ings that led to changes in worker protection laws but
is not primarily a book about changing the law. The
Radium Girls’ most compelling feature is the stories
of the young women. Moore tells their stories such
that they pop from the pages as real human beings
with hopes and dreams, experiencing love and loss.

For me, a scientist, the book was a sobering reminder
of the responsibility scientists have to do our impor-
tant work carefully, thoroughly, and ethically. When I
am working to make my laboratory OSHA-compliant, I
will think of the dial painters and, rather
than grumble about the extra work, I will be grate-
ful for the protections we have in labs and industry
thanks to the radium girls, whose fierce persistence
led to the formation of OSHA and other organiza-
tions. The story of the dial painters reminded me
that the world was (and unfortunately still is) a place
where people who lack power—women, children,
people of color, and the poor—also lack a voice. The
story compels me to be a voice, whenever I can, for
those who lack power; this is an especially important
ethical responsibility for Christians.

Who should read this book? Anyone interested in sci-
ence, law, or business regulations. Anyone who loves
a good nonfiction story with sympathetic characters
and real-life villains. I will recommend this book to
some of the high school students in my church who
love science, especially the girls. It is a compelling
story of young women who found their voices and
made a difference in history.

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HISTORY OF SCIENCE

THE RHINOCEROS AND THE MEGATHERIUM:
An Essay in Natural History by Juan Pimentel,
translated by Peter Mason. Cambridge, MA: Harvard
University Press, 2017. 364 pages, including contents,
prologue, notes, acknowledgments, credits, and

For a person interested in natural history, the notion
of a “fantastic binomial” may bring to mind a favor-
ite plant, animal, or fossil and its uniquely crafted
name following the Linnaean nomenclature for a
species. But for Spanish historian Juan Pimentel, a
“fantastic binomial [is] the combination and setting
into motion of two objects or persons who are appar-
ently unconnected” (p. 6). In The Rhinoceros and the
Megatherium, Pimentel crafts an extended essay that
describes the parallel journeys of two marvelous
mammals to the Iberian peninsula: one a live crea-
ture from the Far East, and the other a fossil from the
western hemisphere.

The first three chapters tell the tale of Ganda, a live
rhinoceros transported from India to Portugal in
1515 who was named in honor of the native term for
the animal. To the Portuguese people, this massive
animal represented their perception of the Orient:
something unfamiliar, exotic, and dangerous. What
was known of rhinoceroses at the time was primar-
ily the stuff of legend, stemming from the works of
ancient Greeks such as Strabo and Pliny, and often
becoming conflated with stories of the mythical uni-
corn. The rhino was viewed as a ferocious, brutal
creature who was built to destroy its natural enemy,
the elephant. Upon coming into contact with ani-
imals such as rhinos, many people simply sought to
reinforce their preconceived notions about these ani-
mals, hence the staged battle between Ganda and a
juvenile elephant that was not in any way ready to
fight the rhinoceros. Ganda was eventually gifted to
Pope Leo X, but tragically died in a shipwreck on his
way to Rome. Pimentel contests that no one would
remember this tale were it not for Albrecht Dürer’s
classic woodcut that immortalizes the creature.
This image, which would spread around the world,
depicts a creature with some of the key traits of a rhi-
oceros, such as its robust body, stout legs, and the
nose horn that gives the animal its name. But it also
features what look like overlapping plates of armor,
thick reptilian scales, and a small unicorn-like horn
perched between its shoulders. Apparently, Dürer
actually never witnessed Ganda firsthand, basing
his representation on a descriptive letter, an original
illustration (which has been lost), and undoubtedly
host of preconceived notions about the animal. Hans
Burgkmair produced a woodcut around the same
time that more accurately represented the anatomy
of the rhinoceros, but it lacked the power of Dürer’s
chimeric piece that carried the “fables and words of
antiquity” about the animal (p. 100).

The next three chapters tell the story of a different
beast, whose bones were dug up from the earth near
the Luján River in present-day Argentina. The fossil
was initially taken to Buenos Aires before eventually
being transported across the Atlantic Ocean to the
Royal Cabinet of Natural History in Madrid during
the summer of 1788. This skeleton was like nothing
anyone had ever seen before—it was massive and
had an anatomy unlike any modern creature known
to science. Initially reconstructed as a pachyderm or
large cat, the first people to study it did not really
know what to make of it. Juan Bautista Bru and
Manuel Navarro collaborated to produce illustra-
tions and engravings of this beast to publicize it, but
it was not until Georges Cuvier got his hands on these images that the mysteries of this ancient creature began to unravel. In 1796, Cuvier produced a paper documenting the anatomy of this creature, placing it in the family tree of mammals, and finally giving it a name: *Megatherium americanum* (which translates to “great American beast”). Through careful comparative work, Cuvier recognized that this animal was new to science, but clearly related to the edentates, a grouping of mammals that includes armadillos and sloths. This work marked the beginning of Cuvier’s prodigious career and helped to provide evidence that the ancient world was full of creatures that are not represented in the modern fauna. Additional fossils of related creatures would be found in later years, and after some further debate, the great anatomist Richard Owen would eventually demonstrate that *Megatherium* was an extinct species of giant ground sloth.

Pimentel uses these two stories to explore many topics along the way. While some digressions are more interesting and germane than others, they generally raise intriguing ideas inspired by the tales of the rhinoceros and *Megatherium*. Pimentel recurrently explores topics such as “the role of imagination in the manufacture of scientific and historical facts” (p. 6), the power of images to convey reality mixed with “preconceptions and mental resonances” (p. 103), and the “alliance between art and science” (p. 164) that gave rise to the discipline of scientific illustration. In telling these tales, he also conveys the importance of understanding how our collective knowledge has changed across centuries. He discusses how the discovery of fossils presented a challenge for many eighteenth-century naturalists, who believed in the plenitude and the “alliance between art and science” (p. 164) that gave rise to the discipline of scientific illustration. In telling these tales, he also conveys the importance of understanding how our collective knowledge has changed across centuries. He discusses how the discovery of fossils presented a challenge for many eighteenth-century naturalists, who believed in the doctrine of plenitude and the fixity of species. In so doing, he briefly covers the infancy of paleontology, the debate between uniformitarianism and catastrophism, and the tensions that existed between science and faith during this time, pointing out that religion actually played an important role in the development of earth history and science in general.

If readers are in search of a more systematic and thorough history of paleontology or zoology, then they should look elsewhere. However, Pimentel’s extended essay about the “circular biographies” (p. 287) of the rhinoceros and *Megatherium* offers plenty of historical illustrations (56 in total) and rich stories that will inspire further thought about the natural world, how we engage with that which is unfamiliar, and the role of imagination and images in helping us see the reality around us.

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