

Spiders of Alberta: from Agelenidae to Uloboridae



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University of Alberta

for the Edmonton Nature Club, 7 Feb 2019

(selected slides for posting; photos (c) H. Proctor unless otherwise noted)

Canadian and Albertan diversity

- 1477 species of spiders in 45 families known from Canada
 - may be up to 1800 spp.
- 657 species in 28 families known from Alberta

ZooKeys 819: 41–56 (2019)

doi: 10.3897/zookeys.819.26391

<http://zookeys.pensoft.net>

REVIEW ARTICLE



Araneae of Canada

Robb Bennett¹, Gergin Blagoev², Claudia Copley¹

631 of the 657 species are included here

ALBERTA CONSERVATION INFORMATION MANAGEMENT SYSTEM (ACIMS)

A member of Nature Serve Canada and NatureServe - a network connecting science with conservation



Alberta  Government

List of all Invertebrate - Spider Elements recorded for Alberta in the ACIMS Database - July 2017

Data on this spreadsheet is queriable by ELCODE, FAMILY, SNAME, SCOMMON NAME, GNAME, GCOMMON NAME, SRANK, NRANK, GRANK and TRACK STATUS

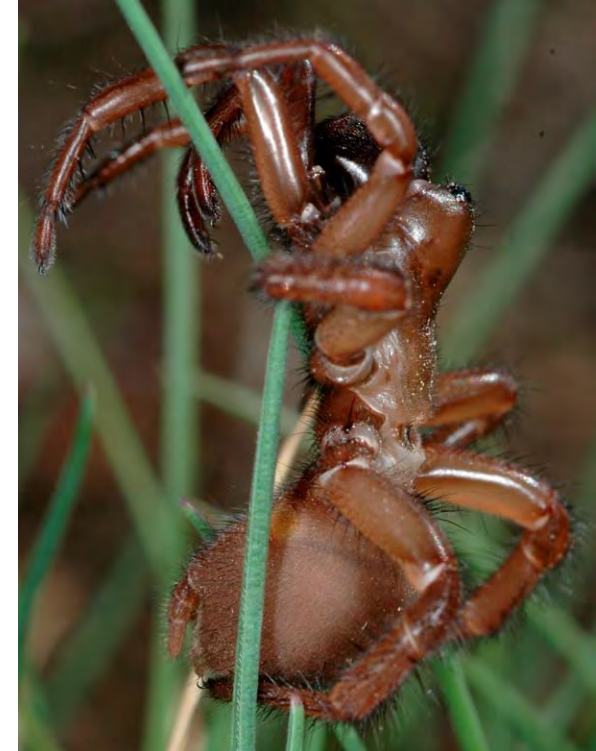
SUBNA	NAME	ELCODE	FAMILY	SNAME	SCOMN	GNAME	GCOMN	S_RAN	N_RAN	G_RAN	D_ORIG	D_CUR	TRACK	ATUS
Alberta	Invertebra	ILARA1002	Lycosidae	Geolycosa	burrowing	Geolycosa	A Burrowir	SU	NNR	GNR	Native	Present	Do not track	

from <https://www.albertaparks.ca/media/6255191/list-of-elements-ab-invertebrates-spiders.xlsx>

The 28 families of spiders known from Alberta

- no mygalomorph spiders in AB, only araneomorph
- Division Synspermiata
 - Pholcioidea: Pholcidae, Telemidae
- Division Entelegynae
 - Araneoidea: Theridiidae, Araneidae, Linyphiidae, Mysmenidae, Mimetidae, Tetragnathidae
 - Uloboroidea: Uloboridae
 - Titanoecoidea: Titanoecidae
 - Amaurobioidea: Amaurobiidae
 - Desoidea: Desidae
 - Agelenoidea: Dictynidae, Cybaeidae, Hahniidae, Agelenidae
 - Lycosoidea: Oxyopidae, Thomisidae, Pisauridae, Lycosidae
 - Salticoidea: Salticidae, Philodromidae, Corinnidae, Eutichuridae
 - Anyphaenoidea: Anyphaenidae, Clubionidae
 - Liocranoidea: Liocranidae
 - Trochanteroidea: Phrurolithidae, Gnaphosidae

