



CHAPTER 15

Plagiosterna discolor

Rethinking the Starling and Herl

“Even if there was no hatch to match, the trout on tree-lined streams responded much better to predominantly green flies”. Gary LaFontaine – *The Dry Fly. New Angles* (Greycliff Publishing Company, 1990).



Giordano (Zamps) Zamparini fishing the appropriately-named Willow Stream on the farm Balloch in Barkly East

For the best part of 25 years starting in the mid-1990s, Tom Sutcliffe and I visited Barkly East as the guests of Basie and Carien Vosloo staying on their farm Birkhall, a five-minute drive from the Sterkspruit River.

Centuries ago, the indigenous willow tree, *Salix mucronata*, provided food for an indigenous Willow Leaf Beetle.

The first settler farmers arrived in areas of the North Eastern Cape Province such as Barkly East, Rhodes and Maclear around a century and a half ago, eventually importing and planting the weeping willow, *Salix babylonica*. This doubled the food source for the local Willow Leaf Beetle. Then, about a century ago, the available food source trebled with the government's policy of planting the imported crack willow, *Salix fragilis* in the hopes of starting a basket weaving industry.

Both quickly infested our river banks and, as a result the increase in Willow Leaf Beetles was exponential. In spring these beetles provided the bulk of the food intake of trout on rivers where willows lined both banks.

I knew that this tiny iridescent beetle was part of the *Chrysomelidae* family but I wanted a more precise identification. I called it the Birkhall Beetle, but a more accurate name would be the Willow Leaf Beetle.

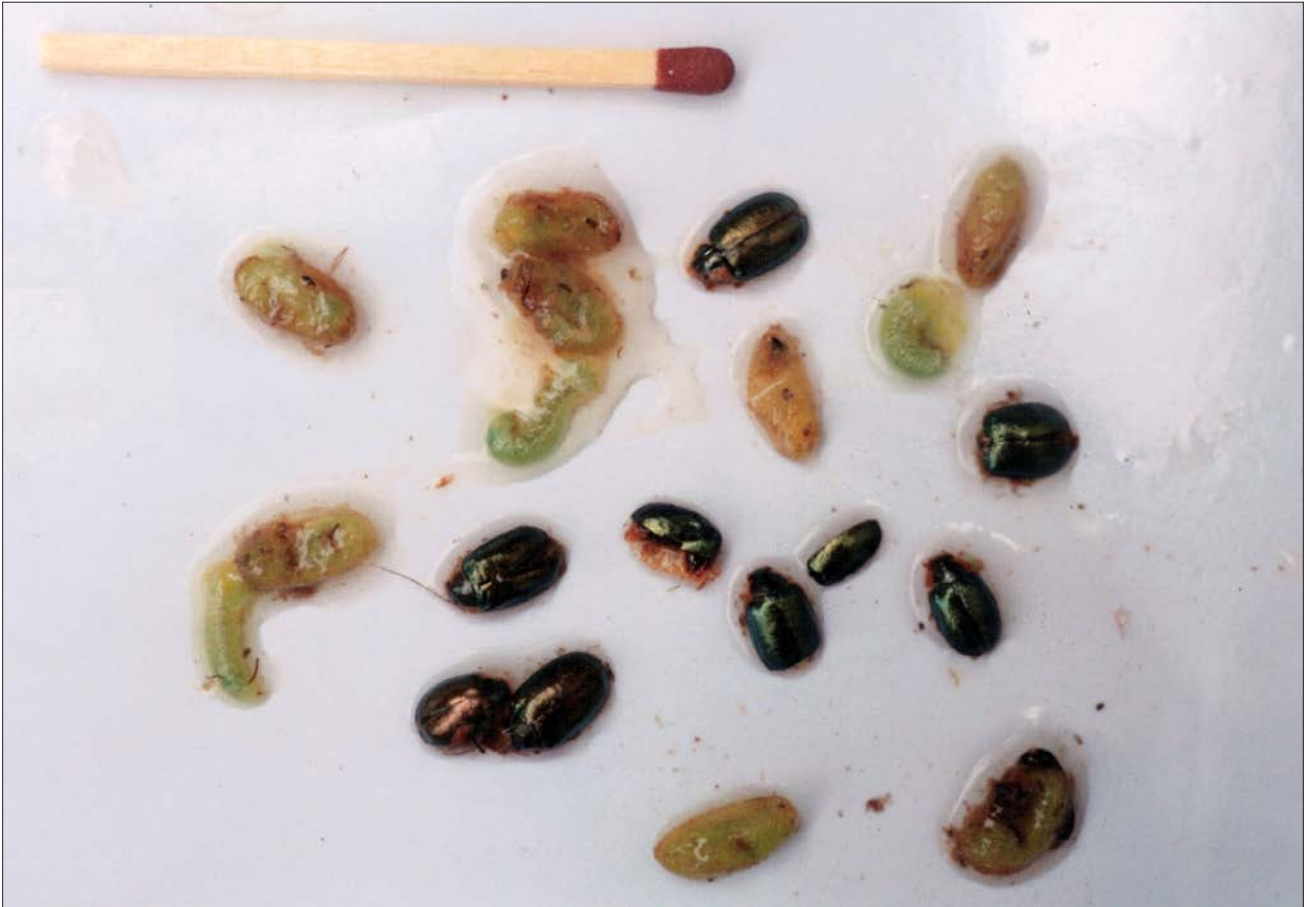
I was put in touch with Beth Grobbelaar, an entomologist and beetle specialist who works at the Agricultural Research Council's Biosystematics Division in Pretoria - @arc_south_africa. She identified the specimens I sent her as *Plagiosterna discolor* (Stål) (Chrysomelidae: Chrysomelinae)

