

polymath, sampling everything from microscopy and evolution to architecture. This breadth of vision was also his undoing.

In the final twist, Shaplin brings on Isaac Newton as Hooke's nemesis. Newton derided Hooke as a "mere smatterer" and was probably responsible for trying to erase Hooke's record. Newton's jealousy best explains why there is no surviving portrait of Hooke and why so little survives of Hooke's ideas on evolution and many other topics. And so the play comes full circle: Hobbes's absolutist reasoning being replaced by Hooke and Boyle's democratic experimental approach, only for that to be usurped by Newton's autocracy in the fully fledged Royal Society.

I loved the show—the acting is wonderful and the crumbling Music Hall venue with its vertical set provides a suitably dusty atmosphere for Restoration London—but not so many were as enthusiastic as I was. Charles II (played by Arsher Ali) as a

Russell Brand-style vulgarian, complete with fluffy detachable head piece, did offer a frisson. Shaplin's stipulation that Boyle must be played by a woman has a lucky manifestation in Amanda Hadingue, who closely resembles Boyle's portraits and has the suitably fastidious demeanor of the sickly man. (Shaplin explained that the purpose of having a woman play the part was to emphasise Boyle's special character: his collaborative instincts and his disengagement from the prevailing masculine brawling.) Jack Laskey is particularly good as the energetic and engaging Hooke. Unfortunately, Will Sharpe as Newton does not project dark enough foreboding and his soliloquy makes for a collapse rather than a finale. But, and it is a big but, despite the performance's many pleasures, the audience was left largely mystified, sometimes sleeping. The play is truly a mass of facts that fall and drift hypnotically like confetti.

Unless theaters hand out copies of Steven Shapin and Schaffer's *Leviathan and the Air Pump* (2) as a study aid, the director Elizabeth Freestone and the playwright should have reined in the text, slapped a stronger structure on the story, and given the performance an emotional heart. I hate to fault a play that so rumbustiously turns over so many brilliant ideas. Go and see *The Tragedy of Thomas Hobbes* if you get a chance, but be prepared.

—Caroline Ash

#### References and Notes

1. A Webcast of the conversation between Shaplin and Schaffer at the Royal Society event is archived at <http://royalsociety.tv> (look under the history of science offerings).
2. S. Shapin, S. Schaffer, *Leviathan and the Air Pump: Hobbes, Boyle, and the Experimental Life* (Princeton Univ. Press, Princeton, NJ, 1985); reviewed by T. L. Hankins, *Science* **232**, 1040 (1986).

10.1126/science.1168875

## BROWSINGS

**Audubon: Early Drawings.** Richard Rhodes, Scott V. Edwards, and Leslie A. Morris. Harvard University Press, Cambridge, MA, 2008. Boxed, 292 pp. \$125, £92.95, €112.50. ISBN 9780674031029.

These 116 early Audubons from the collections of Harvard University provide a perspective on the development of the artist's mature style. In accordance with established ornithological presentation of the time, most of the birds are stiffly posed in profile with little or no background. Some drawings, however, show their subjects in action [e.g., the whip-poor-will, *Caprimulgus vociferus*, in flight (1812), right] or include details of diet or habitat—approaches Audubon took to portray specimens as "drawn from Nature" in his monumental *The Birds of America*. The watercolors and pastels of the European species were executed in France in 1805 and 1806, and those of the North American birds date from 1805 to 1821. The captions discuss when and where Audubon collected the specimens. Morris, Rhodes, and Edwards contribute essays on the history of the drawings, the artist's life, and his science.



usually wild and remote islands and her striking images (below, *Thalassarche impavida* at its only nesting site, on Campbell Island) fill the first half of the book. A second section presents expert essays on albatross biology and conservation issues. The book concludes with short accounts of each of the 22

species, in which Fitter summarizes taxonomy, identification, population, distribution, breeding, food, and threats.

**Albatross: Their World, Their Ways.** Tui De Roy, Mark Jones, and Julian Fitter. Firefly, Toronto, 2008. 240 pp. \$49.95, C\$49.95. ISBN 9781554074150. Christopher Helm, London. £35. ISBN 9780713688122.

Renowned for their mastery of marine air and wide-ranging trips over the oceans, albatrosses may spend 95% of their long lives (which can extend beyond 60 years) riding the winds and waves. Being birds, the adults must return to land to nest and hatch the single large egg that they produce every other year. Traveling on a 13-m sailboat, natural history writer-photographers De Roy and Jones observed nearly all the albatross species at breeding sites. De Roy's descriptions of their visits to these



**Nature's Beloved Son: Rediscovering John Muir's Botanical Legacy.** Bonnie J. Gisel and Stephen J. Joseph (photographer). Heyday, Berkeley, CA, 2008. 280 pp. \$45. ISBN 9781597141062.

A plant press was among the few possessions Muir carried on his "thousand-mile walk" from Kentucky to the Gulf of Mexico in the fall of 1867. His collections from that journey have since disappeared, but specimens from earlier trips in Wisconsin, Ontario, and Indiana and later excursions in California, Alaska, and the southern states are now scattered among several herbaria and archives. In this volume, environmental historian Gisel traces the importance of Muir's "eternal fondness for plants" through his life and work. Her text incorporates numerous short samples of his correspondence and writings, and it is enhanced with examples of his field sketches. Joseph's 95 artistic, enhanced digital prints highlight a selection of Muir's botanical specimens (right, bent grass, *Agrostis exarata*, collected near Yosemite in 1875).

**The Buzz About Bees: Biology of a Superorganism.** Jürgen Tautz; photographs by Helga R. Heilmann; David C. Sandeman, translator. Springer, Berlin, 2008. 298 pp. \$39.95, £23. ISBN 9783540787273.

Whereas bee colonies were once seen as perfect societies of selfless workers and drones ruled by a queen, Tautz presents them as a self-organized, complex adaptive system that he considers "a mammal in many bodies."



This comprehensive introduction to honeybee biology (originally published as *Phänomen Honigbiene*) explores such topics as how bees obtain and communicate information about flowers, "whole-animal gametes," and the comb's contributions to the sociophysiology of the colony. The author has been honored for making research accessible to the public, and his lucid text will reward lay readers, apiarists, students, and professional biologists alike. The book is profusely illustrated with Heilmann's spectacular photos, which capture the full range of bee activities—including some, such as the living chains formed where combs are being built or repaired (bottom left), whose function remains unknown.

**A Field Guide to Surreal Botany.** Janet Chui and Jason Erik Lundberg, Eds. Two Cranes, Singapore, 2008. Paper, 76 pp. \$12, Sg\$14. ISBN 9789810810177.

With its delicate illustrations, Latin names, notes on ecology and life cycle, and seemingly aged paper, this appears to be an old-fashioned botanical treatise. What makes the imagined species so much fun is the extent of the details,

which draw the reader into plausible descriptions that suddenly take a turn to the bizarre. It is hard to pick a favorite, but contenders include the kvetching aspen (the only known tree with a mating cry, which resembles the call of a stilt's jay), the wind melon (which can levitate), the twilight luon-sibir (which has an "abyss-probability" center), and the bone garden (bottom right, also known as Adam's ribcage). The small book is a bit of lunacy sure to appeal to slightly twisted plant lovers.

