

THE 20 GREATEST MEN YOU'VE NEVER HEARD OF

Some are courageous, some have already achieved greatness and one has a ponytail. But most importantly, none are actors or rock stars. Meet the remarkable men making waves in areas of life that just don't get talked about

IF THERE'S ALIEN LIFE TO BE FOUND, DR LEWIS DARTNELL IS ON ITS TAIL

1. THE ALIEN HUNTER

Dr Lewis Dartnell, astrobiologist

RESEARCH FELLOW AT THE UK SPACE AGENCY BY DAY, APOCALYPSE AFICIONADO BY NIGHT. *SHORTLIST* MEETS THE ASTROBIOLOGIST SEARCHING FOR LIFE ON MARS

What is an astrobiologist?

I look for ways to detect Martian life using a Raman spectrometer; a laser that can be shined at minerals to detect biosignatures. If you've been swabbed at airport security, that machine is a Raman spectrometer.

So do little green men actually exist?

No. We've been listening for 50 years. We should have received an interstellar text message by now...

So what are you hunting for?

Signs of life – Martian molecules – hidden beneath the surface of Mars. If we find them, I want to look under their bonnet. It would be *mind-blowing* to find that alien life is built differently, without DNA. We'll learn incredible things about Earth and how we came to be.

Won't that require a very big drill?

Yes. In 2018 the European Space Agency will launch the ExoMars-C rover mission, equipped with a 2-metre drill. They're testing it now, on a recreation of the surface of Mars the size of a tennis court.

Cool. Whereabouts?

Stevenage. I know, it sounds like something out of a *Monty Python* sketch.

Do your friends rib you about your job?

They call me 'The Alien Hunter', but I'm proud to be a geek. It doesn't have any negative connotations these days. That said, it does sound a bit like *Alcoholics Anonymous*: "Hi, I'm Lewis and I'm a geek."

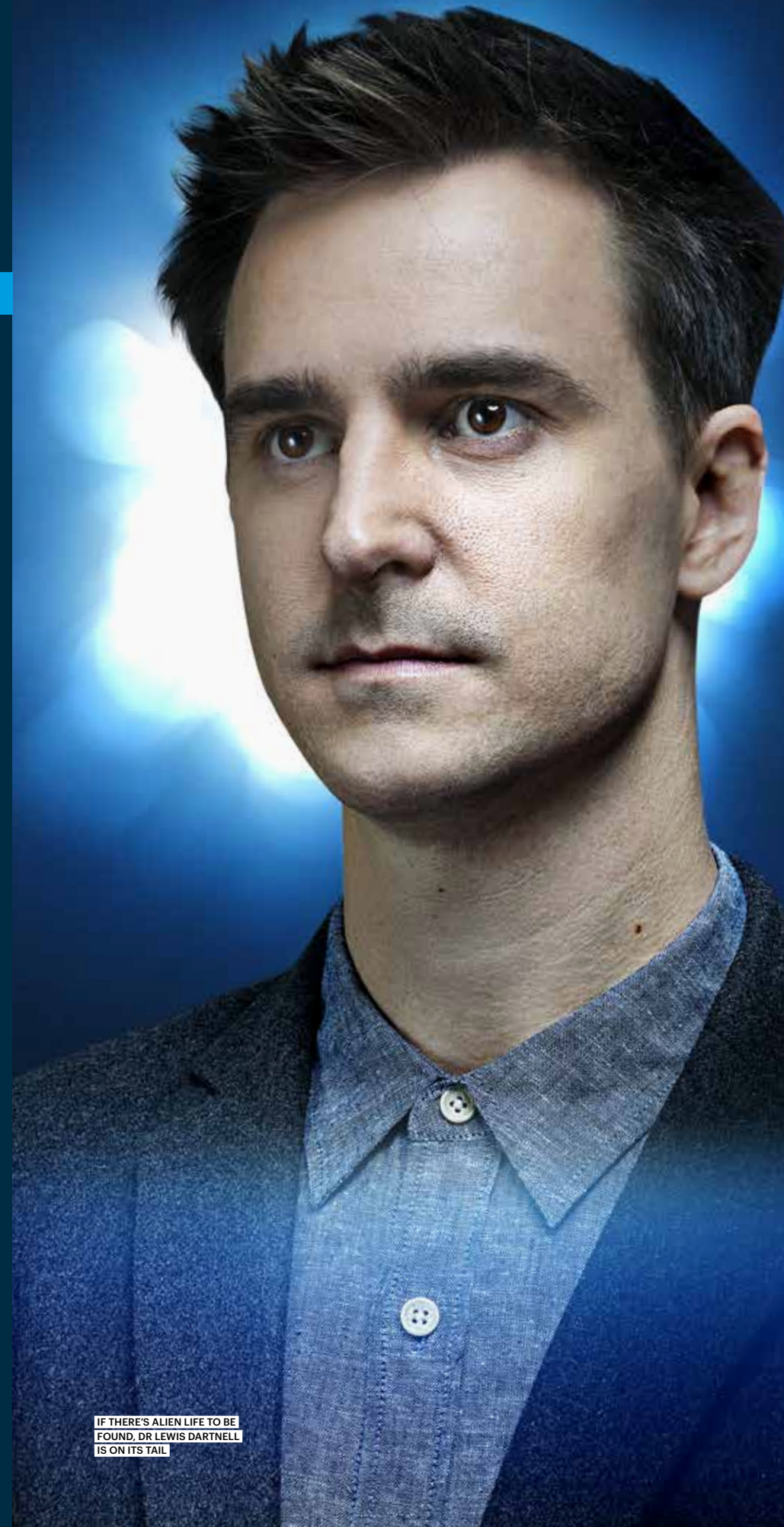
And in your spare time you've written a post-apocalypse survival guide...