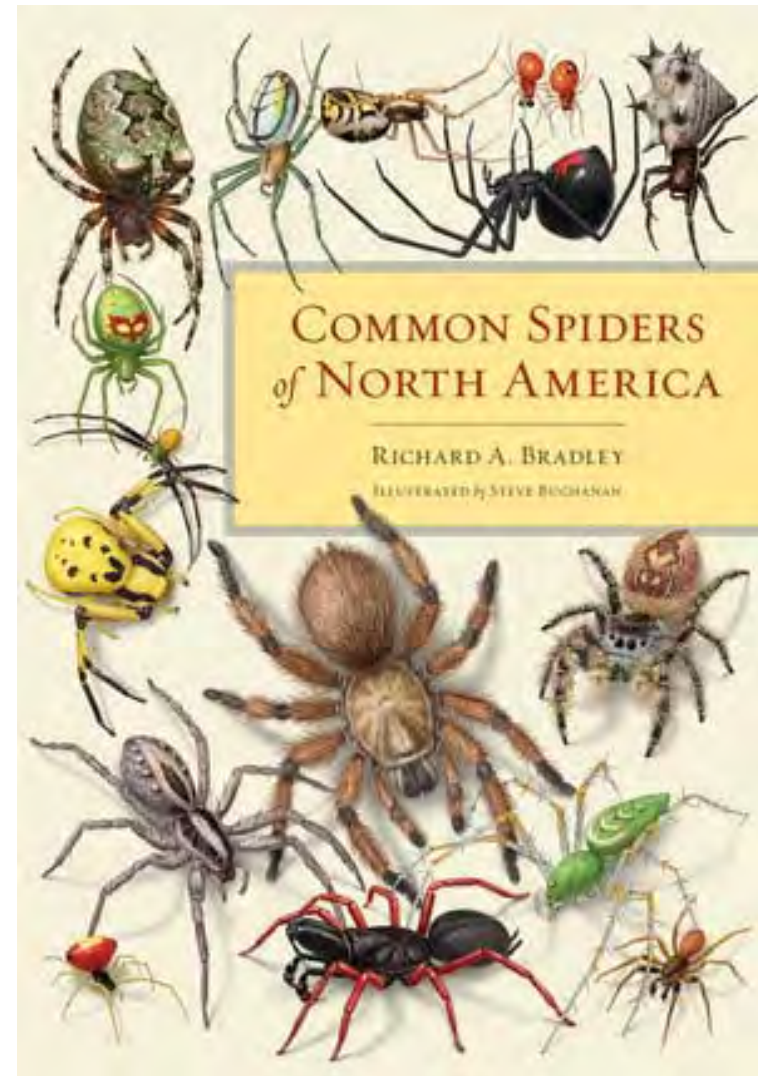
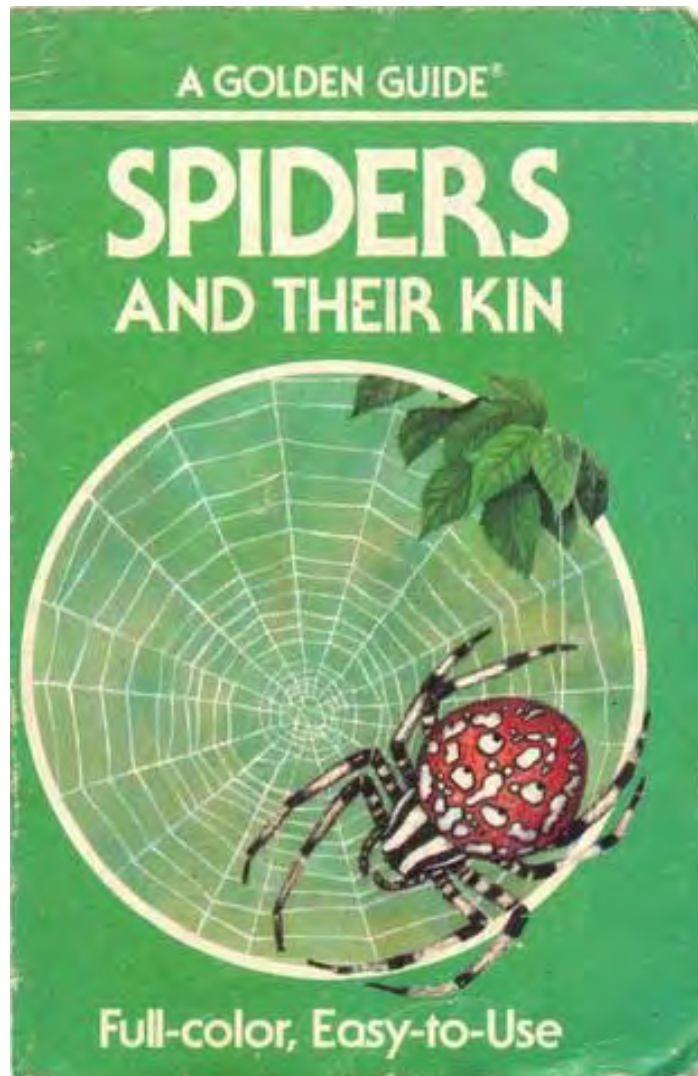
mygalomorphs from BC, *Antrodiaetus* sp.



Linyphiidae	261
Gnaphosidae	51
Lycosidae	50
Salticidae	45
Dictynidae	36
Thomisidae	37
Theridiidae	36
Araneidae	32
Philodromidae	29
Clubionidae	17
Tetragnathidae	14
Hahniidae	10
Amaurobiidae	7
Agelenidae	6
Corinnidae	3
Phrurolithidae	3
Liocranidae	3
Mimetidae	2
Pholcidae	2
Pisauridae	2
Titanoecidae	2
Anyphaenidae	1
Cybaeidae	3
Desidae	1
Eutichuridae	1
Mysmenidae	1
Telemidae	1
Uloboridae	1
	657

