HELLO!

I'm Daniel, the Editor of Junior Skeptic. Welcome to Part One of our two-part look at the claim that aliens visited the Earth in the distant past.

There are those who say visiting extraterrestrials left behind signs of their vast powers and alien technologies. According to some, great monuments like the pyramids must have been ancient alien projects. You may have heard ideas like this yourself. Are any of them true?

Let's find out!

A SENSE OF ANCIENT MYSTERY

Stonehenge: The Great Pyramid. The statues of Easter Island.

Mention these and other astonishing monuments, and our minds are filled with a sense of wonder. Who built them? Why? How could ancient people even move such colossal stones without modern machinery?

Our imaginations tend to suggest out-of-this-world answers to these questions. Some people even think that space aliens may have built these things—which is an idea often seen on television shows like Stargate SG-1 and Stargate Atlantis.

But such ideas are much older than modern TV or science fiction. There is something about human nature that leads us to imagine far-out solutions for ancient mysteries. The Ancient Greeks and Romans stood in awe of huge stone ruins so old that knowledge of their construction was lost in the mists of time, so they imagined mythological origins for them. The ancient Greeks marvelled at the massive boulders in fortress walls built many centuries earlier by the people who populated Greece before them. Their explanation? Those walls must have been built by giant, superhumanly strong Cyclopes!
This idea that the world may once have enjoyed a golden age with advanced knowledge now lost and forgotten has been common for thousands of years. The Greek philosopher Socrates told of a lost civilization called Atlantis, which was unmatched in wealth, cultural achievements, and military power—before it vanished beneath the sea. Many other lost civilizations have been proposed. Lemuria and Mu were also supposedly sunk to the bottom of the sea, while others lay hidden under the ice of Antarctica, or even concealed inside a hollow Earth! In recent decades, these ideas have been mixed together with belief in flying saucers. Could the Atlanteans' advanced abilities have come from alien colonists?

FIRE-BRINGER MYTHS

Another common myth involves a god or hero who gave important wisdom or technology to humankind. In these out-of-this-world origin stories, many cultures imagined supernatural characters who brought their ancestors the secrets of fire, technology, or civilized laws.

For example, the Greeks imagined that the god Prometheus brought the highly classified divine secret of fire to humankind. (Prometheus was gruesomely punished for sharing this secret with mortals. The king of the gods, Zeus, had Prometheus chained to a mountain for eternity, where an eagle tore out his liver every day! Since Prometheus was immortal, his liver always grew back, and the next day the torture began all over again.)

This sort of “fire-bringer” myth has always been popular, and is found all over the world. It’s easy to see why. After all, wisdom has to come from somewhere, right?

Think of something as complicated and wonderful as music. If you lived in ancient times and heard an expert musician, what could be more natural than thinking a god must have shared that wonderful secret with humankind? It’s easy to imagine music as some sort of heavenly knowledge. On the other hand, it’s difficult to imagine all the thousands of years of slow development that really led to the techniques of complex music. Imagining that your own culture’s best inventions and laws must have been gifts from the gods provides satisfying stories about the origin of your culture. This also makes your own people seem special—after all, the gods decided to give their secrets to your ancestors!

So, what happens when the “lost civilization” idea gets combined with the “fire-bringer” idea? It was only a matter of time before someone asked, “What if a lost ancient civilization was created by ‘gods’ from outer space?”

THE TORTURE OF PROMETHEUS
In the summer of 1969, the world was mesmerized as human beings walked on the Moon for the first time. Imagine it! For people who’ve grown up in the years after that “giant leap for mankind” (as astronaut Neil Armstrong put it as he stepped onto the Moon’s dusty surface), this seems cool but not astounding. After all, our space technology is pretty advanced now. But in 1969, a moonwalk seemed almost a miracle—something that had been far beyond human reach for all of history!

The imagination of mankind was turned skyward...

**CHARIOTS OF THE GODS?**

Within months of Neil Armstrong’s first step onto the Moon, a strange book that claimed to explain the origin of civilization soared triumphantly to the top of the bestseller lists. *Chariots of the Gods?*, written by a Swiss author named Erich von Däniken, was first published in German. A couple years later the English-language translation arrived at exactly the right moment. Propelled by a sensational TV movie and intense public interest in NASA’s continuing Apollo moon missions, it was a runaway hit.

Von Däniken claimed that aliens landed on Earth in the distant past. But he began with a topic people were already thinking about: the future of human space travel.

With humans walking on the moon, it was easy to imagine that we might soon reach the other planets in our solar system—and go on from there to conquer the stars themselves. *Chariots of the Gods?* asked readers to imagine such a human starship. “Let us follow the journey of our imaginary spaceship, whose goal is a distant fixed sun,” von Däniken wrote. What would happen when it got there? “Let us assume that the planet chosen to land on is similar to the earth… Let us also assume the supposition that the civilization of the planet visited is in about the same state of development as the earth was 8,000 years ago.”

Von Däniken imagined that human astronauts arriving on an alien world might see “beings making stone tools; they see them hunting and killing game by throwing spears; flocks of sheep and goats are grazing on the steppe; primitive potters are making simple household utensils.” (Of course there’s zero reason to suppose that an alien planet would have space sheep or human-like creatures making pottery. Why not imagine a planet populated by intelligent crystals, or by nothing but algae?)

Von Däniken went on to ask, “But what do the primitive beings on this planet think about the monstrosity that has just landed there and the figures that climbed out of it?” He supposed they might “bury their faces in the ground and dare not raise their eyes.

Until this day they have worshipped the sun and the moon. And now something earth-shaking has happened: the gods have come down from heaven”.

According to von Däniken, these aliens would mistake human astronauts for gods. After all, the human astronauts’ spacesuits would look very strange, their technology would give them amazing powers, and their vehicles might resemble “chariots which the gods drove over land and sea…”

Now, the book encouraged the reader to imagine that thousands of years ago, alien “astronauts” landed here on Earth...
ARRIVAL OF THE SPACE GODS?