Yes, *The Knowledge*. It's about the practicalities of starting from scratch. How do you generate energy, smelt metal into a knife, build a primitive radio set? It's a book I'd have killed to read as a teenager.

What are your chances of success in 2018?

I've bet my career on us finding alien life in the next 30 years. For society as a whole, it would be as game-changing as knowing the Earth isn't flat. We'll look back on it as a moment that changed history. ➔

The Knowledge by Lewis Dartnell is out now



2. THE CRIME-FIGHTING PHILOSOPHER

Eduardo Salcedo-Albarán, crime-fighting professor

In LA, a drug mule's daughter tweets a picture of her new Hermès handbag; in Bogota, a dirty politician visits a bar he's not known to frequent. These are the seemingly insignificant dots that modern-day Sherlock, Eduardo Salcedo-Albarán, connects in his pursuit of the world's most powerful drug cartels. "Most criminal activity goes unnoticed because it's not violent," he says. In short, smart cartels operate like terrorist cells. Which is why Salcedo-Albarán tracks them using AI, neuroscience and complex computer algorithms.



SALCEDO TRACKS DRUG CARTELS WITH AI

esalbaran.com



CAVE HAS BEEN RALLY DRIVING SINCE HE WAS 15

3. THE RALLY-STAR NEXT BIG THING

Tom Cave, rally driver

F1 drivers get money, power and lingerie models. Rally drivers? Big trees in the face. Not that it put off rising British star Tom Cave. At 15 he began competing in Latvia, entered the Wales Rally aged 17, winning his class by 15 minutes, and this year, the 22-year-old is busy fighting for a place in 2015's World Rally Championship.

tomcaveracing.com

4. THE WORLD'S FINEST LIVING WATCHMAKER

Roger W Smith, independent watchmaker

YOU WON'T FIND ROGER SMITH'S MECHANICAL MARVELS IN H SAMUEL – PARTLY BECAUSE HE ONLY MAKES 12 A YEAR AND THEY COST £100,000 EACH

How did you get into watchmaking?

I was hopeless at school. I didn't understand the point of it. The first day I went to horology school in Manchester was an awakening.

What makes a Smith watch special?

