

# Appendix A from D. G. Kontopoulos et al., “Use and misuse of temperature normalisation in meta-analyses of thermal responses of biological traits”

## Supplementary material, mathematical derivations, and data sources

### Contents

<b>A1 Reference temperature values used in the recent literature</b>	<b>2</b>
<b>A2 Mathematical derivations</b>	<b>3</b>
A2.1 The importance of normalisation of $B_0$ at an explicit $T_{\text{ref}}$ value . . . . .	3
A2.2 Derivation of the $T_{\text{pk}}$ parameter . . . . .	3
A2.3 Derivation of the $P_{\text{pk}}$ parameter . . . . .	4
<b>A3 The conditional inference tree</b>	<b>4</b>
A3.1 Description of the algorithm . . . . .	4
A3.2 Evaluation of its performance . . . . .	5
<b>A4 Definition of the probability density function of the beta distribution</b>	<b>5</b>
<b>A5 List of studies whose data were used in this paper</b>	<b>6</b>

### List of Tables

A1	Table of specified $T_{\text{ref}}$ values in some studies that employed the Sharpe-Schoolfield model. . . .	2
A2	The confusion matrix from the data-driven conditional inference tree. . . . .	5

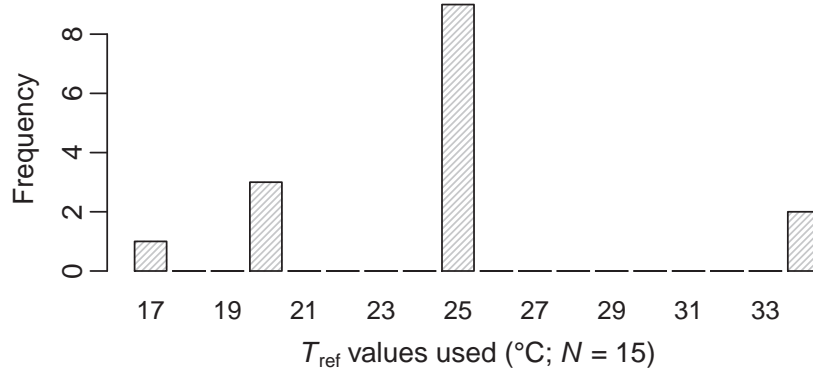
## A1 Reference temperature values used in the recent literature

Table A1: Table of specified  $T_{\text{ref}}$  values in some studies that employed the Sharpe-Schoolfield model.

Study	$T_{\text{ref}}$ (°C)
Ungerer, M. J., M. P. Ayres, and M. J. Lombardero. 1999. Climate and the northern distribution limits of <i>Dendroctonus frontalis</i> Zimmermann (Coleoptera: Scolytidae). <i>Journal of Biogeography</i> 26:1133–1145.	24.85
Wohlfahrt, G., M. Bahn, E. Haubner, I. Horak, W. Michaeler, K. Rottmar, U. Tappeiner, and A. Cernusca. 1999. Inter-specific variation of the biochemical limitation to photosynthesis and related leaf traits of 30 species from mountain grassland ecosystems under different land use. <i>Plant, Cell &amp; Environment</i> 22:1281–1296.	20.01
Hopp, M. J., and J. A. Foley. 2001. Global-scale relationships between climate and the dengue fever vector, <i>Aedes aegypti</i> . <i>Climatic Change</i> 48:441–463.	24.85
Depinay, J.-M. O., C. M. Mbogo, G. Killeen, B. Knols, J. Beier, J. Carlson, J. Dushoff, P. Billingsley, H. Mwambi, J. Githure, et al. 2004. A simulation model of African <i>Anopheles</i> ecology and population dynamics for the analysis of malaria transmission. <i>Malaria Journal</i> 3:1.	24.85
Barmak, D. H., C. O. Dorso, M. Otero, and H. G. Solari. 2014. Modelling interventions during a dengue outbreak. <i>Epidemiology and Infection</i> 142:545–561.	24.85
Barneche, D. R., M. Kulbicki, S. R. Floeter, A. M. Friedlander, J. Maina, and A. P. Allen. 2014. Scaling metabolism from individuals to reef-fish communities at broad spatial scales. <i>Ecology Letters</i> 17:1067–1076.	20
Fand, B. B., H. E. Z. Tonnang, M. Kumar, A. L. Kamble, and S. K. Bal. 2014. A temperature-based phenology model for predicting development, survival and population growth potential of the mealybug, <i>Phenacoccus solenopsis</i> Tinsley (Hemiptera: Pseudococcidae). <i>Crop Protection</i> 55:98–108.	16.88, 25.01, 33.86, 34.47 *
Nealis, V. G., and J. Régnière. 2014. An individual-based phenology model for western spruce budworm (Lepidoptera: Tortricidae). <i>The Canadian Entomologist</i> 146:306–320.	24.85
Kang, S. H., J.-H. Lee, and D.-S. Kim. 2015. Temperature-dependent fecundity of overwintered <i>Scirtothrips dorsalis</i> (Thysanoptera: Thripidae) and its oviposition model with field validation. <i>Pest Management Science</i> 71:1441–1451.	25
Simoy, M. I., M. V. Simoy, and G. A. Canziani. 2015. The effect of temperature on the population dynamics of <i>Aedes aegypti</i> . <i>Ecological Modelling</i> 314:100–110.	24.85
Barneche, D., M. Kulbicki, S. Floeter, A. Friedlander, and A. Allen. 2016. Energetic and ecological constraints on population density of reef fishes. <i>Proceedings of the Royal Society of London. Series B, Biological sciences</i> 283:20152186.	20
Padfield, D., G. Yvon-Durocher, A. Buckling, S. Jennings, and G. Yvon-Durocher. 2016. Rapid evolution of metabolic traits explains thermal adaptation in phytoplankton. <i>Ecology Letters</i> 19:133–142.	25

\* Note:  $T_{\text{ref}}$  in Fand et al. 2014 was treated as a model parameter and not as a constant, allowing its value to vary across fits.

Figure A1: Bar plot of  $T_{\text{ref}}$  values in table A1, rounded to the nearest integer for simplicity. A clear bias towards  $T_{\text{ref}} \approx 25^\circ\text{C}$  emerges, probably due to the use of this value in the original paper by Schoolfield et al. (1981).



## A2 Mathematical derivations

### A2.1 The importance of normalisation of $B_0$ at an explicit $T_{\text{ref}}$ value

The Sharpe-Schoolfield equation (eq. (1)) can be reformulated without  $T_{\text{ref}}$ , i.e. without temperature normalisation of the  $B_0$  parameter, by changing the numerator from  $e^{-\frac{E}{k} \cdot \left(\frac{1}{T} - \frac{1}{T_{\text{ref}}}\right)}$  to  $e^{-\frac{E}{k} \cdot \left(\frac{1}{T}\right)}$ . This implies that:

$$\frac{1}{T_{\text{ref}}} \approx 0 \implies T_{\text{ref}} \approx \infty$$

Therefore, removing the  $T_{\text{ref}}$  value from the Sharpe-Schoolfield equation leads to  $B_0$  being estimated at an extremely high – and biologically meaningless – temperature.

### A2.2 Derivation of the $T_{\text{pk}}$ parameter

To obtain the equation of  $T_{\text{pk}}$ , the temperature at which trait performance peaks, we first differentiate the Sharpe-Schoolfield equation (eq. (1)) with respect to  $T$ , using the quotient rule:

$$\begin{aligned} & \frac{d}{dT} \frac{B_0 \cdot e^{-\frac{E}{k} \cdot \left(\frac{1}{T} - \frac{1}{T_{\text{ref}}}\right)}}{1 + e^{-\frac{E_D}{k} \cdot \left(\frac{1}{T_h} - \frac{1}{T}\right)}} = \\ & \frac{B_0 \cdot E \cdot e^{-\frac{E}{k} \cdot \left(\frac{1}{T} - \frac{1}{T_{\text{ref}}}\right)} \cdot \left(1 + e^{-\frac{E_D}{k} \cdot \left(\frac{1}{T_h} - \frac{1}{T}\right)}\right) - \frac{B_0 \cdot E_D \cdot e^{-\frac{E_D}{k} \cdot \left(\frac{1}{T_h} - \frac{1}{T}\right)} \cdot e^{-\frac{E}{k} \cdot \left(\frac{1}{T} - \frac{1}{T_{\text{ref}}}\right)}}{\left(1 + e^{-\frac{E_D}{k} \cdot \left(\frac{1}{T_h} - \frac{1}{T}\right)}\right)^2} \end{aligned}$$

We then solve for  $T$ , by setting the above quantity equal to zero. This will give the temperature at which the rate of change of the trait with respect to temperature is zero ( $T_{\text{pk}}$ ). As the denominator and  $\frac{B_0}{k \cdot T^2}$  will always be positive, the remaining part of the numerator has to be equal to zero:

$$\begin{aligned}
& E \cdot e^{\frac{-E}{k} \cdot \left( \frac{1}{T} - \frac{1}{T_{\text{ref}}} \right)} + E \cdot e^{\frac{-E}{k} \cdot \left( \frac{1}{T} - \frac{1}{T_{\text{ref}}} \right) + \frac{E_D}{k} \cdot \left( \frac{1}{T_h} - \frac{1}{T} \right)} = E_D \cdot e^{\frac{E_D}{k} \cdot \left( \frac{1}{T_h} - \frac{1}{T} \right) - \frac{E}{k} \cdot \left( \frac{1}{T} - \frac{1}{T_{\text{ref}}} \right)} \implies \\
\implies & E \cdot e^{\frac{-E}{k} \cdot \left( \frac{1}{T} - \frac{1}{T_{\text{ref}}} \right)} = (E_D - E) \cdot e^{\frac{E_D}{k} \cdot \left( \frac{1}{T_h} - \frac{1}{T} \right) - \frac{E}{k} \cdot \left( \frac{1}{T} - \frac{1}{T_{\text{ref}}} \right)}
\end{aligned}$$

Taking the natural logarithm of both sides and solving for  $T$  leads to:

$$\ln \frac{E}{E_D - E} = \frac{E_D}{k} \cdot \left( \frac{1}{T_h} - \frac{1}{T} \right) \implies T = \frac{-E_D \cdot T_h}{k \cdot T_h \cdot \ln \frac{E}{E_D - E} - E_D} = T_{\text{pk}}$$

### A2.3 Derivation of the $P_{\text{pk}}$ parameter

$P_{\text{pk}}$  represents the peak of the thermal response curve (i.e. the maximum trait performance) and can be estimated by setting  $T = T_{\text{pk}}$  in the Sharpe-Schoolfield equation (eq. (1)):

$$P_{\text{pk}} = B(T_{\text{pk}}) = B_0 \cdot \frac{e^{\frac{-E}{k} \cdot \left( \frac{1}{T_{\text{pk}}} - \frac{1}{T_{\text{ref}}} \right)}}{1 + e^{\frac{E_D}{k} \cdot \left( \frac{1}{T_h} - \frac{1}{T_{\text{pk}}} \right)}}$$

## A3 The conditional inference tree

### A3.1 Description of the algorithm

Conditional inference trees attempt to classify a response variable based on combinations of other predictor variables. This is done through a tree-like structure (see fig. 3) where terminal nodes (or leaves) are the predicted classifications, whereas all other nodes up to the root of the tree correspond to predictor variables. Essentially, each internal node is a decision point in the model at which two alternative paths can be followed, depending on the value of the corresponding predictor. The topology of the tree is constructed through a statistical significance approach, consisting of non-parametric tests for each particular node, corrected for multiple testing to avoid overfitting. As a result, the predictors are unbiased and the model does not require cross-validation, often performed in other classes of models to assess overfitting. Overall, conditional inference trees allow identification of complicated nonlinear associations between a response variable and its predictors, which are otherwise quite difficult to distinguish.

### A3.2 Evaluation of its performance

Table A2: The confusion matrix from the data-driven conditional inference tree.

		True condition			
		Training dataset		Testing dataset	
		above	below	above	below
Predicted condition	above	<b>135</b>	4	<b>20</b>	5
	below	8	<b>1611</b>	3	<b>377</b>

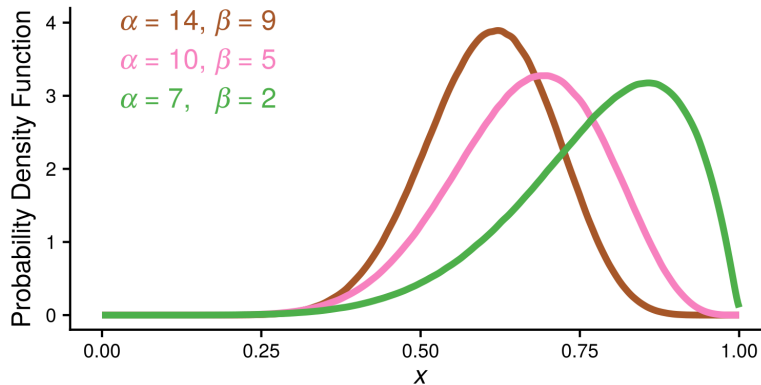
This table allows for assessing the performance of a classifying model, both against the data that were used to train it and against new data (testing dataset). The number of cases for which the model predictions are in agreement with the true condition of the data are shown in bold. Based on these results, we can deduce that the model is both sensitive and specific, able to recognize most combinations of parameters that result in  $B_0$  being above (true positive rate in the training/testing datasets: 94.41% and 86.96%) or below  $P_{pk}$  (true negative rate in the training/testing datasets: 99.75% and 98.69%).

### A4 Definition of the probability density function of the beta distribution

The probability density function of the beta distribution for  $x \in [0, 1]$ , and  $\alpha, \beta > 0$  is

$$f(x|\alpha, \beta) = \frac{x^{\alpha-1} \cdot (1-x)^{\beta-1}}{\int_0^1 x^{\alpha-1} \cdot (1-x)^{\beta-1} dx}.$$

Figure A2: Probability density functions of the beta distribution for different values of the  $\alpha$  and  $\beta$  parameters.



## A5 List of studies whose data were used in this paper

- Abrini, J., H. Naveau, and E.-J. Nyns. 1994. *Clostridium autoethanogenum*, sp. nov., an anaerobic bacterium that produces ethanol from carbon monoxide. *Archives of Microbiology* 161:345–351.
- Adamec, L. 1997. Photosynthetic characteristics of the aquatic carnivorous plant *Aldrovanda vesiculosa*. *Aquatic Botany* 59:297–306.
- Adams, M. S. 1970. Adaptations of *Aplectrum hyemale* to the Environment: Effects of Preconditioning Temperature on Net Photosynthesis. *Bulletin of the Torrey Botanical Club* 97:219.
- Adams, M. S., and M. M. Fayyaz. 1979. Temperature acclimation of net photosynthesis in relation to growth of a cold hardy *Chrysanthemum*. *Oecologia* 39:239–247.
- Admiraal, W. 1976. Influence of light and temperature on the growth rate of estuarine benthic diatoms in culture. *Marine Biology* 39:1–9.
- Aelion, C., and S. Chisholm. 1985. Effect of temperature on growth and ingestion rates of *Favella* sp. *Journal of plankton research* 7:821–830.
- Aghdam, H. R., Y. Fathipour, G. Radjabi, and M. Rezapanah. 2009. Temperature-dependent development and temperature thresholds of codling moth (Lepidoptera: Tortricidae) in Iran. *Environmental entomology* 38:885–895.
- Ahlgren, G. 1978. Growth of *Oscillatoria agardhii* in chemostat culture. 2. Dependence of growth constants on temperature. *In* Symposium: Experimental Use of Algal Cultures in Limnology 26-28 October 1976, Sandefjord, Norway. Internationale Vereinigung fur Theoretische und Angewandte Limnologie, Mittellungen. 21.
- . 1987. Temperature functions in biology and their application to algal growth constants. *Oikos* pages 177–190.
- Albrizio, R., and P. Steduto. 2003. Photosynthesis, respiration and conservative carbon use efficiency of four field grown crops. *Agricultural and Forest Meteorology* 116:19–36.
- Ali, R. M. 1970. The influence of suspension density and temperature on the filtration rate of *Hiatella arctica*. *Marine Biology* 6:291–302.
- Anderson, M. T., J. M. Kiesecker, D. P. Chivers, and A. R. Blaustein. 2001. The direct and indirect effects of temperature on a predator prey relationship. *Canadian Journal of Zoology* 79:1834–1841.
- Angilletta, M. J., T. Hill, and M. A. Robson. 2002. Is physiological performance optimized by thermoregulatory behavior?: a case study of the eastern fence lizard, *Sceloporus undulatus*. *Journal of Thermal Biology* 27:199–204.
- Arbab, A., D. C. Kontodimas, and M. R. McNeill. 2008. Modeling embryo development of *Sitona discoideus* Gyllenhal (Coleoptera: Curculionidae) under constant temperature. *Environmental entomology* 37:1381–1388.
- Atkin, O., C. Holly, and M. Ball. 2000. Acclimation of snow gum (*Eucalyptus pauciflora*) leaf respiration to seasonal and diurnal variations in temperature: the importance of changes in the capacity and temperature sensitivity of respiration. *Plant, Cell & Environment* 23:15–26.
- Atkin, O. K. 2000. Leaf Respiration of Snow Gum in the Light and Dark. Interactions between Temperature and Irradiance. *PLANT PHYSIOLOGY* 122:915–924.

