

The ontogeny of shell-boring *Octopus* versus *Nautilus* predator-prey interactions

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To complete our picture of predatory boring by *Octopus*, this study focuses on the rate and pattern of *Octopus* predation in pre-adult stages of *Nautilus*, which encompasses the first 15 years of its life. Dry shells from several natural history museum collections were used for this study. In the 555 examined shells, 334 borings were found. For adult *N. pompilius* 136/242 (56.2%) were bored, while for juvenile *N. pompilius* 41/154 (26.6%) were bored. Of the juvenile *Nautilus* 8/52 (15.4%) have multiple borings while 68/179 (38%) of the adult *Nautilus* have multiple borings. One adult *Nautilus* has 6 borings and one juvenile *Nautilus* has 5 borings, both of which set a new record. In adult *Nautilus*, there appears to be no preference to bore on the left or right side of the shell: 129 borings are on the left side (48%) and 140 borings on the right side (52%). In juveniles, though, there is a clear difference in left and right borings. With 47 borings on the left (75,8%) and 15 borings on the right (24,2%) there is a statistical difference. Not just all species of *Nautilus* are attacked by *Octopus*, their predation also has a big impact on all ages.

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