The unexplored world

A new age of discovery

The glory-seeking adventurer of old is giving way to explorers who want to understand the planet rather than dominate it

TWENTY years ago this newspaper published an essay that hailed a coming "golden age of discovery". Great expanses of the Earth were beckoning the intrepid to put their footprints on untrodden ground, scale unclimbed mountains, peer into unscrutinised forest canopies, plumb unvisited caves and dive into unfathomed seas.

Many such challenges remain. But exploration for the sake of being the first, and testing willpower, nerve and endurance, has been giving way to a higher-minded thirst to preserve the planet for future generations. As technology advances, especially in photography and telecoms, it is getting easier for ordinary citizens to play a part. Exploration is becoming both more scientific and more democratic.

All the same, vast unknown chunks of the world still tempt the purely adventurous. The most obvious are mountains: thousands remain unconquered. Then there are caves: speleologists, as cavers are more grandly known, reckon that a good half of them have never even been poked into. Antarctica, larger than the United States and Mexico combined, and Greenland still offer vast, untouched icebound stretches for the ultra-hardy. (The picture above shows a crevasses on Ross Island, Antarctica.) Millions of hectares of forest canopy in the Amazon Basin and in Africa and East Asia, especially Borneo and New Guinea, are yet to be inspected. Least charted of all is the seabed. Oliver Steeds, a leading British ocean explorer and filmmaker, reckons that barely 1% of it has been explored. Lastly, there are still isolated peoples who have never been in contact with the outside world, and whose languages remain untranslated and unclassified.

Start with mountains. All 14 higher than 8,000 metres have been scaled; the tallest of all, Mount Everest, has been climbed more than 7,000 times. But many thousands of peaks across the world are still unconquered, including hundreds in the Himalayas rising to 6,000-7,000 metres. Only 200-odd of the 2,800 Nepalese mountains that are higher than 6,000 metres may have been climbed, guesses Glyn Hughes, the archivist of the London-based Alpine Club. The highest unscaled mountain is Gangkhar Puensum, in Bhutan, near the border with China; the authorities have closed it to climbers to respect local beliefs.

Muchu Chhish, in Pakistani Kashmir, is thought to be the highest unscaled mountain that it is still possible to get a permit to climb. It defeated a British team in 2014.

Shifting geopolitics have opened some new ranges to Westerners wanting to display their derring-do, especially in the former Soviet republics but also in Chinese-run Tibet. Kyrgyzstan and Kazakhstan offer many challenging virgin peaks. And of course mountaineers are for ever seeking new “lines”, as they call routes, up mountains whose tops have already been reached. The sheer faces of the range of table-top mountains known as tepuis, near where Venezuela, Brazil and Guyana meet, offer a host of staggeringly hard tests. Even in Europe’s Alps new lines still beckon.

Mountains apart, Antarctica is the continent we know least about, says Julian Dowdeswell, director of the Scott Polar Research Institute in Cambridge, England. It is the coldest, driest and windiest, and probably offers the greatest opportunity for old-style glory-seekers wanting to secure a “first”—if they can find a sponsor rich enough. In the past 30 years numerous new peaks (crossings and climbs by new routes, "unsupported" by mechanical devices, for instance) have been achieved, but many more are still to be tackled.

The most impressive endurance champion is probably Rune Gjeldnes, a Norwegian. Already the first person to cross the Arctic Ocean bringing all his provisions with him, in 2006 he became the first person to cross the Antarctic continent on skis without being resupplied. He is reckoned to be the only person to have traversed the North Pole, the South Pole and Greenland without resupplies.

Caving offers explorers opportunities to test themselves that until recently were unknown to exist. Speleology “has changed massively” in the past two decades, says Andy Davis, widely considered the world’s foremost caver. The Karabera cave in Georgia, near the Black Sea, down which a Ukrainian team descended in 2004, is twice as deep, at more than 2,000 metres, as the Pierre St Martin cave in the
French Pyrenees, which had been reckoned the deepest when Mr Eavis plumbed it in 1971. A new technique of laser scanning can measure such “chambers” far more accurately than before. Mr Eavis still marvels at the great chambers still being found in the Malaysian state of Sarawak, on the island of Borneo. In 1981 he was the first to explore a cave there that is still the largest by area in the world—it could enclose the Hollywood Bowl. Now South China, among other places, is offering new opportunities for cavers. Its Miao Room, penetrated in 1989, is 852 metres long, and the largest by volume.

