

FLY DESIGN FOR WTA STREAMS - THE LIGHT BULB SPIDER

Ed Herbst

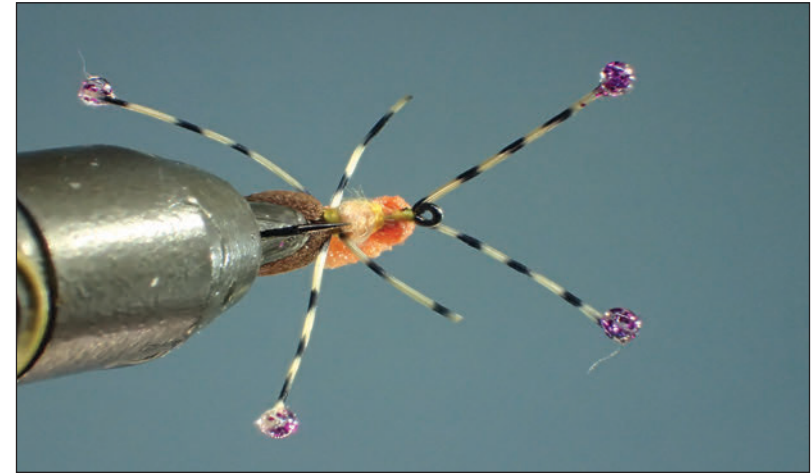


'Trout eat living things. Motion is a sign of life'

[Lee Wulff on Flies Stackpole Books, 1980]

'A fly must have legs' – Tony Biggs

The Light Bulb Spider, which is proving exceptionally effective on the streams of Barkly East and Rhodes, came about through two photographs. Its evolution forms one of the chapters in my book 'The Delicate Fly Fisher' published in late 2025.



The Light Bulb Spider

The first photo appeared on the Instagram page of Arno Crous, a small stream enthusiast who moved from South Africa to Australia several years ago. It showed a Wolf Spider with its feet creating dimples on the water, each of which reflected a starburst of light.

The second was a photo emailed to me in May 2022 by split cane rod maker, Stephen Boshoff – it showed what he called the 'Light Bulb Ant'. The tips of the CDC



The Arno Crous photo of the light pattern created by the feet of a Wolf Spider on the water surface



Stephen Boshoff's Light Bulb Ant which led me to use this technique on the tips of rubber legs

hackle were flecked with tiny droplets of clear UV light-cured resin which would cause them to vibrate in concert with the push and pull of the current and, in so doing, create a moving pattern of light, making it more visible to trout. I realised I could use the same concept on the tips of rubber legs and antennae on flies such as hoppers and spiders.

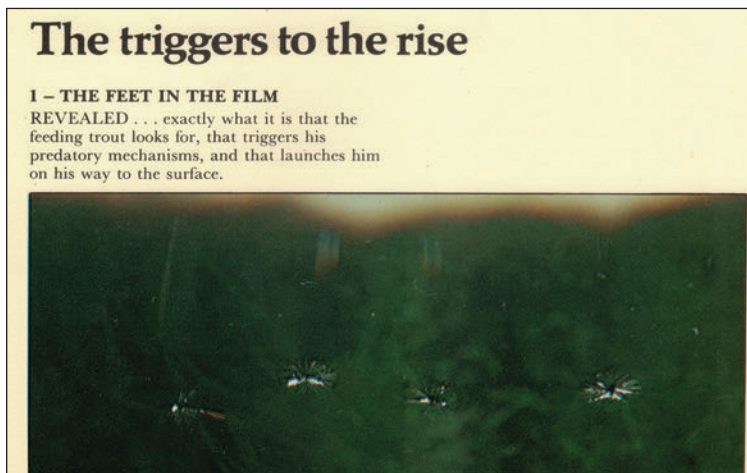


Wolf Spiders are a common sight in South African riverine environments, as are the bigger Rain Spiders (Palystes superciliosus)

Have a look at the article 'Spider locomotion on the water surface' by Robert Suter on the ResearchGate website and do a Google images search using the same key words. Note the star-like light reflections from the dimples created by their feet.

The feet of spiders such as our common local Wolf Spider species, *Nilus massajee*, have features which enable it to use the surface tension of the water advantageously for locomotion.

