



Observations of the pseudoscorpion
***Wyochernes asiaticus* in Denali National Park**

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Acknowledgements

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Pseudoscorpions

“False” or “book” scorpions

- ~3,400 spp. Worldwide
- Small (<5mm)
- Cryptic
- Predators
- Social behavior
- Phoretic



Social behavior

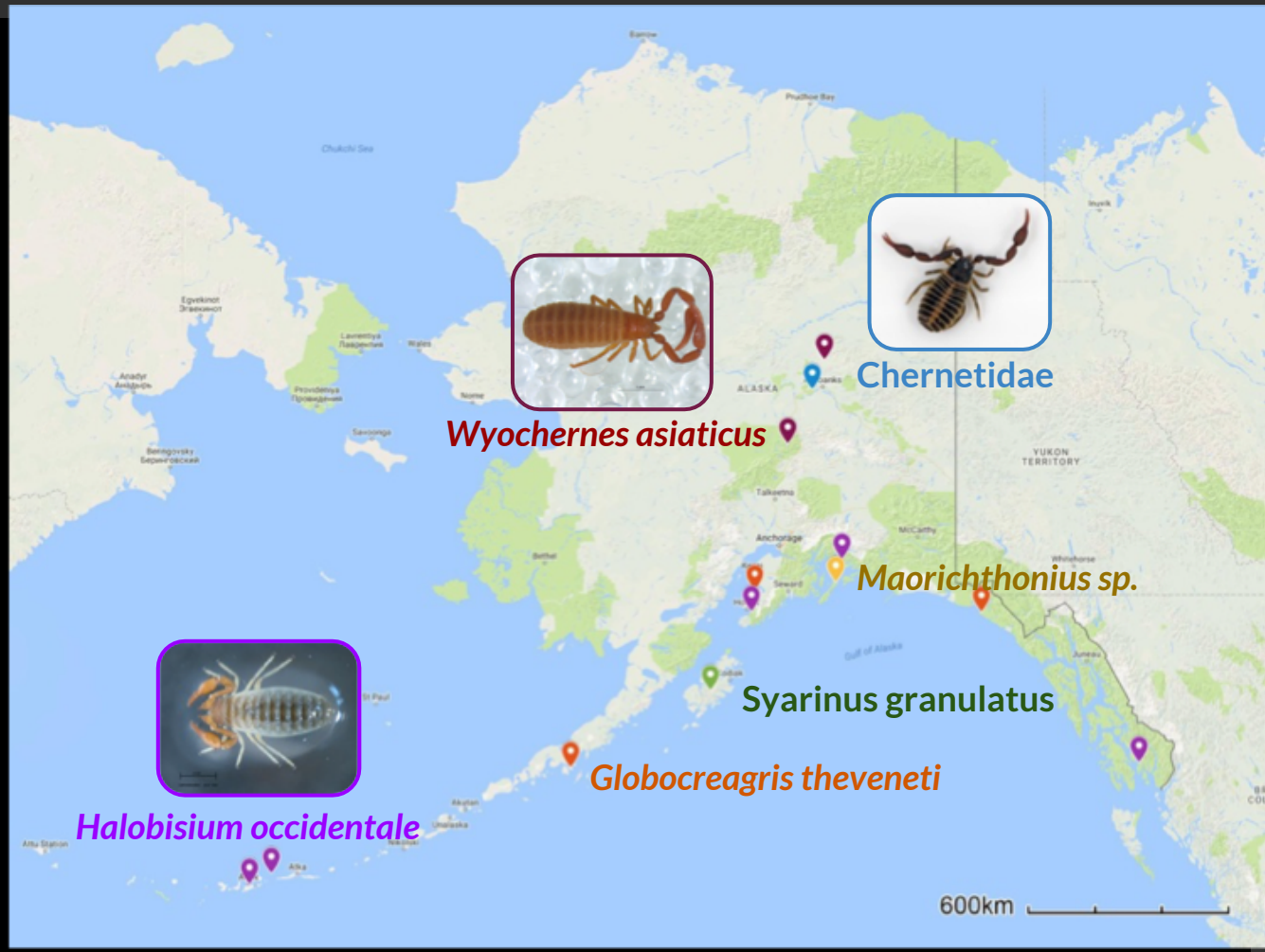
Social features	Eusocial insects	Cooperative spiders	Cooperative Pseudoscorpions
Cooperative breeding	?	?	?
Overlapping generations	?	?	?
Reproductive caste	?	-	-
Cooperative forage	?	?	?
Haplodiploid system	?	-	-

