

Using the Scanner as a Camera, Part Two: some insects and spiders

This is a useful way to find the identity of an unknown bug. Among these samples from nine families there are two unknowns; if someone recognizes them, please let me know. I am particularly interested in the identity and life cycle of the small “ear-flies” that look like immature hippoboscids, but are they? We commonly found them inside the ears of Great Horned Owls.

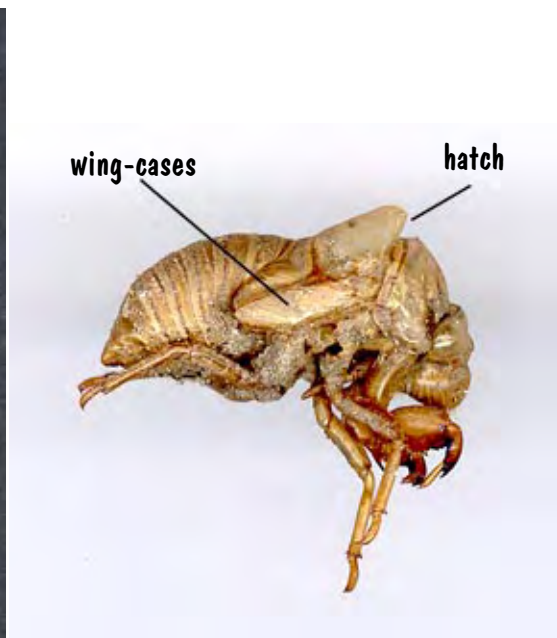
To find out more about how I did the photographs, please see column called “Using a Scanner as a Camera.”

Some insect exoskeletons



Nymph exoskeleton of one species of dragon-fly. The four pointy pockets on its back formerly held the developing wings; the new adult wriggled out at the hatch-site

The dragon-fly nymph is aquatic predator of small animals in ponds and streams. When the adult developing within is ready to leave the exoskeleton, the nymph climbs up a stalk out of water. The adult emerges slowly, rests while its crumpled wings unfold and stiffen and discharges several drops of fluid during that period. Different species of dragon-fly have nymphs of varying shapes.



Exoskeleton of cicada larva. There are 2,500 species of cicadas worldwide

Cicada larvae live underground for many years before climbing up a tree for the metamorphosis into the flying adult. Though seldom seen, the love-song of adult male cicadas is always heard; their high-pitched note, made by a pair of abdominal organs, is common on hot days of summer.

A spider exoskeleton



Dorsal side of spider's moulted carapace. Perfect mold where 8 legs, 2 palps (mouthpieces) and the body fitted before. She was only 28mm long



Ventral (underside) of same carapace with a better view of the decorated lid of her escape hatch, still clinging by a bit of dried tissue. Spiders have to moult several times after hatching.

Two live Beetles



Shining Leaf Chafer, possibly *Pelidnota* sp. Larvae eat plant roots, adults foliage and fruit. Note claws on feet. Like other live insects I have scanned, I gave it something familiar to cling to in order to photograph its back



To show the Long-horned Beetle's topside in the scanner, I gave it a leaf to grasp

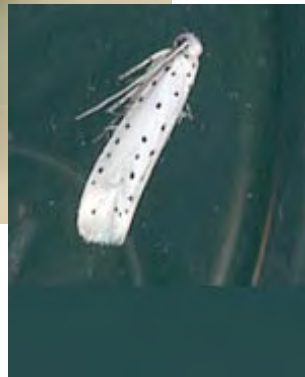


Long-horned Beetle, underside. *Cerambycidae* family. There are about 30,000 species

Two live Moths



These caterpillars appeared on the underside of a Burning Bush (*Eunomymus*) leaf. Each is protected inside its own little silky cocoon, with its black head just poking out of the cocoon, and the whole group supported against the leaf by a fine net web.



I kept them in a jar for a few days, where they pupated and exited as small white moths with delicate black spots.

Can someone identify them for me?

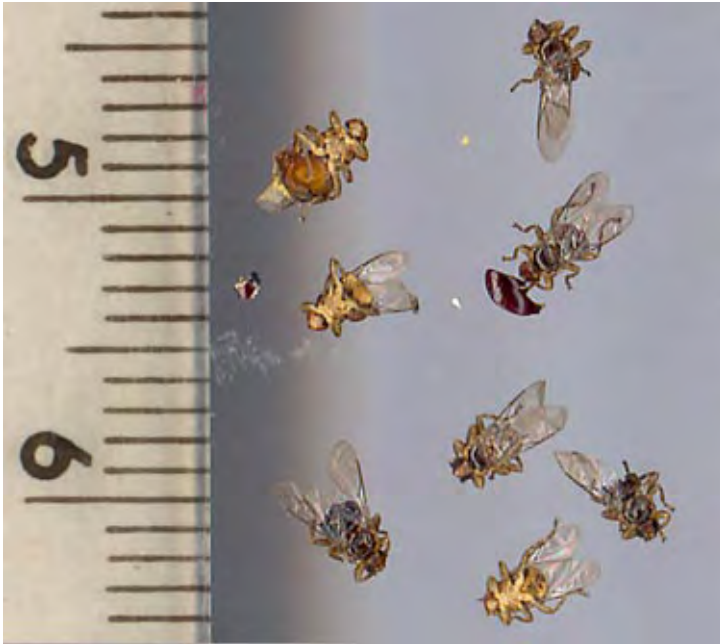


I found this very small furry-headed moth in a grassy ditch. This time I think I have identified its family: *Arctidae*, Ermine and Tiger Moths. This is a large group-- 2,500 species--and some are brightly coloured.

To achieve the pastel backdrop, I covered the moth with a plain white picnic dessert-dish, which somehow produced the blue-gray colour. What a beautiful underside! As soon as I had scanned it, I released it again.

Two dead members of the Fly family

Metric ruler.
Flies approx
4mm long



Unidentified small flat-flies found scurrying in the ears of twelve Great Horned Owls, mostly August through December. Are they immature hippoboscids, or a separate species? We have found mature hippoboscids on 92 birds, of which 86 were raptors, mostly owls.



Female Horntail, a large sawfly,
family *Siricidae*

....and a Katydid

Juvenile katydid. One of 20,000 species of crickets, grasshoppers and relatives. This youngster is arboreal, will grow his wings, and the males sing the "katydid-Katy-didn't" scratchy love song in the night.

They are interesting, very well camouflaged,
and of course quite harmless.

Kit Chubb

