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OUR COVER



THIS ISSUE'S COVER CONCEPT, TEXTURES, AND COMPOSITING BY DANIEL LOXTON.
JIM SMITH CREATED THE COMPUTER GENERATED ALIEN MODEL USED IN THIS SCENE.

ANCIENT ALIENS art one of tw

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!







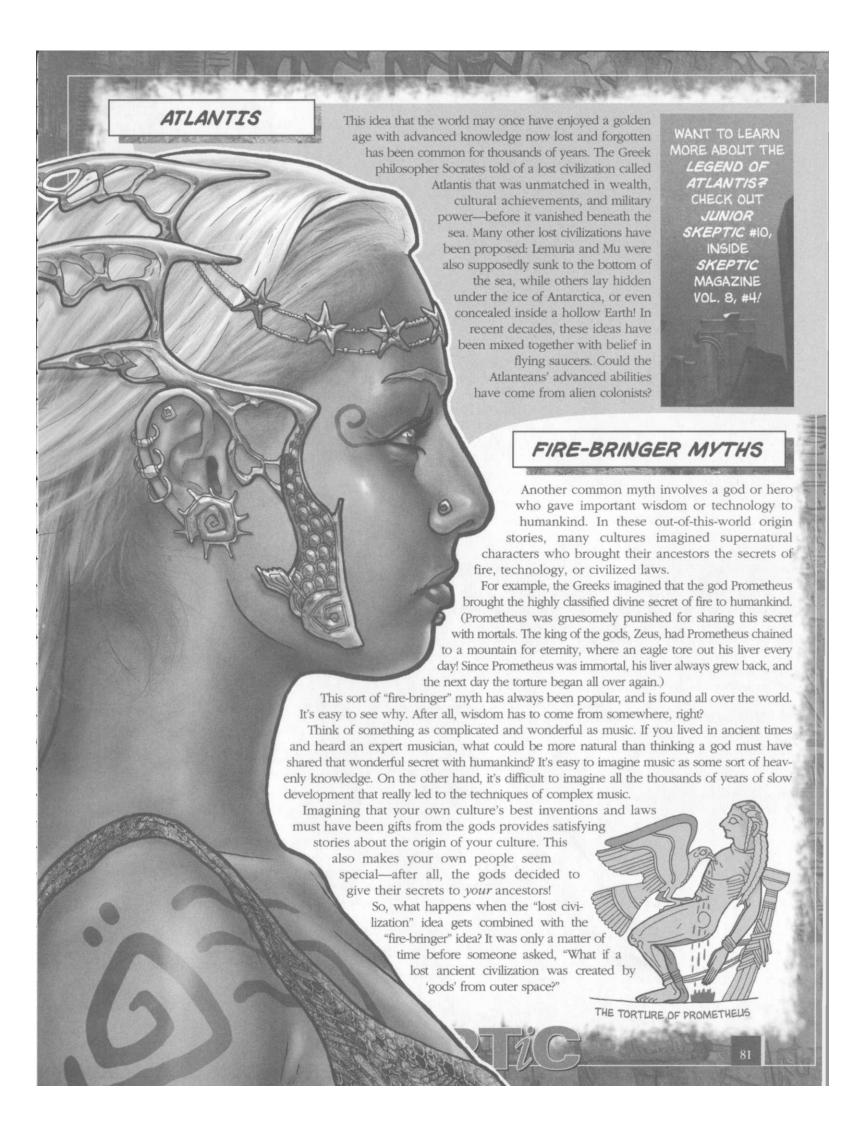
A SENSE OF ANCIENT MYSTERY

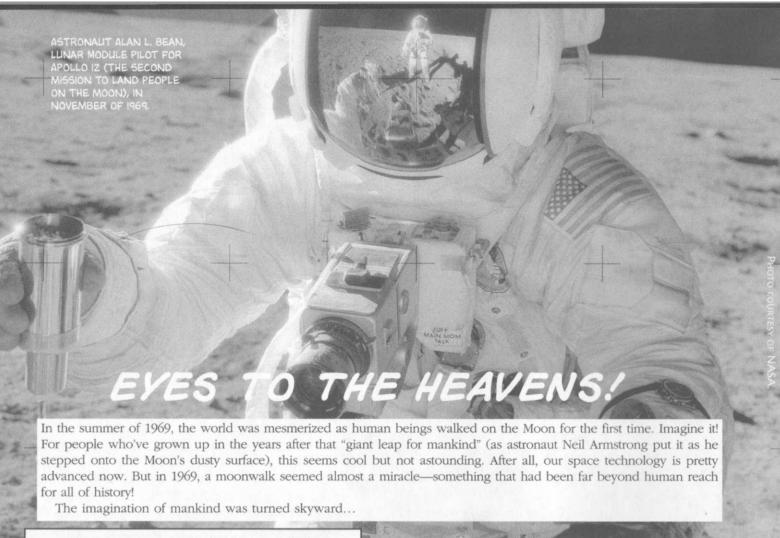
Stonehenge. The Great Pyramid. The statues of Easter Island.

