

## **Male-male competition and chelicera morphology in New Zealand sheet-web spiders (*Cambridgea foliata*)**

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Eligible for student prize

Animal weaponry has long captured the imagination of researchers and they can occur with varying degrees of exaggeration in different taxa. This phenomenon is particularly common in species in which males defend females from potential rivals. While sexual selection is generally credited with their exaggeration, the particular processes and drivers are far from uniform. In particular, exaggerated jaws, horns and teeth may evolve through selection for males who can physically defend females (armaments) or they may develop as badges of status, warning rivals off and advertising the male's quality to the female (ornaments). New Zealand sheet-web spiders (*Cambridgea foliata*) are one such species in which male chelicerae (jaws) are substantially larger than those of female conspecifics. We use both behavioural and morphological analyses to pinpoint the selective pressures acting on male chelicerae and to examine how chelicera morphology varies among males. We randomly paired males on female webs and recorded their behaviours. Then, we compared morphological traits of males and females of varying sizes to see how traits were distributed and how they covaried. We found that male jaws are positively allometric while female jaws are not and will present preliminary analyses examining the relationship between *C. foliata* morphology and fight success.

