & Hilbish, T.J. 1988 Temporal variation in shell and soft tissue growth of the mussel *Geukensia demissa*. *Marine Ecology Progress Series* **42**, 9-15.
- [58] Bourget, E. & Brock, V. 1990 Short-term shell growth in bivalves: individual, regional and age-related variations in the rhythm of deposition of *Cerastoderma* (= *Cardium*) *edule*. *Marine Biology* **106**, 103-108.
- [59] Bourne, N. 1982 Distribution, reproduction, and growth of Manila clam, *Tapes philippinarum* (Adams and Reeves), in British Columbia. *Journal of Shellfish Research* **2**, 47-54.
- [60] Bourne, N. & Quayle, D. 1970 Breeding and growth of razor clams in British Columbia. *Fisheries Research Board of Canada*.
- [61] Bourne, N. & Smith, D.W. 1972 Breeding and growth of the horse clam, *Tresus capax* (Gould), in southern British Columbia. *Proceedings of the National Shellfisheries Association* **62**, 38-46.
- [62] Boyden, C.R. 1972 Relationship of size to age in the cockles *Cerastoderma edule* and *C. glaucum* from the River Crouch Estuary, Essex. *Journal of Conchology* **27**, 475-489.
- [63] Bradley, W.H. & Cooke, P. 1959 Living and ancient populations of the clam *Gemma gemma* in a Maine coast tidal flat. *Fishery Bulletin* **137**, 306-334.
- [64] Brady, F. 1943 The distribution of the fauna of some intertidal sands and muds on the Northumberland coast. *Journal of Animal Ecology* **12**, 27-41.
- [65] Breed-Willeke, G.M. & Hancock, D.R. 1980 Growth and reproduction of subtidal and intertidal populations of the gaper clam *Tresus capax* (Gould) from Yaquina Bay, Oregon. *Proceedings of the National Shellfisheries Association* **70**, 1-13.
- [66] Breen, P., Gabriel, C. & Tyson, T. 1991 Preliminary estimates of age, mortality, growth, and reproduction in the Hiatellidae clam *Panopea zelandica* in New Zealand. *New Zealand Journal of Marine and Freshwater Research* **25**, 231-237.
- [67] Brethes, J.-C.F., Desrosiers, G. & Fortin Jr., G. 1986 Croissance et production du bivalve *Mesodesma arctatum* (Conrad) sur la cote nord du golfe du Saint-Laurent. *Canadian Journal of Zoology* **64**.
- [68] Brey, T., Arntz, W.E., Pauly, D. & Rumorh, H. 1990 *Arctica* (*Cyprina*) *islandica* in Kiel Bay (Western Baltic): growth, production and ecological significance. *Journal of Experimental Marine Biology and Ecology* **136**, 217-235.

- [69] Brey, T. & Hain, S. 1992 Growth, reproduction and production of *Lissarca notorcadensis* (Bivalvia: Philobryidae) in the Weddell Sea, Antarctica. *Marine Ecology Progress Series* **82**, 219-226.
- [70] Bricelj, V. & Krause, M. 1992 Resource allocation and population genetics of the bayscallop, *Argopecten irradians irradians*; effects of age and allozyme heterozygosity on reproductive output. *Marine Biology* **113**, 253-261.
- [71] Bricelj, V.M., Epp, J. & Malouf, R.E. 1987 Comparative physiology of young and old cohorts of bay scallop *Argopecten irradians irradians* (Lamarck) : mortality, growth, and oxygen consumption. *Journal of Experimental Marine Biology and Ecology* **112**, 73-91.
- [72] Broom, M.J. 1982 Analysis of the growth of *Anadara granosa* (Bivalvia: Arcidae) in natural, artificially seeded and experimental populations. *Marine Ecology Progress Series* **9**, 69-79.
- [73] Brousseau, D.J. 1979 Analysis of growth rate in *Mya arenaria* using the Von Bertalanffy equation. *Marine Biology* **51**, 221-227.
- [74] Brousseau, D.J. 1984 Age and growth rate determinations for the Atlantic ribbed mussel, *Guekensia demissa* Dillwyn (Bivalvia: Mytilidae). *Estuaries* **7**, 233-241.
- [75] Brousseau, D.J. & Baglivo, J.A. 1987 A comparative study of age and growth in *Mya arenaria* (soft-shell clam) from three populations in Long Island Sound. *Journal of Shellfish Research* **6**, 17-24.
- [76] Brown, A., Heilmayer, O. & Thatje, S. 2010 Metabolic rate and growth in the temperate bivalve *Mercenaria mercenaria* at a biogeographical limit, from the English Channel. *Journal of the Marine Biological Association of the United Kingdom* **90**, 1019-1023. (doi:10.1017/s0025315409991470).
- [77] Bruenderman, S.A. & Neves, R.J. 1993 Life history of the endangered fine-rayed pigtoe *Fusconaia cuneolus* (Bivalvia: unionidae) in the Clinch River, Virginia. *American Malacological Bulletin* **10**, 83-91.
- [78] Buchanan, J.B. & Warwick, R.M. 1974 An estimate of benthic macrofaunal production in the offshore mud of the Northumberland Coast. *Journal of the Marine Biological Association of the United Kingdom* **54**, 197-222.
- [79] Buick, D.P. & Ivany, L.C. 2004 100 years in the dark: Extreme longevity of Eocene bivalves from Antarctica. *Geology* **32**, 921-924. (doi:10.1130/g20796.1).
- [80] Bureau, D. 2002 Age, size structure and growth parameters of geoducks (*Panopea abrupta*, Conrad 1849) from 34 locations in British Columbia sampled between 1993 and 2000. *Fisheries and Oceans Canada*.
- [81] Bureau, D., Hajas, W., Hand, C.M. & Dovey, G. 2003 Age, size structure and growth parameters of geoducks (*Panopea abrupta*, Conrad 1849) from seven locations in British Columbia sampled in 2001 and 2002. In *Canadian Technical Report of Fisheries and Aquatic Sciences* (pp. 1-29).
- [82] Burke, M. & Mann, K. 1974 Productivity and production: Biomass ratios of bivalve and gastropod populations in an Eastern Canadian estuary. *Journal of the Fisheries Research Board of Canada* **31**, 167-177.
- [83] Bušelić, I., Peharda, M., Reynolds, D.J., Butler, P.G., González, A.R., Ezgeta-Balić, D., Vilibić, I., Grbec, B., Hollyman, P. & Richardson, C.A. 2015 *Glycymeris bimaculata* (Poli, 1795) — A new sclerochronological archive for the Mediterranean? *Journal of Sea Research* **95**, 139-148. (doi:10.1016/j.seares.2014.07.011).

- [84] Butler, A.J. & Brewster, F.J. 1979 Size distributions and growth of the fan-shell *Pinna bicolor* Gmelin (Mollusca:Eulamellibranchia) in South Australia. *Australian Journal of Marine and Freshwater Research* **30**, 25-39.
- [85] Cadee, G.C. 1989 Size-selective transport of shells by birds and its palaeoecological implications. *Palaeontology* **32**, 429-437.
- [86] Calderon-Aguilera, L.E., Aragón-Noriega, E.A., Hand, C.M. & Moreno-Rivera, V.M. 2010 Morphometric relationships, age, growth, and mortality of the geoduck clam, *Panopea generosa*, along the Pacific coast of Baja California, Mexico. *Journal of Shellfish Research* **29**, 319-326. (doi:10.2983/035.029.0206).
- [87] Campbell, A., Bourne, N. & Carolsfeld, W. 1990 Growth and size at maturity of the Pacific gaper *Tresus nuttallii* (Conrad 1837) in southern British Columbia. *Journal of Shellfish Research* **9**, 273-278.
- [88] Campbell, A. & Ming, M.D. 2003 Maturity and growth of the Pacific geoduck clam, *Panopea abrupta*, in southern British Columbia, Canada. *Journal of Shellfish Research* **22**, 85-90.
- [89] Campbell, A., Yeung, C.W., Dovey, G. & Zhang, Z. 2004 Population biology of the Pacific geoduck clam, *Panopea abrupta*, in experimental plots, southern British Columbia, Canada. *Journal of Shellfish Research* **23**, 661-673.
- [90] Cardoso, J.F.M.F., Santos, S., Witte, J.I.J., Witbaard, R., van der Veer, H.W. & Machado, J.P. 2013 Validation of the seasonality in growth lines in the shell of *Macoma balthica* using stable isotopes and trace elements. *Journal of Sea Research* **82**, 93-102. (doi:10.1016/j.seares.2012.09.006).
- [91] Cardoso, J.F.M.F., Witte, J.I.J. & van der Veer, H.W. 2007 Habitat related growth and reproductive investment in estuarine waters, illustrated for the tellinid bivalve *Macoma balthica* (L.) in the western Dutch Wadden Sea. *Marine Biology* **152**, 1271-1282. (doi:10.1007/s00227-007-0774-1).
- [92] Carmichael, R.H., Shriver, A.C. & Valiela, I. 2004 Changes in shell and soft tissue growth, tissue composition, and survival of quahogs, *Mercenaria mercenaria*, and softshell clams, *Mya arenaria*, in response to eutrophic-driven changes in food supply and habitat. *Journal of Experimental Marine Biology and Ecology* **313**, 75-104. (doi:10.1016/j.jembe.2004.08.006).
- [93] Carroll, M.L., Ambrose, W.G., Levin, B.S., Ryan, S.K., Ratner, A.R., Henkes, G.A. & Greenacre, M.J. 2011 Climatic regulation of *Clinocardium ciliatum* (bivalvia) growth in the northwestern Barents Sea. *Palaeogeography, Palaeoclimatology, Palaeoecology* **302**, 10-20. (doi:10.1016/j.palaeo.2010.06.001).
- [94] Carroll, M.L., Johnson, B.J., Henkes, G.A., McMahon, K.W., Voronkov, A., Ambrose, W.G., Jr. & Denisenko, S.G. 2009 Bivalves as indicators of environmental variation and potential anthropogenic impacts in the southern Barents Sea. *Marine Pollution Bulletin* **59**, 193-206. (doi:10.1016/j.marpolbul.2009.02.022).
- [95] Cassie, R.M. 1955 Population studies on the toheroa, *Amphidesma ventricosum* Gray (Eulamellibranchiata). *Australian Journal of Marine and Freshwater Research* **6**, 348-391.
- [96] Cassista, M.C. & Hart, M.W. 2007 Spatial and temporal genetic homogeneity in the Arctic surfclam (*Mactromeris polynyma*). *Marine Biology* **152**, 569-579. (doi:10.1007/s00227-007-0711-3).
- [97] Cataldo, D. & Boltovskoy, D. 1999 Population dynamics of *Corbicula fluminea* (Bivalvia) in the Parana River Delta (Argentina). *Hydrobiologia* **380**, 153-163.

- [98] Cayre, P. 1978 Etude de la moule *Perna perna* L. et des possibilites de mytiliculture en Republique Populaire du Congo. *Cahiers ORSTOM Serie Oceanographie* **16**, 9-17.
- [99] Ceccherelli, V.U. & Rossi, R. 1984 Settlement, growth and production of the mussel *Mytilus galloprovincialis*. *Marine Ecology Progress Series* **16**, 173-184.
- [100] Cerrato, R.M. & Keith, D.L. 1992 Age structure, in the Atlantic from estuarine growth, and morphometric variations surf clam, *Spisula solidissima*, and inshore waters. *Marine Biology* **114**, 581-593.
- [101] Chamberlain, T.K. 1931 Annual growth of freshwater mussels. *Bulletin of the Bureau of Fisheries* **46**, 713-739.
- [102] Chambers, M.R. & Milne, H. 1975 The production of *Macoma balthica* (L.) in the Ythan Estuary. *Estuarine and Coastal Marine Science* **3**, 443-455.
- [103] Chauvaud, L., Thouzeau, G. & Paulet, Y.-M. 1998 Effects of environmental factors on the daily growth rate of *Pecten maximus* juveniles in the Bay of Brest (France). *Journal of Experimental Marine Biology and Ecology* **227**, 83-111.
- [104] Chellam, A. 1988 Growth and biometric relationship of pearl oyster *Pinctada fucata* (Gould). *Indian Journal of Fisheries* **25**, 77-83.
- [105] Chiantore, M., Cattaneo-Vietti, R. & Heilmayer, O. 2003 Antarctic scallop (*Adamussium colbecki*) annual growth rate at Terra Nova Bay. *Polar Biology* **26**, 416-419. (doi:10.1007/s00300-003-0491-2).
- [106] Choo, P.S. & Speiser, G. 1979 An estimation of the growth parameters and mortality of *Mytilus viridis* Linnaeus (Mollusca, Mytilidae) cultured in a suspended plastic in Jelutong, Penang. *The Malaysian Agricultural Journal* **52**, 9-16.
- [107] Christian, A.D., Davidson, C.L., Posey II, W.R., Rust, P.J., Farris, J.L., Harris, J.L. & Harp, G.L. 2000 Growth curves of four species of commercially valuable freshwater mussels (Bivalvia:Unionidae) in Arkansas. *Journal of the Arkansas Academy of Sciences* **54**, 41-50.
- [108] Chung, E.-Y., Ryou, D.-K. & Lee, J.-H. 1994 Gonadal development, age and growth of the shortnecked clam, *Ruditapes philippinarum* (Pelecypoda:Veneridae), on the coast of Kimje, Korea. *Korean Journal of Malacology* **10**, 38-54.
- [109] Chute, A.S., Wainright, S.C. & Hart, D.R. 2012 Timing of shell ring formation and patterns of shell growth in the sea scallop *Placopecten magellanicus* based on stable oxygen isotopes. *Journal of Shellfish Research* **31**, 649-662. (doi:10.2983/035.031.0308).
- [110] Ciocco, N. 1991 Differences in individual growth rate among scallop (*Chlamys tehuelcha* (d'Orb.)) populations from San Jose Gulf (Argentina). *Fisheries Research* **12**, 31-42.
- [111] Claereboudt, M.R. & Himmelman, J.H. 1996 Recruitment, growth and production of giant scallops (*Placopecten magellanicus*) along an environmental gradient in Baie des Chaleurs, eastern Canada. *Marine Biology* **124**, 661-670.
- [112] Clasing, E., Brey, T., Stead, R., Navarro, J. & Asencio, G. 1994 Population dynamics of *Venus antiqua* (Bivalvia: Veneracea) in the Bahia de Yaldad, Isla de Chilok, Southern Chile. *Journal of Experimental Marine Biology and Ecology* **177**, 171-186.
- [113] Cobb, J.C., Stephenson, S.P. & Arnold, W.S. 2011 Reproductive cycle and recruitment patterns of the coquina clam *Donax variabilis* Say along the central Gulf Coast of Florida. *Journal of Shellfish Research* **30**, 25-34. (doi:10.2983/035.030.0105).
- [114] Coe, W.R. 1947 Nutrition, growth and sexuality of the Pismo clam. *Journal of Experimental Zoology* **104**, 1-24.
- [115] Coe, W.R. 1955 Ecology of the bean clam *Donax gouldi* on the coast of Southern California. *Ecology* **36**, 512-514.

- [116] Coe, W.R. & Fitch, J.E. 1950 Population studies, local growth rates and reproduction of the Pismo clam. *Journal of Marine REsearch* **9**, 188-210.
- [117] Coe, W.R. & Fox, D.L. 1944 Biology of the California sea-mussel (*Mytilus californianus*). III. Environmental conditions and rate of growth. *The Biological Bulletin* **87**, 59-72.
- [118] Coelho, J.P., Rosa, M., Pereira, E., Duarte, A. & Pardal, M.A. 2006 Pattern and annual rates of *Scrobicularia plana* mercury bioaccumulation in a human induced mercury gradient (Ria de Aveiro, Portugal). *Estuarine, Coastal and Shelf Science* **69**, 629-635. (doi:10.1016/j.ecss.2006.05.027).
- [119] Çolakoğlu, S. & Palaz, M. 2014 Some population parameters of *Ruditapes philippinarum* (Bivalvia, Veneridae) on the southern coast of the Marmara Sea, Turkey. *Helgoland Marine Research* **68**, 539-548. (doi:10.1007/s10152-014-0410-7).
- [120] Cole, H.A. 1956 A preliminary study of growth-rate in cockles (*Cardium edule* L.) in relation to commercial exploitation. *ICES Journal of Marine Science* **22**, 77-90.
- [121] Commito, J.A. 1982 Effects of *Lunatia heros* predation on the population dynamics of *Mya arenaria* and *Macoma baithica* in Maine, USA. *Marine Biology* **69**, 187-193.
- [122] Conan, G. & Shafee, M.S. 1978 Growth and biannual recruitment of the black scallop *Chlamys varia* (L.) in Lanveoc area, Bay of Brest. *Journal of Experimental Marine Biology and Ecology* **35**, 59-71.
- [123] Coon, T.G., Eckblad, J.W. & Trygstad, P.M. 1977 Relative abundance and growth of mussels (Mollusca:Eulamellibranchia) in pools 8,9 and 10 of the Mississippi River. *Freshwater Biology* **7**, 279-285.
- [124] Coutts, P.J.F. 1974 Growth characteristics of the bivalve *Chione stutchburyi*. *New Zealand Journal of Marine and Freshwater Research* **8**, 333-339. (doi:10.1080/00288330.1974.9515508).
- [125] Cranfield, H.J. & Michael, K.P. 2001 Growth rates of five species of surf clams on a southern North Island beach, New Zealand. *New Zealand Journal of Marine and Freshwater Research* **35**, 909-924. (doi:10.1080/00288330.2001.9517053).
- [126] Cranfield, H.J., Michael, K.P. & Francis, R.I.C.C. 1996 Growth rates of five species of subtidal clam on a beach in the South Island, New Zealand. *Mairne and Freshwater Resarch* **47**, 773-784.
- [127] Crooks, J.A. 1996 The population ecology of an exotic mussel, *Musculista senhousia*, in a southern California bay. *Coastal and Estuarine Research Federation* **19**, 42-50.
- [128] Crowley, T.E. 1957 Age determination in *Anodonta*. *Journal of Conchology* **24**, 201-207.
- [129] Cruz-Vásquez, R., Rodríguez-Domínguez, G., Alcántara-Razo, E. & Aragón-Noriega, E.A. 2012 Estimation of individual growth parameters of the Cortes geoduck *Panopea globosa* from the central Gulf of California using a multimodel approach. *Journal of Shellfish Research* **31**, 725-732. (doi:10.2983/035.031.0316).
- [130] Cudney-Bueno, R. & Rowell, K. 2008 Establishing a baseline for management of the rock scallop, *Spondylus calcifer* (Carpenter 1857): Growth and reproduction in the upper Gulf of California, Mexico. *Journal of Shellfish Research* **27**, 625-632. (doi:10.2983/0730-8000(2008)27[625:eabfmo]2.0.co;2).
- [131] da Silva, C.F., Corte, G.N., Yokoyama, L.Q., Abrahão, J.R. & Amaral, A.C.Z. 2015 Growth, mortality, and reproduction of *Tagelus plebeius* (Bivalvia: Solecurtidae) in Southeast Brazil. *Helgoland Marine Research* **69**, 1-12. (doi:10.1007/s10152-014-0417-0).
- [132] Dalgiç, G., Okumuş, İ. & Karayücel, S. 2010 The effect of fishing on growth of the clam *Chamelea gallina* (Bivalvia: Veneridae) from the Turkish Black Sea coast. *Journal of the Marine Biological Association of the United Kingdom* **90**, 261-265. (doi:10.1017/s0025315409000939).