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: SG1* 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!





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 star," 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 venture 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 worshiped 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...



OVER 4,000,000 COPIES IN PRINT

RICH VON DANIKEN'S

ARRIVAL OF THE SPACE GODS?

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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-bringer" characters 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

Chariots of the Gods? claims that several thousand years ago, at the dawn of human civilization, aliens landed on the Earth 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.

Whoa! 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 reli-

gious. 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 too.)

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 Daniken writing style, which might be described as Early Terrible. It puts the reader's brain into a mixmaster 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."



CHARIOTS OF THE GODS? SUPPOSES THAT PROOF OF ALIEN CONTACT CAN BE FOUND IN OLD LEGENDS AND STORIES-EVEN, IT TURNS OUT, IN FICTIONAL STORIES. VON DÄNIKEN ASKS, "WHAT DARING IMAGINATION INVENTED THE 'OPEN, SESAME!" INCIDENT IN THE TALE OF ALI BABA AND THE FORTY THIEVES?" SUPPOSING THAT THE TALE DESCRIBES A HIGH-TECH AUTOMATIC DOOR, HE CLAIMS "IT MUST BE THAT THE ANCIENT STORYTELLERS HAD A STORE OF THINGS ALREADY SEEN, KNOWN, AND EXPERIENCED READY AT HAND TO SPARK THEIR IMAGI-NATION!

THAT'S A HUGE LEAP-AND ALSO TREMENDOLISLY SILLY. THERE'S NO REASON TO SUPPOSE THIS FAIRY TALE IS AN ANCIENT RECORD OF REAL ALIEN TECHNOLOGY. IN FACT, ALI BABA ISN'T ANCIENT AT ALL! WE KNOW **EXACTLY** WHO INVENTED THE TALE (INCLUDING THE 'OPEN, SESAME!" INCIDENT). A FRENCHMAN WROTE IT, FRANKLIN WAS BORN, BASED VERY ROUGHLY ON A FOLK-TALE, (SCHOLARS ACTUALLY HAVE THE AUTHOR'S ORIGINAL HANDWRITTEN NOTES FOR THE STORY.)

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WHO IS THIS GUY?

Who is Erich von Däniken,

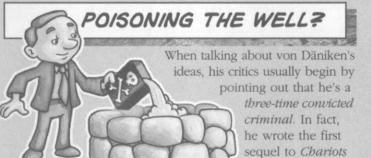
of the Gods? while

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 bartender.

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...



serving one of his prison sentences for fraud. (See "A History of Deception" below.)

Is it fair to bring up his criminal history? Von Däniken certainly doesn't think so. In one major interview he protested, "It's very easy to say that because a person has been in jail he's not serious, and you can't believe what he says. Personally I find that way of thinking very arrogant and unfair."

To begin a debate by saying your opponent's arguments must be wrong because he or she is bad is called "poisoning the well." Just as no one would drink poisoned well water, knowing that someone has a criminal history can prevent people from giving their ideas a fair hearing.

Poisoning the well is considered an unfair trick because first, the accusations might not even be true. And second, even if the person was guilty of some crime (or had some personal flaw or other), that might not have anything to do with the particular claim you are trying to evaluate. For example, just because someone in your class is a real jerk, that wouldn't mean her answers

to, say, arithmetic problems were wrong—the one thing need not have anything to do with the other.

So, is it "poisoning the well" to bring up von Däniken's multiple criminal convictions? As von Däniken put it, "What does my having been in jail, guilty or innocent, have to do with my work?"

Well, that depends. If he was convicted of, say, speeding, that wouldn't have much to do with his astonishing claims about alien visitors. But in fact von Däniken is a convicted *scam artist*. Over and over again, he has been caught *making stuff up* in order to make money. Is a history of criminal dishonesty relevant to the unbelievable claims in his bestselling books? It seems that it probably is. (As we'll see, he has been accused of *presenting fraudulent evidence in bis books as well...*)

Mind you, he says he was innocent each of the multiple times he was convicted of lying and stealing. "I have never committed fraud or embezzlement, although it is true I have been convicted of those things. I was improperly convicted three times," von Däniken insisted in an interview.

AND THEN YOU SECRETLY
STEAL SOME OF IT.

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Däniken's criminal
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prove his claims, his personal

"EMBEZZLEMENT"

IS WHAT WE CALL IT

WHEN SOMEBODY TRUSTS

YOU TO LOOK AFTER MONEY,

Those are certainly two very different ways of looking at von Däniken's criminal past! Either way, he's right about one thing: if he really has the evidence to prove his claims, his personal history doesn't matter. So keep your thinking cap on as we look at the many strange claims in Chariots of the Gods? and other books on "ancient astronauts"!