- ATKIN, O. K., I. SCHEURWATER, and T. L. PONS. 2006. High thermal acclimation potential of both photosynthesis and respiration in two lowland *Plantago* species in contrast to an alpine congeneric. *Global Change Biol* 12:500–515.
- Autumn, K., R. B. Weinstein, and R. J. Full. 1994. Low cost of locomotion increases performance at low temperature in a nocturnal lizard. *Physiological Zoology* pages 238–262.
- Azcon-Bieto, J., G. Farquhar, and A. Caballero. 1981. Effects of temperature, oxygen concentration, leaf age and seasonal variations on the CO<sub>2</sub> compensation point of *Lolium perenne* L. *Planta* 152:497–504.
- Azcón-Bieto, J., and C. B. Osmond. 1983. Relationship between Photosynthesis and Respiration The Effect of Carbohydrate Status on the Rate of CO<sub>2</sub> Production by Respiration in Darkened and Illuminated Wheat Leaves. *Plant Physiology* 71:574–581.
- Baars, J. 1981. Autecological investigations on marine diatoms. 2. Generation times of 50 species. *Hydrobiological Bulletin* 15:137–151.
- . 1985. Autecological investigations on marine diatoms. 4: *Biddulphia aurita* (Lyngb.) Brebisson et Godey A succession of spring diatoms. *Hydrobiological Bulletin* 19:109–116.
- Babel, S., S. Takizawa, and H. Ozaki. 2002. Factors affecting seasonal variation of membrane filtration resistance caused by *Chlorella* algae. *Water Research* 36:1193–1202.
- Baddeley, M. S., B. Ferry, and E. J. Finegan. 1971. A new method of measuring lichen respiration: response of selected species to temperature, pH and sulphur dioxide. *The Lichenologist* 5:18–25.
- Badger, M., O. Björkman, and P. Armond. 1982. An analysis of photosynthetic response and adaptation to temperature in higher plants: temperature acclimation in the desert evergreen *Nerium oleander* L. *Plant, Cell & Environment* 5:85–99.
- Baek, S. H., S. Shimode, and T. Kikuchi. 2008. Growth of dinoflagellates, *Ceratium furca* and *Ceratium fusus* in Sagami Bay, Japan: The role of temperature, light intensity and photoperiod. *Harmful Algae* 7:163–173.
- BAILEY, P. C. E. 1989. The effect of water temperature on the functional response of the water stick insect *Ranatra dispar* (Heteroptera: Nepidae). *Austral Ecology* 14:381–386.
- Bailey, P. C. E. 2010. The Effect of Density and Temperature on the Swimming and Aggregating Behaviour of the Backswimmer, *Anisops deanei* (Heteroptera: Notonectidae) and Subsequent Encounter Rate with a Sit-and-Wait Predator. *Ethology* 77:44–57.
- Baldwin, N. S. 1957. Food Consumption and Growth of Brook Trout at Different Temperatures. *Transactions of the American Fisheries Society* 86:323–328.
- Baltz, D. M., P. B. Moyle, and N. J. Knight. 1982. Competitive Interactions Between Benthic Stream Fishes, Riffle Sculpin, *Cottus gulosus*, and Speckled Dace, *Rhinichthys osculus*. *Can. J. Fish. Aquat. Sci.* 39:1502–1511.
- Band-Schmidt, C. J. 2004. Effects of growth medium, temperature, salinity and seawater source on the growth of *Gymnodinium catenatum* (Dinophyceae) from Bahia Concepcion, Gulf of California, Mexico. *Journal of Plankton Research* 26:1459–1470.
- Barker, H. A. 1935. The culture and physiology of the marine dinoflagellates. *Archives of Microbiology* 6:157–181.
- Barko, J. W., and R. M. Smart. 1981. Comparative influences of light and temperature on the growth and metabolism of selected submersed freshwater macrophytes. *Ecological monographs* pages 219–235.

- Batty, R., and J. Blaxter. 1992. The effect of temperature on the burst swimming performance of fish larvae. *Journal of Experimental Biology* 170:187–201.
- Batty, R., J. Blaxter, and K. Fretwell. 1993. Effect of temperature on the escape responses of larval herring, *Clupea harengus*. *Marine Biology* 115:523–528.
- Bauwens, D., T. Garland, A. M. Castilla, and R. V. Damme. 1995. Evolution of Sprint Speed in Lacertid Lizards: Morphological, Physiological and Behavioral Covariation. *Evolution* 49:848.
- Bell, E. C. 1993. Photosynthetic response to temperature and desiccation of the intertidal alga *Mastocarpus papillatus*. *Marine Biology* 117:337–346.
- Benider, A., M. Tahiri, M. Belkoura, and A. Dauta. 2001. Interaction des facteurs héliothermiques sur la croissance de trois espèces du genre *Scenedesmus*. Pages 257–266 in *Annales de Limnologie-International Journal of Limnology*. Vol. 37. Cambridge Univ Press.
- Bennett, A. F. 1980. The thermal dependence of lizard behaviour. *Animal Behaviour* 28:752–762.
- Bergman, E. 1987. Temperature-dependent differences in foraging ability of two percid, *Perca fluviatilis* and *Gymnocephalus cernuus*. *Environ Biol Fish* 19:45–53.
- Bergmann, P. 2006. Effects of temperature on maximum acceleration, deceleration and power output during vertical running in geckos. *Journal of Experimental Biology* 209:1404–1412.
- Bernacchi, C. J., E. L. Singaas, C. Pimentel, A. R. P. Jr, and S. P. Long. 2001. Improved temperature response functions for models of Rubisco-limited photosynthesis. *Plant, Cell and Environment* 24:253–259.
- Binder, B. J., and D. M. Anderson. 2004. PHYSIOLOGICAL AND ENVIRONMENTAL CONTROL OF GERMINATION IN SCRIPPSIELLA TROCHOIDEA (DINOPHYCEAE) RESTING CYSTS1. *Journal of Phycology* 23:99–107.
- Bjorkman, O., H. A. Mooney, and J. Ehleringer. 1975. Photosynthetic responses of plants from habitats with contrasting thermal environments. *Carnegie Inst. Wash. Yearbook* 74:743–748.
- Blankley, W. F., and R. A. Lewin. 1976. Temperature responses of a coccolithophorid, *Cricosphaera carterae*, measured in a simple and inexpensive thermal-gradient device. *Limnology and Oceanography* 21:457–462.
- Bollmann, J., C. Klaas, and L. E. Brand. 2010. Morphological and Physiological Characteristics of *Gephyrocapsa oceanica* var. *typica* Kamptner 1943 in Culture Experiments: Evidence for Genotypic Variability. *Protist* 161:78–90.
- Bongi, G., and S. Long. 1987. Light-dependent damage to photosynthesis in olive leaves during chilling and high temperature stress. *Plant, Cell & Environment* 10:241–249.
- Bouarab, L., M. Loudiki, and A. Dauta. 2002. Autotrophic and mixotrophic growth of microalgae *Micractinium pusillum* Fres. isolated from wastewater stabilization pond: influence of light and temperature. *Revue des Sciences de l'Eau (France)* .
- Bouchamma, E. O., and M. Derraz. 2004. Interaction of light and temperature effects on the growth rate of three Cyanobacteria species isolated from El kansera impoundment (Morocco). *Algological Studies* 113:129–141.
- Bouterfas, R., M. Belkoura, and A. Dauta. 2002. Light and temperature effects on the growth rate of three freshwater algae isolated from a eutrophic lake. *Hydrobiologia* 489:207–217.
- Bowman, J. P., D. S. Nichols, and T. A. McMeekin. 1997. *Psychrobacter glacincola* sp. nov., a Halotolerant, Psychrophilic Bacterium Isolated from Antarctic Sea Ice. *Systematic and Applied Microbiology* 20:209–215.



- Boyd, P. W., T. A. Ryneerson, E. A. Armstrong, F. Fu, K. Hayashi, Z. Hu, D. A. Hutchins, R. M. Kudela, E. Litchman, M. R. Mulholland, et al. 2013. Marine phytoplankton temperature versus growth responses from polar to tropical waters—outcome of a scientific community-wide study. *PLoS One* 8:e63091.
- Brand, L., and R. Guillard. 1981. The effects of continuous light and light intensity on the reproduction rates of twenty-two species of marine phytoplankton. *Journal of Experimental Marine Biology and Ecology* 50:119–132.
- Bravo, I., and D. M. Anderson. 1994. The effects of temperature, growth medium and darkness on excystment and growth of the toxic dinoflagellate *Gymnodinium catenatum* from northwest Spain. *Journal of Plankton Research* 16:513–525.
- Breeze, V., and J. Elston. 1978. Some effects of temperature and substrate content upon respiration and the carbon balance of field beans (*Vicia faba* L.). *Annals of Botany* 42:863–876.
- Breitbarth, E., A. Oschlies, and J. LaRoche. 2007. Physiological constraints on the global distribution of *Trichodesmium*? effect of temperature on diazotrophy. *Biogeosciences* 4:53–61.
- Brett, J. R. 1967. Swimming Performance of Sockeye Salmon (*Oncorhynchus nerka*) in relation to Fatigue Time and Temperature. *J. Fish. Res. Bd. Can.* 24:1731–1741.
- Briand, J.-F., C. Lebourlanger, J.-F. Humbert, C. Bernard, and P. Dufour. 2004. CYLINDROSPERMOPSIS RACIBORSKII (CYANOBACTERIA) INVASION AT MID-LATITUDES: SELECTION, WIDE PHYSIOLOGICAL TOLERANCE, OR GLOBAL WARMING? *Journal of Phycology* 40:231–238.
- Brock, V., and L. Kofoed. 1987. Species specific irrigatory efficiency in *Cardium* (*Cerastoderma*) *edule* (L.) and *C. lamarcki* (Reeve) responding to different environmental temperatures. *Biological oceanography* 4:211–226.
- Bruce, A. Y., F. Schulthess, and J. Mueke. 2009. Host Acceptance, Suitability, and Effects of Host Deprivation on the West African Egg Parasitoid *Telenomus isis* (Hymenoptera: Scelionidae) Reared on East African Stemborers Under Varying Temperature and Relative Humidity Regimens. *Environ Entomol* 38:904–919.
- Bruning, K. 1991. Effects of temperature and light on the population dynamics of the *Asterionella-Rhizophydium* association. *Journal of plankton research* 13:707–719.
- Bryla, D. R., T. J. Bouma, U. Hartmond, and D. M. Eissenstat. 2001. Influence of temperature and soil drying on respiration of individual roots in citrus: integrating greenhouse observations into a predictive model for the field. *Plant, Cell and Environment* 24:781–790.
- Buitenhuis, E. T., T. Pangerc, D. J. Franklin, C. L. Quéré, and G. Malin. 2008. Growth rates of six coccolithophorid strains as a function of temperature. *Limnol. Oceanogr.* 53:1181–1185.
- Bunce, J. A. 2000. Acclimation of photosynthesis to temperature in eight cool and warm climate herbaceous C3 species: temperature dependence of parameters of a biochemical photosynthesis model. *Photosynthesis Research* 63:59–67.
- Burnett, T. 1951. Effects of Temperature and Host Density on the Rate of Increase of an Insect Parasite. *The American Naturalist* 85:337–352.
- Burton, A. J., and K. S. Pregitzer. 2003. Field measurements of root respiration indicate little to no seasonal temperature acclimation for sugar maple and red pine. *Tree physiology* 23:273–280.
- Butterwick, C., S. Heaney, and J. Talling. 2005. Diversity in the influence of temperature on the growth rates of freshwater algae, and its ecological relevance. *Freshwater Biology* 50:291–300.
- Caldwell, M. M., C. B. Osmond, and D. L. Nott. 1977. C4 Pathway Photosynthesis at Low Temperature in Cold-tolerant *Atriplex* Species. *PLANT PHYSIOLOGY* 60:157–164.

- Cannon, J. 1993. Germination of the toxic dinoflagellate, *Alexandrium minutum*, from sediments in the Port River, South Australia. Toxic phytoplankton blooms in the sea. Elsevier. Amsterdam, The Netherlands pages 103–107.
- Carey, R. W., and J. A. Berry. 1978. Effects of low temperature on respiration and uptake of rubidium ions by excised barley and corn roots. *Plant physiology* 61:858–860.
- Casey, T. M. 1976. Activity Patterns, Body Temperature and Thermal Ecology in Two Desert Caterpillars (Lepidoptera: Sphingidae). *Ecology* 57:485–497.
- Castro-Arevalo, M., M. Reyes-Diaz, M. Alberdi, V. Jara-Rodriguez, C. Sanhueza, L. J. Corcuera, and L. A. Bravo. 2008. Effects of low temperature acclimation on photosynthesis in three Chilean Proteaceae. *Revista Chilena de Historia Natural* 81:321–333.
- Cen, Y.-P., and R. F. Sage. 2005. The regulation of Rubisco activity in response to variation in temperature and atmospheric CO<sub>2</sub> partial pressure in sweet potato. *Plant physiology* 139:979–990.
- Chabot, B. F., and J. F. Chabot. 1977. Effects of light and temperature on leaf anatomy and photosynthesis in *Fragaria vesca*. *Oecologia* 26:363–377.
- Chadwick, L. E., and H. Rahn. 1954. Temperature Dependence of Rattling Frequency in the Rattlesnake, *Crotalus v. viridis*. *Science* 119:442–443.
- Chang, F., R. G. Wear, and J. Reynolds. 1986. Effects of salinity, temperature, and light intensity on the growth rates of two halophilic phytoflagellates in mixed culture. *New Zealand journal of marine and freshwater research* 20:467–478.
- Chapin III, F. S., and W. C. Oechel. 1983. Photosynthesis, respiration, and phosphate absorption by *Carex aquatilis* ecotypes along latitudinal and local environmental gradients. *Ecology* pages 743–751.
- Chappell, P. D., and E. A. Webb. 2010. A molecular assessment of the iron stress response in the two phylogenetic clades of *Trichodesmium*. *Environmental Microbiology* 12:13–27.
- Charles-Edwards, D., J. Charles-Edwards, and J. Cooper. 1971. The influence of temperature on photosynthesis and transpiration in ten temperate grass varieties grown in four different environments. *Journal of Experimental Botany* 22:650–662.
- Chen, J., J. Shen, L. I. Hellgren, P. R. Jensen, and C. Solem. 2015. Adaptation of *Lactococcus lactis* to high growth temperature leads to a dramatic increase in acidification rate. *Sci. Rep.* 5:14199.
- Chen, S., J. Wu, J. V. Huner, and R. F. Malone. 1995. Effects of temperature upon ablation-to-molt interval and mortality of red swamp crawfish (*Procambarus clarkii*) subjected to bilateral eyestalk ablation. *Aquaculture* 138:191–204.
- Childs, M. R., and R. W. Clarkson. 1996. Temperature Effects on Swimming Performance of Larval and Juvenile Colorado Squawfish: Implications for Survival and Species Recovery. *Transactions of the American Fisheries Society* 125:940–947.
- Chin, T., C. Chen, S. Llu, and S. Wu. 1965. INFLUENCE OF TEMPERATURE AND SALINITY ON THE GROWTH OF THREE SPECIES OF PLANKTONIC DIATOMS. *Oceanologia Et Limnologia Sinica* 4:002.
- Chiverton, P. A. 1988. Searching behaviour and cereal aphid consumption by *Bembidion lampros* and *Pterostichus cupreus*, in relation to temperature and prey density. *Entomologia Experimentalis et Applicata* 47:173–182.
- Chow, T., G. E. Long, and G. Tamaki. 1983. Effects of Temperature and Hunger on the Functional Response of *Geocoris bullatus* (Say) (Hemiptera: Lygaeidae) to *Lygus* spp. (Hemiptera: Miridae) Density. *Environmental Entomology* 12:1332–1338.

- Christian, K. A., and C. R. Tracy. 1981. The effect of the thermal environment on the ability of hatchling Galapagos land iguanas to avoid predation during dispersal. *Oecologia* 49:218–223.
- Claquin, P., I. Probert, S. Lefebvre, and B. Veron. 2008. Effects of temperature on photosynthetic parameters and TEP production in eight species of marine microalgae. *Aquat. Microb. Ecol.* 51:1–11.
- Clopton, J. R. 2007. Temperature: Humans Regulating, Ants Conforming. *The American Biology Teacher* 69:e59–e63.
- Coats, D., and M. Tyler. 1985. Encystment of the dinoflagellate *Gyrodinium uncatenum*: temperature and nutrient effects. *J. Phycol.* 21:200–206.
- Cockrell, B. J. 1984. Effects of Temperature and Oxygenation on Predator-Prey Overlap and Prey Choice of *Notonecta glauca*. *The Journal of Animal Ecology* 53:519.
- COESEL, P. F., and K. WARDENAAR. 1990. Growth responses of planktonic desmid species in a temperature/light gradient. *Freshwater Biology* 23:551–560.
- Coles, S., and P. Jokiel. 1977. Effects of temperature on photosynthesis and respiration in hermatypic corals. *Marine biology* 43:209–216.
- Collins, C. D., and C. W. Boylen. 1982. PHYSIOLOGICAL RESPONSES OF *ANABAENA VARIABILIS* (CYANOPHYCEAE) TO INSTANTANEOUS EXPOSURE TO VARIOUS COMBINATIONS OF LIGHT INTENSITY AND TEMPERATURE<sup>1</sup>. *Journal of Phycology* 18:206–211.
- Conte, M. H., A. Thompson, D. Lesley, and R. P. Harris. 1998. Genetic and Physiological Influences on the Alkenone/Alkenoate Versus Growth Temperature Relationship in *Emiliana huxleyi* and *Gephyrocapsa Oceanica*. *Geochimica et Cosmochimica Acta* 62:51–68.
- Cook, J. 1966. Adaptations to temperature in two closely related strains of *Euglena gracilis*. *Biological Bulletin* 131:83–93.
- Cooper, W. 2000. EFFECT OF TEMPERATURE ON ESCAPE BEHAVIOUR BY AN ECTOTHERMIC VERTEBRATE, THE KEELED EARLESS LIZARD (*HOLBROOKIA PROPINQUA*). *Behaviour* 137:1299–1315.
- Covey-Crump, E. M., R. G. Attwood, and O. K. Atkin. 2002. Regulation of root respiration in two species of *Plantago* that differ in relative growth rate: the effect of short- and long-term changes in temperature. *Plant, Cell and Environment* 25:1501–1513.
- Cowling, S., and R. Sage. 1998. Interactive effects of low atmospheric CO<sub>2</sub> and elevated temperature on growth, photosynthesis and respiration in *Phaseolus vulgaris*. *Plant, Cell & Environment* 21:427–435.
- Criddle, R. S., B. N. Smith, and L. D. Hansen. 1997. A respiration based description of plant growth rate responses to temperature. *Planta* 201:441–445.
- Crist, T. O., and J. A. MacMahon. 1991. Foraging Patterns of *Pogonomyrmex occidentalis* (Hymenoptera: Formicidae) in a Shrub-Steppe Ecosystem: The Roles of Temperature, Trunk Trails, and Seed Resources. *Environmental Entomology* 20:265–275.
- Crocker, R. L., W. H. Whitcomb, and R. M. Ray. 1975. Effects of Sex, Developmental Stage, and Temperature on Predation by *Geocoris punctipes*. *Environmental Entomology* 4:531–534.
- Csavina, J., B. Stuart, R. Guy Riefler, and M. Vis. 2011. Growth optimization of algae for biodiesel production. *Journal of applied microbiology* 111:312–318.
- Curl, H., and G. C. McLeod. 1961. THE PHYSIOLOGICAL ECOLOGY OF A MARINE DIATOM, *SKELETONEMA-COSTATUM* (GREV) CLEVE. *Journal of Marine Research* 19:70–88.