According to her research, they are most commonly observed from September to November.



Beth Grobbelaar, who assisted the author in correctly identifying the 'Birkhall Beetle'. Three stages in the life of South Africa's indigenous Willow Leaf Beetle, *Plagiosterna discolor*

During their breeding season they form the bulk of trout food on these streams and there are swirls every time the wind blows. It is not just the beetles that are being dislodged by the wind, it is also their larvae and the occasional inchworm, the beetle indigenous and the other invasive.



The stomach contents of a trout caught in a willow-lined section of the Sterkspruit in Barkly East. Although the stream bed teemed with nymphs, it had only been able to capture drop-in terrestrial insects, Willow Leaf Beetles and sawfly larvae and pupae

Trout respond to the plop and as long as your fly has the general size, shape and colour, it will be taken.

Peacock herl is the main constituent in three famous British flies, the Coch y Bonddu, Tom Ivens' Black and Peacock Spider and the Red Tag. In his book, *50 Favourite Wet Flies* (A.C. Black, 1986) T. Donald Overfield, quotes a letter from another well-known British angling writer, Conrad Voss Bark:

"I have fished the Black and Peacock Spider almost everywhere for trout, especially in late summer and autumn on the chalk, limestone and spate rivers; practically always fished upstream and dropped down with a noticeable plop well above a fish or a place where a fish is likely to be. Sometimes the fish comes to it with such a splash you practically drop your rod. At other times they just suck it down as though they know the beetles cannot escape."

When I last fished the Sterkspruit, I was using the Sunken Beetle described in the previous chapter, but the *Plagiosterna* imitation shown here is a consequence of three recent fly-tying arrivals, hooks, thread and a synthetic body material and it seeks to achieve a more accurate GISS (General impression of size and shape) profile while recognising the flies which our forbears used to such effect on beetle-sipping trout.

Thread: In 2021 Semperfli introduced 20D Nanosilk which consists of 12 micro-thin fibres and has a breaking strain of 26 oz. This brought the realm of micro-patterns into the ambit of all fly-tyers

although, like all gel-spun polyethylene threads, it is slippery and requires a dab of superglue on the hook shank when you start tying.

Shortly thereafter the Italian company Textreme introduced an even thinner GSP thread, Textreme Extreme.

The advantage of these threads is that they allow multiple wraps without creating bulk.

Hooks: Two companies, Umqua with its Perdi Jig Short and Dohiku with its 302 SP have modified the Tiemco 108SP-BL 'Dolphin Shank' by shortening the shank and making the angle of the downturned eye less extreme. This widens the gape while still flipping the hook upside down when used with slotted beads. In smaller sizes these are ideal hooks for tying sunken beetle imitations.



The Tiemco 'Dolphin Shank' hook (top) and the Umqua Perdi Jig short – both #16

Straggle String: Some thirty years ago British stillwater expert Steve Parton wrote that dry flies with bodies of a then-new material, Cactus Chenille, were exceptionally successful, probably because light flickering across the reflective strands gave the impression of movement, the key means by which fish locate prey.

Semperfli Straggle Micro Legs reduces the size of the core and widens the gap between the strands which increases the perception of movement and enables its use with small hooks. *Trout and Salmon* columnist, Paul Proctor uses it as the body material on his Kicking Beetle.

