

# Chelicerata Ecology

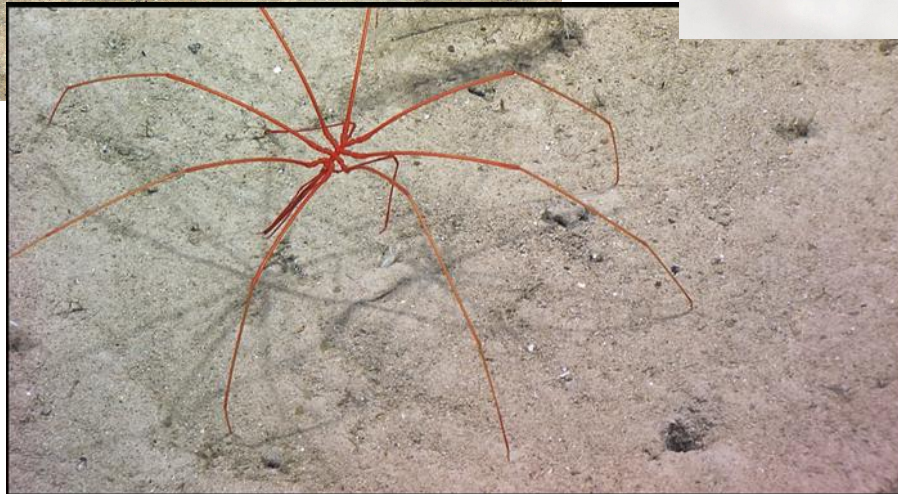
Kaylyn Flanigan



Perry, Bill. 2013.



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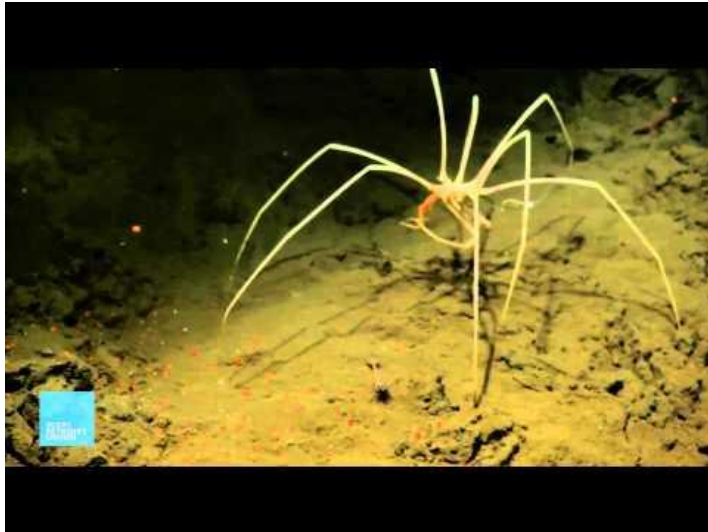
NOAA. 2016.

# Ecology

- *The study of relations and interactions between organisms and their environment*

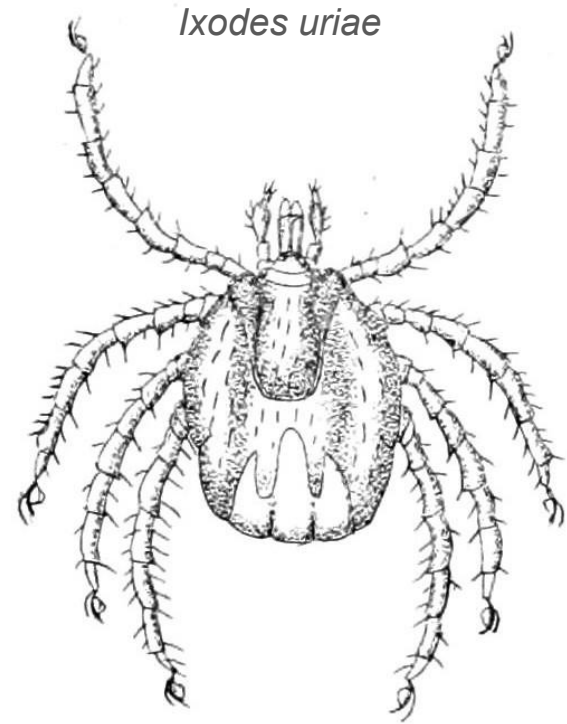
# Chelicerata Distribution

- Located on every continent
- Occupy diverse habitats
- [https://www.inaturalist.org/observations?place\\_id=any&taxon\\_id=47119](https://www.inaturalist.org/observations?place_id=any&taxon_id=47119)