Chariots of the Gods? claims that several thousand years ago, at the dawn of human civilization, aliens landed on the Earth and interacted with humans. They might have been fairly ordinary creatures. (Imagine them as, say, working astronauts, or perhaps even as mining prospectors doing a mineral survey.) Because of their powerful technology, they'd automatically seem like gods to our ancestors. They would even have acted like gods, whether they meant to or not. If they gave us information about their home world amongst the stars, that would sound to our ancestors like a divine revelation about the heavenly home of the gods. Or, what if they provided some gifts or technological help? Wouldn't that make them divine “fire-bringers” character like the Greek god Prometheus?

How would ancient humans really have reacted to such hypothetical alien visitors? Well, von Däniken is probably right to imagine that our ancestors would have thought they must be supernatural creatures—gods from the sky. If our ancestors really encountered such powerful beings, they probably would tell stories about these “gods” or “spirits” in their legends and art. So far so good.

But the next step in his argument is the doozy: von Däniken argues that since we do see gods in ancient legends and art, that means we were visited by aliens. What? Not so fast!

Yes, we see powerful spirits in ancient art and legends, just as von Däniken says. The problem is, we don't need aliens to explain stories of gods. We should see stories of powerful religious figures whether there were alien visitors or not, because ancient people were religious. To make the case for ancient aliens, Chariots of the Gods? needed some sort of unique, solid evidence—something that can only be explained by alien encounters.

According to von Däniken, that evidence is all around us, as huge and obvious as the pyramids themselves. It's just that archaeologists have refused to recognize it...
A RICH SWISS FONDUE

CHARIOTS OF THE GODS makes the argument that there is clear evidence of alien visitation in the distant past—and lots of it.

This evidence is of basically two kinds. First, von Däniken claims that many ancient monuments, such as the pyramids of Egypt, could not have been built by the people who lived at that time. (Indeed, according to von Däniken, "Today, in the twentieth century, no architect could build a copy of the pyramid of Cheops, even if the technical resources of every continent were at his disposal.")

Von Däniken names many structures that he thinks are examples of alien-assisted architecture: the pyramids of Egypt, the Nazca lines of Peru, the statues on Easter Island, and so on. If it ever proved to be true that some ancient structures could not have been built without super-advanced technology, that would be very powerful evidence in favor of ancient aliens, or at least of a long-lost high-tech society on Earth. (We'll look at some of these cases in detail later in this issue, and others in the next issue.)

The other kind of evidence suggested by von Däniken comes from ancient art, legends, and literature. He claims that many old stories and works of art record magical happenings that we can now recognize as alien beings and advanced alien technology. For example, he points to a scene carved on a lid from a Mayan royal coffin. "A genuinely unprejudiced look at this picture would make even the most die-hard skeptic stop and think," von Däniken insists. "There sits a human being, bent forward like a racing motorcyclist, today any child would identify his vehicle as a rocket."

If it was possible to identify rockets and other such wonders in ancient art and legends, that would be an amazing breakthrough! (We'll examine those claims later.)

But, although Chariots of the Gods and its sequels sold many millions of copies, scientists were unimpressed. Reviewers tore von Däniken's books to pieces, claiming that his "evidence" was weak, incorrect—or even simply made up.

For example, the New York Times said the book's many claims are "processed through the von Däniken writing style, which might be described as Early Terrible. It puts the reader's brain into a mistmaster of facts, speculations, rhetorical questions and a mishmash of archeological and mythological materials. ... One's mind is left the consistency of a rich Swiss fondue."
Who is Erich von Däniken,

the author who claims that almost everything ever discovered by archaeologists is wrong? Because he claims to know more than all the thousands of archaeological experts who dedicate their lives to the scientific study of the past, you might imagine that he must be a great archaeologist himself.

Nothing could be further from the truth. In fact, von Däniken has zero professional experience or education in any field relevant to the claims he makes in his books. He has no university or college education of any kind. In fact, he dropped out of high school to become a lumberjack.

From waiting tables and serving drinks, he worked his way up through the hotel industry to become a hotel manager. He wrote *Chariots of the Gods?* in his spare time—and also found time to get in very deep trouble with the police...
THE CAVES OF GOLD

How good is the evidence for lost civilizations presented by von Däniken and other authors? Let's check out some specific claims one by one. Well begin with a case that seemed at first like the best evidence ever presented for the existence of a lost ancient civilization—which later fell apart completely, virtually ruining Erich von Däniken's reputation and career. This case convinced many critics that the man who served multiple prison terms for fraud was once again up to his old tricks: making stuff up and pretending it was true.

This is the case of the legendary Caves of Gold.

It began centuries ago, when the Spanish conquistadors were conquering the native empires of South America and Central America—the Incas, Aztecs, and Mayans. The Spanish looted whole countries and carried off astounding heaps of gold and silver. But there were always rumors of vast secret treasures the natives had concealed in hidden tunnels or caves.

Over the centuries, various adventurers, explorers, and con men claimed they found these lost treasure caves. Nothing ever came of any of those claims, but the legend continued to grow...

ENTER VON DÄNIKEN

In the 1970s, the old legend of the lost Caves of Gold reached a strange new climax. In a sequel to his book called Gold of the Gods, Erich von Däniken made the stunning claim that deep underground, far below the jungles of Ecuador, he had personally stood in a vast treasure cave full of solid gold artifacts! Not only that, this chamber contained evidence of a lost advanced civilization—evidence that his theories were right!

This tale is the centerpiece of the book. Däniken claimed he was led down into the bowels of the earth by the cave's discoverer, a guy named Juan Moritz. They slid down almost 800 feet on ropes, at which point their "visit to the age-old underworld of a strange unknown race really began."

They wound their way through a system of tunnels and halls. Then Moritz asked them to turn off their flashlights. They continued in complete darkness, until Moritz shouted, "Switch on your torches!" Von Däniken claimed he found himself "standing dumbfounded and amazed in the middle of a gigantic hall larger than three football fields! (The stone hall he describes is astonishingly huge, perhaps impossible—something very much along the lines of Moria in Tolkien's Lord of the Rings.)"