- [133] Dame, R.F. 1976 Energy flow in an intertidal oyster population. *Estuarine and Coastal Marine Science* **4**, 243-253.
- [134] Dang, C., de Montaudouin, X., Gam, M., Paroissin, C., Bru, N. & Caill-Milly, N. 2010 The Manila clam population in Arcachon Bay (SW France): Can it be kept sustainable? *Journal of Sea Research* **63**, 108-118. (doi:10.1016/j.seares.2009.11.003).
- [135] Dauvin, J.C. & Gentil, F. 1989 Long-term changes in populations of subtidal bivalves (*Abra alba* and *A. prismatica*) from the Bay of Morlaix (Western English Channel). *Marine Biology* **103**, 63-73.
- [136] Davis, J.P. & Wilson, J.G. 1982 The population structure and ecology of *Nucula turgida* (Leckenby and Marshall) in Dublin Bay. *Progress in Underwater Science* **8**, 53-60.
- [137] de Goeij, P. & Luttikhuisen, P. 1998 Deep-burying reduces growth in intertidal bivalves: field and mesocosm experiments with *Macoma balthica*. *Journal of Experimental Marine Biology and Ecology* **228**, 327-337.
- [138] Defeo, O. 1996 Experimental management of an unexploited sand beach bivalve population. *Revista Chilena de Historia Natural* **69**, 605-614.
- [139] Defeo, O. & Gutiérrez, N. 2003 Geographical patterns in growth estimates of the scallop *Zygochlamys patagonica*, with emphasis on Uruguayan waters. *Journal of Shellfish Research* **22**, 643-646.
- [140] Defeo, O., Ortiz, E. & Castilla, J.C. 1992 Growth, mortality and recruitment of the yellow clam *Mesodesma mactroides* on Uruguayan beaches. *Marine Biology* **114**, 429-437.
- [141] Degraer, S., Meire, P. & Vincx, M. 2007 Spatial distribution, population dynamics and productivity of *Spisula subtruncata*: implications for *Spisula* fisheries in seaduck wintering areas. *Marine Biology* **152**, 863-875. (doi:10.1007/s00227-007-0740-y).
- [142] Dekker, R. & Beukema, J.J. 1993 Dynamics and growth of a bivalve, *Abra tenuis*, at the northern edge of its distribution. *Journal of the Marine Biological Association of the United Kingdom* **73**.
- [143] Dekker, R. & Beukema, J.J. 1999 Relations of summer and winter temperatures with dynamics and growth of two bivalves, *Tellina tenuis* and *Abra tenuis*, on the northern edge of their intertidal distributions. *Journal of Sea Research* **42**, 207-220.
- [144] Dekker, R. & Beukema, J.J. 2012 Long-term dynamics and productivity of a successful invader: The first three decades of the bivalve *Ensis directus* in the western Wadden Sea. *Journal of Sea Research* **71**, 31-40. (doi:10.1016/j.seares.2012.04.004).
- [145] Del Norte, A.G. 1988 Aspects of the growth, recruitment, mortality and reproduction of the scallop *Amusium pleuronectes* (Linne) in the Lingayen Gulf, Philippines. *Ophelia* **29**, 153-168.
- [146] Deval, M.C. 2001 Shell growth and biometry of the striped Venus *Chamelea gallina* (L.) in the Marmara Sea, Turkey. *Journal of Shellfish Research* **20**, 155-159.
- [147] Deval, M.C. & Gökürk, D. 2008 Population structure and dynamics of the cut trough shell *Spisula subtruncata* (da Costa) in the Sea of Marmara, Turkey. *Fisheries Research* **89**, 241-247. (doi:10.1016/j.fishres.2007.09.019).
- [148] Deval, M.C. & Oray, I.K. 1998 The annual shell increments of Bivalvia *Chamelea gallina* L. 1758 in the northern Sea of Marmara. *Oebalia* **24**, 93-109.
- [149] Devillers, N., Eversole, A. & Isely, J. 1998 A comparison of four growth models for evaluating the growth of the northern quahog *Mercenaria mercenaria* (L.). *Journal of Shellfish Research* **17**, 191-194.

- [150] Dewarumez, J.M. 1979 Etude biologique D' *Abra alba*, Wood (mollusque lamellibranche) du littoral de la Mer du Nord, Universite des Sciences et Techniques de Lille.
- [151] Dinamani, P. 2010 Reproductive cycle and gonadial changes in the New Zealand rock oyster *Crassostrea glomerata*. *New Zealand Journal of Marine and Freshwater Research* **8**, 39-65. (doi:10.1080/00288330.1974.9515490).
- [152] Dolbeth, M., Viegas, I., Martinho, F., Marques, J.C. & Pardal, M.A. 2006 Population structure and species dynamics of *Spisula solida*, *Diogenes pugilator* and *Branchiostoma lanceolatum* along a temporal–spatial gradient in the south coast of Portugal. *Estuarine, Coastal and Shelf Science* **66**, 168-176. (doi:10.1016/j.ecss.2005.08.006).
- [153] Dolmer, P. 1997 Seasonal and spatial variability in growth of *Mytilus edulis* L. in a brackish sound: comparisons of individual mussel growth and growth of size classes. *Fisheries Research* **34**, 17-26.
- [154] Duval, D. 1963 The biology of *Ptericola pholadiformis* Lamark (Lamellibranchiata Petricolidae). *Proceedings of the Malacological Society of London* **35**, 89-100.
- [155] Eagar, R.M.C., Stone, N.M. & Dickson, P.A. 1984 Correlations between shape, weight and thickness of shell in four populations of *Venerupid rhomboides* (Pennant). *Journal of Molluscan Studies* **50**, 19-38.
- [156] Easwaran, C.R., Narayanan, K.R. & Michael, M.S. 1969 Pearl fisheries in the Gulf of Kutch. *Journal, Bombay Natural Hist. Society* **66**, 338-344.
- [157] Edie, S.M. & Surge, D. 2013 Deciphering Annual Growth Features in Chione Elevata Shells Using Isotope Sclerochronology. *Palaios* **28**, 93-98. (doi:10.2110/palo.2012.p12-044r).
- [158] Edward, J.K.P. & Ayyakkannu, K. 1991 Temporal variation in annual production of *Tellina nobilis* and *Tellina cuspis* in a tropical estuarine environment. *Mahasagar* **24**, 21-29.
- [159] Emerson, C.W., Minchinton, T.E. & Grant, J. 1988 Population structure, biomass, and respiration of *Mya arenaria* L. on temperate sandflat. *Journal of Experimental Marine Biology and Ecology* **115**, 99-111.
- [160] Epple, V., Brey, T., Witbaard, R., Kuhnert, H. & Patzold, J. 2006 Sclerochronological records of *Arctica islandica* from the inner German Bight. *The Holocene* **16**, 763-769.
- [161] Erlenkeuser, H. & Wefer, G. 1981 Seasonal growth of bivalves from Bermuda recorded in their O-18 profiles. In *Proceedings of the Fourth International Coral Reef Symposium* (pp. 643-648. Manila.
- [162] Escati-Peñaloza, G., Parma, A.M. & Orensanz, J.M. 2010 Analysis of longitudinal growth increment data using mixed-effects models: Individual and spatial variability in a clam. *Fisheries Research* **105**, 91-101. (doi:10.1016/j.fishres.2010.03.007).
- [163] Evans, S.V. & Tallmark, B.O. 1977 Growth and biomass of bivalve molluscs on a shallow, sandy bottom in Gullmar Fjord (Sweden). *Zoon* **5**, 33-38.
- [164] Eversole, A.G., Devillers, N. & Anderson, W.D. 2000 Age and size of *Mercenaria mercenaria* in Two Sisters Creek, South Carolina. *Journal of Shellfish Research* **19**, 51-56.
- [165] Evtushenko, Z.S., Lukyanova, O.N. & Belcheva, N.N. 1990 Cadmium bioaccumulation in organs of the scallop *Mizuhopecten yessoensis*. *Marine Biology* **104**.
- [166] Ezgeta-Balić, D., Peharda, M., Richardson, C.A., Kuzmanić, M., Vrgoč, N. & Isajlović, I. 2010 Age, growth, and population structure of the smooth clam *Callista chione* in the eastern Adriatic Sea. *Helgoland Marine Research* **65**, 457-465. (doi:10.1007/s10152-010-0235-y).
- [167] Fahy, E., Alcantara, M.L., Norman, M., Browne, R., Roantree, V. & Pfeiffer, N. 2002 Mortalities of *Ensis arcuatus* (Jeffreys) (Solenacea) in western Ireland. *Journal of Shellfish Research* **21**, 29-32.

- [168] Fahy, E., Carroll, J., O'Toole, M. & Hickey, J. 2003 A preliminary account of fisheries for the surf clam *Spisula solida* (L) (Mactracea) in Ireland. *Fisheries Bulletin* **21**, 1-27.
- [169] Fairbridge, W.S. 1953 A population study of the Tasmanian "commercial" scallop, *Notovola meridionalis* (Tate) (Lamelli-Branchiata, Pectinidae). *Australian Journal of Marine and Freshwater Research* **4**, 1-40.
- [170] Fassatoui, C., Ben Rejeb Jenhani, A. & Romdhane, M.S. 2014 Geographic pattern of shell morphology in the endemic freshwater mussel *Unio ravoisieri* (Bivalvia: Unionidae) from northern Tunisia. *Journal of Molluscan Studies* **81**, 152-160. (doi:10.1093/mollus/eyu069).
- [171] Feder, H.M. & Paul, A.J. 1974 Age, growth and size-weight relationships of the soft-shell clam *Mya arenaria*, in Prince William Sound, Alaska. *Proceedings of the National Shellfisheries Association* **64**, 45-52.
- [172] Feder, H.M., Paul, A.J. & Paul, J. 1976 Growth and size-weight relationships of the pinkneck clam *Spisula polynyma*, in Hartney Bay, Prince William Sound, Alaska. *Proceedings of the National Shellfisheries Association* **66**, 21-25.
- [173] Feder, H.M., Paul, A.J. & Paul, J.M. 1979 The pinkneck clam *Spisula polynyma* in the eastern Bering Sea growth, mortality, recruitment and size at maturity. In *Alaska Fisheries: 200 years and 200 Miles of Change. Proceedings of the 29th Alaska Science Conference* (pp. 717-721. University of Alaska, Fairbanks.
- [174] Fevolden, S.E. 1992 Allozymic variability in the Iceland scallop *Chlamys islandica*: geographic variation and lack of growth-heterozygosity correlations. *Marine Ecology Progress Series* **85**, 259-268.
- [175] Filippenko, D. & Naumenko, E. 2014 Patterns of the growth of soft-shell clam *Mya arenaria* L. (Bivalvia) in shallow water estuaries of the southern Baltic Sea. *Ecohydrology & Hydrobiology* **14**, 157-165. (doi:10.1016/j.ecohyd.2014.03.002).
- [176] Fiori, S. & Defeo, O. 2006 Biogeographic patterns in life-history traits of the Yellow clam, *Mesodesma mactroides*, in sandy beaches of South America. *Journal of Coastal Research* **224**, 872-880. (doi:10.2112/04-0409.1).
- [177] Flores, L., Licandeo, R., Cubillos, L.A. & Mora, E. 2014 Intra-specific variability in life-history traits of *Anadara tuberculosa* (Mollusca: Bivalvia) in the mangrove ecosystem of the Southern coast of Ecuador. *Revista de Biología Tropical* **62**, 473-482.
- [178] Foster, T. 1932 Observation on the life history of the fingernail shell of the genus *Sphaerium*. *Journal of Morphology* **53**, 473-497.
- [179] Franz, D.R. 1973 The ecology and reproduction of a marine bivalve *Mysella planulata* (Erycinacea). *The Biological Bulletin* **144**, 93-106.
- [180] Franz, D.R. 1996 Size and age at first reproduction of the ribbed mussel *Geukensia demissa* (Dillwyn) in relation to shore level in a New York salt marsh. *Journal of Experimental Marine Biology and Ecology* **205**, 1-13.
- [181] Franz, D.R. 2001 Recruitment, survivorship, and age structure of a New York ribbed mussel population (*Geukensia demissa*) in relation to shore level: A nine year study. *Estuaries* **24**, 319-327.
- [182] Frascchetti, S., Covazzi, A., Chiantore, M. & Albertelli, G. 1997 Life-history traits of the bivalve *Spisula subtruncata* (da Costa) in the Ligurian Sea (North-Western Mediterranean): The contribution of newly settled juveniles. *Scientia Marina* **61**, 25-32.
- [183] Fraser, C. 1931 Notes on the ecology of the cockle *Cardium corbis* Martyn. *Transactions of the Royal Society of Canada* **25**, 59-72.

- [184] Fraser, C.M. & Smith, G.M. 1928 Notes on the ecology of the butter clam, *Saxidomus giganteus* Deshayes. *Proceedings and Transactions of the Royal Society of Canada* **22**, 271-284.
- [185] Fraser, T. 1967 Contributions to the biology of *Tagelus divisus* (Tellinacea:Pelecypoda) in Biscayne Bay, Florida. *Bulletin of Marine Science* **17**, 111-132.
- [186] Fritz, L.W. 1991 Seasonal condition change, morphometrics, growth and sex ratio of the ocean quahog, *Arctica islandica* (Linnaeus, 1767) off New Jersey, U.S.A. *Journal of Shellfish Research* **10**, 79-88.
- [187] Gagayev, S.Y. 1989 Growth and production of mass species of bivalves in Chaun Bay (East Siberian Sea). *Oceanology* **29**, 504-507.
- [188] Gage, J. 1968 The mode of life of *Mysella cuneata*, a bivalve 'commensal' with *Phascolion strombi* (Sipunculoidea). *Canadian Journal of Zoology* **46**, 919-934.
- [189] Galinou-Mitsoudi, C. & Sinis, A.I. 1995 Age and growth of *Lithophaga lithophaga* (Linnaeus, 1758) (Bivalvia:Mytilidae), based on annual growth lines in the shell. *Journal of Molluscan Studies* **61**, 435-453.
- [190] Galinou-Mitsoudi, S., Vlahavas, G. & Papoutsis, O. 2006 Population study of the protected bivalve *Pinna nobilis* (Linnaeus, 1758) in Thermaikos Gulf (North Aegean Sea). *Journal of Biological Research* **5**, 47-53.
- [191] Gallardo, C.S. 1993 Reproductive habits and life cycle of the small clam *Kingiella chilensis* (Bivalvia: Cyamiidae) in an estuarine sand flat from the South of Chile. *Marine Biology* **115**, 595-603.
- [192] Gam, M., de Montaudouin, X. & Bazairi, H. 2010 Population dynamics and secondary production of the cockle *Cerastoderma edule*: A comparison between Merja Zerga (Moroccan Atlantic Coast) and Arcachon Bay (French Atlantic Coast). *Journal of Sea Research* **63**, 191-201. (doi:10.1016/j.seares.2010.01.003).
- [193] Garcia, N., Prieto, A., Alzola, R. & Lodeiros, C. 2003 Growth and size distribution of *Donax denticulatus* (Mollusca:Donacidae) in Playa Brava, Peninsula de Araya, Sucre State, Venezuela. *Revista Científica* **13**, 464-470.
- [194] Garcia-March, J.R., García-Carrascosa, A.M. & Pena, A.-L. 2002 In situ measurement of *Pinna nobilis* shells for age and growth studies: A new device. *Marine Ecology* **23**, 207-217.
- [195] García-March, J.R., García-Carrascosa, A.M., Peña Cantero, A.L. & Wang, Y.G. 2007 Population structure, mortality and growth of *Pinna nobilis* Linnaeus, 1758 (Mollusca, Bivalvia) at different depths in Moraira Bay (Alicante, Western Mediterranean). *Marine Biology* **150**, 861-871. (doi:10.1007/s00227-006-0386-1).
- [196] Garcia-March, J.R., Marquez-Aliaga, A., Wang, Y.-G., Surge, D. & Kersting, D.K. 2011 Study of *Pinna nobilis* growth from inner record: How biased are posterior adductor muscle scars estimates? *Journal of Experimental Marine Biology and Ecology* **407**, 337-344. (doi:10.1016/j.jembe.2011.07.016).
- [197] Gardner, J.P.A. & Thomas, M.L.H. 1987 Growth, mortality and production of organic matter by a rocky intertidal population of *Mytilus edulis* in the Quoddy Region of the Bay of Fundy. *Marine Ecology Progress Series* **39**, 31-36.
- [198] Gaspar, M.B., Ferreira, R. & Monteiro, C.C. 1999 Growth and reproductive cycle of *Donax trunculus* L., (Mollusca:Bivalvia) off Faro, southern Portugal. *Fisheries Research* **41**, 309-316.
- [199] Gaspar, M.B., Pereira, A.M., Vasconcelos, P. & Monteiro, C.C. 2004 Age and growth of *Chamelea gallina* from the Algarve Coast (Southern Portugal): Influence of seawater temperature and gametogenic cycle on growth rate. *Journal of Molluscan Studies* **70**, 371-377.