It was John Goddard and Brian Clark who, through their use of underwater cameras, brought us the information that those dimples created by the feet of floating insects serve as an early warning to trout of approaching prey being carried towards them by the current. It came in their milestone book 2005 book 'The Trout and the Fly.'



A scan from 'The Trout and the Fly' showing how insect feet in the water surface reflect sunlight, alerting downstream trout to their approach

Wolf Spiders (Lycosidae) which are common in riverine habitats, do not spin webs but either ambush or run down their prey -hence their common name 'Huntsman Spiders'



CPS member Mark Mackereth who tied the first Wolf Spider imitation. [Photo: Tom Burgers]

For more than half a century, members of the Cape Piscatorial Society have tied imitations of this insect. The story of the transition from Mark MacKereth's Caribou Spider to Leonard Flemming's more realistic Wolf Spider imitation can be found in the Terrestrials folder in the articles archive of the Cape Piscatorial Society:

<https://www.piscator.co.za/CPS2/articles/terrestrials/>

Peter Brigg modified Leonard's design, replacing the fragile pheasant tail front legs with squirrel hair.



*The original Caribou Spider as tied by
Marcel Terblanche*



Peter Brigg simplified the design of Leonard Flemming's original Wolf Spider and it has proved as successful as the original.

The rubber-leg Light Bulb Spider, developed over the past three years, has proved to be an outstanding trout fly wherever it has been tried and that is easy to understand. It ticks all the boxes:

- General Impression of size and shape.
- Movement – weighting the tip of the rubber leg creates a cantilever effect which makes it more responsive to current pressure as well replicating the starburst of light created when the insect moves across the surface film. The weight of the UV-resin droplet pulls the leg tip below the water surface making it more visible to trout from a greater distance. The clear resin droplet is mixed with glitter dust which enhances the fly's visibility factor for trout.

Gary LaFontaine who used scuba divers to study trout reaction to different patterns, said that what was needed to persuade a trout holding deep in strong currents to expend the necessary energy to capture prey at the water surface was a 'wide fly' and a 'big chunk'. Visually, the LBS meets such criteria.

I tied the initial version with orange foam rubber because orange is a time-proven trigger colour for trout and yellowfish. It proved very successful but later I changed to a more neutral colour for the rear portion of the fly.

An interim version of the LBS used orange foam rubber for the entire fly.

Initially it was tied on a on a #14 short shank, medium wire Dohiku 303 hook, but smaller trout found it difficult to get into their mouths. A short-shank Grip #18 12723 BL Egg Hook – effectively a size 20 – proved sufficiently heavy to provide a keel effect holding the fly upright, but was light enough not to sink the fly.

To start, a rubber strand is tied in behind the eye and folded forward so that the eye separated it into a wide 'V'

The front section is orange Wapsi Evazote foam rubber to make to fly more visible. A strip of orange foam is tied in at the eye facing forward. It is then folded backwards and tied down at the junction with the body thus forming the head. The resulting stub is cut at an angle facing forward at a slant. This area is covered with a mixture of Loon Water-Based Head Cement and glitter dust to form a brightly-coloured, light-reflecting sighter.

The 'abdomen' is made of stretched and doubled tan or brown Hareline Fettuccine Foam.

In the gap between the head and abdomen, tie in rubber strands in a V-shape projecting laterally to represent the legs. I mottle these with a Sharpie black permanent marker which, according to a Google search, is the most waterproof ink available in such felt-tip pens. My leg preference is a flexible material, Hareline Micro-Flex, which is alleged by an American fly-fishing shop to '... wiggle like crazy'. To



The short-shank Grip hook which proved to be the ideal compromise for the Light Bulb Spider



Hareline Micro-Flex is supple, durable and easily mottled with a black Sharpie permanent marker

separate the legs, I use orange Semperfli Kapok dubbing which is exceptionally buoyant.

The female Wolf Spider carries a prominent white egg sac beneath the abdomen and Solarez Buoyant Armour, a white UV resin is the ideal material to imitate this feature.