"There was a table in the middle of the room," von Däniken claimed, surrounded by chairs made of something like plastic but "as hard and heavy as steel." And, amazingly, "There were animals behind the chairs: squirrels, elephants, lions, crocodiles, jaguars, camels, bears, monkeys, bison, and wolves, with snails and crabs crawling about between them. ... The whole thing was like a fantastic zoo and what is more all the animals were made of solid gold."

A whole zoo made of solid gold! Impressive. But the best was yet to come: a library of thousands of large metal pages containing ancient writings in an unknown language! According to von Däniken, "This metal library was created to outlast the ages, to remain legible for eternity." It was a message from the lost ancients themselves!
"To me this is the most incredible, fantastic story of the century," Däniken boasted. "It could easily have come straight from the realms of Science Fiction if I had not seen... the incredible truth in person."

There was just one problem, according to Moritz, von Däniken definitely did not see the caves in person! "Däniken has never been in the caves," revealed Moritz, "unless it was in a flying saucer. ... If he claims to have seen the library and the other things himself then that's a lie."

Was von Däniken's whole story, the main claim of his book, an outright hoax? Däniken insisted he'd really been in the caves; Moritz claimed the cave, zoo and library were real, but that Däniken never saw them.

Who was lying? According to von Däniken, they both were! Confronted with Moritz's testimony during an interview, von Däniken admitted "I guess we both are telling half the truth." He still insisted he saw the zoo and library, but admitted many parts of his story weren't true "in my book I have not told the truth concerning the geographical location of the place, nor about some various other little things."

How little? What about the main scene in the book, in which Däniken describes switching on his flashlight and suddenly beholding the gigantic hall—was that pivotal scene true or a lie?

"No, that is not true. It is what I call theatrical effect," Däniken confessed.

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**A Chain of Lies?**

Moritz said von Däniken was never there at all, and even von Däniken admitted the main scene in the book was fake. Why believe anything about this outlandish Caves of Gold story?

We probably shouldn't. There are no pictures of the zoo or library. Von Däniken's convenient, far-fetched excuse was that Moritz wouldn't let him take pictures for fear of triggering ancient security devices. Hearing this, skeptical author James Randi asked in exasperation, "Just what the hell is von Däniken talking about? Is this his poor excuse for not giving us photos of this fabulous wealth and the interiors of the caves? No, there is a much better reason than that. ... There are no treasure caves, and there is no gold."

"Truth is, there's no evidence that the cavern ever existed (let alone an alien library or golden zoo). Moritz died without revealing its location, and researchers think he lifted the story from another guy—who was also probably lying! It appears the legendary caves are nothing but a long chain of frauds and hoaxes..."

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**The Priest's Gold**

Or are they? Von Däniken claimed that an Ecuadorian priest named Father Crespi had a collection of gold artifacts from the cave system. "Gold of the Gods" includes many pictures of these objects. Von Däniken claimed "that the characters on these gold plaques found deep under the earth will prove to be the oldest writing in the world! And that wise messengers from the gods inscribed technical data and advice for future generations on them!"

He asked "what tricks scholars will use" to deny this "fabulous gold treasure of inestimable archaeological and historical value..."

James Randi used the simplest "trick of all: he went there, spent time with Father Crespi, and examined the artifacts himself. He wrote, "I was speechless: not for the same reason as von Däniken, however. The collection was a total, unmitigated fraud from wall to wall. Scraps of tin cans, brass sheets, and copper steps abounded, mixed with piles of rusted chain, shards of armor, and bits of miscellaneous machinery."

There were also brass sheets with meaningless symbols and crude pictures of Egyptian pyramids and other out-of-place objects. No mystery there: it turns out that the eccentric Crespi paid locals for artifacts "which would prove his theory that the Egyptians and Babylonians populated South America," leading to a collection of crude fakes!

Randi explained, "the nature of the entire collection was proved to me when...I came across a copper float for a toilet tank and an embossed tin can on which the words 'product of Argentina' were still visible." Randi felt the collection was so obviously bogus that von Däniken must have known it. "I can only conclude, based on these facts, that von Däniken is a liar and an incompetent fake."

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**Why Not Simply Go Back?**

If his claims were true, why would von Däniken let this controversy so badly damage his career, reputation and book sales? Why tolerate accusations of fraud when all he had to do was go back to the cave and get all the proof he needed? He could take a whole expedition of objective experts with him. If the cave of wonders really exists as he described it, it would speak for itself. Overnight, he'd become one of the greatest discoverers in the history of archaeology.

So why not do that? He could have settled this whole "fraud" controversy in a week, way back in the 1970's.

This question has made even his supporters very uncomfortable. "I am not entirely content," wrote a friend in a biography of von Däniken, "with the ostensible reasons for Däniken's stubborn refusal to undertake another visit to Ecuador. After all, if von Däniken were sincere and if the cave were real, it would immediately "be recognized and accepted as the proof" of his theories about lost ancient civilizations!"

What is von Däniken's reason for ignoring this easy way to both clear his name and prove his theories? "I cannot," he said in an interview in the 70's, "I'm a little afraid to go there now." He suggested that Moritz might want to harm him. "After this controversy, I have the feeling I should not go there anymore, and I really don't care too much anymore," von Däniken said.

This excuse was always unconvincing, and it's irrelevant now: Moritz passed away over 15 years ago. Why not go back to the caves today? Unless von Däniken provides solid evidence that he truly stood in the caves of gold, it looks like Moritz was right: "Von Däniken was never in the caves, when he states he has seen the library and the other things himself, he is lying."
In the South American country of Peru, there is a mid-sized city called Ica. Tragically, Ica was devastated by a huge earthquake in August of 2007, from which it is still recovering.

For decades before the quake, Ica had an altogether happier claim to international fame: mysterious objects called the Ica Stones. These stones—some the size of a fist, some the size of small boulders—are engraved with strange, supposedly ancient pictures. There are tens of thousands of them. Together they seem to reveal the existence of an advanced, ancient, and completely unknown civilization.

And I mean really advanced—and really ancient. The Ica Stones show ancient people using telescopes to do astronomy, performing ultra-modern surgeries (like heart transplants), flying in strange vehicles, and other technological marvels. They also show humans interacting with animals extinct for millions of years—such as riding or hunting dinosaurs.

