Vucic-Pesic et al. 2010 (*Journal of Animal Ecology*):

Analyzed the functional responses of multiple predator-prey species (~13 predators, 2 prey) to test how functional response parameters differed across a gradient of predator to prey size ratios. Specifically, interested in how calculated power-law scaling coefficients to determine how variation in predator prey size influenced species interaction strengths and therefore food web dynamics. Generally found an increase in handling time with prey mass and a hump shaped relationship between attack rate and predator/prey body mass ratio. Lengthy discussion of fitting power-law relationships and the implications of the estimates that was a bit opaque to me.

Emmerson and Raffaelli 2004 (*Journal of Animal Ecology*):

Study of the Ytan estuary (Scotland) which examined how interaction strengths between predators and prey could be used to estimate scaling law relationships which then parameterized a food web model. Essentially, they conclude that food web models are dynamically stable when interaction strengths are estimated using a scaling-laws based on body size.

Uiterwall et al. 2017 (*Oecologia*):

Examined how body size ratios (i.e. predator:prey body size ratio), prey type, and arena size influenced functional response parameters. They also develop (?) a mechanistic model of that incorporates dependence of attack rate on the predator:prey body size ratio. The results do not seem all that striking: essentially, they conclude that there is a hump shaped relationship between predator:prey body size and attack rate consistent with other studies, but suggest the importance of arena size towards reducing noise in parameter estimates. This ties in nicely with thinking abundance-density relationships can alter interactions strengths in food webs. They also use an interesting (and to me opaque) technique of comparing non-linear fits that I should explore further.

Li et al. 2017 (*PeerJ*):

The authors used computer simulations to estimate the effects of refuge availability and patch size on functional response parameters. They then explored how these effects would cascade to the stability of predator:prey population models. Essentially, they found that refuge availability matters (reduces the interactions strengths, therefore theoretically allowing higher species richness) but found no evidence for a shift in functional response parameters with changes in patch size. This paper I feel will be really useful in setting up a argument about how shifts in the abundance-area relationship could drive changes in the stability of food webs.

Pawar et al. 2012 (*Nature*):

Very interesting paper suggesting that dimensionality dramatically alters trophic interactions, by changing the attack rate. They propose a model of how search rate scales with both body size and dimensionality and suggest that differences in the stability of aquatic compared with terrestrial environments in due to the higher prevalence of 3-D predation events in aquatic environments.

Kalinkat et al. 2013 (*Ecology Letters*):

The authors devise a “generalized functional response model”, that incorporates size dependency of both predator and prey into a model that allows for switching between type II or III. The model code could be useful to fit to the lobster-urchin data (?). They also show that the capture exponent (*q*, which describes whether its type II or III) varies with predator:prey ratio, suggesting that type III interactions can arise solely from single species pair interactions (rather than multiple prey, etc).

McCoy et al. 2011 (*American Naturalist*):

DeLong et al. 2015 (*American Naturalist*):

Hunsicker et al. 2011 (*Ecology Letters*):