For one man to make a watch from scratch, he has to have mastered 34 separate crafts. As recently as the Sixties that was thought by some people to be impossible.

Is it as fiddly as it sounds?

You have to be willing to engage in a daily battle with tolerances of 0.0001mm. If you don't achieve the accuracy, the escapement – the movement – won't be accurate. Take the guardpin, for instance. It's less than a millimetre long and 0.2mm thick.

Ever lost one?

Once – and only once. It... sharpens you up.



SMITH'S JOB REQUIRES 34 INTRICATE CRAFTS AND HOURS OF PATIENCE

Would it be fair to say you're quite obsessive? [Laughs] You'll have to speak with my wife. But to spend weeks making a dial, you need to be.

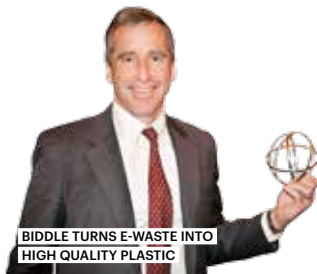
The GREAT Britain watch by Roger Smith is touring the world as part of the prime minister's GREAT campaign; rsmithwatches.com

5. THE TRASH-COLLECTING GENIUS

Mike Biddle, chemical engineer

The world uses 240,000 plastic bags every 10 seconds. Which is bad, but at least they can be recycled. What can't be recycled is e-waste (laptops, phones, fax machines). There are entire Chinese villages with streets stacked with old e-crap – which motivated Mike Biddle to invent a way to recycle this e-waste back into high-quality plastic. Just don't ask him how: "My investors would kill me if I told you," he sighs. "I've invested \$150m and spent 20 years figuring this out."

mbapolymers.com



BIDDLE TURNS E-WASTE INTO HIGH QUALITY PLASTIC



MACKAY IS LIKELY TO PILOT VIRGIN'S FIRST COMMERCIAL INTERGALACTIC FLIGHT

6. THE SPACE-AGE TEST PILOT

Dave Mackay, Virgin Galactic test pilot

When Dave Mackay left Britain's Empire Test Pilot School in 1988, he probably didn't imagine he'd be grazing the moon 26 years later. As Virgin Galactic's chief test pilot – and the likely pilot of the first commercial intergalactic flight – the Scotsman is inching us towards space tourism. "I felt at home straight away," he says of the rocket that can go supersonic in eight seconds. Which says it all. Or, as

Branson said, "We try to provide exciting career progression at Virgin, but [Mackay] takes the biscuit."

virgingalactic.com

7. THE EINSTEIN OF AXE-MAKING

Graeme Cameron, axe-maker

As introductions go, "Hi, I make axes" is up there with "Luke, I'm your father". Sadly, Graeme Cameron rarely says it. He's too busy crafting steel masterpieces at a secret workshop in Canada, to satisfy a client list that actually includes George Lucas. Such is Cameron's mastery, his axes have been exhibited at London's Saatchi Gallery. "Anyone who thinks they're just art is wrong," he adds. "These are powerful axes."

basecampx.com



GEORGE LUCAS IS PART OF CAMERON'S AXE CLIENT LIST

8. THE VINTAGE BOOZE HOUND

Edgar Harden, vintage spirits collector

Imagine if Indiana Jones were Canadian, and sought out vintage spirits rather than grails. Well that's Edgar Harden. He travels the world sourcing spirits from forgotten stashes, abandoned shipping containers and dusty chateaux. Recently, he's acquired everything from mid-19th century absinthe ("blows your head off") to vintage Drambuie ("off-the-charts good"). Some remain in his collection, but he supplies much of it to the world's finest bars.

oldspiritscompany.com



HARDEN SALVAGES VINTAGE SPIRITS FOR THE FINEST BARS

9. THE ROCK 'N' ROLL FLY-FISHING GOD

Dave Skok, fly fisherman

Fly fishing - fishing with hand-tied lures rather than bait - is currently hotter than the filling in a McDonald's apple pie. But what the hipsters have yet to discover, is that it's also insanely hard. Unless, of course, you're born with a god-given talent like Dave Skok. "It's tricky,"