Hind wing: An oft-omitted but important element of beetle imitations is the membranous wings which can be seen protruding beyond the body when the insect is on the water.

If you Google 'Images beetle wing structure' you will see what I mean.

Renowned American fly tyer A K Best regards these wings as a key trigger factor and imitates them with hackle tips, but I found them to be fragile and inclined to twist light tippets

The best material for this purpose, I have found is stretched bubble wrap plastic. It is durable and

has a subtle sheen but an alternative is Gliss-n-Glow Clear Ice made by local company Fishient which features light-reflecting horizontal corrugations and is easier and quicker to use on size 18 and smaller patterns.



Gliss n' Glow Clear Ice mimics the protruding beetle wing on smaller imitations

Body material: Peacock eye feathers provide the material for the Red Tag, the Cochy and the Black and Peacock Spider but the sword feather is more lush and more reflective. I twist the Straggle Legs and the peacock together in an anti-clockwise direction and then spiral the thread around both before winding this rope forward and stopping shortly before the eye.

What this does is provide a halo of reflective and mobile strands surrounding a core of peacock herl which is covered in minute light reflecting scales.

Hackle: I tie a European starling feather in by the butt and then wind it around the thread W C Stewart-style. Wind on with two turns. Trim away the tip and then x-wind the thread through the barbs to strengthen and separate them.

Adding more weight and sparkle

Watch Tim Flagler's video 'Jig Hooks and Slotted Beads Part 2 of 2' on the Orvis website.

In addition to 1.5 and 2mm brass or tungsten beads, one can add a little more weight and ensure that your 'tied in the round' Willow Leaf Beetle drifts hook point up. Simply tie a piece of Hends 0.2mm lead wire to the top of the hook shank.

To add more sparkle, cover the bare hook shank when you start tying with some superglue and then brush some black UV Ice Dub against this area. You can also touch dub this sparkly synthetic dubbing against waxed thread when you start tying. Later in the process, when you palmer your peacock herl forward, the Ice Dub will protrude through the feather creating little sparkles of light.

Tying sequence

Slip the bead onto the hook and tie in a tiny slip of plastic at the bend of the hook to represent a

protruding wing.

Tie in 4-6 strands of peacock sword feather and a strand of Straggle Legs;

Plait the herl and the Straggle String together and then spiral the thread around both. Wrap forward to just behind the bead

Tie in a starling or equivalent feather by the butt. I use a tiny drop of superglue at this point.

Twist the thread around the feather W C Stewart-style and take about two turns of feather around the hook to create the hackle. Take the thread between the individual barbules to separate and reinforce them before whip finishing.



Wrapping the starling feather around the thread W C Stewart-style. On a down-stream drift, this is how the fly will appear to the trout

Fishing the Sunken Beetle

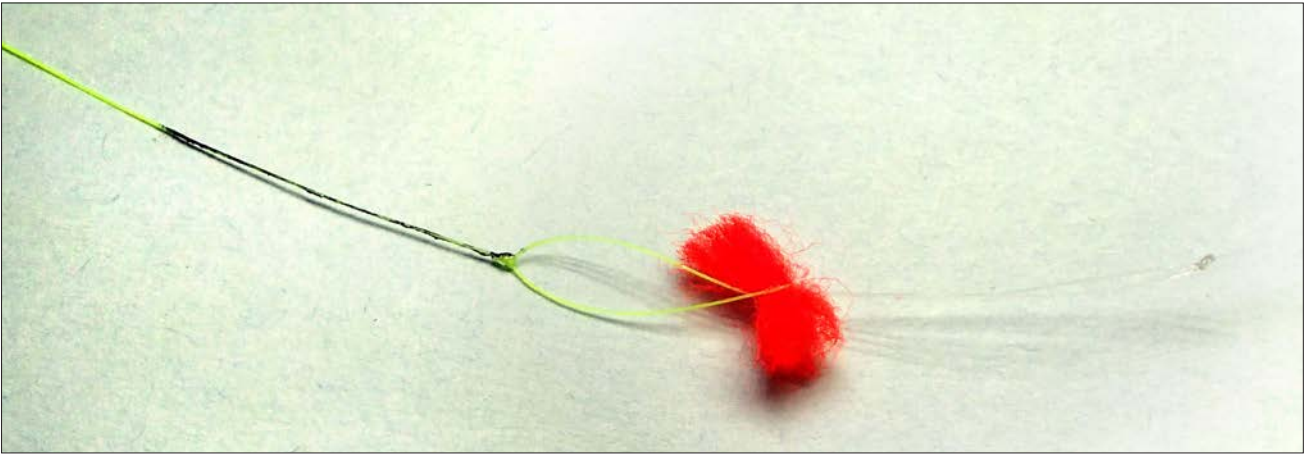
Following small beetle and ant patterns in the drift must have been very difficult until the advent of what I call the 'greased hi-vis leader'. Some 40 years ago Dave Whitlock, writing in the American magazine *Flyfisherman*, advised sliding a piece of red or orange floating fly line onto the leader as a strike indicator. I slid it onto a piece of yellow Stren mono which I then marked on both sides of the fly line with a black permanent marker.