- [200] Genelt-Yanovskiy, E., Poloskin, A., Granovitch, A., Nazarova, S. & Strelkov, P. 2010 Population structure and growth rates at biogeographic extremes: a case study of the common cockle, *Cerastoderma edule* (L.) in the Barents Sea. *Marine Pollution Bulletin* **61**, 247-253. (doi:10.1016/j.marpolbul.2010.02.021).
- [201] George, E.L. & Nair, N.B. 1974 The growth rates of the estuarine mollusc *Musculista arcuatula* Yamamoto and Habe (Bivalvia:Mytilidae). *Hydrobiologia* **45**, 239-248.
- [202] Gerasimova, A.V. & Maximovich, N.V. 2013 Age–size structure of common bivalve mollusc populations in the White Sea: the causes of instability. *Hydrobiologia* **706**, 119-137. (doi:10.1007/s10750-012-1415-3).
- [203] Gerasimova, A.V., Maximovich, N.V. & Filippova, N.A. 2015 Cohort life tables for a population of the soft-shell clam, *Mya arenaria* L., in the White Sea. *Helgoland Marine Research* **69**, 147-158. (doi:10.1007/s10152-014-0423-2).
- [204] Ghent, A.W., Singer, R. & Johnson-Singer, L. 1978 Depth distributions determined with SCUBA, and associated studies of the freshwater unionid clams *Elliptio complanata* and *Anodonta grandis* in Lake Bernard, Ontario. *Canadian Journal of Zoology* **56**, 1654-1663.
- [205] Gibbs, P.E. 1984 The population cycle of the bivalve *Abra tenuis* and its mode of reproductions. *Journal of the Marine Biological Association of the United Kingdom* **64**, 791-800.
- [206] Gibson, F. 1956 Escallops (*Pecten maximus* L.) in Irish waters. *The Scientific Proceedings of the Royal Dublin Society* **27**, 2553-2270.
- [207] Gil, G.M. & Thome, J.W. 2000 Estudo do crescimento em comprimento de *Donax hanleyanus* Philippi, 1847 (Mollusca, Bivalvia, Donacidae). *Biociencias* **8**, 163-175.
- [208] Gilbert, M.A. 1973 Growth rate, longevity and maximum size of *Macoma balthica* (L.). *The Biological Bulletin* **145**, 119-126.
- [209] Gillilan, W. 1964 Pismo clam survey. *Outdoor California* **25**, 10-11.
- [210] Goong, S.A. & Chew, K.K. 2001 Growth of butter clams, *Saxidomus giganteus* Deshayes, on selected beaches in the state of Washington. *Journal of Shellfish Research* **20**, 143-147.
- [211] Gosselin, M., Lazareth, C.E. & Ortlieb, L. 2013 Sclerochronological studies in the Humboldt Current system, a highly variable ecosystem. *Journal of Shellfish Research* **32**, 867-882. (doi:10.2983/035.032.0331).
- [212] Grave, B.H. 1928 Natural history of shipworm, *Teredo navalis*, at Woods Hole, Massachusetts. *Biological Bulletin* **55**, 260-282.
- [213] Grave, B.H. 1933 Rate of growth, age at sexual maturity, and duration of life of certain sessile organisms at Woods Hole, Massachusetts. *Biological Bulletin* **65**, 375-386.
- [214] Green, J. 1957 The growth of *Scrobicularia plana* (Da Costa) in the Gwendraeth estuary. *Journal of the Marine Biological Association of the United Kingdom* **36**, 41-47.
- [215] Green, R.H. 1973 Growth and mortality in an Arctic intertidal population of *Macoma balthica* (Pelecypoda, Tellinidae). *Journal of the Fisheries Research Board of Canada* **30**, 1345-1348.
- [216] Green, R.H. & Hobson, K.D. 1970 Spatial and temporal structure in a temperate intertidal community, with special emphasis on *Gemma gemma* (Pelecypoda: Mollusca). *Ecology* **51**, 999-1011.
- [217] Gribben, P.E. & Creese, R.G. 2005 Age, growth, and mortality of the New Zealand geoduck clam, *Panopea zelandica* (Bivalvia: Hiattellidae) in two North Island populations. *Bulletin of Marine Science* **77**, 119-135.
- [218] Grier, N.M. 1922 Observation on the rate of growth of shell of lake dwelling fresh water mussels. *American Midland Naturalist* **8**, 129-148.

- [219] Griffiths, C.L. & King, J.A. 1979 Energy expended on growth and gonad output in the ribbed mussel *Aulacomya ater*. *Marine Biology* **53**, 217-222.
- [220] Griffiths, R.J. 1981 Population dynamics and growth of the bivalve *Choromytilus meridionalis* (Kr.) at different tidal levels. *Estuarine, Coastal and Shelf Science* **12**, 101-118.
- [221] Grizzle, R.E. & Lutz, R.A. 1988 Descriptions of macroscopic banding patterns in sectioned polished shells of *Mercenaria mercenaria* from southern New Jersey. *Journal of Shellfish Research* **7**, 367-370.
- [222] Gruffydd, L.D. 1974 An estimate of natural mortality in an unfished population of the scallop *Pecten maximus* (L.). *Journal du Conseil Permanent International pour l'Exploration de la Mer* **35**, 209-210.
- [223] Guerreiro, J. 1998 Growth and production of the bivalve *Scrobicularia plana* in two southern European estuaries. *Vie Milieu* **48**, 121-131.
- [224] Guillou, J. & Sauriau, P.G. 1985 Some observations on the biology and the ecology of a *Venus striatula* population in the Bay of Douarnenez, Brittany. *Journal of the Marine Biological Association of the United Kingdom* **65**, 889-900.
- [225] Gutiérrez, N.L. & Defeo, O. 2005 Spatial patterns in population dynamics of the scallop *Psychrochlamys patagonica* at the northern edge of its range. *Journal of Shellfish Research* **24**, 877-882. (doi:10.2983/0730-8000(2005)24[877:spipdo]2.0.co;2).
- [226] Gutsell, J. 1930 Natural history of the bay scallop. *Bulletin of the Bureau of Fisheries* **46**, 569-632.
- [227] Gwyther, D. & McShane, P.E. 1988 Growth rate and natural mortality of the scallop *Pecten alba* Tate in Port Phillip Bay, Australia, and evidence for changes in growth rate after a 20-year period. *Fisheries Research* **6**, 347-361.
- [228] Haag, W.R. & Rypel, A.L. 2011 Growth and longevity in freshwater mussels: evolutionary and conservation implications. *Biological reviews of the Cambridge Philosophical Society* **86**, 225-247. (doi:10.1111/j.1469-185X.2010.00146.x).
- [229] Hall Jr., C.A., Dollase, W.A. & Corbato, C.E. 1974 Shell growth in *Tivela stultorum* (Mawe, 1823) and *Callista chione* (Linnaeus, 1758) (Bivalvia): Annual periodicity, latitudinal differences, and diminution with age. *Palaeogeography, Palaeoclimatology, Palaeoecology* **15**, 33-61.
- [230] Hallmann, N., Burchell, M., Schöne, B.R., Irvine, G.V. & Maxwell, D. 2009 High-resolution sclerochronological analysis of the bivalve mollusk *Saxidomus gigantea* from Alaska and British Columbia: techniques for revealing environmental archives and archaeological seasonality. *Journal of Archaeological Science* **36**, 2353-2364. (doi:10.1016/j.jas.2009.06.018).
- [231] Hallmann, N., Schöne, B.R., Strom, A. & Fiebig, J. 2008 An intractable climate archive — Sclerochronological and shell oxygen isotope analyses of the Pacific geoduck, *Panopea abrupta* (bivalve mollusk) from Protection Island (Washington State, USA). *Palaeogeography, Palaeoclimatology, Palaeoecology* **269**, 115-126. (doi:10.1016/j.palaeo.2008.08.010).
- [232] Hamner, W.N. & Jones, M.S. 1976 Distribution, burrowing, and growth rates of the clam *Tridacna crocea* on interior reef flats. *Oecologia* **24**, 207-227.
- [233] Hanekom, N. 1986 Growth and somatic production estimates of *Dosinia hepatica* (Lamarck) (Mollusca: Bivalvia) in the Swartkops estuary, South Africa. *S.-Afr. Tydskr. Dierk.* **21**, 325-330.
- [234] Hanks, R.W. & Packer, D.B. 1985 A new species of *Sphenia* (Bivalvia:Myidae) from the Gulf of Maine. *The Veliger* **27**, 320-330.

- [235] Hanlon, S.D. & Levine, J.F. 2004 Notes on the life history and demographics of the savannah lilliput (*Toxolasma pullus*) (Bivalvia: Unionidae) in University Lake, NC. *Southeastern Naturalist* **3**, 289-296. (doi:10.1656/1528-7092(2004)003[0289:notlha]2.0.co;2).
- [236] Hanson, J.M., Mackay, W.C. & Prepas, E.E. 1988 The effects of water depth and density on the growth of a unionid clam. *Freshwater Biology* **19**, 345-355.
- [237] Harding, J.M. 2007 Northern Quahog (=Hard Clam) *Mercenaria mercenaria* age at length relationships and growth patterns in the York River, Virginia 1954 to 1970. *Journal of Shellfish Research* **26**, 101-107. (doi:10.2983/0730-8000(2007)26[101:nqhcmm]2.0.co;2).
- [238] Harding, J.M. & Mann, R. 2006 Age and growth of wild Suminoe (*Crassostrea ariakensis*, Fugita 1913) and Pacific (*C. gigas*, Thunberg 1793) oysters from Laizhou Bay, China. *Journal of Shellfish Research* **25**, 73-82. (doi:10.2983/0730-8000(2006)25[73:aagows]2.0.co;2).
- [239] Harding, J.M., Mann, R. & Southworth, M.J. 2008 Shell length-at-age relationships in James River, Virginia, oysters (*Crassostrea virginica*) collected four centuries apart. *Journal of Shellfish Research* **27**, 1109-1115. (doi:10.2983/0730-8000-27.5.1109).
- [240] Harding, J.M., Mann, R., Southworth, M.J. & Wesson, J.A. 2010 Management of the Piankatank River, Virginia, in support of oyster (*Crassostrea virginica*, Gmelin 1791) fishery repletion. *Journal of Shellfish Research* **29**, 867-888. (doi:10.2983/035.029.0421).
- [241] Harrington, R.J. 1987 Skeletal growth histories of *Protothaca staminea* (Conrad) and *Protothaca grata* (Say) throughout their geographic ranges, Northeastern Pacific. *The Veliger* **30**, 148-158.
- [242] Hart, A.M. & Joll, L.M. 2006 Growth, mortality, recruitment and sex-ratio in wild stocks of silver-lipped pearl oyster *Pinctada maxima* (Jameson) (Mollusca: Pteriidae), in Western Australia. *Journal of Shellfish Research* **25**, 201-210. (doi:10.2983/0730-8000(2006)25[201:gmrasi]2.0.co;2).
- [243] Harvey, M. & Vincent, B. 1990 Density, size distribution, energy allocation and seasonal variations in shell and soft tissue growth at two tidal levels of a *Macoma balthica* (L.) population. *Journal of Experimental Marine Biology and Ecology* **142**, 151-168.
- [244] Harvey, M., Vincent, B. & Gratton, Y. 1993 Spatial variability of length-specific production in shell, somatic tissue and sexual products of *Macoma balthica* in the Lower St. Lawrence Estuary. *Marine Biology* **115**, 421-433.
- [245] Hastie, L.C. 2006 Determination of mortality in exploited freshwater pearl mussel (*Margaritifera margaritifera*) populations. *Fisheries Research* **80**, 305-311. (doi:10.1016/j.fishres.2006.03.024).
- [246] Haukioja, E. & Hakala, T. 1978 Measuring growth from shell rings in populations of *Anodonta piscinalis* (Pelecypoda, Unionidae). *Annales Zoologici Fennici* **15**, 60-65.
- [247] Hawes, I., Lasiak, T., Smith, M.L. & Oengpepa, C. 2011 The status of silverlip pearl oyster *Pinctada maxima* (Jameson) (Mollusca, Pteriidae) in the Solomon Islands after a 15-year export ban. *Journal of Shellfish Research* **30**, 255-260. (doi:10.2983/035.030.0209).
- [248] Hayes, P.F. & Menzel, R.W. 1981 The reproductive cycle of early setting *Crassostrea virginica* (Gmelin) in the Northern Gulf of Mexico, and its implications for population recruitment. *The Biological Bulletin* **160**, 80-88.
- [249] Heald, D.I. & Caputi, N. 1981 Some aspects of growth, recruitment and reproduction in the southern saucer scallop, *Amusium balloti* (Bernardi, 1861) in Shark Bay, Western Australia. *Fisheries Research Bulletin Western Australia* **25**.
- [250] Heilmayer, O., Brey, T., Chiantore, M., Cattaneo-Vietti, R. & Arntz, W.E. 2003 Age and productivity of the Antarctic scallop, *Adamussium colbecki*, in Terra Nova Bay (Ross Sea,

- Antarctica). *Journal of Experimental Marine Biology and Ecology* **288**, 239-256. (doi:10.1016/s0022-0981(03)00020-0).
- [251] Heilmayer, O., Brey, T., Storch, D., Mackensen, A. & Arntz, W.E. 2004 Population dynamics and metabolism of *Aequipecten opercularis* (L.) from the western English Channel (Roscoff, France). *Journal of Sea Research* **52**, 33-44. (doi:10.1016/j.seares.2003.07.005).
- [252] Helama, S. & Hood, B.C. 2011 Stone Age midden deposition assessed by bivalve sclerochronology and radiocarbon wiggle-matching of *Arctica islandica* shell increments. *Journal of Archaeological Science* **38**, 452-460. (doi:10.1016/j.jas.2010.09.029).
- [253] Henderson, S.M. & Richardson, C.A. 1994 A comparison of the age, growth rate and burrowing behaviour of the razor clams, *Ensis siliqua* and *E. ensis*. *Journal of the Marine Biological Association of the United Kingdom* **74**, 939-954.
- [254] Hendriks, I.E., Basso, L., Deudero, S., Cabanellas-Reboredo, M. & Álvarez, E. 2012 Relative growth rates of the noble pen shell *Pinna nobilis* throughout ontogeny around the Balearic Islands (Western Mediterranean, Spain). *Journal of Shellfish Research* **31**, 749-756. (doi:10.2983/035.031.0319).
- [255] Henry, K.M. & Cerrato, R.M. 2007 The annual macroscopic growth pattern of the northern quahog [=hard clam, *Mercenaria mercenaria* (L.)], in Narragansett Bay, Rhode Island. *Journal of Shellfish Research* **26**, 985-993. (doi:10.2983/0730-8000(2007)26[985:tamgpo]2.0.co;2).
- [256] Henry, K.M. & Nixon, S.W. 2008 A half century assessment of hard clam, *Mercenaria mercenaria*, growth in Narragansett Bay, Rhode Island. *Estuaries and Coasts* **31**, 755-766. (doi:10.1007/s12237-008-9060-9).
- [257] Hernández-Otero, A., Gaspar, M.B., Macho, G. & Vázquez, E. 2014 Age and growth of the sword razor clam *Ensis arcuatus* in the Ría de Pontevedra (NW Spain): Influence of environmental parameters. *Journal of Sea Research* **85**, 59-72. (doi:10.1016/j.seares.2013.09.006).
- [258] Herrington, H.B. 1948 Further proof that *Sphaerium occidentale* does not attain full growth in one year. *The Canadian Field Naturalist* **62**, 74-75.
- [259] Herrmann, M., Alfaya, J.E.F., Lepore, M.L., Penchaszadeh, P.E. & Arntz, W.E. 2011 Population structure, growth and production of the yellow clam *Mesodesma mactroides* (Bivalvia: Mesodesmatidae) from a high-energy, temperate beach in northern Argentina. *Helgoland Marine Research* **65**, 285-297. (doi:10.1007/s10152-010-0222-3).
- [260] Herrmann, M., Lepore, M.L., Laudien, J., Arntz, W.E. & Penchaszadeh, P.E. 2009 Growth estimations of the Argentinean wedge clam *Donax hanleyanus*: A comparison between length-frequency distribution and size-increment analysis. *Journal of Experimental Marine Biology and Ecology* **379**, 8-15. (doi:10.1016/j.jembe.2009.07.031).
- [261] Hibbert, C.J. 1976 Biomass and production of a bivalve community on an intertidal mud-flat. *Journal of Experimental Marine Biology and Ecology* **25**, 249-261.
- [262] Hibbert, C.J. 1977 Growth and survivorship in a tidal-flat population of the bivalve *Mercenaria mercenaria* from Southampton water. *Marine Biology* **44**, 71-76.
- [263] Hidalgo-De-La-Toba, J.A., González-peláez, S.S., Morales-Bojórquez, E., Bautista-Romero, J.J. & Lluch-Cota, D.B. 2015 Geoduck *Panopea generosa* growth at its southern distribution limit in North America using a multimodel inference approach. *Journal of Shellfish Research* **34**, 91-99. (doi:10.2983/035.034.0112).
- [264] Higgs, N.D., Reed, A.J., Hooke, R., Honey, D.J., Heilmayer, O. & Thatje, S. 2009 Growth and reproduction in the Antarctic brooding bivalve *Adacnarca nitens* (Philobryidae) from the Ross Sea. *Marine Biology* **156**, 1073-1081. (doi:10.1007/s00227-009-1154-9).

- [265] Hily, C. & Le Bris, H. 1984 Dynamics of an *Abra alba* population (bivalve-scrobiculariidae) in the Bay of Brest. *Estuarine, Coastal and Shelf Science* **19**, 463-475.
- [266] Hoffmann, A., Bradbury, A. & Goodwin, C.L. 2000 Modeling geoduck, *Panopea abrupta* (Conrad, 1849) population dynamics. 1. Growth. *Journal of Shellfish Research* **19**, 57-62.
- [267] Hopkins, H.S. 1930 Age differences and the respiration in muscle tissues of mollusks. *The Journal of Experimental Zoology* **56**, 209-239.
- [268] Hornbach, D.J. & Wissing, T.E. 1982 Life-history characteristics of a stream population of the freshwater clam *Sphaerium striatinum* Lamarck (Bivalvia: Pisidiidae). *Canadian Journal of Zoology* **60**, 249-260.
- [269] Hove, M.C. & Neves, R.J. 1994 Life history of the endangered James spiny mussel *Pleurobema collina* (Conrad, 1837) (Mollusca: Unionidae). *American Malacological Bulletin* **11**, 29-39.
- [270] Howarth, L.M., Roberts, C.M., Hawkins, J.P., Steadman, D.J. & Beukers-Stewart, B.D. 2015 Effects of ecosystem protection on scallop populations within a community-led temperate marine reserve. *Marine Biology* **162**, 823-840. (doi:10.1007/s00227-015-2627-7).
- [271] Hughes, S.E. & Bourne, N. 1981 Stock assessment and life history of a new discovered Alaska surf clam (*Spisula polynyma*) resource in the southeastern Bering Sea. *Canadian Journal of Fisheries and Aquatic Sciences* **38**, 1173-1181.
- [272] Humphreys, J., Caldow, R.W.G., McGrorty, S., West, A.D. & Jensen, A.C. 2007 Population dynamics of naturalised Manila clams *Ruditapes philippinarum* in British coastal waters. *Marine Biology* **151**, 2255-2270. (doi:10.1007/s00227-007-0660-x).
- [273] Hutchings, J.A. & Haedrich, R.L. 1984 Growth and population structure in two species of bivalves (Nuculanidae) from the deep sea. *Marine Ecology Progress Series* **17**, 135-142.
- [274] Iglesias, J.I.P. & Navarro, E. 1991 Energetics of growth and reproduction in cockles (*Cerastoderma edule*): seasonal and age-dependent variations. *Marine Biology* **111**, 359-368.
- [275] Ignell, S. & Haynes, E. 2000 Geographic patterns in growth of the giant Pacific sea scallop, *Patinopecten caurinus*. *Fishery Bulletin* **98**, 849-853.
- [276] Isla, M.S. & Gordillo, S. 1996 Age and growth of the clam *Tawera gayi* (Hupe) from Golondrina Bay (Beagle Channel, Tierra del Fuego). *Naturalia patagonica. Ciencias biológicas* **4**, 33-40.
- [277] Jagadis, I. & Rajagopal, S. 2007 Age and growth of the venus clam *Gafrarium tumidum* (Roding) from south-east coast of India. *Indian Journal of Fisheries* **54**, 351-356.
- [278] Jensen, A.C., Humphreys, J., Caldow, R.W.G., Grisley, C. & Dyrinda, P.E.J. 2004 Naturalization of the Manila clam (*Tapes philippinarum*), an alien species, and establishment of a clam fishery within Poole Harbour, Dorset. *Journal of the Marine Biological Association of the United Kingdom* **84**, 1069-1073.
- [279] Jensen, J.N. 1990 Increased abundance and growth of the suspension-feeding bivalve *Corbula gibba* in a shallow part of the eutrophic Limfjord, Denmark. *Netherlands Journal of Sea Research* **27**, 101-108.
- [280] Jensen, K.T. 1992 Dynamics and growth of the cockle, *Cerastoderma edule*, on an intertidal mud-flat in the Danish Wadden Sea: Effects of submersion time and density. *Netherlands Journal of Sea Research* **28**, 335-345.
- [281] Jimenez, M., Prieto, A., Ruiz, L., Marin, B. & Allen, T. 2004 Distribucion de tallas, crecimiento y mortalidad de *Anadara notabilis* (Bivalvia: Arcidae) en la Bahía de Mochima Estado Sucre, Venezuela. *Boletín del Instituto Oceanográfico de Venezuela* **43**, 41-47.

