“Read Me” file for data presented in:

Sex-specific differences in the response of prey to predation risk

Sarah C. Donelan[1,*] and Geoffrey C. Trussell

Marine Science Center and the Department of Marine and Environmental Sciences

Northeastern University, Nahant, MA, USA

[1]Current address: Smithsonian Environmental Research Center, Edgewater, MD, USA

[*]corresponding author:

email: sarah.donelan@gmail.com

phone: 443-482-2256

File 1: 1.donelan&trussell.Fig2variables.csv

Summary: Data used in analyses of male and female *Nucella lapillus* tissue growth, foraging, and growth efficiency and to construct Fig. 2.

Column heading	**Description**
Replicate	Code of experimental mesocosm to which treatments were applied.
Snail ID	*Nucella* were tagged individually with a colored bee tag to differentiate among individuals.
Sex	Experimental treatment with 2 levels indicating the sex of experimental *Nucella* snails.
Risk	Experimental treatment with 2 levels. *Nucella* were exposed to the presence or absence of one adult male green crab to indicate risk or no risk, respectively.
Submerged Mass (g)	Mass obtained while an individual *Nucella* was submerged in room temperature seawater, as described in (Palmer 1982) and (Matassa & Trussell 2014). This measurement approximates *Nucella* shell mass. Initial measurements were taken at the start of the experiment and final measurements were taken at the end of the 12 week experiment.
Dry Mass (g)	Mass of each entire *Nucella* (shell + tissue) obtained after drying at room temperature for 2 hours and being poked and blotted dry with a paper towel. Initial measurements were taken at the start of the experiment and final measurements were taken at the end of the 12 week experiment.
Shell Mass (g)	Shell mass calculated using the submerged mass and empirically derived equations (see Electronic Supplementary Material of this paper). Initial measurements were taken at the start of the experiment and final measurements were taken at the end of the 12 week experiment.
Tissue Mass (g)	Calculated as dry mass – shell mass. Initial measurements were taken at the start of the experiment and final measurements were taken at the end of the 12 week experiment.
Tissue Growth (g)	Calculated as final – initial tissue mass.
Tissue Growth (mg)	Converting tissue growth from grams to milligrams.
Tissue Produced (J)	Converting tissue growth (mg) into a dry tissue equivalent using empirically derived equations in (Matassa & Trussell 2014), which was then converted into its energetic equivalent using an empirically derived equation in (Hughes 1972).
Total Energy Consumed (J)	Total energy consumed by *Nucella* over the 12 week experiment. Raw data in File 3.
Growth Efficiency	Individual *Nucella* tissue growth (in its energetic equivalent, J) divided by the amount of energy consumed by that *Nucella*.
Energy in Initial Tissue (J)	Initial tissue mass (g) converted to its energetic equivalents using the same formulas as given above for tissue produced.

File 2: 2.donelan&trussell.Fig3variables.csv

Summary: Data used in analysis of egg capsules laid, regressions of egg capsules laid by initial female *Nucella lapillus* tissue (J), and to construct Fig. 3.

Column heading	**Description**
Replicate	Code of experimental mesocosm to which treatments were applied.
Snail ID	*Nucella* were tagged individually with a colored bee tag to differentiate among individuals.
Sex	Experimental treatment with 2 levels indicating the sex of experimental *Nucella* snails.
Risk	Experimental treatment with 2 levels. *Nucella* were exposed to the presence or absence of one adult male green crab to indicate risk or no risk, respectively.
Energy in Initial Tissue (J)	Initial tissue mass (g) converted to its energetic equivalents using the same formulas as given above for tissue produced.
Number of egg capsules laid	Total number of egg capsules produced by individual *Nucella* females over the course of the 12 week experiment.

File 3: 3.donelan&trussell.allmussels.csv

Summary: Raw data of blue mussels (*Mytilus edulis*) that were consumed by *Nucella lapillus* during the 12 week experiment. Used to calculate energy consumed by *Nucella* in File 1.

Column heading	**Description**
Replicate	Code of experimental mesocosm to which treatments were applied.
Snail ID	*Nucella* were tagged individually with a colored bee tag to differentiate among individuals.
Sex	Experimental treatment with 2 levels indicating the sex of experimental *Nucella* snails.
Risk	Experimental treatment with 2 levels. *Nucella* were exposed to the presence or absence of one adult male green crab to indicate risk or no risk, respectively.
Week Consumed	Week of the experiment when those mussels were consumed. Replicates were checked each week to remove consumed mussels and add new mussels so that *Nucella* had access to four live mussels at the start of each week.
Shell Length (mm)	Maximum length of mussel shell measured by calipers.
Proportion of Tissue Remaining	If tissue was remaining in the mussel shell, we approximated the proportion of tissue remaining.
Total Dry Tissue Mass (mg)	Converting shell length into a dry tissue equivalent using empirically derived equations in (Burrows & Hughes 1990).
Dry Tissue Mass of Remaining Tissue (mg)	Any tissue that remained in a mussel shell was not consumed by *Nucella*. If any tissue was remaining, we converted the approximate remaining tissue into dry tissue mass using the equation in (Burrows & Hughes 1990).
Tissue Consumed (mg)	Calculated as total dry tissue mass – dry tissue mass of remaining tissue. Accounts for any remaining tissue not consumed by *Nucella*.
Energy in Tissue Consumed (J)	Converting dry tissue mass consumed into its energetic equivalent using empirically derived equations in (Elner & Hughes 1978).

References in “Read Me” File

Burrows, M.T. & Hughes, R.N. (1990) Variation in growth and consumption among individuals and populations of dogwhelks, *Nucella lapillus*: a link between foraging behaviour and fitness. *Journal of Animal Ecology,* **59,** 723-742. doi:10.2307/4891

Elner, R.W. & Hughes, R.N. (1978) Energy maximization in the diet of the shore crab, *Carcinus maenas*. *Journal of Animal Ecology,* **47,** 103-116. doi:10.2307/3925

Hughes, R.N. (1972) Annual production of two Nova Scotian populations of *Nucella lapillus* (L.). *Oecologia,* **8,** 356-370. doi:10.1007/BF00367538

Matassa, C.M. & Trussell, G.C. (2014) Prey state shapes the effects of temporal variation in predation risk. *Proceedings of the Royal Society B: Biological Sciences,* **281,** 20141952. doi:10.1098/rspb.2014.1952

Palmer, A.R. (1982) Growth in marine gastropods: a non-destructive technique for independently measuring shell and body weight. *Malacologia,* **23,** 63-74.