Intraspecific variation in terrestrial invertebrate predator diets revealed by diet DNA metabarcoding

Intra-specific, body size, and ontogeny questions

1. Is there a relationship between individual predator-prey body sizes? (given these are continuous-growing species and so measuring ontogenetic “stages” is challenging)
2. If so, is it the same relationship as species-level predator-prey body size?
3. Do small predators (within/across species) have narrower diets than large predators (within/across species) (Woodward and Hildrew 2002)
4. Do species with broader size ranges show stronger size-based variation in prey identity/body size? and/or, is there more evidence for size-based “stages” in a species with a broader size range?
5. Do larger individuals/species eat higher trophic position prey?
6. Is there a relationship between interaction frequency (a proxy for interaction strength) and predator-prey body size?
7. Is there a relationship between interaction frequency (a proxy for interaction strength) and prey trophic position?
8. Is there ontogeny revealed by metabarcoding data?
   1. Is there nestedness (look at bitartite package)
   2. If not, is it sampling noise or ecological effect (sampling effort curves)
9. Ontogeny explorations
   1. Species part of analysis:
      1. Neoscona
      2. Heteropoda
      3. Pantala
      4. Phisis
      5. Scytodes
      6. SME
   2. Species not part of analysis for different reasons
      1. CEN (pretty low diet family diversity, and seems to be dominated by those predator IDs shared on the run – Tettigoniidae))
      2. EUB (low diet family diversity, and seems to be dominated by those predator IDs shared on the run – Tettigoniidae))
      3. LRS (low diet family diversity and low number of smaples)