



Gorgon: The Monsters That Ruled the Planet Before Dinosaurs and How They Died in the Greatest Catastrophe in Earth's History

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Based on more than a decade's research in South Africa's Karoo Desert, this remarkable journey of discovery and real-life adventure deep into Earth's history is offered by a renowned scientist. Photo insert.

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From Reader Review Gorgon: The Monsters That Ruled the Planet Before Dinosaurs and How They Died in the Greatest Catastrophe in Earth's History for online ebook

Esmeralda Rupp-Spangle says

Some people may feel like this book misrepresents itself as a science text, when in fact it's more of a travelogue, in the spirit of Charles Darwin or Freya Stark. I read reviews and a summary (always wise) beforehand and was thus prepared for this not to be a scientific analysis, but more of a personal account. I have also read a number of Mr. Ward's other books and was well acquainted with his literary quirks of throwing about personal experiences and events in his life as they happen in the timeline of the discovery process; I.e: In The Life and Death of Planet Earth, he uses the slow, heartbreakng death of his mother as a narrative tool to widen the emotional scope of the transient life of the planet, and all life on it.

I, personally, find it to be refreshing- as he comes across as both genuine and imperfect. He doesn't shine himself in the best light- he seems to know his flaws, but he is honest, about himself and others. He is insightful and observant, but occasionally also stunningly oblivious or socially inept (science folk often are, myself included)- to both personal and scientific facts.

The book is largely devoted to his time spent in the Karoo desert in South Africa. The social upheavals of the times he visited, his interactions with others while there, what the sky looked like, what kind of car they rented, what they ate for dinner, how loud they argued, how uncomfortable the beds were, what being mugged was like, looking for bones while jet lagged, the infuriating process of drilling cores, the smell of the night air, the heady intoxication of success, the bitter sting of failure, and what they found and how- both the exciting and the mundane in equal measure, interlaced with Ward's particular literary flourishes and love for long, adjective heavy descriptions of time and place.

Ultimately, he draws the book in to a reasonably good conclusion, and though I do wish there were *more* to the whole book (it clocks in under 250 pages) it was a lovely way to break up the largely science and fact-heavy nonfiction books I've been reading lately, and to throw in some adventure, tick bites, sunburns, and mashed up sandwiches.

Thumbs up, fun read!

On a side note:

Some people have remarked that they found this book to be either sexist or culturally insensitive, but frankly that's just horseshit. He reflects on the beauty of a female coworker briefly- he also reflects on her strength of character, and the beauty of the African stars so it's condemned out of context, though I would hazard a guess that working in the field, there's quite a bit of uh... unexpected fraternization? He also describes the mid and post-apartheid governmental upheaval in the most condemnatory of ways. His observations and opinions are his own, and he makes no claim of being an engine for social change. Though he clearly is progressive minded, ultimately his interests lie in science, and his opinions and actions aren't as nuanced as the clearly perfect saints who've offered their critiques. I'm of the opinion that the people who found this 'offensive' were looking for something to be offended by, frankly, but that's just imho, and I'm a total a*hole, so whatever.

Alex says

This book is an odd amalgamation of lots of feelings. Firstly, it's a somehow riveting story of rethinking and reexamining huge questions of science through rock deposits. It's the unexpectedly terrifying examination of mass extinction. It's a travelogue for a world both beautiful and terrible. There are things to like here.

And yet, this is also very much a book which would be made better by a better narrator. To wit, Peter Ward attempts to make commentary about the sociopolitical climate of South Africa, and mostly comes off as a perhaps well meaning but deeply tone deaf old white dude. His discussion of his colleagues doesn't hold up much better: his respect for his female colleagues comes off at turns patronizing and at turns lecherous. I mean, I'm not judging if you and your colleague did it, Pete. You do you. I'm just saying, if you DIDN'T, you're coming off damn creepy.

Of course, in non-fiction, we don't always get the narrators we want. As such, to get Ward's story, we have to deal with his voice. And really, it is a fascinating story if you're into the sometimes dry world of science. It's about the inspiration to seek the truth, the search for evidence that goes against what is expected. Stay for the Permian fossils. Just expect that the ride will be as frustrating as riding through the Karoo seems to be.

