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# Eating The Future

A Book Review by Katharine Betts

If you enjoy the modern miracle story of evolution you will love this book. And, if you worry about the prospects of our species as we race headlong into an obscure future, you will not find solace within its pages but you will find new ideas and a fresh perspective on the past, as you try to imagine and shape that future.

Tim Flannery, senior research scientist at the Australian Museum, presents the story of human evolution. But this is not the familiar version where African genesis leads, inch-by-inch, to the wonders of Cro-Magnon man and the Lascaux cave paintings. In his account the coastal regions, tidal zones and mud flats of South East Asia play a crucial role. It was here, Flannery argues, around the edges of the Banda sea, that the descendants of *Homo erectus* developed into modern people.

Perhaps Africa was recolonized by these Banda people, these Australoids.<sup>1</sup> But, whatever the answer to that question, it is almost certain that the people of the South-East Asian littoral were the immediate ancestors of the Australasians, the inhabitants of New Guinea and Australia.

The first part of *The Future Eaters* is devoted to the geological creation of Australia, New Guinea, New Zealand and New Caledonia as they broke lose from Gondwanaland in the south and began the long drift north with their strange freight of animals and plants. But parts two and three are fine examples of human history and prehistory written within an ecological frame of reference (the "new ecological paradigm" that Catton and Dulap urged on the unresponsive Social Science community in 1980).<sup>1</sup> Here in this ecological history the main actors are not laws, parties and parliaments but human numbers, their resource base, the plants and animals which they can gather or hunt or domesticate, germs, germ lines, and the bitter harvest of population booms which, after a period of exuberant expansion and wasteful consumption, crash in human misery and habitat destruction.

People evolved in Africa and Asia but, Flannery argues, we could not have learned to be future-eaters, with all the cultural development and habitat destruction that this term describes, within the confines of our Eurasian homeland. In this homeland we evolved

side-by-side with the animals we hunted and the creatures who hunted us, and this side-by-side evolution formed a straight-jacket. The prey species we pursued were canny, wary and fleet of foot. We needed sharp eyes and well-honed weapons to bring them down, while fierce carnivores were always waiting for us to slip or wander or grow too old to hide. Co-evolution concentrates a creature's energies on the struggle to survive and leaves little scope for leaps of imagination,

radical innovation and the luxury of experimenting with new ways of living. But what if an animal like *Homo sapiens* could escape the straight-jacket and find its way to a new ecological niche where the prey had not learned to run and where the predators were few?

Flannery argues that humans made such a step when they crossed the Wallace

line. This is an imaginary line running through the Indonesian archipelago, west of the islands of Lombok and Sulawesi, separating the two distinct biological and geological realms of Asia and Australia. It is named for the man who first discerned it, Alfred Wallace, a naturalist who, just as Darwin did, read Malthus and found the theory of natural selection.

Humans and their ancestors had lived on Bali for a million years, side-by-side with warm-blooded carnivores, animals which ate the unwary and competed with humans for game. The first true future-eaters may have moved east from the island of Bali to Lombok 60,000 years ago.<sup>3</sup> Looking back across the strait they were lonely and separated from their fellows but, turning towards their new home, they found themselves face to face with a cornucopia. They saw naive fauna, animals which did not know that they should run and hide: crabs, pygmy elephants, birds, fish, molluscs — meals without end, or so it seemed. "Without predators and surrounded by naive prey, people would have become, in a sense, gods ... and their offspring would have gone forth and multiplied."<sup>4</sup>

## THE FUTURE EATERS: AN ECOLOGICAL HISTORY OF THE AUSTRALASIAN LANDS AND PEOPLE

By Tim Flannery  
Sydney, Australia: Reed, 1994  
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***"Will the day of reckoning come  
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Some years ago William Catton wrote *Overshoot*,<sup>5</sup> arguing that the human population had already overshoot its resource base. We did not yet realize this, he said, because we had acquired the technology to tap the Earth's finite supplies of fossil fuels. He painted a grim scenario. We can treat it as bad science fiction, shelving the images and hoping the author is mistaken. Are human beings really living on their natural "capital" rather than their "interest"? Will the day of reckoning come when the account is quite overdrawn and vast numbers of us suddenly find that we lack the means to live? We may hope that this future will never come. After all, we are *Homo sapiens* and we have thought, planned and invented our way out of many a tight corner in the past. But, what if this future of human numbers overshooting their resource base has already happened (for some people in some places)? What might have taken place and what could we learn from it?