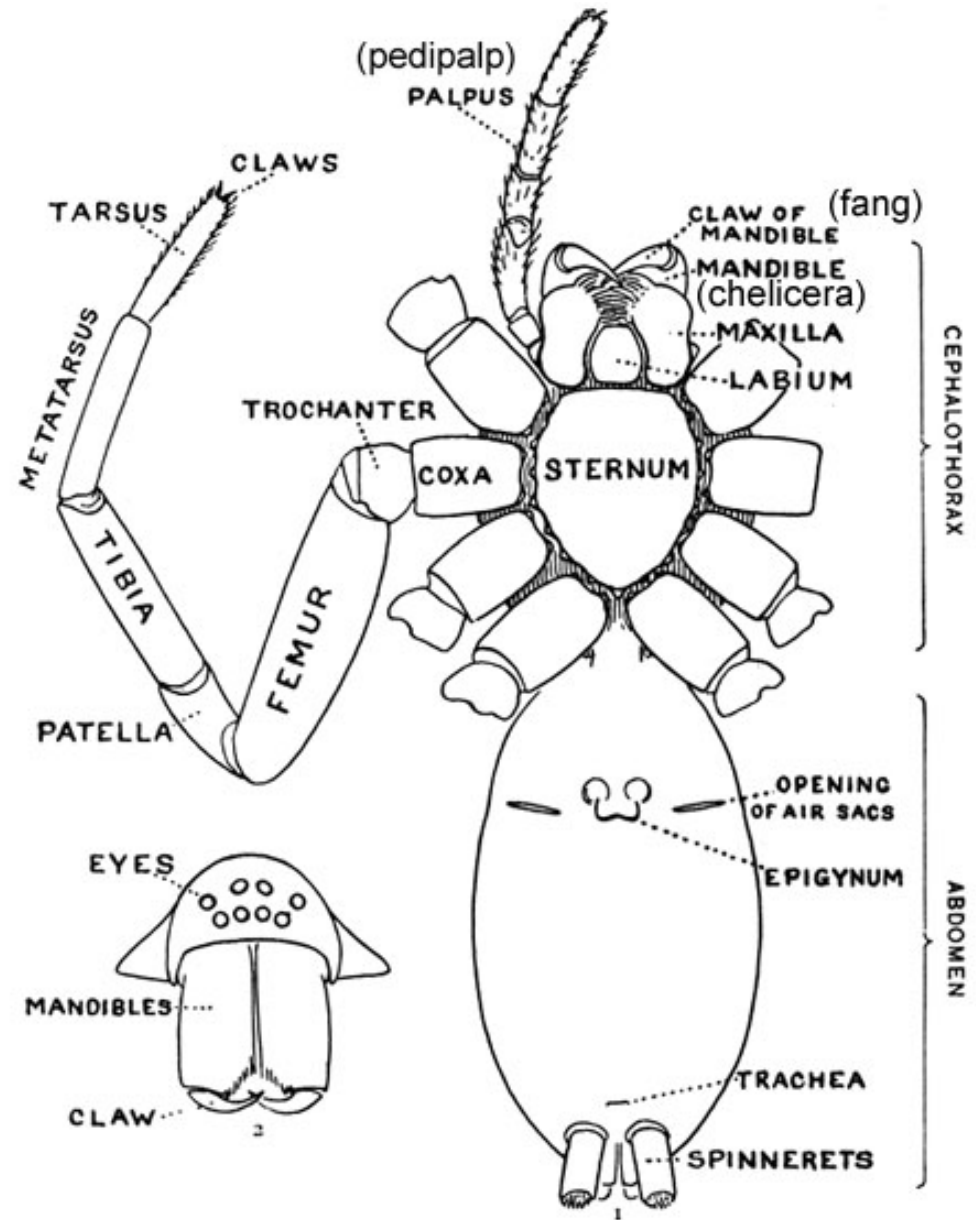
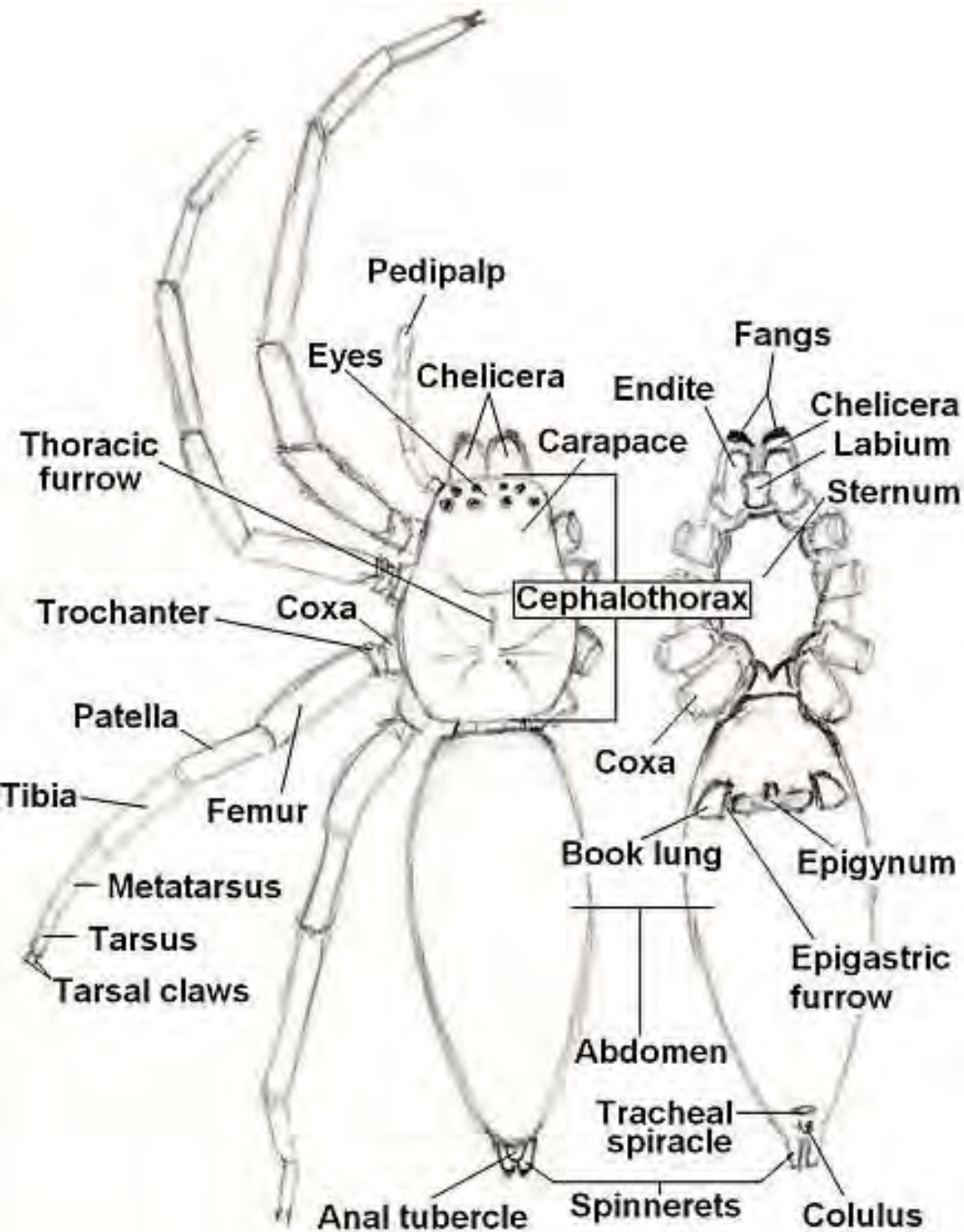
Number of species known
from each family in Alberta
(based on Robb Bennett's
personal list, 7 Feb 2019)

Gentle guides to identifying spiders



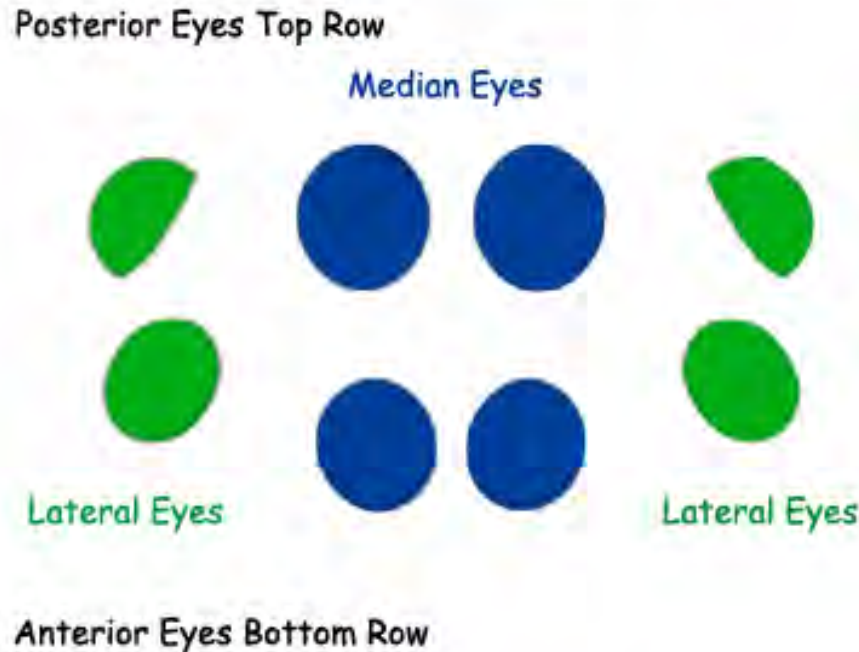
I also recommend this on-line key to families of spiders from Europe:
<https://araneae.nmbe.ch/key> (note that it includes more families than occur in Alberta)