- Damme, R. V., D. Bauwens, A. M. Castilla, and R. F. Verheyen. 1989. Altitudinal variation of the thermal biology and running performance in the lizard *Podarcis tiliguerta*. *Oecologia* 80:516–524.
- Dauta, A. 1982. Conditions de développement du phytoplancton. Etude comparative du comportement de huit espèces en culture. I. Détermination des paramètres de croissance en fonction de la lumière et de la température. Pages 217–262 in *Annales de limnologie*. Vol. 18. Cambridge Univ Press.
- Dauta, A., J. Devaux, F. Piquemal, and L. Boumnick. 1990. Growth rate of four freshwater algae in relation to light and temperature. *Hydrobiologia* 207:221–226.
- Davey, K. 1994. Modelling the combined effect of temperature and pH on the rate coefficient for bacterial growth. *International Journal of Food Microbiology* 23:295–303.
- Davison, I. R. 1987. ADAPTATION OF PHOTOSYNTHESIS IN LAMINARIA SACCHARINA (PHAEOPHYTA) TO CHANGES IN GROWTH TEMPERATURE. *Journal of Phycology* 23:273–283.
- Davison, I. R., R. Greene, and E. Podolak. 1991. Temperature acclimation of respiration and photosynthesis in the brown alga *Laminaria saccharina*. *Marine Biology* 110:449–454.
- Dawes, C. J., R. E. Moon, and M. A. Davis. 1978. The photosynthetic and respiratory rates and tolerances of benthic algae from a mangrove and salt marsh estuary: A comparative study. *Estuarine and Coastal Marine Science* 6:175–185.
- de Boer, M. K. 2004. Temperature responses of three *Fibrocapsa japonica* strains (Raphidophyceae) from different climate regions. *Journal of Plankton Research* 27:47–60.
- de Vries, F. P., J. Witlage, and D. Kremer. 1979. Rates of respiration and of increase in structural dry matter in young wheat, ryegrass and maize plants in relation to temperature, to water stress and to their sugar content. *Annals of Botany* 44:595–609.
- Delucia, E. H. 1986. Effect of low root temperature on net photosynthesis, stomatal conductance and carbohydrate concentration in Engelmann spruce (*Picea engelmannii* Parry ex Engelm.) seedlings. *Tree Physiology* 2:143–154.
- Denius, H. R., and P. H. Homann. 1972. The relation between photosynthesis, respiration, and Crassulacean acid metabolism in leaf slices of *Aloe arborescens* Mill. *Plant physiology* 49:873–880.
- Derlinden, E. V., and J. V. Impe. 2012. Modeling growth rates as a function of temperature: Model performance evaluation with focus on the suboptimal temperature range. *International Journal of Food Microbiology* 158:73–78.
- Dermoun, D., D. Chaumont, J.-M. Thebault, and A. Dauta. 1992. Modelling of growth of *Porphyridium cruentum* in connection with two interdependent factors: light and temperature. *Bioresource technology* 42:113–117.
- Dmi'el, R., and D. Rapoport. 1976. Effect of temperature on metabolism during running in the lizard *Uromastix aegyptius*. *Physiological Zoology* pages 77–84.
- Doemel, W. N., and T. D. Brock. 1970. The upper temperature limit of *Cyanidium caldarium*. *Archiv für Mikrobiologie* 72:326–332.
- Donk, E., and S. S. Kilham. 1990. TEMPERATURE EFFECTS ON SILICON-AND PHOSPHORUS-LIMITED GROWTH AND COMPETITIVE INTERACTIONS AMONG THREE DIATOMS. *Journal of Phycology* 26:40–50.
- Downton, W. J. S., J. A. Berry, and J. R. Seemann. 1984. Tolerance of photosynthesis to high temperature in desert plants. *Plant Physiology* 74:786–790.

- Dreisig, H. 1981. The Rate of Predation and Its Temperature Dependence in a Tiger Beetle, *Cicindela Hybrida*. *Oikos* 36:196.
- Drent, W. J., G. A. Lahpor, W. M. Wiegant, and J. C. Gottschal. 1991. Fermentation of inulin by *Clostridium thermosuccinogenes* sp. nov., a thermophilic anaerobic bacterium isolated from various habitats. *Applied and environmental microbiology* 57:455–462.
- Drew, E. A. 1977. The physiology of photosynthesis and respiration in some Antarctic marine algae. *Br Antarct Surv Bull* 46:59–76.
- . 1979. Physiological aspects of primary production in seagrasses. *Aquatic Botany* 7:139–150.
- Dreyer, E., X. Le Roux, P. Montpied, F. A. Daudet, and F. Masson. 2001. Temperature response of leaf photosynthetic capacity in seedlings from seven temperate tree species. *Tree Physiology* 21:223–232.
- Dungan, R. J., D. Whitehead, and R. P. Duncan. 2003. Seasonal and temperature dependence of photosynthesis and respiration for two co-occurring broad-leaved tree species with contrasting leaf phenology. *Tree Physiology* 23:561–568.
- Durbin, E. G. 1974. STUDIES ON THE AUTECOLOGY OF THE MARINE DIATOM THALASSIOSIRA NORDENSKIOLDII CLEVE. 1. THE INFLUENCE OF DAYLENGTH, LIGHT INTENSITY, AND TEMPERATURE ON GROWTH. *Journal of Phycology* 10:220–225.
- Dyer, D. L., and R. D. Gafford. 1961. Some characteristics of a thermophilic blue-green alga. *Science* 134:616–617.
- Eddy, B. 1956. The suitability of some algae for mass cultivation for food, with special reference to *Dunaliella bioculata*. *Journal of Experimental Botany* 7:372–380.
- Edvardsen, B., and E. Paasche. 1992. TWO MOTILE STAGES OF CHRYSOCHROMULINA POLYLEPIS (PRYMNESIOPHYCEAE): MORPHOLOGY, GROWTH, AND TOXICITY. *Journal of phycology* 28:104–114.
- Edwards, D. J. 1971. Effect of temperature on rate of passage of food through the alimentary canal of the plaice *Pleuronectes platessa* L. *Journal of Fish Biology* 3:433–439.
- Eggert, A., and C. Wiencke. 2000. Adaptation and acclimation of growth and photosynthesis of five Antarctic red algae to low temperatures. *Polar Biology* 23:609–618.
- Eggleston, D. B. 1990. Behavioural Mechanisms Underlying Variable Functional Responses of Blue Crabs, *Callinectes sapidus* Feeding on Juvenile Oysters, *Crassostrea virginica*. *The Journal of Animal Ecology* 59:615.
- Ehleringer, J. R., and O. Björkman. 1978. A comparison of photosynthetic characteristics of *Encelia* species possessing glabrous and pubescent leaves. *Plant physiology* 62:185–190.
- El-Sabaawi, R., and P. J. Harrison. 2006. INTERACTIVE EFFECTS OF IRRADIANCE AND TEMPERATURE ON THE PHOTOSYNTHETIC PHYSIOLOGY OF THE PENNATE DIATOM PSEUDO-NITZSCHIA GRANII (BACILLARIOPHYCEAE) FROM THE NORTHEAST SUBARCTIC PACIFIC. *Journal of Phycology* 42:778–785.
- ELLIOTT, J. M. 1972. Rates of gastric evacuation in brown trout, *Salmo trutta* L. *Freshwater Biology* 2:1–18.
- Elnor, R., and R. N. Hughes. 1978. Energy maximization in the diet of the shore crab, *Carcinus maenas*. *The Journal of Animal Ecology* pages 103–116.
- Elnor, R. W. 1980. The influence of temperature, sex and chela size in the foraging strategy of the shore crab, *Carcinus maenas* (L.). *Marine Behaviour and Physiology* 7:15–24.

- Else, P., and A. Bennett. 1987. The thermal dependence of locomotor performance and muscle contractile function in the salamander *Ambystoma tigrinum nebulosum*. *Journal of Experimental Biology* 128:219–233.
- Emerson, R., and L. Green. 1934. Manometric measurements of photosynthesis in the marine alga *Gigartina*. *The Journal of general physiology* 17:817.
- Esener, A. A., J. A. Roels, and N. W. F. Kossen. 1981. The influence of temperature on the maximum specific growth rate of *Klebsiella pneumoniae*. *Biotechnol. Bioeng.* 23:1401–1405.
- Evans, A. S., K. L. Webb, and P. A. Penhale. 1986. Photosynthetic temperature acclimation in two coexisting seagrasses, *Zostera marina* L. and *Ruppia maritima* L. *Aquatic Botany* 24:185–197.
- Falcón, L., S. Pluvinae, and E. Carpenter. 2005. Growth kinetics of marine unicellular N<sub>2</sub>-fixing cyanobacterial isolates in continuous culture in relation to phosphorus and temperature. *Marine Ecology Progress Series* 285:3–9.
- Falkowski, P. G. 1977. The adenylate energy charge in marine phytoplankton: The effect of temperature on the physiological state of *Skeletonema costatum* (Grev.) Cleve. *Journal of Experimental Marine Biology and Ecology* 27:37–45.
- Fan, L., A. Vonshak, and S. Boussiba. 1994. EFFECT OF TEMPERATURE AND IRRADIANCE ON GROWTH OF *HAEMATOCOCCUS PLUVIALIS* (CHLOROPHYCEAE). *Journal of Phycology* 30:829–833.
- Fang, T., Y. Liu, and L. Huang. 2013. Growth kinetics of *Listeria monocytogenes* and spoilage microorganisms in fresh-cut cantaloupe. *Food Microbiology* 34:174–181.
- Fawley, M. W. 1984. EFFECTS OF LIGHT INTENSITY AND TEMPERATURE INTERACTIONS ON GROWTH CHARACTERISTICS OF *PHAEODACTYLUM TRICORNUTUM* (BACILLARIOPHYCEAE)1. *Journal of Phycology* 20:67–72.
- FEDORENKO, A. Y. 1975. Feeding characteristics and predation impact of *Chaoborus* (Diptera, Chaoboridae) larvae in a small lake. *Limnol. Oceanogr.* 20:250–258.
- Feil, H., and A. H. Purcell. 2001. Temperature-Dependent Growth and Survival of *Xylella fastidiosa* in Vitro and in Potted Grapevines. *Plant Disease* 85:1230–1234.
- Feng, S., and W. V. Winkle. 1975. The effect of temperature and salinity on the heart beat of *Crassostrea virginica*. *Comparative Biochemistry and Physiology Part A: Physiology* 50:473–476.
- Ferguson, T. J., and R. A. Mah. 1983. Isolation and characterization of an H<sub>2</sub>-oxidizing thermophilic methanogen. *Applied and environmental microbiology* 45:265–274.
- Fiala, M., and L. Oriol. 1990. Light-temperature interactions on the growth of Antarctic diatoms. *Polar Biol* 10:629–636.
- Flinn, P., and D. Hagstrum. 2002. Temperature-mediated functional response of *Theocolax elegans* (Hymenoptera: Pteromalidae) parasitizing *Rhyzopertha dominica* (Coleoptera: Bostrichidae) in stored wheat. *Journal of Stored Products Research* 38:185–190.
- Flinn, P. W. 1991. Temperature-Dependent Functional Response of the Parasitoid *Cephalonomia waterstoni* (Gahan) (Hymenoptera: Bethyridae) Attacking Rusty Grain Beetle Larvae (Coleoptera: Cucujidae). *Environmental Entomology* 20:872–876.
- Foerster, L. A., M. do R.F. Avanci, and A. K. Doetzer. 1999. Effect of temperature on the development and progeny production of *Glyptapanteles muesebecki* (Blanchard) (Hymenoptera: Braconidae) parasitizing larvae of *Pseudaletia sequax* Franclemont (Lepidoptera: Noctuidae). *An. Soc. Entomol. Bras.* 28:243–249.

- Fogg, G. E., and B. Thake. 1987. Algal cultures and phytoplankton ecology. Univ of Wisconsin Press.
- Foy, R. 1983. Interaction of temperature and light on the growth rates of two planktonic *Oscillatoria* species under a short photoperiod regime. *British phycollogical journal* 18:267–273.
- Foy, R., and C. Gibson. 1993. The influence of irradiance, photoperiod and temperature on the growth kinetics of three planktonic diatoms. *European Journal of Phycology* 28:203–212.
- Foy, R., C. Gibson, and R. Smith. 1976. The influence of daylength, light intensity and temperature on the growth rates of planktonic blue-green algae. *British phycollogical journal* 11:151–163.
- Foyle, T. P., R. K. O'dor, and R. W. ELNER. 1989. Energetically defining the thermal limits of the snow crab. *Journal of Experimental Biology* 145:371–393.
- FRANTZ, J. M. 2004. Night Temperature has a Minimal Effect on Respiration and Growth in Rapidly Growing Plants. *Annals of Botany* 94:155–166.
- Franzmann, P., C. Haddad, R. Hawkes, W. Robertson, and J. Plumb. 2005. Effects of temperature on the rates of iron and sulfur oxidation by selected bioleaching Bacteria and Archaea: Application of the Ratkowsky equation. *Minerals Engineering* 18:1304–1314.
- Fuiman, L., and D. Ottey. 1993. Temperature effects on spontaneous behavior of larval and juvenile red drum *Sciaenops ocellatus*, and implications for foraging. *Fishery Bulletin* 91:23–35.
- Fuiman, L. A. 1986. Burst-Swimming Performance of Larval Zebra Danios and the Effects of Diel Temperature Fluctuations. *Transactions of the American Fisheries Society* 115:143–148.
- . 1991. Influence of temperature on evasive responses of Atlantic herring larvae attacked by yearling herring, *Clupea harengus* L. *Journal of Fish Biology* 39:93–102.
- Fuiman, L. A., and R. S. Batty. 1994. Susceptibility of Atlantic herring and plaice larvae to predation by juvenile cod and herring at two constant temperatures. *Journal of Fish Biology* 44:23–34.
- Gallepp, G. W. 1977. Responses of Caddisfly Larvae (*Brachycentrus* spp.) to Temperature, Food Availability and Current Velocity. *American Midland Naturalist* 98:59.
- Gilchrist, G. W. 1996. A Quantitative Genetic Analysis of Thermal Sensitivity in the Locomotor Performance Curve of *Aphidius ervi*. *Evolution* 50:1560.
- Goldasteh, S., A. Talebi, Y. Fathipour, H. Ostovan, A. Zamani, and V. Shoushtari. 2009. Effect of temperature on life history and population growth parameters of *Planococcus citri* (Homoptera, Pseudococcidae) on coleus [*Solenostemon scutellarioides* (L.) Codd.]. *Arch. biol. sci. (Beogr.)* 61:329–336.
- Goldman, J. C., and E. J. Carpenter. 1974. A kinetic approach to the effect of temperature on algal growth. *Limnology and Oceanography* 19:756–766.
- González, J. M., C. Kato, and K. Horikoshi. 1995. *Thermococcus peptonophilus* sp. nov., a fast-growing, extremely thermophilic archaeobacterium isolated from deep-sea hydrothermal vents. *Archives of Microbiology* 164:159–164.
- González, J. M., Y. Masuchi, F. T. Robb, J. W. Ammerman, D. L. Maeder, M. Yanagibayashi, J. Tamaoka, and C. Kato. 1998. *Pyrococcus horikoshii* sp. nov., a hyperthermophilic archaeon isolated from a hydrothermal vent at the Okinawa Trough. *Extremophiles* 2:123–130.
- Grafius, E., and F. W. Warner. 1989. Predation by *Bembidion quadrimaculatum* (Coleoptera: Carabidae) on *Delia antiqua* (Diptera: Anthomyiidae). *Environmental Entomology* 18:1056–1059.