SKOK'S FLY FISHING WON HIM FISHING'S GRAND PRIZE

concedes the flip-flop wearing 'army of one', who fishes with a cigarette hanging from his lips. "You have to trick the fish into thinking the lure is real food without spooking them." The only fly fisherman to win fishing's Grand Prize in its 60-year history, Skok is almost certainly the world's most underappreciated sportsman.

dwskok.com



10 & 11. THE SAVIOURS OF THE THIRD WORLD

Martin Riddiford & Jim Reeves, LED engineers

When @BillGates (15.9 million followers) tweets your company to congratulate you on inventing something "pretty cool", it's safe to say you're on the right track. To that end, let us introduce you to the engineering duo behind

GravityLight - a \$10 LED lantern powered by gravity. A tug on a weighted rope is all that's needed to light the lamp for 25 minutes - no batteries or running costs. "We designed it to replace the damaging kerosene lamps used throughout Africa," says Riddiford. It's currently being trialled, but not by Gates. "Thanks for the reminder," quips Riddiford. "Do you have his address?"

deciwatt.org



THE GRAVITY LIGHT DOESN'T USE BATTERIES OR ELECTRICITY

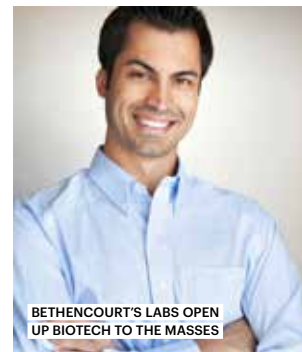
12. THE BIOHACKING DIY SCIENTIST

Ryan Bethencourt, biohacker

Traditionally there are two things one requires in order to

'do' science: a white coat - that's non-negotiable - and a string of letters after one's name. But biohacker Ryan Bethencourt, co-founder of Berkeley BioLabs, isn't exactly traditional. His 'citizen science' lab allows anyone to extract the DNA from a banana, research cancer or, as recently happened, improve upon the standard malaria testing kit. "Biohacking is a return to the roots of science," explains Bethencourt, "when science was the pursuit of hobbyists and the likes of Newton and Darwin." Best think of it as the pharmaceutical equivalent of the Homebrew Computer Club, which spawned Apple.

berkeleybiolabs.com



BETHENCOURT'S LABS OPEN UP BIOTECH TO THE MASSES

13. THE MAN WHO MILKS SNAKES

Steve Trim, venomous snake-milker

MEET THE SCIENTIST WHO SAVES LIVES BY COLLECTING DEADLY SNAKE VENOM

Is snake-milking a real thing?

The first ever high blood pressure drug came from snake venom; if it wasn't for venom we wouldn't know how to treat it. Venom is a crucial ingredient in pain therapeutics and life-saving drugs, and I frequently meet people on medication who had no idea they were dependant on venom to save their lives.

How many snakes do you keep?

We have access to around 60 species of venomous snakes and only collect venom when needed - about five times a year. Modern drug discovery is all about miniaturisation, so we only need a small amount.



THE SNAKES ARE MILKED FIVE TIMES A YEAR



TRIM USES SNAKE VENOM TO DEVELOP VITAL MEDICINES

Do you milk them by hand?
Yes. Venomous snakes are keen to deliver venom, thus it is not stressful on them.

What does the snake bite?
We use sterile containers with a flexible rubber membrane to mimic skin.

