

New Year Special

Looking For Life?!

by Matt Crenson



IT'S easy to reduce the year's science events to three words — life on Mars, reports AP. But it would be a mistake. When NASA scientists said this summer that they had found evidence for life on the red planet, they added but an episode to this year's hottest scientific drama, a revolution to significant that it is changing our conception of life in the universe.

In the last year, a number of findings have all but convinced scientists that life is not just a freak accident that could only happen on Earth, but a ubiquitous and irrepressible part of the universe.

"It's every bit as profound as the revolutions that were brought about by Copernicus and Darwin on our place in the universe," said Steven Squyres, a planetary scientist at Cornell University in Ithaca, New York.

And it's not just the famous potato-sized meteorite bearing chemical signs of microbial metabolism.

The evidence for life on Earth was pushed back this year, to an extremely inhospitable era when Earth was a barren planet constantly bombarded by giant asteroids. If life survived — and probably even arose — under those conditions, where else in the universe could not be hiding out?

Perhaps near one of the nearby stars which are now known to have planets circling them. Only one such planet was known at this time last year, but now there are about a dozen, several of which appear hospitable to life.

Closer to home, the Galileo spacecraft has begun exploring a little-known corner of the solar system that could harbor life. On Dec. 19 the spacecraft took a close look at Jupiter's moon Europa, which some researchers consider even more promising than Mars as a potential garden spot.

And researchers also got a clearer sense this year of how life develops. The genetic analysis of an ancient microbe revealed secrets about how the

tree of life is organized. This summer scientists announced that they'd sequenced the genes of Methanococcus jannaschii, a microbe that lives near hot vents at the bottom of the ocean. M. jannaschii, as scientists call it, is a member of the archaea, an arm of life separate from animals, plants and bacteria.

By comparing archaean genes to yeast, bacterial and even human genes, researchers hope to write a history of evolution from beginning to present. That history could reveal clues about what molecular processes are common to all life on Earth, and thus were probably present in the very earliest life, and which ones are innovations that came later on.

"Understanding these organisms is going to get us a lot closer to understanding the origin of life. But it won't answer the question of whether life originated here or somewhere else," said Craig Venter, president of the Institute for Genomic Research.

That question became a little more interesting when a paper in the journal Nature presented evidence that rocks from Greenland hold chemical evidence that life existed 3.85 billion years ago.

That may not sound too much older than 3.5 billion years ago, the previous earliest evidence for life on Earth. But to scientists who study Earth's early history, the 350-million-year step is a quantum leap into an era of violence and chaos.

Until about 3.8 billion years ago, Earth was under regular bombardment by the giant debris left over from the formation of the solar system. Huge asteroids, some big enough to vaporize the oceans, smashed into the young planet.

If the first microscopic creatures developed under such conditions, then life is tough indeed.

Maybe even tough enough to develop in some of the new-found worlds around distant

stars. This year who stars-47 Ursa Majoris and Lalande 21185 — have been discovered to have Jupiter-like planets.

"It actually shows that we're not very special," said William Cochran, a planet hunter and astronomy professor at the University of Texas in Austin. "Any time that we've thought that we here on our Earth and our solar system and our sun have been special in any way, we've been proven wrong."

The rest of the dozen or so planets that have been discovered circling distant stars follow orbits too misshapen to sustain liquid water. Or they suffer from Goldilocks syndrome, being too hot or too cold to have water on their surfaces.

But it's important to remember that the planets that have been discovered so far are mostly giants like Jupiter that orbit relatively near their stars, Cochran said. Those are the planets that are easiest to find using the methods that astronomers employ, not necessarily the ones most representative of what's out there.

"The ideas of how to look for Earth-like planets will evolve through time," Cochran said.

Jupiter's moon Europa is nothing like Earth, but scientists also cite it as a possible future stop on the Homes of Life in the Stars tourist map. That's because Europa is thought to have a liquid water ocean beneath its icy exterior.