- [282] Johannessen, O. 1973 Length and weight relationships and the potential production of the bivalve *Venerupis pullastra* (Montagu) on a sheltered beach in Western Norway. *Sarsia* **53**, 41-48.
- [283] Jonasson, J.P., Thorarinsdottir, G., Eiriksson, H., Solmundsson, J. & Marteinsdottir, G. 2007 Collapse of the fishery for Iceland scallop (*Chlamys islandica*) in Breidafjordur, West Iceland. *ICES Journal of Marine Science* **64**, 298-308.
- [284] Jones, D.S. 1980 Annual cycle of shell growth increment formation in two continental shelf bivalves and its paleoecologic significance. *Paleobiology* **6**, 331-340.
- [285] Jones, D.S. 1988 Sclerochronology and the size versus age problem. In *Heterochrony in evolution* (ed. M.L. McKinney), pp. 93-108, Plenum Publishing Corporation.
- [286] Jones, D.S., Arthur, M.A. & Allard, D.J. 1989 Sclerochronological records of temperature and growth from shells of *Mercenaria mercenaria* from Narragansett Bay, Rhode Island. *Marine Biology* **102**, 225-234.
- [287] Jones, D.S. & Gould, S.J. 1999 Direct measurement of age in fossil *Gryphaea*: the solution to a classic problem in heterochrony. *Paleobiology* **25**, 158-187.
- [288] Jones, D.S., Quitmyer, I.R. & Andrus, C.F.T. 2004 Seasonal shell growth and longevity in *Donax variabilis* from Northeastern Florida: Evidence from oxygen isotopes. *Journal of Shellfish Research* **23**, 707-714.
- [289] Jones, D.S., Quitmyer, I.R., Arnold, W.S. & Marelli, D.C. 1990 Annual shell banding, age and growth rate of hard clams (*Mercenaria* spp.) from Florida. *Journal of Shellfish Research* **9**, 215-225.
- [290] Jones, D.S., Thompson, I. & Ambrose, W. 1978 Age and growth rate determinations for the Atlantic surf clam *Spisula solidissima* (Bivalvia: Mactracea), based on internal growth lines in shell cross-sections. *Marine Biology* **47**, 63-70.
- [291] Jones, D.S., Williams, D.F. & Romanek, C.S. 1986 Life history of symbiont-bearing giant clams from stable isotope profiles *Science* **231**, 46-48.
- [292] Jones, J.W., Neves, R.J., Ahlstedt, S.A. & Mair, R.A. 2004 Life history and propagation of the endangered dromedary pearlymussel (*Dromus dromas*) (Bivalvia: Unionidae). *Journal of the North American Benthological Society* **23**, 515-525. (doi:10.1899/0887-3593(2004)023<0515:lhapot>2.0.co;2).
- [293] Josefson, A.B. 1982 Regulation of population size, growth, and production of a deposit-feeding bivalve: A long-term field study of three deep-water populations off the Swedish west coast. *Journal of Experimental Marine Biology and Ecology* **59**, 125-150.
- [294] Joseph, M.M. & Joseph, P.S. 1985 Age and growth of the oyster *Crassostrea madrasensis* (Preston) in Mulki Estuary, west coast of India. *Indian Journal of Marine Sciences* **14**, 184-186.
- [295] Kafanov, A.I. 1985 Growth and production of the bivalve mollusk *Macoma balthica* in Nabil' Lagoon (Northeastern Sakhalin). *Biologiya Morya-Marine Biology* **6**, 23-31.
- [296] Kalyanasundaram, M. & Kasinathan, R. 1983 Age and growth in the estuarine clam *Katelysia opima* (Gmelin) from the Vellar Estuary. *Indian Journal of Marine Sciences* **12**, 247-248.
- [297] Kamermans, P., Van der Veer, H.W., Witte, J. & Adriaans, E. 1999 Morphological differences in *Macoma balthica* (Bivalvia, Tellinacea) from a Dutch and three southeastern United States estuaries. *Journal of Sea Research* **41**, 213-224.
- [298] Kang, Y.J. & Kim, C.K. 1983 Studies on the structure and production processes of biotic communities in the coastal shallow waters of Korea. *Bulletin of the Korean Fisheries Society* **16**, 82-87.

- [299] Kato, Y. & Hamai, I. 1975 Growth and shell formation of the surf clam, *Spisula sachalinensis* (Schrenck). *Bulletin of the Faculty of Fisheries Hokkaido University* **25**, 291-303.
- [300] Katsanekvakis, S. 2006 Population ecology of the endangered fan mussel *Pinna nobilis* in a marine lake. *Endangered Species Research* **1**, 51-59.
- [301] Katsanevakis, S. 2009 Population dynamics of the endangered fan mussel *Pinna nobilis* in a marine lake: a metapopulation matrix modeling approach. *Marine Biology* **156**, 1715-1732. (doi:10.1007/s00227-009-1206-1).
- [302] Kautsky, N. 1982 Growth and size structure in a Baltic *Mytilus edulis* population. *Marine Biology* **68**, 117-133.
- [303] Keller, N., Del Piero, D. & Longinelli, A. 2002 Isotopic composition, growth rates and biological behaviour of *Chamelea gallina* and *Callista chione* from the Bay of Trieste (Italy). *Marine Biology* **140**, 9-15. (doi:10.1007/s002270100660).
- [304] Kennish, M. & Loveland, R. 1980 Growth models of the northern quahog *Mercenaria mercenaria* (Linne). *Proceedings of the National Shellfisheries Association* **70**, 230-239.
- [305] Kevrekidis, T. & Koukouras, A. 1992 Population dynamics, growth and productivity of *Abra ovata* (Mollusca, Bivalvia) in the Evros Delta (North Aegean Sea). *Internationale Revue der gesamten Hydrobiologie und Hydrographie* **77**, 291-301. (doi:10.1002/iroh.19920770209).
- [306] Khim, B.-K. 2001 Stable isotope profiles of *Serripes groenlandicus* shells. II. Occurrence in Alaskan coastal water in South St. Lawrence Island, Northern Bering Sea. *Journal of Shellfish Research* **20**, 275-281.
- [307] Khim, B.-K., Woo, K.S. & Je, J.-G. 2000 Stable isotope profiles of bivalve shells: seasonal temperature variations, latitudinal temperature gradients and biological carbon cycling along the east coast of Korea. *Continental Shelf Research* **20**, 843-861.
- [308] Kilada, R.W., Campana, S.E. & Roddick, D. 2007 Validated age, growth, and mortality estimates of the ocean quahog (*Arctica islandica*) in the western Atlantic. *ICES Journal of Marine Science* **64**, 31-38.
- [309] Kilada, R.W., Campana, S.E. & Roddick, D. 2009 Growth and sexual maturity of the northern propellerclam (*Cyrtodaria siliqua*) in Eastern Canada, with bomb radiocarbon age validation. *Marine Biology* **156**, 1029-1037. (doi:10.1007/s00227-009-1146-9).
- [310] Kilada, R.W., Roddick, D. & Mombourquette, K. 2007 Age determination, validation, growth and minimum size of sexual maturity of the Greenland smoothcockle (*Serripes groenlandicus*, Bruguiere, 1789) in eastern Canada. *Journal of Shellfish Research* **26**, 443-450. (doi:10.2983/0730-8000(2007)26[443:advgam]2.0.co;2).
- [311] Kim, B.K. 1985 Studies on the spawning and growth of Hen Clam, *Mactra sulcataria* (Reeve). *Bulletin of Fisheries Research Devison Agency* **34**, 157-164.
- [312] Kim, J.-H., Kim, J.-S., Kim, Y.-H., Chung, E.-Y. & Ryu, D.-K. 2003 Age and growth of the jedo venus clam, *Protothaca jedoensis* on the west coast of Korea. *Korean Journal of Malacology* **19**, 125-132.
- [313] Kitamura, A., Tada, K., Sakai, S., Yamamoto, N., Ubukata, T., Miyaji, T. & Kase, T. 2011 Age and growth of *Glossocardia obesa*, a "large" bivalve in a submarine cave within a coral reef, as revealed by oxygen isotope analysis. *The Veliger* **51**, 59-65.
- [314] Kraeuter, J.N., Flimlin, G., Kennish, M.J., Macaluso, R. & Viggiano, J. 2009 Sustainability of northern quahogs (= hard clams) *Mercenaria mercenaria*, Linnaeus in Raritan Bay, New Jersey: Assessment of size specific growth and mortality. *Journal of Shellfish Research* **28**, 273-287. (doi:10.2983/035.028.0209).

- [315] Kraeuter, J.N., Ford, S. & Cummings, M. 2007 Oyster growth analysis: A comparison of methods. *Journal of Shellfish Research* **26**, 479-491. (doi:10.2983/0730-8000(2007)26[479:ogaaco]2.0.co;2).
- [316] Krantz, D.E., Jones, D.S. & Williams, D.F. 1984 Growth rates of the sea scallop, *Placopecten magellanicus*, determined from the 18O/16O record in shell calcite. *The Biological Bulletin* **167**, 186-199.
- [317] Kraus, M.G., Beal, B.F., Chapman, S.R. & McMartin, L. 1992 A comparison of growth rates in *Arctica islandica* (Linnaeus, 1767) between field and laboratory populations. *Journal of Shellfish Research* **11**, 289-294.
- [318] Kube, J. 1996 Spatial and temporal variations in the population structure of the soft-shell clam *Mya arenaria* in the Pommeranian Bay (Southern Baltic Sea). *Journal of Sea Research* **35**, 335-344.
- [319] Kunitzer, A. 1989 Factors affecting the population dynamics of *Amphiura filiformis* (Echinodermata:Ophiuroidea) and *Mysella bidentata* (Bivalvia:Galeommatacea). In *Reproduction, genetics and distribution of marine organisms* (eds. J.S. Ryland & P.A. Tyler), pp. 395-406.
- [320] Lammens, J.J. 1967 Growth and reproduction in a tidal flat population of *Macoma balthica* (L.). *Netherlands Journal of Sea Research* **3**, 315-382.
- [321] Landry, T., Sephton, T.W. & Jones, D.A. 1993 Growth and mortality of northern quahog, (Linnaeus 1758) *Mercenaria mercenaria* in Prince Edward Island. *Journal of Shellfish Research* **12**, 321-327.
- [322] Lastra, M., Palacio, J. & Mora, J. 1993 Population dynamics and secondary production of *Abra alba* (Wood) (Bivalvia) in the Santanger Bay, northern Spain. *Sarsia* **78**, 35-42.
- [323] Laudien, J., Brey, T. & Arntz, W.E. 2003 Population structure, growth and production of the surf clam *Donax serra* (Bivalvia, Donacidae) on two Namibian sandy beaches. *Estuarine, Coastal and Shelf Science* **58**, 105-115. (doi:10.1016/s0272-7714(03)00044-1).
- [324] Lavaud, R., Thébault, J., Lorrain, A., van der Geest, M. & Chauvaud, L. 2013 *Senilia senilis* (Linnaeus, 1758), a biogenic archive of environmental conditions on the Banc d'Arguin (Mauritania). *Journal of Sea Research* **76**, 61-72. (doi:10.1016/j.seares.2012.11.003).
- [325] Lavoie, R., Tremblay, J.-L. & Filteau, G. 1968 Age et croissance de *Macoma balthica* L. a cacouna-est dans L'estuaire du St-Laurent. *Le Naturaliste canadien* **95**, 887-895.
- [326] Laxmilatha, P. 2013 Population dynamics of the edible clam *Meretrix casta* (Chemnitz) (International Union for Conservation of Nature status: Vulnerable) from two estuaries of North Kerala, south west coast of India. *International Journal of Fisheries and Aquaculture* **5**, 253-261. (doi:10.5897/IJFA12.035).
- [327] LeBlanc, K., Ouellette, M., Chouinard, G. & Landry, T. 2005 Commercial harvest and population structure of a northern quahog, (*Mercenaria mercenaria* Linnaeus 1758) population in St. Mary's Bay, Nova Scotia, Canada. *Journal of Shellfish Research* **24**, 47-54.
- [328] Lee, A.M., Williams, A.J. & Southgate, P.C. 2007 Modelling and comparison of growth of the silver-lip pearl oyster *Pinctada maxima* (Jameson) (Mollusca: Pteriidae) cultured in West Papua, Indonesia. *Marine and Freshwater Research* **59**, 22-31.
- [329] Lee, S.Y. 1985 The population dynamics of the green mussel, *Perna viridis* (L.) in Victoria Harbour, Hong Kong - Dominance in a polluted environment. *Asian Marine Biology* **2**, 107-118.
- [330] Lefort, Y. 1994 Growth and mortality of the tropical scallops: *Annachlamys flabellata* (Bernardi), *Comptopallium radula* (Linne) and *Mimachlamys gloriosa* (Reeve) in Southwest Lagoon of New Caledonia. *Journal of Shellfish Research* **13**, 539-546.

- [331] LeGallo, J.-M. & Moreteau, J.-C. 1988 Croissance et productivite d'une population du *Sphaerium corneum* (L.) (Bivalvia : Pisidiidae). *Canadian Journal of Zoology* **66**, 439-445.
- [332] Leontarakis, P.K. & Richardson, C.A. 2005 Growth of the smooth clam, *Callista chione* (Linnaeus, 1758) (Bivalvia: Veneridae) from the Thracian Sea, northeastern Mediterranean. *Journal of Molluscan Studies* **71**, 189-192.
- [333] Lewandowski, K. & Stancykowska, A. 1975 The occurrence and role of bivalves of the family Unionidae in Mikolajskie Lake. *Ekologia Polska* **23**, 317-334.
- [334] Lewis, C.V.W., Weinberg, J.R. & Davis, C.S. 2001 Population structure and recruitment of the bivalve *Arctica islandica* (Linnaeus, 1767) on Georges Bank from 1980-1999. *Journal of Shellfish Research* **20**, 1135-1144.
- [335] Lewis, J.B., Saleh, S., Reiswig, H.M. & Lalli, C.M. 1982 Growth, production and biomass of the burrowing protobranch mollus *Yoidia limatula* in the Bideford River, Prince Edward Island, Canada. *Marine Biology* **70**, 173-179.
- [336] Lim, H.S. & Chang-II, L. 2004 Growth pattern of soft clam (*Mya arenaria oonogai*) (Mollusca:Bivalvia) from a mud flat on the southwest coast of Korea. *Journal of Korean Fisheries Society* **37**, 105-115.
- [337] Lochead, J., Zhang, Z. & Hand, C. 2012 The impact of increased accuracy in geoduck (*Panopea generosa*) age determination on recommended exploitation rates. *Journal of Shellfish Research* **31**, 969-976. (doi:10.2983/035.031.0409).
- [338] Lodeiros, C.J., Rengel, J.J. & Himmelman, J.H. 1999 Growth of *Pteria colymbus* (Roding, 1798) in suspended culture in Golfo de Cariaco, Venezuela. *Journal of Shellfish Research* **18**, 155-158.
- [339] Loesch, J.G. & Haven, D.S. 1974 Estimated growth functions and size-age relationships of the hard clam, *Mercenaria mercenaria*, in the York River Virginia. *The Veliger* **16**, 76-81.
- [340] Lomovasky, B.J., Baldoni, A., Ribeiro, P., Alvarez, G., Lasta, M., Campodónico, S. & Iribarne, O. 2011 Exploring the causes of differences in growth rate of the Patagonian scallop *Zygochlamys patagonica* along its commercial bed distribution in the SW Atlantic. *Journal of Sea Research* **66**, 162-171. (doi:10.1016/j.seares.2011.05.010).
- [341] Lomovasky, B.J., Brey, T., Baldoni, A.N.A., Lasta, M., Mackensen, A., Campodónico, S. & Iribarne, O. 2007 Annual shell growth increment formation in the deep water Patagonian scallop *Zygochlamys patagonica*. *Journal of Shellfish Research* **26**, 1055-1063. (doi:10.2983/0730-8000(2007)26[1055:asgifi]2.0.co;2).
- [342] Lomovasky, B.J., Brey, T. & Morriconi, E. 2005 Population dynamics of the venerid bivalve *Tawera gayi* (Hupe, 1854) in the Ushuaia Bay, Beagle Channel. *Journal of Applied Ichthyology* **21**, 64-69.
- [343] Lomovasky, B.J., Brey, T., Morriconi, E. & Calvo, J. 2002 Growth and production of the venerid bivalve *Eurhomalea exalbida* in the Beagle Channel, Tierra del Fuego. *Journal of Sea Research* **48**, 209-216.
- [344] Lomovasky, B.J., Lasta, M., Valiñas, M., Bruschetti, M., Ribeiro, P., Campodónico, S. & Iribarne, O. 2008 Differences in shell morphology and internal growth pattern of the Patagonian scallop *Zygochlamys patagonica* in the four main beds across their SW Atlantic distribution range. *Fisheries Research* **89**, 266-275. (doi:10.1016/j.fishres.2007.09.006).
- [345] Lopez-Jamar, E., Gonzalez, G. & Majuto, J. 1987 Ecology, growth, and production of *Thyasira flexuosa* (Bivalvia, Lucinacea) from Ria de la Corun, northwest Spain. *Ophelia* **27**, 111-126.

