

IS WHAT WALKS

Some walk on tentacles and look like flowers, others are five metres tall and have horse-like heads. These, say scientists, are the closest we have yet come to identifying alien species - and there's not a Vulcan, Dalek or Wookiee in sight

by Anna Pukas

FROM the moment man first raised his eyes to the sky, he has gazed at the stars and wondered: are we alone in the world or is there something else out there? I use the term "man" advisedly, as it is usually overgrown boys who get all steamed up over the possibility of flying saucers landing in a field and disgorging little green men. Some of these overgrown boys are bright if geeky, like the (mostly) male contributors to a new exhibition on aliens at London's Science Museum.

Extra-terrestrials have always been good for business on Earth. Books about them sell steadily. Films about them attract the biggest names in acting and directing and usually do spectacularly well. Even if the movie is execrable, like *Battlefield Earth*, it will find a lucrative DVD niche in the so-bad-it's-good category.

While these are all the creations of fertile imaginations, the Science Museum has involved real scientists in the science fiction. The Science Of Aliens presents their best predictions of what an alien would look like, should we ever encounter one. And what a shock it would be to encounter any of the creatures imagined by the likes of palaeontologist Simon Conway-Morris.

What would we make of gulphugs: five metres tall, long necks and small heads with protruding incisors and two powerful legs that can carry them at speeds of up to 40mph? Or of the beautiful stinger fans, which look like flowers but are animals slithering on tentacles?

They are all inhabitants of the planet Aurelia, which orbits around a star cooler than our own Sun. Because Aurelia's star is cooler, the planet has to be much closer, which means it would have such a tight orbit it couldn't spin.

Anyway, it all means half of Aurelia is permanently facing the sun and the other side is always cold, so there are no days or nights and no seasons.

Then there are the skywhales - fly-like sea monsters that soar on 10-metre wings through the thermal currents of the Blue Moon, which orbits a planet the size of Jupiter, which in turn orbits a pair of stars on the edge of our own galaxy. The atmosphere on Blue Moon is so thick it makes even big, bulky creatures like the skywhales capable of flight.

What, no Vulcans or Wookiees? Some may find it surprising - not to

mention disappointing - that the buffins did not come up with anything remotely humanoid, like ET or mammalian, like Han Solo's furry co-pilot in *Star Wars*, or even something resembling a Dalek or R2D2. But it isn't surprising really because the contributors to the Science Of Aliens exhibition are physicists and biologists and not George Lucas.

It is a fact universally acknowledged as damned obvious since it has been pointed out, that mankind's tendency to attribute human characteristics to non-humans extends beyond chimps and dogs to extra-terrestrials.

Better still, not only do we imagine they think like us, we like to believe they look rather like us, too, only with bugger eyes and bigger heads to accommodate their superior brains.

Search through the annals of sci-fi film and television history and the aliens invariably have four limbs off a trunk and two eyes. In *Star Trek*, the aliens quite often had backcombed hair and jutting bosoms, too, while the extra-terrestrials in *Men In Black* had the good manners to hide their alien-ness inside a human shell.

Part of this would be due to the limitations of the production budget but mostly it is due to the limitations of our own imagination and experience.

How can we envisage intelligent life that is differently configured from us? Especially when all the evidence shows that being made the way we are has ensured not only our survival when other species have failed, but our inexorable progress to the top of the evolutionary tree.

Whenever alien life is depicted as looking vastly different from us, the creature is usually the embodiment of evil: think of the saw-toothed monster in *Alien* or the dear old Daleks. We simply cannot empathise with the totally unfamiliar - it's human nature.

Hence, despite looking a bit like a tortoise, ET was still cute enough to inspire sympathy.

There's another contradiction at work here: the general assumption is that aliens are more developed than we are. Yet, in popular culture, the humans tend to defeat or win over the superior aliens, not by intelligence but by the more quintessentially human qualities of love, compassion and low cunning. They might be able to out-think us but we can out-them.

The notion that aliens are enemies is, in any case, a relatively modern concept. The scholars of the ancient world thought to the Renaissance



FICTION AND FACT: ET is cute enough not to be scary, left, but how would we feel if we met life forms from the Science Of Aliens exhibition - a skywhale, above, or hideous gulphugs, below?

thought the existence of other worlds possible but saw no reason to encounter hostility from them. Not until 1898, when HG Wells' *The War Of The Worlds* was published do we meet malevolent aliens in the form of the invaders from Mars.

THIS was no accident, says Emily Bick, curator of the Science Of Aliens exhibition. The end of the 19th century, an era of huge technological progress, coincides with the time when Europeans had completed the exploration of the world. Earth was mapped out and the fear of the unknown, evoked by

uncharted seas and continents where dangerous beasts roamed, was transferred on to things beyond the planet.

Similarly, the advance of science had also eliminated a good deal of superstition and belief in the supernatural or witchcraft. Nor were people as frightened by religion as they had been in centuries past.

"Before, it was maybe the forest, or strange things that happened in the sky, or weird things that happened in a fairy world," says Bick. "Now we have dismissed all that with rationality, so what's left? Aliens are the one thing we don't know about, so we can project all these same fears, these same stories, on to this new world."

The monster that bursts out of John Hurt's stomach in *Alien*, for example,

"embodies all of the fears we have about aliens" - fears that often have their origins in far older traditions. The monster is reptilian (like the Garden of Eden serpent), her bite is lethal (like a vampire's), she takes possession of human bodies (like evil spirits) and she is female, as were the witches burned at the stake; as was Eve, whose weakness led to mankind's expulsion from paradise.

Yet scientists also say there are sound reasons for expecting extra-terrestrials to look similar to us. According to the laws of physics and evolution, the most efficient shape for survival and adaptability is to have "bilateral symmetry" - two hands, two legs, two eyes. It gives us balance and a useful spare of everything