Lighting for invertebrate enclosures

The essential benefits of providing the correct lighting for reptiles are now well-known. But increasingly, the question is being asked if - and how - the quarters of invertebrates should be illuminated? John Courteney-Smith shares his thoughts.

Many invertebrates do of course hide away in dark areas, even if they are not actually found in woodland, so as to avoid becoming prey for a passing predator. But could they benefit in a similar way to reptiles for example, from exposure to artificial lighting within a terrarium?

Most invertebrate keepers presently do not light their enclosures at all. This is unfortunate, because aside from anything else, you miss out on seeing much of what is going on, as it is considerably harder to observe the occupants without some illumination. Furthermore, most plants die quickly when placed in terrariums, typically because of a lack of suitable light which means that they cannot photosynthesise and produce essential nutrients in these surroundings. This then makes it hard to create a natural ecosystem, with the only option being to rely on plastic plants.

Plants and invertebrates

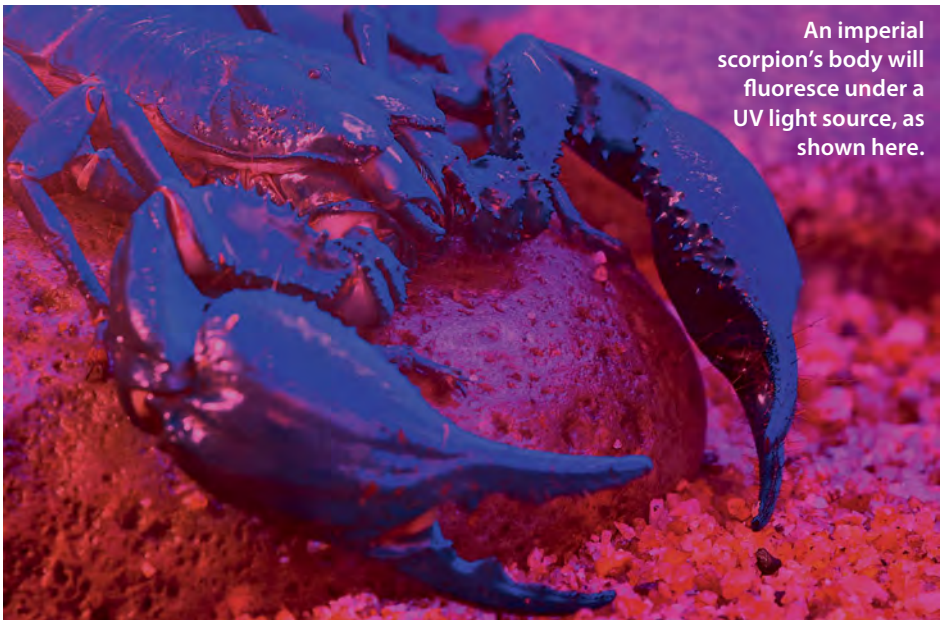
I have now been experimenting over the last year or so in this area, housing invertebrates in illuminated, planted enclosures. When setting up a terrarium with living plants however, it is not safe to put them straight into the terrarium. You need to prepare them carefully - or grow your own from seed. This is because many such plants are treated with pesticides, aiming at killing invertebrates which may otherwise harm them. They can have this effect within the terrarium too.

You will therefore need to start by taking the plants out of their pots, discarding the compost and washing the entire plant off thoroughly, using tepid water under a running tap so as to remove all traces of the soil. You will then need to repot it, in a clean container, using a compost of the type that can serve as a substrate in a terrarium itself.

What is the impact of ultraviolet light?

Aside from the need of plants for ultraviolet light, the other important aspect to consider is the effect of ultra-violet light on the invertebrates themselves. It is already recognised that the UVA component of ultraviolet light plays an important role in aiding both the sight and general well-being of invertebrates.

I have made further observations of my own, working with Chile rose tarantulas, the imperial scorpion and some assorted Madagascan millipedes in my collection. If you have tried a 2% UV lamp over your spiders for instance, you will already have seen them basking under the rays. I cannot pretend to explain just why this is, but it definitely happens!



An imperial scorpion's body will fluoresce under a UV light source, as shown here.