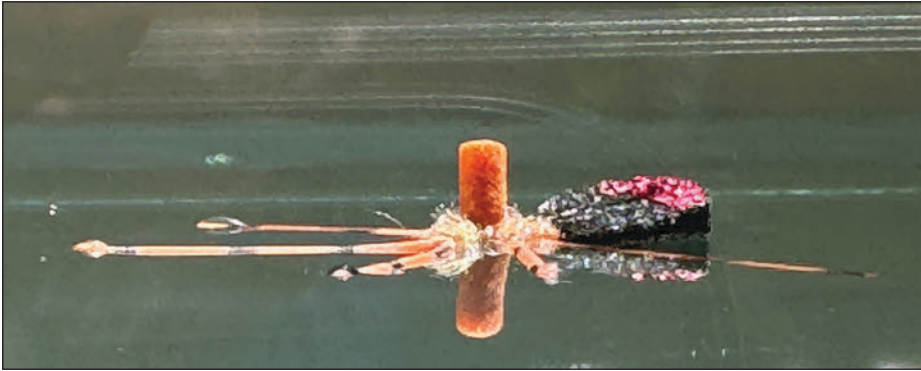
The penultimate step is to tip the legs with two layers of clear UV resin, the first is UV Knot Sense mixed with glitter dust.



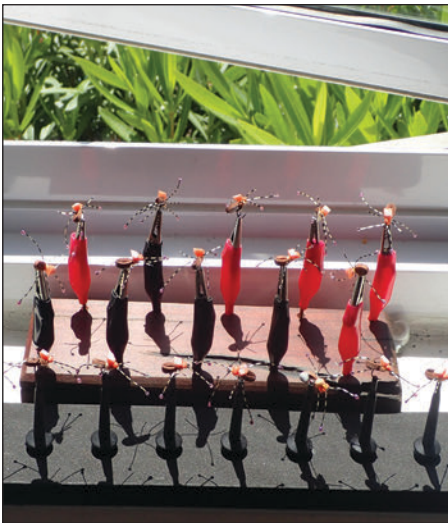
Solarez Buoyant Armour UV resin is ideal for imitating the white egg sac beneath the abdomen of the female Wolf Spider

In the initial trials, these droplets did not adhere for long. To counter that, we added a second layer – Solarez Bone Dry. That solved the problem.

Buoyancy improves if the fly can be waterproofed beforehand and allowed to dry on a sunny windowsill. I put a drop of Watershed on the kapok and coat the legs and body with a viscous floatant such as Loon Aqual. I have tried Loon Fly Dip with success but it is difficult to find.



An early version of the LBS showing how low it sits in the water. Brightly-coloured mono in a greased leader assists in following it in the drift



Recently water-proofed Light Bulb Spiders drying on a sunny windowsill



Loon Fly Dip leaves the fly covered with powdered gel which repels water and makes it more buoyant

The LBS proved successful from when it was first tied in mid-2023 and has continued to do so.

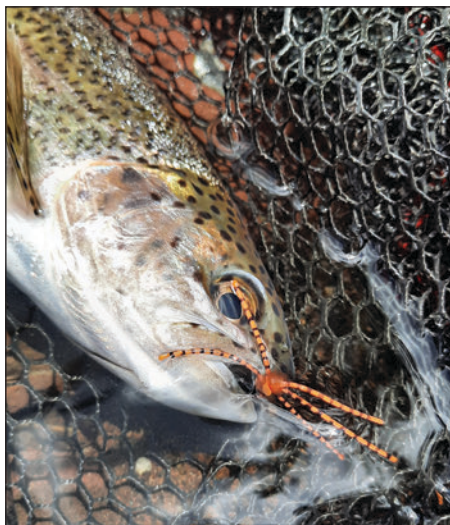
Matthew Sephton was the first to try the orange-leg, # 14 LBS on the Three Drifts stream which flows through the family farm, Pitlochrie' in Barkly East and, in April 2023, I received this email message:

'The spider is honestly something special, watching it float down the stream and into an eddy, watching a big bow come up and have a look, deciding carefully whether or not to take the fly and then absolutely engulfing it. Seriously fun skinny stream fishing today. I fished a Simulid nymph with a spider dry dropper. For every 2 fish I hooked on the Simulid, I hooked one on the spider. After this I couldn't help myself and fished only a spider or hopper the rest of the day, all on a little 6ft 1-weight and had such fun.'*

