

Beyond UFOs by Jeffrey Bennett, Princeton University Press, £15.95/\$26.95, ISBN 9780691135496



NATIONAL PARK SERVICE/JIM FEGLO

OH MY GOD, WHAT IF WE FIND ALIENS?

Jeffrey Bennett gives a great account of the search for alien life and our place in the universe, but his conclusions go a little too far, says **Michael Brooks**

THE first edition of George Gamow's textbook *The Constitution of Atomic Nuclei*, published in 1931, was almost immediately rendered useless when the neutron was discovered in 1932. The second edition was running through the presses in 1936 when physicists worked out the structure of the compound nucleus, making that edition as obsolete as the first. Gamow agonised over whether he should risk firing a third bullet and finally, in 1947, he took the plunge. The third edition was duly published, but with a mischievous preface in which he claimed credit for any subsequent breakthroughs in the field. Just producing the book was, he wrote, a contribution to the progress of science.

"Whenever a new edition of this book nears publication, a new major discovery is made in nuclear physics."

We are living through a similar boom time in mapping the cosmos, so perhaps astronomer Jeffrey Bennett should make an equally bold claim. He has been working on the fifth edition of *Life in the Universe*, a textbook about the search for alien life. The first edition, published in 1998, described the 13 known extrasolar planets. Now Bennett has 277 to cover, and astronomers just keep finding more. So he has taken a break from the treadmill of updating his textbook and has written a popular book instead, bringing the rest of us up to date on our extraordinary new

and expanded universe – and on who else might live in it.

It is almost inconceivable that there are no other life forms out there, Bennett says, given that the cosmos contains as many stars as there are grains of sand on all of Earth's beaches. *Beyond UFOs* explores everything from the likely locations of alien life to the implications of our finding it, and it's a thrilling ride. For Bennett, though, the facts are but a means to an end. If he can inspire us to gaze up into the heavens and realise the glory of the universe, bloodshed and hatred on Earth will be consigned to history – or so he says. At times, *Beyond UFOs* is not so much an

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introduction to alien life as it is a manual for achieving world peace. "A little perspective on our place in the universe makes any form of geographic, ethnic or religious hatred seem just plain ridiculous," he writes.

Such naive enthusiasm for the power of science is enviable, but it

If life can survive in this hot spring in Yellowstone, where else might we find it?

gets a bit wearing as the book progresses. Even Bennett's hero, Carl Sagan, took a more world-weary attitude to the terrestrial consequences of our cosmic discoveries. Sagan worried that "when we agonise about our diminished cosmic place and purpose... habits of thought familiar from ages past reach for the controls". The result, Sagan said, is not a healthy self-effacement but a growth in pseudoscience and superstition.

Sagan used "superstition" as a euphemism for religion, but Bennett is far more sympathetic: "If a scientist tries to tell you that there's no room for God in our present understanding of life and evolution, he's just plain wrong," he writes. "Can't everyone just calm down, and realise that science and religion do not pose threats to one another?"

It's a nice idea, but if we discover extraterrestrial life it will become extremely difficult to argue that humanity is the centre of divine attention. The central tenet of more than one sacred text would be instantly negated. The culture clash that would inevitably follow the discovery of alien life may prove hard to mediate but, to quote Sagan again, "our preferences do not determine what's true".

At least Bennett has good insight into what's likely to be true. *Beyond UFOs* is crammed with neat analogies, startling imagery and mind-blowing illustrations of astronomical concepts. If you want to understand the universe and our place in it, you will not find a better primer. The first diagram alone – which shows how Earth's 10,000-kilometre span of real estate fits into a supercluster of galaxies a billion trillion kilometres across – bears a good 10 minutes of study. This truth is astonishing, and humbling – and *Beyond UFOs* is a great place to find it.

Michael Brooks's novel *Entanglement* is published by Random House Australia