

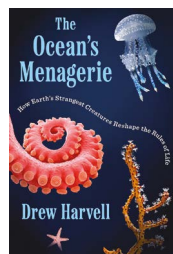
Bryozoans sieve food particles from the water with their tentacles.

Books in brief: the best of 2025

Ten great reads from this year's Books in brief column get a more expansive write-up. **By Andrew Robinson**

The Ocean's Menagerie

Drew Harvell
Viking (2025)



Life on Earth began in the sea. There, invertebrates emerged roughly 700 million years ago — some 200 million years before their spined cousins, the vertebrates.

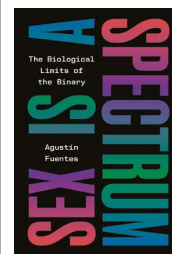
"The more I learned," writes marine ecologist Drew Harvell, "about the critters in the oceans without backbones—the corals, sponges, worms, jellyfish, clams, crabs, and octopuses that make up 99 percent of diversity in the oceans—the more awe I felt in seeing the marvellous adaptations they had for getting food, reproducing, and avoiding their killers in an environment spinning with an abundance of life." She calls her appealing book exploring this underwater universe, written after a lifetime of study, "a deep dive".

The turning point of her career came while working on the remote Pacific shores of the Salish Sea, on the border between Canada and the United States. She witnessed that, when exposed to a predator, Bryozoa — creatures that resemble corals and are often referred to as 'moss animals' — grow "a forest of long, dense spines". In other words, they shift into a form that is "as different as another species" is.

Her tour of wondrous animals, from extremely strong corals to sponges that release compounds now used as drugs, shows how climate change threatens their existence. We need to conserve this "menagerie" — not least to ensure the survival of our own species.

Sex Is a Spectrum

Agustín Fuentes
Princeton Univ. Press (2025)



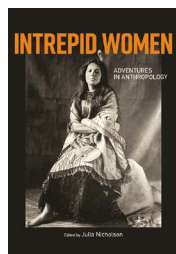
A tropical Atlantic fish, the bluehead wrasse (*Thalassoma bifasciatum*), launches this fascinating book about sex. Females produce eggs and males make sperm. But if the group's largest male gets killed, a female takes over by rapidly altering its reproductive organs to become the main sperm producer.

"On the face of it, sex is a paradox," writes anthropologist Agustín Fuentes. "Wouldn't life be easier if organisms just kept copying themselves to reproduce?" In fact, he argues, the biology of sex does not entail a binary distinction. "It's about patterns of variation in bodies, behaviour, and lives that differ, overlap and intertwine." And this includes humans: women and men overlap more than is generally accepted. But, he admits, there is little academic agreement about human sexual orientation, other than that it is "complicated".

He notes that this idea of overlap goes back a long way. In ancient Greece and Rome, philosophers and physicians such as Aristotle, Hippocrates and Galen did not regard men and women as distinct beings with different biologies. Their view persisted through the Renaissance and into the early eighteenth century. Only then, especially during the nineteenth century, did the binary view prevail among scientists, epitomized in the works of Charles Darwin. But Darwin, for all his study of fishes, never encountered the bluehead wrasse.

Intrepid Women

Ed. Julia Nicholson
Bodleian Library (2025)



In 1927, Mākereti Papakura, a Māori woman, enrolled as a student at the University of Oxford, UK — the first woman from an Indigenous community to do so. She and her family donated several Māori objects to Oxford's Pitt Rivers Museum over her lifetime and after. In 1930, she died, aged 56, just before completing her thesis on Māori culture. In 2025, Oxford's vice-chancellor posthumously awarded Papakura an MPhil in anthropology for her work, in the presence of more than 100 members of her family and community.

A fascinating photograph of her in Māori dress forms the cover of *Intrepid Women*, a stunningly illustrated book inspired by an exhibition at the Pitt Rivers Museum in 2018–19. Edited by the exhibition's co-curator Julia Nicholson, the book celebrates six pioneering anthropologists who did fieldwork between 1910 and 1957, when such work was frowned on for women. As Nicholson notes: "Some of these intrepid women had advantages of class, money and education," but all faced the fact that "men held the positions of power and influence".

Unlike Papakura, the other five women studied communities other than their own for their research. Barbara Freire-Marreco lived with Pueblo peoples in the United States; Maria Czaplicka with reindeer herders in Siberia; Beatrice Blackwood with villagers in Papua New Guinea and the Solomon Islands; Elsie McDougall with textile artists in Mexico and Guatemala; and Ursula Graham Bower with Naga people in northeastern India.