You still need to know anatomy



Eye patterns can sometimes be helpful

Spider Eye Arrangement Terminology



This view is looking into the face of the spider.

following eye patterns are from
Bugguide unless otherwise mentioned

<https://bugguide.net/node/view/323910> and
<https://bugguide.net/node/view/84423>

Families with six-eyed spiders

Anapidae (in part)

Cybaeidae (in part-nearly all eight-eyed)

Dictynidae (in part-nearly all eight-eyed)

Diguetidae

Dysderidae

Leptonetidae (in part-nearly all six-eyed)

Linyphiidae (in part-nearly all eight-eyed)

Nesticidae (in part-nearly all eight-eyed)

Ochryoceratidae

Oonopidae (in part-nearly all six-eyed)

Orsolobidae

Pholcidae (in part)

Scytodidae

Segestriidae

Sicariidae

Telemididae (in part-nearly all six-eyed)

Families with four-eyed spiders

Nesticidae (in part)

Symphytognathidae

Families with two-eyed spiders

Caponiidae

Families with no-eyed spiders

Cybaeidae (in part-nearly all eight-eyed)

Dictynidae (in part-nearly all eight-eyed)

Leptonetidae (in part)

Linyphiidae (in part-nearly all eight-eyed)

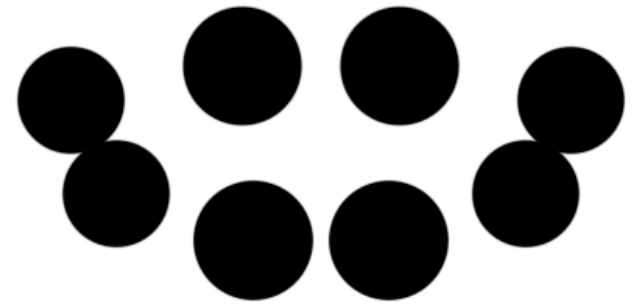
Nesticidae (in part)

Telemididae (in part-nearly all six-eyed)

Theridiidae (in part)

Linyphiidae

- sheetweb, dwarf, and money spiders
- 261 spp. in AB
- usually small to tiny, except for *Megalepthyphantes nebulosus*, which is middle sized

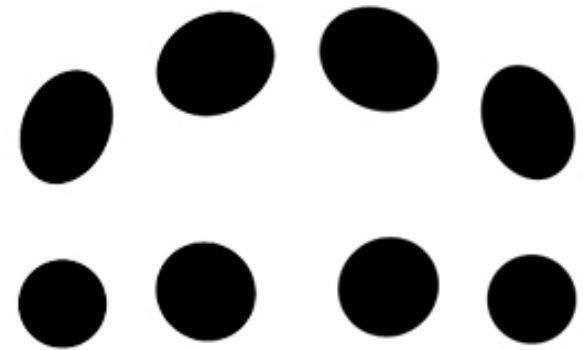


Linyphiidae...



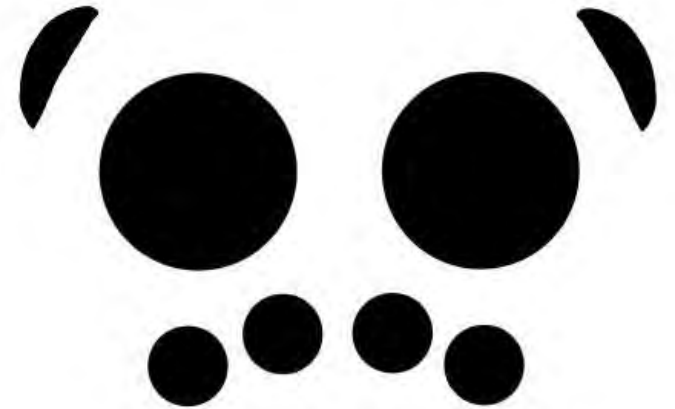
Gnaphosidae

- ground spiders
- 51 spp. in AB
- many appear to be ant-mimics



Lycosidae

- wolf spiders
- 50 spp. in AB

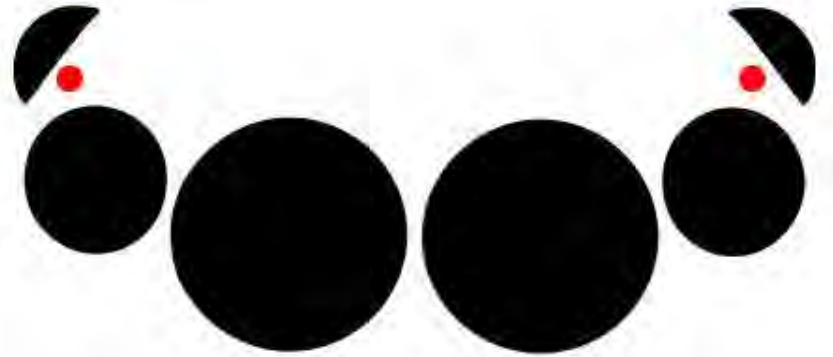


Lycosidae

- female lycosids carry egg sacs in spinnerets



Salticidae



- jumping spiders
- 45 spp. in AB



Salticidae...

- *Phidippus* – big and furry often with green chelicerae



- *Habronattus* –
flashy males, this is
H. americanus

Salticidae...