Reproduced from Del-Claro & Tizo-Pedroso (2009)

Phoresy

- Most commonly:
 - Coleoptera
 - Diptera
 - Lepidoptera (Noctuidae)
- But also:
 - Hymenoptera Araneae
 - Odonata Opiliones
 - Orthoptera Birds
 - Hemiptera Mammals





Wyochernes asiaticus



Chernetidae



Halobisium occidentale

Maorichthonius sp.

Syarinus granulatus

Globocreagris theveneti

600km

Wyochernes asiaticus

(Redikorzev, 1922)

- Beringian species
Alaska, Yukon, central Asia
- Type locality
Tibet
- First recorded in Alaska in 2007
- Found in Denali in 2017



Wyochernes asiaticus

Live under rocks on seasonally flooded gravel bars

- Immersion tolerance
Up to 17 days
- Freeze-avoidant
Down to -3.6 degrees C



Savage River



Teklanika River

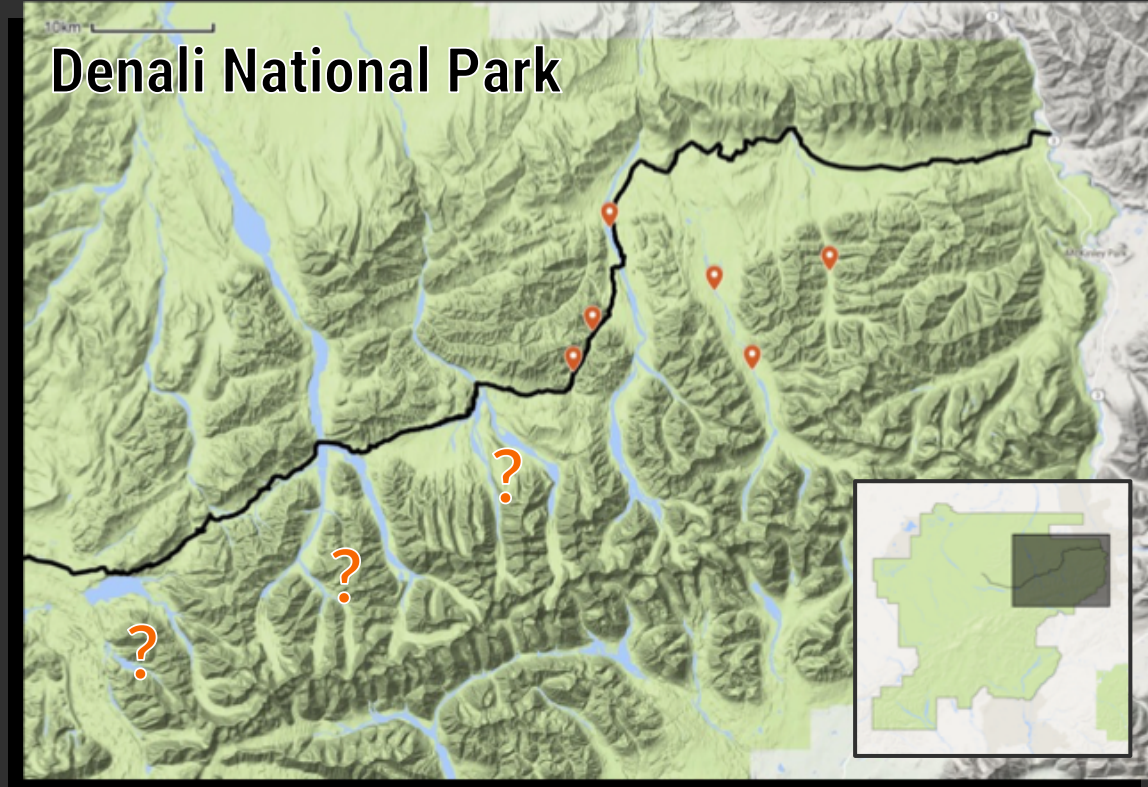
Goals

Document the distribution, phenology, and life history of
W. asiaticus

First ever observations of:

- Feeding
- Mating behavior
- Social behavior?

