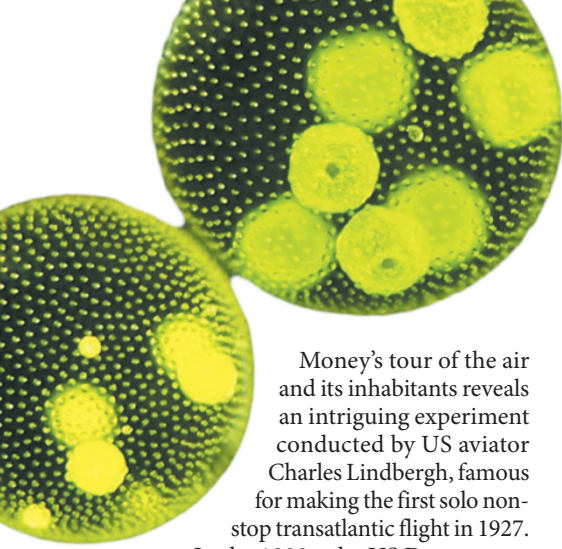


Books in brief



Money's tour of the air and its inhabitants reveals an intriguing experiment conducted by US aviator Charles Lindbergh, famous for making the first solo non-stop transatlantic flight in 1927.

In the 1930s, the US Department of Agriculture asked Lindbergh and his wife, Anne, to gather air samples in a bid to understand the dispersal of cereal rusts. The two collected abundant rust spores using a plane fitted with a sky-hook, a device incorporating oiled microscope slides. Money also discusses how more recent researchers have speculated that some bacteria and microscopic algae control cloud formation and rainfall.

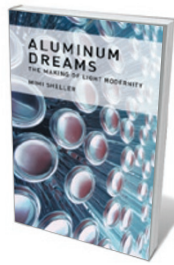
The co-evolution of human and microbe is amply explored. Those that cause disease or death — think pathogenic bacteria, flu viruses, malaria — have shaped our history. But, as researchers have discovered in the past century, the human body could not function without the estimated thousands of species of bacteria that inhabit our mouths, guts and other recesses. Like the pond and branch that Money probes early on, a human can be seen as a collection of ecological niches, albeit a mobile one.

“Seemingly uninhabited water swarms with communities and complex as any seen with the naked eye.”

Money goes on to discuss seemingly inhospitable environments (such as deep-sea hydrothermal vents, acidic areas or regions bombarded with high levels of radiation) in which microbes — such as archaeans that can grow at 121 °C — prosper. He sums up with distressing prospects for extinctions and change, but also reassures: the microbial world is one of prodigious diversity, power and resilience.

This is a lucid and informative book. There is an impressive afterword of references and notes, and fine line drawings. So much that is lyrical and little-known waits to be discovered here — novelties that will appeal to new undergraduates as well as to incorrigible microbial enthusiasts like myself. ■

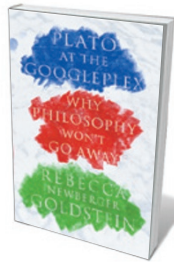
Mark O. Martin is associate professor of biology at the University of Puget Sound in Tacoma, Washington.
e-mail: momartin@pugetsound.edu



Aluminum Dreams: The Making of Light Modernity

Mimi Sheller MIT PRESS (2014)

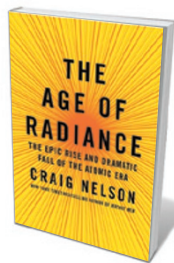
It propelled humanity into air and space, transformed communications and fed war machines. Aluminium — in aeroplanes, space capsules, satellites, bombs and baking foil — is welded into the built world. Mimi Sheller's coruscating cultural study reveals how young US chemist Charles Martin Hall and his French counterpart Paul Héroult simultaneously discovered the electrolytic production of aluminium in 1886; how designers were galvanized by its potential for the light and sleek; and how social and environmental problems from bauxite mining and aluminium smelting persist.



Plato at the Googleplex: Why Philosophy Won't Go Away

Rebecca Goldstein PANTHEON (2014)

Philosopher Rebecca Goldstein probes why Plato — and the philosophical enterprise itself — remains a force in science and culture 2,400 years on. Into a weighty discussion of the Platonic world view Goldstein inserts fictional interludes that see Plato, Chromebook in hand, touring the Googleplex, a neuroscience lab and beyond. Although contrived, this thought experiment usefully casts an eye on our turbocharged century. And it shows what survives of this classical titan: an ability to plumb the deep questions we still grapple with, from the nature of knowledge to morality.



The Age of Radiance: The Epic Rise and Dramatic Fall of the Atomic Era

Craig Nelson SCRIBNER (2014)

Tomes on things atomic are rife — from discoveries by seminal physicists to meltdowns and crumbling nuclear arsenals. Craig Nelson braids the strands into a comprehensive chronicle that is also a wry elegy for an ebbing age. Starting with Wilhelm Röntgen's discovery of X-rays, Nelson gives us the panoply of physicists from Lise Meitner to Leo Szilard; offers a masterful reading of Hiroshima and Nagasaki; and takes us through weapons tests, the cold war, Fukushima, and the rest of our long attempt to “live with blessed curses”.



The Thing with Feathers: The Surprising Lives of Birds and What They Reveal About Being Human

Noah Strycker RIVERHEAD (2014)

Birds intrigue humanity, and in this research round-up Noah Strycker reveals why — in marvels such as the equal-radius flight paths of flocking starlings and the decontamination chamber that is a vulture's stomach. As he notes, such findings can mirror human realities. Clark's nutcrackers, for instance, can recall the location of 5,000 seed caches. Yet, in captivity some wild species lose substantial hippocampal volume (and memory) within weeks — an echo of the rapid losses found in patients with Alzheimer's disease.



The Insect Cookbook: Food for a Sustainable Planet

Arnold van Huis, Henk van Gorp and Marcel Dicke COLUMBIA UNIVERSITY PRESS (2014)

The looming squeeze on food security is forcing some scientists to look at the abundance of protein under our feet: insects. Here entomologists Arnold van Huis and Marcel Dicke team up with chef Henk van Gorp for a pragmatic introduction to entomophagy, covering insect farming, nutrition and cuisine. Tarte tatin with chocolate-coated grasshoppers? With 2 billion of us already popping mealworms and more, this is a case of joining the crowd. [Barbara Kiser](#)