**The Simulid Nymph imitates the prolific black fly larvae*



Matthew Sephton fishing the Three Drifts stream on the Barkly East family farm, Pitlochrie. The LBS was first tested here and proved exceptionally effective. [Photo: Wiebke Langner]

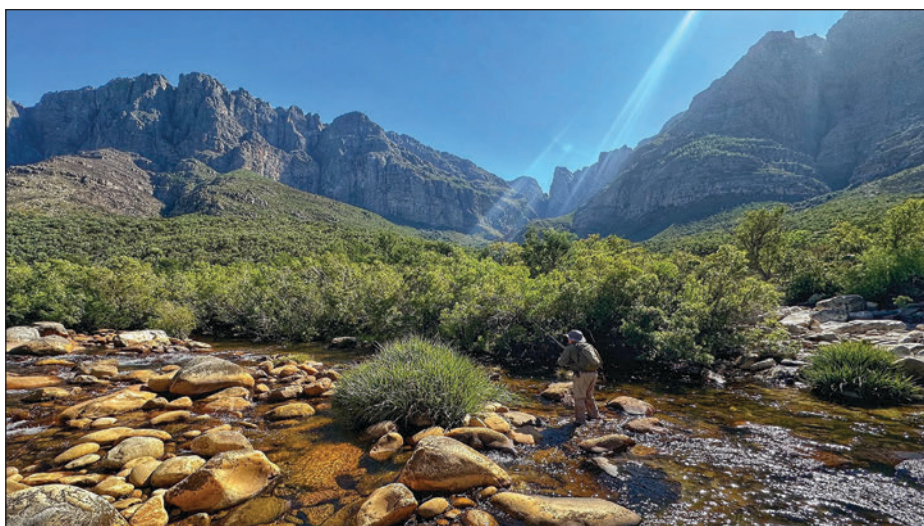


A Three Drifts rainbow trout deceived by Matt Sephton's Light Bulb Spider – subsequent versions were smaller and the colours more realistic.

Then, during the March 2024 Wild Trout Association Festival in Rhodes, Ian Cox fished it on the Kraai River. The tiddlers, faster and more agile, always got to my original rubber leg spider first, but could not get it into their mouths – eventually realising it was fake. This commotion inhibited the bigger trout.

This motivated a major revamp and we settled on the short-shank Grip #18 12723 BL Egg Hook and used brown or tan Fettucine Foam for the abdomen.

To test the latest version, I approached two accomplished fly anglers, Darryl Lampert who would test it on the Smalblaar stream near Cape Town and Jan Korrubel who would test it on the Bushmans stream in KZN. Both streams experience heavy angling pressure.



The Smalblaar stream near Cape Town where the trout proved very vulnerable to the LBS.
[Photo: Darryl Lampert]



A Smalblaar stream rainbow trout deceived by a Light Bulb Spider fished by Darryl Lampert

Darryl fished the first weekend in May and his response was overwhelmingly positive. He phoned to say 'I think you have a winner here'.

On his Facebook page he wrote: 'Ed's Light Bulb Spider was a revelation. Fish ate it slowly and confidently all day and I was sad to finally lose it under a rock - ordered some more'.

He said that, after the first cast, the leg tips dipped under water, which I feel is advantageous because fish can spot the spider before it enters their window - which is small on shallow streams.

Jan Korrubel - @jankorrubel_anglerfish – the professional guide and fly tyer, who runs the Kingfisher shop in Pietermaritzburg, only managed to get away during the last weekend in May, by which time the brown trout in the Bushmans stream had already spawned. The rigours of spawning had left them lethargic, but Jan brought several to hand and one drifted below the spider for the full length of a run, then followed it over the lip into the next run before taking it decisively!



Jan Korrubel's photo of the Bushmans, the most iconic brown trout stream in South Africa



A Bushmans stream brown trout which pursued the LBS downstream
{Photo: Jan Korrubel}

Jan provided some useful feedback saying that, after only fishing in the morning, to rest the post-spawning fish, all the UV resin 'lightbulbs' had come off the Microflex legs. They would be easy to replace, but I now use a double layer method.

This has solved an initial problem which occurred when the legs, tipped with sticky Loon Knot Sense mixed with glitter dust, stuck together when, inevitably, they touched.