- *Salticus scenicus*, the introduced zebra house spider



Thomisidae

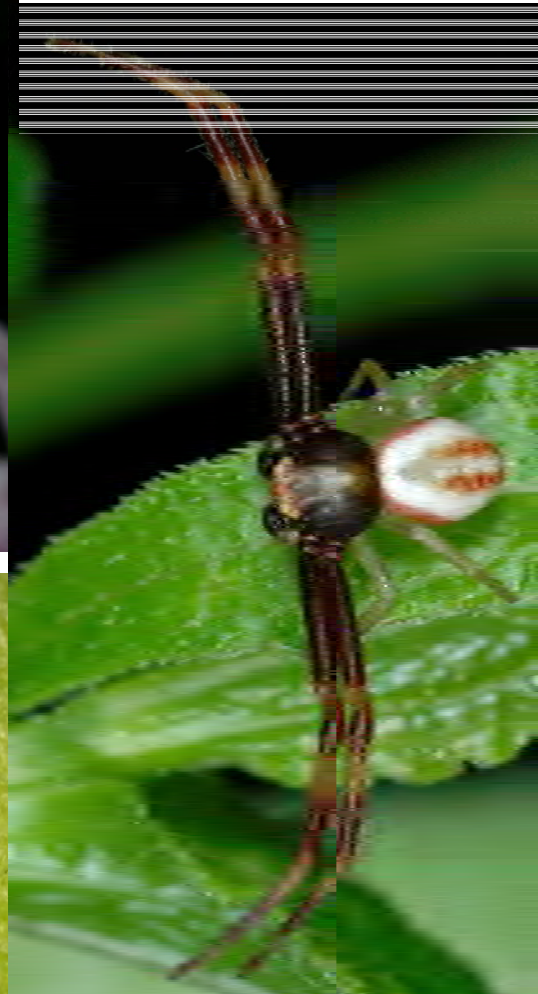
- crab spiders
- 37 spp. in AB
- in Edmonton, flower-associated ones are mostly *Misumena vatia*

Red eyes not visible from front in *Misumenoides*



Thomisidae...

- *M. vatia* can change colour



male *M. vatia*

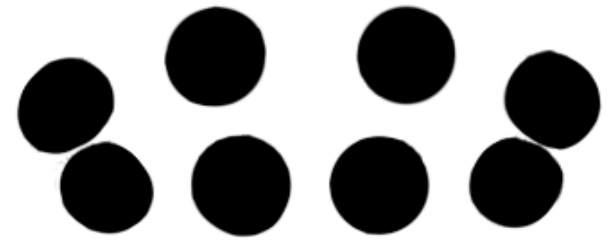
Thomisidae...

- thomisids in the genus *Xysticus* are cryptically coloured for life in leaf litter



Dictynidae

- mesh-web weavers
- 36 spp. in AB
- small bodied and diverse

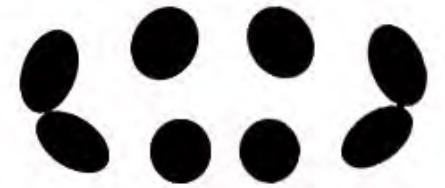
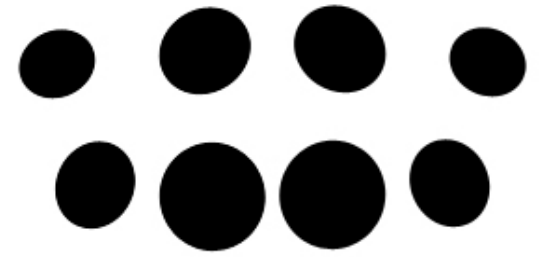


- cobweb spiders Theridiidae

- 36 spp. in AB

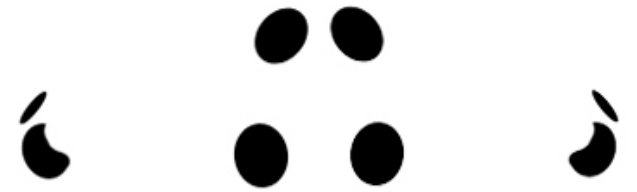
- including *Latrodectus hesperus* (western black widow)

- *Steatoda borealis* is a common basement spider in Edmonton



- orb weavers
- 32 spp. in AB
- large *Araneus* spp. sometimes build webs over doorways at night and frighten people in the morning

Araneidae



Philodromidae

- the running crab spiders
- 29 spp. in AB
- common in conifers
- most are greyish, dorso-ventrally flattened and have a crab-like stance



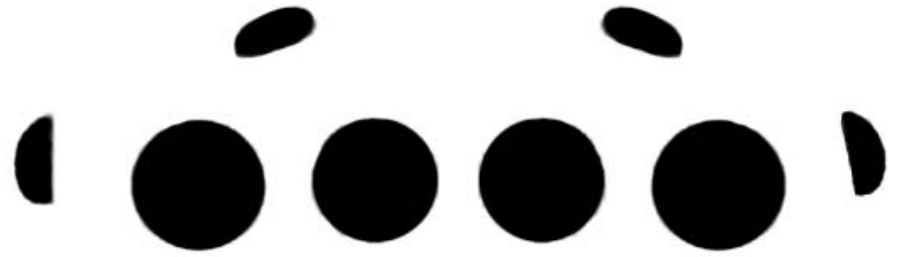
Philodromidae...

- some are more brightly coloured;
Tibellus (right) has a more elongate body



Clubionidae

- sac spiders,
- 17 spp. in AB



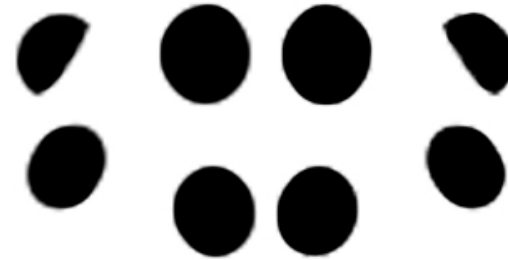
Clubionidae...

