

Built for Speed: A Year in the Life of Pronghorn

By John A. Byers. 2003. Harvard University Press, Cambridge, Massachusetts. 230 pages. U.S. \$24.95 Cloth.

This is not a book about NASCAR racing cars. Rather, as Preface author Rick Bass writes, "[This] is the kind of work for which I have the greatest respect: watching one animal for hours each day, days upon end ... regardless of the conditions." Indeed, author Byers began his continuing intensive observations of pronghorns on the National Bison Range (NBR), in the Flathead Valley of western Montana, in 1981. Although established primarily to save the bison from the brink of extinction, the NBR inadvertently was important to the salvation of the pronghorn, perhaps the most charismatic of big game animals inhabiting the American Great Plains.

Author Byers explains that an objective in writing his book "is to convey both my intellectual and my aesthetic appreciation of the species", clearly one that continued to amaze and delight him. Also he hopes to convey an impression of what it is like to conduct a long-term field research project in North America, largely focused on a single species.

Modest in size, $5\frac{1}{4}$ (147 cm) \times $7\frac{1}{4}$ (185 cm) \times 1" (2.5 cm), the book contains much information about the behavior and social organization of this unique ungulate, so renowned for its speed, endurance, and eyesight. Thirteen chapters intimately describe the year-round activity of the pronghorn, especially its individual and group behavior in relation to biological processes and ecology.

The book is written in a very readable, semi-popular style, supported by chapter-end notes, literature citations, and intimate photographs. Byers is unusually gifted in sharing the beauty and wonder of the pronghorn and its ecology with his readers.

His behavioral and social studies of pronghorns are largely about individuals and groups, made possible by ear-tagging fawns or by recognizing subtle morphological differences among individuals. In this manner, Byers and his students were able to follow the fortunes and fates of individuals such as GY (green tag in the right ear, yellow tag in the left) or BUG (a female that had a small spot of black hair, resembling a bug, on her nose). Their studies clearly show that the social ranking and dominance of pronghorns, males and females alike, is established early in life according to birth sequence.

Byers sometimes thinks and writes a bit outside the conventional biological box. He colorfully describes the pronghorn body as having a "four-chopsticks-in-a-bratwurst" appearance. Noting that a running antelope can attain a speed of 60 mph by strides of 29 feet, this rate translates into covering the length of a foot-

ball field in $3\frac{1}{2}$ seconds with slightly over 10 strides. He tells that the comparably rapid growth of pronghorn young is attributable to the energy content of the nursing mother's milk, which is about twice that of cow's milk and 2.5 times that of human milk.

We further learn, for example, that the 30-square mile NBR supports about 258 tons of bison, 44 tons of elk, 17 tons of white-tailed and mule deer, 8 tons of mountain goats, and 5 tons of pronghorn, and that the grasshopper biomass of 412 tons, or about 120 percent the tonnage of big herbivorous mammals.

Unfortunately the author often fails to give times and dates of his many interesting observations. Indeed I was left with many questions. For example, he intimately describes the birth of one fawn but then fails to describe that of its twin. While the entire refuge is fenced, are the pronghorns he studied totally contained within it year-round as are the bison? Is the pronghorn population cropped annually by trapping and removal, again as are the bison? How do pronghorn population numbers fluctuate from year to year, and in response to what cause?

Further, how do Byers' interesting observations of individuals and their behavior relate to or influence the overall pronghorn population of about 120 on the NBR? Perhaps such basic concerns are beyond the rather narrowly stated scope of research reported upon in this one work, and may be addressed in one or more of his seven cited publications, and particularly in his monographic *American Pronghorn: Social Adaptations and the Ghosts of Predators Past* (University of Chicago Press, 1997).

With his emphasis on individual and group behavior, it seems puzzling why he does not credit David W. Kitchen's work *The Social Behavior and Ecology of the Pronghorn* (unpublished Ph.D. dissertation, University of Michigan, 1972) also undertaken on the NBR. Byers similarly overlooks R. E. Autenreith and E. Fichter's study, *On the Behavior and Socialization of Pronghorn Fawns* (Wildlife Monographs 42. 1975) as well as Arthur S. Einarsen's pioneering monograph, *The Pronghorn Antelope* (Wildlife Management Institute, 1948), all of which contain much behavioral information.

While I found *Built for Speed* interesting and informative reading insofar as individual and small groups of pronghorns are concerned, it is likely to be disappointing to those having a broader interest in pronghorns, particularly in their population dynamics and management.

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