- GRAHAM, J. M., P. ARANCIBIA-AVILA, and L. E. GRAHAM. 1996. Physiological ecology of a species of the filamentous green alga *Mougeotia* under acidic conditions: Light and temperature effects on photosynthesis and respiration. *Limnol. Oceanogr.* 41:253–262.
- Graham, J. M., M. T. Auer, R. P. Canale, and J. P. Hoffmann. 1982. Ecological Studies and Mathematical Modeling of *Cladophora* in Lake Huron: 4. Photosynthesis and Respiration as Functions of Light and Temperature. *Journal of Great Lakes Research* 8:100–111.
- Graham, W. D., J. E. Thorpe, and N. B. Metcalfe. 1996. Seasonal current holding performance of juvenile Atlantic salmon in relation to temperature and smolting. *Can. J. Fish. Aquat. Sci.* 53:80–86.
- Gratani, L., P. Pesoli, M. Crescente, K. Aichner, and W. Larcher. 2000. Photosynthesis as a temperature indicator in *Quercus ilex* L. *Global and Planetary Change* 24:153–163.
- Gratani, L., L. Varone, and R. Catoni. 2008. Relationship between net photosynthesis and leaf respiration in Mediterranean evergreen species. *Photosynthetica* 46:567–573.
- Gray, J. 1923. The Mechanism of Ciliary Movement. III.—The Effect of Temperature. *Proceedings of the Royal Society B: Biological Sciences* 95:6–15.
- Gresens, S. E., M. L. Cothran, and J. H. Thorp. 1982. The influence of temperature on the functional response of the dragonfly *Celithemis fasciata* (Odonata: Libellulidae). *Oecologia* 53:281–284.
- Grimm, N., and T. Weisse. 1985. Die Temperaturabhängigkeit des Wachstums von *Phaeocystis pouchetii* (Haptophyceae) in Batchkulturen. *Helgoländer Meeresuntersuchungen* 39:201–211.
- Grote, R., L. Li, J. Tamaoka, C. Kato, K. Horikoshi, and G. Antranikian. 1999. *Thermococcus siculi* sp. nov., a novel hyperthermophilic archaeon isolated from a deep-sea hydrothermal vent at the Mid-Okinawa Trough. *Extremophiles* 3:55–62.
- Grzebyk, D., and B. Berland. 1996. Influences of temperature, salinity and irradiance on growth of *Prorocentrum minimum* (Dinophyceae) from the Mediterranean Sea. *J Plankton Res* 18:1837–1849.
- Guillard, R. R. L., and J. H. Ryther. 1962. STUDIES OF MARINE PLANKTONIC DIATOMS: I. *CYCLOTELLA NANA* HUSTEDT, AND *DETONULA CONFERVACEA* (CLEVE) GRAN. *Can. J. Microbiol.* 8:229–239.
- Hailty, A., and P. M. C. Davies. 2009. Effects of size, sex, temperature and condition on activity metabolism and defence behaviour of the viperine snake, *Natrix maura*. *Journal of Zoology* 208:541–558.
- HALDIMANN, P., and U. FELLER. 2004. Inhibition of photosynthesis by high temperature in oak (*Quercus pubescens* L.) leaves grown under natural conditions closely correlates with a reversible heat-dependent reduction of the activation state of ribulose-1,5-bisphosphate carboxylase/oxygenase. *Plant, Cell and Environment* 27:1169–1183.
- Hällgren, J.-E., E. Sundbom, and M. Strand. 1982. Photosynthetic responses to low temperature in *Betula pubescens* and *Betula tortuosa*. *Physiologia plantarum* 54:275–282.
- Hamilton-Brehm, S. D., J. J. Mosher, T. Vishnivetskaya, M. Podar, S. Carroll, S. Allman, T. J. Phelps, M. Keller, and J. G. Elkins. 2009. *Caldicellulosiruptor obsidiansis* sp. nov., an Anaerobic, Extremely Thermophilic, Cellulolytic Bacterium Isolated from Obsidian Pool, Yellowstone National Park. *Applied and Environmental Microbiology* 76:1014–1020.
- Hanke, K., T. B. Hanke, L. M. Olsen, G. Johnsen, and R. N. Glud. 2008. TEMPERATURE EFFECTS ON MICROALGAL PHOTOSYNTHESIS-LIGHT RESPONSES MEASURED BY O<sub>2</sub> PRODUCTION, PULSE-AMPLITUDE-MODULATED FLUORESCENCE, AND 14C ASSIMILATION<sup>1</sup>. *Journal of Phycology* 44:501–514.



- Harley, P., J. Tenhunen, and O. Lange. 1986. Use of an analytical model to study limitations on net photosynthesis in *Arbutus unedo* under field conditions. *Oecologia* 70:393–401.
- Harley, P., J. Weber, and D. M. Gates. 1985. Interactive effects of light, leaf temperature, CO<sub>2</sub> and O<sub>2</sub> on photosynthesis in soybean. *Planta* 165:249–263.
- Harley, P. C., J. D. Tenhunen, K. J. Murray, and J. Beyers. 1989. Irradiance and temperature effects on photosynthesis of tussock tundra *Sphagnum* mosses from the foothills of the Philip Smith Mountains, Alaska. *Oecologia* 79:251–259.
- HARLEY, P. C., R. B. THOMAS, J. F. REYNOLDS, and B. R. STRAIN. 1992. Modelling photosynthesis of cotton grown in elevated CO<sub>2</sub>. *Plant, Cell and Environment* 15:271–282.
- Healey, F. 1983. Effect of temperature and light intensity on the growth rate of *Synura sphagnicola*. *Journal of plankton research* 5:767–774.
- Heckrotte, C. 1967. Relations of Body Temperature, Size, and Crawling Speed of the Common Garter Snake, *Thamnophis s. sirtalis*. *Copeia* 1967:759.
- Heiman, D. R., and A. W. Knight. 1975. The influence of temperature on the bioenergetics of the carnivorous stonefly nymph, *Acroneuria californica* Banks (Plecoptera: Perlidae). *Ecology* pages 105–116.
- Hellmuth, E. 1967. A method of determining true values for photosynthesis and respiration under field conditions. *Flora B* 157:265–286.
- Hellmuth, E. O. 1971. Eco-Physiological Studies on Plants in Arid and Semi-Arid Regions in Western Australia: III. Comparative Studies on Photosynthesis, Respiration and Water Relations of Ten Arid Zone and Two Semi-Arid Zone Plants Under Winter and Late Summer Climatic Conditions. *The Journal of Ecology* pages 225–259.
- Hertz, P. E., R. B. Huey, and E. Nevo. 1982. Fight versus flight: Body temperature influences defensive responses of lizards. *Animal Behaviour* 30:676–679.
- Hikosaka, K., A. Murakami, and T. Hirose. 1999. Balancing carboxylation and regeneration of ribulose-1,5-bisphosphate in leaf photosynthesis: temperature acclimation of an evergreen tree, *Quercus myrsinaefolia*. *Plant, Cell and Environment* 22:841–849.
- HIRANO, M., and L. C. ROME. 1984. Jumping performance of frogs (*Rana pipiens*) as a function of muscle temperature. *Journal of Experimental Biology* 108:429–439.
- Hocutt, C. H. 1973. Swimming Performance of Three Warmwater Fishes Exposed to a Rapid Temperature Change. *Chesapeake Science* 14:11.
- Hodaifa, G., M. E. Martínez, and S. Sánchez. 2010. Influence of temperature on growth of *Scenedesmus obliquus* in diluted olive mill wastewater as culture medium. *Engineering in Life Sciences* 10:257–264.
- Holaday, A. S., W. Martindale, R. Alred, A. L. Brooks, and R. C. Leegood. 1992. Changes in Activities of Enzymes of Carbon Metabolism in Leaves during Exposure of Plants to Low Temperature. *PLANT PHYSIOLOGY* 98:1105–1114.
- Holt, S. J. 1955. On the Foraging Activity of the Wood Ant. *The Journal of Animal Ecology* 24:1.
- Huang, L., A. Hwang, and J. Phillips. 2011. Effect of Temperature on Microbial Growth Rate-Mathematical Analysis: The Arrhenius and Eyring-Polanyi Connections. *Journal of Food Science* 76:E553–E560.
- Huang, X. 2005. Interactive effects of soil temperature and moisture on Concord grape root respiration. *Journal of Experimental Botany* 56:2651–2660.

- Huang, X., C. Li, C. Liu, and D. Zeng. 2001. Studies on the Ecological Factors of *Oocystis borgei*. *Journal of Zhanjiang Ocean University* 22:8–12.
- Huey, R. B., P. H. Niewiarowski, J. Kaufmann, and J. C. Herron. 1989. Thermal Biology of Nocturnal Ectotherms: Is Sprint Performance of Geckos Maximal at Low Body Temperatures? *Physiological Zoology* 62:488–504.
- HUEY, R. B., and R. STEVENSON. 1979. Integrating Thermal Physiology and Ecology of Ectotherms: A Discussion of Approaches. *American Zoologist* 19:357–366.
- Hulburt, E. 1982. The adaptation of marine phytoplankton species to nutrient and temperature. *Ocean science and engineering (USA)* .
- Hulburt, E. M., and R. R. Guillard. 1968. The relationship of the distribution of the diatom *Skeletonema tropicum* to temperature. *Ecology* pages 337–339.
- Hull, L. A., D. Asquith, and P. D. Mowery. 1977. The Functional Responses of *Stethorus punctum* to Densities of the European Red Mite. *Environmental Entomology* 6:85–90.
- HURLBERT, A. H., F. BALLANTYNE, and S. POWELL. 2008. Shaking a leg and hot to trot: the effects of body size and temperature on running speed in ants. *Ecological Entomology* 33:144–154.
- Huser, B. A., K. Wuhrmann, and A. J. B. Zehnder. 1982. *Methanothrix soehngeni* gen. nov. sp. nov., a new acetotrophic non-hydrogen-oxidizing methane bacterium. *Archives of Microbiology* 132:1–9.
- Ignatiades, L., and T. J. Smayda. 1970. AUTECOLOGICAL STUDIES ON THE MARINE DIATOM RHIZOLENIA FRAGILISSIMA BERGON. I. THE INFLUENCE OF LIGHT, TEMPERATURE, AND SALINITY. *Journal of Phycology* 6:332–339.
- Imamura, T., J. Uraichuen, P. Visarathanonth, S. Morimoto, and A. Miyanoshita. 2004. Effect of temperature on development of *Theocolax elegans* (Westwood) (Hymenoptera: Pteromalidae) parasitizing larvae of the maize weevil *Sitophilus zeamais* (Coleoptera: Curculionidae) in brown rice. *Applied Entomology and Zoology* 39:497–503.
- Inoue, N., Y. Taira, T. Emi, Y. Yamane, Y. Kashino, H. Koike, and K. Satoh. 2001. Acclimation to the growth temperature and the high-temperature effects on photosystem II and plasma membranes in a mesophilic cyanobacterium, *Synechocystis* sp. PCC6803. *Plant and Cell Physiology* 42:1140–1148.
- Isaksen, M., and B. Jorgensen. 1996. Adaptation of psychrophilic and psychrotrophic sulfate-reducing bacteria to permanently cold marine environments. *Applied and Environmental Microbiology* 62:408–414.
- James, C., S. Al-Hinty, and A. Salman. 1989. Growth and  $\omega$ 3 fatty acid and amino acid composition of microalgae under different temperature regimes. *Aquaculture* 77:337–351.
- Jensen, M. Ø., and Ø. Moestrup. 1997. Autecology of the toxic dinoflagellate *Alexandrium ostenfeldii* : life history and growth at different temperatures and salinities . *European Journal of Phycology* 32:9–18.
- Jobling, M., and P. S. Davies. 2006. Gastric evacuation in plaice, *Pleuronectes platessa* L.: effects of temperature and meal size. *Journal of Fish Biology* 14:539–546.
- Johnson, T., and A. Bennett. 1995. The thermal acclimation of burst escape performance in fish: an integrated study of molecular and cellular physiology and organismal performance. *The Journal of experimental biology* 198:2165–2175.
- Johnson, Z. I. 2006. Niche Partitioning Among *Prochlorococcus* Ecotypes Along Ocean-Scale Environmental Gradients. *Science* 311:1737–1740.

- Johnston, A. 1996. The effect of environmental variables on  $^{13}\text{C}$  discrimination by two marine phytoplankton. *Marine Ecology Progress Series* 132:257–263.
- Johnston, T. A., and J. A. Mathias. 1994. The effects of temperature on feeding in zooplanktivorous walleye, *Stizostedion vitreum*, larvae. *Environmental biology of fishes* 40:189–198.
- Jolliffe, P., and E. Tregunna. 1968. Effect of temperature,  $\text{CO}_2$  concentration, and light intensity on oxygen inhibition of photosynthesis in wheat leaves. *Plant physiology* 43:902–906.
- Jørgensen, C. B. 1974. On gill function in the mussel *Mytilus Edulis* L. . *Ophelia* 13:187–232.
- Jørgensen, C. B., P. S. Larsen, and H. U. Riisgård. 1990. Effects of temperature on the mussel pump. *Marine Ecology-Progress Series* 64:89–97.
- Jr., W. W., A. Bianchini, C. C. Sanchez, and L. H. Poersch. 2003. The effect of temperature, salinity and nitrogen products on food consumption of pink shrimp *Farfantepenaeus paulensis*. *Brazilian Archives of Biology and Technology* 46:135–141.
- Juhl, A. R. 2005. Growth rates and elemental composition of *Alexandrium monilatum*, a red-tide dinoflagellate. *Harmful Algae* 4:287–295.
- Kaeriyama, H., E. Katsuki, M. Otsubo, M. Yamada, K. Ichimi, K. Tada, and P. J. Harrison. 2011. Effects of temperature and irradiance on growth of strains belonging to seven *Skeletonema* species isolated from Dokai Bay, southern Japan . *European Journal of Phycology* 46:113–124.
- Kahn, S., O. A. &, and Y. Onoue. 1998. Physiological investigations of a neurotoxin-producing phytoflagellate, *Chattonella marina* (Raphidophyceae). *Aquaculture Research* 29:9–17.
- Kalyebi, A., W. Overholt, F. Schulthess, J. Mueke, and S. Sithanatham. 2006. The effect of temperature and humidity on the bionomics of six African egg parasitoids (Hymenoptera: Trichogrammatidae). *Bull. Entomol. Res.* 96:305–314.
- Karentz, D., and T. Smayda. 1984. Temperature and seasonal occurrence patterns of 30 dominant phytoplankton species in Narragansett Bay over a 22-year period (1959-1980). *Marine Ecology Progress Series* 18:277–293.
- Kasai, F., and T. Ichimura. 1990. Temperature optima of three closely related mating groups of the *Closterium ehrenbergii* (Chlorophyta) species complex. *Phycologia* 29:396–402.
- Khan, S., O. Arakawa, and Y. Onoue. 1996. Growth Characteristics of a Neurotoxin-Producing Chloromonad *Fibrocapsa japonica* (Raphidophyceae). *J World Aquaculture Soc* 27:247–253.
- Kim, J. H., M. O. Shin, K. L. Lee, and H. S. Kim. 2008. Effect of environmental conditions on the growth of *Synura petersenii* (Synurophyceae) in vitro and two eutrophic water bodies in Korea. *Nova Hedwigia* 86:529–544.
- Kim, K. 2005. Temperature Dependence of Photosynthesis in Arabidopsis Plants with Modifications in Rubisco Activase and Membrane Fluidity. *Plant and Cell Physiology* 46:522–530.
- KIM, S., D. GITZ, R. SICHER, J. BAKER, D. TIMLIN, and V. REDDY. 2007. Temperature dependence of growth, development, and photosynthesis in maize under elevated  $\text{CO}_2$ . *Environmental and Experimental Botany* 61:224–236.
- KISHI, D., M. MURAKAMI, S. NAKANO, and K. MAEKAWA. 2005. Water temperature determines strength of top-down control in a stream food web. *Freshwater Biology* 50:1315–1322.
- Kishimoto, N., Y. Ohnishi, M. Ohnishi, and I. Somiya. 1998. Effects of water temperature and light intensity on growth rate and death rate of freshwater dinoflagellate *Peridinium bipes*. *Japanese Journal of Limnology (Japan)* .

- Kitaya, Y., L. Xiao, A. Masuda, T. Ozawa, M. Tsuda, and K. Omasa. 2008. Effects of temperature, photosynthetic photon flux density, photoperiod and O<sub>2</sub> and CO<sub>2</sub> concentrations on growth rates of the symbiotic dinoflagellate, *Amphidinium* sp. *Journal of Applied Phycology* 20:737–742.
- Kittner, C., and H. Riisgård. 2005. Effect of temperature on filtration rate in the mussel *Mytilus edulis*: no evidence for temperature compensation. *Marine Ecology Progress Series* 305:147–152.
- Kivivuori, L. 1983. Temperature acclimation of walking in the crayfish *Astacus astacus* L. *Comparative Biochemistry and Physiology Part A: Physiology* 75:375–378.
- Knoblauch, C., and B. B. Jorgensen. 1999. Effect of temperature on sulphate reduction, growth rate and growth yield in five psychrophilic sulphate-reducing bacteria from Arctic sediments. *Environ Microbiol* 1:457–467.
- Knowles, T. W., and P. D. Weigl. 1990. Thermal Dependence of Anuran Burst Locomotor Performance. *Copeia* 1990:796.
- Komarek, J., and J. Ruzicka. 1969. Effect of temperature on the growth and variability of *Scenedesmus quadricauda* (Turp.) BrEb. *Studies in Phycology*. Academia, Prague pages 262–292.
- Konai, M., E. A. Clark, M. Camp, A. L. Koeh, and R. F. Whitcomb. 1996. Temperature Ranges, Growth Optima, and Growth Rates of *Spiroplasma* ( *Spiroplasmataceae* , class Mollicutes ) Species. *Current Microbiology* 32:314–319.
- Konopka, A., and T. D. Brock. 1978. Effect of temperature on blue-green algae (cyanobacteria) in Lake Mendota. *Applied and Environmental Microbiology* 36:572–576.
- Kotsyurbenko, O. R., M. V. Simankova, A. N. Nozhevnikova, T. N. Zhilina, N. P. Bolotina, A. M. Lysenko, and G. A. Osipov. 1995. New species of psychrophilic acetogens: *Acetobacterium bakii* sp. nov., *A. paludosum* sp. nov., *A. fimetarium* sp. nov. *Archives of Microbiology* 163:29–34.
- Kratz, W. A., and J. Myers. 1955. Nutrition and growth of several blue-green algae. *American Journal of Botany* pages 282–287.
- Krawiec, R. W. 1982. Autecology and clonal variability of the marine centric diatom *Thalassiosira rotula* (Bacillariophyceae) in response to light, temperature and salinity. *Marine Biology* 69:79–89.
- Kriedemann, P. 1968. Photosynthesis in vine leaves as a function of light intensity, temperature, and leaf age. *Vitis* 7:213–220.
- Krist, K. 1997. Description and mechanisms of bacterial growth responses to water activity and compatible solutes. Ph.D. thesis. University of Tasmania.
- . 1998. Final optical density and growth rate; effects of temperature and NaCl differ from acidity. *International Journal of Food Microbiology* 43:195–203.
- Krüger, G., and J. Eloff. 1978. The effect of temperature on specific growth rate and activation energy of *Microcystis* and *Synechococcus* isolates relevant to the onset of natural blooms. *Journal of the Limnological Society of southern Africa* 4:9–20.
- Krugner, R., K. M. Daane, A. B. Lawson, and G. Y. Yokota. 2007. Temperature-dependent development of *Macrocentrus iridescens* (Hymenoptera: Braconidae) as a parasitoid of the obliquebanded leafroller (Lepidoptera: Tortricidae): Implications for field synchrony of parasitoid and host. *Biological Control* 42:110–118.
- Ku, S.-B., G. E. Edwards, and C. B. Tanner. 1977. Effects of light, carbon dioxide, and temperature on photosynthesis, oxygen inhibition of photosynthesis, and transpiration in *Solanum tuberosum*. *Plant Physiology* 59:868–872.

