



Small Subjects - Big Questions

By Steve Plant

My passion for nature started at an early age thanks to my parents, my Dad in particular, who used to take me for long walks as soon as I was big enough.

When I was about nine years old I was given a basic, inexpensive, camera one Christmas - all plastic but it worked. Although the quality of the results wasn't great, it was enough to kindle a spark within me. As a young teenager and having had a good school report I was rewarded by my parents with a Halina rangefinder camera. It was a cheap 'proper' camera but a big step up for me. I took it everywhere, the spark was turning into a flame.

Soon after starting work and saving hard, I bought myself a single lens reflex, (SLR), body and a 28-50mm lens. I still couldn't really photograph small, shy or more distant subjects, but it had the advantage of interchangeable lenses, something not possible with the Halina. Then, by good fortune, a longer lens came my way - and sooner than I expected. A friend had a 300mm they didn't use and, very generously, let me have it for well below its value. I soon had photographs of water voles, grey wagtails and dippers: the River Dove flowing through my home village was a big advantage.

Then, later in the 1970's, Tamron brought out a macro lens to rave reviews. I wanted one! Photography equipment back then was considerably more expensive, relatively speaking, than now. It was going to take quite a while to save up for one. Getting some work published and paid for helped, not to mention giving a boost to my confidence in my photography. I am still using that lens!

The first time some of your work is used is a huge buzz. Over the years I have been quite successful, having had work published in books and magazines, including some featuring on front covers. Also, I have had commissions from major charities, the National Lottery's own in-house magazine and even The Home Office - all very encouraging.

Now, though, the *greatest buzz* of all comes from capturing something new, sometimes not just new to me, but not captured in camera before and, occasionally, even new to science too!

I still take straight forward nature portraits, such photographs are good records, especially with digital cameras which record date and time etc. But what I really, really want to capture in camera nowadays is some form of action, a more documentary aspect, a fresh angle, something new.

Some years ago on an outing with Bill Grange, we were observing and photographing insects on some umbellifers. There were assorted flies taking nectar on the particular flower head I was looking at. All of a sudden something appeared to lurch out from beneath and take one of the flies and go back under! I tried to spot it but it didn't like my interest and was quickly gone. It looked like a wasp but it wasn't a wasp. Had I seen something more innocent and imagined it being more macabre? A few years later whilst at Foremark Reservoir with my daughter, Cristina, I spotted a *Tenthredo* species of sawfly decapitating a smaller *Argidae* species of sawfly; very gruesome - but this time I got several photos. I knew I had never seen a photograph of this behaviour before, so when I got home I scoured the internet. Someone else had definitely witnessed this same predatory behaviour - just weeks before I got the photos. All of the information available at that time stated that *Tenthredo* species of sawflies were purely pollen eaters. It is now well known that they are semi-predatory. My photographs might well have been the first photographic evidence of this behaviour.

Allestree Park in Derby has provided some discoveries. One of these was an ichneumon wasp, *Limerodops elongatus*. It was thought there were around 2,300 species of Ichneumons in the UK, but that has recently been increased to probably over 3,000. Consequently, they are a very difficult group to identify and little is known about the majority of species. When I photographed the female *Limerodops elongatus* she was ovipositing into something hidden in a grass seed head. I posted some of the images on the Ispot website. I really didn't expect to get an identification, but David Notton, Senior Curator of Hymenoptera at the Natural History Museum, saw the images and responded. David informed me that this particular ichneumon is one of the few that can often be identified with some degree of confidence from photographs. He also informed me that virtually nothing was known of its ecology and so David advised me that my photographs have contributed a little more to the knowledge base for this species.

Again in Allestree Park, I discovered several milk spot snake millipedes, amassed around the headless corpse of a ground beetle. Some had managed to get their heads inside the corpse, others were vying to get access. As the corpse still had red mites attached, I believe the beetle wasn't long dead and the millipedes were eating the fresh flesh within the corpse. I checked my copy of the Atlas of Millipedes (Diplopoda) of Britain and Ireland. It confirmed what I had understood - that snake millipedes are vegetarian, or were believed to be. I therefore contacted the Millipede Recording Scheme. They asked if I could forward copies of the images - it was behaviour not previously seen by any of the team there either.

On another outing with Bill, at Stanley in Derbyshire, in August 2010, I noticed wasps swarming around the stem of a willowherb. It took a bit of patience to see what was going on. It transpired that two or three holes had been opened up in this particular stem and we



assumed the wasps were eagerly competing to access the sugary sap within. Whether a wasp had first chewed through the stem or something else had and so inspired the wasps isn't known, but the wasps were now making their own holes elsewhere on the stem.

Coming up to date, I have been lucky enough to regularly visit Ashover Rock and The Fabrick Rock during 2014. A part of the site is of a heathland nature. Being a popular spot with walkers and people visiting to enjoy the distant views there are some well-worn paths. The erosion from feet and, in some places, exposures from natural small land slips make ideal sandy habitats for both mining bees and digger wasps, some of the latter preying on the former. Other digger wasps on site take larger flies. So, lots of opportunity to photograph and study. I noticed puzzlingly that in some cases there were abandoned lifeless bees and flies with no obvious reason.