The Ica Stones had one major promoter, a retired doctor named Cabrera. Doctor Cabrera claimed he had been given one stone as a birthday present. Recognizing that it showed a long-extinct fish, he began to buy more stones from local farmers. Soon he set up a small museum to store his collection, which grew to tens of thousands of stones. According to Cabrera, the stones were carved millions of years ago by alien colonists.

Cabrera claimed most of the stones came from a secret cave. However, he refused to give any details about this cave, right up until the day he died. There's no evidence at all that it ever existed, and it's likely Cabrera just made it up.

On the other hand, there's overwhelming evidence that the stones are fake. Time after time, TV crews sent to Ica have had no trouble finding and interviewing the men who made and sold the stones to Cabrera. Local artists produced the engravings with dental drills and pieces of hacksaw blades, scratching drawings into the outer layer of the stones. They admitted they based their designs on comic books.

They're happy to demonstrate this on camera, creating brand new stones identical to Cabrera's. Their story is confirmed by laboratory tests of Cabrera's stones: if the Ica Stones were truly ancient, the engraving cuts would be smoothed from weathering and covered with a "patina" (an outer layer of tarnish). They aren't. The engraving cuts are sharp and recent, just as the artists say.

THE COMIC BOOKS IN THE ROCKS

MANY ICA STONE SCENES ARE CLEARLY CLUMSY MODERN FAKES BASED ON COMICS AND IMAGINATION. FOR EXAMPLE, THE T-REX ABOVE IS SHOWN WITH FIVE FINGERS AND TOES ON EACH LIMB. REAL ANIMALS OF THIS TYPE HAVE THREE-FOOTED FEET (AND TWO OR THREE FINGERS). T-REX IS ALSO SHOWN STANDING UP WITH ITS TAIL DRAGGING BEHIND IT, LIKE A KANGAROO. SCIENTISTS NOW KNOW REAL DINOSAURS HELD THEIR TAILS OUT STIFFLY BEHIND THEM, OFF THE GROUND. (DESIGNS REDRAWN FOR CLARITY.)
PTERODACTYL RIDERS?

We know Ica Stone pictures of people riding pterodactyls are unrealistic because the last pterodactyls went extinct millions of years before the first humans evolved. But it’s so much fun to imagine that I wanted to find out if they lived at the same time, could a pterodactyl carry a human?

Some species of pterosaurs (the group of flying reptiles that includes pterodactyls) were only the size of small birds. Others were just enormous. From wing tip to wing tip, the awesome Quetzalcoatlus measured almost 40 feet. (Modern bald eagles have about a seven-foot wingspan.)

Could a 40-foot pterosaur carry a human? Luckily, we were able to ask an expert: paleontologist Dr. Warren Langston, co-discoverer of one of the two species of Quetzalcoatlus. His answer may surprise you: huge pterosaurs could not carry the weight of a human, precisely because they were so huge.

Sound backward? As Dr. Langston explained, “the larger they became the less likely it is that they could carry increased load” because they were already pushing the limits of how big (or heavy) a flying animal can be and still get into the air.

“Quetzalcoatlus is presumed to have been close to the functional limits for flying creatures,” Dr. Langston told me, “being more of a sailplane than a flapping flier.”

Despite its size, the hollow-boned Quetzalcoatlus may not have weighed any more than a human.

Tossing a person on its back would be a bit like throwing a bag of cement onto the back of a modern hero.

SEE YOU NEXT ISSUE, FOR ANCIENT ALIENS PART TWO OF TWO

WE’VE SEEN HOW THE IDEA OF ANCIENT ALIEN VISITORS GREW OUT OF MUCH OLDER MYTHS ABOUT LOST CIVILIZATIONS (LIKE ATLANTIS) OR HELPFUL GODS (LIKE PROMETHEUS).

NEXT ISSUE WE’LL LOOK AT MANY OF THE SPECIFIC CLAIMS OF VON DANKEN AND OTHER “ANCIENT ASTRONAUT” WRITERS. IS IT TRUE THAT ALIENS BUILT OUR ANCIENT MONUMENTS, LEFT SIGNS OF THEIR TECHNOLOGY–OR EVEN ENGINEERED THE EVOLUTION OF HUMAN BEINGS? FIND OUT IN THE NEXT ISSUE OF JUNIOR SKEPTIC!

Let us know what you think. We love hearing from you.

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ANCIENT ALIENS
part two of two

HELLO!

I'm Daniel, the Editor of Junior Skeptic. Welcome to Part Two of our look into the claim that aliens built the great monuments of the ancient world.

Last time we saw how this idea became popular in the 1950s and 70s, through the books of a guy named Erich von Däniken. This time we'll look at modern cases... and explore the idea of the flying saucer culture. If you want to learn more, check out the books and books by Erich von Däniken. His work has been influential in the development of the flying saucer culture.

Let's find out!

ANCIENT JET PLANES?

Did the ancient Indians of South America see high-tech aircraft piloted by creatures from outer space? Some people claim they did, because small gold sculptures found in Colombia look like modern jet airplanes—but they were made 1500 years before the Wright brothers flew!

These pendants do look like something that could fly, but it's hard to tell exactly what because the sculptors did not make realistic art. They worked in an "abstract" art style (this just means simplified or exaggerated), so their work has to be interpreted.

The people who wore this jewelry would've known exactly what it was supposed to be, but we have to look at what else the sculptors made to discover what the “aircraft” pendants were originally meant to represent.

We know they made jewelry in the shape of various animals, including birds. But the little extra wings on the tail don't really belong on birds. Also, birds' tails have a flat, side-to-side shape. The tails on the pendants have an upright shape. A mystery! Not really. It turns out there's another kind of real, local animal that matches these strange details of the pendants very closely: flying fish! The ancient Colombian sculptors definitely knew about these wonderful fish. We know this because they very clearly sculpted other gold jewelry in the shape of flying fish!
Rust-Proof Iron?