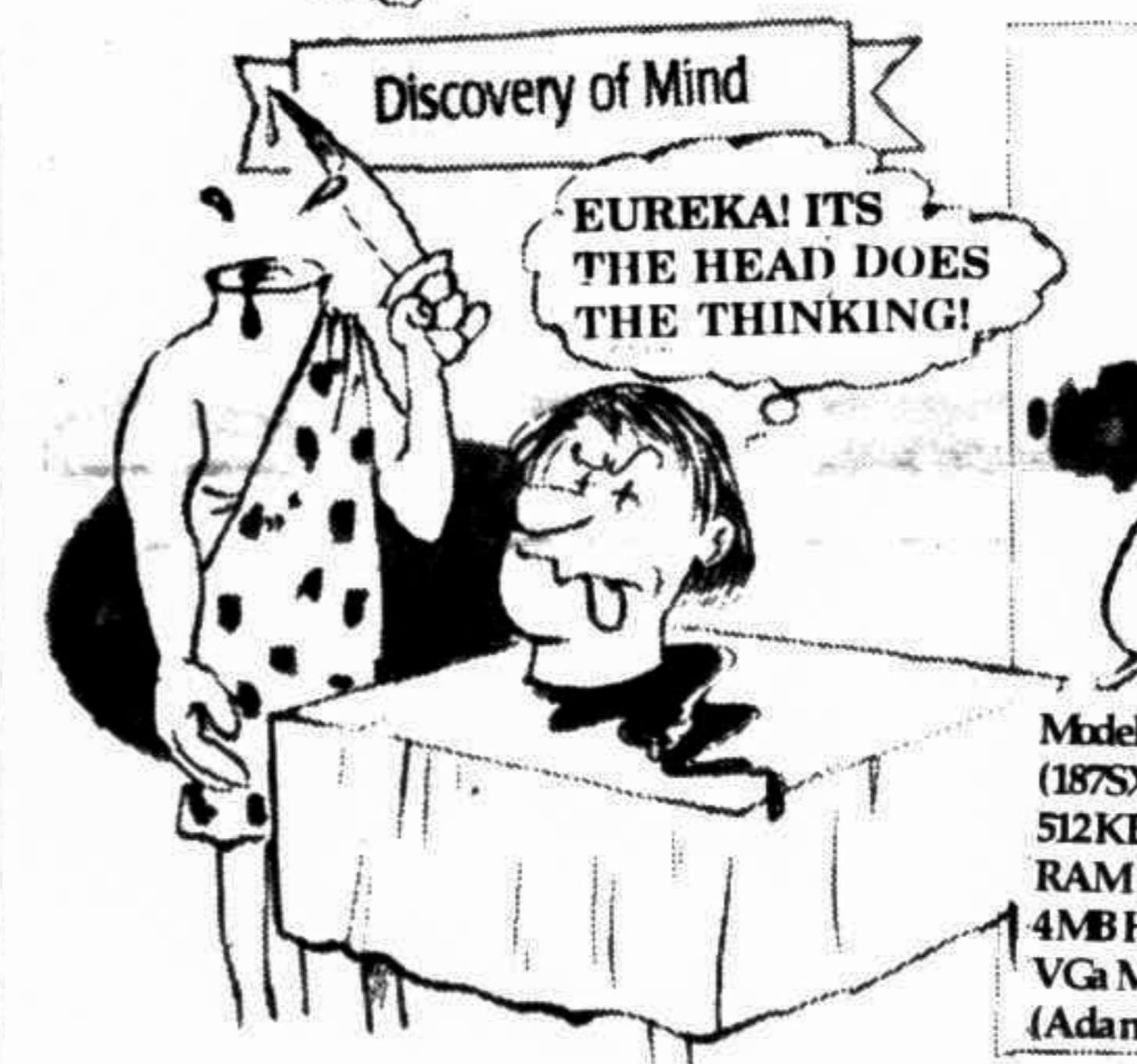
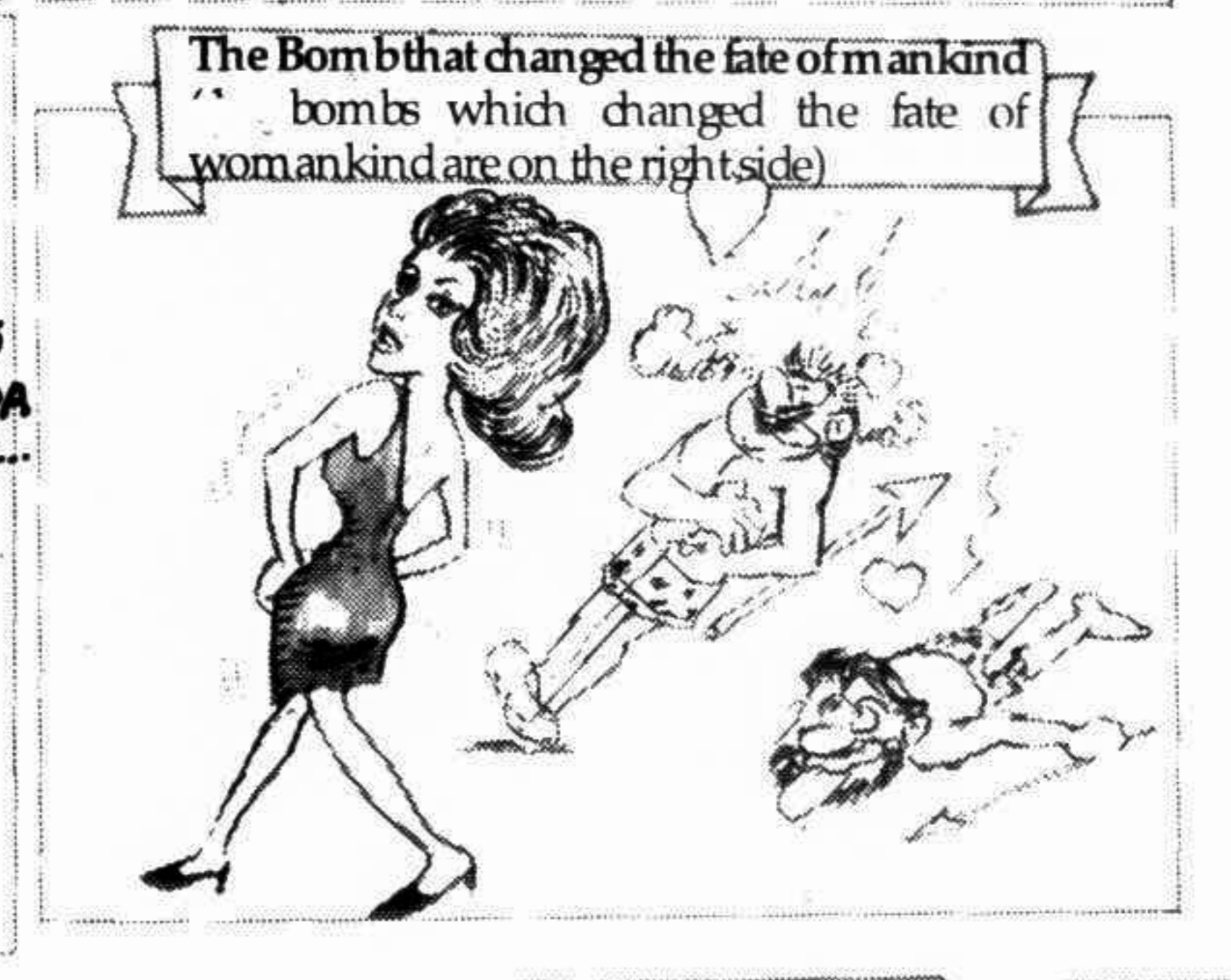