- female *Clubiona*, leaf-curling sac spiders, do just that



Tetragnathidae

- longjawed orb weavers
- 14 spp. in AB
- often build webs over water

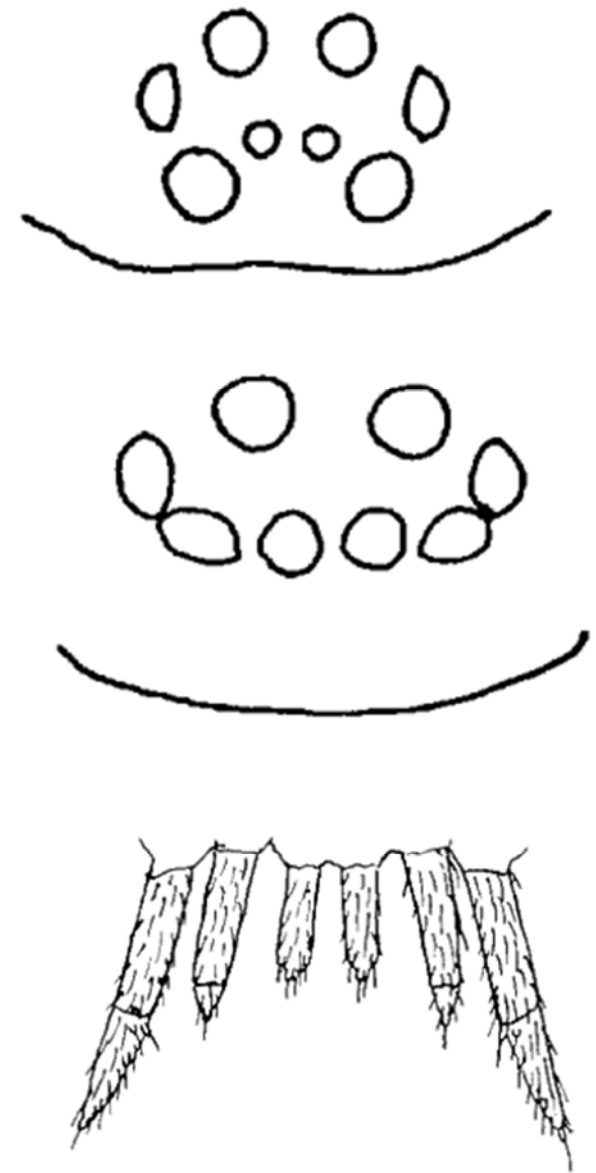


Hahniidae

- comb-tailed spiders, so called because some have all 6 spinnerets lined up in a row
- 10 spp. in AB; I've never photographed one!



<https://bugguide.net/node/view/713561>

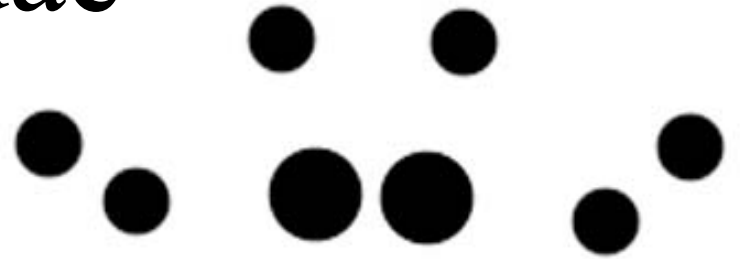


two types of hahniid eye arrangements; spinnerets

(<https://araneae.nmbe.ch/genkey/22/Hahniidae>)

Amaurobiidae

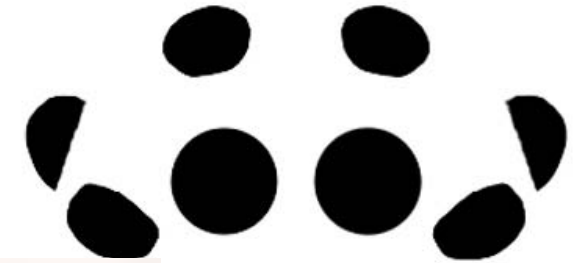
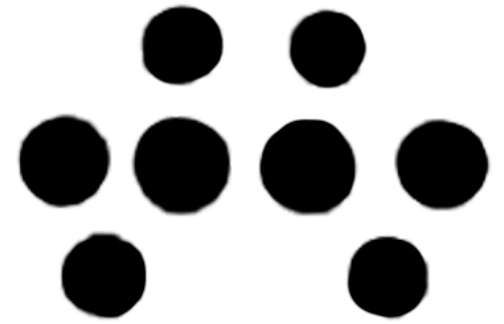
- hacklemesh weavers
- 7 spp. in AB
- another family I haven't photographed (to my knowledge)



Callobius severus from B.C.
(<https://bugguide.net/node/view/926204>)

Agelenidae

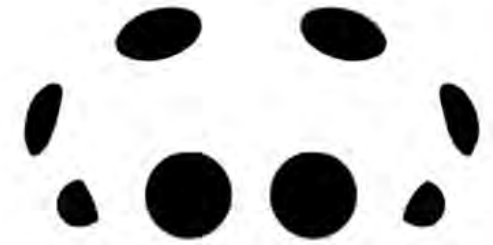
- funnel weavers
- 6 spp. in AB, 3 of them house-loving spiders introduced from Europe



Agelenopsis eyes top,
Tegenaria bottom

Corinnidae

- ant-mimic and ground sac spiders
- 3 spp. in AB, all *Castianeira*



Castianeira
longipalpa

(<https://bugguide.net/node/view/477559>)

Phrurolithidae

- no common name?
- 3 spp. in AB
- another family I've never gotten a photo of
 - but it's a new family, composed of spp. moved from Corinnidae



Phrurolithus eye
arrangement

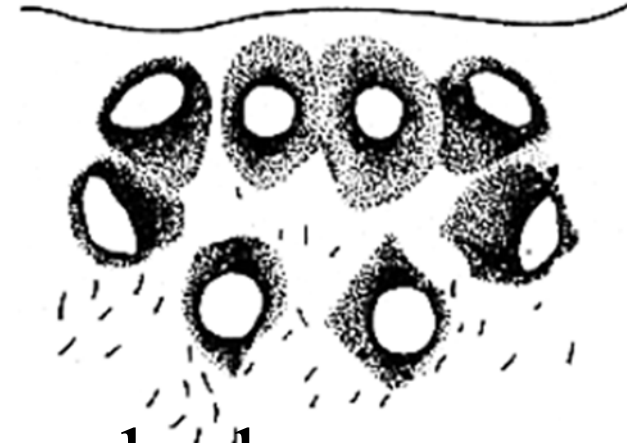
(<https://araneae.nmbe.ch/keylist/265>)

Liocranidae

Agroeca eyes

(<https://araneae.nmbe.ch/specieskey/20/Agroeca>)

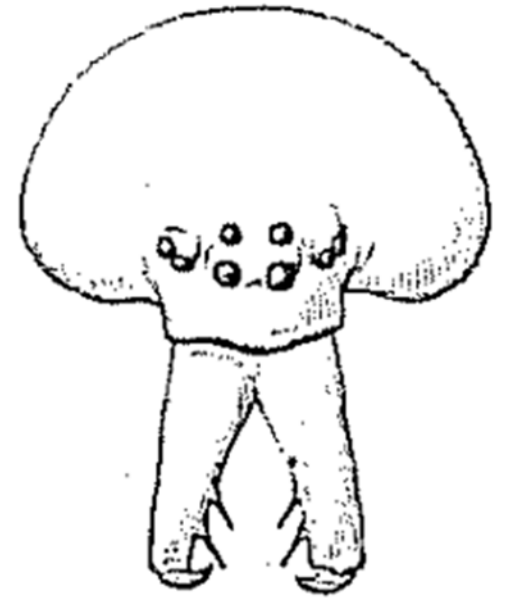
- spiny-legged sac spiders
- 3 spp. in AB
- yup, another one I haven't photographed
 - but here's a photo of an *Agroeca* from Whitecourt



[https://bugguide.net
/node/view/378271](https://bugguide.net/node/view/378271)

Mimetidae

- dwarf pirate spiders
- 2 spp. in AB
- they have very spiny front legs
- some day I will see one...