A HISTORY OF DECEPTION

At one of his criminal trials, a court-appointed psychiatrist testified that von Däniken was "a master swindler," a liar, and a criminal psychopath. Looking at his past, it's easy to see a pattern of deceptive behavior...

He was already running afoul of the police at age 15. As a Scout Pathfinder, von Däniken "cleaned out the cash-box" at his Boy Scout camp (according to a biography written by a friend and fan!). He then stole a stack of money from the camp custodian. When the cops nabbed him, he tried to lie his way out of trouble. But that was just the beginning.

According to an important magazine story, "Von Däniken

got into more trouble, at the age of 19, when he was convicted of stealing money from an innkeeper and from a camp where

he worked as a youth leader." He then dropped out of high school, worked for a while, and soon got caught for "a dubious jewelry deal that resulted...in a conviction for fraud and embezzlement, for which he served nine months" in prison.

He spent a few more years working as a hotel manager while frequently jetsetting around the world. Eventually, "The authorities began to wonder how a hotelier of modest means could afford it," explained one researcher. "The answer appeared to be that he was spending other people's money." Von Däniken was caught again, and convicted of "repeated and sustained acts of embezzlement," fraud and forgery. He was sentenced to three and a half years in prison.

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THE CAVES OF GOLD

How good is the evidence

Switch on

for lost civilizations presented by von Däniken and other authors? Let's check out some specific claims one by one. We'll 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 Incans, 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, or 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 Chariots 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!

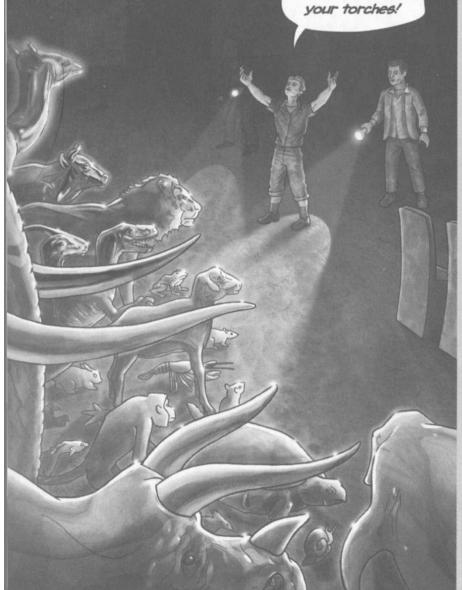
This tale is the centerpiece of the book. Däniken claimed he was led down into the bowels of the earth by the caves' discoverer, a guy named Juan Moricz. They slid down almost 800 feet on ropes, at which point their "visit to the age-old underworld of a strange unknown race really began."

They wound their way through a system of tunnels and halls. Then Moricz asked them to turn off their flashlights. They continued in complete darkness, until Moricz 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 staggeringly 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: saurians, 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!



BUSTED!

"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 Moricz, von Däniken definitely did not see the caves in person! "Däniken has never been in the caves," revealed Moricz, "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; Moricz 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 Moricz'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.

A CHAIN OF LIES?

Moricz 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 Daniken's convenient, far-fetched excuse was that Moricz 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). Moricz 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...

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 strips 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."

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 discovers in the history of archaeology.