Chariot of the Gods tells of an ancient pillar in India which is made of iron—yet it has withstood long centuries of weather "without showing a trace of rust." Mysterious indeed! It certainly does sound like it could be some sort of incredible alien technology. As von Däniken put it, "Here we have an unknown alloy standing us in the face."

The pillar really does exist, and it is astonishing—but it isn't mysterious. It is an Indian cultural treasure, which a king had erected as a religious monument about 1600 years ago. However, it actually does rust. Still, considering that it's been sitting outdoors all that time, it really is in great shape. But this isn't a mystery either.

How come the pillar hasn't rusted away to nothing? Well, it turns out there are several reasons—beginning with the dry weather. There is very little rain in that area of India, and the humidity (the amount of water vapor in the air) is very low. Also, the dark-colored iron pillar soaks up so much sunlight during the day that it stays warm through the night, which keeps dew from forming on it. Finally, we know from chemical analysis of the pillar that the ancient ironsmiths made it using a technique that results in especially high-quality, rust-resistant iron. No mystery, just good skilled craftsmanship. Furthermore, scientists knew all this before von Däniken wrote Charriot of the Gods.

In the early 1970s, a magazine reporter confronted von Däniken about his false claim of a rust-proof "unknown alloy." The reporter pointed out, "In fact, that column does have rust on it, and the process by which it was made is well understood. Do you still find it mysterious?"

"No," von Däniken confessed "not anymore." He said that he didn't know about the real scientific investigations before he wrote his book, but admitted "they came to quite different results, so we can forget about this iron thing."

That's that, then the claim that it was an "unknown alloy" that didn't show "a trace of rust" was untrue, and von Däniken admitted it.

But the reporter's next question revealed a more serious flaw in von Däniken's work. Many editions of Charriot of the Gods had already been printed, and the book contains claims that are known to be untrue. The reporter wanted to know, "have you made any effort to correct these errors?"

Von Däniken claimed he tried hard to correct errors, but said it was difficult to get publishers to change anything. He said, "it takes, I don't know, maybe a year and a half and about 20 letters to get it done."

Twenty-five years after he said this, the 1999 anniversary edition of Charriot of the Gods was released. It contained the same untrue claims about the Delhi pillar, word for word. Nothing changed. The error was not fixed.

This suggests, once again, that von Däniken doesn't care about accuracy. But perhaps that isn't surprising. After all, the publishers of the 1999 edition of Charriot of the Gods even began the book with a disclaimer: "This is a work of fiction. Names, characters, places and incidents are either the product of the author's imagination or are used fictitiously, and any resemblance to actual persons, living or dead, business establishments, events or locales is entirely coincidental."

In other words, according to the publisher, if anything in the book, actually is true, it's only by accident.
THE GIANT STATUES OF EASTER ISLAND

Easter Island may be the most remote place on our planet. At just 15 miles long, it is a small volcanic island lost in the vastness of the Pacific Ocean. The nearest major land mass is South America, more than two thousand miles away. There isn’t even another island within a thousand miles. In every direction, there’s nothing but water.

This is why the crew of a European sailing ship was so surprised to stumble across the place about three hundred years ago. They were even more astonished to find an organized farming society living there—complete with giant stone statues that the islanders had erected.

The captain of the sailing ship wrote, “The stone images first caused us to be struck with astonishment, because we could not comprehend how it was possible that these people, who are devoid of heavy thick timber for making any machines, as well as strong ropes, nevertheless had been able to erect such images, which were fully 30 feet high and thick in proportion.”

He was right to be impressed. The enormous statues (the largest stood 33 feet tall) were each carved from a single block of stone. Many were also capped with a huge hat-like object made from another type of stone. The captain knew that on other Pacific islands, strong ropes were made from tree bark, and that anyone moving such huge statues would need to use a lot of logs (for wooden sleds, levers, scaffold ing, and that sort of thing).

But Easter Island had no trees, only farms and grass. It didn’t even have a large population to provide workers (only about 2000 people). So how had they done it?

A couple centuries later, Chariote of the Gods author Erich von Däniken had a simple answer: the Easter Islanders didn’t make the statues at all. Aliens did.

However, this alien idea is wrong. We know this because scientists have now solved most of the mysteries of Easter Island.

To begin with, the island used to be already forested. When humans first reached the island, it had great riches of wood, including the world’s largest species of palm tree (now extinct). It also had plenty of food resources, including fruit trees and the Pacific’s largest population of nesting birds. Add to this the fertile soil and abundant rain, and it must have been an island paradise.

All these resources gave the Easter Islanders plenty of building materials for canoes and houses, ample firewood, food to support a thriving population that reached perhaps 15,000 or more people, and the wealth to support a program of building and erecting statues. But all of that changed. The people cut down the trees—every last one of them. They also wiped out most of the animals through overhunting. The population fell drastically.

By the time the European captain arrived, intense farming of the treeless island could barely support a couple thousand people. As the food and forests disappeared, the survivors fell into a series of savage civil wars. The environmental collapse of the Easter Island society is a terribly sad warning to all of us not to waste our natural resources!

THE STATUES

But what about the statues? Are they still an unsolved mystery? The first major breakthroughs were made by Thor Heyerdahl in the 1950s. He explains, “We know exactly how they were carved, where they were carved, why they were carved, and when they were carved.” The last statues were made just over 500 years ago, when civil war broke out. The statues were abandoned, which meant half-completed statues were left still embedded in the rock for us to study today. Not only that, but the tools and the knowledge of how to use them are also available for scientists to study today. As Heyerdahl explains, “Thousands of crude stone adzes (axes) and picks used for the work were still found scattered about in the quarries, and the local islanders... actually showed us how to carve a giant with the abandoned basalt tools, and how to move it on sleds and erect it...”
CARVING GIANTS

Was it really possible to carve the giant statues using only the stone tools the old Easter Islanders left lying around the quarry? Heyerdahl's team of archaeologists turned to the modern Islanders to help them find out. They put together a crew of local workers, who brought with them the oral history recording how their own ancestors carved the statues. Within a few days they were able to carve out the outline of a new statue using the exact tools their ancestors did.

