AWESOME stories

BALLOONING SPIDERS

0. BALLOONING SPIDERS - Story Preface

1. THE REAL ZUCKERMAN FARM

2. WHO IS CHARLOTTE?

3. MAKING SILK THREADS

4. SPINNING A WEB

5. WEBS in the MORNING DEW

6. HOW DOES CHARLOTTE EAT?

7. EGG SACS and BABY SPIDERS

8. BALLOONING SPIDERS

9. WILBUR and the FARM

10. THE STORY OF CHARLOTTE'S WEB



In late September, 2013, Texans saw something unusual: strings, apparently made of silk, attached to objects on one end but flying loose on the other end. The fine strands of spider-produced gossamer were leftover launchers which spiderlings had created for their “dynamic kiting” journeys. In a process more commonly known as “ballooning,” spiderlings face into the wind, stand on their tiptoes and release their gossamer strands. With no control over where (and when) they will land, the best they can do is reach a place where they can mature the following summer. “SkynoThings676" shared this image of “web strings left behind by migrating spiders in North Texas.” Online via WFAA Ushare.

Young spiders can move away from the place where they hatched by sending out a strand of their silk (referred to, sometimes, as gossamer) and riding it on the wind. They look like little balloons in the air, and what they do is actually called ballooning.

Here's how it works.

From the top of a platform (like a blade of grass), the spider faces the wind. Standing in a "tip-toe" position, with its abdomen pointing toward the sky (like the lower spider in this picture), it releases a stream of silk from its spinneret. (The picture, although of an adult spider, allows you to clearly see silk thread coming from two spinnerets.)

Once the wind catches a thread, the spiderling leaves its launch pad. Sometimes they "fly" for hundreds of miles.

It isn't just baby spiders who balloon, however. Smaller adults, and "immatures" of larger species, can also position themselves to travel with the wind.

Charles Darwin (the English naturalist who traveled the world, finding and studying changes in various life forms, then publishing his ideas about the concept of evolution in his famous book, *The Origin of Species*), once - during his explorations - saw a large group of spiders land on his ship, the *Beagle*. At the time, the ship was sixty miles off the coast of South America.

Ballooning spiders have even been seen by airplane pilots flying at about 10,000 feet.

Allen Dean, a spider expert at Texas A&M University, describes how ballooning takes place:

> *Spiders use their silk as a way to disperse. A variety of spiders use their silk as a simple parachute to carry them from one place to another. Light winds and rising thermals favor spider dispersal in this manner. When the wind currents catch the threads the spiders release their launching pad and off they go.*

Walt Whitman, the famous poet, described such an event in his 1868 poem *A Noiseless, Patient Spider*:

A noiseless patient spider,
I mark'd where on a little promontory it stood isolated,
Mark'd how to explore the vacant vast surrounding,
It launch'd forth filament, filament, filament, out of itself,
Ever unreeling them, ever tirelessly speeding them.

And you O my soul where you stand,
Surrounded, detached, in measureless oceans of space,
Ceaselessly musing, venturing, throwing, seeking the spheres to connect them,
Till the bridge you will need be form'd, till the ductile anchor hold,
Till the gossamer thread you fling catch somewhere, O my soul.

In E.B. White's story about Charlotte and her friends, credit for saving Charlotte's egg sac, after her death, goes to Wilbur (the pig) and Templeton (the rat). Who were these animals - and - what was life like for *them* on the Zuckerman farm?

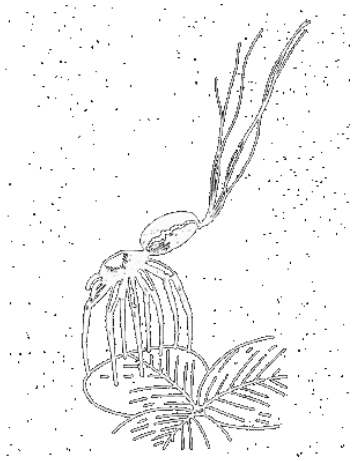
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Media Stream



Pre-Ballooning Spider Ready to "Fly"
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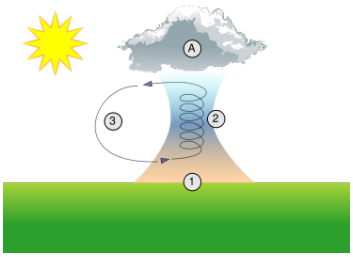
Silk Threads used by Spiders for Travel