(L) The components used by the author for his Mucilin-greased 'Hi-vis' leaders when fishing small dry or sunken flies

Today, thanks to competitive fly fishing, we have several manufacturers such as Hends, Sci-Anglers, Rio, Soldarini, Vision and others who produce brightly-coloured nylon mono as visual aids for nymphing. Then there is Skafars which is a wipe-on/wipe-off coloured wax and Loon-Bio Strike, a yellow or pink plasticine which one can apply to leader knots or tippet rings. Grease the leader with Mucilin paste and it will lift off the water with less

disturbance and this will make it easier to follow the coloured sections of mono during the drift.



The author's Perfection Loop to Perfection Loop to Perfection Loop greased strike indicator leader. By sliding the loops apart, the waterproofed tuft of yarn can easily be removed

Combining olive Straggle String with the sumptuous opulence of the peacock sword feather will, I feel, enhance proven patterns such as the Red Tag, the Coch y Bonddu and the Black and Peacock Spider but, there is very little that is new in fly tying and, in the end, I realised that I had just tied an improved version of a century-old pattern, the Starling and Herl.

The Willow Leaf Beetle as a floater



The Bell River below Rhodes showing the separation of the willow trees on the bank, each of which is host to both *Plagiosterna* beetles and *Nematus* inchworm larvae. Photo Peter Brigg

Decades ago, when the Steynberg family owned the Rhodes Hotel, I was sitting on the veranda with their son Fred (today a renowned guide) discussing the Willow Leaf Beetle and he asked me to accompany him to a weeping willow a few yards away. Using his thumb, he prised away a piece of bark

to expose a Willow Beetle. The tree was full of them. Willow trees in Rhodes are found in the middle sections of the streams where the flow is slower.

I have always seen flies tied to imitate this insect as slightly weighted with a 1.5 mm black brass bead to create a plop and get it down to the level where trout were holding.

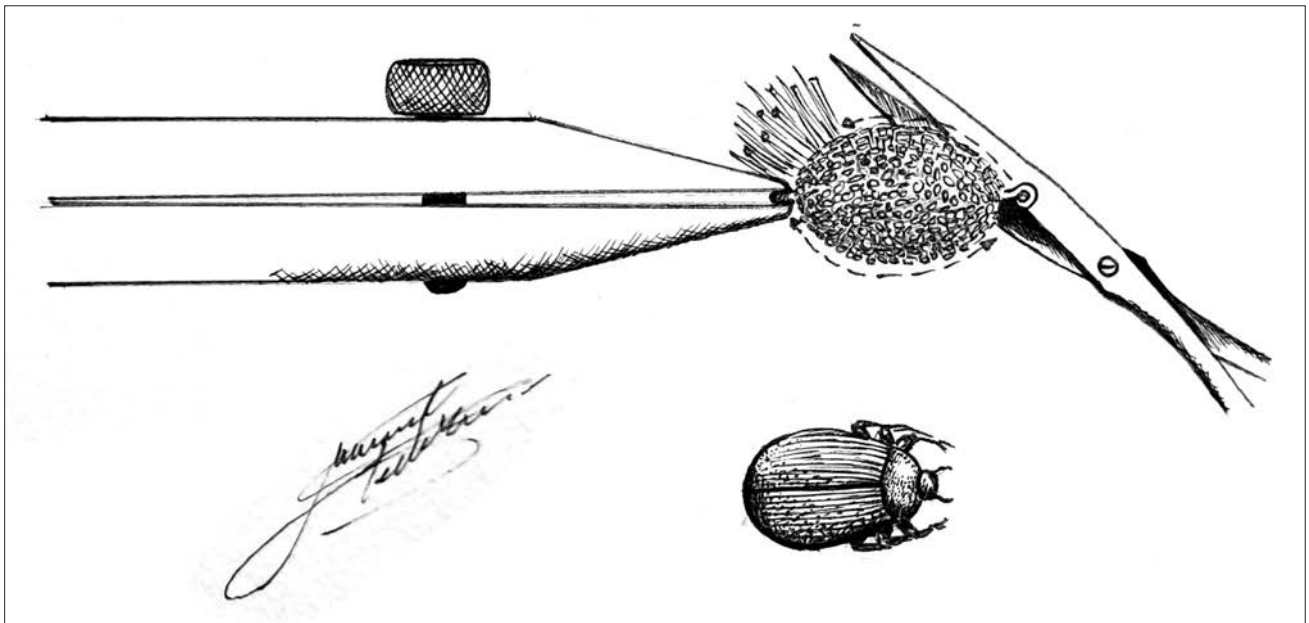
My reasoning was that the bead was a trigger and the plop attracted attention.