- [346] Lucero, C., Cantera, J. & Neira, R. 2012 Pesquería y crecimiento de la piangua (Arcoidea: Arcidae) *Anadara tuberculosa* en la Bahía de Málaga del Pacífico colombiano, 2005-2007. *International Journal of Tropical Biology and Conservation* **60**, 203-217.
- [347] Luckens, P.A. 1990 Distribution, size-frequency, and growth-ring analyses of *Tawera mawsoni* (Bivalvia: Veneridae) at Macquarie Island. *New Zealand Journal of Marine and Freshwater Research* **24**, 59-73. (doi:10.1080/00288330.1990.9516402).
- [348] Luckens, P.A. 1991 Distribution, growth rate, and death from octopod and gastropod predation of *Tawera bollonsi* (Bivalvia: Veneridae) at the Auckland Islands. *New Zealand Journal of Marine and Freshwater Research* **25**, 255-268. (doi:10.1080/00288330.1991.9516477).
- [349] Lutz, R.A. & Castagna, M. 1980 Age composition and growth rate of a mussel (*Geukensia demissa*) population in a Virginia salt marsh. *Journal of Molluscan Studies* **46**, 106-115.
- [350] MacDonald, B.A. & Bourne, N.F. 1987 Growth, reproductive output, and energy partitioning in weathervane scallops, *Patinopecten caurinus*, from British Columbia. *Canadian Journal of Fisheries and Aquatic Sciences* **44**, 152-160.
- [351] MacDonald, B.A. & Thomas, M.L.H. 1980 Age determination of the soft-shell clam *Mya arenaria* using shell internal growth lines. *Marine Biology* **58**, 105-109.
- [352] MacDonald, B.A. & Thompson, R.J. 1985 Influence of temperature and food availability on the ecological energetics of the giant scallop *Placopecten magellanicus*. I. Growth rates of shell and somatic tissue. *Marine Ecology Progress Series* **25**, 279-294.
- [353] MacDonald, B.A. & Thompson, R.J. 1986 Production, dynamics and energy partitioning in two populations of the giant scallop *Placopecten magellanicus* (Gmelin)*. *Journal of Experimental Marine Biology and Ecology* **101**, 285-299.
- [354] MacDonald, B.A. & Thompson, R.J. 1988 Intraspecific variation in growth and reproduction in latitudinally differentiated populations of the giant scallop *Placopecten magellanicus* (Gmelin). *The Biological Bulletin* **175**, 361-371.
- [355] Mackie, G.L. 1979 Growth dynamics in natural populations of Sphaeriidae clams (*Sphaerium*, *Musculium*, *Pisidium*). *Canadian Journal of Zoology* **57**, 441-456.
- [356] Mackie, G.L. & Flippance, L.A. 1983 Life history variations in two populations of *Sphaerium rhomboideum* (Bivalvia: Pisidiidae). *Canadian Journal of Zoology* **61**, 860-867.
- [357] Mancera, E. & Mendo, J. 1996 Population dynamics of the oyster *Crassostrea rhizophorae* from the Ciénaga Grande de Santa Marta, Colombia. *Fisheries Research* **26**, 139-148.
- [358] Mane, U.H. 1974 Growth and breeding habits of the clam, *Katelysia opima* in the Kalbadevi Estuary at Ratnagiri. *Indian Journal of Fisheries* **21**, 386-398.
- [359] Mane, U.H. & Nagabhushanam, R. 1979 Studies on the growth and density of the clam *Paphia laterisulca* at Kalbadevi Estuary, Ratnagiri, on the West Coast of India. *Malacologia* **18**, 297-313.
- [360] Marali, S. & Schöne, B.R. 2015 Oceanographic control on shell growth of *Arctica islandica* (Bivalvia) in surface waters of Northeast Iceland — Implications for paleoclimate reconstructions. *Palaeogeography, Palaeoclimatology, Palaeoecology* **420**, 138-149. (doi:10.1016/j.palaeo.2014.12.016).
- [361] Marcano, J., Prieto, A., Larez, A. & Salazar, H. 2003 Crecimiento de *Donax denticulatus* (Linne 1758) (Bivalvia: Donacidae) en la ensenada La Guardia, Isla de Margarita, Venezuela. *Zootecnia Tropical* **21**, 237-260.

- [362] Margosian, A., Tan, F.C., Cai, D. & Mann, K.H. 1987 Seawater temperature records from stable isotopic profiles in the shell of *Modiolus modiolus*. *Estuarine, Coastal and Shelf Science* **25**, 81-89.
- [363] Marsh, P.C. 1985 Secondary production of introduced Asiatic clam, *Corbicula fluminea*, in a central Arizona canal. *Hydrobiologia* **124**, 103-110.
- [364] Maslin, J. & Bouvet, Y. 1986 Population dynamics of *Corbula trigona* (Mollusca) in Lake Aheme, a west African Lagoon in Benin. *Oikos* **46**, 292-302.
- [365] Maslin, J.-L. & Pattee, E. 1989 The production of *Corbula trigona* (Bivalvia) in relation to its demographic strategies in a West African lagoon. *Oikos* **55**, 194-204.
- [366] Mason, J. 1957 The age and growth of the scallop, *Pecten maximus* (L.), in Manx waters. *Journal of the Marine Biological Association of the United Kingdom* **36**, 473-492.
- [367] Mason, J. 1983 *Scallop and queen fisheries in the British Isles*.
- [368] Mattei, N. & Pellizzato, M. 1996 A population study on three stocks of a commercial Adriatic pectinid (*Pecten jacobaeus*). *Fisheries Research* **26**, 49-65.
- [369] Matteson, M. 1948 Life history of *Elliptio complanatus* (Dilwyn, 1817). *American Midland Naturalist* **40**, 690-723.
- [370] Matveeva, T.A. & Maksimovich, N.V. 1977 Peculiarities of ecology and distribution of *Hiatella arctica* (Mollusca, Bivalvia, Heterodonta) in the White Sea. *Zoologicheskii Zhurnal* **46**, 199-204.
- [371] Maximovich, N.V. & Guerassimova, A.V. 2003 Life history characteristics of the clam *Mya arenaria* in the White Sea. *Helgoland Marine Research* **57**, 91-99. (doi:10.1007/s10152-003-0137-3).
- [372] McGrath, D. & O'Foighil, D. 1986 Population dynamics and reproduction of hermaphroditic *Lasaea rubra* (Montagu) (Bivalvia, Galeommatacea). *Ophelia* **25**, 209-219.
- [373] McGraw, K.A., Castagna, M. & Conquest, L.L. 2001 A study of the arkshell clams, *Noetia ponderosa* (Say 1822) and *Anadara ovalis* (Bruguiere, 1789), in the oceanside lagoons and tidal creeks of Virginia. *Journal of Shellfish Research* **20**, 185-195.
- [374] McGreer, E.R. 1983 Growth and reproduction of *Macoma balthica* (L.) on a mud flat in the Fraser River estuary, British Columbia. *Canadian Journal of Zoology* **61**, 887-894.
- [375] McLachlan, A. 1979 Growth and production of *Donax sordidus* Hanley on an open sandy beach in Algoa Bay. *South African Journal of Zoology* **14**, 61-66.
- [376] McLachlan, A., Cooper, C. & van der Horst, G. 1979 Growth and production of *Bullia rhodostoma* on an open sandy beach in Algoa Bay. *Suid-Afrikaanse tydskrif vir Dierkunde* **14**, 49-53.
- [377] McLachlan, A. & Hanekom, N. 1979 Aspects of the biology, ecology and seasonal fluctuations in biochemical composition of *Donax serra* in the East Cape. *South African Journal of Zoology* **14**, 183-193.
- [378] McLusky, D.S. & Allan, D.G. 1976 Aspects of the biology of *Macoma balthica* (L.) from the estuarine firth of forth. *Journal of Molluscan Studies* **42**, 31-45.
- [379] McLusky, D.S., Nair, S.A., Stirling, A. & Bhargava, R. 1975 The ecology of a central West Indian beach, with particular reference to *Donax incamatus*. *Marine Biology* **30**, 267-276.
- [380] McMillin, H.C. 1924 The life-history and growth of the razor clam. In *State of Washington Department of Fisheries* (pp. 1-52).
- [381] McQuiad, C.D. & Lindsay, T.L. 2000 Effect of wave exposure on growth and mortality rates of the mussel *Perna perna*: bottom-up regulation of intertidal populations. *Marine Ecology Progress Series* **206**, 147-154.

- [382] Menesguen, A. & Dreves, L. 1987 Sea-temperature anomalies and population dynamics variations: effects on growth and density of three bivalves. *Marine Ecology Progress Series* **36**, 11-21.
- [383] Merrill, A.S. & Posgay, J.A. 1964 Estimating the natural mortality rate of the sea scallop (*Placopecten magellanicus*). *International Commission for the Northwest Atlantic Fisheries Research Bulletin* **1**, 88-106.
- [384] Merrill, A.S., Posgay, J.A. & Nichy, F.E. 1966 Annual marks on shell and ligament of sea scallop (*Placopecten magellanicus*). *Fishery Bulletin* **65**, 299-311.
- [385] Metaxatos, A. 2004 Population dynamics of the venerid bivalve *Callista chione* (L.) in a coastal area of the eastern Mediterranean. *Journal of Sea Research* **52**, 293-305. (doi:10.1016/j.seares.2004.03.001).
- [386] Michaelson, D.L. & Neves, R.J. 1995 Life history and habitat of the endangered dwarf wedgemussel *Alasmidonta heterodon* (Bivalvia:Unionidae). *Journal of the North American Benthological Society* **14**, 324-340.
- [387] Milione, M. & Southgate, P. 2012 Growth of the winged pearl oyster, *Pteria penguin*, at dissimilar sites in northeastern Australia. *Journal of Shellfish Research* **31**, 13-20. (doi:10.2983/035.031.0102).
- [388] Mills, S.C. & Cote, I.M. 2003 Sex-related differences in growth and morphology of blue mussels. *Journal of the Marine Biological Association of the United Kingdom* **83**, 1053-1057.
- [389] Milne, H. & Dunnet, G.M. 1972 Standing crop, productivity and trophic relations of the fauna of the Ythan Estuary. In *The Estuarine Environment* (eds. R.S.K. Barnes & J. Green), pp. 86-106. Amsterdam, Associated Scientific Publishers.
- [390] Mirzaei, M.R., Yasin, Z. & Shau Hwai, A.T. 2014 Length-weight relationship, growth and mortality of *Anadara granosa* in Penang Island, Malaysia: an approach using length-frequency data sets. *Journal of the Marine Biological Association of the United Kingdom* **95**, 381-390. (doi:10.1017/s0025315414001337).
- [391] Mistri, M., Rossi, R. & Ceccherelli, V.U. 1988 Growth and production of the ark shell *Scapharca inaequivalvis* (Bruguiere) in a lagoon of the Po River Delta. *Marine Ecology* **9**, 35-49.
- [392] Mohammed, S.Z. & Yassien, M.H. 2003 Population parameters of the pearl oyster *Pinctada radiata* (Leach) in Qatari waters, Arabian Gulf. *Turkish Journal of Zoology* **27**, 339-343.
- [393] Mohite, S.A. & Mohite, A.S. 2009 Age and growth of the shortneck clam, *Paphia malabarica* (Chemnitz) in estuarine regions of Ratnagiri, West coast of India. *Asian Journal of Animal Science* **3**, 235-240.
- [394] Moles, K.R. & Layzer, J.B. 2008 Reproductive ecology of *Actinonaias ligamentina* (Bivalvia:Unionidae) in a regulated river. *Journal of the North American Benthological Society* **27**, 212-222. (doi:10.1899/07-006.1).
- [395] Monti, D., Frenkeil, L. & Moueza, M. 1991 Demography and growth of *Anomalocardia brasiliiana* (Gmelin) (Bivalvia: Veneridae) in a mangrove, in Guadeloupe (French West Indies). *Journal of Molluscan Studies* **57**, 249-257.
- [396] Moore, H.B. & Lopez, N.N. 1969 The ecology of *Chione cancellata* *Bulletin of Marine Science* **19**, 131-148.
- [397] Moore, H.B. & Lopez, N.N. 1970 A contribution to the ecology of the Lamellibranch *Dosinia elegans*. *Bulletin of Marine Science* **20**, 980-986.

- [398] Moore, H.B. & Lopez, N.N. 1972 A contribution to the ecology of the Lamellibranch *Anodontia alba*. *Bulletin of Marine Science* **22**, 381-390.
- [399] Morsán, E. & Ciocco, N.F. 2004 Age and growth model for the southern geoduck, *Panopea abbreviata*, off Puerto Lobos (Patagonia, Argentina). *Fisheries Research* **69**, 343-348. (doi:10.1016/j.fishres.2004.06.012).
- [400] Morsan, E., Zaidman, P., Ocampo-Reinaldo, M. & Ciocco, N. 2010 Population structure, distribution and harvesting of southern geoduck, *Panopea abbreviata*, in San Matías Gulf (Patagonia, Argentina). *Scientia Marina* **74**, 763-772. (doi:10.3989/scimar.2010.74n4763).
- [401] Morsan, E.M. & Orensanz, J.M.L. 2004 Age structure and growth in an unusual population of purple clams, *Amiantis purpuratus* (Lamarck 1818) (Bivalvia : Veneridae), from Argentine Patagonia. *Journal of Shellfish Research* **23**, 73-80.
- [402] Morton, B. 1974 Some aspects of the biology, population dynamics, and functional morphology of *Musculista senhousia* Benson (Bivalvia, Mytilidae). *Pacific Science* **28**, 19-33.
- [403] Morton, B. 1978 The population dynamics of *Anomalocardia squamosa* Lamarck (Bivalvia:Veneracea) in Hong Kong. *Journal of Molluscan Studies* **44**, 135-144.
- [404] Morton, B. 1988 The population dynamics and reproductive cycle of *Brachidontes variabilis* (Bivalvia:Mytilidae) in a Hong Kong Mangrove. *Malacological Review* **21**, 109-117.
- [405] Morton, B. 1995 The population dynamics and reproductive cycle of *Septifer virgatus* (Bivalvia : Mytilidae) on an exposed rocky shore in Hong Kong. *Journal of the Zoological Society of London* **235**, 485-500.
- [406] Morton, B.S. 1969 Studies on the biology of *Dreissena polymorpha* Pall III. Population dynamics. *Journal of Molluscan Studies* **38**, 471-482.
- [407] Moura, P., Gaspar, M.B. & Monteiro, C.C. 2009 Age determination and growth rate of a *Callista chione* population from the southwestern coast of Portugal. *Aquatic Biology* **5**, 97-106. (doi:10.3354/ab00119).
- [408] Moura, P., Vasconcelos, P. & Gaspar, M.B. 2013 Age and growth in three populations of *Dosinia exoleta* (Bivalvia: Veneridae) from the Portuguese coast. *Helgoland Marine Research* **67**, 639-652. (doi:10.1007/s10152-013-0350-7).
- [409] Mukai, H. 1974 Ecological studies on distribution and production of some benthic animals in the coastal waters of Central Inland Sea of Japan. *Journal of Science of Hiroshima University* **1**, 1-82.
- [410] Munch-Petersen, S. 1973 An investigation of a population of the soft clam (*Mya arenaria* L.) in a Danish estuary. *Medd Dan Fisk Havunders* **7**, 47-73.
- [411] Murawski, S.A., Ropes, J.W. & Serchuk, F.M. 1982 Growth of the ocean quahog, *Arctica islandica*, in the Middle Atlantic Bight. *Fishery Bulletin* **80**, 21-34.
- [412] Nakaoka, M. & Matsui, S. 1994 Annual variation in the growth rate of *Yoldia notabilis* (Bivalvia: Nuculanidae) in Otsuchi Bay, northeastern Japan, analyzed using shell microgrowth patterns. *Marine Biology* **119**, 397-404.
- [413] Nalepa, T.F. & Gauvin, J.M. 1988 Distribution, abundance, and biomass of freshwater mussels (Bivalvia: Unionidae) in Lake St. Clair. *Journal of Great Lakes Research* **14**, 411-419.
- [414] Narasimham, K.A. 1998 Biology of the blood clam *Anadara granosa* (Linnaeus) in Kakinada Bay. *Journal of the Marine Biological Association of India* **30**, 137-150.
- [415] Narayanan, K.R. & Michael, M.S. 1968 On the relation between age and linear measurements of the pearl oyster, *Pinctada vulgaris* (Schumacher), of the Gulf of Kutch. *The Journal of the Bombay Natural History Society* **65**, 444-452.

- [416] Nayar, K.N. 1955 Studies on the growth of the wedge clam, *Donax* (Latona) *cuneatus* Linnaeus. *Indian Journal of Fisheries* **2**, 325-348.
- [417] Negus, C.L. 1966 A quantitative study of growth and production of unionid mussels in the River Thames at Reading. *The Journal of Animal Ecology* **35**, 513-532.
- [418] Neves, R.J. & Moyer, S.N. 1988 Evaluation of techniques for age determination of freshwater mussels (Unionidae). *American Malacological Bulletin* **6**, 179-188.
- [419] Newcombe, C.L. 1935 Growth of *Mya arenaria* L. in the Bay of Fundy region. *Canadian Journal of Research* **13**, 97-137.
- [420] Nickerson, R.B. 1975 A critical analysis of some razor clam (*Siliqua patula*, Dixon) populations in Alaska. *State of Alaska Department of Fish and Game*.
- [421] Nolan, C.P. 1988 Calcification and growth rates in Antarctic molluscs. In *British Antarctic Survey Report* (
- [422] Nolan, C.P. & Clarke, A. 1993 Growth in the bivalve *Yoldia eightsi* at Signy Island, Antarctica, determined from internal shell increments and calcium-45 incorporation. *Marine Biology* **117**, 243-250.
- [423] Norte-Campos, A. & Villarta, K. 2010 Use of population parameters in examining changes in the status of the short-necked clam *Paphia undulata* Born, 1778 (Mollusca, Pelecypoda: Veneridae) in coastal waters of southern Negros Occidental. *Science Diliman* **22**, 53-60.
- [424] O'Brien, K. & Keegan, B.F. 2006 Age-related reproductive biology of the bivalve *Mysella bidentata* (Montagu) (Bivalvia:Galeommatacea) in Kinsale Harbour (south coast of Ireland). *The Irish Naturalists' Journal* **28**, 284-299.
- [425] Ocaña, F.A. 2015 Growth and production of *Donax striatus* (Bivalvia: Donacidae) from Las Balsas beach, Gibara, Cuba. *Revista de Biología Tropical* **Revista de Biología Tropical**, 639-646.
- [426] O'Foighil, D., McGrath, D., Conneely, M.E., Keegan, B.F. & Costelloe, M. 1984 Population dynamics and reproduction of *Mysella bidentata* (Bivalvia: Galeommatacea) in Galway Bay, Irish west coast. *Marine Biology* **81**, 283-291.
- [427] Ohba, S. 1959 Ecological studies in the natural population of a clam, *Tapes japonica*, with special reference to seasonal variations in the size and structure of the population and to individual growth. *Biological Journal of Okayama University* **5**, 13-42.
- [428] Okera, W. 1976 Observations on some population parameters of exploited stocks of *Senilia senilis* (= *Arca senilis*) in Sierra Leone. *Marine Biology* **38**, 217-229.
- [429] Orton, J.H. 1928 On rhythmic periods in shell-growth in *O. edulis* with a note on fattening. *Journal of the Marine Biological Association of the United Kingdom* **15**, 365-427.
- [430] Ostrovsky, I., Gophen, M. & Kalikhman, I. 1993 Distribution, growth, production, and ecological significance of the clam *Unio terminalis* in Lake Kinneret, Israel. *Hydrobiologia* **271**, 49-63.
- [431] Palacios, C., Cruz, R. & Urpi, P. 1983 Estructura poblacional y cuantificación de *Donax dentifer* Hanley, 1843 (Pelecypoda:Donacidae) en Playa Garza, Puntarenas, Costa Rica. *Revista de Biología Tropical* **31**, 251-255.
- [432] Palacios, R., Orensanz, J.M. & Armstrong, D.A. 1994 Seasonal and life-long variation of Sr/Ca ratio in shells of *Mya arenaria* from Grays Harbor (Washington) - an ancillary criterion in demographic studies. *Estuarine, Coastal and Shelf Science* **39**, 313-327.
- [433] Palmer, D.W. 2004 Growth of the razor clam *Ensis directus*, an alien species in the Wash on the east coast of England. *Journal of the Marine Biological Association of the United Kingdom* **84**, 1075-1076.

