

## THE HIDDEN WORLD OF BUGS AND INSECTS

Report compiled by Sony in partnership with conservation charity  
**Buglife**

### Foreword

**By Vanessa Amaral-Rogers, Conservation Campaigns Officer at Buglife**

Invertebrates are vitally important to a healthy planet – humans and other lifeforms could not survive without them. Bugs and insects are the most common type of life on the planet and while some consider them to be pests, these extraordinary, living creatures play an important role in our homes as an integral part of the ecosystem.

Sony's *a7R II Hidden World of Bugs and Insects* report and photo series reveal some of the most common bugs and insects in our households, from the common house spider to lacewings. The Sony *a7R II* camera combined with the 90mm Sony Macro Lens and a macro filter allows us to take a sharp and detailed look at the hidden world of these creatures – even those that are not always visible to the human eye.

### Ten of the top bugs and insects in your home this winter

1. House spider (*Tegenaria* species)
2. European earwig (*Forficula auricularia*)
3. Red admiral (*Vanessa atalanta*)
4. Common green lacewing (*Chrysoperla carnea*)
5. Bluebottle fly (*Calliphora vomitoria*)
6. Common clothes moth (*Tineola bisselliella*)
7. Seven-spot ladybird (*Coccinella septempunctata*)
8. Silverfish (*Lepisma saccharina*)
9. Common woodlouse (*Oniscus asellus*)
10. Daddy long-legs spider (*Pholcus phalangioides*)

### Sony *a7R II* camera takes a closer look at the hidden beauty of the creepy-crawlies

Incredible macro photography series shows extreme close-ups of some of the smallest creatures in your homes – all possible with the ultra-high resolution [Sony \*a7R II\*](#) combined with the [90mm Sony Macro Lens](#) and a macro filter

Using the a7R II's unrivalled sensor technology, details that are normally not visible to the naked eye are made suddenly prominent, such as the intricate wings and golden compound eyes of the green lacewing, the earwig's distinctive pair of pinchers, the amour-like shell of the woodlouse and the *hairy legs* of the female house spider.

### **House spider (*Tegenaria sp*)**

Autumn is the time of year when many of us think our houses are being invaded by rather large eight-legged creatures. These are male House spiders and although they are actually in your house all year round, we only see them around this time of year. It is now when they're on the prowl, searching every corner of your house looking for the lady spider of their dreams. Once they find a female, he'll guard her until she matures and mate with her until he dies.

It is easy to work out whether a spider is a girl or a boy. The males have smaller bodies but longer legs than the females and the palps - like tiny legs either side of their jaws - look like little arms with boxing gloves. These are the ones more prone to running across your carpet. The most fascinating close up details of the House spider are their amazing eyes and chelicerae (jaws). Like many spiders, the House spider has eight eyes, and these are arranged in two rows. The large chelicerae are used for biting their prey and are an impressive size.

### **Common woodlouse (*Oniscus asellus*)**

Woodlice are particularly unusual bugs, in that they are more closely related to crabs and shrimps than anything else which can be found on land. Whilst normally found outside under logs and in compost heaps, they love damp and dark areas. So when searching for these in your house, check the bathroom. Just before mating the male climbs on top of the female, uses his front legs to drum on her back and licks her head. The eggs are stored in a 'brood pouch', where they are kept until they hatch out as fully developed young.

The body of the woodlouse looks like armour-plating and is actually made from segments of toughened chitin which contains calcium. The armour-plating gives the woodlouse a fantastic defence, when threatened they clamp down onto the surface by gripping with their feet, making them almost impenetrable.

### **Seven-spot ladybird (*Coccinella septempunctata*)**

This lovely little beetle is a gardener's favourite, helping keep numbers of aphids down. The adults can be active all the way into November, but when it starts to get cold, they move into homes and outbuildings to hibernate over the winter and can often found clustered together in groups for warmth. These creatures are struggling at the moment as their numbers are dwindling, so they're best left sleeping in the house to give them a much needed boost in the spring.

Beautiful warning colours, such as the black and red seen on this ladybird, are commonly used in the animal kingdom as a warning that the animal isn't going to make a decent meal. When

attacked, ladybirds exude a bitter tasting alkaloid fluid from their leg joints in a defence mechanism known as reflex bleeding. The fluid also contains a distinctive smell of a chemical known as pyrazine. The combination of the two is an early warning to the attacker that this dinner is going to taste awful.

### **Common green lacewing (*Chrysoperla carnea*)**

With their long antennae, golden eyes and two pairs of transparent wings that are nearly twice as long as their abdomen, the Common green lacewing can grow to 1cm in length. Even though their name suggests they are all green, Common green lacewings do vary in colour and some are striking shades of blue. This is the only species of lacewing to hibernate and during the cold winter months, adult lacewings will enter into homes to find a warm place.

With the change in season, adults change in colour too. Their colour goes from a beautiful shade of green or blue to a yellowish-brown colour, often with red spots on their bodies whilst they overwinter. The large golden eyes are a compound structure, and similar to that of a fly. They are more sensitive to colours in the bluegreen-green region of the spectrum, a sensitivity which is thought to allow them to recognize fresh green leaves to lay their eggs on, and to hide on during the day.

### **European earwig (*Forficula auricularia*)**

An old wives tale once thought that we call these insects Earwigs because of their habit of climbing into people's ears, although it is more likely that their ear-shaped wings gave them their name. They definitely don't deserve a fearsome reputation being harmless to humans. The females are very caring mothers, defending their young from predators and licking the eggs to keep them free from mould. They come into houses as they're attracted to lights, similar to night-flying moths.

Through the lens, their distinctive pair of pinchers at their hind end look pretty mean and is generally used to deter predators. When threatened, they display their pinchers by arching their body above their head. Although the pinchers may look formidable, they are actually only able to give a human a harmless nip at most.

### **Did you know?**

- There are millions of invertebrates living in your home, from house spiders which scuttle across the floor, to dust mites which are barely visible to the naked eye<sup>i</sup>
- Up to 25,000 harmless bugs can be living on your Christmas tree<sup>ii</sup>
- There are roughly around ten species of spider living in your home<sup>iii</sup>

### **About Buglife**

Buglife is the only organisation in Europe devoted to the conservation of all invertebrates. The conservation trust is actively working to save Europe's rarest little

animals, everything from bees to beetles, worms to woodlice and jumping spiders to jellyfish.

### **Sony Camera Technology**

With unrivalled sensor technology, the new Sony a7R II can take incredibly sharp and detailed pictures. A specialist at low light photography, the a7R II is yet another example of how Sony is leading the way in the compact system camera market through its ongoing focus on innovation. Tailor-made for high-impact close-ups and portraits, the 90mm Sony Macro Lens delivers an impressive blend of clarity and exceptionally smooth bokeh - to produce incredibly sharp and detailed pictures.

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<sup>i</sup> Buglife, November 2015

<sup>ii</sup> Jordal, University Museum of Bergen, 2012

<sup>iii</sup> Buglife, November 2015