- Kubien, D. S. 2003. C4 Photosynthesis at Low Temperature. A Study Using Transgenic Plants with Reduced Amounts of Rubisco. *PLANT PHYSIOLOGY* 132:1577–1585.
- Kübler, J. E., and I. R. Davison. 1993. High-temperature tolerance of photosynthesis in the red alga *Chondrus crispus*. *Marine Biology* 117:327–335.
- Kuebler, J. E., I. R. Davison, and C. Yarish. 1991. Photosynthetic adaptation to temperature in the red algae *Lomentaria baileyana* and *Lomentaria orcadensis*. *British Phycological Journal* 26:9–19.
- Kumar, D., and L. L. Tieszen. 1980. Photosynthesis in *Coffea arabica*. I. Effects of light and temperature. *Experimental Agriculture* 16:13–19.
- Kuo, M.-H., W.-N. Lu, M. C. Chiu, Y.-H. Kuo, and S.-H. Hwang. 2006. Temperature-dependent development and population growth of *Tetraneura nigriabdominalis* (Homoptera: Pemphigidae) on three host plants. *Journal of economic entomology* 99:1209–1213.
- Labate, C. A., and R. C. Leegood. 1988. Limitation of photosynthesis by changes in temperature. *Planta* 173:519–527.
- Langdon, C. 1987. On the causes of interspecific differences in the growth-irradiance relationship for phytoplankton. Part I. A comparative study of the growth-irradiance relationship of three marine phytoplankton species: *Skeletonema costatum*, *Olisthodiscus luteus* and *Gonyaulax tamarensis*. *Journal of Plankton Research* 9:459–482.
- Lange, O. L., J. Belnap, and H. Reichenberger. 1998. Photosynthesis of the cyanobacterial soil-crust lichen *Collema tenax* from arid lands in southern Utah, USA: role of water content on light and temperature responses of CO<sub>2</sub> exchange. *Functional Ecology* 12:195–202.
- Lange, O. L., and T. G. A. Green. 2004. Lichens show that fungi can acclimate their respiration to seasonal changes in temperature. *Oecologia* 142:11–19.
- Larimore, R. W., and M. J. Duever. 1968. Effects of Temperature Acclimation on the Swimming Ability of Smallmouth Bass Fry. *Transactions of the American Fisheries Society* 97:175–184.
- Larsen, A., S. Bryant, and U. Båmstedt. 1998. Growth rate and toxicity of *Prymnesium parvum* and *Prymnesium patelliferum* (Haptophyta) in response to changes in salinity, light and temperature. *Sarsia* 83:409–418.
- Ledig, F. T., and D. R. Korbobo. 1983. Adaptation of sugar maple populations along altitudinal gradients: photosynthesis, respiration, and specific leaf weight. *American Journal of Botany* pages 256–265.
- Lee, K. L., and H. S. Kim. 2007. Growth characteristics of three synurophytes (*Mallomonas* species) at different temperatures and pH. *Nova Hedwigia* 84:227–240.
- Lee, K. L., H.-S. Yoon, Y. J. Kim, and H. S. Kim. 2007. Growth characteristics of three *Mallomonas* species (silica-scaled chrysophytes) at different temperatures and pH. *Nordic Journal of Botany* 25:113–118.
- Lehtovirta-Morley, L. E., C. Ge, J. Ross, H. Yao, G. W. Nicol, and J. I. Prosser. 2014. Characterisation of terrestrial acidophilic archaeal ammonia oxidisers and their inhibition and stimulation by organic compounds. *FEMS Microbiol Ecol* 89:542–552.
- Lei, J., B. S. Payne, and S. Y. Wang. 1996. Filtration dynamics of the zebra mussel, *Dreissena polymorpha*. *Can. J. Fish. Aquat. Sci.* 53:29–37.
- Leigh, J. A., F. Mayer, and R. S. Wolfe. 1981. *Acetogenium kivui*, a new thermophilic hydrogen-oxidizing acetogenic bacterium. *Archives of Microbiology* 129:275–280.

- Lenz, M., R. A. Barrett, and E. R. Williams. 1982. Influence of diet on the survival and wood consumption of *Porotermes adamsoni* (Froggatt) (Isoptera: Termopsidae) at different temperatures. *BER* 72:423.
- Lenz, M., and E. Williams. 1986. CHANGING FEEDING PATTERNS OF POROTERMES-ADAMSONI (FROGGATT)(ISOPTERA, TERMOPSIDAE) DURING NO-CHOICE AND CHOICE TRIALS AT DIFFERENT TEMPERATURES ON SOUND AND DECAYED NEST WOOD. *Sociobiology* 11:215–226.
- Lenz, P. H., A. E. Hower, and D. K. Hartline. 2005. Temperature Compensation in the Escape Response of a Marine Copepod, *Calanus finmarchicus* (Crustacea). *Biological Bulletin* 209:75.
- Leroi, F., P. A. Fall, M. F. Pilet, F. Chevalier, and R. Baron. 2012. Influence of temperature, pH and NaCl concentration on the maximal growth rate of *Brochothrix thermosphacta* and a bioprotective bacteria *Lactococcus piscium* CNCM I-4031. *Food Microbiology* 31:222–228.
- Lester, W. W., M. S. Adams, and A. M. Farmer. 1988. Effects of light and temperature on photosynthesis of the nuisance alga *Cladophora glomerata* (L.) Kutz from Green Bay, Lake Michigan. *New phytologist* 109:53–58.
- Leuschner, C., and U. Rees. 1993. CO<sub>2</sub> gas exchange of two intertidal seagrass species, *Zostera marina* L. and *Zostera noltii* Hornem., during emersion. *Aquatic Botany* 45:53–62.
- Lewis, N., S. Bates, J. McLachlan, and J. Smith. 1993. Temperature effects on growth, domoic acid production, and morphology of the diatom *Nitzschia pungens* f. *multiseriata*. Toxic phytoplankton blooms in the sea pages 601–606.
- Li, D., G. Wang, L. Chen, F. Lü, and Z. Shen. 2009. Effects of Irradiance and Temperature on the Photosynthesis and Vegetative Propagation of *Caulerpa serrulata*. *Journal of integrative plant biology* 51:147–154.
- Lieth, J., and C. Pasion. 1990. A model for net photosynthesis of rose leaves as a function of photosynthetically active radiation, leaf temperature, and leaf age. *Journal of the American Society for Horticultural Science* 115:486–491.
- Lighton, J. R., G. A. Bartholomew, and D. H. Feener. 1987. Energetics of locomotion and load carriage and a model of the energy cost of foraging in the leaf-cutting ant *Atta colombica* Guer. *Physiological Zoology* pages 524–537.
- Lighton, J. R. B., and F. D. Duncan. 2002. Energy Cost of Locomotion: Validation of Laboratory Data by in situ Respirometry. *Ecology* 83:3517.
- Lindstrom, K. 1984. EFFECT OF TEMPERATURE, LIGHT AND pH ON GROWTH, PHOTOSYNTHESIS AND RESPIRATION OF THE DINOFLAGELLATE *PERIDINIUM CINCTUM* FA. WESTII IN LABORATORY CULTURES1. *Journal of Phycology* 20:212–220.
- Linley, J. R. 1986. Swimming Behavior of the Larva of *Culicoides Variipennis* (Diptera: Ceratopogonidae) and its Relationship to Temperature and Viscosity. *Journal of Medical Entomology* 23:473–483.
- Liu, X., and H. Ye. 2009. Effect of temperature on development and survival of *Bactrocera correcta* (Diptera: Tephritidae). *Scientific Research and Essay* 4:467–472.
- Londos, P. L., and R. J. Brooks. 1988. Effect of temperature acclimation on locomotory performance curves in the toad, *Bufo woodhousii* woodhousii. *Copeia* pages 26–32.
- Lovejoy, C., W. F. Vincent, S. Bonilla, S. Roy, M.-J. Martineau, R. Terrado, M. Potvin, R. Massana, and C. Pedrós-Alió. 2007. DISTRIBUTION, PHYLOGENY, AND GROWTH OF COLD-ADAPTED PICO-PRASINOPHYTES IN ARCTIC SEAS. *Journal of Phycology* 43:78–89.

- Ludlow, M., and G. Wilson. 1971. Photosynthesis of tropical pasture plants I. Illuminance, carbon dioxide concentration, leaf temperature, and leaf-air vapour pressure difference. *Australian Journal of Biological Sciences* 24:449–470.
- Lundholm, N., J. Skov, R. Pocklington, and Ø. Moestrup. 1997. Studies on the marine planktonic diatom *Pseudo-nitzschia*. 2. Autecology of *P. pseudodelicatissima* based on isolates from Danish coastal waters. *Phycologia* 36:381–388.
- LÜRLING, M., F. Eshetu, E. J. Faassen, S. Kosten, and V. L. Huszar. 2013. Comparison of cyanobacterial and green algal growth rates at different temperatures. *Freshwater Biology* 58:552–559.
- MABERLY, S. C. 1985. Photosynthesis by *fontinalis antipyretica*. i. interaction between photon irradiance, concentration of carbon dioxide and temperature. *New Phytologist* 100:127–140.
- Mackey, K. R., A. Paytan, K. Caldeira, A. R. Grossman, D. Moran, M. McIlvin, and M. A. Saito. 2013. Effect of temperature on photosynthesis and growth in marine *Synechococcus* spp. *Plant physiology* 163:815–829.
- MADDUX, W. S., and R. F. JONES. 1964. Some interactions of temperature, light intensity, and nutrient concentration during the continuous culture of *Nitzschia closterium* and *Tetraselmis* sp. *Limnol. Oceanogr.* 9:79–86.
- Marsh, A. C. 1985. Microclimatic factors influencing foraging patterns and success of the thermophilic desert ant, *Ocymyrmex barbiger*. *Insectes Sociaux* 32:286–296.
- Marsh, J. A., W. C. Dennison, and R. S. Alberte. 1986. Effects of temperature on photosynthesis and respiration in eelgrass (*Zostera marina* L.). *Journal of Experimental Marine Biology and Ecology* 101:257–267.
- Marsh, R. L., and A. F. Bennett. 1986. Thermal dependence of sprint performance of the lizard *Sceloporus occidentalis*. *Journal of Experimental Biology* 126:79–87.
- Marvin, G. A. 2003a. Aquatic and Terrestrial Locomotor Performance in a Semiaquatic Plethodontid Salamander (*Pseudotriton ruber*): Influence of Acute Temperature, Thermal Acclimation, and Body Size. *Copeia* 2003:704–713.
- . 2003b. Effects of acute temperature and thermal acclimation on aquatic and terrestrial locomotor performance of the three-lined salamander, *Eurycea guttolineata*. *Journal of Thermal Biology* 28:251–259.
- Mathieson, A. C., and R. L. Burns. 1971. Ecological studies of economic red algae. I. Photosynthesis and respiration of *Chondrus crispus* Stackhouse and *Gigartina stellata* (Stackhouse) Batters. *Journal of Experimental Marine Biology and Ecology* 7:197–206.
- Mathieson, A. C., and C. J. Dawes. 1974. Ecological studies of Floridian *Eucheuma* (Rhodophyta, Gigartinales). II. Photosynthesis and respiration. *Bulletin of Marine Science* 24:274–285.
- Mayo, A. W. 1997. Effects of temperature and pH on the kinetic growth of unialga *Chlorella vulgaris* cultures containing bacteria. *Water environment research* pages 64–72.
- McCaffrey, J. P., and R. L. Horsburgh. 1986. Functional Response of *Orius insidiosus* (Hemiptera: Anthracoridae) to the European Red Mite, *Panonychus ulmi* (Acari: Tetranychidae), at Different Constant Temperatures. *Environmental Entomology* 15:532–535.
- McCombie, A. M. 1960. Actions and interactions of temperature, light intensity and nutrient concentration on the growth of the green alga, *Chlamydomonas reinhardi* Dangeard. *Journal of the Fisheries Board of Canada* 17:871–894.
- McCoull, C., R. Swain, and R. Barnes. 1998. Effect of temperature on the functional response and components of attack rate in *Naucoris congrex* Stål (Hemiptera: Naucoridae). *Australian Journal of Entomology* 37:323–327.

- McKay, L., D. Kamykowski, E. Milligan, B. Schaeffer, and G. Sinclair. 2006. Comparison of swimming speed and photophysiological responses to different external conditions among three *Karenia brevis* strains. *Harmful Algae* 5:623–636.
- McLeese, D., and D. Wilder. 1958. The activity and catchability of the lobster (*Homarus americanus*) in relation to temperature. *Journal of the Fisheries Board of Canada* 15:1345–1354.
- McMeekin, T. A., and P. D. Franzmann. 1988. Effect of temperature on the growth rates of halotolerant and halophilic bacteria isolated from Antarctic saline lakes. *Polar Biol* 8:281–285.
- Meade, M. E., J. E. Doeller, D. Kraus, and S. A. Watts. 2002. Effects of Temperature and Salinity on Weight Gain, Oxygen Consumption Rate, and Growth Efficiency in Juvenile Red-Claw Crayfish *Cherax quadricarinatus*. *Journal of the World Aquaculture Society* 33:188–198.
- Mehnert, G., F. Leunert, S. Cirés, K. D. Jöhnk, J. Rucker, B. Nixdorf, and C. Wiedner. 2010. Competitiveness of invasive and native cyanobacteria from temperate freshwaters under various light and temperature conditions. *Journal of Plankton Research* 32:1009–1021.
- Meier, K. S. 2004. Effect of temperature on culture growth and cyst production in the calcareous dinoflagellates *Calciodinellum albatrosianum*, *Leonella granifera* and *Pernambugia tuberosa*. *Micropaleontology* 50:93–106.
- MEMBRE, J., B. LEPORQ, M. VIALETTE, E. METTLER, L. PERRIER, D. THUAULT, and M. ZWIETERING. 2005. Temperature effect on bacterial growth rate: quantitative microbiology approach including cardinal values and variability estimates to perform growth simulations on/in food. *International Journal of Food Microbiology* 100:179–186.
- Menon, A., P. W. Flinn, and B. A. Dover. 2002. Influence of temperature on the functional response of *Anisopteromalus calandrae* (Hymenoptera: Pteromalidae), a parasitoid of *Rhyzopertha dominica* (Coleoptera: Bostrichidae). *Journal of Stored Products Research* 38:463–469.
- Messenger, P., and D. Force. 1963. An Experimental Host-Parasite System: *Therioaphis maculata* (Buckton)-*Praon palitans* Muesebeck (Homoptera: Aphididae–Hymenoptera: Braconidae). *Ecology* 44:532–540.
- Messenger, P. S. 1968. BIOCLIMATIC STUDIES OF THE APHID PARASITE *PRAON EXSOLETUM*: I. EFFECTS OF TEMPERATURE ON THE FUNCTIONAL RESPONSE OF FEMALES TO VARYING HOST DENSITIES. *The Canadian Entomologist* 100:728–741.
- Miller, K. 1982. Effect of Temperature on Sprint Performance in the Frog *Xenopus laevis* and the Salamander *Necturus maculosus*. *Copeia* 1982:695.
- Miller, R. L., and D. L. Kamykowski. 1986. EFFECTS OF TEMPERATURE, SALINITY, IRRADIANCE AND DIURNAL PERIODICITY ON GROWTH AND PHOTOSYNTHESIS IN THE DIATOM *NITZSCHIA AMERICANA*; LIGHT-SATURATED GROWTH. *Journal of Phycology* 22:339–348.
- Mitrovic, S. M., J. N. Hitchcock, A. W. Davie, and D. A. Ryan. 2010. Growth responses of *Cyclotella meneghiniana* (Bacillariophyceae) to various temperatures. *Journal of plankton research* 32:1217–1221.
- Miyamoto, K., P. C. Hallenbeck, and J. R. Benemann. 1979. Nitrogen fixation by thermophilic blue-green algae (cyanobacteria): temperature characteristics and potential use in biophotolysis. *Applied and environmental microbiology* 37:454–458.
- Mjaaland, G. 1956. Some Laboratory Experiments on the Coccolithophorid *Coccolithus huxleyi*. *Oikos* 7:251.
- Mohaghegh, D. Clercq, and Tirry. 2001. Functional response of the predators *Podisus maculiventris* (Say) and *Podisus nigrispinus* (Dallas) (Het., Pentatomidae) to the beet armyworm, *Spodoptera exigua* (Hubner) (Lep., Noctuidae): effect of temperature. *J Appl Entomology* 125:131–134.