I trace this back to my early days of fly fishing and a section of one of the local trout streams which was completely bushed in. The trees on both banks met in the middle of the stream creating a canopy which left that section in deep shadow.

I quickly discovered that a slightly-weighted fly landing a yard or so downstream of the shadow line, invariably resulted in a trout swimming into the sunshine to investigate what had fallen in.

Two alien beetle species drove the experiments on the Letort Spring Run which saw Vincent Marinaro, Charlie Fox, Ernest Schweibert, Ed Koch, Ed Shenk and others seeking appropriate imitations in the 1960s - *Popillia japonica* which aroused the ire of gardeners by attacking roses and the smaller *Plagiodera versicolora* which attacked willow trees.

The latter, the Willow Leaf Beetle, like our indigenous species, is little bigger than a match head, about a quarter of an inch long and its legs are tiny.



An illustration by Storms River artist and professional fly tyer, Marcel Terblanche - @driftflyfisher – based on the sketch of a Willow Leaf Beetle imitation in Ed Koch's 1990 book 'Terrestrial Fishing'

The imitation that the Letort regulars finally settled on to imitate their Willow Leaf Beetle was a #18 spun and clipped deer hair fly – a floater – and I now wonder if my earlier 'plop' experience on the streams near Cape Town did not send me down a somewhat incorrect path because I think the Willow Leaf Beetles on the middle reaches of the North Eastern Cape streams where the currents are smoother than those higher up the valleys, could well float.

I base that conjecture on an experience I had about 25 years ago on the Sterkspruit with the late Basie Vosloo.

The background is that in 1993 some plants were brought into Lesotho which were parasitised by the invasive sawfly, *Oligospilus nematus*, which has a green inchworm in its larval stage.

By 1995 it had made its way into Rhodes and found a century of crack willow infestation of local

streams to feed on and the sawfly population exploded.

I arrived at Dave Walker's B&B, unpacked my luggage and strolled down to the Bell stream to check on water conditions.

I was astonished to see the stream bed littered with dozens of dead green caterpillars and the tree canopy massively reduced by the green inchworms. Equally present were their pupae. I took some back with me by which time most had hatched into adults. The entomologists at the Cape Town Museum identified them as the invasive sawfly and referred me to a paper published two years earlier – ***'A recently introduced sawfly, *Nematus oligospilus* Förster (Hymenoptera: Tenthredinidae), that defoliates willows in southern Africa'*** by A. J. Urban and C. D. Eardley of the Plant Protection Research Institute in Pretoria (a copy can be found in the Terrestrials folder on this website.)

A recently introduced sawfly, *Nematus oligospilus* Förster (Hymenoptera: Tenthredinidae), that defoliates willows in southern Africa

A.J. Urban & C.D. Eardley

Plant Protection Research Institute, Private Bag X134, Pretoria, 0001 South Africa

Exotic willow trees, *Salix babylonica* L. and *S. fragilis* Benth., were severely defoliated in the Highveld Region of South Africa and in Lesotho during the summer of 1993/94 by larvae of the Holarctic tenthredinid sawfly *Nematus oligospilus* Förster. This is the first record of *Nematinae* from southern Africa. A diagnosis is provided and distribution, biology and economic relevance are discussed. Natural enemies of the sawfly include the parasitoids *Dibrachys* sp. and *Pteromalus* sp. (Pteromalidae) and *Pediobius* sp. (Eulophidae) (Hymenoptera), and the predator *Macrorhaphis* sp. (Hemiptera: Pentatomidae). Field surveys indicated that the indigenous willow, *S. mucronata* Thunb., is not attacked. A greenhouse trial demonstrated that the sawfly cannot breed on the economically important salicaceous tree *Populus deltoides* Bart. ex Marsh.