Colleen says

Remember Roy Chapman Andrews and his stories about fossil hunting in the Gobi Desert in the 1930s? Well, this is the tale of fossil hunting in the 1990s in South Africa's unforgivingly harsh Karoo badlands. It's also the tale of geologists figuring how when exactly the first mass extinction on earth, the Permian/Triassic boundary occurred (250 million years ago), and why. Marine sediment told a story of mass ocean dieoffs, but there wasn't any good evidence for land animals. This is the back story, how geologists drilled into sedimentary deposits covering themselves with mud under the blazing sun, to get a magnetic record of time. The timeline of the planet. Armed with a timeline and fossils found in that timeline they could see if there was some planet-wide catastrophe like the asteroid that destroyed the dinosaurs 65 million years ago. The driving vision is much darker than Andrews'. And much more urgent. The amount of CO₂ we have put into the atmosphere is close to what we know the planet had at 250 million years ago. What survived? Birds. Able to fly to a lake in the Himalayas, 30,000 feet up. Disturbing to think about.

Miriam says

If you're wondering how anyone could write an entire non-specialist text on a long-extinct suborder of theriodonts, the answer is not to be found here. Gorgonopsids feature minimally in this book, and the promised insert is mostly photos of people looking at rocks, not pictures of dinosaurs.

False advertising aside, this is a fine book about an individual's series of archaeological undertakings. Ward's research focus is not therapsids themselves, but the large question of how exactly the first mass extinction on earth, the *Permian/Triassic boundary, occurred and how long the process took.

(About 250 million years ago, life on Earth nearly came to an end. The end of the Permian period saw the loss of 96% of marine life, 70% of terrestrial vertebrates, possibly masses of vegetation, and is thought to be the only mass extinction of insects.)

Ward's experience is also firmly placed in a specific time and place, the Apartheid era. This was significant not just from a political and human justice perspective, but also in how it affected people's ability to travel and the availability of skilled labor, funding for jobs, etc.

Henry says

A very good book if you want a book about paleo. In the Karoo desert with its intense heat and even snowsqualls, with biting insects, researchers dig up a veritable monster that lived long before the dinosaurs and probably would have made mincemeat of them. It is like a detective story but in real life.

Sally says

Meh.

I concur with other reviewers re: the false advertising (This is not a book about the Permian, this is a book about the author's adventures while researching the Permian) and re: the less than adept handling of South African politics and race.

Also I could have done with less of all women being repeatedly described based entirely on their physical attractiveness (except wives, who exist only to weep and try to talk people out of doing science.)

Also he doesn't even do a great job with explaining the science; the accounts of what fieldwork and labwork entail are pretty good, but the last few chapters, which are theoretically actually about their conclusions re: the Permian extinction itself, are pretty incoherent.

Tamsin B-g says

I enjoyed reading this book, but I don't think it really lives up to its title. It's mostly an account of several years of geological fieldwork in the Karoo region of South Africa. While I enjoy a good field story, I really would have liked to see more emphasis on the group's findings. A lot more. After I read it I didn't feel particularly enlightened about "the monsters that ruled the planet before the dinosaurs" or even about how they died. In one of the final chapters Ward presents an interesting hypothesis about the conditions on Earth in the aftermath of the Permian-Triassic extinction and how those conditions may have contributed to the rise of the dinosaurs (and, ultimately, birds), but unfortunately he doesn't expand on it in this book (it is the subject of a subsequent book of his, *Out of Thin Air*).

So, apart from my gripes about the mismatch between the book's title and content, how was it? Well, I found it pretty readable. The prose sometimes gets a bit purple, but it wasn't bad enough to spoil my reading experience. The Karoo region, with its amazing geology and unpredictable weather, is really the star of the book, and I found the descriptions of the fieldwork to be quite compelling.

There was one other thing that I found somewhat irritating, though: Ward's occasional attempts to wax eloquent on the politics and race relations of South Africa during the 1990s. His insights on this topic were not as profound as he seemed to think they were.

Nikki says

Reviewed for The Bibliophilian.

If you're looking for information on the gorgonopsids and their world, this book is rather thin on that. Instead, it's mostly about Ward's career and some of his excavations and initiatives. Admittedly, much of that is in the service of getting information about the gorgonopsids, but the book is rather thin on what was actually found. There is some interesting stuff on pinning down that mass extinction and figuring out how fast it happened, but the gorgonopsids in life — how they lived, what they did — are absent.

So pretty interesting in terms of understanding Ward's career as a palaeontologist, with the appropriate set pieces about how hot it was and how difficult, etc, etc, but low on actual pre-dinosaurian monsters ruling the Earth.

Reviewed for The Bibliophilian.