- Monson, R. K., C. H. Jaeger, W. W. Adams, E. M. Driggers, G. M. Silver, and R. Fall. 1992. Relationships among Isoprene Emission Rate, Photosynthesis, and Isoprene Synthase Activity as Influenced by Temperature. *PLANT PHYSIOLOGY* 98:1175–1180.
- Monson, R. K., R. O. Littlejohn Jr, and G. J. Williams III. 1983. Photosynthetic adaptation to temperature in four species from the Colorado shortgrass steppe: a physiological model for coexistence. *Oecologia* 58:43–51.
- Monson, R. K., M. A. Stidham, G. J. Williams, G. E. Edwards, and E. G. Uribe. 1982. Temperature Dependence of Photosynthesis in *Agropyron smithii* Rydb. : I. FACTORS AFFECTING NET CO<sub>2</sub> UPTAKE IN INTACT LEAVES AND CONTRIBUTION FROM RIBULOSE-1,5-BISPHOSPHATE CARBOXYLASE MEASURED IN VIVO AND IN VITRO. *PLANT PHYSIOLOGY* 69:921–928.
- Montagnes, D. J., and M. Franklin. 2001. Effect of temperature on diatom volume, growth rate, and carbon and nitrogen content: reconsidering some paradigms. *Limnology and Oceanography* 46:2008–2018.
- Montresor, M., and C. R. Tomas. 1988. GROWTH AND PROBABLE GAMETE FORMATION IN THE MARINE DINOFLAGELLATE *CERATIUM SCHRANKII*. *Journal of Phycology* 24:495–502.
- Mooney, H., and M. West. 1964. Photosynthetic acclimation of plants of diverse origin. *American Journal of Botany* pages 825–827.
- Mooney, H. A. 1980. Photosynthetic plasticity of populations of *Heliotropium curassavicum* L. originating from differing thermal regimes. *Oecologia* 45:372–376.
- Mooney, H. A., O. Björkman, and G. J. Collatz. 1978. Photosynthetic acclimation to temperature in the desert shrub, *Larrea divaricata* I. Carbon dioxide exchange characteristics of intact leaves. *Plant Physiology* 61:406–410.
- Moore, L., R. Goericke, and S. Chisholm. 1995. Comparative physiology of *Synechococcus* and *Prochlorococcus*: influence of light and temperature on growth, pigments, fluorescence and absorptive properties. *Marine Ecology Progress Series* 116:259–275.
- Morehead, S. A., and D. H. F. Jr. 1998. Foraging behavior and morphology: seed selection in the harvester ant genus, *Pogonomyrmex*. *Oecologia* 114:548–555.
- Morris, E. P., and J. C. Kromkamp. 2003. Influence of temperature on the relationship between oxygen- and fluorescence-based estimates of photosynthetic parameters in a marine benthic diatom (*Cylindrotheca closterium*) . *European Journal of Phycology* 38:133–142.
- Mortensen, S. H., K. Y. Børsheim, J. Rainuzzo, and G. Knutsen. 1988. Fatty acid and elemental composition of the marine diatom *Chaetoceros gracilis* Schütt. Effects of silicate deprivation, temperature and light intensity. *Journal of Experimental Marine Biology and Ecology* 122:173–185.
- Morton, S. L., D. R. Norris, and J. W. Bomber. 1992. Effect of temperature, salinity and light intensity on the growth and seasonality of toxic dinoflagellates associated with ciguatera. *Journal of experimental marine biology and ecology* 157:79–90.
- Moss, B. 1973. The Influence of Environmental Factors on the Distribution of Freshwater Algae: An Experimental Study: III. Effects of Temperature, Vitamin Requirements and Inorganic Nitrogen Compounds on Growth. *The Journal of Ecology* pages 179–192.
- Mtimet, N., C. Trunet, A.-G. Mathot, L. Venaille, I. Leguérinel, L. Coroller, and O. Couvert. 2015. Modeling the behavior of *Geobacillus stearothermophilus* ATCC 12980 throughout its life cycle as vegetative cells or spores using growth boundaries. *Food Microbiology* 48:153–162.
- Muller, H. v. 1972. Wachstum und Phosphat-bedurf von *Nitzschia actinastroides* (Lemn.) V. Goor. in statischer und homokontinuierlicher Kultur unter Phosphat-limitierung. *Arch. Hydrobiol* pages 399–484.

- Myking, T. 1997. Effects of constant and fluctuating temperature on time to budburst in *Betula pubescens* and its relation to bud respiration. *Trees* 12:107–112.
- Nadgauda, D., and H. N. Pitre. 1986. Effects of Temperature on Feeding, Development, Fecundity, and Longevity of *Nabis roseipennis* (Hemiptera: Nabidae) Fed Tobacco Budworm (Lepidoptera: Noctuidae) Larvae and Tarnished Plant Bug (Hemiptera: Miridae) Nymphs. *Environmental Entomology* 15:536–539.
- Nagasoe, S., D.-I. Kim, Y. Shimasaki, Y. Oshima, M. Yamaguchi, and T. Honjo. 2006. Effects of temperature, salinity and irradiance on the growth of the red tide dinoflagellate *Gyrodinium instriatum* Freudenthal et Lee. *Harmful algae* 5:20–25.
- Nakamura, Y., and M. M. Watanabe. 1983. Growth characteristics of *Chattonella antiqua* (Raphidophyceae). *Journal of the Oceanographical Society of Japan* 39:110–114.
- Nalewajko, C., and T. P. Murphy. 2001. Effects of temperature, and availability of nitrogen and phosphorus on the abundance of *Anabaena* and *Microcystis* in Lake Biwa, Japan: an experimental approach. *Limnology* 2:45–48.
- Navarro, J., G. Leiva, G. Martinez, and C. Aguilera. 2000. Interactive effects of diet and temperature on the scope for growth of the scallop *Argopecten purpuratus* during reproductive conditioning. *Journal of Experimental Marine Biology and Ecology* 247:67–83.
- Navas, C. A. 1996. Metabolic Physiology, Locomotor Performance, and Thermal Niche Breadth in Neotropical Anurans. *Physiological Zoology* 69:1481–1501.
- Nedwell, D., and M. Rutter. 1994. Influence of temperature on growth rate and competition between two psychrotolerant Antarctic bacteria: low temperature diminishes affinity for substrate uptake. *Applied and Environmental Microbiology* 60:1984–1992.
- Neilson, R. E., M. M. Ludlow, and P. G. Jarvis. 1972. Photosynthesis in Sitka Spruce (*Picea sitchensis* (Bong.) Carr.). II. response to temperature. *The Journal of Applied Ecology* 9:721.
- Nevot, M., V. Deroncelé, M. J. Montes, and E. Mercade. 2008. Effect of incubation temperature on growth parameters of *Pseudoalteromonas antarctica* NF 3 and its production of extracellular polymeric substances . *Journal of Applied Microbiology* 105:255–263.
- Newell, R., and V. Pye. 1968. Seasonal variations in the effect of temperature on the respiration of certain intertidal algae. *Journal of the Marine Biological Association of the United Kingdom* 48:341–348.
- Newell, R. C., L. G. Johson, and L. H. Kofoed. 1977. Adjustment of the components of energy balance in response to temperature change in *Ostrea edulis*. *Oecologia* 30:97–110.
- Nielsen, M. 1996. Growth and chemical composition of the toxic dinoflagellate *Gymnodinium galatheanum* in relation to irradiance, temperature and salinity. *Marine Ecology Progress Series* 136:205–211.
- Nielsen, M. V., and C. P. Tønseth. 1991. Temperature and salinity effect on growth and chemical composition of *Gyrodinium aureolum* Hulburt in culture . *J Plankton Res* 13:389–398.
- Nishibori, N., T. Nishijima, Y. Onoda, and Y. Hata. 1991. Effects of light intensity, temperature, pH, and nitrogenous nutrient on the growth of *Peridinium bipes* fo. *occultatum* [in the lakes, Japan]. *Bulletin of the Japanese Society of Scientific Fisheries* (Japan) .
- Nishikawa, T., and M. Yamaguchi. 2006. Effect of temperature on light-limited growth of the harmful diatom *Eucampia zodiacus* Ehrenberg, a causative organism in the discoloration of *Porphyra thalli*. *Harmful Algae* 5:141–147.

- Niu, C., D. Lee, S. Goshima, and S. Nakao. 2003. Effects of temperature on food consumption, growth and oxygen consumption of freshwater prawn *Macrobrachium rosenbergii* (de Man 1879) postlarvae. *Aquaculture Research* 34:501–506.
- Nordli, E. 1957. Experimental Studies on the Ecology of Ceratia. *Oikos* 8:200.
- Nozhevnikova, A., M. Simankova, S. Parshina, and O. Kotsyurbenko. 2001. Temperature characteristics of methanogenic archaea and acetogenic bacteria isolated from cold environments. *Water science and technology* 44:41–48.
- Oertli, J. 1989. Relationship of wing beat frequency and temperature during take-off flight in temperate-zone beetles. *Journal of experimental biology* 145:321–338.
- Ohkubo, N., O. Yagi, and M. Okada. 1991. Effects of temperature and illumination on the growth of blue-green alga *Microcystis viridis*. *Japanese Journal of Limnology (Rikusuigaku Zasshi)* 52:255–261.
- Ojala, A. 1993. EFFECTS OF TEMPERATURE AND IRRADIANCE ON THE GROWTH OF TWO FRESH-WATER PHOTOSYNTHETIC CRYPTOPHYTES. *Journal of phycology* 29:278–284.
- Ono, K., S. Khan, and Y. Onoue. 2000. Effects of temperature and light intensity on the growth and toxicity of *Heterosigma akashiwo* (Raphidophyceae). *Aquaculture Research* 31:427–433.
- Orr, P. T., J. Pokorný, P. Denny, and P. J. Sale. 1988. Photosynthetic response of *Myriophyllum salicifolium* AE Orchard to photon irradiance, temperature and external free CO<sub>2</sub>. *Aquatic botany* 30:363–378.
- Oshiki, M., M. Shimokawa, N. Fujii, H. Satoh, and S. Okabe. 2011. Physiological characteristics of the anaerobic ammonium-oxidizing bacterium *Candidatus Brocadia sinica*. *Microbiology* 157:1706–1713.
- O'Steen, S., and A. F. Bennett. 2003. Thermal acclimation effects differ between voluntary, maximum, and critical swimming velocities in two cyprinid fishes. *Physiological and Biochemical Zoology* 76:484–496.
- Paarup, M., M. W. Friedrich, B. J. Tindall, and K. Finster. 2005. Characterization of the psychrotolerant acetogen strain SyrA5 and the emended description of the species *Acetobacterium carbinolicum*. *Antonie Van Leeuwenhoek* 89:55–69.
- Paasche, E. 1967. Marine Plankton Algae Grown with Light-Dark Cycles. I. *Coccolithus huxleyi*. *Physiologia Plantarum* 20:946–956.
- . 1968. Marine Plankton Algae Grown with Light-Dark Cycles. *Physiologia plantarum* 21:66–77.
- Padilla-Gamino, J. L., and R. C. Carpenter. 2007. Seasonal acclimatization of *Asparagopsis taxiformis* (Rhodophyta) from different biogeographic regions. *Limnology and oceanography* 52:833–842.
- PALTA, J. A., and P. S. NOBEL. 1989a. Influences of water status, temperature, and root age on daily patterns of root respiration for two cactus species. *Annals of Botany* 63:651–662.
- . 1989b. Root respiration for *Agave deserti*: influence of temperature, water status and root age on daily patterns. *Journal of Experimental Botany* 40:181–186.
- Patel, B. K. C., C. Monk, H. Littleworth, H. W. Morgan, and R. M. Daniel. 1987. *Clostridium fervidus* sp. nov., a New Chemoorganotrophic Acetogenic Thermophile. *International Journal of Systematic Bacteriology* 37:123–126.
- Patterson, D. T., and D. A. Mortensen. 1985. Effects of temperature and photoperiod on common crupina (*Crupina vulgaris*). *Weed Science* pages 333–339.
- Paul, M., D. Lawlor, and S. P. DRISCOLL. 1990. The effect of temperature on photosynthesis and carbon fluxes in sunflower and rape. *Journal of Experimental Botany* 41:547–555.

- Pearcy, R., A. Harrison, H. Mooney, and O. Björkman. 1974. Seasonal changes in net photosynthesis of *Atriplex hymenelytra* shrubs growing in Death Valley, California. *Oecologia* 17:111–121.
- Pearcy, R. W. 1977. Acclimation of Photosynthetic and Respiratory Carbon Dioxide Exchange to Growth Temperature in *Atriplex lentiformis* (Torr.) Wats. *PLANT PHYSIOLOGY* 59:795–799.
- Pérez, M., and J. Romero. 1992. Photosynthetic response to light and temperature of the seagrass *Cymodocea nodosa* and the prediction of its seasonality. *Aquatic Botany* 43:51–62.
- Pérez-Lloréns, J., and F. X. Niell. 1993. Temperature and emergence effects on the net photosynthesis of two *Zostera noltii* Hornem. morphotypes. *Hydrobiologia* 254:53–64.
- PERSSON, L. 1979. The effects of temperature and different food organisms on the rate of gastric evacuation in perch (*Perca fluviatilis*). *Freshwater Biology* 9:99–104.
- Persson, L. 1986. Temperature-Induced Shift in Foraging Ability in Two Fish Species, Roach (*Rutilus rutilus*) and Perch (*Perca fluviatilis*): Implications for Coexistence between Poikilotherms. *The Journal of Animal Ecology* 55:829.
- Peterson, R. H., and J. M. Anderson. 1969. Influence of Temperature Change on Spontaneous Locomotor Activity and Oxygen Consumption of Atlantic Salmon, *Salmo salar*, Acclimated to Two Temperatures. *J. Fish. Res. Bd. Can.* 26:93–109.
- Petron, G., P. Harley, J. Greenberg, and A. Guenther. 2001. Seasonal temperature variations influence isoprene emission. *Geophysical Research Letters* 28:1707–1710.
- Pilon, J., and L. Santamaria. 2001. Seasonal acclimation in the photosynthetic and respiratory temperature responses of three submerged freshwater macrophyte species. *New Phytologist* 151:659–670.
- Pittermann, J., and R. F. Sage. 2001. The response of the high altitude C4 grass *Muhlenbergia montana* (Nutt.) AS Hitchc. to long- and short-term chilling. *Journal of Experimental Botany* 52:829–838.
- Podolsky, R., and R. Emlet. 1993. Separating the effects of temperature and viscosity on swimming and water movement by sand dollar larvae (*Dendraster excentricus*). *The Journal of Experimental Biology* 176:207–222.
- Post, A. F., R. de Wit, and L. R. Mur. 1985. Interactions between temperature and light intensity on growth and photosynthesis of the cyanobacterium *Oscillatoria agardhii*. *Journal of Plankton Research* 7:487–495.
- Putnam, R. W., and A. F. Bennett. 1981. Thermal dependence of behavioural performance of anuran amphibians. *Animal Behaviour* 29:502–509.
- Qin, J. G., and Y. Li. 2006. Optimization of the growth environment of *Botryococcus braunii* strain CHN 357. *Journal of Freshwater Ecology* 21:169–176.
- RAFIQUL, I. M., A. Hassan, G. Sulebele, C. Orosco, and P. Roustaian. 2003. Influence of temperature on growth and biochemical composition of *Spirulina platensis* and *S. fusiformis*.
- Raimbault, P. 1984. Influence of temperature on the transient response in nitrate uptake and reduction by four marine diatoms. *Journal of experimental marine biology and ecology* 84:37–53.
- Rand, A. S. 1964. Inverse Relationship Between Temperature and Shyness in the Lizard *Anolis Lineatopus*. *Ecology* 45:863–864.
- Rao, K. P. 1953. Rate of Water Propulsion in *Mytilus Californianus* as a Function of Latitude. *Biological Bulletin* 104:171.

- Rapala, J., and K. Sivonen. 1998. Assessment of environmental conditions that favor hepatotoxic and neurotoxic *Anabaena* spp. strains cultured under light limitation at different temperatures. *Microbial Ecology* 36:181–192.
- Rastorfer, J. R. 1970. Effects of Light Intensity and Temperature on Photosynthesis and Respiration of Two East Antarctic Mosses, *Bryum argenteum* and *Bryum antarcticum*. *The Bryologist* 73:544.
- Ratkowsky, D. A., J. Olley, and T. Ross. 2005. Unifying temperature effects on the growth rate of bacteria and the stability of globular proteins. *Journal of Theoretical Biology* 233:351–362.
- Read, J. 1990. Some Effects of Acclimation Temperature on Net Photosynthesis in Some Tropical and Extra-Tropical Australasian *Nothofagus* Species. *The Journal of Ecology* 78:100.
- Reay, D. S., D. B. Nedwell, J. Priddle, and J. C. Ellis-Evans. 1999. Temperature dependence of inorganic nitrogen uptake: reduced affinity for nitrate at suboptimal temperatures in both algae and bacteria. *Applied and Environmental Microbiology* 65:2577–2584.
- Regehr, D. L., and F. Bazzaz. 1976. Low temperature photosynthesis in successional winter annuals. *Ecology* pages 1297–1303.
- Reicosky, D., P. Brown, and M. Moran. 1994. Diurnal trends in wheat canopy temperature, photosynthesis, and evapotranspiration. *Remote Sensing of Environment* 49:235–245.
- Renaud, J. M., and E. D. Stevens. 1983. The extent of long-term temperature compensation for jumping distance in the frog, *Rana pipiens*, and the toad, *Bufo americanus*. *Can. J. Zool.* 61:1284–1287.
- Renaud, S. M., L.-V. Thinh, G. Lambrinidis, and D. L. Parry. 2002. Effect of temperature on growth, chemical composition and fatty acid composition of tropical Australian microalgae grown in batch cultures. *Aquaculture* 211:195–214.
- Renaud, S. M., H. C. Zhou, D. L. Parry, L.-V. Thinh, and K. C. Woo. 1995. Effect of temperature on the growth, total lipid content and fatty acid composition of recently isolated tropical microalgae *Isochrysis* sp., *Nitzschia closterium*, *Nitzschia paleacea*, and commercial species *Isochrysis* sp. (clone T.ISO). *J Appl Phycol* 7:595–602.
- Rengefors, K., G. A. Weyhenmeyer, and I. Bloch. 2012. Temperature as a driver for the expansion of the microalga *Gonyostomum semen* in Swedish lakes. *Harmful algae* 18:65–73.
- Reynolds, W. W., and M. E. Casterlin. 1979. Behavioral thermoregulation and activity in *Homarus americanus*. *Comparative Biochemistry and Physiology Part A: Physiology* 64:25–28.
- Rhee, G., I. J. Gotham, et al. 1981. The effect of environmental factors on phytoplankton growth: temperature and the interactions of temperature with nutrient limitation. *Limnology and Oceanography* 26:635–648.
- Rhodes, L. L., B. M. Peake, A. L. MacKenzie, and S. Marwick. 1995. Coccolithophores *Gephyrocapsa oceanica* and *Emiliania huxleyi* (Prymnesiophyceae= Haptophyceae) in New Zealand's coastal waters: characteristics of blooms and growth in laboratory culture. *New Zealand Journal of Marine and Freshwater Research* 29:345–357.
- Richards, S., and C. Bull. 1990. Size-limited predation on tadpoles of three Australian frogs. *Copeia* pages 1041–1046.
- Rigatuso, R., S. M. R. Bertoluzzo, F. E. Quattrin, and M. G. Bertoluzzo. 2000. Ant Activity Associated with a Chemical Compound. *J. Chem. Educ.* 77:183.
- Riisgård, H. U., and D. F. Seerup. 2003. Filtration rates in the soft clam *Mya arenaria*: effects of temperature and body size. *Sarsia* 88:416–428.

