The science of How to Tame a Fox examines basic Darwinian artificial selection, told through the audacious transformation of feral fur foxes into loving house pets through selective breeding. The particular fascination of the story, however, comes from its characters, history, and setting and from the layers of scientific understanding of the experiment. The work started in 1950s Russia, when the cosmopolitan and charismatic Dmitry Belyaev, a geneticist working for the Russian fur industry, partnered with Lyudmila Trut to model the thousand-year process of canine domestication in a few generations. Belyaev sought to “basically turn a fox into a dog-like animal, [so that] he might solve the long-standing riddle of how domestication comes about. Perhaps he would even discover important insights about human evolution.” Over the next several decades, Belyaev, Trut, and their team took foxes that were so fearful and aggressive that keepers had to approach the cages wearing protective two-inch-thick gloves and carefully bred them to be lovable, loyal domestic companions.

Trofim Lysenko, the Stalin-appointed director of the Soviet Union’s Academy of Agricultural Sciences, conducted a “vehement crusade against genetics research,” and scientists who displeased him were sent to prison camps, forced to resign, or even killed. It was in this setting that Belyaev set out to solve the “great outstanding mystery of domestication,” and the subsequent work unfolds in the context of the political and scientific upheavals of the mid-20th century. Particularly fascinating is how these researchers’ understanding developed within the context of increasing recognition of ethology as a “real” science through the works of E.O. Wilson, Jane Goodall, and others.

The many aspects of physiology discussed in this retelling of the project are intriguing, as are the ingenious experimental designs carried out by Belyaev and Trut, in sometimes astonishingly primitive conditions on breeding farms in remote Siberia. The authors discuss the selective breeding experiments in the light of genetics, animal behaviors such as imprinting and play, behavior, the physiology of breeding, and even human evolution. Among the most fascinating experiments investigated the source of fox pups’ increasing tameness—genetic determination or learning through the mother’s behavior? Belyaev and Trut addressed this question through “cross-fostering,” in which eight-day-old embryos from tame mothers were implanted in aggressive mothers to be whelped and raised, and vice versa. The results were powerful: tame offspring of aggressive foster mothers interacted positively with humans, even when their foster mothers punished them for their behavior. The researchers were even able to compare the behavior of tame and wild pups in the same litter, identifying the tame pups through their characteristic coloration.

*How to Tame a Fox* provides a fascinating glimpse of the ambitious and long-term work of a team of scientists investigating, innovating, and persevering. The book has appeal for the independent reader, as well as great potential for use in the biology classroom. Each iteration of the experiment offers a glimpse of science in progress, with the potential for examples and discussion. Although its flow can seem scattered and long-winded at times, the book is well worth the read for the science, and scientific history, it presents.

**TABLE BOOKS**


It is a rare lover of the natural world who can resist the beauty, elegance, and . . . well . . . the enigma of owls. And thus, inherently, there are few who will be able to resist the fascination, charm, and beauty of this lovely book. Oversized and lavish, with exquisite photographs, *The Enigma of the Owl* brings the owls of the world to life in front of your eyes.

The book opens with a short introduction examining both the history and the natural history of owls. A discussion of owls as a group informs the reader of the two owl families and surveys both living and prehistoric species (including an extinct barn owl that stood a meter tall). Basic general owl anatomy is described—distinguished, in particular, by large eyes for binocular vision while hunting
and, less obviously, by keen hearing, aided by the distinctive feathered facial disc of most species. A brief presentation of owl ecology examines predator-prey interactions, as well as behavioral interactions of owls in courtship, mating, and brood rearing. Finally, the authors address owls and people. In folklore, these birds have been beloved. The Ainu people of Japan revered owls as “the god that protects the village.” In Jamaica, tradition states that the presence of an owl outside a house requires recitation of an incantation to protect the house’s occupants. Human ecological influences, such as deforestation, commercial agriculture, power lines, and poisoning, are linked to the health of both species and ecosystems.

The bulk of the book is devoted to species descriptions, grouped by biogeographic region (North America, Central/South America, Eurasia, etc.). Each owl is represented by several pages of text and glorious photographs. Physical descriptions are presented in careful detail, along with ranges, calls, mating and nesting habits, hunting behavior, and conservation status. As interesting as the text is, the photographs make this volume a joy. They illustrate the grace of a soaring barn owl, the quirky charm of a quizzical fledgling burrowing owl, the searing orange eyes of a Eurasian eagle owl, and so much more. It is unfortunate that this review must be presented in words rather than images, as the photographs make up the story “Owl” are without exception pleasing, beautiful, and informative.

The Enigma of the Owl has great potential as a science reference for this fascinating order, Strigiformes. Furthermore, it has the potential to inspire future nature artists and photographers. And, without a doubt, this book will become a treasured addition to the library of any ornithologist or bird lover.