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

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

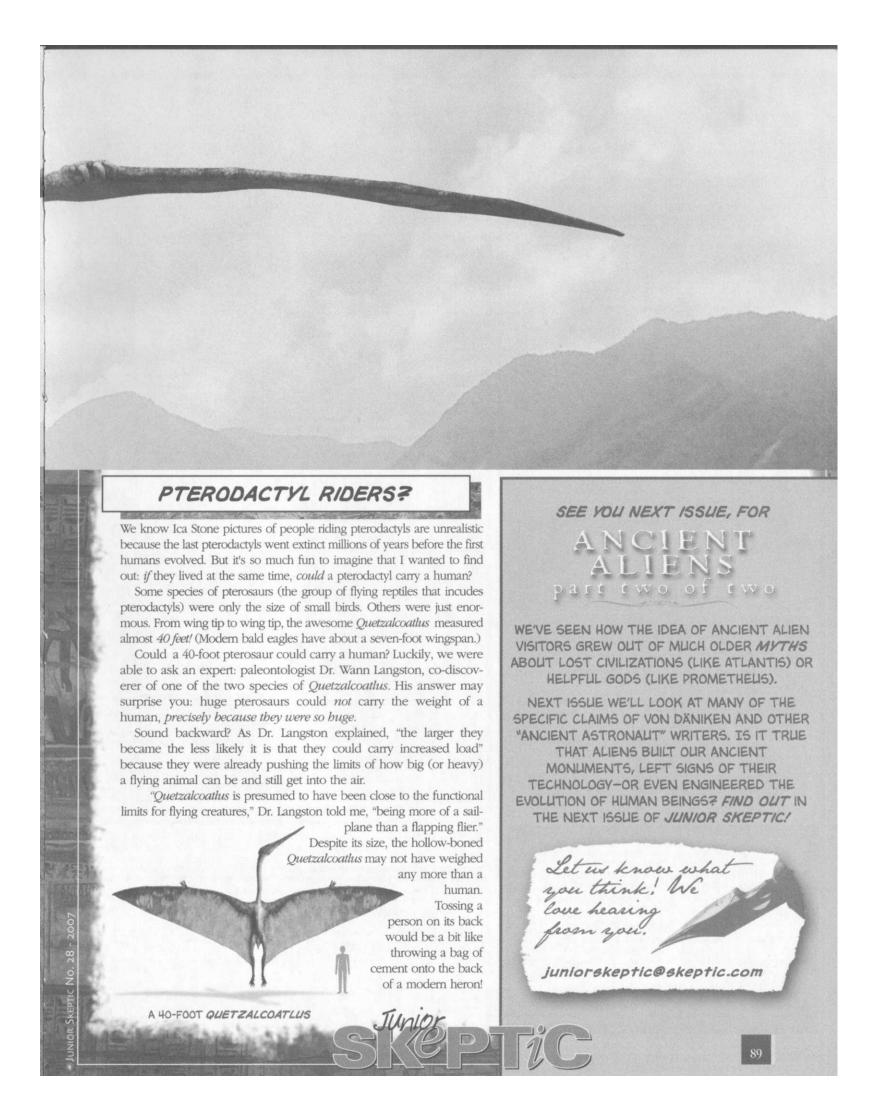
Däniken's stubborn refusal to undertake another visit to Ecuador." After all, *if* von Däniken were sincere and *if* the cave were real, it would immediately "be recognized and accepted as *the* proof" of his theories about lost ancient civilizations!

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 70s. "I'm a little afraid to go there now." He suggested that Moricz 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: Moricz 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 Moricz 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."









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ANCIENT ALIENS art 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 1960s and 70s, through the books of a guy named Erich von Däniken. This time we'll look at more of the specific cases used to argue that aliens once walked the Earth. Is there anything to this idea, which we still see in movies, books, and TV shows like Stargate: SG/?

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 Columbia 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

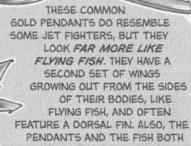
be, but we have to look at what else the sculptors made to discover what the "aircraft" pendants were originally meant to represent.

We know they made jewelry in the shape of various animals, including birds. But the little extra wings on the tail don't rightfully 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!



WHICH AIRPLANES DON'T!





RUST-PROOF IRON?

Chariots 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 staring 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 *Chariots 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 *Chariots 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 Chariots 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.

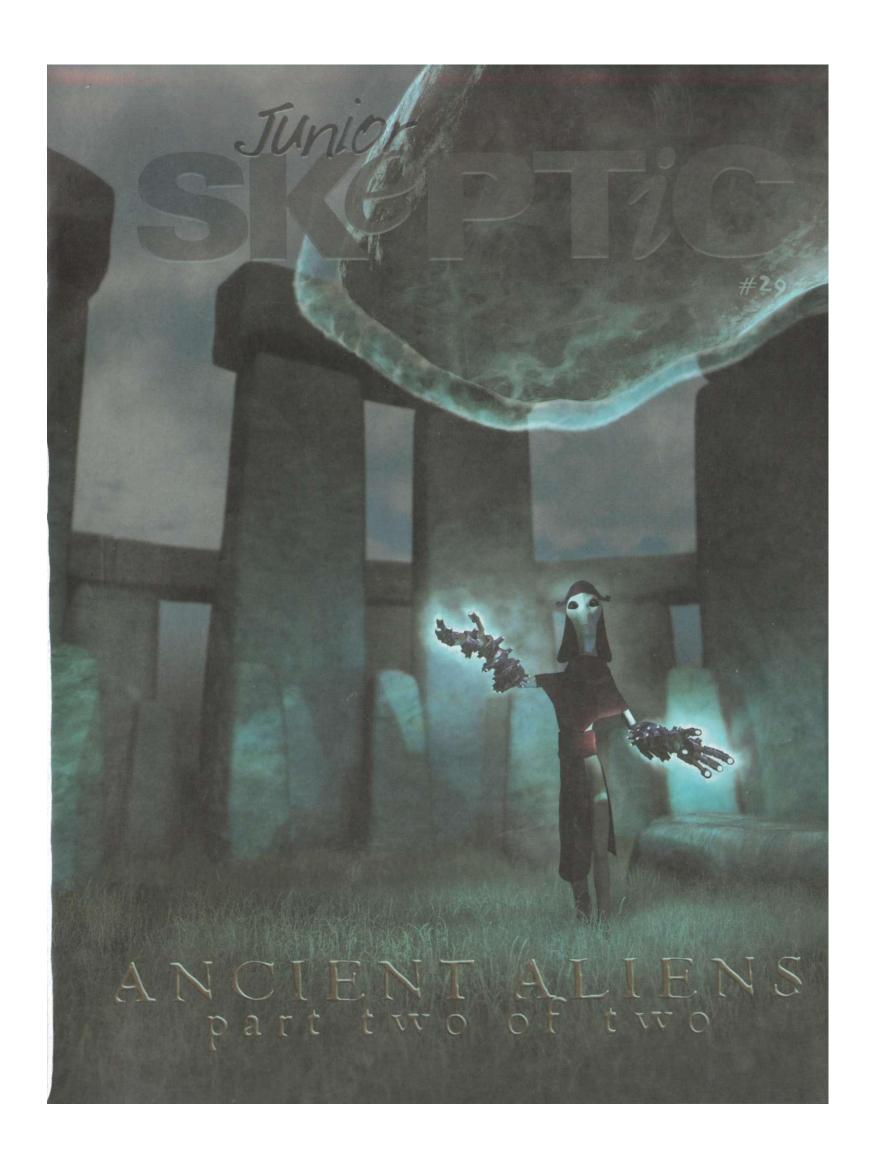
This suggests, once again, that von Däniken doesn't care about accuracy.