- [434] Parulekar, A.H. 1984 Studies on growth and age of bivalves from temperate and tropical estuarine ecosystems. *Indian Journal of Marine Sciences* **13**, 193-195.
- [435] Patel, B. & Eapan, J.T. 1989 Physiological evaluation of naphthalene intoxication in the tropical acrid clam *Anadara granosa*. *Marine Biology* **103**, 193-202.
- [436] Paterson, C.G. 1985 Biomass and production of the unionid, *Elliptio complanata* (Lightfoot) in an old reservoir in New Brunswick, Canada. *Freshwater Invertebrate Biology* **4**, 201-207.
- [437] Paul, A.J. & Feder, H.M. 1973 Growth, recruitment, and distribution of the littleneck clam, *Protothaca staminea*, in Galena Bay, Prince William Sound, Alaska. *Fishery Bulletin* **71**, 665-677.
- [438] Paul, A.J. & Feder, H.M. 1976 Clam, mussel, and oyster resources of Alaska. *Institute of Marine Science*, **76**.
- [439] Paul, A.J., Paul, J.M. & Feder, H.M. 1976 Age, growth and recruitment of the butter clam, *Saxidomus gigantea*, on Porpoise Island, Southeast Alaska. *Proceedings of the National Shellfisheries Association* **66**, 26-28.
- [440] Paul, A.J., Paul, J.M. & Feder, H.M. 1976 Growth of the littleneck clam, *Protothaca staminea*, on Porpoise Island, southeast Alaska. *The Veliger* **19**, 163-166.
- [441] Pearson, R.G. & Munro, J.L. 1991 Growth, mortality and recruitment rates of giant clams, *Tridacna gigas* and *T. derasa*, at Michaelmas Reef, central Great Barrier Reef, Australia. *Australian Journal of Marine and Freshwater Research* **42**, 241-262.
- [442] Peck, L.S. & Bullough, L.W. 1993 Growth and population structure in the infaunal bivalve *Yoldia eightsi* in relation to iceberg activity at Signy Island, Antarctica. *Marine Biology* **117**, 235-241.
- [443] Peharda, M., Bolotin, J., Vrgoč, N. & Jasprica, N. 2003 A study of the Noah's ark shell (*Arca noae* Linnaeus 1758) in Mali Ston Bay, Adriatic Sea. *Journal of Shellfish Research* **22**, 705-709.
- [444] Peharda, M., Crnčević, M., Bušelić, I., Richardson, C.A. & Ezgeta-Balić, D. 2012 Growth and Longevity of *Glycymeris nummaria* (Linnaeus, 1758) from the Eastern Adriatic, Croatia. *Journal of Shellfish Research* **31**, 947-950. (doi:10.2983/035.031.0406).
- [445] Peharda, M., Richardson, C.A., Mladineo, I., Šestanović, S., Popović, Z., Bolotin, J. & Vrgoč, N. 2007 Age, growth and population structure of *Modiolus barbatus* from the Adriatic. *Marine Biology* **151**, 629-638. (doi:10.1007/s00227-006-0501-3).
- [446] Peharda, M., Richardson, C.A., Onofri, V., Bratos, A. & Crncevic, M. 2002 Age and growth of the bivalve *Arca noae* L. in the Croatian Adriatic Sea. *Journal of Molluscan Studies* **68**, 307-310.
- [447] Peharda, M., Soldo, A., Pallaoro, A., Matic, S. & Cetinic, P. 2003 Age and growth of the Mediterranean scallop *Pecten jacobaeus* (Linnaeus 1758) in the northern Adriatic Sea. *Journal of Shellfish Research* **22**, 639-642.
- [448] Penchaszadeh, P. & Oliver, S. 1975 Ecología de una población de "Berberecho" (*Donax hanleyanus*) en Villa Gesell, Argentina. *Malacologia* **15**, 133-146.
- [449] Penzias, L.P. 1969 *Tellina martinicensis* (Mollusca: Bivalvia): Biology and productivity. *Bulletin of Marine Science* **19**, 568-579.
- [450] Pérez-Valencia, S.A. & Aragón-Noriega, E.A. 2013 Age and growth of the Cortes Geoduck *Panopea globosa* (Dall, 1898) in the upper Gulf of California. *Indian Journal of Geo-Marine Sciences* **42**, 201-205.

- [451] Persson, L. 1976 Abundance and growth of a *Cardium glaucum* Bruguiere population in Hano Bight (Southern Baltic). *Ophelia* **15**, 163-174.
- [452] Petersen, G.H. 1978 Life cycles and population dynamics of marine benthic bivalves from the Disko Bugt area of West Greenland. *Ophelia* **17**, 95-120.
- [453] Peterson, C.H. 1986 Quantitative allometry of gamete production by *Mercenaria mercenaria* into old age. *Marine Ecology Progress Series* **29**, 93-97.
- [454] Peterson, C.H., Duncan, P.B., Summerson, H.C. & Safrit, G.W. 1983 A mark recapture test of annual periodicity of internal growth band deposition in shells of hard clams, *Mercenaria mercenaria*, from a population along the southeastern United States. *Fishery Bulletin* **81**, 765-779.
- [455] Philipp, E., Brey, T., Heilmayer, O., Abele, D. & Portner, H.O. 2006 Physiological ageing in a temperate and a polar swimming scallop. *Marine Ecology Progress Series* **307**, 187-198.
- [456] Philipp, E., Brey, T., Portner, H.O. & Abele, D. 2005 Chronological and physiological ageing in a polar and a temperate mud clam. *Mechanisms of Ageing and Development* **126**, 598-609.
- [457] Pinn, E.H., Richardson, C.A., Thompson, R.C. & Hawkins, S.J. 2005 Burrow morphology, biometry, age and growth of piddocks (Mollusca: Bivalvia: Pholadidae) on the south coast of England. *Marine Biology* **147**, 943-953. (doi:10.1007/s00227-005-1582-0).
- [458] Ponurovskii, S.K. 2008 Population structure and growth of the Japanese littleneck clam *Ruditapes philippinarum* in Amursky Bay, Sea of Japan. *Russian Journal of Marine Biology* **34**, 329-332. (doi:10.1134/s1063074008050106).
- [459] Pozdnyakova, L.A., Silina, A.V. & Evseev, G.A. 1997 Age, size distribution and growth of native and cultured Japanese scallops in Possjet Bay, Sea of Japan, Russia. *Aquaculture International* **5**, 79-88.
- [460] Quayle, D.B. 1952 The Rate of Growth of *Venerupis pullastra* (Montagu) at Millport, Scotland. *Proceedings of the Royal Society of Edinburgh. Section B. Biology* **64**, 384-406. (doi:10.1017/s0080455x00009942).
- [461] Quayle, D.B. & Bourne, N. 1972 The clam fisheries of British Columbia. *Fisheries Research Board of Canada*, **179**.
- [462] Rabaoui, L., Tlig Zouari, S., Katsanevakis, S. & Ben Hassine, O.K. 2007 Comparison of absolute and relative growth patterns among five *Pinna nobilis* populations along the Tunisian coastline: an information theory approach. *Marine Biology* **152**, 537-548. (doi:10.1007/s00227-007-0707-z).
- [463] Rabaoui, L., Tlig-Zouari, S., Katsanevakis, S., Belgacem, W. & Hassine, O.K.B. 2011 Differences in absolute and relative growth between two shell forms of *Pinna nobilis* (Mollusca: Bivalvia) along the Tunisian coastline. *Journal of Sea Research* **66**, 95-103. (doi:10.1016/j.seares.2011.05.002).
- [464] Rainer, S.F. 1985 Population dynamics and production of the bivalve *Abra alba* and implications for fisheries production. *Marine Biology* **85**, 253-262.
- [465] Rainer, S.F. & Wadley, V.A. 1991 Abundance, growth and production of the bivalve *Solemya* sp., a food source for juvenile rock lobsters in a seagrass community in Western Australia. *Journal of Experimental Marine Biology and Ecology* **152**, 201-223.
- [466] Ralph, R. & Maxwell, J.G.H. 1977 Growth of two antarctic Lammelibranchs: *Adamussium colbecki* and *Laternula elliptica*. *Marine Biology* **42**, 171-175.

- [467] Ramon, M., Abello, P. & Richardson, C.A. 1995 Population structure and growth of *Donax trunculus* (Bivalvia: Donacidae) in the western Mediterranean. *Marine Biology* **121**, 665-671.
- [468] Ramon, M. & Richardson, C.A. 1992 Age determination and shell growth of *Chamelea gallina* (Bivalvia: Veneridae) in the western Mediterranean. *Marine Ecology Progress Series* **89**, 15-23.
- [469] Ramsay, K., Kaiser, M.J., richardson, C.A., Veale, L.O. & Brand, A.R. 2000 Can shell scars on dog cockles (*Glycymeris glycyermis* L.) be used as an indicator of fishing disturbance? *Journal of Sea Research* **43**, 167-176.
- [470] Rapson, A.M. 1952 The Toheroa, *Amphidesma ventricosum* Gray (Eulamellibranchiata) development and growth. *Australian Journal of Marine and Freshwater Research* **3**, 170-198.
- [471] Redfern, P. 1974 Biology and distribution of the toheroa *Paphies* (*Mesodesma*) *ventricosa* (Gray). *Fisheries Research Bulletin Western Australia* **11**, 1-51.
- [472] Reed, A.J., Linse, K. & Thatje, S. 2014 Differential adaptations between cold-stenothermal environments in the bivalve *Lissarca* cf. *miliaris* (Philobryidae) from the Scotia Sea islands and Antarctic Peninsula. *Journal of Sea Research* **88**, 11-20. (doi:10.1016/j.seares.2013.12.008).
- [473] Reynolds, D.J., Butler, P.G., Williams, S.M., Scourse, J.D., Richardson, C.A., Wanamaker, A.D., Austin, W.E.N., Cage, A.G. & Sayer, M.D.J. 2013 A multiproxy reconstruction of Hebridean (NW Scotland) spring sea surface temperatures between AD 1805 and 2010. *Palaeogeography, Palaeoclimatology, Palaeoecology* **386**, 275-285. (doi:10.1016/j.palaeo.2013.05.029).
- [474] Riasco, J. & Uranb, H. 2002 Dinamica poblacional de *Donax dentifer* (Veneroidae:Donacidae) en Bahía Malaga, Pacifico colombiano durante el fenomeno "El Niño" 1997/1998. *Revista de Biología Tropical* **50**, 1113-1123.
- [475] Riascos, J.M., Heilmayer, O. & Laudien, J. 2008 Population dynamics of the tropical bivalve *Cardita affinis* from Málaga Bay, Colombian Pacific related to La Niña 1999–2000. *Helgoland Marine Research* **62**, 63-71. (doi:10.1007/s10152-007-0083-6).
- [476] Riascos, J.M., Heilmayer, O., Oliva, M.E. & Laudien, J. 2011 Environmental stress and parasitism as drivers of population dynamics of *Mesodesma donacium* at its northern biogeographic range. *ICES Journal of Marine Science* **68**, 823-833. (doi:10.1093/icesjms/fsr026).
- [477] Riascos V, J.M. 2006 Effects of El Niño-Southern oscillation on the population dynamics of the tropical bivalve *Donax dentifer* from Málaga bay, Colombian Pacific. *Marine Biology* **148**, 1283-1293. (doi:10.1007/s00227-005-0165-4).
- [478] Richard, G. 1981 A first evaluation of the findings of the growth and produciton of lagoon and reef molluscs in French Polynesia. In *Fourther International Coral Reef Symposium* (pp. 637-641. Manila.
- [479] Richardson, C.A. 1987 Microgrowth patterns in the shell of the Malaysian cockle *Anadara granosa* (L.) and their use in age determination. *Journal of Experimental Marine Biology and Ecology* **111**, 77-98.
- [480] Richardson, C.A., Collis, S.A., Ekaratne, K., Dare, P. & Key, D. 1993 The age determination and growth rate of the European flat oyster, *Ostrea edulis*, in British waters determined from acetate peels of umbo growth lines. *ICES Journal of Marine Science* **50**.
- [481] Richardson, C.A., Kennedy, H., Duarte, C.M., Kennedy, D.P. & Proud, S.V. 1999 Age and growth of the fan mussel, *Pinna nobilis* from south-east Spanish Mediterranean seagrass (*Posidonia oceanica*) meadows. *Marine Biology* **133**, 205-212.

- [482] Richardson, C.A., Peharda, M., Kennedy, H., Kennedy, P. & Onofri, V. 2004 Age, growth rate and season of recruitment of *Pinna nobilis* (L) in the Croatian Adriatic determined from Mg:Ca and Sr:Ca shell profiles. *Journal of Experimental Marine Biology and Ecology* **299**, 1-16. (doi:10.1016/j.jembe.2003.08.012).
- [483] Richardson, C.A., Seed, R., Al-Roumaihi, E.M.H. & McDonald, L. 1993 Distribution, shell growth and predation of the New Zealand oyster, *Tiostrea* (= *Ostrea*) *lutaria* Hutton, in the Menai Strait, North Wales. *Journal of Shellfish Research* **12**, 207-214.
- [484] Richardson, C.A., Seed, R. & Naylor, E. 1990 Use of internal growth bands for measuring individual and population growth rates in *Mytilus edulis* from offshore production platforms. *Marine Ecology Progress Series* **66**, 259-265.
- [485] Richardson, C.A. & Walker, P. 1991 The age structure of a population of the hard-shell clam, *Mercenaria mercenaria* from Southampton Water, England, derived from acetate peel replicas of shell sections. *ICES Journal of Marine Science* **48**, 229-236.
- [486] Richardson, M.G. 1979 The ecology and reproduction of the brooding Antarctic bivalve *Lissarca miliaris*. *British Antarctic Survey Bulletin* **49**, 91-115.
- [487] Ridgway, I., Bowden, T.J., Roman-Gonzalez, A. & Richardson, C.A. 2014 Resistance to oxidative stress is not associated with the exceptional longevity of the freshwater pearl mussel, *Margaritifera margaritifera* nor three unionid species. *Aquatic Sciences* **76**, 259-267. (doi:10.1007/s00027-013-0334-3).
- [488] Ridgway, I.D., Richardson, C.A., Enos, E., Ungvari, Z., Austad, S.N., Philipp, E.E.R. & Csiszar, A. 2011 New species longevity record for the Northern Quahog (=Hard Clam), *Mercenaria mercenaria*. *Journal of Shellfish Research* **30**, 35-38. (doi:10.2983/035.030.0106).
- [489] Ridgway, I.D., Richardson, C.A., Scourse, J.D., Butler, P.G. & Reynolds, D.J. 2012 The population structure and biology of the ocean quahog, *Arctica islandica*, in Belfast Lough, Northern Ireland. *Journal of the Marine Biological Association of the United Kingdom* **92**, 539-546. (doi:10.1017/s0025315411000154).
- [490] Robinson, R.F. & Richardson, C.A. 1998 The direct and indirect effects of suction dredging on a razor clam (*Ensis arcuatus*) population. *ICES Journal of Marine Science* **55**, 970-977.
- [491] Robinson, T.B., Govender, A., Griffiths, C.L. & Branch, G.M. 2007 Experimental harvesting of *Mytilus galloprovincialis*: Can an alien mussel support a small-scale fishery? *Fisheries Research* **88**, 33-41. (doi:10.1016/j.fishres.2007.07.005).
- [492] Rogers, S.O., Watson, B.T. & Neves, R.J. 2001 Life history and population biology of the endangered tan riffleshell (*Epioblasma florentina walkeri*) (Bivalvia: Unionidae). *Journal of the North American Benthological Society* **20**, 582-594.
- [493] Roper, D.S., Pridmore, R.D. & Thrush, S.F. 1992 Recruitment to the macrobenthos of *Macomona liliana* (bivalvia: Tellinidae) in Manukau Harbour, New Zealand. *New Zealand Journal of Marine and Freshwater Research* **26**, 385-392. (doi:10.1080/00288330.1992.9516532).
- [494] Ropes, J. 1987 Age and growth, reproductive cycle, and histochemical tests for heavy metals in hard clams, *Mercenaria mercenaria*, from Raritan Bay 1974-1975. *Fishery Bulletin* **85**, 653-662.
- [495] Ropes, J.W. 1984 Procedures for preparing acetate peels and evidence validating the annual periodicity of growth lines formed in the shells of ocean quahogs, *Arctica islandica*. *Marine Fisheries Review* **46**, 27-35.

- [496] Rowell, T.W., Chaisson, D.R. & McLane, J.T. 1990 Size and age of sexual maturity and annual gametogenic cycle in the ocean quahog, *Arctica islandica* (Linnaeus, 1767), from coastal waters in Nova Scotia, Canada. *Journal of Shellfish Research* **9**, 195-203.
- [497] Royer, C., Thebault, J., Chauvaud, L. & Olivier, F. 2013 Structural analysis and paleoenvironmental potential of dog cockel shells (*Glycymeris glycymeris*) in Brittany, northwest France. *Palaeogeography, Palaeoclimatology, Palaeoecology* **373**, 123-132.
- [498] Şahin, C., Duzgunes, E., Mutlu, C., Aydin, M. & Emiral, H. 1999 Determination of the growth parameters of the *Anadara cornea* R. 1844 population by the Bhattacharya method in the eastern Black Sea. *Turkish Journal of Zoology* **23**, 99-105.
- [499] Sakurai, I., Horii, T., Murakami, O. & Nakao, S. 1998 Population dynamics and stock size prediction for the sunray surfclam, *Macra chinensis*, at Tomakomai, southwest Hokkaido, Japan. *Fishery Bulletin* **96**, 344-351.
- [500] Sakurai, I., Kurata, M. & Abe, E. 1996 Age structure and mortality of the sunray surf clam *Macra chinensis* off Tomakomai, southwest Hokkaido. *Fisheries Science* **62**, 168-172.
- [501] Saloman, C.H. & Taylor, J.L. 1959 Age and growth of large southern quahogs from a Florida estuary. *Proceedings of the National Shellfisheries Association* **59**, 46-51.
- [502] Salzwedel, H. 1979 Reproduction, growth, mortality and variations in abundance and biomass of *Tellina fabula* (Bivalvia) in the German Bight in 1975/1976. *Veroffentlichungen des Instituts fur Meeresforschung in Bremerhaven* **18**, 111-202.
- [503] Sanchez-Salazar, M.E., Griffiths, C.L. & Seed, R. 1987 The interactive roles of predation and tidal elevation in structuring populations of the edible cockle, *Cerastoderma edule*. *Estuarine, Coastal and Shelf Science* **25**, 245-260.
- [504] San-Miguel, E., Monserrat, S., Fernández, C., Amaro, R., Hermida, M., Ondina, P. & Altaba, C.R. 2004 Growth models and longevity of freshwater pearl mussels (*Margaritifera margaritifera*) in Spain. *Canadian Journal of Zoology* **82**, 1370-1379. (doi:10.1139/z04-113).
- [505] Sasaki, K. 1981 Growth of the Sakhalin surf clam, *Spisula sachalinensis* (Schrenck), in Sendai Bay. *The Tohoku Journal of Agricultural Research* **32**, 168-180.
- [506] Sato, S. 1994 Analysis of the relationship between growth and sexual maturation in *Phacosoma japonicum* (Bivalvia: Veneridae). *Marine Biology* **118**, 663-672.
- [507] Sato, S. 1999 Temporal change of life-history traits in fossil bivalves: an example of *Phacosoma japonicum* from the Pleistocene of Japan. *Palaeogeography, Palaeoclimatology, Palaeoecology* **154**, 313-323.
- [508] Schäffer, F. & Zettler, M.L. 2007 The clam siphon as indicator for growth indices in the soft-shell clam *Mya arenaria*. *Helgoland Marine Research* **61**, 9-16. (doi:10.1007/s10152-006-0049-0).
- [509] Schimdt, R.R. & Warne, J.E. 1969 Population characteristics of *Protothaca staminea* (Conrad) from Magu Lagoon, California. *The Veliger* **12**, 193-199.
- [510] Schmidt, A., Wehrmann, A. & Dittmann, S. 2008 Population dynamics of the invasive Pacific oyster *Crassostrea gigas* during the early stages of an outbreak in the Wadden Sea (Germany). *Helgoland Marine Research* **62**, 367-376. (doi:10.1007/s10152-008-0125-8).
- [511] Schöne, B.R., Freyre Castro, A.D., Fiebig, J., Houk, S.D., Oschmann, W. & Kröncke, I. 2004 Sea surface water temperatures over the period 1884–1983 reconstructed from oxygen isotope ratios of a bivalve mollusk shell (*Arctica islandica*, southern North Sea). *Palaeogeography, Palaeoclimatology, Palaeoecology* **212**, 215-232. (doi:10.1016/j.palaeo.2004.05.024).

