Sleeping with the enemy!

If you are lucky enough to receive an invitation to visit Dr Richard Naylor at his base in the very scenic Wye valley do be a bit careful if he offers you overnight accommodation. To support his bed bug testing lab, Richard has set up what must be a unique facility – two identical model hotel bedrooms, one of which he regularly sleeps in, accompanied, in the name of science, by real live bed bugs.

Tucked away down some very scenic lanes near Chepstow you eventually reach Dr Richard Naylor's base. Once there it's out into the garden en route to two timber-built home offices. This is where Cimex Store, the business set up by Richard only seven years ago after completing his PhD at Sheffield University, is based. In this idyllic spot, Richard is taking the world of bed bugs by storm - rearing, testing and preserving this unique insect.

In the UK and, for that matter, in Europe, very few organisations rear and keep live bed bugs. One very obvious reason being that they require a blood meal to reproduce, with fresh human blood being their favoured meal.

Richard with his stock of bed bugs. He estimates to have c50,000 at any one time

Whilst completing his PhD at Sheffield, Richard tended the bed bug cultures kept there for research and frequently received requests from other researchers at chemical companies and consultancies for a supply of live quarry for their own trials. From this he spotted a niche in the market and after leaving the University set up his own business rearing and supplying live bed bugs – Cimex Store Ltd.

From his experimental work at Sheffield, Richard soon realised there was demand for independent trials, namely testing new insecticides and assessing monitors and lures. So the research side was established. With bed bugs being relatively new to the modern pest control industry, many technicians were not familiar with this insect in all its life stages, so Richard began making resin blocks containing all the life stages for use in training and identification, so completing the third aspect of his business.

So, from this triangle of work sectors, Cimex Store has flourished. To such an extent that he is now very ably supported by his charming wife Alexia, who uses her ex-school mistress skills to keep everything in order, plus the most recent addition, Jan – a part time laboratory technician.

Running alongside Richard's Cimex Store activities is his involvement with the Bed Bug Foundation (see pages 27 to 29), where he is a trustee and member of the Senate. He is also one of our ***Pest*** Technical Advisory Board members as well as a frequent invited guest speaker at technical events around the world.

Richard runs his business from two purpose-built offices in the garden, the newest of which was only finished at the end of 2018.

The first houses not only the bed bug colonies, a variety of susceptible and resistant strains, but also some of Richard's other 'pets'. Richard has always been keen on natural history, no doubt acquiring it from his parents who both worked alongside

Alexia is a real expert at knowing where to look for bed bugs

Bed bug behaviour is captured using infra red photography

Richard and Alexia Naylor outside the bedroom cabin

Sir David Attenborough on several natural history programmes.

Amongst the 'pets' kept are several types of spiders and scorpions plus a large boa constrictor, which he says he has had since it was tiny.

It is here the bed bug orders are put together for despatch in vials for use by researchers elsewhere, or by those with scent detection dogs for their training and routine maintenance. Amusingly, all orders are despatched via Royal Mail, as live bed bugs cannot be sent via parcel delivery services!

It is also here that the labourious and very time consuming task of preparing bugs in all their life stages goes on, before encasing them in resin to create the training items. There is also a laboratory where the commissioned trials work is undertaken.

A matter of yards away is the real star of the show – the cabin containing an office plus two rooms laid out to replicate identical hotel bedrooms. Why two? As Richard explains, one is used, in effect as a control. Here he can also use an infra-red camera to track the movements of bed bugs at night and to view the effectiveness of traps. Whilst in the other identical bedroom, he can be found sleeping several nights of the week. Richard is simply trying to mirror the real-life situation of a hotel guest in an infested room. With a warm, breathing human being in the bed, how do bed bugs behave? Or more importantly, how do the products on trial behave?

When conducting a trial, a precise number of bed bugs are released into the bedroom, Richard sleeps in the bed, the activity of the bugs is recorded and then next day any monitors on trial are inspected for catches and the balance are searched out and their positions recorded. This might sound a difficult task, but with experience their favourite resting places are soon identified. After each night, the bedding and the whole room has to be thoroughly cleaned so as to eliminate any pheromone traces which might influence subsequent test bugs.

So, congratulations Richard on creating a totally unique test facility. Sleep tight!

Life cycle resin moulds near completion

The boa constrictor getting a bit too friendly!

Evaluating one of the trials