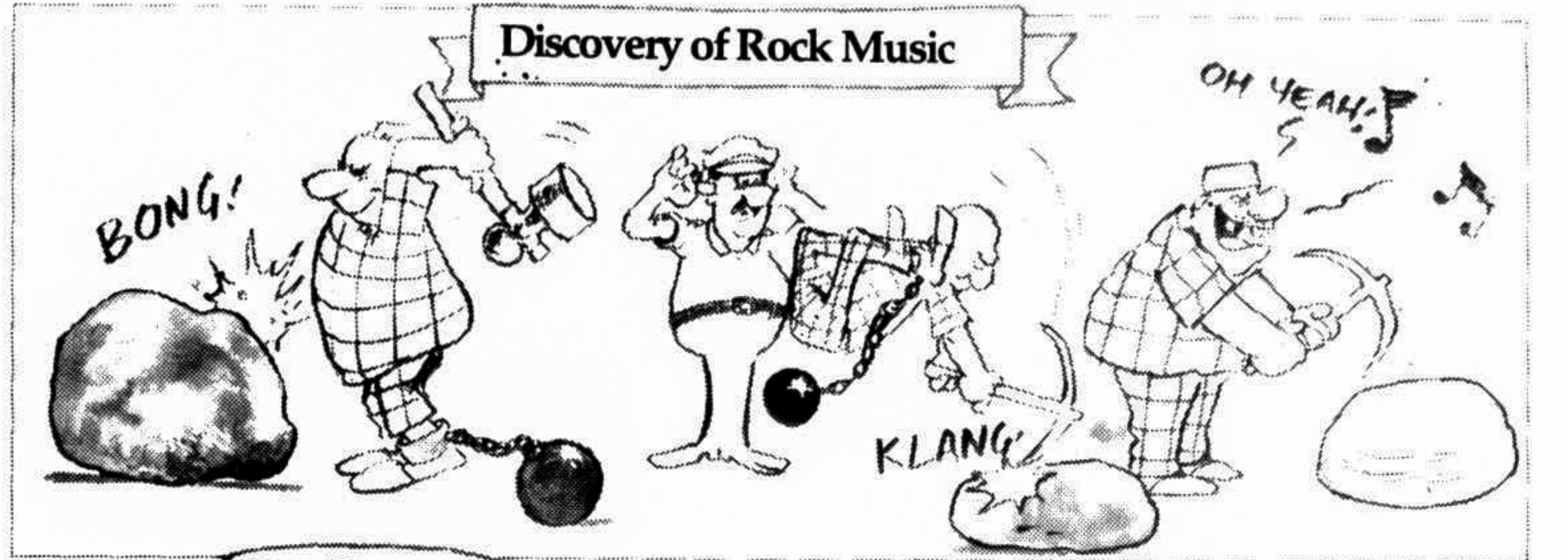
There's only a slim chance that Galileo will be able to detect that hypothetical ocean. But a future mission probably will.

