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The Great Experiment in Conservation: Voices from the Adirondack Park

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of past successful radiations that have since largely disappeared. Carroll's ample discussion reminds us that extinction was even more important in the dawn of amphibian evolution. In a sense, he revives a fascinating and diverse fauna that went almost completely extinct—except for a single lineage that eventually gave rise to the more than 6600 current species in the Lissamphibia.

The recurrent cross-references among the chapters on Paleozoic amphibians highlight a major advantage of this work: Unlike other volumes of its size and breadth, *The Rise of the Amphibians* was written by a single author, giving it a comprehensive and logical structure. The authority of the author and timeliness of the work are beyond question regarding these and earlier chapters on Paleozoic amphibians. However, Carroll's book has some weaknesses when it comes to discussing current phylogenetic knowledge of lissamphibian phylogeny and origins. Not until chapter 9 does he bring up the enigmatic origins of modern amphibians. Chapter 13, "The Success of Modern Amphibians," shows some phylogenetic trees of the Lissamphibia, but all of these date back to 2004. This active field of research, and our understanding of lissamphibian biogeography, has been revolutionized by more recent phylogenetic studies—studies that provided, for example, evidence for phylogenetic links between relict frogs from southern South America (genus *Calyptocephalella*) and the Australian myobatrachid radiation; for relationships between Indian (*Nasikabatrachus*) and Seychellean (Sooglossidae) endemic frogs; for a few amphibian lineages dispersing over the sea to oceanic islands; and for a Tertiary dispersal out of South America of bufonid toads, a group previously considered to be much more ancient. A summary of these findings as reported by San Mauro and colleagues (2005), Frost and colleagues (2006), Roelants and colleagues (2007), and other important contributors would have been welcome. I was disappointed by the absence of an evaluation of the calibration points often used to date molecular trees of amphibians. How reliable are these points, and which ones may have been overlooked that may be more suitable? For amniotes, numerous papers have discussed which calibration points are most suitable and reliable from a purely paleontological point of view; a similar discussion is overdue for amphibians, especially since there is a great need for calibration points from the Tertiary.

The last chapter of *The Rise of Amphibians* is devoted to "The Future of Amphibians," and presents a thorough summary of the current knowledge of amphibian declines, which may represent the forefront of a sixth mass extinction. Despite the alarming signals, this chapter—mainly written by invited author David Green—ends with an optimistic conclusion: Amphibians have proven to be tough survivors of at least three mass extinctions (at the end of the Permian, Triassic, and Cretaceous) and may survive the current crisis of biodiversity as well. It remains to be seen where evolution will drive them. Will some frog lineages overcome the restrictions of their *bauplan* and evolve back into creatures with long vertebrate columns and tails, maybe in subterraneous or aquatic environments where their mainly optical sensory system and saltatory locomotion are disadvantageous? Will there ever be marine amphibians? Will there be neotenic frogs in which the tadpoles become sexually mature, which may then become the ancestors of a radiation with an unprecedented *bauplan* among vertebrates? I would have loved to have read some unbridled speculations about the future of amphibians by one of the major experts of their past. Even without these, however, I enjoyed reading this fascinating book. It will become a landmark and standard reference in early amphibian evolution for years to come.

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INSIDE THE BLUE LINE

The Great Experiment in Conservation: Voices from the Adirondack Park. William F. Porter, Jon D. Erickson, and Ross S. Whaley, eds. Syracuse University Press, 2009. 640 pp., illus. $45.00 (ISBN 9780815632313 cloth).

The Great Experiment in Conservation is a big book about a big subject: a great experiment in conservation that has been running now for over a century inside the "blue line" drawn in 1892, which created the Adirondack Park. Two years later, state-owned lands within the park—most of which had been logged over, acquired for back taxes, and already made a forest preserve to protect timber and water supply—were declared "forever wild" and placed under constitutional protection. The Adirondack Park contains six million acres—it's three times the size of Yellowstone. More than one million acres are motorless wilderness, which amounts to one-quarter of the designated wilderness in the United States east of the Rockies. In 1970, in the face of mounting development pressure, New York State formed the Adirondack Park Agency (APA), giving it broad powers to control private land use within the park and unleashing decades of controversy. These two watershed moments, almost a century apart, have made Adirondack Park one of the great "crucibles of conservation" in American history.