One definitely can make those statues with those tools! Oh helps that the ancients used highly carvable stone. One scientist points out that this stone "has a hard surface but an ashlake consistency inside... it almost cries out, 'Carve me!'"

But Erich von Däniken rejected this successful experiment. Briefly visiting the quarry, he decided that "Nobody could ever have freed such gigantic lumps of lava with small, primitive stone tools." His reason for thinking so? None, except that carving that way would be hard. The Islanders would give up, he says, because "even today they are not very fond of hard work..."

Instead, he makes the bizarre claim that shipwrecked aliens built the statues out of boulders before being rescued. The Islanders then tried to copy the alien "masters" using stone tools, but soon gave up. His evidence for that amazing claim? There's none—none at all. He just made it up off the top of his head!

Luckily, we don't have to rely on imaginary explanations. We can actually see how the Islanders worked. There are the statues in progress, there are the actual, exact tools. We've tested those tools, and they work great. Case closed!

LIKE MOVING A SOFA

We also know how they moved these massive statues, the same way you'd move a heavy sofa. Well, not exactly the same—it would have to be a pretty big sofa. And it would have to be made of solid stone. But otherwise, the trick is the same: get a bunch of people to help you.

In a test, a group of 180 modern Easter Islanders were able to easily drag a 12-ton statue using ropes. Amazingly, according to an archaeologist involved in the test, "once it got up onto the hard soil, we could have cut that crew down by at least one-half. Once they got it out of the sand, they really started tearing with this thing, and we had to stop them, or they would have pulled it away from the actual site." (The ancient Easter Islanders moved quite a lot of statues, so it won't surprise you to learn that they constructed good roads to help make it easier.)

We'll see this theme a lot as we look at other mysteries like Stonehenge and the pyramids: moving big rocks isn't that hard if enough people work together!

LEVERAGE

Have you ever seen somebody lift a car? No? Have you ever watched someone change a tire? To change a tire, a person first lifts up the car using a jack. Jacks don't usually contain a motor or anything like that. The muscles of the person using the jack actually supply all the power needed for lifting the car. This is possible because of leverage. When a person uses a jack, they make big pumping or winding motions. The jack turns that muscle power into tiny little lifting motions—and lifts the car one small step at a time.

That's the same system the Easter Islanders used for lifting their statues upright. In the 1950s, modern Easter Islanders showed scientists how this was done, all without using any modern machinery. One archaeologist recalled watching as only a dozen guys lifted a 30-ton statue into position: slowly, over 38 days, and one small step at a time. "First, the men went down to the beach and gathered up all the boulders they could find and brought them in near the statue. Then they brought in three long poles," which they used as huge levers. "So they were getting a terrific advantage. The leverage is fantastic." As the men pulled down on the long levers, "the statue would have gone up a little, and they would immediately throw in some boulders... They kept going back and forth on each side until the thing was up in the air... The whole thing is leverage and it just went beautifully."

THIS DRAWING IS BASED ON AN ACTUAL STATUE-HAULING PHOTOGRAPHED BY THOR HEYERDAHL.
In the South American country of Peru, there is a place where a desert is covered with vast, ancient drawings—pictures hundreds of feet long, huge strange shapes, and straight lines that stretch off for miles. Who made these lines at Nazca—and how?

According to Erich von Däniken, some of the lines were made by aliens who came down in "various types of aircraft" from "space-towns" in orbit. The local people watched as "Human-like beings with golden, shimmering skins walked around" doing a mineral survey. Soon a fleet of alien mining ships arrived. The ships blasted strange shapes with their exhaust, and the aliens created "huge geometric patterns on the mountain's surface" and on the floor of the desert which "contained landing and take-off information" for the spacecraft. Later, after the aliens left, the local Indians imitated the designs the aliens left behind.

Sound far-fetched? It is.

Everyone—even von Däniken—agrees that (at least) most of Nazca's huge earth drawings were made by ordinary people. The lines were made by simply bending over and picking up the dark gravel and stones from the surface of the desert, exposing the lighter sand underneath. No special tools or high technology were required. In fact, it's so easy to make marks on the Nazca desert floor that recent truck tire tracks may still be visible hundreds of years from now.

But why make giant art? Everyone agrees that the lines had some religious purpose. Some feel the lines honored water gods in the nearby mountains since the Nazca Plain is a parched desert. People have always made special places for religious worship. Is there any specific reason to think this particular religious site was inspired by the landing of an alien mining fleet? Is there any concrete evidence to support Erich von Däniken's claim that aliens made the first lines "as landing orientation" for their ships?

No. There isn't. It's just a story von Däniken made up, based only on his feeling that the lines vaguely resembled an airport.

According to archaeologists, ancient Nasca priests may have walked along the lines in ceremonies. After all, "the lines are literally sandy paths, and most of the drawings are made with one continuous line."
The idea that the ancient Nazca people couldn't have made the drawings without inspiration or help from flying spacemen depends on two false assumptions: 1) that the "primitive" Nazca's couldn't do anything too difficult, and 2) that making the Nazca drawings was very hard.

We can ignore the first point, which is just pure racism. The Nazca had their artists, geniuses, ambitious planners, and hard workers just like every society.

But what about the second point? Was it actually that hard to make the Nazca drawings?

The great skeptical investigator Joe Nickell wanted to find out for himself. As a kid, he decided he would recreate a full-size 450-foot Nazca condor design! But how?

We know that the Nazca people started with smaller, six-foot drawings, and then enlarged them. How was this accomplished? One way would be to have someone overhead in an aircraft, giving directions ("OK, a little more to the right"). This has been proposed not only by people who believe flying spacemen, but by some famous balloon pilots as well. These balloonists built hot-air balloons using only technology available to the Nazca (such as good-quality cotton cloth and woven baskets) — and it really works! Does that solve the Nazca lines mystery? Hardly. Proving it was technically possible for modern balloon experts to design and fly hot-air balloons does not prove the Nazca people themselves built baloons! (All you need is paper and ink to write the Declaration of Independence, but that doesn't mean ancient people wrote it."

