In brief

BILL BACHMAN/ALAMY

Predicting how hot springs turn into such cool things

THE limestone formations around many hot springs are not as haphazard as they appear.

Geothermal ponds and terraces like those at Mammoth Hot Springs in Yellowstone National Park, Wyoming (above), are built up when calcium carbonate-rich spring water depressurises and cools. Carbon dioxide bubbles appear, which trigger the deposition of a mineral called travertine in layers that can grow as quickly as 5 millimetres per day.

Some suggest that heat-loving microbes in the water influence the shapes of the resulting terraced ponds, but John Veysey and Nigel Goldenfeld at the University of Illinois, Urbana-Champaign, say that a number of purely physical processes are responsible.

The pair suspected that one of the primary processes governing the sizes and shapes of the ponds was a process of drowning. The lips on the edge of some terraces grow faster than others due to variable water flow. This means faster-growing ponds will drown the adjacent slower-growing ones.

Using such observations, they built a computer model that predicted how the terraces at Mammoth Hot Springs would grow. Over two years, the prediction matched the appearance and distribution of pond shapes at the springs (*Nature Physics*, DOI: 10.1038/nphys911).

Love radio silence? Try the lunar park

AS POTENTIAL conservation areas go, it has to be the bleakest. But this hasn't stopped one astronomer from suggesting that a protected area be set up on the far side of the moon.

Like many of his colleagues, Claudio Maccone of the International Academy of Astronautics in Paris thinks that the moon's far side will one day be a haven for radio telescopes, free from the electronic chatter of Earth and the many satellites now orbiting it. Maccone is calling on the United Nations to recognise a 1820-kilometre-diameter zone on the moon's far side as the "Protected Antipode Circle". A crater called Daedalus within this area would be suitable for a future radio-astronomy base, he says in *Acta Astronautica* (DOI: 10.1016/j.actaastro.2007.12.022).

No one has put the idea to the UN in the past, according to Sergiy Negoda, legal officer at the UN's Office for Outer Space Affairs in Vienna, Austria. Creating a legal framework for something so novel can take "years, sometimes decades", he warns.

Firms claiming to sell moon land say they would welcome a lunar conservation area. "Anything that protects the moon, front side or back, is to our minds a positive thing," says William Folkes of MoonEstates in the UK.

Turning the worm

TALK about neglected. Around the world, 200 million people suffer from schistosomiasis – and it kills about 280,000 a year. Despite this toll there is only one drug, praziquantel, used to battle the flatworm that causes the disease. But there may soon be another.

Any parasite that resists praziquantel has a huge selective advantage, so drug resistance is likely to emerge unless it can be combined with another drug that works differently, says David Williams of Illinois State University in Normal.

Williams screened a large number of chemicals looking for those that block a vital enzyme unique to schistosome worms. The best one killed worms in test tubes and also in infected mice, even at a low dose. It appears safe in mammals, and Williams hopes to start human trials within five years. But, as ever with schistosomiasis, "funding is the key".

Exoplanet makes hell seem chilly

IMAGINE if the sun's energy increased by 3400 times: Earth's oceans would instantly boil away. Yet a newly discovered exoplanet is subjected to such heat, making it one of the hottest in our galactic neighbourhood.

Planet HAT-P-7b, spotted about a thousand light years away by a network of small telescopes called HATNet, orbits at only 5.6 million kilometres from its star – around one-tenth of the distance between Mercury and our sun (www.arxiv.org/abs/0803.0746).

The planet's atmosphere could distribute the solar energy in a number of ways, says Robert Noyes of the Harvard-Smithsonian Center for Astrophysics in Cambridge, Massachusetts, but one model suggests temperatures could reach a searing 2460 °C.