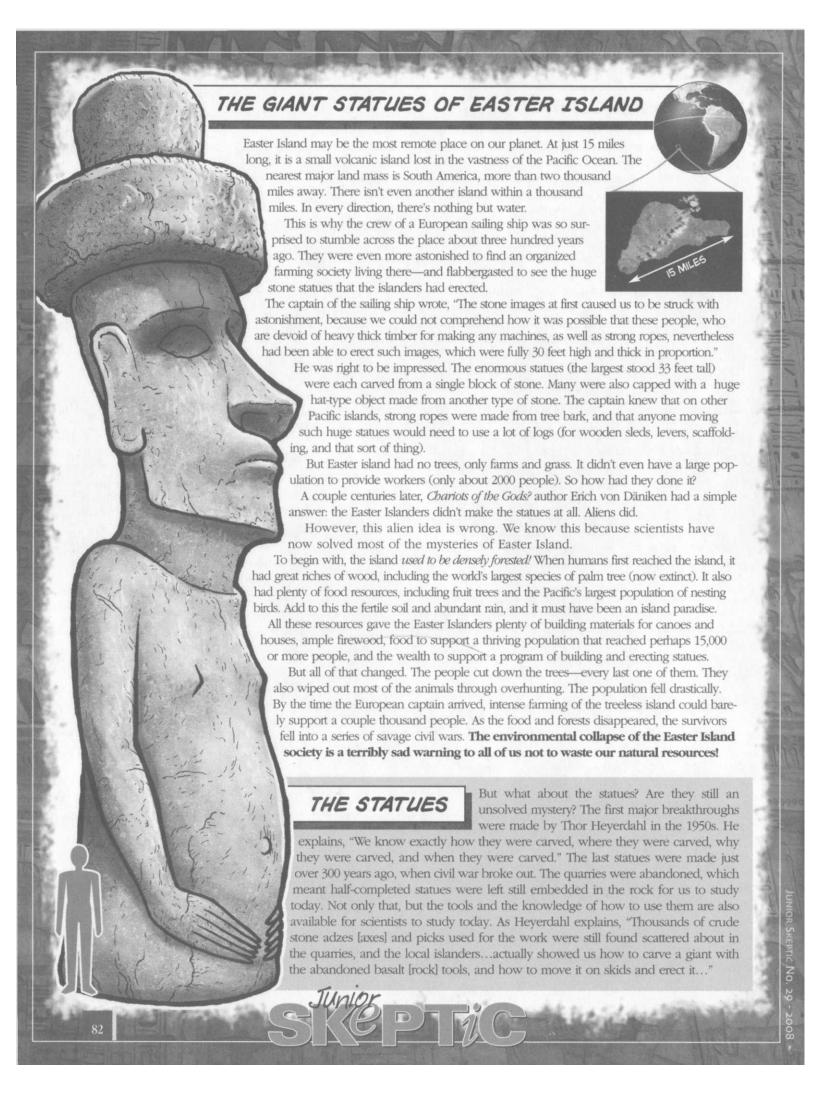
But perhaps that isn't surprising. After all, the publishers of the 1999 edition of *Chariots of the Gods?* even began the book with a disclaimer: "This is a work of fiction. Names, characters, places and incidents are either the product of the author's imagination or are used fictitiously, and any resemblance 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.



