Clinical management Silagy eds)

The Earth: an intimate history Richard Fortey Harper Collins, 2004 HB, 501 pp, £20.00, 0 00 257011 4

other textbooks. In 1898 Edward G Robinson (or someone who looked terribly like him) wrote in Bailey and Love's *Short Practice of Surgery* that paraumbilical hernias are terribly dangerous, or that Phalen's Sign is positive in 96% of cases of carpel tunnel syndrome (on what planet?). Somehow these shibboleths are regurgitated through generations of textbooks. The nice thing about this particular one is that it is clear that every chapter has been written from scratch and, usually, with some scepticism about the conventional wisdom.

The second volume is necessarily less unique than the first. To me it is only successful insofar as it reflects those features of general practice that are not merely diluted aspects of internal medicine or other specialities. After all, there are already many excellent texts on internal medicine or dermatology. But in general practice the patient presents with a morass of undifferentiated symptoms rather than a 6-week history of dyspepsia. Many of those symptoms will be of minor disease, and even those symptoms that are signals of significant disease will often not yet have developed into the fully differentiated form that one finds in an internal medicine textbook or an outpatient clinic. This is one of the defining difficulties of general practice. At this stage over-zealous investigation can create invalidism, while too relaxed an approach can lead to missed diagnoses, missed opportunities and death. This is the tightrope that differentiates primary care from other specialities. The clinical chapters that recognise this essence, and deal explicitly with the difficulties of adeptly differentiating the wheat from the chaff, prove their worth.

I think overall this book is a titanic achievement. For the most part it is an honest and succinct distillation of the essence of general practice as considered by 400 experienced practitioners. Its approach, and its prose, is fresh. Somewhat to my surprise it is now my first reference for training matters.

I think the book also has great symbolic significance. If primary care fragments and disappears, which it might, then this book will be merely an historical anachronism. If general practice survives in Britain, then this will be its bible.

The book, of course, has many flaws. But then so does general practice. And so does everything in life (except maybe pressure hose patio cleaners).

Kevin Barraclough

am biased. I am utterly in awe of those polymaths who write elegant, witty English about their particular technical expertise. Fortey is certainly one. His subject is our earth and how it got to be the way it is.

The earth, day to day, seems a pretty static affair, with trees, people and cities on high ground, and oceans, fish and seaweed on low bits. Oceans and mountains are the common metaphors of permanence.

But really, the ocean floor and the continents are utterly different, and all is flux. From mid-ocean volcanic ridges lava flows congeal as immense basalt plates, which move the ocean floors outwards towards the continents. At the edges of oceans the driven plates of basalt pass grudgingly, grindingly, below the eroded sediments of the land, a violent, jerky, unwilling subduction punctuated by tremor and eruption. Immense pressures and temperatures transform benign sediments. This swirl and eddying of surface rock is driven by convection deep in the mantle, as the heat of radioactive decay is transferred to the cooler outer regions.

Where continents bourn on gliding plates impact, the crust rears up in folds, as a towel slid along a table meeting an obstruction. From the pressure cooker below, granitic intrusions rise into the folds — the late, thrust-through, skeletons of mountains. Erosion, fissuring, and migration ensure that what remains to us yields its regularities and predictability only to the most painstaking, sustained and imaginative enquiry.

Fortey lingers affectionately with the men whose chipping away with geological hammers, mapping, fossil hunting and leaps of imagination elucidated the drift, collisions, fusions and fracturing of continents. Their virtuosity is celebrated. Their foibles, whether Teutonic authoritarianism or a fondness for marrying their preferred students, are noted too:

And how those pioneers could walk ... they thought nothing of covering 30 miles a day of 'brown heath and shaggy wood' ... geological maps drawn by heroic footsloggers preceded tectonic enlightenment.

Fortey vividly describes places that typify the dermatology of the planet: the pyroclastic surge that engulfed Pompeii, the linear arrangement of Hawaiian volcanoes testifying to the slow drift of the Pacific plate across a magmatic hot spot, the contorted strata of the Alps, the manic structural complexity of Newfoundland and its neighbourliness, geologically, to north-west Scotland. He dwells as fondly on the human environment of his locations as any travel writer, tying the lives of men to the stuff of the changing ground upon which they transiently perch.

The conclusions of Fortey's science are always provisional, awaiting revision or refutation by the next wave of observation, the next bold hypothesis. Current uncertainties and past blind alleys are acknowledged. But, the central idea — plate tectonics — is celebrated with gusto, as the key to understanding the glorious complexity of our physical world. This festival of geological science draws on everything from Greek mythology to Häagen Dasz ice-cream, to bring the slow dance of the plates and the rhythms of millennia into the intellectual compass and sense of self of mortals who live for but a day:

... the slow stroll of the continents around the globe has been continuous ... for a far longer time than the break up of the last super continent ... The Himalayas will one day be yet another seam on the face of the old earth, another wrinkle added to testify to its character.

Fortey is a palaeontologist. The planet is about 4500 million years old. Continents have strolled for a little less than 4000 million, and life has left its mark in the rocks for more than 3000 million:

... life and the earth have evolved together in an intimate collaboration that is a marvel in the galaxy.

Life, and particularly human life is Fortney's conscious context. This is geology as Montaigne might have written it. It is early Greece, the Renaissance and the Enlightenment with the measuring and calculating power of now. It is also merely the musing of a smart monkey:

Mankind is no more than a parasitic tick gorging himself on temporary plenty ... But the present arrangement of land and sea will change, and with it our brief supremacy.

Quibbles? Well, the question 'Hang on ... how exactly do you know that?' is never very far away. The book doesn't lay open every stage of evidence and argument — that would be too much to ask. Instead it is an overview, and it is fun. I'd have liked a small glossary. The technical terms are not many, but it would be handy to clarify meanings occasionally.

My hunch is that we are lucky enough to be living in changing times. Copernicus and Gallileo banished man from the centre of the universe. Newton confirmed that we didn't need to be there. Which left us a bit unsure of ourselves. Now Darwin, and stuff like this, are giving us back a notion of ourselves, but a very new and different one.

In Fortey's old rock mill, there is much food for thought.

Alan Munro