Flannery shows us that Australia, New Guinea, New Zealand and all of the islands of the Pacific have seen human beings burst into new lands, discover a paradise of untapped resources, expand their numbers rapidly, temporarily overshoot their resource base and then face the miserable demographic consequences. Easter Island stands as the grimmest reminder that human populations can flourish exuberantly, produce a complex civilization, and then collapse just like those of any other animal ungifted with our intelligence, language and artefacts.<sup>6</sup>

What happens to these societies as they go down? There are a few brief records of the last decades of the Rapanui people on Easter Island but the picture is more clearly documented for the Maoris in New Zealand. Of all the groups of pre-European colonists which Flannery examines, the Maoris are the most recent. They arrived from somewhere in Polynesia, after a long and well-planned sea-voyage, sometime between 1,000 and 800 years ago.<sup>7</sup> They spread quickly through their new land. So delighted were they with its wide array of birds, especially the giant Moas, that they let the domestic chickens they had brought with them perish. Some 500 years later when the first European, Abel Tasman, encountered them in 1642, the Moas were extinct and the Maoris were locked in bitter tribal warfare, struggling for access to pitiful supplies of fern roots and stunted yams. They were also supplementing their diet with cannibalism. The population crash had progressed further for the Easter Islanders when Jakob Roggeveen came upon them in 1722; the remnant groups, huddled among the boulders in the treeless landscape, greeted him with enthusiasm. The Maoris, in contrast, attacked Tasman's landing party on sight and he could find no safe place to take on water along the whole coast.

What of the Australian Aborigines? They must have been the first group of *Homo sapiens sapiens* (truly modern people) to occupy a whole continent where no hominid had trod before and no creature had learned to flee as they approached. They first arrived perhaps as

long as 60,000 years ago, well before modern people established themselves in Europe (some 45,000 years ago).<sup>8</sup>

The story of the Aborigines' exuberant entry into a unique land innocent of man, well-stocked with diprotodons and other megafauna, and their subsequent harsh readjustment to its limits, are lost in the most distant past. Their stories tell of a "dream time" of creation but, after a long boom, the readjustment must have been more like a nightmare and the land that they had found was dramatically altered by it. The megafauna were lost and long years of "firestick farming" completely transformed the flora from the fire-sensitive but fire-retarding southern beeches, southern pines, tree ferns and sheoaks to the fire-tolerant and fire-promoting eucalypts.<sup>9</sup>

With the age of exuberance and the crash long behind them, the millennia taught the Aborigines to adjust their numbers to their resource base. They had shaped the land and in many ways impoverished it<sup>10</sup> as they learned from their terrible mistakes, but they did learn. The people had shaped the land but the land had also shaped them. And what of the Europeans, and now the Asians — what of us, the Johnny-come-latelys? The catalogue of our errors and the environmental wreckage we have caused is long and we have still not learned to let the land shape us and our demands upon it.<sup>11</sup>

Will culture always stay with us to protect us from the vicissitudes of nature? Is it possible that *Homo sapiens* could forget his accumulated wisdom? Environmentalists are used to worrying about over-population and the threat that this poses for the future of mankind. But Flannery's data show that under-population, if it is combined with isolation, can pose problems too. As the last ice age retreated, 10,000 years ago, areas which had been part of the Australian mainland became isolated by sea, especially in the south. People survived for several thousand years on Kangaroo and Flinders Islands but eventually became extinct, probably because their numbers were below 500, the number geneticists believe necessary for the preservation of genetic diversity.

Tasmania is a much larger island and the Tasmanian Aborigines probably averaged around 5,000 individuals at any one time. A group of 5,000 is large enough to maintain the genetic diversity necessary for survival but is it large enough to maintain a rich technology and culture over the very long term? Flannery presents evidence showing that the Tasmanians gradually forgot significant parts of their culture. They forgot how to sew the possum-skin cloaks of the mainland and had to survive the brisk Tasmanian climate without clothing. They forgot how to fish and thus lost access to a large reserve of protein. They forgot how to make fire and had to borrow it from other campsites if their own went out. They lost the art of making boomerangs, spear throwers, and shafted tools.<sup>12</sup>

Flannery invites us to imagine that a country town of 5,000 modern Western people becomes isolated from the rest of the world. How much of our rich material and

intellectual culture could we preserve for a period of 10,000 years?

Looked at from this perspective the achievement of the first Tasmanians is remarkable. This fragment of the human race was cut off from its kin before the civilizations of Egypt, Greece and Rome rose and fell. It was cut off before the Mongoloid peoples of northern Asia developed rice-based agriculture and, from its fruits, grew rapidly to displace the Australoids right up to the Wallace line.<sup>13</sup>

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But, for all that they had forgotten of the material culture of their ancestors, the Tasmanians survived and, unlike the Maoris, appeared to be living relatively peacefully together. When they met the French explorer François Péron on the south-east coast in 1802 they greeted him with a curiosity which grew to open delight as Péron and his crew allowed them to examine their persons and possessions. The Tasmanians conducted their guests back to their camp where the Frenchmen enjoyed a fine feast of shell fish and repaid their hosts with a chorus of songs.