Ever have nightmares?
No, I jump out of bed excited for work, knowing our products will save lives. ➔

venomtech.co.uk

14. THE BUG-FARMING VISIONARY

Daniel Imrie-Situnayake, entomophagist

Eighty per cent of the world eats insects – or ‘bush caviar’ – to supplement their diet. And there’s a compelling argument for the developed world doing the same. As last May’s UN report highlighted, with a population expected to grow by ‘two Chinas’ by 2050, our shrinking farmland won’t be able to keep up. “It’s a satisfying, nutritious and sustainable protein,” says Daniel Imrie-Situnayake, co-founder of Tiny Farms and supplier of the ‘open source’ bug-farming kit. “They’re affordable and can be farmed in a high-rise apartment.” Before you gag at the thought of *Im A Celeb*-style dining, note that you already (unintentionally) eat 1lb of insects a year. Gag away...

openbugfarm.com



THIS KIT WILL HELP YOU FARM AN INSECT DINNER

15. THE BAR SCIENCE SVENGALI

Jon Taffer, bar consultant

When he’s not puffing on an electronic cigar, Las Vegas bar consultant Jon Taffer is on a mission to turn every dive bar into the martini-slinging joint of your dreams. Using psychology and technology, he tweaks everything from a bar menu’s font to the music’s BPM to control “how fast you drink, chew, blink and talk”, to make for your perfect night. Not that he’s entirely altruistic: “The idea is to get my hands so deep in your pocket they’ll be round your ankles,” he chuckles.

jontaffer.com



TAFER IS ON A MISSION TO IMPROVE YOUR NIGHT OUT



MARTIN PRINTED A HUMAN EYEBALL, CELL BY CELL

16. THE MAN WHO PRINTS EYEBALLS

Keith Martin, professor of ophthalmology

Last December, Martin and his team of biofabricators at the University Of Cambridge pulled off an impressive world first: printing eyeballs with an (admittedly quite fancy) inkjet printer. Cell by cell, using a sub-millimetre nozzle, the human enhancement pioneer printed an adult rat’s retina, which took him tantalisingly close to a cure for blindness. Which only makes it more disturbing that he doesn’t have a Wikipedia page – yet the world’s fattest man does. Go figure.

brc.cam.ac.uk



17. THE A-LIST STUNT DOUBLE

George Cottle, stuntman

As a member of a famous circus dynasty, announcing that you want to be a film stunt double probably doesn’t raise an eyebrow. George Cottle’s stunts, on the other hand, frequently do. From doubling for Pierce Brosnan in *Die Another Day*’s pre-title sequence to driving the Tumbler off a car park roof in *Batman Begins* at 26, Cottle has recently risen to become lead stunt co-ordinator on the likes of *Zero Dark Thirty*. What does he do for fun? “As little as possible, to stop myself getting injured.”



COTTLE HANGING OUT ON SET



THE WATER-POWERED FRIDGE WILL HELP POOR COUNTRIES

18. THE INVENTOR OF THE WATER-POWERED FRIDGE

Ian Tansley, refrigeration pioneer

Ian Tansley invented the Sure Chill, a water-powered fridge that cools without power for 10 days. “Water is heaviest when it’s at 4C,” he explains. “We use that principle to configure water to give you a temperature-control mechanism.” War-torn countries where medical staff struggle to store vaccines at temperature will benefit.

surechill.com

19. THE URBAN FORESTER

Shubhendu Sharma, urban forester

Shubhendu Sharma unpaves paradise. In 2011, the 28-year-old 2014 TED fellow set out to plant trees in polluted cities. With his soil treatment method he can fit 300 trees on an area the size of six parking spaces, and achieves 100 years’ worth of growth in 10 years. “Creating forests around individual houses has been successful,” he says. “They filter pollution, cut air-conditioning costs, can be watered with treated sewage and they bear fruit.”

afforestt.com



SHARMA’S AIM IS TO REFOREST URBAN LAND

20. THE HEADPHONE IMPRESARIO

Noel Lee, audio engineer

Lee invented the first ‘proper’ speaker cables (back when they were two lengths of lamp wire) and recently convinced the world to ditch cheap, hissing earbuds. Lee also engineered Beats’ headphones. “People love natural voices, natural horns, natural timbales,” he shrugs. Modest? That’s just how he rolls.



monsterproducts.com



LEE IS RESPONSIBLE FOR THE BEATS HEADPHONES REVOLUTION