There's a good deal of evidence that the Nazca had balloon technology. Luckily, there are easier ways to enlarge a drawing. Joe Nickell took a small drawing of the Nazca condor and drew a line down through the center. Then he took a ruler and measured out from that center line to the tips of the wings and feet. To re-create the giant, full-size condor on the ground, he had some family members marked out a long center line with string. Then, all they had to do was pleat out from this center line, planting more long pieces of string. For example, if the tip of one feather was four inches from the center line on the small drawing, they might measure out 400 feet from the center line of the full-size condor outline. At each point they planted a stick in the ground, creating a giant connect-the-dots picture. They pinned the dots with string, and then white powder (made of by clearing gravel.)

The result! Six people were able to accurately recreate the Nazca condor picture, using only string and bits of wood — in one day! The original would have taken longer, but the ancient Nazca obviously didn't need aliens to help them!

In some places, von Daniken makes a wild claim in one sentence, only to contradict himself in the next. For example, he writes, "Enormous drawings that were undoubtedly meant as signals for a being floating in the air are found on mountaintops in many parts of Peru. What other purpose could they have served? But if they were drawn on the sides of mountains, a viewer can enjoy them without floating in the air.

In fact, von Daniken's very next sentence acknowledges this: "One of the most peculiar drawings is carved on the grey red wall of the cliffs in the Bay of Pisco. If you arrive by sea, you can make out a figure nearly 820 feet high from a distance of more than 12 miles." Not only can you see it without flying, you can see it from a boat at sea level, and from miles away!

Even the drawings on the flat desert floor can be appreciated without a spacecraft. Most are just straight lines, which can be admired by looking at how they stretch out toward the horizon. And, many of the huge animal drawings can also be made out from the ground. As Joe Nickell put it after recreating a large Nazca drawing using bits of wood and string, "It is frequently asserted that the Nazca drawings are recognizable only from the air. That is not quite true, certainly not of the smaller figures, such as... the fish, which is only 80 feet long." He added, "even the large drawings can be appreciated to some extent from the ground. With our condor, we were able to see whole portions — such as the body and head, leg and foot, the entire fan of the tail while standing on top of the drawing."
ancient monument. No other structure has ever inspired so much legend, speculation, and far-out theorizing. It stands in a league of its own.

Predictably, the Great Pyramid is one of Erich von Daniken’s favorite cases in support of his theories about ancient aliens. It’s so big, so old, and so awe-inspiring that it almost seems natural to imagine otherworldly forces involved in its construction.

According to von Daniken, not even the powerful Egyptian civilization could have built the Great Pyramid—nor could any human society. “Today, in the twentieth century, no architect could build a copy,” he wrote, “even if the technical resources of every continent were at his disposal.”

Von Daniken claims the ancient Egyptians had no wood on which to roll the more than two million massive stone blocks used to build the Great Pyramid, and no ropes to pull the blocks. He also claims there’s no sign of any huts for tens of thousands (or hundreds of thousands) of workers to live in during dozens of years of construction. Even more mysterious, according to von Daniken, the size, shape, and location of the Great Pyramid indicate that extraterrestrial knowledge was used in its planning. Besides, he claims, the advanced technology of pyramid-building sprang from nowhere, all of a sudden, almost as if the idea fell from the clear blue sky.

Those are bold, exciting claims—and they are all wrong.

“We know next to nothing about the how, why, and when of the building of the pyramid,” von Daniken states. But the truth is that Egyptologists have been painstakingly
piecing together the answers for a couple of hundred years now. Not surprisingly, we've learned a lot! It's hardly that the ancient Egyptians wrote so much stuff down, and left detailed illustrations we can study. We know which Pharaoh built the Great Pyramid, and when, because construction workers left graffiti on the stone blocks they were moving, telling us details like the date ("Year 17 of Khufu's reign") and even the team name of one of the work crews ("the Friends of Khufu").

We know from ancient diagrams exactly how work crews moved rocks much larger and heavier than the blocks of the pyramid. The ropes and wooden sleds von Däniken calls "non-existent" are right there in the diagrams. Samples of Egyptian ropes still exist, and the Egyptians had both home-grown timber and cedar wood imported from a neighboring country.

We've found the ruins of the city the construction workers lived in—the city von Däniken insisted didn't exist.

What about his claim that the techniques of pyramid-building showed up suddenly? No need for aliens: this isn't true either. As skeptic James Randi explained, "The construction of the Great Pyramid... was the result of two hundred years of experiments in the art. There is even one example of a pyramid built (very early) with sides a bit too steep. It literally fell down, and the slope of another one then in the process of being built was abruptly changed to accommodate the lesson learned." Von Däniken also claims the height of the Great Pyramid "multiplied by a thousand million—98,000,000 miles—corresponds approximately to the distance between the earth and the sun." Sounds impressive, doesn't it? It is a sign of special knowledge from aliens? No. To begin with, we don't know the precise original height of the pyramid, because roughly 50 feet is missing from the top. We do know, however, that the original height did not correspond to the distance to the sun. Worse than that, the 98,000,000 number von Däniken comes up with isn't even the number you get when you multiply the pyramid's height by a thousand million." The whole claim is just gibberish, but it wouldn't mean much even if it were true. If you can take the approximate height and multiply or divide by any amount you like, it's not hard to find an impressive-sounding approximate "match." For example, the Great Pyramid was originally about 100 times the height of actor and director Danny DeVito. Does that mean the Egyptians foresaw the TV series "Taxi"?

ANCIENT EGYPTIANS PRESERVED THE DEAD BODIES OF WEALTHY PEOPLE SO THAT THEIR MUMMIFIED REMAINS COULD LIVE AGAIN IN THE AFTERLIFE. ERICH VON DÄNIKEN IMAGINED THAT ALIENS INTRODUCED MUMMIFICATION AS A KIND OF SUSPENDED ANIMATION SO THAT FAVORITE HUMANS COULD BE REMANUFACTURED AND QUESTIONED AFTER THOUSANDS OF YEARS. IF THE EGYPTIANS HADN'T SEEN ALIEN Hibernation pods, he asked, how could such primitive "heathens" possibly come up with "the idea of a remanufacturing, a return to life?"

