

0. MAKING SILK THREADS - Story Preface

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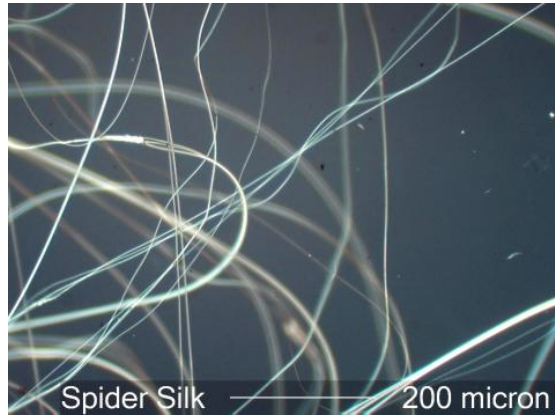
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This image depicts the silk strands of a spider, at high-powered magnification. Russ Crutcher, of [Microlab NW](#), has graciously made this image of spider silk available. Click on it for a better view.

Web-spinning spiders have glands which make silk. The silk is a protein which spiders can eat and recycle. Each gland produces a different type of silken thread. Those threads perform different functions in the web-spinning/prey-capturing process, such as:

- *Attaching threads*
- *Walking threads*
- *Sticky threads*
- *Adhesive threads*
- *Prey-encapsulating threads*
- *Cocoon-spinning threads*

When we examine a spider's anatomy, we see it has "spinners." Those spinners (or spinnerets) are like little nozzles which shoot-out the threads made in the spider's glands. They, together with the spider's legs, are the tools needed to weave a web.

Different types of spiders spin different types of webs. Their glands and spinnerets also look different. Thanks to the [California Academy of Sciences](#), we can examine highly magnified glands and spinnerets (the "A" picture is the overview for each) in the following spiders:

- *Hypochilus pococki, North Carolina*
- *Filistata insidiatrix, Siena, Italy*
- *Megadictynathilenii, New Zealand*
- *Goeldia, Chile*

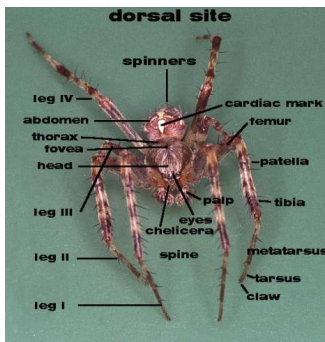
When the silk thread first comes out of the spider's body, it is a liquid. It becomes a solid when the air mixes with it.

The spider is now ready to begin spinning a web.

See [Alignments to State and Common Core standards for this story online at:](#)

<http://www.awesomestories.com/asset/AcademicAlignment/MAKING-SILK-THREADS-Charlotte-s-Web>

## Media Stream

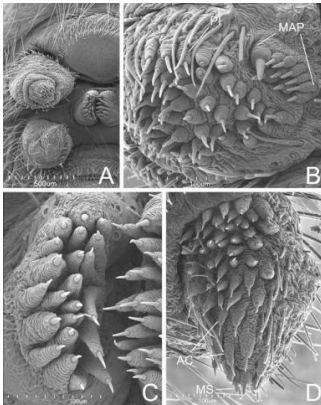


### Spider Spinners

Image, described above, online courtesy Ed Nieuwenhuys.

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View this asset at: <http://www.awesomestories.com/asset/view/Spider-Spinners>



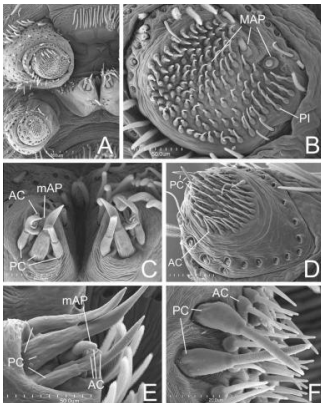
### Glands and Spinnerets of North Carolina Hypochilus Pococki

Image online, courtesy California Academy of Sciences (San Francisco) "Atlas of Entelegynae."

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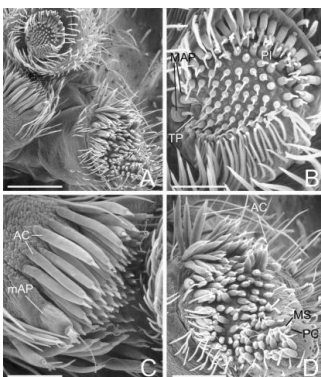
### Glands and Spinnerets of Siena, Italy Filistata Insidiatrix

Image online, courtesy California Academy of Sciences (San Francisco) "Atlas of Entelegynae."

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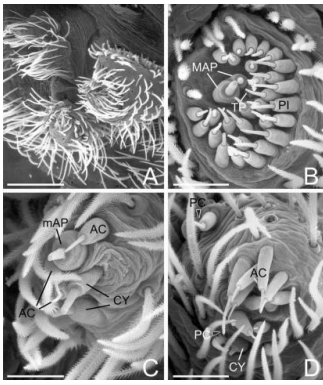
### Glands and Spinnerets of New Zealand Megadictynathilenii

Image online, courtesy California Academy of Sciences (San Francisco) "Atlas of Entelegynae."

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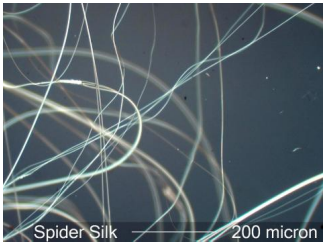


### Glands and Spinnerets of Chile Goeldia

[Image online](#), courtesy California Academy of Sciences (San Francisco) "Atlas of Entelegynae."

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