Mimetus eye
arrangement

(<https://araneae.nmbe.ch/specieskey/419/Mimetus>)

Ero canionis from
Saskatchewan

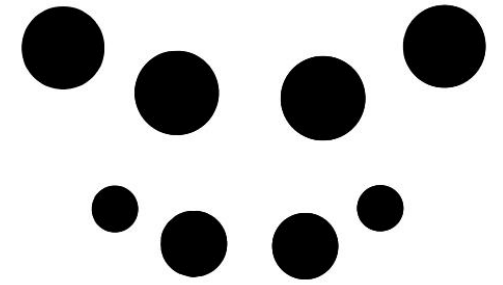
<https://bugguide.net/node/view/1386054>

Pholcidae

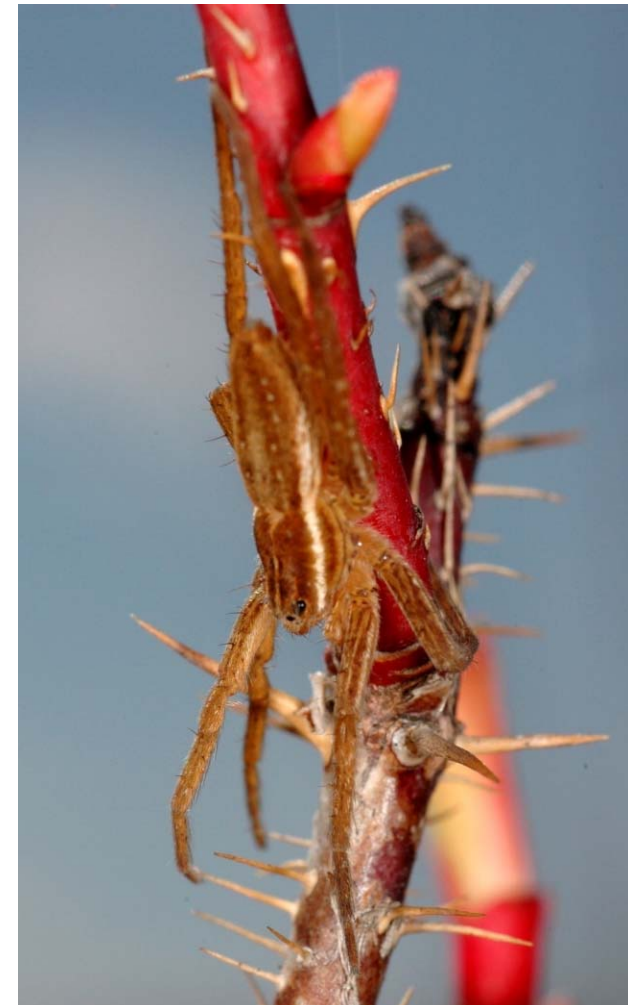
- cellar or daddy longlegs spiders
- 2 spp. in AB, 1 of them exotic



Pisauridae



- nursery web or fishing spiders
- 2 spp. of *Dolomedes* in AB



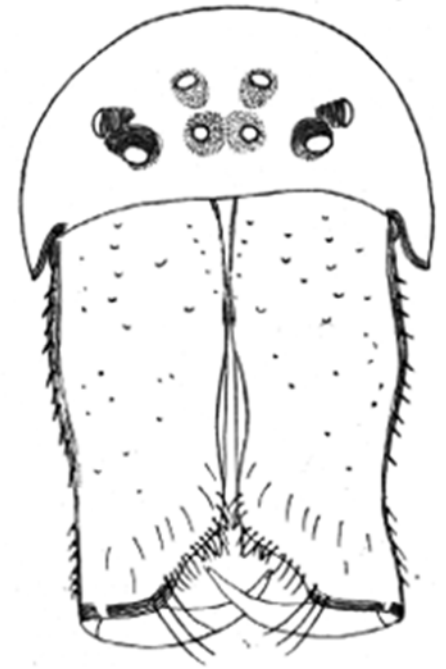
Titanoecidae

- rock weavers because they like to build webs under rocks
- 2 spp. in AB
- yet another family I need to photograph



this is a European
Titanoeca sp.

(<http://www.jorgenlissner.dk/Titanoecidae.aspx>)

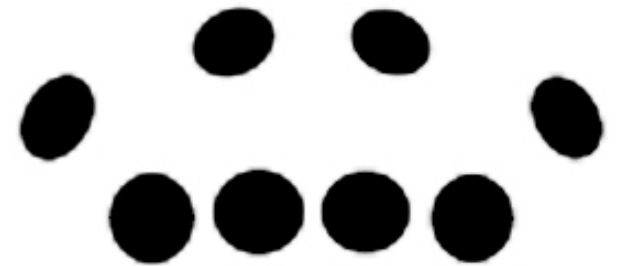


Titanoeca
eyes

(<https://araneae.nmb.e.ch/specieskey/337/Titanoeca>)

Cybaeidae

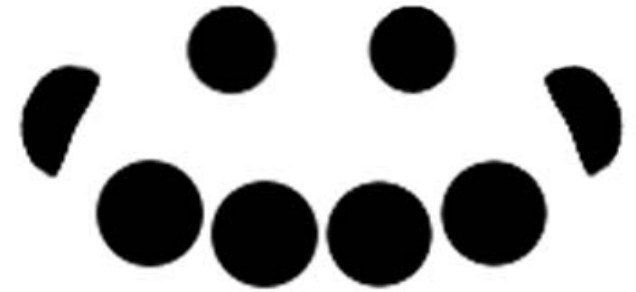
- soft spiders, water spiders
 - though ones in AB show no strong affinity for water
- 3 spp. in AB



Ethobuella tuonops from
Alaska

(<https://bugguide.net/node/view/369932>)

Anyphaenidae



- ghost spiders, because most are pale
- 1 sp. in AB, *Anyphaena pacifica*



Anyphaena pacifica
from B.C.