- Rissing, S. W. 1982. Foraging Velocity of Seed-Harvester Ants, *Veromessor pergandei* (Hymenoptera: Formicidae). *Environmental Entomology* 11:905–907.
- Robakowski, P., P. Montpied, and E. Dreyer. 2002. Temperature response of photosynthesis of silver fir (*Abies alba* Mill.) seedlings. *Ann. For. Sci.* 59:163–170.
- Robichaux, R. H., and R. W. Pearcy. 1980. Photosynthetic responses of C3 and C4 species from cool shaded habitats in Hawaii. *Oecologia* 47:106–109.
- Robinson, J. L., B. Pyzyrna, R. G. Atrasz, C. A. Henderson, K. L. Morrill, A. M. Burd, E. DeSoucy, R. E. Fogleman, J. B. Naylor, S. M. Steele, D. R. Elliott, K. J. Leyva, and R. F. Shand. 2005. Growth Kinetics of Extremely Halophilic Archaea (Family Halobacteriaceae) as Revealed by Arrhenius Plots. *Journal of Bacteriology* 187:923–929.
- Ruberson, J., C. Tauber, and M. Tauber. 1995. Developmental Effects of Host and Temperature on *Telenomus* spp (Hymenoptera: Scelionidae) Parasitizing Chrysopid Eggs. *Biological Control* 5:245–250.
- Runjie, Z., K. L. Heong, and I. T. Domingo. 1996. Relationship Between Temperature and Functional Response in *Cardiochiles philippinensis* (Hymenoptera: Braconidae), a Larval Parasitoid of *Cnaphalocrocis medinalis* (Lepidoptera: Pyralidae). *Environmental Entomology* 25:1321–1324.
- Ruyet, J. P.-L., K. Mahé, N. L. Bayon, and H. L. Delliou. 2004. Effects of temperature on growth and metabolism in a Mediterranean population of European sea bass, *Dicentrarchus labrax*. *Aquaculture* 237:269–280.
- Ryther, J. H. 1954. The Ecology of Phytoplankton Blooms in Moriches Bay and Great South Bay, Long Island, New York. *Biological Bulletin* 106:198.
- Sabour, B., B. Sbiyyaa, M. Loudiki, B. Oudra, M. Belkoura, and V. Vasconcelos. 2009. Effect of light and temperature on the population dynamics of two toxic bloom forming Cyanobacteria–*Microcystis ichthyoblabe* and *Anabaena aphanizomenoides*. *Chemistry and Ecology* 25:277–284.
- Sage, R. F., and T. D. Sharkey. 1987. The effect of temperature on the occurrence of O<sub>2</sub> and CO<sub>2</sub> insensitive photosynthesis in field grown plants. *Plant Physiology* 84:658–664.
- Saker, M. L., and G. K. Eaglesham. 1999. The accumulation of cylindrospermopsin from the cyanobacterium *Cylindrospermopsis raciborskii* in tissues of the Redclaw crayfish *Cherax quadricarinatus*. *Toxicon* 37:1065–1077.
- Salvucci, M. E., and S. J. Crafts-Brandner. 2004. Relationship between the heat tolerance of photosynthesis and the thermal stability of Rubisco activase in plants from contrasting thermal environments. *Plant Physiology* 134:1460–1470.
- Sánchez, J., J. Fernández-Sevilla, F. Acién, M. Cerón, J. Pérez-Parra, and E. Molina-Grima. 2008. Biomass and lutein productivity of *Scenedesmus almeriensis*: influence of irradiance, dilution rate and temperature. *Applied microbiology and biotechnology* 79:719–729.
- Sanchez-Salazar, M., C. Griffiths, and R. Seed. 1987. The effect of size and temperature on the predation of cockles *Cerastoderma edule* (L.) by the shore crab *Carcinus maenas* (L.). *Journal of Experimental Marine Biology and Ecology* 111:181–193.
- Sandnes, J., T. Källqvist, D. Wenner, and H. R. Gislerød. 2005. Combined influence of light and temperature on growth rates of *Nannochloropsis oceanica*: linking cellular responses to large-scale biomass production. *Journal of Applied Phycology* 17:515–525.
- Schöne, H. K. 1982. The influence of light and temperature on the growth rates of six phytoplankton species from the upwelling area off northwest africa. *Rapp. Pv. Reun. Cons. Int. Explor. Mer* 189:246–253.

- Scribner, S. J., and P. J. Weatherhead. 1995. Locomotion and antipredator behaviour in three species of semi-aquatic snakes. *Can. J. Zool.* 73:321–329.
- Seaburg, K. G., B. C. Parked, R. A. Wharton, and G. M. Simmons. 1981. TEMPERATURE-GROWTH RESPONSES OF ALGAL ISOLATES FROM ANTARCTIC OASES. *Journal of Phycology* 17:353–360.
- Seemann, J. R., J. A. Berry, and W. J. S. Downton. 1984. Photosynthetic Response and Adaptation to High Temperature in Desert Plants A Comparison of Gas Exchange and Fluorescence Methods for Studies of Thermal Tolerance. *Plant Physiology* 75:364–368.
- Seemann, J. R., W. J. S. Downton, and J. A. Berry. 1986. Temperature and leaf osmotic potential as factors in the acclimation of photosynthesis to high temperature in desert plants. *Plant Physiology* 80:926–930.
- Seguel, M. R. 1992. Interactive effects of temperature-light and temperature-salinity on growth of five phytoplanktonic species isolated from a shallow-water embayment of Nova Scotia.
- Seki, H., H. Ozawa, and S.-e. Ichimura. 1981. Temperature dependence of filament length of *Anabaena spiroides* Klebahn var. *crassa* Lemm. *Hydrobiologia* 83:419–423.
- Senft, W. H., R. A. Hunchberger, and K. E. Roberts. 1981. TEMPERATURE DEPENDENCE OF GROWTH AND PHOSPHORUS UPTAKE IN TWO SPECIES OF VOLVOX (VOLVOCALES, CHLOROPHYTA). *Journal of Phycology* 17:323–329.
- Seymour, R. S., and P. Schultze-Motelf. 1999. Respiration, temperature regulation and energetics of thermogenic inflorescences of the dragon lily *Dracunculus vulgaris* (Araceae). *Proceedings of the Royal Society B: Biological Sciences* 266:1975–1983.
- Shapley, H. 1920. Thermokinetics of *Liometopum Apiculatum* Mayr. *Proceedings of the National Academy of Sciences* 6:204–211.
- . 1924. Note on the Thermokinetics of Dolichoderine Ants. *Proceedings of the National Academy of Sciences* 10:436–439.
- Sharkey, T. D., and F. Loreto. 1993. Water stress, temperature, and light effects on the capacity for isoprene emission and photosynthesis of kudzu leaves. *Oecologia* 95:328–333.
- Simankova, M. V., O. R. Kotsyurbenko, E. Stackebrandt, N. A. Kostrikina, A. M. Lysenko, G. A. Osipov, and A. N. Nozhevnikova. 2000. *Acetobacterium tundrae* sp. nov., a new psychrophilic acetogenic bacterium from tundra soil. *Archives of Microbiology* 174:440–447.
- Simpson, P., and J. Eaton. 1986. Comparative studies of the photosynthesis of the submerged macrophyte *Elodea canadensis* and the filamentous algae *Cladophora glomerata* and *Spirogyra* sp. *Aquatic Botany* 24:1–12.
- Sinsawat, V., J. Leipner, P. Stamp, and Y. Fracheboud. 2004. Effect of heat stress on the photosynthetic apparatus in maize (*Zea mays* L.) grown at control or high temperature. *Environmental and Experimental Botany* 52:123–129.
- Skillman, J. B., B. R. Strain, and C. B. Osmond. 1996. Contrasting patterns of photosynthetic acclimation and photoinhibition in two evergreen herbs from a winter deciduous forest. *Oecologia* 107:446–455.
- Smayda, T. J. 1969. EXPERIMENTAL OBSERVATIONS ON THE INFLUENCE OF TEMPERATURE, LIGHT, AND SALINITY ON CELL DIVISION OF THE MARINE DIATOM, *DETONULA CONFERVACEA* (CLEVE) GRAN2. *Journal of Phycology* 5:150–157.
- Smith, C. M., and J. A. Berry. 1986. Recovery of photosynthesis after exposure of intertidal algae to osmotic and temperature stresses: comparative studies of species with differing distributional limits. *Oecologia* 70:6–12.

- Smith, D. G. 1997. Ecological factors influencing the antipredator behaviors of the ground skink, *Scincella lateralis*. *Behavioral Ecology* 8:622–629.
- Smith, E. M., and E. B. Hadley. 1974. Photosynthetic and respiratory acclimation to temperature in *Ledum groenlandicum* populations. *Arctic and Alpine Research* pages 13–27.
- Smith, G. R., and J. A. Lemos-Espinal. 2005. COMPARATIVE ESCAPE BEHAVIOR OF FOUR SPECIES OF MEXICAN PHRYNOSOMATID LIZARDS. *Herpetologica* 61:225–232.
- Smith, L. 1994. Temperature Influences Functional Response of *Anisopteromalus calandrae* (Hymenoptera: Pteromalidae) Parasitizing Maize Weevil Larvae in Shelled Corn. *Annals of the Entomological Society of America* 87:849–855.
- Smith, R. E., L. C. Stapleford, and R. S. Ridings. 1994. THE ACCLIMATED RESPONSE OF GROWTH, PHOTOSYNTHESIS, COMPOSITION, AND CARBON BALANCE TO TEMPERATURE IN THE PSYCHROPHILIC ICE DIATOM *NITZSCHIA SERIATA*. *Journal of phycology* 30:8–16.
- Sorokin, C. 1960. Kinetic studies of temperature effects on the cellular level. *Biochimica et biophysica acta* 38:197–204.
- Sosik, H. M., and B. G. Mitchell. 1994. EFFECTS OF TEMPERATURE ON GROWTH, LIGHT ABSORPTION, AND QUANTUM YIELD IN *DUNALIELLA TERTIOLECTA* (CHLOROPHYCEAE). *Journal of Phycology* 30:833–840.
- Spencer, W. E., and R. G. Wetzel. 1993. Acclimation of photosynthesis and dark respiration of a submersed angiosperm beneath ice in a temperate lake. *Plant physiology* 101:985–991.
- Staehr, P. A., and M. J. Birkeland. 2006. Temperature acclimation of growth, photosynthesis and respiration in two mesophilic phytoplankton species. *Phycologia* 45:648–656.
- Stamenković, M., and D. Hanelt. 2013. Adaptation of growth and photosynthesis to certain temperature regimes is an indicator for the geographical distribution of *Cosmarium* strains (Zygnematophyceae, Streptophyta). *European Journal of phycology* 48:116–127.
- Stapleford, L. S., and R. E. Smith. 1996. The interactive effects of temperature and silicon limitation on the psychrophilic ice diatom *Pseudonitzschia seriata*. *Polar Biology* 16:589–594.
- Steigenberger, L. W., and P. A. Larkin. 1974. Feeding Activity and Rates of Digestion of Northern Squawfish (*Ptychocheilus oregonensis*). *J. Fish. Res. Bd. Can.* 31:411–420.
- Steller, D., J. Hernández-Ayón, R. Riosmena-Rodríguez, and A. Cabello-Pasini. 2007. Effect of temperature on photosynthesis, growth and calcification rates of the free-living coralline alga *Lithophyllum margaritae*. *Ciencias Marinas* 33:441–456.
- Stevenson, R., and R. K. JOSEPHSON. 1990. Effects of operating frequency and temperature on mechanical power output from moth flight muscle. *Journal of Experimental Biology* 149:61–78.
- Stevenson, R. D., C. R. Peterson, and J. S. Tsuji. 1985. The thermal dependence of locomotion, tongue flicking, digestion, and oxygen consumption in the wandering garter snake. *Physiological Zoology* pages 46–57.
- Strzepek, R., and N. Price. 2000. Influence of irradiance and temperature on the iron content of the marine diatom *Thalassiosira weissflogii* (Bacillariophyceae). *Marine Ecology Progress Series* 206:107–117.
- Sundström, A. M., A. Kremp, N. Daugbjerg, Ø. Moestrup, M. Ellegaard, R. Hansen, and S. Hajdu. 2009. *GYMNODINIUM COROLLARIUM* SP. NOV.(DINOPHYCEAE) A NEW COLD-WATER DINOFLAGELLATE RESPONSIBLE FOR CYST SEDIMENTATION EVENTS IN THE BALTIC SEA. *Journal of Phycology* 45:938–952.



- Suzuki, Y., and M. Takahashi. 1995. GROWTH RESPONSES OF SEVERAL DIATOM SPECIES ISOLATED FROM VARIOUS ENVIRONMENTS TO TEMPERATURE. *Journal of Phycology* 31:880–888.
- Swarup, A., J. Lu, K. C. DeWoody, and M. R. Antoniewicz. 2014. Metabolic network reconstruction, growth characterization and <sup>13</sup>C-metabolic flux analysis of the extremophile *Thermus thermophilus* HB8. *Metabolic Engineering* 24:173–180.
- Takahashi, M., and S.-e. Ichimura. 1970. Photosynthetic properties and growth of photosynthetic sulfur bacteria in lakes. *Limnol. Oceanogr* 15:929–944.
- Takai, K., K. Nakamura, T. Toki, U. Tsunogai, M. Miyazaki, J. Miyazaki, H. Hirayama, S. Nakagawa, T. Nunoura, and K. Horikoshi. 2008. Cell proliferation at 122 C and isotopically heavy CH<sub>4</sub> production by a hyperthermophilic methanogen under high-pressure cultivation. *Proceedings of the National Academy of Sciences* 105:10949–10954.
- Talbot, P., J.-M. Thébault, A. Dauta, and J. De la Noüe. 1991. A comparative study and mathematical modeling of temperature, light and growth of three microalgae potentially useful for wastewater treatment. *Water research* 25:465–472.
- TALLING, J. F. 1957. PHOTOSYNTHETIC CHARACTERISTICS OF SOME FRESHWATER PLANKTON DIATOMS IN RELATION TO UNDERWATER RADIATION. *New Phytologist* 56:29–50.
- Tan, K., G. Zhou, and S. Ren. 2013. Response of leaf dark respiration of winter wheat to changes in CO<sub>2</sub> concentration and temperature. *Chinese Science Bulletin* 58:1795–1800.
- Tang, E. P., R. Tremblay, and W. F. Vincent. 1997. CYANOBACTERIAL DOMINANCE OF POLAR FRESHWATER ECOSYSTEMS: ARE HIGH-LATITUDE MAT-FORMERS ADAPTED TO LOW TEMPERATURE? *Journal of Phycology* 33:171–181.
- Tasaka, Y., Z. Gombos, Y. Nishiyama, P. Mohanty, T. Ohba, K. Ohki, and N. Murata. 1996. Targeted mutagenesis of acyl-lipid desaturases in *Synechocystis*: evidence for the important roles of polyunsaturated membrane lipids in growth, respiration and photosynthesis. *The EMBO journal* 15:6416.
- Taylor, D., and J. Collie. 2003. Effect of temperature on the functional response and foraging behavior of the sand shrimp *Crangon septemspinosa* preying on juvenile winter flounder *Pseudopleuronectes americanus*. *Marine Ecology Progress Series* 263:217–234.
- Temple, G. K., and I. Johnston. 1998. Testing hypotheses concerning the phenotypic plasticity of escape performance in fish of the family Cottidae. *The Journal of experimental biology* 201:317–331.
- Teoh, M.-L., W.-L. Chu, H. Marchant, and S.-M. Phang. 2004. Influence of culture temperature on the growth, biochemical composition and fatty acid profiles of six Antarctic microalgae. *J Appl Phycol* 16:421–430.
- Teoh, M.-L., S.-M. Phang, and W.-L. Chu. 2013. Response of Antarctic, temperate, and tropical microalgae to temperature stress. *Journal of applied phycology* 25:285–297.
- Terrados, J., and J. Ros. 1992. The influence of temperature on seasonal variation of *Caulerpa prolifera* (Forsskal) Lamouroux photosynthesis and respiration. *Journal of Experimental Marine Biology and Ecology* 162:199–212.
- . 1995. Temperature effects on photosynthesis and depth distribution of the seagrass *Cymodocea nodosa* (Ucria) Ascherson in a Mediterranean coastal lagoon: the Mar Menor (SE Spain). *Marine Ecology* 16:133–144.
- Thebud, R., and K. A. Santarius. 1982. Effects of high-temperature stress on various biomembranes of leaf cells in situ and in vitro. *Plant physiology* 70:200–205.