# Arachnid Distribution

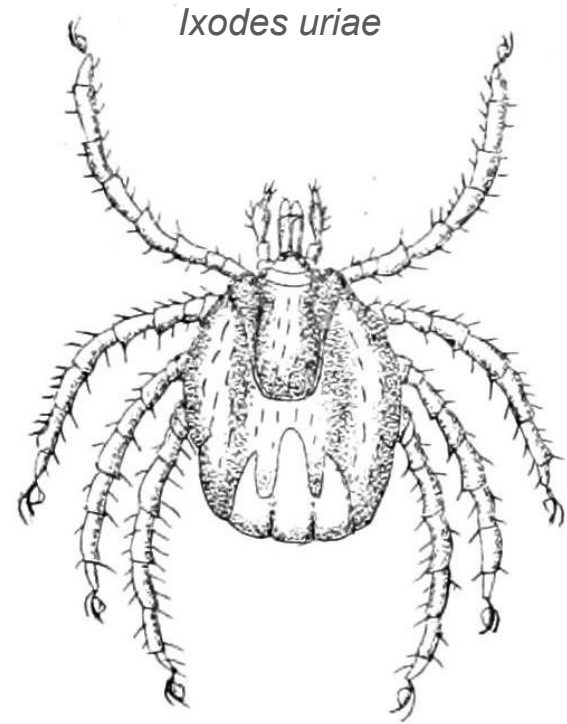
- Acari
  - Found on every continent
    - *Ixodes uriae* is a tick found in Antarctica
    - *Maudheimia* is a mite found in Antarctica<sup>4</sup>.



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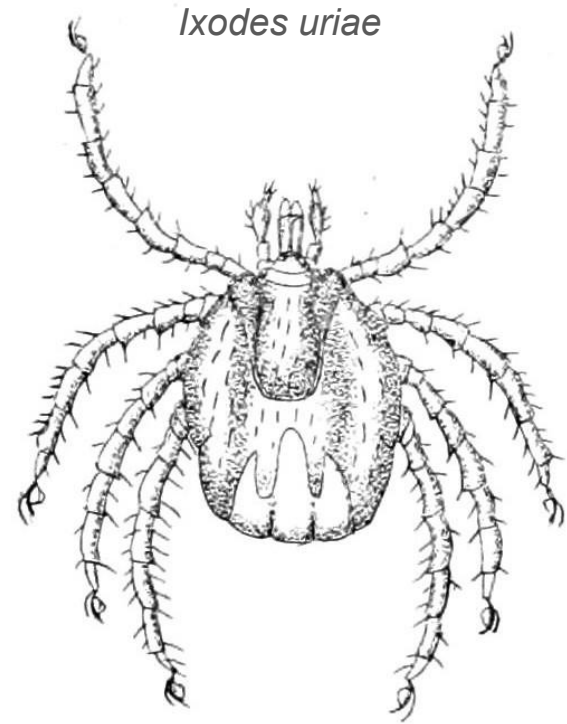
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  - Found as atmospheric plankton at high altitudes<sup>5</sup>.



# Arachnid Distribution

- Amblypygi<sup>6</sup>
  - Found in the tropics and the subtropics





# Arachnid Distribution

- Amblypygi<sup>6</sup>
  - Found in the tropics and the subtropics
  - Occupy many habitats from wet forests to deserts



# Arachnid Distribution

- Araneae
  - Found everywhere but Antarctica



# Arachnid Distribution

- Araneae
  - Found everywhere but Antarctica
  - Found in Himalayan Mountains, tropic and temperate zones, and in or on water<sup>7</sup>.



# Arachnid Distribution

- Scorpiones<sup>8</sup>
  - Temperate, subtropical, and tropical environments



# Arachnid Distribution

- Scorpiones<sup>8</sup>
  - Temperate, subtropical, and tropical environments
  - Range from intertidal zones to mountain ranges



# Arachnid Food Webs

- Acari
  - Omnivores, carnivores, herbivores, fungivores, and parasites<sup>1</sup>.



# Arachnid Food Webs

- Amblypygi
  - Predators



Day, H.

# Arachnid Food Webs

- Amblypygi
  - Predators
  - Consume other arthropods, but opportunistic



Day, H.



