

Effects of Experience and Risk of Predation on the Foraging Behaviour of the South-Eastern Pacific Muricid *Concholepas concholepas* (Mollusca: Gastropoda)

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Abstract

1. Different size classes of the muricid *Concholepas concholepas* (Bruguiere) (small and medium subadult specimens inhabiting mainly the high- and mid-intertidal, and large adult ones inhabiting mainly the subtidal) were assessed for handling times and diet selection by offering them three different sizes of the high-intertidal mussel *Perumytilus purpuratus* (Lamarck). 2. The effect of experience on the foraging efficiency of the different size classes of the muricid was tested by comparing the handling times of specimens starved after collection from the field with those of specimens subjected to starvation after having been exclusively fed with this mussel. 3. Experienced predators showed a consistent reduction in handling time with corresponding increase in prey profitability, although this varied in magnitude in the nine distinct predator/prey size combinations. As a consequence, foraging experience changed the profitability ranking of different classes of prey. 4. Prey-size preferences changed with foraging experience in accordance with the associated variations in prey profitabilities. Particularly, the number of attacks per unit time and the average weight of the mussels consumed by the different size classes of *C. concholepas* increased with experience, while the total time devoted to foraging decreased slightly. 5. The exposure of experienced *C. concholepas* to effluent from a higher-order predator, the subtidal asteroid *Meyenaster gelatinosus* (Meyen), induced the muricid to reduce the time devoted to foraging. This reduction in foraging time was achieved differently, according to the size of the forager: small individuals reverted to their initial preference for smaller mussels, while medium and large individuals reduced the number of attacks. Both effects lowered the rate of food intake, which must be seen as a cost of reducing risk of predation.