Memory Lane

Ciara Greene & Gillian Murphy
Princeton Univ. Press (2025)



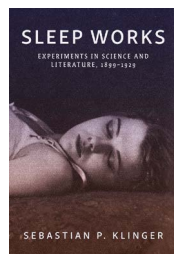
Molecular biologists examine memory through neurotransmitters such as dopamine; neuroscientists through groups of cells working in concert; and psychologists through organismal activity as a whole. None of these researchers considers memories to be stored in our brains in a filing system, unlike how people tend to imagine them while desperate to recall, say, a forgotten name.

Psychologists Ciara Greene and Gillian Murphy's universally appealing book discusses memory in terms of a neighbourhood, *Memory Lane*. It is a place that is "constantly under construction, with individual buildings being built, remodelled, and even razed to the ground". In other words, it is a site for imperfect recollections, and memory recall is a reconstructive process. The authors' goal "is to explain how this continuous reconstruction supports our daily activities, keeping our memories alive and lived in rather than perfectly preserved monuments to the past".

Such reconstructions can, however, trigger false memories. Around 70% of wrongful US court convictions arise from an eyewitness's misidentification. Greene and Murphy describe a woman who was convinced that she recalled the appearance of a man who raped her — she even picks him from a live line-up. After a decade in prison, the man is released when advances in DNA evidence identify the actual rapist. The woman, appalled by her false memory, subsequently became friends with the wrongly convicted man and they now work together to raise public awareness of misidentification.

Sleep Works

Sebastian P. Klinger
Johns Hopkins Univ. Press (2025)



Most humans spend one-third of their lives asleep, unaware of themselves. Before psychiatrist Hans Berger published, in 1929, the first study of electroencephalography — revealing the slumbering brain's electrical activity — sleep science did not exist. Sleep was a mystery; Sigmund Freud excluded it from his influential 1899 study of dreams, arguing that dreamless sleep was inaccessible to science.

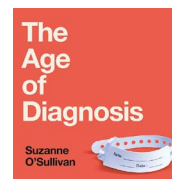
However, physicians, drug manufacturers and writers, such as Franz Kafka and Marcel Proust, struggling with insomnia or an addiction to sleeping pills were keenly interested in sleep during those 30 intervening years. These groups preoccupy Sebastian Klinger, a cultural historian and literary scholar based in Freud's home city, Vienna.

Klinger's engaging book ponders "What kind of activity is sleep? Who sleeps? How can we represent sleep?" He answers by bringing together three ways of thinking — scientific, pharmaceutical and literary. "By looking closely at the historical entanglements and interactions of these fields, we can gain an understanding into modernist culture that the familiar study of dreams does not supply."

These connections can be disturbing. The barbiturate Veronal was sold as a sleeping aid from 1903 until the mid-1950s. The drug's use led to instances of self-poisoning and some suicides. When a character took their own life in Hermann Broch's 1930s novel *The Sleepwalkers* (*Die Schlafwandler* in German), "the mere mention of Veronal suffices to convey what has happened".

The Age of Diagnosis

Suzanne O'Sullivan
Thesis (2025)



In 2019, the UK health secretary praised a direct-to-consumer genetic test that revealed his 15% risk of prostate cancer, and planned its widespread use. However, this statistic was not significant, given that the average lifetime risk for men is 18%, comments neurologist Suzanne O'Sullivan.

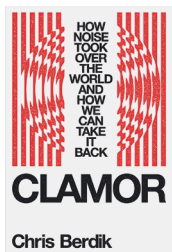
Her riveting book — based on more than three decades of experience as a physician and clinical neurophysiologist — argues that new technologies can lead to overdiagnosis. Both doctors and patients often welcome a diagnosis. But it is "supposed to lead to something. Traditionally, it should explain symptoms, indicate next steps, introduce people to fellow sufferers", she remarks. "New diagnostic criteria need to be measured more by their ability to make quality of life better—not by how many patients they can find."

Part of this growing problem is that a condition's accepted diagnostic criteria might change over time, thus altering the number of people diagnosed with it. Autism spectrum disorder, first described by a psychiatrist in 1943, is a well-known example. Diagnoses increased by 787% in the United Kingdom between 1998 and 2018, in part because physicians expanded the condition's range of symptoms. A diagnosis of autism is welcomed by people "who are struggling and in need of help", O'Sullivan observes. But she also notes the "potential impact of negative perceptions" and argues that the long-term outcomes of the recognition of "mild autism in adults" should be examined further.

Books & arts

Clamor

Chris Berdik
W. W. Norton (2025)



The World Health Organization treats noise as a leading environmental threat. The European Environment Agency reported in 2020 that noise triggers some 48,000 cases of heart disease and causes 12,000 premature deaths every year. And the American Public Health Association argues that noise might be placing more than 100 million people at risk — children are among the most vulnerable.

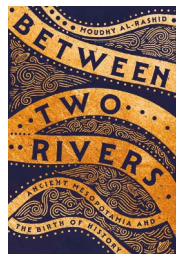
The underlying problem, according to science writer Chris Berdik, is that “noise took over our world while we weren’t really listening”. “Sounds can trigger a visceral, even furious response from us in the moment, but barely a shrug when that moment passes,” Berdik notes.

