

## **Julie Wright**

Does sensorial sexual dimorphism affect prey preference and capture in *Scyliorhinus canicula*?

Sensory studies have provided insight into elasmobranch feeding ecology. Dietary studies allow an understanding of their trophic role in marine ecosystems. Males of most species are known to have greater olfactory and electrosensory acuity for mate detection, but it is unclear whether this is advantageous for prey detection. The diet and sensory morphology of *Scyliorhinus canicula* an abundant, epibenthic shark from Liverpool Bay in the northeast Atlantic, were examined. Quantification of olfactory and electrosensory apparatus confirmed that males of all sizes were sensorially superior to females of the equivalent size. Number of sensory alveoli within ampullary bulbs, olfactory rosette weight (g) and surface area of sensory epithelia (mm<sup>2</sup>) of olfactory lamellae were all significantly greater than for females. Diets were broad (22 prey taxa), but dominated by crustaceans, molluscs and teleosts. Analyses of stomach contents data demonstrated that diet differed significantly by sex with larger males successfully capturing squid and forage fish (%IRI for this category of prey was 14.99 for males; 0.17 for females). Females preyed more readily on large hermit crabs (%IRI 15.58 for females, 3.49 for males). Subadults of both sexes consumed mainly slow moving benthic in- and epifauna, showing ontogenetic resource partitioning. Future work could include sampling over several seasons to include prey shift and of coastal populations to identify sensory and dietary similarities and disparities.