Access to forest canopies is also being transformed by technology. Towers, balloons, inflatable rafts, light aerial walkways, drones and even giant cranes that have been helicoptered into place allow scientists to see what is going on under once-inaccessible foliage. A new remote-sensing technology known as lidar can illuminate objects high up under the canopy and analyse them through reflected light.

The world’s most extensive unexplored place is undoubtedly the seabed. At first the aim was to get to the ocean’s very bottom. In 1960 Jacques Piccard, a Swiss oceanographer, and Don Walsh, an American, touched the floor of the Mariana Trench, the ocean’s deepest point, off the Pacific island of Guam. It is near 11,000 metres down; for comparison, Mount Everest rises 8,848 metres. Since then only one other person, a film-maker, James Cameron, has achieved the feat, in 2012.

Lastly, there is one of the old-school Western explorers’ oldest quests: to find people who have never made contact with other human beings. The richest area in this respect is the Amazon Basin, mainly in Brazil but also extending into Bolivia, Colombia, Ecuador, Peru and Venezuela. (Paraguay, though not Amazonian, may also host an uncontacted people.) Estimates of the number of uncontacted groups are rising, says Fiona Watson of Survival International, an organisation that seeks to protect tribal peoples and their lands, and to help them determine their own future. Ten years ago the Brazilian government department that deals with the country’s indigenous people reckoned there were between 20 and 30 such groups. Ms Wilson now thinks there are between 70 and 80.

The other last bastion of uncontacted people (or isolated people, as some anthropologists prefer to call them) is New Guinea, an immense island whose western chunk, West Papua, is part of Indonesia and whose eastern side comprises a country of its own, Papua New Guinea (PNG). Half a century ago, many of its people lived in complete isolation from the rest of the world: even, often, from nearby groups. In the 1990s, says Sophie Grig of Survival International, missionaries made contact for the first time with at least 40 distinct groups in West Papua. But recent experiences in Amazonia lead the group to believe that there are still isolated people in various areas of West Papua. It would generally be best for them if they stayed that way, Ms Grig thinks.

“All of the tribes in PNG have had contact with the modern world to one degree or another,” says Jonathan Claussen, an American linguist-cum-explorer who roams PNG. But many have seen only one or two visitors in the past 40 years, he adds; many outlying regions have yet to be visited. “The last uncontacted people are usually clans and families of a tribe that live on the fringes in isolated valleys, sub-ranges and forests,” he says. A tribe may be labelled as contacted, but “perhaps only 20% of the villages have actually been visited... Whole sections of mountain ranges and valleys have had no recorded visits by researchers or travellers.”

Finding and saving endangered languages is yet another challenge. Early this century Tom Headland, an expert on tribal languages in the Philippines at Sir. International, a non-profit organisation formerly known as the Summer Institute of Linguistics, reckoned there were 6,809 known languages, but half had fewer than 6,000 speakers each; a quarter, fewer than 1,000. Five hundred, he wrote, had no more than...
Don’t just show off

While the prospect of reaching new places and even people still tantalises the adventurous, explorers have become far more conscious of a duty to preserve the environment and less keen to be seen as no more than frosted action heroes. Even mountaineers, still often obsessive individuals seeking to pit themselves against the forces of nature, now tend to stress their role in advancing science and protecting the environment and local people. Mr Gjelnes took regular samples of his blood as he crossed the Antarctic to help research into the functioning of the immune system under extreme conditions. Community Action Nepal, a charity founded by a British mountaineer, Doug Scott, who in 1975 was the first Briton to scale Mount Everest, is supported by thousands of climbers across the globe. It works to improve education, health care and living conditions in the Middle Hill Regions of Nepal, the home of most of the porters who assist Himalayan climbing expeditions.