- [512] Schöne, B.R., Goodwin, D.H., Flessa, K.W., Dettman, D.L. & Roopnarine, P.D. 2002 Sclerochronology and growth of the bivalve mollusks *Chione (Chionista) fluctifraga* and *C. (Chionista) cortezi* in the northern Gulf of California, Mexico. *The Veliger* **45**, 45-54.
- [513] Schöne, B.R., Tanabe, K., Dettman, D.L. & Sato, S. 2003 Environmental controls on shell growth rates $\delta^{18}\text{O}$ of the shallow-marine bivalve mollusk *Phacosoma japonicum* in Japan. *Marine Biology* **142**, 473-485. (doi:10.1007/s00227-002-0970-y).
- [514] Schöne, B.R., Zhang, Z., Radermacher, P., Thébault, J., Jacob, D.E., Nunn, E.V. & Maurer, A.-F. 2011 Sr/Ca and Mg/Ca ratios of ontogenetically old, long-lived bivalve shells (*Arctica islandica*) and their function as paleotemperature proxies. *Palaeogeography, Palaeoclimatology, Palaeoecology* **302**, 52-64. (doi:10.1016/j.palaeo.2010.03.016).
- [515] Schweers, T., Wolff, M., Koch, V. & Duarte, F.S. 2006 Population dynamics of *Megapitaria squalida* (Bivalvia: Veneridae) at Magdalena Bay, Baja California Sur, Mexico. *Revista de Biología Tropical* **54**, 1003-1017.
- [516] Scourse, J., Richardson, C., Forsythe, G., Harris, I., Heinemeier, J., Fraser, N., Briffa, K. & Jones, P. 2006 First cross-matched floating chronology from the marine fossil record: data from growth lines of the long-lived bivalve mollusc *Arctica islandica*. *The Holocene* **16**, 967-974. (doi:10.1177/0959683606h1987rp).
- [517] Searcy-Bernal, R. & Juarez-Romero, R. 1991 Estructura por edades y tallas en muestras de captura comercial de la almeja pismo *Tivela stultorum* (Mawe, 1823), extraídas de playa San Ramon, B.C., Mexico. *Ciencias Marinas* **17**, 71-82.
- [518] Seed, R. 1968 Factors influencing shell shape in the mussel *Mytilus edulis*. *Journal of the Marine Biological Association of the United Kingdom* **48**, 561-584.
- [519] Seed, R. 1973 Absolute and allometric growth in the mussel, *Mytilus edulis* L. (Mollusca Bivalvia). *Proceedings of the Malacological Society of London* **40**, 343-357.
- [520] Seed, R. & Brown, R.A. 1978 Growth as a strategy for survival in two marine bivalves, *Cerastoderma edule* and *Modiolus modiolus*. *Journal of Animal Ecology* **47**, 283-292.
- [521] Segerstrale, S.G. 1960 Investigations on Baltic populations of the bivalve *Macoma balthica* (L.). *Commentationes Biologica* **23**, 3-72.
- [522] Sejr, M.K., Blicher, M.E. & Rysgaard, S. 2009 Sea ice cover affects inter-annual and geographic variation in growth of the Arctic cockle *Clinocardium ciliatum* (Bivalvia) in Greenland. *Marine Ecology Progress Series* **389**, 149-158. (doi:10.3354/meps08200).
- [523] Sejr, M.K. & Christensen, P.B. 2007 Growth, production and carbon demand of macrofauna in Young Sound, with special emphasis on the bivalves *Hiatella arctica* and *Mya truncata*. In *Carbon cycling in Arctic marine ecosystems: Case study Young Sound, Meddr. Gronland, Bioscience* (eds. S. Rysgaard & R.N. Glud), pp. 122-135.
- [524] Sejr, M.K., Sand, M.K., Jensen, K.T., Peterson, J.K., Christensen, P.B. & Rysgaard, S. 2002 Growth and production of *Hiatella arctica* (Bivalvia) in a high-Arctic fjord (Young Sound, Northeast Greenland). *Marine Ecology Progress Series* **244**, 163-169.
- [525] Selin, N.I. 1980 Size-age structure of settlements of *Crenomytilus grayanus* on different grounds in Pos'et Bay, Sea of Japan. *Soviet Journal of Marine Biology*, 44-49.
- [526] Selin, N.I. 1988 Size-age structure and growth of the mussel *Mytilus coruscus* in Peter the Great Bay, Sea of Japan. *Soviet Journal of Marine Biology* **14**, 284-288.
- [527] Selin, N.I. 1993 Production and growth of the bivalve mollusk *Keenocardium californiense* in the Northwestern part of the Sea of Japan. *Russian Journal of Marine Biology* **19**, 26-33.

- [528] Selin, N.I. 2007 Shell form, growth and life span of *Astarte arctica* and *A. borealis* (Mollusca: Bivalvia) from the subtidal zone of northeastern Sakhalin. *Russian Journal of Marine Biology* **33**, 232-237. (doi:10.1134/s1063074007040050).
- [529] Selin, N.I. 2008 Distribution, population structure and growth of *Protothaca euglypta* (Sowerby, 1914) (Bivalvia: Veneridae) from the northwestern part of the East Sea of Russia. *Korean Journal of Malacology* **24**, 81-87.
- [530] Selin, N.I. 2010 The growth and life span of bivalve mollusks at the northeastern coast of Sakhalin Island. *Russian Journal of Marine Biology* **36**, 258-269. (doi:10.1134/s1063074010040048).
- [531] Selin, N.I. & Lysenko, V.N. 2006 Size and age composition of populations and growth of *Mytilus trossulus* (Bivalvia: Mytilidae) in the subtidal area of western Kamchatka. *Russian Journal of Marine Biology* **32**, 360-368. (doi:10.1134/s1063074006060058).
- [532] Selin, N.I. & Selina, M.S. 1988 Production characteristics of the bivalve mollusk *Callista brevisiphonata* in Peter the Great Bay, Sea of Japan. *Soviet Journal of Marine Biology* **14**, 219-223.
- [533] Sellmer, G.P. 1967 Functional morphology and ecological life history of the gem clam, *Gemma gemma* (Eulamellibranchia: Veneridae). *Malacologia* **5**, 137-223.
- [534] Semenova. 1970 Linear growth in *Macoma balthica* in the Gulf of Kandalsksha in the White Sea. *Trudy Belomorskoj Biologicheskoi Stantsii Moskovskogo Gosudarstvennogo Universiteta*.
- [535] Sephton, T.W. & Bryan, C.F. 1990 Age and growth rate determinations for the Atlantic surf clam, *Spisula solidissima* (Dillwyn, 1817), in Prince Edward Island, Canada. *Journal of Shellfish Research* **9**, 177-185.
- [536] Sewell, R.B. 1924 Observations on growth in certain molluscs and on changes correlated with growth in the radula of *Pyrazus palustris*. *Records of the Indian Museum* **26**, 529-548.
- [537] Shafee, M.S. 1979 Ecological energy requirements of the green mussel, *Perna viridis* Linnaeus from Ennore estuary, Madras. *Oceanologica Acta* **2**, 69-74.
- [538] Shafee, M.S. 1992 Production estimate of a mussel population *Perna picta* (Born) on the Atlantic coast of Morocco. *Journal of Experimental Marine Biology and Ecology* **163**, 183-197.
- [539] Shaul, W. & Goodwin, L. 1982 Geoduck (*Panope generosa*: Bivalvia) age as determined by internal growth lines in the shell. *Canadian Journal of Fisheries and Aquatic Sciences* **39**, 632-636.
- [540] Sheldon, R.W. 1968 The effect of high population density on the growth and mortality of oysters (*Ostrea edulis*). *Journal du Conseil Permanent International pour l'Exploration de la Mer* **31**, 352-363.
- [541] Shelley, C. 1988 Growth rates of *Hippopus hippopus* from Orpheus Island, Great Barrier Reef. In *Giant clams in Asia and the Pacific* (eds. J.W. Copland & J.S. Lucas), pp. 207-212, Australian Centre for International Agricultural Research.
- [542] Siletic, T. & Peharda, M. 2003 Population study of the fan shell *Pinna nobilis* L. in Malo and Veliko Jezero of the Mljet National Park (Adriatic Sea). *Scientia Marina* **67**, 91-98.
- [543] Silina, A.V. 2006 Tumor-like formations on the shells of Japanese scallops *Patinopecten yessoensis* (Jay). *Marine Biology* **148**, 833-840. (doi:10.1007/s00227-005-0120-4).
- [544] Silina, A.V. 2007 Growth responses of the scallop *Patinopecten yessoensis* (Pelecypoda: Pectinidae) to shell bioerosion and bottom sediment type. *Korean Journal of Malacology* **23**, 9-16.

- [545] Silina, A.V. 2012 Growth of bivalve *Atrina vexillum* in the Gulf of Thailand. *Journal of Shellfish Research* **31**, 989-995. (doi:10.2983/035.031.0411).
- [546] Silina, A.V. 2014 Habitat preferences and growth of *Ruditapes bruguieri* (Bivalvia: Veneridae) at the northern boundary of its range. *The Scientific World Journal* **2014**, 235416. (doi:10.1155/2014/235416).
- [547] Silina, A.V. & Zhukova, N.V. 2007 Growth variability and feeding of scallop *Patinopecten yessoensis* on different bottom sediments: Evidence from fatty acid analysis. *Journal of Experimental Marine Biology and Ecology* **348**, 46-59. (doi:10.1016/j.jembe.2007.03.018).
- [548] Sims, N.A. 1992 Population dynamics and stock management of the black-lip pearl oyster, *Pinetada margaritifera* (L.), in the Cook Islands, South Pacific. *Australian Journal of Marine and Freshwater Research* **43**, 1423-1435.
- [549] Sims, N.A. 1993 Size, age and growth of the black-lip pearl oyster, *Pinctada margaritifera* (L.) (Bivalvia: Pteriidae). *Journal of Shellfish Research* **12**, 223-228.
- [550] Slattery, J.P., Lutz, R.A. & Vrijenhoek, R.C. 1993 Repeatability of correlations between heterozygosity, growth and survival in a natural population of the hard clam *Mercenaria mercenaria* L. *Journal of Experimental Marine Biology and Ecology* **165**, 209-224.
- [551] Slattery, J.P., Vrijenhoek, R.C. & Lutz, R.A. 1991 Heterozygosity, growth, and survival of the hard clam, *Mercenaria mercenaria*, in seagrass vs sandflat habitats. *Marine Biology* **111**, 335-342.
- [552] Sloan, N.A. & Robinson, S.M.C. 1984 Age and gonad development in the geoduck clam *Panope abrupta* (Conrad) from southern British Columbia, Canada. *Journal of Shellfish Research* **4**, 131-137.
- [553] Smith, E.B., Scott, K.M., Nix, E.R., Korte, C. & Fisher, C.R. 2000 Growth and condition of seep mussels (*Bathymodiulus childressi*) at a Gulf of Mexico brine pool. *Ecology* **81**, 2392-2403.
- [554] Sola, J.C. 1997 Reproduction, population dynamics, growth and production of *Scrobicularia plana* Da Costa (pelecypoda) in the Bidasoa estuary, Spain. *Netherlands Journal of Aquatic Ecology* **30**, 283-296.
- [555] Soldati, A.L., Jacob, D.E., Schone, B.R., Bianchi, M.M. & Hajduk, A. 2008 Seasonal periodicity of growth and composition in valves of *Diplodon chilensis* patagonicus (d'Orbigny, 1835). *Journal of Molluscan Studies* **75**, 75-85. (doi:10.1093/mollus/eyn044).
- [556] Somasekar, M., Sriraman, K. & Kasinathan, R. 1982 Age, growth and length-weight relationship in the backwater oyster *Crassostrea madrasensis* (Preston). *Indian Journal of Marine Sciences* **11**, 190-192.
- [557] Steffani, C.N. & Branch, G.M. 2003 Growth rate, condition, and shell shape of *Mytilus galloprovincialis*: responses to wave exposure. *Marine Ecology Progress Series* **246**, 197-209.
- [558] Stephen, A.C. 1931 Notes on the biology of certain lamellibranchs on the Scottish Coast. *Journal of the Marine Biological Association of the United Kingdom* **17**, 277-300.
- [559] Stern-Pirlot, A. & Wolff, M. 2006 Population dynamics and fisheries potential of *Anadara tuberculosa* (Bivalvia: Arcidae) along the Pacific coast of Costa Rica. *Revista de Biología Tropical* **54**, 87-99.
- [560] Stevenson, J. & Dickie, L. 1954 Annual growth rings and rate of growth of the giant scallop, *Placopecten magellanicus* (Gmelin) in the Digby Area of the Bay of Fundy. *Journal of the Fisheries Research Board of Canada* **11**, 650-671.

- [561] Stober, Q.J. 1972 Distribution and age of *Margaritifera margaritifera* (L.) in a Madison River (Montana, U.S.A.) mussel bed. *Malacologia* **11**, 343-350.
- [562] Stockton, W.L. 1984 The biology and ecology of the epifaunal scallop *Adamussium colbecki* on the west side of McMurdo Sound, Antarctica. *Marine Biology* **78**, 171-178.
- [563] Stotz, W.B. & Gonzalez, S.A. 1997 Abundance, growth, and production of the sea scallop *Argopecten purpuratus* [Lamarck 18 191: bases for sustainable exploitation of natural scallop beds in north-central Chile. *Fisheries Research* **32**, 173-183.
- [564] Strahl, J. & Abele, D. 2010 Cell turnover in tissues of the long-lived ocean quahog *Arctica islandica* and the short-lived scallop *Aequipecten opercularis*. *Marine Biology* **157**, 1283-1292. (doi:10.1007/s00227-010-1408-6).
- [565] Strauss, J. 2005 Oxygen and carbon isotopic profiles of recent and Cenozoic mollusks: growth rates and paleoenvironmental analysis, Florida Atlantic University.
- [566] Strayer, D.L., Cole, J.J., Likens, G.E. & Buso, D.C. 1981 Biomass and annual production of the freshwater mussel *Elliptio complanata* in an oligotrophic softwater lake. *Freshwater Biology* **11**, 435-440.
- [567] Strom, A., Francis, R.C., Mantua, N.J. & Miles, E.L. 2004 North Pacific climate recorded in growth rings of geoduck clams: A new tool for paleoenvironmental reconstruction. *Geophysical Research Letters* **31**, 1-4. (doi:10.1029/2004gl019440).
- [568] Sugiura, D., Katayama, S., Sasa, S. & Sasaki, K. 2014 Age and growth of the ark shell *Scapharca broughtonii* (Bivalvia, Arcidae) in Japanese Waters. *Journal of Shellfish Research* **33**, 315-324. (doi:10.2983/035.033.0130).
- [569] Sukhotin, A., Abele, D. & Portner, H.O. 2006 Ageing and metabolism of *Mytilus edulis*: Populations from various climate regimes. *Journal of Shellfish Research* **25**, 893-899. (doi:10.2983/0730-8000(2006)25[893:aamome]2.0.co;2).
- [570] Sukhotin, A.A., Abele, D. & Portner, H.-O. 2002 Growth, metabolism and lipid peroxidation in *Mytilus edulis*: age and size effects. *Marine Ecology Progress Series* **226**, 223-234.
- [571] Sukhotin, A.A. & Maximovich, N.V. 1994 Variability of growth rate in *Mytilus edulis* L. from the Chupa Inlet (the White Sea). *Journal of Experimental Marine Biology and Ecology* **176**, 15-26.
- [572] Sukhotin, A.A. & Portner, H.-O. 2001 Age-dependence of metabolism in mussels *Mytilus edulis* (L.) from the White Sea. *Journal of Experimental Marine Biology and Ecology* **257**, 53-72.
- [573] Surge, D. & Walker, K.J. 2006 Geochemical variation in microstructural shell layers of the southern quahog (*Mercenaria campechiensis*): Implications for reconstructing seasonality. *Palaeogeography, Palaeoclimatology, Palaeoecology* **237**, 182-190. (doi:10.1016/j.palaeo.2005.11.016).
- [574] Swennen, C., Leopold, M.F. & Stock, M. 1985 Notes on growth and behaviour of the American razor clam *Ensis directus* in the Wadden Sea and the predation on it by birds. *Helgolander Meeresuntersuchungen* **39**, 255-261.
- [575] Talikhedkar, P.M., Mane, U.H. & Nagabhushanam, R. 1976 Growth rate of the wedge clam *Donax cuneatus* at Miriya Bay, Ratnagiri. *Indian Journal of Fisheries* **23**, 183-193.
- [576] Tanabe, K. 1988 Age and growth rate determinations of an intertidal bivalve, *Phacosoma japonicum*, using internal shell increments. *Lethaia* **21**, 231-241.