- Thomas, W. H. 1966. EFFECTS OF TEMPERATURE AND ILLUMINANCE ON CELL DIVISION RATES OF THREE SPECIES OF TROPICAL OCEANIC PHYTOPLANKTON. *Journal of Phycology* 2:17–22.
- Thompson, D. J. 1978. Towards a Realistic Predator-Prey Model: The Effect of Temperature on the Functional Response and Life History of Larvae of the Damselfly, *Ichnura elegans*. *The Journal of Animal Ecology* 47:757.
- Thompson, P. A., M. xin Guo, and P. J. Harrison. 1992. EFFECTS OF VARIATION IN TEMPERATURE. I. ON THE BIOCHEMICAL COMPOSITION OF EIGHT SPECIES OF MARINE PHYTOPLANKTON1. *Journal of Phycology* 28:481–488.
- Thronsdén, J. 1976. Occurrence and productivity of small marine flagellates. *Norwegian Journal of Botany* .
- Titus, J. E., and M. S. Adams. 1979. Coexistence and the comparative light relations of the submersed macrophytes *Myriophyllum spicatum* L. and *Vallisneria spiralis* L. *Oecologia* 40:273–286.
- Tjoelker, M., J. Oleksyn, and P. Reich. 1998. Seedlings of five boreal tree species differ in acclimation of net photosynthesis to elevated CO<sub>2</sub> and temperature. *Tree physiology* 18:715–726.
- Tjoelker, M. G., J. Oleksyn, G. Lorenc-Plucinska, and P. B. Reich. 2009. Acclimation of respiratory temperature responses in northern and southern populations of *Pinus banksiana* . *New Phytologist* 181:218–229.
- Tjoelker, M. G., J. Oleksyn, P. B. Reich, and R. ŻYTKOWIAK. 2008. Coupling of respiration, nitrogen, and sugars underlies convergent temperature acclimation in *Pinus banksiana* across wide-ranging sites and populations. *Global Change Biology* 14:782–797.
- Todd, G. W. 1982. Photosynthesis and respiration of vegetative and reproductive parts of wheat and barley plants in response to increasing temperature. Pages 57–62 *in* Proceedings of the Oklahoma Academy of Science. Vol. 62.
- Tomas, C. R. 1978. OLISTHODISCUS LUTEUS (CHRYSOPHYCEAE) I. EFFECTS OF SALINITY AND TEMPERATURE ON GROWTH, MOTILITY AND SURVIVAL2. *Journal of Phycology* 14:309–313.
- Torres-Contreras, H., and R. Vasquez. 2004. A field experiment on the influence of load transportation and patch distance on the locomotion velocity of *Dorymyrmex goetschi* (Hymenoptera, Formicidae). *Insectes Sociaux* 51:265–270.
- Torzillo, G., and A. Vonshak. 1994. Effect of light and temperature on the photosynthetic activity of the cyanobacterium *Spirulina platensis*. *Biomass and Bioenergy* 6:399–403.
- Traniello, J. F. A., M. S. Fujita, and R. V. Bowen. 1984. Ant foraging behavior: ambient temperature influences prey selection. *Behavioral Ecology and Sociobiology* 15:65–68.
- Tranquillini, W., W. M. Havranek, and P. Ecker. 1986. Effects of atmospheric humidity and acclimation temperature on the temperature response of photosynthesis in young *Larix decidua* Mill. *Tree Physiology* 1:37–45.
- Tsujimura, S., K. Ishikawa, and H. Tsukada. 2001. Effect of temperature on growth of the cyanobacterium *Aphanizomenon flos-aquae* in Lake Biwa and Lake Yogo. *Phycological Research* 49:275–280.
- Tsujimura, S., M. Kumagai, J. Urabe, T. Sekino, Y. Hayami, and M. Maruo. 2003. Effect of temperature and light on growth of planktic green algae isolated from Lake Hövsgöl, Mongolia. *Algological Studies* 110:81–89.
- Tsujimura, S., and T. Okubo. 2003. Development of *Anabaena* blooms in a small reservoir with dense sediment akinete population, with special reference to temperature and irradiance. *Journal of Plankton Research* 25:1059–1067.

- Tyler, A. V. 1970. Rates of Gastric Emptying in Young Cod. *J. Fish. Res. Bd. Can.* 27:1177–1189.
- Ueda, Y., S. Nishihara, H. Tomita, and Y. Oda. 2000. Photosynthetic response of Japanese rose species *Rosa bracteata* and *Rosa rugosa* to temperature and light. *Scientia Horticulturae* 84:365–371.
- Uehlinger, U. 1981. Experimentelle Untersuchungen zur Autökologie von *Aphanizomenon flos-aquae*. *Algalogical Studies/Archiv für Hydrobiologie, Supplement Volumes* pages 260–288.
- Usup, G., D. M. Kulis, and D. M. Anderson. 1994. Growth and toxin production of the toxic dinoflagellate *Pyrodinium bahamense* var. *compressum* in laboratory cultures. *Nat. Toxins* 2:254–262.
- Valík, Ľ., A. Medveďová, M. Čižniar, and D. Liptáková. 2013. Evaluation of temperature effect on growth rate of *Lactobacillus rhamnosus* GG in milk using secondary models. *Chemical Papers* 67.
- Van Auken, O. W., and I. B. McNULTY. 1973. The effect of environmental factors on the growth of a halophylic species of algae. *The Biological Bulletin* 145:210–222.
- Van der Westhuizen, A., and J. Eloff. 1985. Effect of temperature and light on the toxicity and growth of the blue-green alga *Microcystis aeruginosa* (UV-006). *Planta* 163:55–59.
- van Liere, E. 1979. On *Oscillatoria agardhii* Gomont: experimental ecology and physiology of a nuisance bloomforming cyanobacterium. "De Nieuwe Schouw" Press.
- Vapaavuori, E., R. Rikala, and A. Ryyppö. 1992. Effects of root temperature on growth and photosynthesis in conifer seedlings during shoot elongation. *Tree Physiology* 10:217–230.
- Venter, A., A. Jordaan, and A. Pieterse. 2003. *Oscillatoria simplicissima*: a taxonomical study. *WATER SA-PRETORIA-* 29:101–104.
- Vona, V., V. D. M. Rigano, O. Lobosco, S. Carfagna, S. Esposito, and C. Rigano. 2004. Temperature responses of growth, photosynthesis, respiration and NADH: nitrate reductase in cryophilic and mesophilic algae. *New Phytologist* 163:325–331.
- Vose, J. M., and P. V. Bolstad. 1999. Challenges to modelling NPP in diverse eastern deciduous forests: species-level comparisons of foliar respiration responses to temperature and nitrogen. *Ecological Modelling* 122:165–174.
- Wakeling, J. M., N. J. Cole, K. M. Kemp, and I. A. Johnston. 2000. The biomechanics and evolutionary significance of thermal acclimation in the common carp *Cyprinus carpio*. *American Journal of Physiology-Regulatory, Integrative and Comparative Physiology* 279:R657–R665.
- Walcroft, A., X. L. Roux, A. Diaz-Espejo, N. Dones, and H. Sinoquet. 2002. Effects of crown development on leaf irradiance, leaf morphology and photosynthetic capacity in a peach tree. *Tree Physiology* 22:929–938.
- Waldschmidt, S., and C. R. Tracy. 1983. Interactions between a Lizard and Its Thermal Environment: Implications for Sprint Performance and Space Utilization in the Lizard *Uta Stansburiana*. *Ecology* 64:476–484.
- Wallace, J. 1973a. Observations on the relationship between the food consumption and metabolic rate of *Blennius pholis* L. *Comparative Biochemistry and Physiology Part A: Physiology* 45:293–306.
- Wallace, J. C. 1973b. Feeding, starvation and metabolic rate in the shore crab *Carcinus maenas*. *Marine Biology* 20:277–281.
- Walne, P. R., and G. J. Dean. 1972. Experiments on Predation by the Shore Crab, *Carcinus Maenas* L., on *Mytilus* and *Mercenaria*. *ICES Journal of Marine Science* 34:190–199.
- Wang, K.-Y., S. Kellomäki, and K. Laitinen. 1996. Acclimation of photosynthetic parameters in Scots pine after three years exposure to elevated temperature and CO<sub>2</sub>. *Agricultural and Forest Meteorology* 82:195–217.

- Wang, X., K. Tang, Y. Wang, and W. Smith. 2010. Temperature effects on growth, colony development and carbon partitioning in three *Phaeocystis* species. *Aquat. Biol.* 9:239–249.
- WARD, D. A., and D. W. LAWLOR. 1990. Abscisic acid may mediate the rapid thermal acclimatization of photosynthesis in wheat. *Journal of experimental botany* 41:309–314.
- Ware, D. M. 1973. Risk of Epibenthic Prey to Predation by Rainbow Trout ( *Salmo gairdneri* ) . *J. Fish. Res. Bd. Can.* 30:787–797.
- Warren, C. 2006. Temperature response of photosynthesis and internal conductance to CO<sub>2</sub>: results from two independent approaches. *Journal of Experimental Botany* 57:3057–3067.
- . 2008. Does growth temperature affect the temperature responses of photosynthesis and internal conductance to CO<sub>2</sub>? A test with *Eucalyptus regnans*. *Tree Physiology* 28:11–19.
- Watras, C. J., S. W. Chisholm, and D. M. Anderson. 1982. Regulation of growth in an estuarine clone of *Gonyaulax tamarensis* Lebour: Salinity-dependent temperature responses. *Journal of Experimental Marine Biology and Ecology* 62:25–37.
- Weatherhead, P. J., and I. C. Robertson. 1992. Thermal constraints on swimming performance and escape response of northern water snakes ( *Nerodia sipedon* ) . *Can. J. Zool.* 70:94–98.
- Wedge, R. M., and J. E. Burris. 1982. Effects of light and temperature on duckweed photosynthesis. *Aquatic Botany* 13:133–140.
- Weier, J. A., and D. H. Feener. 1995. Foraging in the seed-harvester ant genus *Pogonomyrmex*: are energy costs important? *Behavioral Ecology and Sociobiology* 36:291–300.
- Weiler, C., and R. Eppley. 1979. Temporal pattern of division in the dinoflagellate genus *Ceratium* and its application to the determination of growth rate. *Journal of Experimental Marine Biology and Ecology* 39:1–24.
- Weis, E. 1981. Reversible heat-inactivation of the calvin cycle: A possible mechanism of the temperature regulation of photosynthesis. *Planta* 151:33–39.
- Whitehead, P., J. Puckridge, C. Leigh, and R. Seymour. 1989. Effect of temperature on jump performance of the frog *Limnodynastes tasmaniensis*. *Physiological zoology* pages 937–949.
- Widdows, J. 1973. Effect of temperature and food on the heart beat, ventilation rate and oxygen uptake of *Mytilus edulis*. *Marine Biology* 20:269–276.
- Wilken, S., J. Huisman, S. Naus-Wiezer, and E. Donk. 2013. Mixotrophic organisms become more heterotrophic with rising temperature. *Ecology letters* 16:225–233.
- William, K. L., and I. Morris. 1982. Temperature adaptation in *Phaeodactylum tricornerutum* Bohlin: photosynthetic rate compensation and capacity. *Journal of Experimental Marine Biology and Ecology* 58:135–150.
- WISE, R. R., A. J. OLSON, S. M. SCHRADER, and T. D. SHARKEY. 2004. Electron transport is the functional limitation of photosynthesis in field-grown Pima cotton plants at high temperature. *Plant, Cell and Environment* 27:717–724.
- Wittmann, C., and H. Pfanz. 2007. Temperature dependency of bark photosynthesis in beech (*Fagus sylvatica* L.) and birch (*Betula pendula* Roth.) trees. *Journal of Experimental Botany* 58:4293–4306.
- Wootton, R. J., J. R. M. Allen, and S. J. Cole. 1980. Effect of body weight and temperature on the maximum daily food consumption of *Gasterosteus aculeatus* L. and *Phoxinus phoxinus* (L.): selecting an appropriate model. *Journal of Fish Biology* 17:695–705.

- Xiong, F. S., E. C. Mueller, and T. A. Day. 2000. Photosynthetic and respiratory acclimation and growth response of Antarctic vascular plants to contrasting temperature regimes. *American Journal of Botany* 87:700–710.
- Xu, N., S. Duan, A. Li, C. Zhang, Z. Cai, and Z. Hu. 2010. Effects of temperature, salinity and irradiance on the growth of the harmful dinoflagellate *Prorocentrum donghaiense* Lu. *Harmful Algae* 9:13–17.
- Xue, Y., P. Zhou, Y. Ma, Y. Liu, and Y. Xu. 2001. *Thermoanaerobacter tengcongensis* sp. nov., a novel anaerobic, saccharolytic, thermophilic bacterium isolated from a hot spring in Tengcong, China. *International Journal of Systematic and Evolutionary Microbiology* 51:1335–1341.
- Yamaguchi, H., K. Mizushima, S. Sakamoto, and M. Yamaguchi. 2010. Effects of temperature, salinity and irradiance on growth of the novel red tide flagellate *Chattonella ovata* (Raphidophyceae). *Harmful Algae* 9:398–401.
- Yamaguchi, H., T. Yoshimatsu, Y. Tanimoto, S. Sato, T. Nishimura, K. Uehara, and M. Adachi. 2012. Effects of temperature, salinity and their interaction on growth of the benthic dinoflagellate *Ostreopsis cf. ovata* (Dinophyceae) from Japanese coastal waters. *Phycological research* 60:297–304.
- Yamaguchi, M., and T. Honjo. 1989. . *NIPPON SUISAN GAKKAISHI* 55:2029–2036.
- Yamaguchi, M., I. Shigeru, K. Nagasaki, Y. Matsuyama, T. Uchida, and I. Imai. 1997. Effects of temperature and salinity on the growth of the red tide flagellates *Heterocapsa circularisquama* (Dinophyceae) and *Chattonella verruculosa* (Raphidophyceae). *Journal of Plankton Research* 19:1167–1174.
- Yamamoto, A. C., A. K. Doetzer, and L. A. Foerster. 2005. Efeito da temperatura no desenvolvimento de *Euplectrus ronnai* Brèthes (Hymenoptera, Eulophidae) parasitando lagartas de *Pseudaletia sequax* Fraquelemont (Lepidoptera, Noctuidae) e consumo alimentar do hospedeiro. *Acta Biológica Paranaense* 27.
- Yamamoto, Y., and H. Nakahara. 2005. The formation and degradation of cyanobacterium *Aphanizomenon flos-aquae* blooms: the importance of pH, water temperature, and day length. *Limnology* 6:1–6.
- Yamasaki, T., T. Yamakawa, Y. Yamane, H. Koike, K. Satoh, and S. Katoh. 2002. Temperature Acclimation of Photosynthesis and Related Changes in Photosystem II electron transport in winter wheat. *PLANT PHYSIOLOGY* 128:1087–1097.
- Yamatogi, T., M. Sakaguti, N. Takagi, M. Iwataki, and K. Matsuoka. 2005. Effects of temperature, salinity and light intensity on the growth of a harmful dinoflagellate *Cochlodinium polykrikoides* Margalef occurring in coastal waters of West Kyushu, Japan. *Bulletin of the Plankton Society of Japan* (Japan) .
- Yamori, W., K. Noguchi, and I. Terashima. 2005. Temperature acclimation of photosynthesis in spinach leaves: analyses of photosynthetic components and temperature dependencies of photosynthetic partial reactions. *Plant, Cell & Environment* 28:536–547.
- YANASE, R., and T. Imai. 1968. The effect of light intensity and temperature on the growth of several marine algae useful for rearing molluscan larvae. *Tohoku journal of agricultural research* 19:75–82.
- Yang, X., Z. Liang, and C. Lu. 2005. Genetic engineering of the biosynthesis of glycinebetaine enhances photosynthesis against high temperature stress in transgenic tobacco plants. *Plant Physiology* 138:2299–2309.
- Yoder, J. A. 1979. EFFECT OF TEMPERATURE ON LIGHT-LIMITED GROWTH AND CHEMICAL COMPOSITION OF *SKELETONEMA COSTATUM* (BACILLARIOPHYCEAE). *Journal of Phycology* 15:362–370.
- Zamani, A., A. Talebi, Y. Fathipour, and V. Baniameri. 2006. Temperature-dependent functional response of two aphid parasitoids, *Aphidius colemani* and *Aphidius matricariae* (Hymenoptera: Aphidiidae), on the cotton aphid. *J Pest Sci* 79:183–188.

- Zargar, S., and T. Ghosh. 2007. Thermal and biocidal (chlorine) effects on select freshwater plankton. *Archives of environmental contamination and toxicology* 53:191–197.
- Zargar, S., K. Krishnamurthi, S. S. Devi, T. Ghosh, and T. Chakrabarti. 2006. Temperature-induced stress on growth and expression of Hsp in freshwater alga *Scenedesmus quadricauda*. *Biomedical and Environmental Sciences* 19:414.
- Zehnder, A. J. B., and K. Wuhrmann. 1977. Physiology of a Methanobacterium strain AZ. *Archives of Microbiology* 111:199–205.
- Zeikus, J., and R. Wolee. 1972. *Methanobacterium thermoautotrophicus* sp. n., an anaerobic, autotrophic, extreme thermophile. *Journal of Bacteriology* 109:707–713.
- Zhang, B.-Y., Y.-G. Li, Z.-K. Li, Y.-H. Geng, and H.-J. Hu. 2003. Effects of temperature, light intensity and pH on photosynthesis and growth rate of *Haematococcus pluvialis*. *Oceanologia Et Limnologia Sinica* 34:558–565.
- ZIMMERMAN, M. C., and T. E. WISSING. 1978. Effects of temperature on gut-loading and gut-clearing times of the burrowing mayfly, *Hexagenia limbata*. *Freshwater Biology* 8:269–277.
- Zimmerman, R. C., R. D. Smith, and R. S. Alberte. 1989. Thermal acclimation and whole-plant carbon balance in *Zostera marina* L.(eelgrass). *Journal of Experimental Marine Biology and Ecology* 130:93–109.
- Zinder, S., T. Anguish, and S. Cardwell. 1984. Effects of temperature on methanogenesis in a thermophilic (58 C) anaerobic digester. *Applied and Environmental Microbiology* 47:808–813.
- Zinder, S. H., and R. A. Mah. 1979. Isolation and characterization of a thermophilic strain of *Methanosarcina* unable to use H<sub>2</sub>-CO<sub>2</sub> for methanogenesis. *Applied and Environmental Microbiology* 38:996–1008.
- Zinser, E. R., Z. I. Johnson, A. Coe, E. Karaca, D. Veneziano, and S. W. Chisholm. 2007. Influence of light and temperature on *Prochlorococcus* ecotype distributions in the Atlantic Ocean. *Limnol. Oceanogr.* 52:2205–2220.
- Ziska, L. H. 2001. Growth temperature can alter the temperature dependent stimulation of photosynthesis by elevated carbon dioxide in *Albutilon theophrasti*. *Physiol Plant* 111:322–328.
- Zlotnik, I., and Z. Dubinsky. 1989. The effect of light and temperature on DOC excretion by phytoplankton. *Limnology and Oceanography* 34:831–839.