That's a silly question! Anyone who has ever seen a sleeprapar person wake up would naturally wonder that a dead person could wake up too. Also, those with advanced medical knowledge would never use EGYPTIAN MUMMIFICATION TO PRESERVE A PERSON, THE BRAIN IN PIECES, AND THROW IT AWAY!
MYSTERIOUS STONEHENGE

In England there stands a monument thousands of years older than the Roman Empire—older even than the pyramids of Egypt. This is Stonehenge, a circle of enormous stones set in place over 4000 years ago.

Today, some people think that Stonehenge (and thousands of other smaller stone circles around Europe) may be alien artifacts, or that they focus magical energy. That's not hard to imagine. Stonehenge is genuinely impressive. The largest stones weigh 50 tons, and many other four-ton stones were brought from over 100 miles away! Could an ancient farming society really have built Stonehenge? And, if so—why?

As in similar megalithic (or "big rock") mysteries, the "how" turns out to be much simpler than technology from outer space or magical forces. Experiments prove that fewer than 200 people are needed to pull even the largest Stonehenge stones along a greased wooden track. Hard work, sure. Paranormal mystery, no.

The "why" is also less mysterious than most people suppose. Stonehenge had a religious or ritual purpose. It was also a monument to the hard work and ambition of the people who made it. It's easier to understand when we remember that people then were just like us; they wanted to impress their neighbors, please the gods, and leave behind monuments to their own achievements, just as people do today. As one archaeology textbook put it, the "fundamental mistake" we make when we turn the real Stonehenge into a bogus mystery is that "We look back four or five thousand years and see nothing but primitive and alien strumgins..." We don't need extraterrestrials to explain Stonehenge: it is like a "great cathedral, a colosseum, an impressive temple, a skyscraper. It is a reflection of what human beings are capable of."

THE ALIENS ON OUR COVER, WITH HIS ANTI-GRAVITY LEVITATION GLOVES, IS A PAUL ON AN OLD LEGEND: FOR HUNDREDS OF YEARS, THE MOST POPULAR EXPLANATION FOR STONEHENGE WAS THAT THE GREAT SORCEROR MERLIN BROUGHT IT TO ENGLAND FROM IRELAND, USING MAGIC. HOW DID THE STONES GET TO IRELAND? IN THE FIRST PLACE, THEY WERE BROUGHT THERE BY GIANTS. THIS JUST GOES TO SHOW HOW NATURAL IT IS FOR PEOPLE TO IMAGINE PARADISE SOLUTIONS FOR REAL-LIFE MYSTERIES!

GRAVITY IS YOUR FRIEND!

WHEN LIFTING SOMETHING HEAVY, PEOPLE DON'T THINK OF FETCHING A SHOVEL, BUT ERECTING A GIANT STONE IS EASIER IF YOU CAN SLIDE THE HEAVY END OUT OVER TO A HOLE AND THEN LET GRAVITY TIP THE STONE UPRIGHT!
very weird ideas about breeding. He tells us that human interbreeding with animals "was obviously an everyday occurrence" in the ancient world. But, in fact, the only evidence we have is the creation of a new species. "...how a 'species' is defined is a problem. It is not a species in any way. It is a problem in biology. What is a species? It is a problem in biology."

The idea of aliens breeding with humans is even sillier than humans interbreeding with scorpions. As Carl Sagan pointed out, "humans have no interest in men with a petunia and an extraterrestrial."

One very serious criticism of the idea that many ancient monuments required alien builders is that this argument is based on a misunderstanding of the word "savage." It is not uncommon for von Däniken's books to describe the work of ancient art and architecture and then say things like, "with the best will in the world, one cannot imagine savages making them."

Is he saying that all ancient humans were "savages"? Of course, they were too primitive to build their own monuments. Actually, he seems to make an exception for the people of Europe. One anthropologist textbook calculated that 96 percent of von Däniken's examples are "from places other than Europe." The textbook author wrote that von Däniken is "utterly astounded by the archaeological records of ancient Africa, Asia, and North America. He is so astounded, in fact, that he thinks that only through the assistance of men from outer space could such black, brown, yellow, and red people have produced the prehistoric works that archaeologists find on these continents."

Why does von Däniken mostly ignore ancient European accomplishments such as Stonehenge or the temples of the Greeks? Skeptic James Randi thought he knew the answer. "because these wonders are European, built by people who expect to have the intelligence and ability to do such work." Randi blamed this double standard on von Däniken's "personal prejudices," saying von Däniken "cannot conceive of our brown and black brothers having the wit to conceive or the skill to build the great structures they did leave behind."

While millions of readers have taken von Däniken seriously, there are plenty of signs that he himself didn't believe many of his own claims. To begin with, his books make clear that he later admitted were jokes. (That's not to say that these are from another star, for example.) He has also admitted that he made up stories for "a logical effect." And, as we saw last issue, once he admitted that to a skeptical writer.

There's also a story of his research to consider. For example, von Däniken writes that the Ark of the Covenant - the large gold-plated box in which the Ten Commandments were carried, according to the Bible - was an alien machine. "Undoubtedly the Ark was electrically charged!" His evidence for this startling claim? "Without actually consulting the Bible, von Däniken says, "I seem to remember that the Ark was often surrounded by flashes of lightning and that Moses made use of this transmitter whenever he needed help and advice."

He concludes that an alien that created the box on the basis of what he "seems to remember." As a book, he didn't bother to check it at all. That doesn't sound like serious research. In fact, it isn't research at all.

Authors like von Däniken have no direct evidence that aliens ever visited the Earth. The best they can do is point to ancient monuments and try to make a mystery where there is none. Saying that aliens created the great monuments of the past creates the people who really made them of the credit. What ancient humans achieved through breathtaking daring and effort would have been easy for aliens with the technology to travel between stars.

Skeptic James Randi said it best in his classic book "Why I Am Not a Christian." "As he might, von Däniken cannot diminish the works created by greater men than he. For every giant, there is a little man who kicked it because "until the machine," which became "shooting the DNA on a laser beam towards a particular, earth-like planet" (whatever that means).