

tion, many of the intricate adaptations (evolutionary novelties) that mark the new group (the echolocating ear mechanisms of bats, for example) are already in place at its first appearance. Simpson saw this repeated pattern as "real," that is, as a reflection of unusually high rates of evolution (through his quantum evolution) rather than as an artifact caused by gaps in the paleontological record.

Simpson's methodology has been expanded to embrace all manner of repeated patterns in the history of life. His approach now permeates all of paleontology and its allied disciplines. Only fringe groups like the ironically named "pattern cladists" still explicitly deny the feasibility of testing process hypotheses with repeated patterns in the data of paleontology and systematics (and they occupy perhaps the only corner of "science" to eschew causality in its work). Everyone else has managed to follow Simpson's lead, as the entire field of modern paleobiology attests. This is Simpson's living legacy.

Laporte's text brings these points out, though perhaps not always with the ringing clarity they deserve. The author also explores other facets of his subject's scientific life, such as the reasons underlying Simpson's preference for stable continents until after most of his paleontological brethren had accepted plate tectonics. In



Time traveler. The title character in the posthumously published science fiction novella *The Dechronization of Sam Magruder* (1996) appears to reflect Simpson's views of the purpose and meaning of life and of the importance of historical contingency.

one particularly arresting chapter, "The Awkward Embrace," Laporte traces the often thorny relations Simpson had with both colleagues and administrators at the American Museum of Natural History, where he was employed for the vast preponderance

of his remarkably creative and productive career. New to me was the story of Simpson's response to the intention of the then-newly appointed director Albert Parr to downplay evolution as a theme at the museum. Coming as that did in 1942, just when Simpson was about to publish his epochal *Tempo and Mode*, one can only imagine how Simpson felt. Though he was not to leave the American Museum until later disagreements with Parr over purely administrative matters, the earlier run-in probably set the stage. I can only be grateful that Simpson managed to stay there as long as he did.

Simpson the man will always remain something of an enigma. How, after all, could the author of *Attending Marvels* (1934), a travel journal of his first expedition to Patagonia that opens so colorfully with a burst of gunfire in the main square of Buenos Aires, barely acknowledge in the same pages the passing of his most important mentor, W. D.

Matthew (news of whose death reached Simpson in the field)? But Simpson the scientist is another matter; his position in intellectual history is secure and is made the more so by the welcome publication of Laporte's book.

TELEVISION: ENVIRONMENT

Fade to Black?

For three decades, David Attenborough and the British Broadcasting Corporation have awed television audiences with breathtaking images of the natural world, presented in series underpinned with solid ecological science. Through works like *Life on Earth* and *The Living Planet*, the silverback of the natural history documentary has invited us to share his vision of a planet bursting with living splendor and endless wonder, the usually unsullied products of millions of years of evolution. In *State of the Planet*, Attenborough sets out instead to portray the threats to all this.

Despite his undoubted conservationist passion, Attenborough's approach has sometimes been criticized for its lack of attention to the perils faced by many of his subjects. If this series is the director's response to such critics, it is a fine attempt. Condensing his customary grand, multipart sweep into just three 50-minute programs, he conveys a world launched on the sixth great mass extinction of Earth's history. His account is interspersed with clips from ecologists Jared Diamond, John Lawton, Tom Lovejoy, Robert May, and Edward O. Wilson. Attenborough first details the nature of the current biodiversity crisis. He then identifies five major causes of damage to the environment: habitat destruction, habitat fragmentation (here called "islandisation"), overharvesting, pollution, and invasions by alien species. In the final program, he points to some of the actions and conservation programs that might mitigate the disaster.

Attenborough builds his thesis in characteristic peripatetic fashion,

dashing from continent to continent, tropical forest to British backyard, desert to coral reef. As ever, the imagery is splendid, and the scientific argument sound. But will the series hit the mark? *State of the Planet* is already finding its most avid viewers amongst those who already care and worry about the future of the planet, who think biodiversity is valuable in itself, and who are amenable to scientific argument. Attenborough's technique relies on a receptiveness in its audience: show me a beautiful image of any natural scene and I will say "conserve it." But for those whose priorities and sentiments lie elsewhere, an altogether more shocking approach might be required. (And in the United Kingdom last month, the first episode fell victim to ratings wars, billed as it was against independent television's showing of the death of *Inspector Morse*.)

The examples of hope for the future that Attenborough chooses—such as community sea-horse farming projects in the Philippines, or butterfly farming projects in New Guinea—are indeed encouraging signs of the potential for sustainable development and an economic premium for conservation. But we also need more examples of such commitments from the developed countries. In the first of these programs, May invites the audience to consider whether it wants to live in the techno-world of the cult movie *Blade Runner*. By the end, and in the wake of the failure of last month's climate conference in the Hague, one wonders whether there'll be any option. Up to 50% of living species are now staring down the barrel of a gun and expected to go extinct in the coming 100 years. Why should the process stop there?

—ANDREW SUGDEN

State of the Planet
David Attenborough
Director

BBC1, November, 2000.
See: www.bbc.co.uk/nature/earth/state_planet/