SKEPTIC





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! (It helps that the ancients used highly carvable stone. One scientist points out that this stone "has a hard surface but an ashlike 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 boredom 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 con-

tain 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 18 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 just 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-RAISING PHOTOGRAPHED BY THOR HEYERDAHL.

ART OF THE SKY GODS?

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 summits" 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.



FULL-SCALE RE-CREATION!

The idea that the ancient Nazcan people couldn't have made the drawings without

inspiration or help from flying spacemen depends on two huge assumptions: 1) that the "primitive" Nazcan'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 Nazcans had their artistic 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 test, he decided he

would re-create a full-size 440-foot Nazca condor design! But how?

We know that the Nazcans 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 in ancient aliens,

but by some famous balloon pilots as well. These balloonists built a hot air balloon using only technology available to the Nazcans (such as good-quality cotton cloth and woven baskets)—and it really flew! Does that solve the Nazca lines mystery? Hardly. Proving it was technically possible for *modern balloon experts* to design a balloon using Nazcan materials does *not* prove the Nazcans themselves built balloons! (All you need is paper and ink to write the Declaration of Independence, but that doesn't mean ancient people wrote it too.) There's not a shred of evidence that the Nazcans 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 and some family members marked out a long center line with string. Then, all they had to do was measure out from that center line, using more long pieces of string. For eaxmple, 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-scale condor outside. At each point they planted a stick in the ground,

creating a giant connect-the-dots picture. (They joined the dots with string and then white powder instead of by clearing gravel.)

The result? Six people were able to accurately recreate the 440-foot Nazca condor picture, using only string and bits of wood—
in one day! The original would have taken longer, but the ancient Nazcans obviously didn't need aliens to help them!

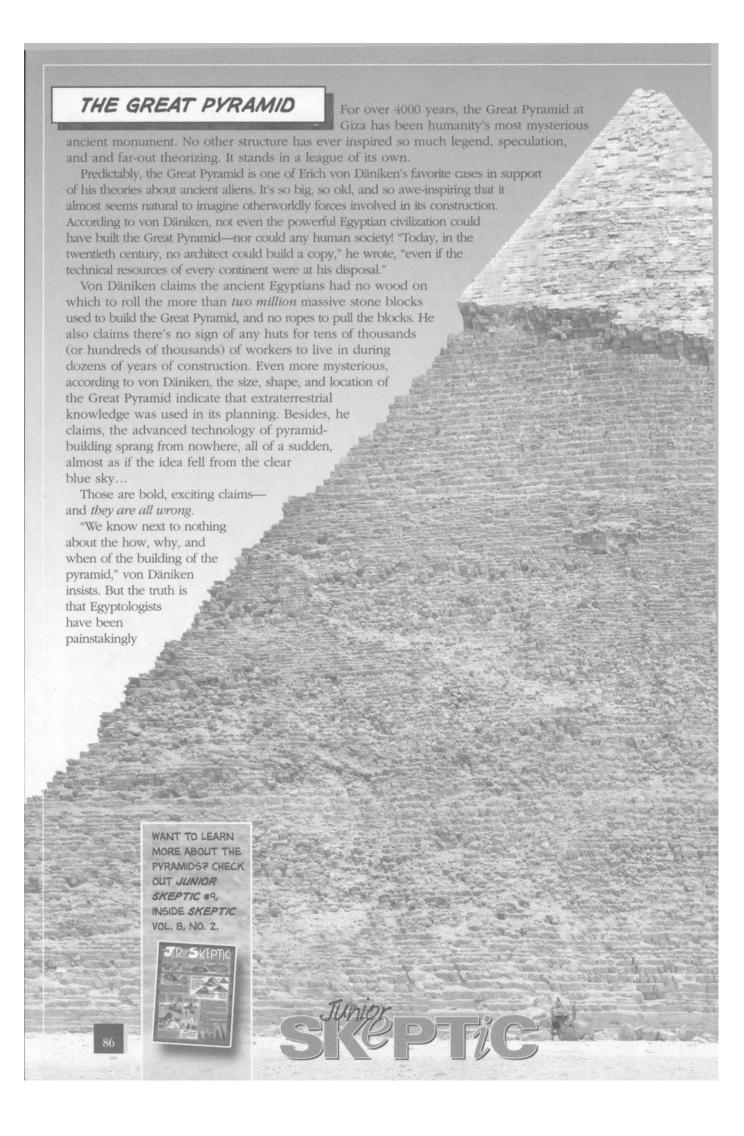
ONLY VISIBLE FROM THE AIR?