And any environment on Earth that has liquid water, nutrients and a volcanic heat source inevitably has life. So Europa's possibilities are tantalizing.

In the meantime we'll have to settle for Mars. The red planet almost certainly had the conditions necessary for life early in its history, and may still have them today. So even those who remain unconvinced by the data presented this summer are hopeful that life will eventually be found there.

Lesser Known moments of DISCOVERY

discovered by Sharier Khan



Model	(187SX)	(387SX)	(587SDX)	(%@\$!DX)
RAM	512KB	1MB	8MB	100GB
HDD	4MB	10MB	100MB	1millionGHDD
Video	VGA	VGA	SVGA	MS Chapa Pro, Excel, Fox-Pro, Killer-Pro, Terminator-Pro
Software	Windows 3.1	Windows 3.1	Windows 3.1	MS Word, MS Excel, MS PowerPoint, MS Access, MS Outlook, MS Internet Explorer, MS FrontPage, MS Office 97, MS Office 98, MS Office 2000, MS Office XP, MS Office 2003, MS Office 2007, MS Office 2010, MS Office 2013, MS Office 2016, MS Office 2019, MS Office 2021

A Sad Retribution

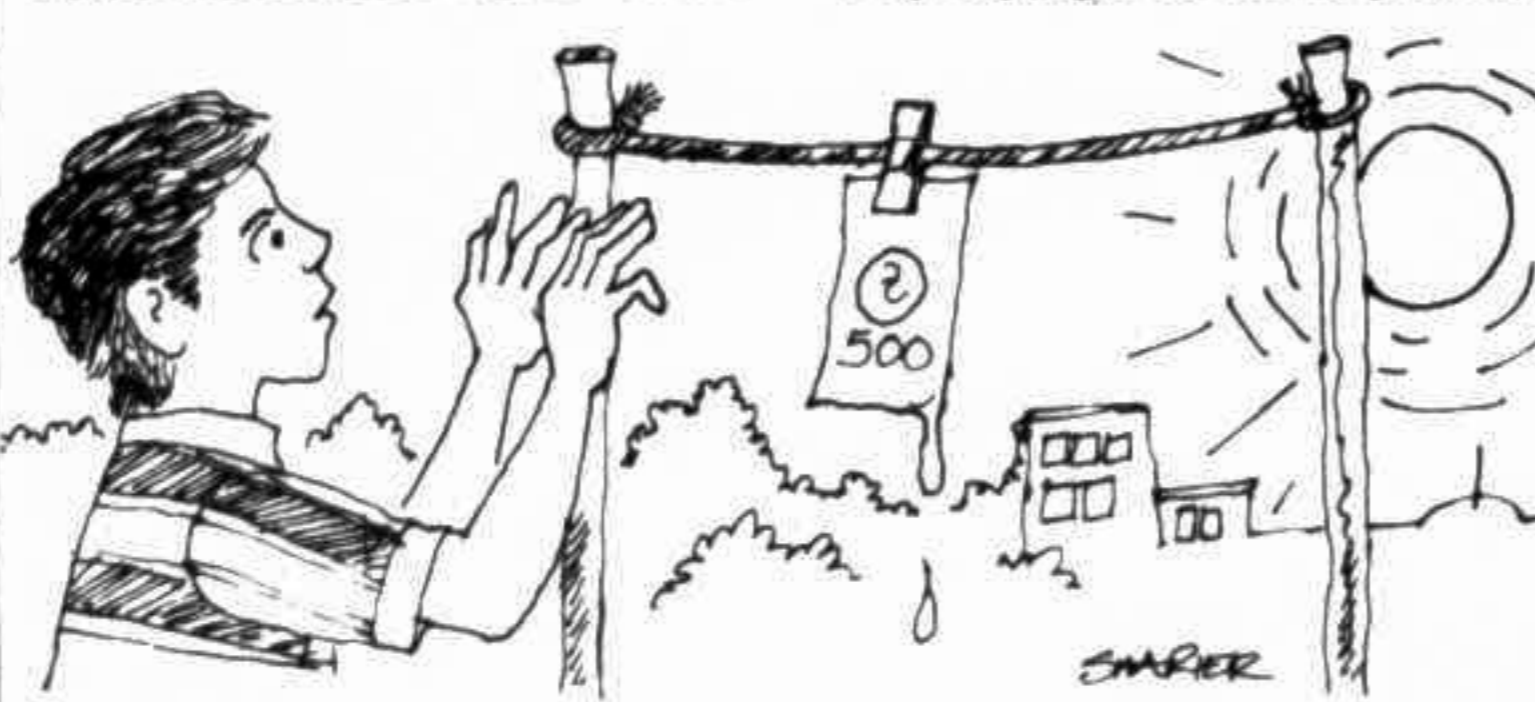
by A S M Nurunnabi

RISAL'S cousin aged about nine years, Rafiq by name, reads in a middle school. Risal is also of the same age. Rafiq has one good quality: he is studious and always does well in examinations. As a reward for his consistently good academic performance, Rafiq's father gave him a five-hundred taka note with permission to visit his cousin in Dhaka city for a week during the school vacation. To supplement his fund, Rafiq's mother gave him a small amount of money in currency notes of small denominations in order to enable him to cover the expenses of his bus journey to the city.

hundred taka note and repay the amount of expenditure incurred by him on Rafiq's account.

Then a sort of mishap occurred in Risal's household. The domestic help in the household used to wash clothes of the family, including those of Risal. When Risal and his cousin were taking a nap after the mid-day meal, the domestic help mistakenly thought that Risal's shirt needed washing. Actually it was Rafiq's shirt. By the time Rafiq woke up, the mischief was already done. The domestic help soaked the shirt in a washing powder-mixed bucket of water.

When Rafiq woke up, he found his shirt in the bucket of water with the five-hundred-taka note inside its pocket. He made a dash to the bathroom to retrieve his shirt. He was stunned to find his five-hundred-taka note in a crumpled state in the shirt pocket. He took it out and hastened to save it by drying it as far as possible



blot on his otherwise good nature.