The Tasmanians received the Frenchmen as if they had been old friends. The excerpts Flannery reproduces from Péron's diary<sup>14</sup> will make modern readers weep because we know that, within 30 years, most of these intelligent and open-hearted people were dead, victims of disease and the war of European settlement. (Flannery does say that this terrible history is not often taught in schools. On this I must differ. I was brought up in Hobart, Tasmania, and the dreadful story of the virtual extermination of the original Tasmanians was taught to me in primary school.)

It is clear Flannery is no narrow biologist blind to the culture that social scientists celebrate. He is very sensitive to it. But he does not believe that it exempts us from nature's limits. Culture does not cut the Malthusian bond that ties us to our land and its resources. Rather it is the means by which we can, if we will, adapt our numbers and our demands to our resources. We are not necessarily trapped by the biological predicament we have created for ourselves. Centuries of print and careful science and shared reflections have given us options and choices which the Maoris and the Rapanui lacked. The inventiveness that allowed us to use our own orgy of future eating to develop knowledge and understanding must be used in grave earnest now.

If we can muster the intelligence and wisdom to see our predicament within its ecological context, we can minimize our present and future troubles. The blindness of the human exemptionist paradigm (the mind-set

gripping most social scientists, economists and other technological optimists)<sup>15</sup> can only stand in our way. Choosing paradigms is not a matter of whim or postmodern fashion. It is a choice between adapting to our habitat on terms which minimize human suffering or waiting until the habitat forces adaptation on us.

Flannery has a message for all his readers but his book is written from an Australian perspective. One feature of the lands east of the Wallace line is that, like the Americas, humans arrived in them as modern people. In America the native Americans and, later, the Europeans did indeed find a cornucopia. In Australia the cornucopia was an illusion. This geologically old "new" land was strangely barren. The region is subject to erratic climate changes and the massive glaciers which had ground out the rich earth of the Northern Hemisphere had passed it by, leaving the soil thin and infertile. Not for Australia the deep black soil of the Ukraine or the steady march of the seasons loved and celebrated in Northern Europe and North America. Instead there are long years of drought, followed by flooding rains and, since European settlement, the erratic climate has also been punctuated by apocalyptic bush fires.

The bush fires are man-made. The Aborigines changed the flora millennia ago to the highly flammable but nonetheless fire-resistant eucalypts. While this change created the risk, the Europeans exacerbated it. They put an end to the Aborigines' fire-stick farming, and the regular "cool" burnings it involved, and allowed woody scrub to grow under and around the trees where it waits, ready to fuel the next inferno.

But we owe the climate to the El Niño Southern Oscillation, a phenomenon which we have only recently come to understand. Our immediate ancestors could look on long years of drought, where their stock died and their soil blew off the land, as an aberration, bad luck, an abnormal interruption to the normal progression of spring rains and summer growth. They had come from the seasons of the Northern Hemisphere; they knew that these seasons would be reversed down-under, but they still expected them to re-appear each year in their God-given order. Their expectations were and are often disappointed. Certainly it is colder in winter and hotter in summer but we now know that it is not safe to predict more than that. The normal seasonal pattern for Australia is abnormality.

Flannery has a broad grasp of geological and evolutionary history and a deep understanding of the biological present. Therefore he does not shrink from drawing conclusions about the numbers of people Australia could and should support. If we are to preserve prudent margins for safety, and if we are to protect the biodiversity that is fast shrinking around us, we should aim to slowly reduce our numbers from the present 18 million to between six and 12 million.<sup>16</sup> Some Australian reviewers who have delighted in Flannery's panoramic history have balked at this demographic conclusion. But it follows with a gentle and unswerving logic from all that has gone before. ■

## NOTES

<sup>1</sup> T. F. Flannery, *The Future Eaters: An Ecological History of the Australasian Lands and People*, Reed, Sydney, 1994, pp. 153, 162.

<sup>2</sup> See W. R. Catton and R. E. Dulap, "A new ecological paradigm for a post-exuberant society," *American Behavioral Scientist*, vol. 24, no. 1, 1980, pp. 15-47.

<sup>3</sup> Flannery, op. cit. pp. 159-60.

<sup>4</sup> *ibid.*, p. 160.

<sup>5</sup> W. R. Catton, *Overshoot: The Ecological Basis of Revolutionary Change*, University of Illinois Press, Urbana, 1980.

<sup>6</sup> Flannery, op. cit., pp. 254-7.

<sup>7</sup> *ibid.*, p. 165.

<sup>8</sup> *ibid.*, pp. 147-153, 300.

<sup>9</sup> See *ibid.*, p. 225.

<sup>10</sup> *ibid.*, p. 233.

<sup>11</sup> See *ibid.*, 390-397.

<sup>12</sup> *ibid.*, 264-269.

<sup>13</sup> See *ibid.*, pp. 147-9.

<sup>14</sup> *ibid.*, pp. 313-15.

<sup>15</sup> See Catton and Dulap op. cit.

<sup>16</sup> Flannery, op. cit. p. 369.