Stu says

This book is an interesting account of the author's quest to understand the greatest extinction event in Earth's prehistory, which killed off the titular Gorgon.

The author had spent more than a decade studying this problem in the Karoo desert in South Africa. The majority of the book describes his excursions to the Karoo, with its variable weather, fever carrying ticks and barbed wire fences. As this time period spans the end of apartheid, the author includes his thoughts on how South Africa changes from visit to visit.

The scientific content of the book, why the team is there, what their purpose is on a particular day is well explained and relatively jargon free. In a sense this book feels more like a travelogue than a science book in style, which I had not expected but quite appreciated.

Greg says

Good story of the hard work of palaeontology, and some interesting discussions of the nature of the Permian extinction, but I found it a bit unsatisfying. Partly because the author is scientist first and writer second, so when he's trying to vividly illustrate the hardships of fossil hunting in South Africa he often just comes across as whiny. But partly because the title, cover and blurb of this book bear no relation to the content. Maybe it's just easier to sell paleo books with pictures of big predators on the cover? But the book fundamentally was not about gorgonopsids, it was about fossil hunting, Africa and the causes of the Permian extinction. In fact, gorgons hardly appear at all. I was hoping for and expecting a book about how these animals lived, not one about how they died and what it's like digging them up. Good for what it is, but don't be misled.

🐓🌔 says

i expected a book about the Permian era and Theriodonts and got a book which is peppered by the former but mostly about the process of finding and extracting fossils, the Karoo desert, apartheid from a white outsider's perspective, and Ward's colleagues.

It was a smooth read though and gives good insight on the Permian extinction and the philosophy of good science.

Brad Kent says

I wanted this to be the perfect followup to Alvarez (T. Rex and the Crater of Doom), but it definitely isn't. Instead Ward tells stories about paleontology and paleontologists, and especially about himself. It's an interesting memoir, sort of, but now I need to go read a real book about the Permian/Triassic extinction.

Jared Pechacek says

You can't subtitle your book "The Monsters That Ruled The Planet Before Dinosaurs and How They Died In The Greatest Catastrophe In Earth's History" and then give readers a hundred pages of you wandering around looking at rocks. Actually, you can't subtitle your book that at all, because that is unwieldy as h*ck. And you certainly can't do it, then ignore the monsters.

Really, that subtitle is the book in a microcosm: Most of it doesn't need to be there, it promises more than it delivers, and it's awkwardly structured. For a book about the Permian-Triassic extinction, relatively little space is devoted to one of the worst ecological disasters in Earth's history. No, what actually matters is that Peter D. Ward went to South Africa, wasn't racist there, and looked at a bunch of rocks. And he will tell you about it all in prose purpler than a gymnast's bruise.

Gorgon follows Ward's search for the cause of the Permian extinction, buried in the rocks of the Karoo region of South Africa. The thing is, the cover copy leads you to believe it's about the gorgonopsids, a family of bizarre animals which met their end during that extinction event. That subtitle promises it. The cover has one of their skeletons. *The book is even freaking named "gorgon"*. So I, for one, spent most of the book waiting for some glimpse into their biology, environment, possible behavior, and was rewarded only by page after page about strata in the Karoo. See, *Gorgon* is really about the extinction, but pretends otherwise for far too long.

Also known as the Great Dying, the extinction itself is a fascinating topic. About 250 million years ago, life on Earth nearly came to an end. The end of the Permian period saw the loss of 96% of marine life, 70% of terrestrial vertebrates, and is (according to Wikipedia) the only mass extinction of insects. Nobody is quite sure why, though Ward mentions a number of theories and comes to his own conclusions involving, essentially, the planet rusting to death. When *Gorgon* focuses on this huge mystery, it's gripping, like a detective story where the victim is an entire world. But Ward can't keep his mind on this when there are more interesting things to talk about, like Peter D. Ward.

He really does not come off well, let's say. I find it's generally safe to say that the purpler the prose, the larger the ego: you really need massive self-confidence if you're gonna plunge your readers into a maze of adjectives. Which can be fine. But Ward isn't as good a writer as he thinks he is; he can't just say "the pizza had old vegetables"; he has to say, multiple times, that the vegetables were as ancient as [a different geological thing each time]. Like, dude, there's poetic writing full of memorable images, and then there's trying too hard.

