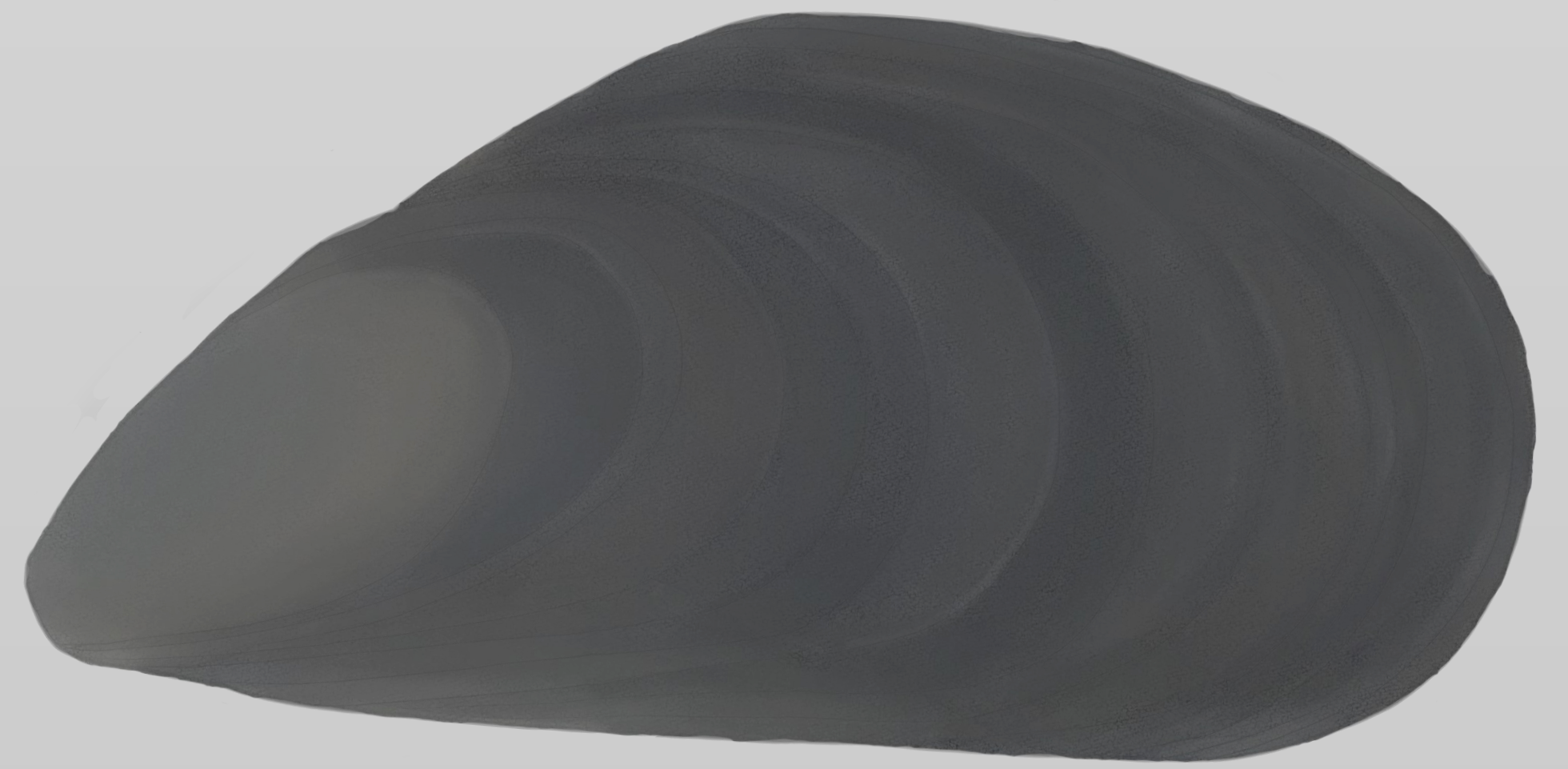


Metabolic depression

Metabolic depression is when an organism intentionally lowers its metabolic rate—reducing energy use, oxygen consumption, and activity levels. It's like putting the body into “low-power mode” to survive tough conditions.



Some young blue mussels (*Mytilus* spp.) may survive extreme heat by slowing their metabolism—reducing how much they eat and breathe. This strategy, called metabolic depression, helps them avoid a dangerous mismatch between energy supply and demand during heatwaves.

Research suggests that mussels with a naturally lower metabolic rate are better at handling daily temperature swings, but only a few individuals may have what it takes to survive future warming.

Metabolic depression also slows growth and reproduction, so it's a strategy used only when necessary. Species that can use metabolic depression may be better equipped to survive climate extremes, but only if they also have time to recover and reproduce.

