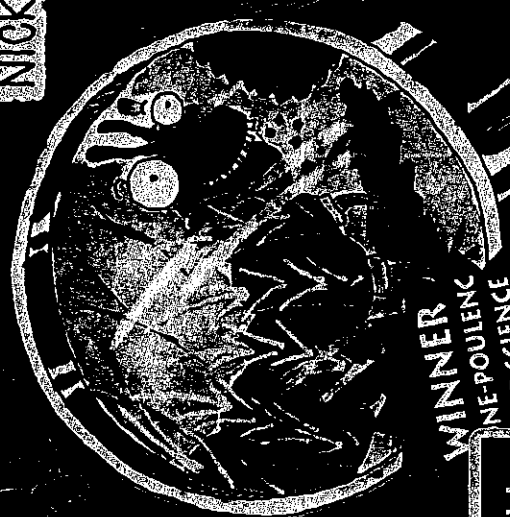


# HORRIBLE SCIENCE

# UGLY BUGS

NICK ARNOLD



Now that's what I call ugly!

WINNER  
NE-POULENC  
JUNIOR SCIENCE  
BOOK PRIZE

Horrible  
Ugly  
Books!

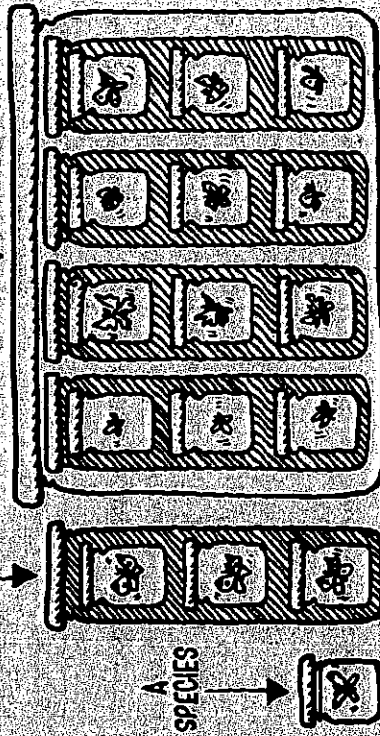
# Ugly bug families

The worst thing about ugly bugs is that there are so many of them. There are thousands and thousands of different types. They have to be sorted out before we can even begin to get to know them. It's a horrible job - but someone has to do it. Don't worry, though, it won't be you - here's a list some scientists prepared earlier.

Each type of living thing is called a species and these species are put into larger groups called genera a bit like belonging to a club. Groups of genera make families. Confused yet? You will be.

A GROUP OF SPECIES MAKES A GENERA

THIS GROUP OF GENERA MAKES A FAMILY

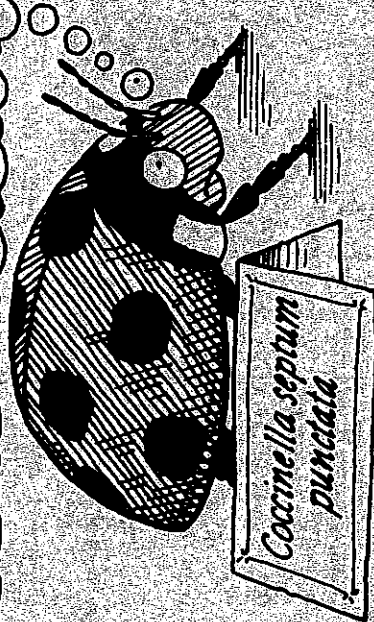


Like any family, ugly bug family members look a bit alike. But they don't all live together in a neat little home. If they did they might start fighting over who uses the bathroom first in the morning.

Groups of related families are known as "orders". And scientists lump orders together to make huge groups called "classes". (This is nothing to do with school, even if the classes have to follow orders.)

Here's an example of what we're talking about. This little bug is a seven-spot ladybird.

MAKES ME SOUND LIKE AN ITALIAN ICE-CREAM!



- Its scientific name is *Coccinella septempunctata* (try saying that with a mouthful of popcorn) – which is Latin for seven-spot ladybird.
- And ladybirds belong to an ugly bug family called *Coccinellidae* (cock-in-ell-id-day), or ladybirds. (Surprise, surprise!)
- Ladybirds belong to the order *Coleoptera* (coe-le-op-ter-ra), that's beetles to you.
- Beetles belong to the class *Insecta*, or insects. Simple, really! And it makes good sense for ugly bugs to be organised. There are more than 350,000 species of beetle alone. Try sorting that lot into matchboxes! So, now

you know how the system works, why not flip through the ugly bug family album? First let's meet some . . .



### Irritating Insects

Insect bodies are divided into three parts – a head, a middle bit or thorax and a bit at the back called an abdomen. An insect has two feelers (antennae) on its head and three pairs of legs attached to its thorax. Scientists have identified about a million insect species with bodies like these and there are plenty more just waiting to be discovered.

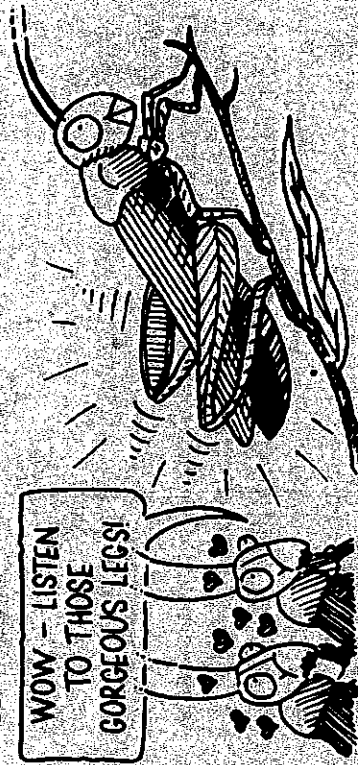
YES IT'S DEFINITELY AN INSECT . . . I CAN SEE IT'S HEAD, THORAX AND ABDOMEN VERY CLEARLY!



**Earwigs 1,000 species.** Earwigs get their name from the barmy belief that they crawl into your ears when you're asleep! They have mean-looking pincers at the back of their bodies. Males have curved pincers and females have straight ones.



**Grasshoppers, crickets and locusts 20,000 species.** They jump around and produce noises by rubbing their legs together to make themselves irresistible to the opposite sex.



**Stick insects and leaf insects 2,000 species.** Most live in tropical forests. Suck insects are so called because, well, they look like sticks, and leaf insects are so called because, you guessed it, they look like leaves. Either way they sit about all day looking like part of the furniture.

Know anyone like that? It's a clever disguise, of course, but what a life!



**Beetles At least 350,000 species in this order worldwide** - that's more than any other type of animal. But you'd never be able to catch them all in a jam jar. Apart from their vast numbers, many of them are known only as a single example in a museum collection.



**Termites 2,000 species.** Termites like a nice hot climate. They are small soft insects but that doesn't mean they're a soft touch. Termites build nests that look like palaces and are ruled by kings and queens. Guard-termites are so serious about their work they sometimes explode in a bid to defend the nest!