Distribution

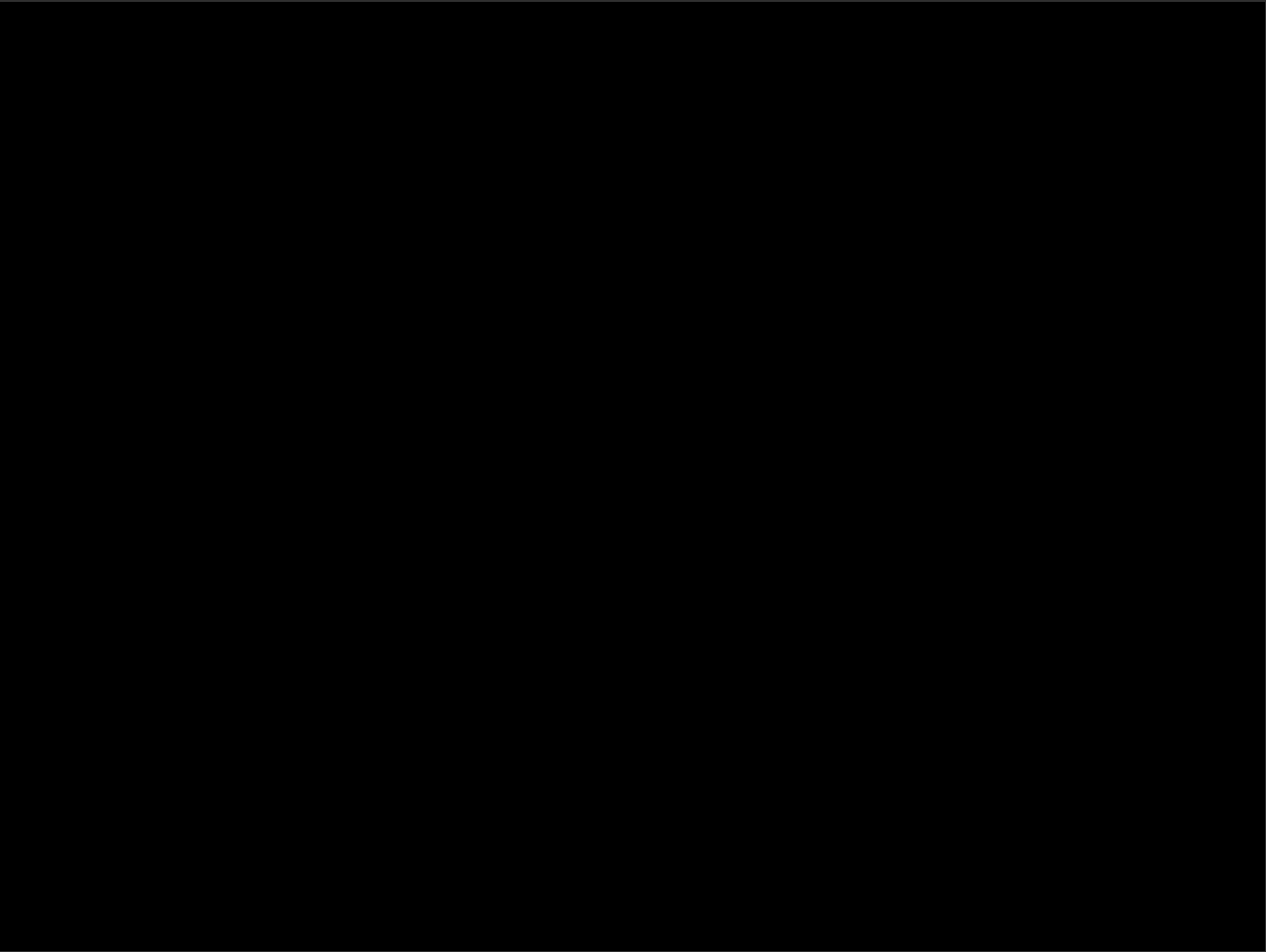


Feeding behavior



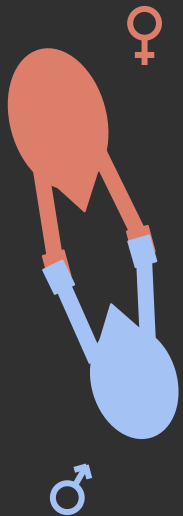
Mating behavior



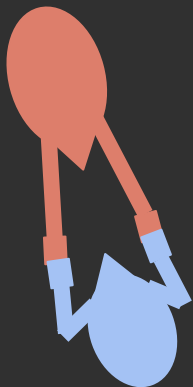


The dance steps

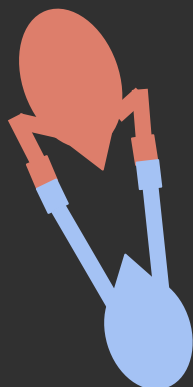
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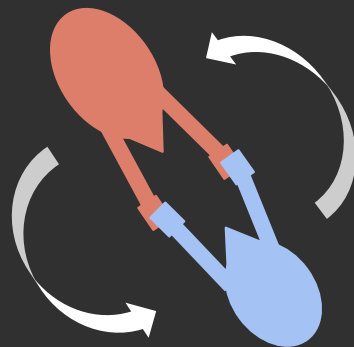