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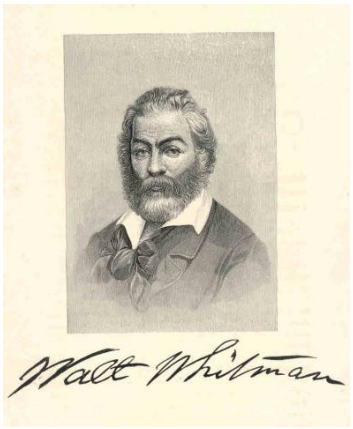
Charles Darwin - The Beagle

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Rising Thermals - Facilitate Spider Ballooning

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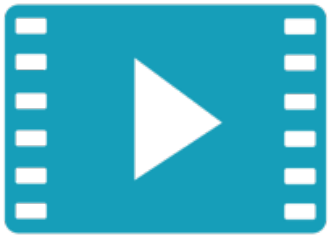
Poet Walt Whitman (A Noiseless, Patient Spider, 1868)

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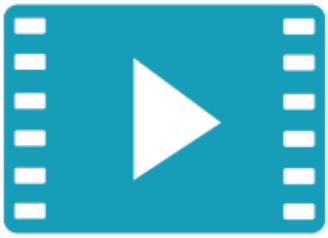
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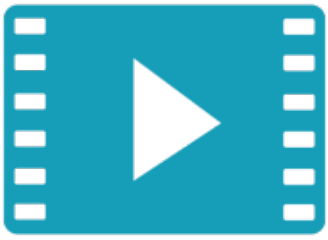
Charles Darwin - His Dangerous Idea, Part 1

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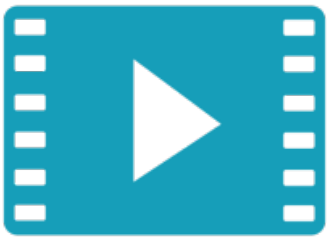
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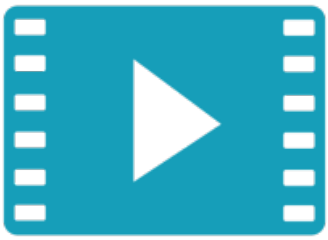
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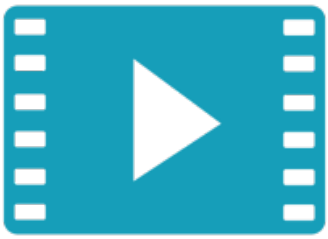
Charles Darwin - Darwin's Dangerous Idea, Part 4

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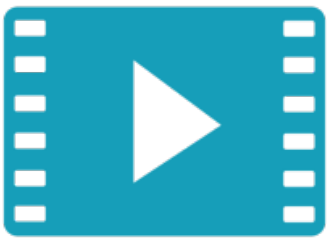
Charles Darwin - Darwin's Dangerous Idea, Part 5

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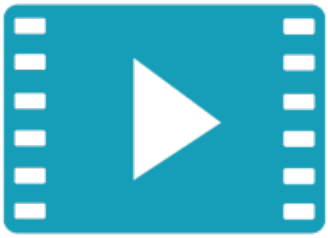
Charles Darwin - Darwin's Dangerous Idea, Part 6

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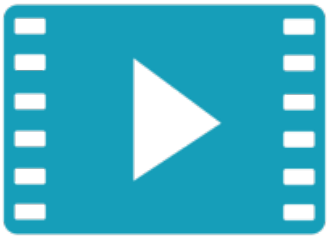
Charles Darwin - Darwin's Dangerous Idea, Part 7

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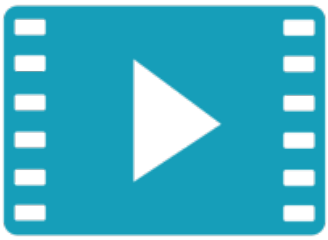
Charles Darwin - Death of Annie Darwin, Part 8

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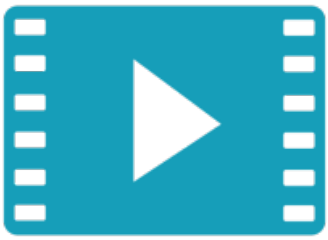
Charles Darwin - Darwin's Dangerous Idea, Part 9

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Charles Darwin - Darwin's Dangerous Idea, Part 10

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Darwin's Dangerous Idea - Part 11

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