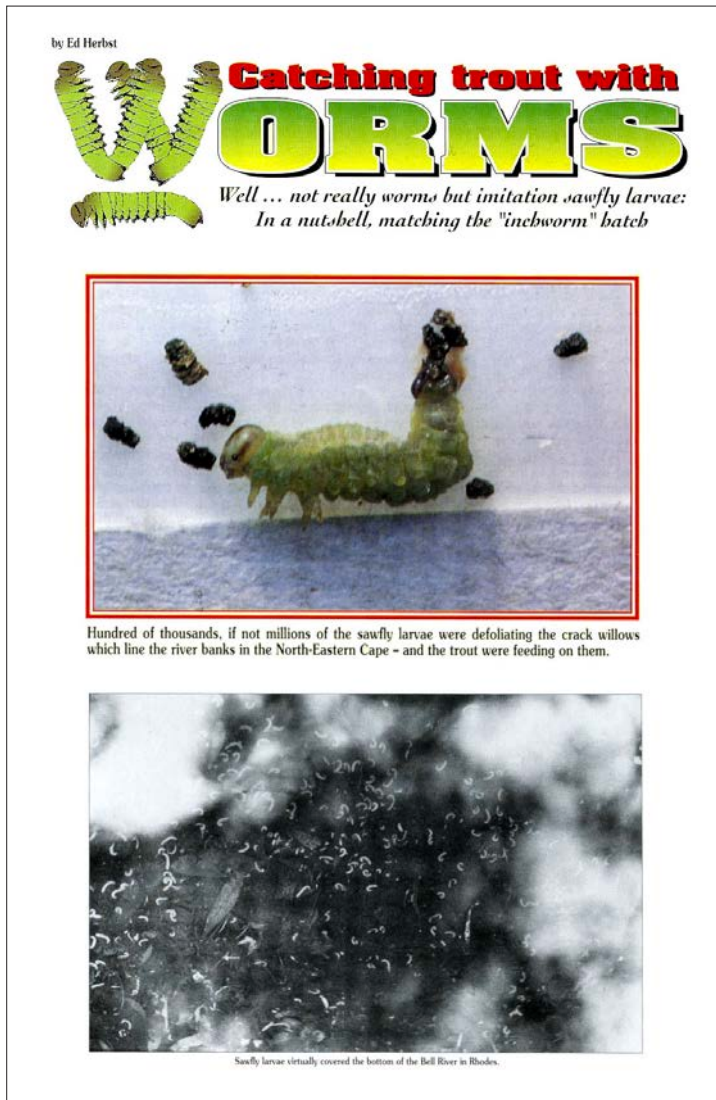
Key words: sawfly *Nematus oligospilus*, *Nematus desantisi*, *Dibrachys*, *Pteromalus*, *Pediobius*, *Macrorhaphis*, *Salix*, *Populus*, southern Africa.

The 1993 paper which set out the background to the 1993 sawfly invasion and which can be found in the 'Terrestrials' folder on this website

I duly wrote an article on this new source of trout food for a local magazine, *Flyfishing*.

In the July 1990 issue of the authoritative American magazine, *Flyfisherman*, Barry Beck had written an article *The Sinking Inchworm – A guide's 'Ace-in-Hole' Pattern* in which he recommended weighting inchworm imitation - so I tied mine that way.

The dénouement came when I was being picked up at Birkhall by Basie's neighbours around noon. They were taking their children to school in Bloemfontein and would drop me at the airport to catch



An article by the author which first alerted the fly angling public to the sawfly invasion

the surface, snapping up the larvae the instant they touch the water surface.

a flight back to Cape Town.

There were a few hours to spare and, as I was packed, I borrowed a rod from him, grabbed a fly box and we drove down to the Sterkspruit to be met by an astonishing sight.

The river was literally boiling with yellowfish rising to inchworms every time a gusty breeze made its presence felt. Looking downstream, against the light, there was a fine mist in the air - such was their feeding frenzy.

I was elated - for once, I was in the right place at the right time with the right fly - Barry Beck's sinking inchworm with a 1.5 mm black brass bead supplying the weight.

Fifteen minutes later I had caught one small yellowfish and they continued their metronomic rising, despite my standing in full sight on the bank only metres from them.

The river was shallow here, so I propped my rod against a tree and waded across to where the nearest yellowfish was rising and put my nose down close to the water surface.

The inchworms were floating!