On another occasion I witnessed a wasp arrive with its bee victim held beneath. On arrival at the pre-dug nest chamber, the entrance was a little too small, so the wasp had to deposit its victim temporarily. These wasps sting their prey to paralyse them and keep them fresh in the nest chamber, ready for when the wasp's larvae emerge hungry for food. After a few seconds this particular bee showed signs of the paralysis wearing off. First the legs were twitching as it laid on its back, the wasp being too busy to notice. A good few seconds later the wings were moving. After another few seconds the bee was propelling itself along on its back. Eventually it came close to righting itself - just too late, as the wasp was now looking for its victim. Spotting it just in time, it pounced on the hapless victim, stinging it again and also seemingly using its mandibles on the back of the bee's neck. I have taken photos where insects, in tilting their heads forward, revealed what looks like nerve cords. Once it was satisfied that the job was done, it was down the hole with the hapless bee.

It then occurred to me that the wasps might have to learn just how much toxin is needed to fully immobilise the victim but not kill it. Not enough had been applied the first time in the scenario I witnessed and describe above. Perhaps the abandoned victims had been overdosed and were dead, in which case the wasp can somehow differentiate between paralysis and death.

Another smaller digger wasp takes flies often bigger than itself. It too paralyses the victim but then pushes its ovipositor through the victims abdomen to carry it back to the nest chamber - quite a sight! But how does it then remove the victim from its ovipositor, I don't know - yet?

New discoveries are always still possible, often closer to home than we might imagine. Insects constantly amaze!

Key to collage on Page 23

1. Lesser House fly, *Fannia* sp. The males 'defend' their shaft of sunlight. If another encroaches a 'dog fight' ensues.
2. Field Digger Wasp, *Mellinus arvensis* with hoverfly prey, which is paralysed with a sting, then taken to a nest hole as provisions for the larvae when it hatches.
3. A species of Crab Spider, *Xysticus cristatus*, preying on a *Tortrix* species moth caterpillar, again showing that these spiders hunt as well as ambushing prey.
4. Common Flower Bug, *Anthocoris nemorum* sucking an aphid dry. As some of us know from experience, they will also pierce human skin to get food and or fluids.
5. A species of Capsid Bug, *Apolygus lucorum* - attacking and sucking dry an aphid.
6. Tree Damsel Bug, *Himacerus apterus* with green bottle fly prey. Curiously, this damsel bug and a second individual were among ground vegetation and the green bottle is much bigger prey than normal. Was it all ready dead and 'sniffed out' by the damsel bugs which were drawn down to it?
7. Social Wasps, *Vespula* sp. Wasps competing to get access to a hole in a willowherb stem, probably to get to the sweet sap.
8. Red-headed Cardinal beetles, *Pyrochroa serraticornis*. One individual was already on this sunlit leaf, when the second arrived. A battle ensued until one left; a good spot appears to be valued.
9. A species of Sawfly, *Tenthredo* sp. preying on another sawfly species. I believe the discovery that *Tenthredo* are semi predatory was only made shortly before I got this shot.
10. A species of sawfly, *Tenthredo* sp. eating a sand wasp. I read that *Tenthredo* suck their victims dry but this one chewed and swallowed most of the victim.
11. A species of Hoverfly, *Rhingia campestris*. While taking a series of images, I found that it has a diaphragm attached to the distinctive snout and feeding tube, which it can contract like a pen dropper and so draw up nectar. The long feeding tube also hinges back half way along its length and is lifted closely under the snout when not in use, so providing protection for the delicate diaphragm.



Small Subjects...





12. A species of ichneumon wasp, *Limerodops elongatus* (probably). David Notton, senior curator, Hymenoptera, at the Natural History Museum is fairly confident of the identification. He tells me that virtually nothing is known of the life cycle. The numerous shots I obtained of this female ovipositing show previously unknown behaviour which suggests that it may be parasitising capsid bug nymphs or moth larvae, feeding within the grass head.

13. Scorpion fly, *Panorpa communis*. These are known to steal the cashed meals of spiders. This one was feeding from a fly which had fallen victim to a fungal infection. Would the fungal infection affect the scorpion fly?

14. A species of spider, *Tetragnatha extensa*. A male tries to defend himself while he attempts to pass on his sperm to the female, a deadly serious situation for him.

15. A Zebra Spider, *Salticus scenicus*, with quite a large victim. The two large eyes at the front of its head provides the spider with binocular vision.

16. Bronze Shield Bug, *Troilus luridus*, late instar nymph. These they are known to be semi-predatory. In this case, piercing the ladybird's tough integument must have been a challenge. The feeding tube was inserted so far in, that the shield bug at times was suspended in mid-air as the ladybird tried to get away from it.

17. *Yellow Dung Fly*, *Scathophaga stercoraria*, with a fly it has caught.

18. Large Bee Fly, *Bombylius major*. I often read that these do not actually land and as you can see here they do touch down, even if only lightly, and with wings still in action.

19. Slender Ground-hoppers, *Tetrix subulata*, in a lovers embrace, perhaps.

20. A species of crab spider, *Xysticus cristatus* has caught a small wolf spider species. Crab spiders don't just sit on flowers waiting for flies. I have also seen one pounce on the empty remains of a beetle which was perfectly still, so they are not just attracted to movement

21. Spotted Snake Millipedes, *Blaniulus guttulatus*, jostling to get their heads inside the remains of a ground beetle. The people at the Millipede Recording Scheme believe that this behaviour has not been recorded before. This millipede was thought to be purely vegetarian.

22. ? Ground beetle larvae attacking moth pupa

Grey heron

By Alec Rapkin

*hunched grey heron
standing on a bank
part-opens its wings
to oddly small stubs
before sliding them back
into the full plumage,*

*beak slightly agape:
it strops itself clean,
one quick downstroke at a time,
looking, listening,
its flimsy quiff of a crest
slipping sideways,*

*not about to be nailed by humans:
it takes a speculative step
in jerky slow motion,
but under tension gives,
and flaps off hugely
on parallel legs*



Grey Heron by Thorburn