- [577] Tanabe, K. & Oba, T. 1988 Latitudinal variations in shell growth patterns of *Phacosoma japonicum* (Bivalvia: Veneridae) from the Japanese coast. *Marine Ecology Progress Series* **47**, 75-82.
- [578] Tang, S.F. 1941 The breeding of the scallop (*Pecten maximus* (L.)) with a note on the growth rate. *Proceedings and Transactions of the Liverpool Biological Society* **54**, 9-28.
- [579] Taylor, A.C. & Venn, T.J. 1978 Growth of the queen scallop, *Chlamys opercularis*, from the Clyde Sea area. *Journal of the Marine Biological Association of the United Kingdom* **58**, 687-700.
- [580] Theisen, B.F. 1973 The growth of *Mytilus edulis* L. (Bivalvia) from Disko and Thule District, Greenland. *Ophelia* **12**, 59-77.
- [581] Theisen, B.F. 1975 Growth parameters of *Mytilus edulis* L. (Bivalvia) estimated from tagging data. *Meddelelser fra Danmarks Fiskeri og Havundersoegelser* **7**, 99-109.
- [582] Thippeswamy, S. & Joseph, M. 1991 Population selection strategies in the wedge clam, *Donax incarnatus* (Gmelin) from Panambur beach, Mangalore. *Indian Journal of Marine Sciences* **20**, 147-151.
- [583] Thomas, S. & Nasser, M. 2009 Growth and population dynamics of short-neck clam *Paphia malabarica* from Dharmadom estuary, North Kerala, southwest coast of India. *Journal of the Marine Biological Association of India* **51**, 87-92.
- [584] Thompson, I., Jones, D.S. & Dreibelbis, D. 1980 Annual internal growth banding and life history of the ocean quahog *Arctica islandica* (Mollusca: Bivalvia). *Marine Biology* **57**, 25-34.
- [585] Thorarinsdóttir, G.G. & Jacobson, L.D. 2005 Fishery biology and biological reference points for management of ocean quahogs (*Arctica islandica*) off Iceland. *Fisheries Research* **75**, 97-106. (doi:10.1016/j.fishres.2005.04.010).
- [586] Thorarinsdóttir, G.G. & Steingrímsson, S.A. 2000 Size and age at sexual maturity and sex ratio in ocean quahog, *Arctica islandica* (Linnaeus, 1767), off Northwest Iceland. *Journal of Shellfish Research* **19**, 943-947.
- [587] Thouzeau, G., Robert, G. & Smith, S.J. 1991 Spatial variability in distribution and growth of juvenile and adult sea scallops *Placopecten magellanicus* (Gmelin) on eastern Georges Bank (Northwest Atlantic). *Marine Ecology Progress Series* **74**, 205-218.
- [588] Trevallion, A. 1971 Studies on *Tellina tenuis* Da Costa. III. Aspects of general biology and energy flow. *Journal of Experimental Marine Biology and Ecology* **7**, 95-122.
- [589] Trutschler, K. & Samtleben, C. 1988 Shell growth of *Astarte elliptica* (Bivalvia) from Kiel Bay (Western Baltic Sea). *Marine Ecology Progress Series* **42**, 155-162.
- [590] Tunberg, B. 1983 Growth of *Dosinia exoleta* (L.) (Bivalvia) in Raunefjorden, Western Norway. *Sarsia* **68**, 40-45.
- [591] Tunberg, B. 1983 Population structure, size distribution, and shell growth of *Dosinia lupinus* (L.) (Bivalvia) in Raunefjorden, Western Norway, with biometrical comparison to *Dosinia exoleta* (L.). *Sarsia* **68**, 33-40.
- [592] Tunçer, S. & Erdemir, C.Ç. 2002 A preliminary study on some properties for *Chamelea gallina* (L.) (Bivalvia: Veneridae) from Karabiga-Çanakale. *Turkish Journal of Fisheries and Aquatic Sciences* **2**, 117-120.
- [593] Turekian, K., Cochran, J.K., Kharkar, D., Cerrato, R., Vaisnys, J., Sanders, H., Grassle, J. & Allen, A. 1975 Slow growth rate of a deep-sea clam determined by 228Ra chronology. *Proceedings of the National Academy of Sciences* **72**, 2829-2832.
- [594] Turekian, K.K. & Cochran, J.K. 1981 Growth rate of a vesicomid clam from the Galapagos spreading center. *Science* **214**, 909-911.

- [595] Turra, A., Petracco, M., Amaral, A.C.Z. & Denadai, M.R. 2014 Temporal variation in life-history traits of the clam *Tivela mactroides* (Bivalvia: Veneridae): Density-dependent processes in sandy beaches. *Estuarine, Coastal and Shelf Science* **150**, 157-164. (doi:10.1016/j.ecss.2013.06.004).
- [596] Turra, A., Petracco, M., Amaral, A.C.Z. & Denadai, M.R. 2015 Population biology and secondary production of the harvested clam *Tivela mactroides* (Born, 1778) (Bivalvia, Veneridae) in Southeastern Brazil. *Marine Ecology* **36**, 221-234. (doi:10.1111/maec.12137).
- [597] Urban, H.-J. 1996 Population dynamics of the bivalves *Venus antiqua*, *Tagelus dombeii*, and *Ensis macha* from Chile 36° S. *Journal of Shellfish Research* **15**, 719-727.
- [598] Urban, H.-J. 1998 Description and management of a clam fishery (*Gari solida*, Psammobiidae) from Bahía Independencia, Peru (14° S). *Fisheries Research* **35**, 199-207.
- [599] Urban, H.J. & Campos, B. 1994 Population dynamics of the bivalves *Gari solida*, *Semel solida* and *Protothaca thaca* from a small bay in Chile at 36S. *Marine Ecology Progress Series* **115**, 93-102.
- [600] Urban, H.J. & Tesch, C. 1996 Aspects of population dynamics of six bivalve species from South Chile: Results of the Victor Hensen cruise to the Magellan Strait and the Beagle Channel in October/November 1994. *Archive of Fishery and Marine Research* **44**, 243-256.
- [601] Urban, H.-J. & Mercuri, G. 1998 Population dynamics of the bivalve *Laternula elliptica* from Potter Cove, King George Island, South Shetland Islands. *1998* **10**, 153-160.
- [602] Urban, H.-J. & Tarazona, J. 1996 Effects of El Niño/Southern Oscillation on the population dynamics of a *Gari solida* population (Bivalvia: Psammobiidae) from Bahía Independencia, Perú. *Marine Biology* **125**, 725-734.
- [603] Urrutia, M.B., Ibarrola, I., Iglesias, J.I.P. & Navarro, E. 1999 Energetics of growth and reproduction in a high-tidal population of the clam *Ruditapes decussatus* from Urdaibai Estuary (Basque Country, N. Spain). *Journal of Sea Research* **42**, 34-48.
- [604] Vadopalas, B., Weidman, C. & Cronin, E.K. 2011 Validation of age estimation in geoduck clams using the bomb radiocarbon signal. *Journal of Shellfish Research* **30**, 303-307. (doi:10.2983/035.030.0216).
- [605] Vahl, O. 1981 Energy transformations by the Iceland scallop, *Chlamys islandica* (O.F. Müller), from 70° N. I. The age specific energy budget and net growth efficiency. *Journal of Experimental Marine Biology and Ecology* **53**, 281-296.
- [606] Vannote, R.L. & Minshall, G.W. 1982 Fluvial processes and local lithology controlling abundance, structure, and composition of mussel beds. *Proceedings of the National Academy of Sciences* **79**, 4103-4107.
- [607] Velarde, A., Flye-Sainte-Marie, J., Mendo, J. & Jean, F. 2015 Sclerochronological records and daily microgrowth of the Peruvian scallop (*Argopecten purpuratus*, Lamarck, 1819) related to environmental conditions in Paracas Bay, Pisco, Peru. *Journal of Sea Research* **99**, 1-8. (doi:10.1016/j.seares.2015.01.002).
- [608] Velez, A., Venables, B. & Fitzpatrick, L. 1985 Growth and production of the tropical beach clam *Donax denticulatus* (Tellinidae) in eastern Venezuela. *Caribbean Journal of Science* **21**, 63-73.
- [609] Veloso, V., Moreira, J. & Troncoso, J. 2007 Annual dynamics of bivalve populations in muddy bottoms of the Ensenada de Baiona (Galicia, NW Iberian Peninsula). *Iberas* **25**, 1-10.
- [610] Verdelhos, T., Neto, J.M., Marques, J.C. & Pardal, M.A. 2005 The effect of eutrophication abatement on the bivalve *Scrobicularia plana*. *Estuarine, Coastal and Shelf Science* **63**, 261-268. (doi:10.1016/j.ecss.2004.11.019).

- [611] Verginelli, R. & Prieto, A. 1991 Produccion secundaria de *Pinctada imbricata* (Roding, 1798) (Pterioda:Pteriidae) en una poblacion del Golfo de Cariaco, Venezuela. *Acta Cientifica* **42**, 138-144.
- [612] Vincent, B., Brassard, C. & Harvey, M. 1987 Variations de la croissance de la coquille, et de la structure d'âge du bivalve *Macoma balthica* (L.) dans une population intertidale de l'estuaire du Saint-Laurent (Québec). *Canadian Journal of Zoology* **65**, 1906-1916.
- [613] Wade, B. 1964 Notes on the ecology of *Donax denticulatus* (Linne). In *Proceedings of the Gulf and Carribbean Fisheries Institute* (pp. 36-42).
- [614] Wade, B. 1969 Studies on the biology of the West Indian beach clam, *Donax denticulatus* Linne. 2. Life-history. *Bulletin of Marine Science* **18**, 876-901.
- [615] Walker, R.L. & Heffernan, P.B. 1994 Age, growth rate, and size of the southern surfclam, *Spisula solidissima similis* (Say, 1822). *Journal of Shellfish Research* **13**, 433-441.
- [616] Walker, R.L. & Tenore, K.R. 1984 Growth and production of the dwarf surf clam *Mulinia lateralis* (Say 1822) in a Georgia estuary. *Gulf Research Reports* **7**, 357-363.
- [617] Walker, R.L. & Tenore, K.R. 1984 The distribution and production of the hard clam, *Mercenaria mercenaria*, in Wassaw Sound, Georgia. *Estuaries* **7**, 19-27.
- [618] Walliser, E.O., Schöne, B.R., Tütken, T., Zirkel, J., Grimm, K.I. & Pross, J. 2015 The bivalve *Glycymeris planicostalis* as a high-resolution paleoclimate archive for the Rupelian (Early Oligocene) of central Europe. *Climate of the Past* **11**, 653-668. (doi:10.5194/cp-11-653-2015).
- [619] Wanamaker, A.D., Jr., Butler, P.G., Scourse, J.D., Heinemeier, J., Eiriksson, J., Knudsen, K.L. & Richardson, C.A. 2012 Surface changes in the North Atlantic meridional overturning circulation during the last millennium. *Nature communications* **3**, 899. (doi:10.1038/ncomms1901).
- [620] Wanamaker, A.D., Kreutz, K.J., Schöne, B.R., Maasch, K.A., Pershing, A.J., Borns, H.W., Introne, D.S. & Feindel, S. 2009 A late Holocene paleo-productivity record in the western Gulf of Maine, USA, inferred from growth histories of the long-lived ocean quahog (*Arctica islandica*). *International Journal of Earth Sciences* **98**, 19-29. (doi:10.1007/s00531-008-0318-z).
- [621] Warwick, R.M., George, C.L. & Davies, J.R. 1978 Annual macrofauna production in a Venus community. *Estuarine and Coastal Marine Science* **7**, 215-241.
- [622] Warwick, R.M. & Price, R. 1975 Macrofauna production in an estuarine mud-flat. *Journal of the Marine Biological Association of the United Kingdom* **55**, 1-18.
- [623] Watanabe, T., Suzuki, A., Kawahata, H., Kan, H. & Ogawa, S. 2004 A 60-year isotopic record from a mid-Holocene fossil giant clam (*Tridacna gigas*) in the Ryukyu Islands: physiological and paleoclimatic implications. *Palaeogeography, Palaeoclimatology, Palaeoecology* **212**, 343-354. (doi:10.1016/j.palaeo.2004.07.001).
- [624] Weinberg, J.R. 1985 Factors regulating population dynamics of the marine bivalve *Gemma gemma*: intraspecific competition and salinity. *Marine Biology* **86**, 173-182.
- [625] Weinberg, J.R. & Hesler, T.E. 1996 Growth of the Atlantic surfclam, *Spisula solidissima*, from Georges Bank to the Delmarva Peninsula, USA. *Marine Biology* **126**, 663-674.
- [626] Wendell, J., DeMartini, D., Dinnel, P. & Siecke, J. 1976 The ecology of the gaper or horse clam, *Tresus capax* (Gould 1850) (Bivalvia:Mactridae) in Humboldt Bay, California. *California Fish and Game* **62**, 41-64.
- [627] Westerbom, M., Kilpi, M. & Mustonen, O. 2002 Blue mussels, *Mytilus edulis*, at the edge of the range: population structure, growth and biomass along a salinity gradient in the north-eastern Baltic Sea. *Marine Biology* **140**, 991-999. (doi:10.1007/s00227-001-0765-6).

- [628] Weymouth, F.W. 1931 The life history and growth of the Pismo clam. *State of California Fish and Game Commission* **7**.
- [629] Weymouth, F.W. & McMillin, H.C. 1930 Relative growth and mortality of the Pacific razor clam (*Siliqua patula*, Dixon) and their bearing on the commercial fishery. *Bulletin of the Bureau of Fisheries* **46**, 543-567.
- [630] Weymouth, F.W., McMillin, H.C. & Holmes, H.B. 1925 Growth and age at maturity of the Pacific razor clam, *Siliqua patula* (Dixon). *Bulletin of the Bureau of Fisheries* **47**, 201-236.
- [631] Weymouth, F.W. & Thompson, S.H. 1930 The age and growth of the Pacific cockle (*Cardium corbis*, Martyn). *Bulletin of the Bureau of Fisheries* **46**, 633-641.
- [632] Wijsman, J. & Smaal, A.C. 2011 Growth of cockles (*Cerastoderma edule*) in the Oosterschelde described by a Dynamic Energy Budget model. *Journal of Sea Research* **66**, 372-380. (doi:10.1016/j.seares.2011.09.007).
- [633] Wiktor, J. 1963 Research on the ecology of *Dreissena polymorpha* Pall, in the Szczecin Lagoon (Zalew Szczecinski). *Ekologia Polska* **11**, 275-280.
- [634] Williams, M.J. & Dredge, M.C.L. 1981 Growth of the saucer scallop, *Amusium japonicum balloti* Habe, in central eastern Queensland. *Marine and Freshwater Research* **32**, 657-666.
- [635] Wilson, B.R. & Hodgkin, E.P. 1967 A comparative account of the reproductive cycles of five species of marine mussels (Bivalvia:Mytilidae) in the vicinity of Fremantle, western Australia. *Australian Journal of Marine and Freshwater Research* **18**, 175-203.
- [636] Wilson, D.P. 1977 *Modiolus modiolus* (L.) in small mid-tidal rock pools at Penrhyn Bay, North Wales. *Estuarine and Coastal Marine Science* **5**, 215-222.
- [637] Winckworth, R. 1931 On the growth of *Paphia undulata* (Veneridae). *Journal of Molluscan Studies* **19**, 171-174.
- [638] Winkelstern, I., Surge, D. & Hudley, J.W. 2013 Multiproxy sclerochronological evidence for Plio-Pleistocene regional warmth: United States Mid-Atlantic Coastal Plain. *Palaios* **28**, 649-660. (doi:10.2110/palo.2013.p13-010r).
- [639] Winther, U. & Gray, J.S. 1985 The biology of *Mya arenaria* (Bivalvia) in the eutrophic inner Oslofjord. *Sarsia* **70**, 1-9.
- [640] Witbaard, R., Duineveld, G.C.A., Bergman, M.J.N., Witte, H.I.J., Groot, L. & Rozemeijer, M.J.C. 2015 The growth and dynamics of *Ensis directus* in the near-shore Dutch coastal zone of the North Sea. *Journal of Sea Research* **95**, 95-105. (doi:10.1016/j.seares.2014.09.008).
- [641] Witbaard, R., Jenness, M.I., Van der Borg, K. & Ganssen, G. 1994 Verification of annual growth increments in *Arctica islandica* L. from the North Sea by means of oxygen and carbon isotopes. *Netherlands Journal of Sea Research* **33**, 91-101.
- [642] Wolf, B.M. & White, R.W.G. 1995 Age and growth of the queen scallop, *Equichlamys bifrons*, in the D'Entrecasteaux Channel and Huon River Estuary, Tasmania. *Marine and Freshwater Research* **46**, 1127-1135.
- [643] Wolf, W.J. & de Wolf, L. 1977 Biomass and production of zoobenthos in the Grevelingen Estuary, the Netherlands. *Estuarine and Coastal Marine Science* **5**, 1-24.
- [644] Wolfe, D.A. & Petteway, E.N. 1968 Growth of *Rangia cuneata* Gray. *Chesapeake Science* **9**, 99-102.
- [645] Wolff, W.J., Gueye, A., Meijboom, A., Piersma, T. & Sall, M.A. 1987 Distribution, biomass, recruitment and productivity of *Anadara senilis* (L.)(Mollusca: Bivalvia) on the Banc d'Arguin, Mauritania. *Netherlands Journal of Sea Research* **21**, 243-253.

- [646] Wolowicz, W. 1980 Characteristics of the *Cardium glaucum* Bivalvia population in Gdanfsk Bay growth rate, age mortality. *International Council for the Exploration of the Sea* **1**, 1-10.
- [647] Xavier, B.M., Branch, G.M. & Wieters, E. 2007 Abundance, growth and recruitment of *Mytilus galloprovincialis* on the west coast of South Africa in relation to upwelling. *Marine Ecology Progress Series* **346**, 189-201. (doi:10.3354/meps07007).
- [648] Yan, L., Schöne, B.R., Li, S. & Yan, Y. 2014 Shells of *Paphia undulata* (Bivalvia) from the South China Sea as potential proxy archives of the East Asian summer monsoon: a sclerochronological calibration study. *Journal of Oceanography* **70**, 35-44. (doi:10.1007/s10872-013-0210-8).
- [649] Yap, W.G. 1977 Population biology of the Japanese little-neck clam, *Tapes philippinarum*, in Kaneohe Bay, Oahu, Hawaiian Islands. *Pacific Science* **31**, 223-244.
- [650] Yavnov, S.V. & Ignat'ev, V. 1979 Shell structure and growth temperature of mollusks, family Mactridae. *Biologiya Morya* **44**, 409-414.
- [651] Zeichen, M.M., Agnesi, S., Mariani, A., Maccaroni, A. & Ardizzone, G.D. 2002 Biology and Population Dynamics of *Donax trunculus* L. (Bivalvia: Donacidae) in the South Adriatic Coast (Italy). *Estuarine, Coastal and Shelf Science* **54**, 971-982. (doi:10.1006/ecss.2001.0868).
- [652] Zeinalipour, M., Kiabi, B.H., Shokri, M.R. & Ardalan, A.A. 2014 Population dynamic and distribution of *Barbatia decussata* (Bivalvia: Arcidae) on rocky intertidal shores in the northern Persian Gulf (Iran). *Tropical Zoology* **27**, 73-87. (doi:10.1080/03946975.2014.944381).
- [653] Zettler, M.L., Bonsch, R. & Gosselck, F. 2001 Distribution, abundance and some population characteristics of the ocean quahog, *Arctica islandica* (Linnaeus, 1767), in the Mecklenburg Bight (Baltic Sea). *Journal of Shellfish Research* **20**, 161-169.
- [654] Ziuganov, V., Miguel, E.S., Neves, R.J., Longa, A., Fernández, C., Amaro, R., Beletsky, V., Popkovitch, E., Kaliuzhin, S. & Johnson, T. 2000 Life Span Variation of the Freshwater Pearl Shell: A Model Species for Testing Longevity Mechanisms in Animals. *AMBIO: A Journal of the Human Environment* **29**, 102-105. (doi:10.1579/0044-7447-29.2.102).
- [655] Zolotarev, V.N. 1980 The life span of bivalves from the Sea of Japan and Sea of Okhotsk. *The Soviet Journal of Marine Biology* **6**, 3-12.