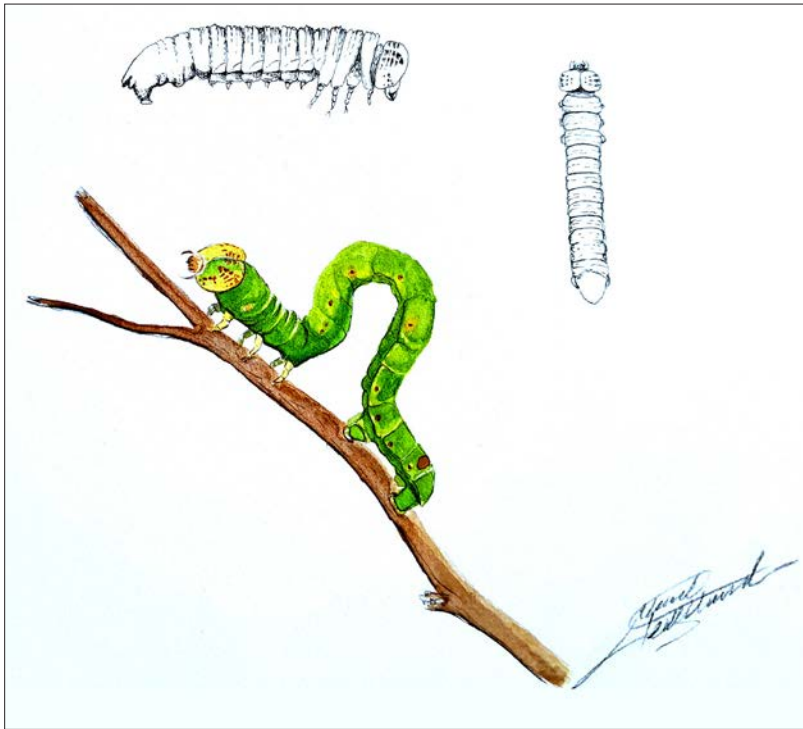
Inchworms float on hitting the water, but sink eventually.

This sawfly has also invaded the Andean region of Argentina and Chile, Australia and New Zealand and the experience there is exactly the same - the trout hover just below



Plagiosterna discolor is probably fractionally lighter than an inchworm.

Those lone willow trees dispersed along the banks of streams in Barkly East, Rhodes and Maclear, co-host both the Willow Leaf Beetle and the sawfly larva.



(L) An illustration of the Nematus inchworm by Storms River artist Marcel Terblanche

The beetle has tiny legs and is easily dislodged by the wind, the inchworm not.

According to the Beth Grobbelaar, *Plagiosterna discolor* has a breeding cycle of three-months - from September to November.

However, in the above-mentioned study by Urban and Eardley, they cite the sawfly as breeding four times a year right through summer from October to March.

They found that the caterpillar stage rarely pupates on the tree, more often than not dropping to the ground to complete its transition to the adult

stage in the leaf litter at the base of the willow tree.

In Australia, where *Nematus* is also invasive and defoliating both *Babylonica* and *Fragilis* willows, the breeding season also starts in October, once the temperature reaches 23 degrees centigrade (73.4 °F).

If the portion of the willow in which the inchworm stage is feeding overhangs the water, they become fish food.

The government's Working for Water alien vegetation clearing program has seen the eradication of much of the crack willow infestation in this region and nature has achieved its own balance, so those heady days of frenzied feeding on more inchworms than could be consumed are just a memory. The crack willows have, however, re-grown in the interim.

The angler who can fish a dry/dropper rig is thus at an advantage when approaching such willow trees with my version of the Starling and Herl on the point and a foam rubber beetle on the dropper – both size 18 - will be at an advantage.

If inchworms are present, try one on the dropper.