The editors of *The Great Experiment in Conservation: Voices from the Adirondack*

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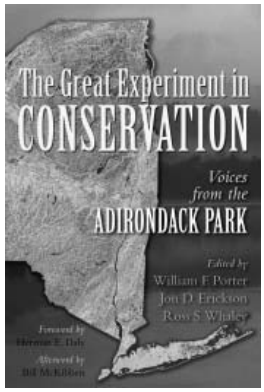
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Park have performed a heroic task in assembling 34 compact essays, along with their own introductions, a foreword by economist Herman Daly, and an afterword by Bill McKibben. The editors are deeply qualified: They have distinguished academic careers at the State University of New York College of Environmental Science and Forestry and at the University of Vermont, in addition to years of public service in the Adirondacks—they have been in the crucible themselves. William F. Porter is director of the Adirondack Ecological Center, Jon D. Erickson is editor of the *Adirondack Journal of Environmental Studies*, and Ross S. Whaley has served as chairman of the APA. The book's contributors are similarly credible, and include many of the leaders involved in Adirondack research, policy, and activism.

The book begins with essays on the natural and human history of the Adirondacks, moves through the development of the park's conservation institutions, and closes with voices from the controversies of the past four decades. The issues discussed are among the most fundamental in conservation: protecting nature (and particularly wilderness) versus fostering economic development (sustainable or otherwise), public versus private control of land use, and outside "top-down" control versus local "bottom-up" control of agendas and policy. Most of the essays are engaging and clearly written by people who are passionate about what is at stake.

The book contains remarkable juxtapositions that highlight both conflict and efforts at reconciliation. In one essay, Robert Glennon, former APA executive director, charges that regulations to control development have been compromised and undermined from the start, leading inexorably to a "land not saved"; in the next essay, local newspaper editor John Penney portrays those same regulations as outside, top-down control run amok, stifling local rights through the hypocritical application of nebulous standards. Later come essays by Whaley and another former APA chairman, Richard Lefebvre, who presents a guardedly optimistic picture of gradual movement toward inclusion and common ground, though hardly a consensus.

A thoughtful essay by forester Roger Dziengeleski outlines the pressures on large-scale forest industries in the park: parcelization of holdings, past overcutting that has reduced the forest's productivity, and environmental regulations



that make it difficult to survive global competition from regions where such regulations do not exist. This, he fears, is leading to the gradual extinction of the industry. Will the Adirondack Park inevitably become a six-million-acre wilderness preserve? Such an outcome might be celebrated by wilderness advocates such as Elizabeth Thorndike, who argues that bringing these large private holdings into the wilderness fold through some combination of public acquisition and conservation easements is essential to consolidating the fragmented public forest preserve that exists today—though she is a bit guarded on what "small-w wilderness" on such private lands would mean. Would it include timber harvesting? Motorized vehicles? She is followed by a noteworthy contribution from seasoned wildlife biologist Rainer Brocke, who advocates a "new wilderness paradigm" in which not only conservation easements but the continuation of large-scale wood harvesting on forest industry lands is welcomed to create productive early successional habitat. Brocke values the aesthetic qualities of unmanaged old growth, but he argues that wild areas alone cannot sustain viable populations of some species within the park, partly because the Adirondacks are isolated from the broader Northern Forest bioregion by waterways and developed lands on all sides.

This brings us to perhaps the most interesting question in the book: To what extent is the Adirondack Park a fascinating but isolated case, cut off by unique political and physical boundaries? Is it a model for other regions? *The Great Experiment in Conservation* is a great success at painting a picture of the Adirondacks as a distinctive place, and at illuminating the challenges that face the park and its residents. Much more difficult is the question of what significance these issues have for other regions beyond the blue line—and not just other parks and formal conservation areas around the world, such as the Abruzzo Park in Italy and others in developing countries. The book does suggest some things about the future of other rural regions facing similar pressures and uncertainties.

The challenges facing the Adirondack Park are not that different from those of a much larger forested region—in particular, the Northern Forest ecoregion stretching east through New England, north into Canada, and west to Minnesota. As the authors point out, many of the hardships confronting park residents are not caused by restrictions placed upon them by the APA, as much as those may rankle some. Across the region the challenges include the decline of the forest industry, even as it continues to shape the ecological and social landscape, coupled with the lurking promise (or threat) that a sustained rise in world energy prices might invert the situation by reviving the forest industry (e.g., for the large-scale production of biomass fuel). Similarly, the entire region, along with many other rural areas, endures low standards of living and losses of jobs and population—yet at the same time (at least in the most scenic districts) also the promise or threat of a continuing influx of affluent ecotourists and vacation homebuilders, who bring economic stimulus but also an altered landscape and way of life, the disappearance of affordable housing, and costly demands for improved services.

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