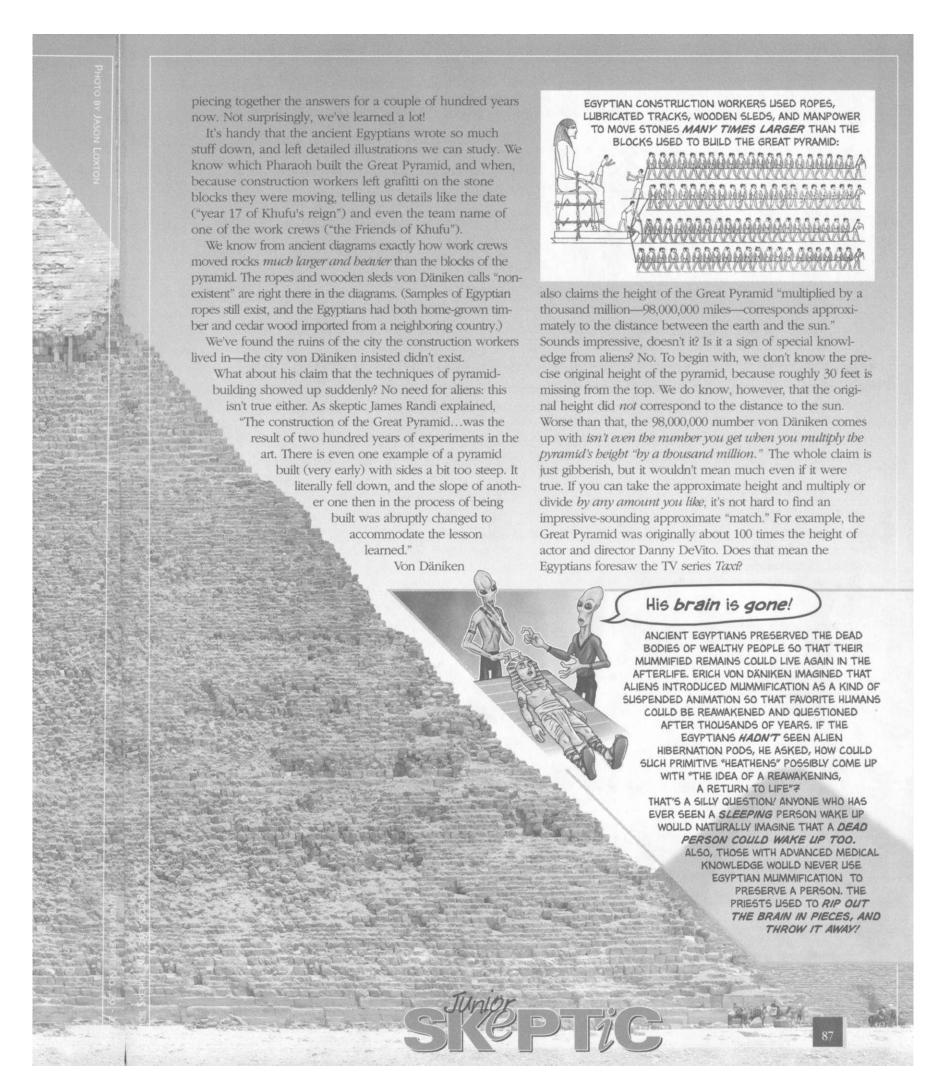
In some places, von Däniken makes a wild claim in one sentence, only to contradict himself in the next. For example, he writes, "Enormous drawings that were undoubtedly meant as signals for a being floating in the air are found on mountainsides in many parts of Peru. What other purpose could they have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