Today’s ocean explorers, too, think at least as much about scientific progress as about being the first to reach the bottom of another seabed. Considering its vast expanse, remarkably little is known about it. “Only 0.05% of the ocean floor has been mapped in detail,” says Mr Steeds, who has switched from desert and jungle to the ocean. The “blue economy”, he reckons, could provide a wealth of minerals such as cobalt and manganese, and new plant and fish life. He talks poetically about the five watery zones: “sunit” means down to 200 metres; “twilight” descending to 1,000; “midnight” to 4,000; “abyssal” to 6,000; and finally “hadal”, meaning the deepest trenches, where (not being immune to the lure of being first) he has filmed a fish at a deeper level than anyone else.

Virtually all today’s leading explorers stress climate change. “We’ve learnt a totally new way of presenting rainforests to the world,” says Andrew Mitchell, a British zoologist who runs the Global Canopy Programme. “It’s like understanding the lining of your lungs.” Forest coverage, he reckons, hosts 40% of the world’s terrestrial biodiversity. Mr Eavis says that caving offers climatologists “an incredibly detailed history of the planet” in terms of the composition of water and the atmosphere. Bertrand Piccard, son of the late Jacques, is trying, with a British balloonist, Brian Jones, to achieve the first around-the-world trip in a solar-powered aircraft—to promote clean technologies.

“The key word nowadays is discovery rather than exploration,” says John Hemming, a former director of Britain’s Royal Geographical Society and an expert on the Amazon. “The term ‘explorer’ has been diminished and debased by headline-grabbing stuntmen and adventurers.” The RGS now gives grants almost solely for research. Mr Hemming quotes Robert Ballard, an American oceanographer famous for discovering the wrecks of the Titanic and the German battleship Bismarck—but who is far prouder of his work on hydrothermal vents. “Science gives legitimacy and worth to exploration,” wrote Mr Ballard. “You see lots of stunts today, but if you’re not doing worthwhile science, you’re not an explorer.”

Most good research, Mr Hemming continues, involves patient observation, often in the same spot, under concealment and for a long time. “It is near-impossible to do that if you’re doing it solo or travelling by some awkward method.” He notes hopefully that many countries that once took less interest in the environment, including China and Brazil, along with smaller counties, such as Oman and various African ones, are becoming keener on conservation. Brazil has improved its once-dismal treatment of indigenous peoples. Mr Mitchell says the world should be grateful to them for helping to preserve the rainforest, which in turn provides the Earth with so much of its potable water.

Nigel Winser, another British explorer and long-time RGS luminary who more recently worked for the Earthwatch Institute, a charity founded in the United States to study and protect the environment, praises what he calls “citizen’s science”. Advances in technology, particularly in photography and the internet, make it possible for far more people to carry out valuable research. What he calls “the revaluation of the camera trap” means images of animals can be captured seemingly with no interference by humans. Drastic improvements in nocturnal and underwater photography have opened whole new vistas of knowledge. Apps nowadays make it possible to identify the species of a bird by its chip, often on the spot. Shane Winser, another RGS stalwart (and wife of Nigel), points also to the benefits of television, since it brings the best aspects of exploration into the public domain, not least thanks to sponsorship: witness David Attenborough and Alastair Fothergill, creators of “Planet Earth” and more recently “The Hunt”, two BBC television series.

Not that the new zest for scientific discovery has quenched the desire to see what is over the horizon, behind the tree, up the mountain or under the sea. What Robin Hanbury-Tenison, another British explorer, who is president of Survival International, calls the “gosh factor”—that rush of amazement and catharsis when a pinnacle is reached or a mad exploit in some jungle or desert achieved—still motivates many an explorer.

There is still no limit to the feats of endurance that people seek to achieve without a tangible scientific purpose—though often for a charitable one. Just after Christmas a 53-year-old Briton, John Beeden, became the first man to row solo non-stop across the Pacific Ocean (from San Francisco to Cairns in Australia). As Ranulf Bicker, a British explorer, once said, people are still trying to cross the oceans “in ever tinier gin-bottles”, claiming firsts that have no bearing on science. Mountaineering still offers the same thrills it always has done. Even Everest has an almost endless list of feats yet to have been achieved. In 2006 Mark Inglis, a New Zealander, became the first double amputee to scale it.

But, however admirable, this is not exploration or discovery. The gosh factor has been overtaken by the “do-good factor”. ■