This might explain why audiologists often struggle to persuade people to wear ear protection. Berdik illustrates this dilemma succinctly by noting that a man working in a factory whose hearing had worsened, according to tests, agreed to protect his ears only when informed that he would lose the ability to hear his favourite sounds: the “soft, high-pitched kiss of a trout” as it takes the fly at the end of his fishing line “and the little splash that followed”.

Drawing on research in acoustics, neuroscience and urban planning, Berdik’s resonant book explores a phenomenon that is both familiar and unfamiliar to us all. Will his readers learn to listen and to make an effort to reduce the noise causing their chronic stress, sleep deprivation and related diseases?

Between Two Rivers

Moudhy Al-Rashid
Hodder (2025)



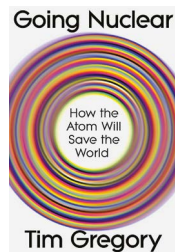
Cuneiform is the world’s oldest writing system. From around 3300 BC, people in ancient Mesopotamia — the land between the Tigris and Euphrates rivers — inscribed their notes in clay. It was used until AD 79–80, when an ancient astronomer in Uruk wrote the last known cuneiform to record planetary movements, lunar visibility and a partial solar eclipse. Inscriptions have revealed a vast collection of activities and behaviour, ranging from prosaic accountancy, dynastic information, geographical maps and scientific measurements — including the first approximation of the number pi — to religious divination, love stories and humour, such as the world’s first recorded fart joke.

Seven engraved objects feature in historian of ancient science Moudhy Al-Rashid’s enticing book, which provides what she calls “thousands of glimpses into the lives of people” in ancient Mesopotamia. They include building bricks, a statue of a king, school tablets, a boundary stone and a mace head used in war — although, surprisingly, none of them is illustrated in the book, nor are any cuneiform inscriptions included.

The scripts’ subjects include numerous receipts for beer, a working mother trying to juggle her responsibilities, a lullaby to soothe a baby, preschool children struggling to write, instructions on how to exorcise a ghost, an enslaved person negotiating their freedom and a princess who might have been responsible for the world’s first museum.

Going Nuclear

Tim Gregory
Bodley Head (2025)



Nuclear chemist Tim Gregory explains why nuclear energy promises to rein in global warming — even though, often “the most climate-concerned environmentalists are the least supportive” of it. Nuclear reactors produce no carbon dioxide, and one gram of uranium contains the same amount of nuclear energy as more than one tonne of coal does chemical energy. His enjoyable, deliberately controversial book maintains that “nuclear power is the only way” to decarbonize our world while “sustaining economic growth, protecting the environment, and continuing the human progress that has characterised the past century”.

Gregory recognizes that public opinion associates nuclear reactors with nuclear weapons. But he stresses that this attitude has no basis in science. Whereas nuclear bombs generate energy rapidly in uncontrolled chain reactions, nuclear reactors are designed to generate it slowly in carefully controlled ones. Indeed, “splitting atoms in power stations is one of the safest things our species does”.

One chapter tackles the risk of deadly accidents, such as those at Chernobyl in the Soviet Union in 1986 and at Fukushima, Japan, in 2011. It argues that nuclear power is much less risky than fossil-fuel burning. “The hysterical opposition to nuclear power distracts us from the preventable dangers that kill millions annually and ruins our best shot at renouncing fossil fuels before 2050.”

The Mask

Bruno J. Strasser & Thomas Schlich
Yale Univ. Press (2025)



“Masks have signified hope and despair, courage and cowardice, a sense of community and a sense of selfishness”, write historian of science Bruno Strasser and historian of medicine Thomas Schlich (who was previously a physician). All of these emotions — known to people who experienced the COVID-19 pandemic — underpin their engrossing, finely illustrated account of a subject hitherto surprisingly under-researched.

The book’s discussions cover the globe, ranging from masked theatrical performances in ancient Greece, historical plagues and horrific gas attacks during the First World War to present-day urban smog, hospital surgery and modern pandemics. Throughout the book, Strasser and Schlich address the issue of measuring how effective masks are. Such assessments are “simple in the laboratory, but complex and uncertain in the real world”.

Surgical masks, introduced in hospitals during the late nineteenth century, are designed to prevent bacteria from slipping out of the surgeon’s mouth and nose and infecting the patient’s wound. But masks interfere with communication and cause surgeons to inhale their own exhalations as well as fog up their spectacles. “After a long operation, every surgeon is relieved to take off their mask.”

As for the general public, masks are inherently controversial. During the COVID-19 pandemic, US President Donald Trump resisted wearing one, and, according to a poll in 2020, only 53% of US Republicans wore one in public, as opposed to 75% of US Democrats.