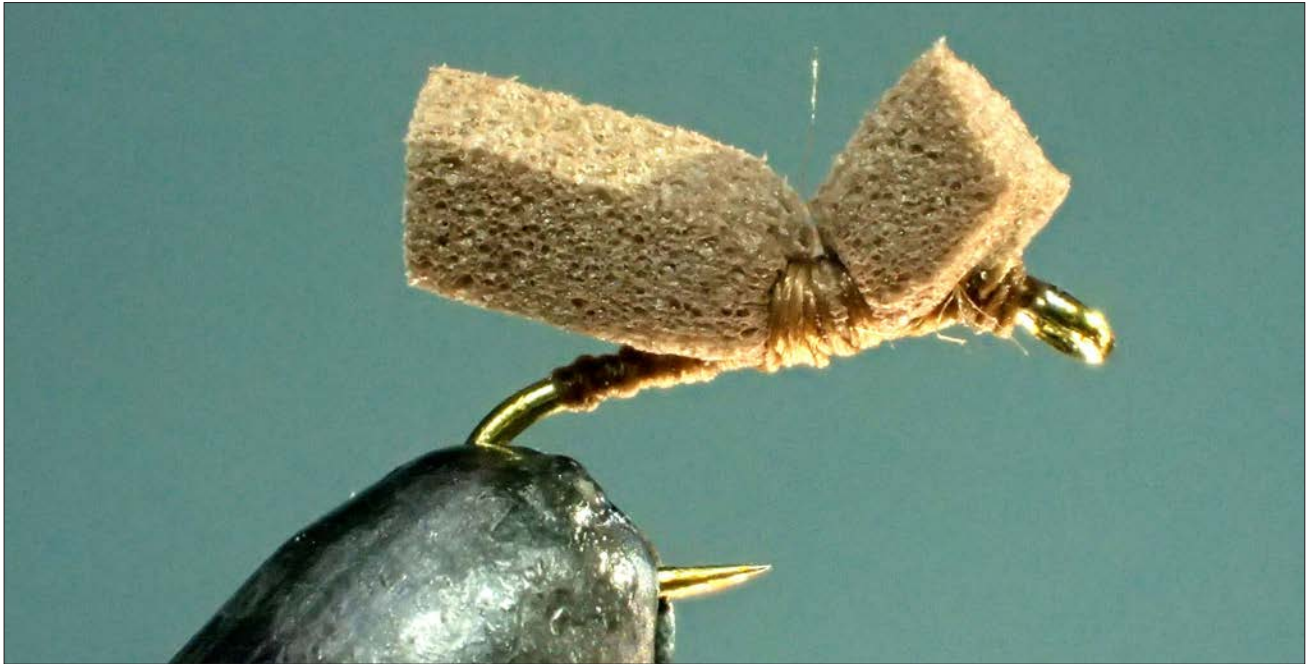
I'm told that to imitate the inchworm, you need nothing more than a 17 mm (slightly more than half an inch) piece of green chenille singed at both ends and treated with floatant, tied on a #16 light wire hook. In Australia's Goulbourn Valley, they tie a strip of looped green foam rubber to the side of a light wire, up-eyed sedge hook.

Mario Geldenhuys, custom rod and net maker from Aliwal North, contributed a chapter on his ingenious foam rubber inchworm for the book Peter Brigg and I wrote on indigenous South African flies and it can be found in the 'Terrestrials' folder on this website.

For the floating version of the Willow Leaf Beetle, it can be as complicated as you want to make it.

In 1998, Stephen Boshoff who was studying in the USA at the time, attended the Somerset Fly

Fishing Show in New Jersey and bought a beetle from Ed Koch – not spun and clipped deer hair – just a piece of foam rubber lashed to a #18 hook. Silhouette again.



The Micro-beetle which Stephen Boshoff bought from Ed Koch

My thoughts in the context of imitating the floating Willow Leaf beetle is get the size right first - #18 – 20 and then make the trout aware of its approach as early as possible.

I feel that the material for achieving this is micro cactus chenille.

In 1994 Gary Borger wrote an article for *Flyfisherman* magazine headlined 'The New Synthetics' and strongly recommended a new material called 'Cactus Chenille' which worked well for me on dry fly bodies. At around the same time, a float tube pioneer in the UK, the late Steve Parton, wrote an article on this for the magazine *Stillwater Trout Angler*: ***'The secret is out! Cactus chenille dry flies are deadly'***.



A prototype attractor beetle designed to float beneath willow trees and tied on a #18 light wire hook using micro cactus chenille for the body

CHAPTER 15

My experiments with this material as a dry fly did well for me, but was probably instantly relegated to obscurity by its name, the Xmas Caddis. You can find the account in the 'Patterns from Piscator' folder on this website.

You can now get Micro Cactus Chenille which enables you to incorporate this deadly attention-attracting sparkle in #18 patterns and smaller.

The great sawfly invasion some 20 years ago did not endure at that level, but the inchworms are still around, albeit in smaller numbers.

If you are a traditional 'match-the-hatch' recreational fly angler then it would pay to approach the willow trees in this area with suitably imitative flies.

A final thought – would a suitably-coloured and greased squirmy wormy be an effective inchworm imitation in such circumstances?



Micro Cactus Chenille enables trout to detect small beetle imitations at a distance. They can be followed in the drift by using a greased hi-vis leader