# Arachnid Food Webs

- Araneae
  - Herbivores<sup>9</sup>



Abel, D. 2014.

# Arachnid Food Webs

- Araneae
  - Herbivores<sup>9</sup>
  - Predators
    - Sit-and-wait
    - Active hunters



Abel, D. 2014.

# Arachnid Food Webs

- Scorpiones
  - Opportunistic predators
    - Will eat what they can catch



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# Arachnid Food Webs

- Scorpiones
  - Opportunistic predators
    - Will eat what they can catch
  - Sit-and-wait or hunters
  -



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# Arachnid Food Webs

- Scorpiones
  - Opportunistic predators
    - Will eat what they can catch
  - Sit-and-wait or hunters
  - Cannibalistic



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# Arachnid Species Interactions - Acari

- Acari
  - Parasitic<sup>5</sup>
    - *Demodex folliculorum* and *D. brevis* are parasites that live on human skin



# Arachnid Species Interactions - Acari

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  - Parasitic<sup>5</sup>
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    - Chiggers
    - *Sarcoptes scabiei*



# Arachnid Species Interactions - Acari

- Acari
  - Parasitic<sup>5</sup>
    - *Demodex folliculorum* and *D. brevis* are parasites that live on human skin
    - Chiggers
    - *Sarcoptes scabiei*
  - Commensalist<sup>5</sup>
    - Phoresy - hitching a ride without harming the host

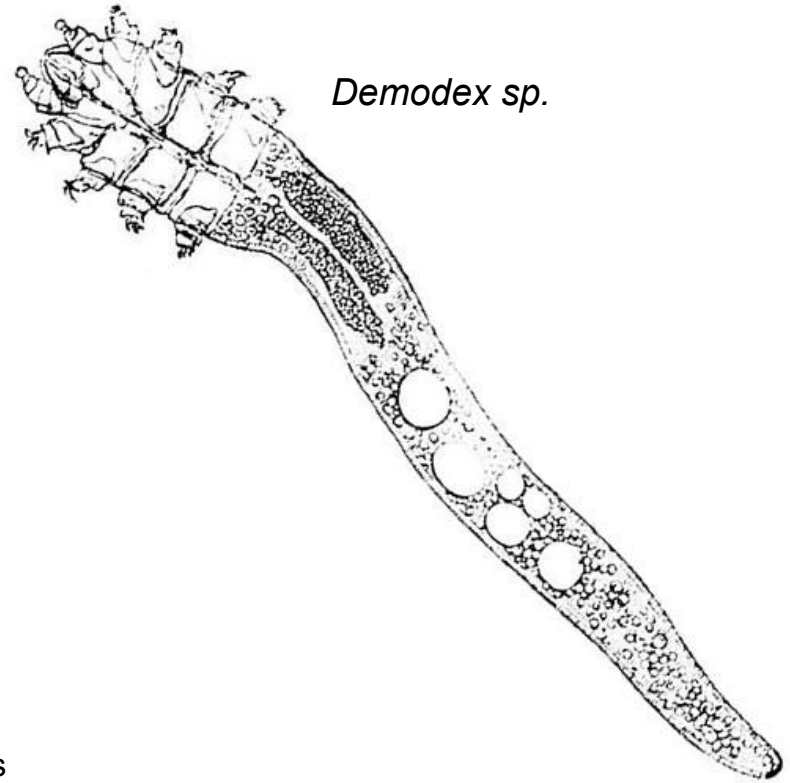




Dog's ears infested with ticks



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*Demodex sp.*

# Arachnid Species Interactions

- Amblypygi
  - Commonly parasitized by mites and chloropid flies
  -



National Geographic

Wise, G., 2014.

# Arachnid Species Interactions

- Amblypygi
  - Commonly parasitized by mites and chloropid flies
  - Commensalism with a variety of animals for shelter and food



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  - Commensalism with a variety of animals for shelter and food
  - Cannibalistic



National Geographic

Wise, G., 2014.

# Arachnid Species Interactions

- Araneae
  - “The enemy of my enemy is my friend”
    - Spiders have negative interactions with many pests of humans



# Arachnid Species Interactions

- Scorpiones
  - Cannibalistic



M, Hamm, 2013

# Arachnid Species Interactions

- Scorpiones
  - Cannibalistic
  - Mostly solitary



# Works Cited

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