The answer was to use a second layer of Solarez Bone Dry which is not tacky.

Additionally, the tips are omitted on the middle legs which are cut slightly shorter.

Here is the material list and a step by step tying sequence of the Light Bulb Spider:

Hook: Grip 12723 BL size 18

Thread: Orange Hends Ultrafine or UTC 70 denier orange or white Textreme Extreme coloured orange with a permanent marker

Abdomen: Stretched and doubled foam rubber strip – Hareline Fettuccine foam rubber preferred

Head: Wapsi Evazote foam rubber or Larva Lace foam rubber

Legs: Ultrafine rubber – Hareline Micro-Flex preferred. Barred with black Sharpie permanent marker

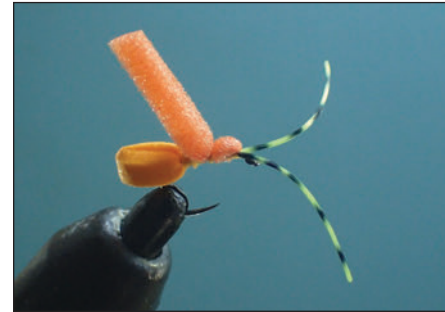
Dubbing: Orange Semperfli Kapok



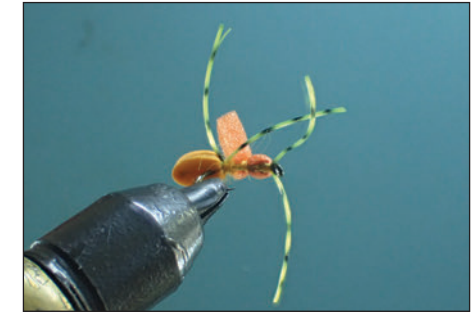
Step 1: Tie in the pre-barred Micro-Flex front legs



Step 2: Tie in the Evazote strip which will form the head and sighter post



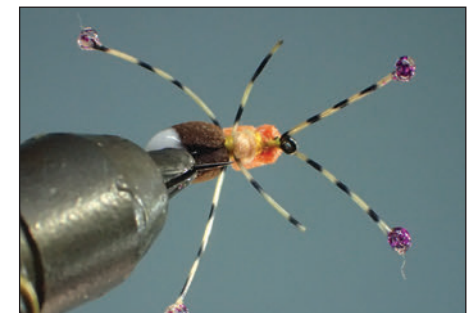
Step 3 and 4: Fold the Evazote foam rubber backwards and tie down to form the head and sighter post. Then, tie in the looped Fettuccine foam rubber strip to represent the abdomen of the spider



Step 5: Tie in a rubber leg on either side of the hook shank, dub the thread with kapok and use it to separate and secure the legs. Then, tip the legs with a double layer of resin and add Loon Water-Based Head Cement plus glitter dust to the tapered head stub to create the sighter.



The latest version of the LBS showing the front of the fly being used as a light-reflecting sighter



The white Solarez Buoyant Armour UV resin on the bottom of the abdomen replicates the egg sac of the female Wolf Spider

PART 1: THE LIGHT BULB SPIDER



The downward taped sighter covered with a mixture of Loon Water-Based Head Cement and glitter dust. The bulbs have been increased in size to enhance leg movement



A cluster of Light Bulb Spiders prior to being waterproofed – design details such as the reflective sighter and the white resin imitating the egg sac can be seen

Since finishing this article, I received news from TC Botha that the LBS 'is on fire' on the Coldbrook stream, a tributary of the Sterkspruit in Barkly East and a message from Rhodes resident, Heather Ralph - @fishnwine on Instagram – reveals that the fish on the Glen Nesbitt stream in the same area are also taking it with alacrity. The LBS is a large fly on a small hook and quite wind-resistant so it would be best to use a 4–5x tippet plus a knot such as the Perfection Loop, lubricated with Loon Knot Sense before tightening.



A trout from the Coldbrook stream in Barkly East that could not resist the LBS.
[Photo: T C Botha]



The older, orange-leg version of the LBS deceived this Glen Nesbitt trout.
[Photo :Heather Ralph]

'The Delicate Fly Fisher' is available from Amazon in paperback and Kindle formats and, locally, from all major fly angling shops.