However, with the small money that his mother gave him in one-taka currency notes, Rafiq undertook his bus journey to Dhaka to visit his cousin's house.

Risal, his cousin in the city, and his mother were happy over Rafiq's visit. They were already good friends. After Rafiq's arrival, Risal felt that his friend should see some of the places of interest in the city. They began their pleasure trip with a visit to the zoo. At the entrance gate of the zoo, an admission charge is required to be paid. Rafiq told Risal that he had no change for the admission ticket, as he had a five-hundred-taka note with him. Risal understood the position and paid for Rafiq's admission ticket. They enjoyed themselves greatly inside the zoo. On the return trip home by bus, Rafiq repeated the story of his not having small change. Risal paid his bus fare.

Next day in the afternoon, they decided to visit the children's park. Here again Rafiq expressed his regret for not having the change for admission to the park. He requested Risal to pay for the admission charge on his behalf. Within the park, both of them went on a spree eating chatpati, fuchka, peanuts, etc. For consuming all these items Risal had to foot the bill as Rafiq still continued his story of non-availability of the change to meet his share of the expenses. At heart, Risal was flustered because his fund of pocket money given by his mother was rapidly dwindling. Risal wondered when Rafiq would be able to encash his five-

On A Diet?

by Syeda Mushrequa Shabber

ARE you on a diet right now? Before reading this, go and get yourself a large packet of potato chips followed by chocolates and an ice-cream. Drop your dieting programme today. You don't need to get slim. You look good as you are. Just think that you look great with that figure you have when you stand in front of a mirror. Better still, avoid mirrors. Why do you need to starve yourself so that someone else can say "Wow!" You look great, you look changed etc. while inside they are thinking, "Doesn't she look like a broomstick?" You should think yourself blessed that you are getting to eat. And how do you know that five years from now you will get to eat your fill? A country has to feed so many mouths that maybe after some days you will get only a fixed amount of food per meal time.

There is virtually nothing that you can learn from food labels. All labels are written in label jargon, such as "This food product contains not less than 0.2% of rehydroxylated glutinium or abstract of debentured soybean, whichever comes first". The more jargon you see, the more likely it is that the label-writer has something to hide.

So what is recommend is, instead of trying to understand the words on the label, simply figure out the average number on syllables per word. If the average is two or below, the product is probably safe in small quantities. If the average is three or four, it probably causes grave concern in laboratory rats. If the average is five or more, you should set the container down very carefully and flee the vicinity.

Vitamins are little pills named ABCD, E and K that you

On A Diet?

are recommended to have certain amounts.

Physicians think vitamins were the greatest thing since luxury automobiles. The truth is that vitamins are very good for you, and each morning you should take a vitamin-A, followed by vitamin, D then by E and so on until the end of the day. Don't forget to start all over again the next day. This will probably be enough vitamins for you, but keep alert for the three Major Warning Signs of vitamin Deficiency, which are, 1. nosebleeds, 2. thick coats on in summer, and 3. death.

Even after all this, if you insist on dieting, then you are welcome. But don't start your new diet today. You've done enough today. I would rule tomorrow out, also, seeing as how it comes so soon after today I would say the best time to begin would be first think after this New Year

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Dancing in the Graveyard

by Asif Azam Siddiqi Joy

1971. A field of green and a crop so pure Covered by shadows and a disease with no cure The family broken up and the parents died As war broken down there was nowhere to hide The rape of the soul inside.

Rise up and heed the call to arms From concrete to grass, from cities to farms Fight for the taste that bled from your heart And the woman and child who were torn apart The seeds planted in our graveyards

Savour the feeling, raise up the flag Fight for the purity of our children in rags Light up the torches, bury temptation Would you stand steadfast for your own nation?

Victory secured and the flower was saved As they opened their eyes to ask back what they gave I never learned my lessons, only knew it in part As I rebuilt my conscience right from the start But I was only dancing in the graveyard

Savour the feeling, raise up the flag Fight for the purity of our children in rags Light up the torches, bury temptation Would you stand steadfast for your own nation?

A history book later, gone invisible notes We send off our children to acquire Western codes As we leave, we turn back to glance at the heart Lies and cheating bleeding each part All of us dancing in the graveyard