He also spends far too long blathering about 1) South African politics, 2) the environment of the Karoo, 3) his marriage, and 4) how hot one of his colleagues is. It's clear *Gorgon* is partly just a chance for him to *talk*. I think all this is intended to give human touches to a book that has the potential to be quite dry, but it reads like: 1) I'm not racist, guys, like at all; 2) I read a travel book once; 3) honey I have to be gone all the time for Science Reasons; and 4) I'm a huge creep. (Seriously. He talks more about how beautiful his colleague is than he does about his own wife, in any capacity.) And when he's not bloviating about all that, he goes on and on about rocks when doing so adds nothing and, in fact, actively detracts from whatever he's trying to accomplish. I get that examining rocks is how we know anything about the ancient world, but every chance he gets he swoons over the colors and at one point ejaculates a stream of synonyms when he could just say "red".

The Permian extinction parts are great. But. The prose, the ego, the rocks, the leering: It's just—it's a lot to go through merely to get to his ~groundbreaking theory~, which takes up just a few pages right before the end. And he never even gets to the freaking gorgons.

Travis says

I was going to rank this 3 stars as a sort of average amount, but then remembered that 2 stars is "it was okay" which is really the best description for this. I first encountered this book around when it was first published; the disjunction between the title and the cover image intrigued me. At some point I started reading it, but then traveling to and living in Japan for a time got in the way and I never finished. Reading *The Ends of the World* reminded me of this and I thought I should revisit it.

It is kind of a disappointing read. It was still interesting enough that I don't really regret reading it and kind of feel I should still give it 3 stars, but it wasn't a very coherent book. The overall structure is a chronological description of Ward's work relating to investigations of the end Permian extinction. This leads to a very episodic structure, with much of the book filled with descriptions of field work in the Karoo desert of South Africa. This is interesting in its own right, and I could further relate a bit having participated in a paleontological dig (albeit for rather unimportant dinosaur bones in the US) as part of a college course. But then later in the book, Ward starts talking about drawing conclusions from the finds, and it seems like a non-sequitur since the descriptions of field work were always more about the personal experience of being out there and never really goes into what is learned from the work.

Further incoherence is found at the end of the book. In the penultimate chapter Ward seems to reject the conclusion that an impact was responsible for the end Permian extinction and proposes some interesting ideas (albeit one that obviously lacks rigorous testing for the very fact that he first published it in this book of popular/general science writing and not in an academic paper) about how lower than current normal levels of oxygen in the early Mesozoic could have contributed to the rise of dinosaurs and may be behind certain mammalian traits like live birth. But then in the final chapter he talks about the Permian and Cretaceous extinctions being the same sort of thing, coming being the result of extraterrestrial impacts events. I suppose

he may have just been going along with the scientific consensus of the time (which seems to have changed to pointing the finger at massive climate change now), but it is jarring to read.

A final issue is with the title. It doesn't really make much sense, and the gorgonopsids from which the title is derived aren't really that prevalent in the book. In fact, the one major excavation of a gorgon skeleton turns out to be an unrelated species. There is a bit at the end about using the term "Gorgon" as a symbol or metaphor, but it isn't a really well developed idea.

Ryan Marquardt says

An interesting read about the Permian extinction, which is one of five major extinctions in the biological history of planet earth. It is written in a first person narrative style and spends a lot of time recounting the author's field visits to the Karoo desert in South Africa from ~1990-2000.

I thought this book would be more of a description of the Permian period and the creatures that lived and died around the Permian boundary. After all, it does have a gorgon skeleton on the cover and the title says it's about the 'monsters'. It was kind of disappointing that so much of it is about the field trips made by the author.

Despite the fact that the book wasn't what I thought it would be, the description of the field work is interesting. It gives a good account of the huge amount of field work that gives rise to scientific theories. It is also interesting as an account of what life is like for a modern day university scientist. The grant writing, field work, paper writing, hypothesizing in the field and over beers, colleague rivalries, and the thrill of discovery are all part of Ward's journey.

The last few chapters are where he lays out what he thinks happened at the Permian extinction. According to Ward, the basic culprit is a lack of oxygen in the atmosphere brought about by CO₂ from Siberian eruptions and a drop in sea level that oxidized newly exposed land and further removed oxygen. The latter is believed to be the reason why Triassic period sediments generally have a red color.

The fact that increased CO₂ levels can cause asphyxiation is very unsettling for current life on the planet (Ward states that temperature levels in the Triassic also jumped by 6 degrees celcius). However, without the Permian extinction, the age of mammals probably would not have begun. It's a testament to the adaptability of life on the planet that it can continue so well under new conditions.