(<https://bugguide.net/node/view/799733/bgimage>)

Desidae

- saltwater spiders (not relevant to all spp,!)
- 1 sp. in AB *Metaltella simoni*
 - introduced from South America; in AB lives in houses



Metaltella simoni male

(<https://bugguide.net/node/view/1353938/bgimage>)

https://en.wikipedia.org/wiki/Metaltella_simoni

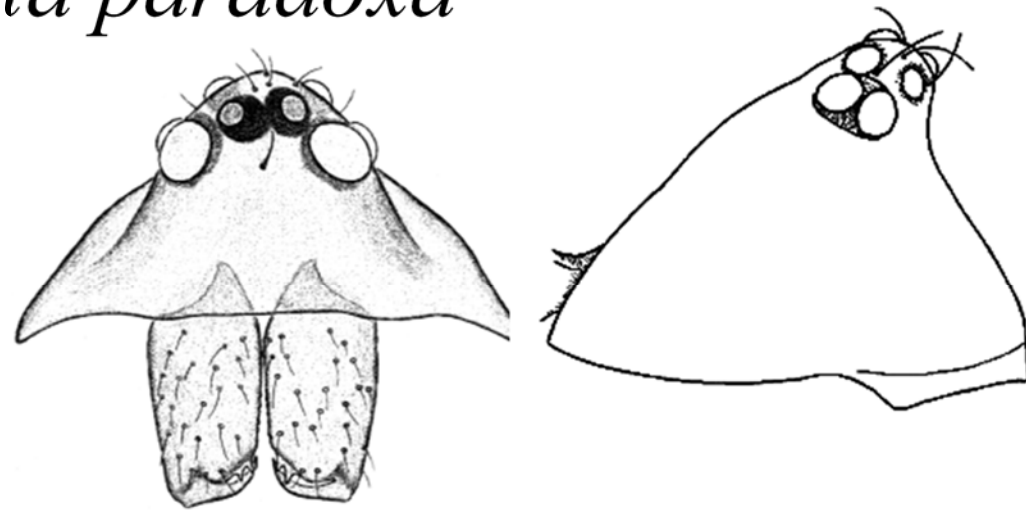
Eutichuridae

- yellow sac spiders
- 1 sp., *Cheiracanthium inclusum*
- looks very much like a clubionid, so I may have photos but don't realize it



Mysmenidae

- dwarf cobweb weavers or minute litter spiders
- 1 sp. in AB, *Trogloneta paradoxa*



Trogloneta, front and side view of cephalothorax

(<https://araneae.nmbe.ch/specieskey/348/Trogloneta>)

this one is from Australia because North Americans appear not to post *Trogloneta* photos on the internet

(http://www.arachne.org.au/01_cms/details.asp?ID=2489)

Telemididae

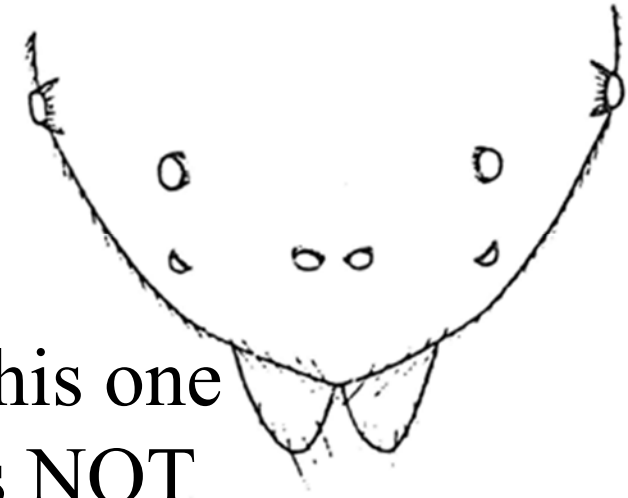
- longlegged cave spiders
- 1 sp. in AB, *Usofila pacifica*, which has 6 eyes and is not always in caves



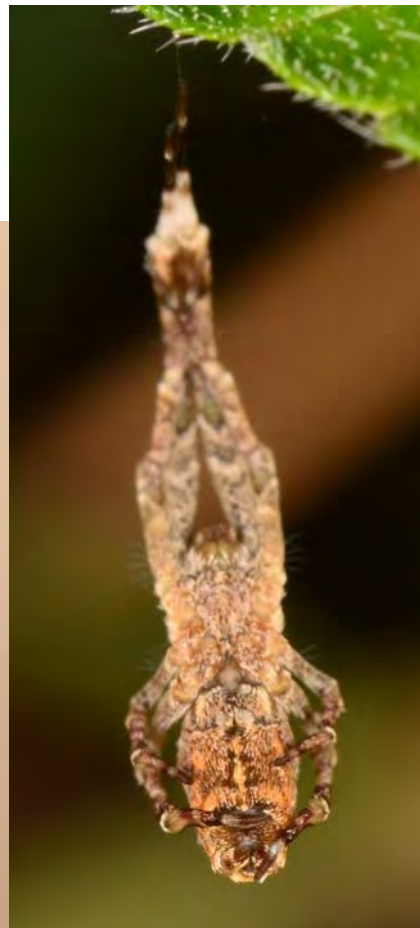
the 6-eyed *Usofila pacifica*
(<https://bugguide.net/node/view/718508>)

Uloboridae

- hackled orbweavers
- 1 sp. in AB
 - but might be more; I photographed this one at the Muttart Conservatory, and it is NOT
 - *Hyptiotes gertschi*.



Hyptiotes eye pattern, dorsal rather than frontal view
(<https://araneae.nmbe.ch/specieskey/161/Hyptiotes>)



Hyptiotes gertschi:
<http://www.pbse.com/splluk/image/128982623>

Non-native spider species

- Agelenidae *Eratigena agrestis* - funnel weaver spider
- Agelenidae *Eratigena atrica* - giant house spider
- Agelenidae *Tegenaria domestica* - barn funnelweaver
- Araneidae *Cercidia prominens* - orbweaver spider
- Araneidae *Larinioides sclopetarius* - bridge orbweaver spider
- Desidae *Metaltella simony* - amphinectid spider
- Linyphiidae *Lepthyphantes leprosus* - sheetweb weaver spider
- Linyphiidae *Lepthyphantes nebulosus* - sheetweb weaver spider
- Pholcidae *Pholcus phalangioides* - long-bodied cellar spider
- Salticidae *Salticus scenicus* - zebra jumping spider
- Theridiidae *Neottiura bimaculata* - cobweb weaver spider
- Theridiidae *Parasteatoda tepidariorum* - common house spider