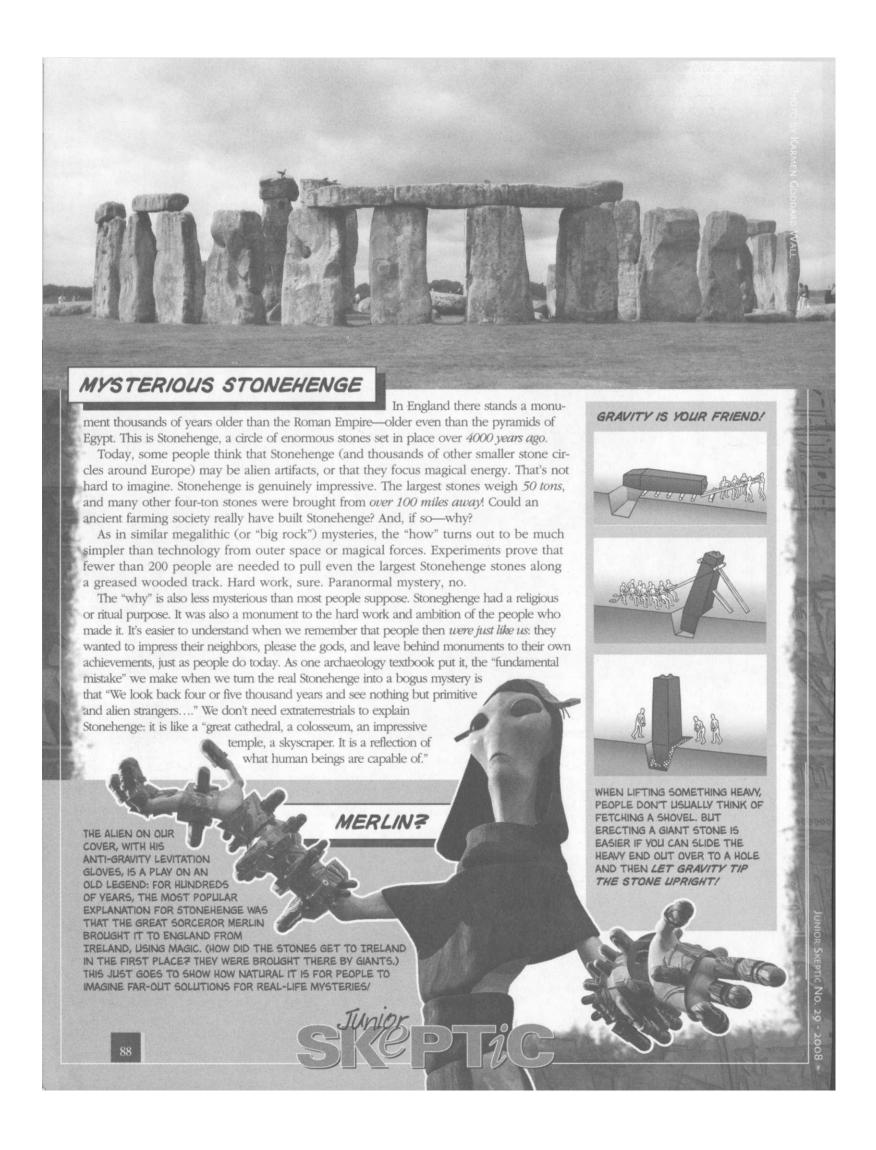
In fact, von Däniken's very next sentence acknowledges this. "One of the most peculiar drawings is carved on the high red wall of the cliffs in the Bay of Pisco. If you arrive by sea, you can make out a figure nearly 820 feet high from a distance of more than 12 miles." Not only can you see it without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









very weird ideas about biology. He tells us that human interbreeding with animals "was obviously an everyday occurrence" in the ancient world because ancient literature and art describes hordes of "hybrid beings" such as "mermaids, scorpion men, birdmen, centaurs"—which he claimed actually existed! Of course, creatures from different species can't interbreed willynilly; in fact, not being able to interbreed with other species is how a "species" is defined He also tells us that "a group of Martian giants... escaped to earth to found the new culture of homo sapiens by breeding with the semi-intelligent beings living there...." Mermaids? Martian giants? Scorpion men? Is he joking?

The idea of aliens breeding with humans is even sillier than

humans interbreeding with scorpions. As Carl Sagan pointed out: "human beings...in my view, are much more likely to successfully mate with a petunia than an extraterrestrial." As one anthropology textbook added, "at least the human ancestor and the petunia both evolved here on Earth." There's zero chance that our genetic code could be compatible with creatures from another solar system. But it's also worse than that: it's very unlikely that aliens would even have DNA!

In later books, von Däniken changed his tune on all this so often that it's hard to work out just how the aliens are supposed to have created modern humans. "Breeding" became "artificial insemination" which became "artificial mutation" which became "shooting the DNA on a laser beam towards a particular, earth-like planet" (whatever that means).

RACISM?

One very serious criticism of the idea that many ancient monuments required alien builders is that this argument

often seems to be based on racism. For example, it's common for von Däniken's books to describe skilled works 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" who were too primitive to build their own monuments? Actually, he seems to make an exception for the people of Europe. One anthropology textbook calculated that 96 percent of von Däniken's examples "are from places other than Europe." The textbook author wrote that von Däniken is apparently "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 those 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 he expects 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."



NOT EVEN TRYING

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 outlandish claims that he later admitted were jokes (that bananas come from another star, for example). He has also admitted making up key stories for "theatrical effect." And, as we saw last issue, critics have accused him of deliberately lying.

There's also the sheer sloppiness of his research to consider. For example, von Däniken argues that the Ark of the Covenant-the large, goldplated 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 Exodus," von Däniken wrote, "I seem to remember that the Ark was often surrounded by flashing sparks and that Moses made use of this 'transmitter' whenever he needed help and advice."

He concludes it was an alien transmitter purely on the basis of what he "seems to remember" about a book he didn't even bother to look at?

THE BOTTOM LINE

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 cheats 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 Flim-Flam!: "Try as he might, von Däniken cannot diminish the works created by greater men than he. For every giant, there is a little man to kick at his ankles. But the great accomplishments of long ago remain.'