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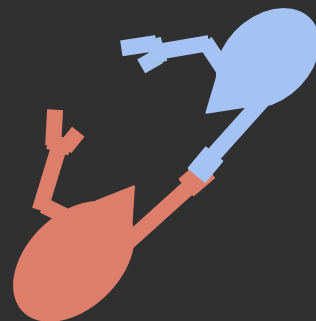
3



4



5



Egg development

15 Jun

**No
Eggs**



21 Jun



10 Aug



15 Aug

**No
Eggs**

Social behavior?



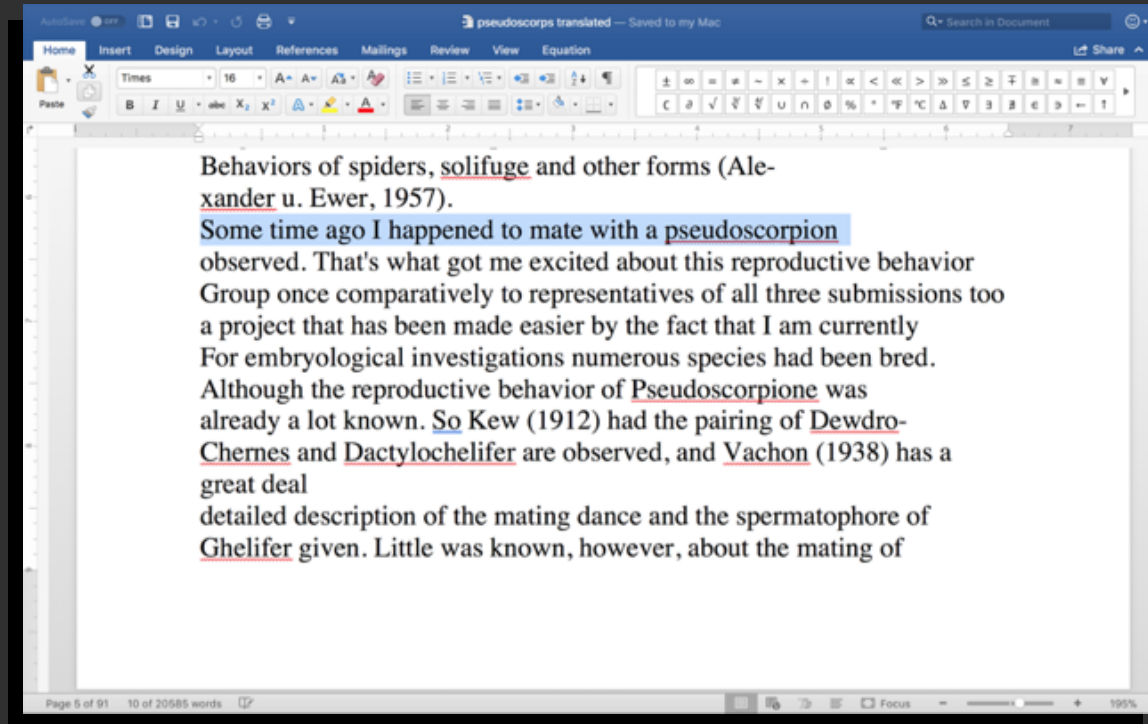
More work to do...

2018 field season

- DNA barcode
- SEM
- Collect from additional drainages
- Overwintering strategy
- Phoresy



Questions?



Google Translate...