

## Book Review

**A Feathered River Across the Sky: The Passenger Pigeon's Flight to Extinction.** Joel Greenberg. 2014 Bloomsbury USA, NY. 289 p.

Why should the Central Valley Bird Club Bulletin feature a review about a book on the biology and extinction of the Passenger Pigeon (*Ectopistes migratorius*), a bird not ever recorded in the Central Valley, much less elsewhere in California? I'll argue that it is worth our attention because it is a gripping although tragic story that offers lessons for bird conservation issues we face here today.

Most bird people are generally familiar with the highlights of the Passenger Pigeon's status and demise, but this book lays out the stunning story in detail. We all know the species was abundant, but how numerous? Greenberg provides ample historical information and resulting estimates that indicate an amazing North American population total of 3 to 5 billion, by far the most numerous bird species in North America. The contemporary descriptions of flights are simply astounding. For example, as late as 1860, a single flock flew over in a group a mile wide, continuously for 14 hours, which was later estimated at over 3.7 million birds. Dense nesting aggregations were reported as occurring over 850 square miles.

How could a species so amazingly abundant disappear? The book details the causes, which are shocking in their barbarity and widespread acceptance. While habitat loss due to the clearing of the eastern hardwood forest certainly played a role, the loss is clearly shown to result from unrelenting commercial and public exploitation.

The Passenger Pigeon's extinction occurred in era before the advent of the science of wildlife management and of laws and regulations to conserve game species' populations through hunting regulation--or for that matter any widely held environmental stewardship ethic. The pigeon's great abundance attracted commercial operations that directly harvested hundreds of millions of dead birds for shipment to meat markets and live birds for sport pigeon shoots. Whole communities would abandon normal activities when pigeons arrived nearby to roost or nest, and thousands of locals and commercial meat dealers would partake of a subsequent slaughter. The harvest occurred both during and outside the nesting season, disrupting or destroying the reproduction of millions of birds annually. Improved communications and transportation only increased the ability of the exploiters to learn about and access areas where the bird aggregated. While the species was in rapid decline for many years, it still seemed abundant to people, until finally in the 1880s, the wild population was eliminated. A pathetic small captive

population finally died out with the last individual, Martha, in 1914, just 100 years ago.

What is relevant about this story today? Clearly, the days of this sort of unregulated commercial exploitation of gamebirds is far in the past. A conservation ethic that was absent has been replaced by strong concern by sportsmen and the public over the health and plight of species and their habitats. Yet, there are valuable lessons that apply to species conservation today. Perhaps the most noteworthy application is to our own Tricolored Blackbird (*Agelaius tricolor*), which shares with the Passenger Pigeon the characteristics of nesting in large aggregations.

Clearly, one message from *A Feathered River Across the Sky* is that complacency can lead to disastrous consequences. At the time, the public and their representatives refused to believe those few people who attempted to argue the need for conservation measures for the Passenger Pigeon. The prevailing belief was that the pigeon was just too abundant to be affected by human activities. A second message is the simple one that even an abundant population cannot survive long if it is not reproducing at a sufficient rate to offset natural or especially human-elevated rates of mortality.

The application of these lessons to the Tricolored Blackbird are striking. Review of historical records and the tri-annual surveys (in which many CVBC members have participated) has documented that the species has been in a long-term and continued population decline through 2014 (Graves et al. 2013, Kyle and Kelsey 2011; Meese unpub. data). Recent research has shown that the population has suffered low reproduction during an extended period (2006-2011) due to disruption of large nesting colonies by agricultural harvesting in the San Joaquin Valley and drought-related reduction in insect supplies (Meese 2013, Meese unpublished data). Shooting conducted to control blackbird and starling depredation of rice crops in the Sacramento Valley also may be resulting in the loss of many adult Tricolored Blackbirds, which could affect breeding populations (R. Meese pers. comm.) but remains poorly documented.

The Tricolored's decline has continued notwithstanding considerable long-term attention by state and federal agencies and conservation groups. The continued decline demonstrates that largely voluntary and piecemeal measures enacted to date appear to be inadequate to address the problem.

Greenberg's goal in so thoroughly documenting the demise of the Passenger Pigeon was to warn of the continued threats of species extinction. He and others have established a confederation of organizations, *Project Passenger Pigeon*, "to use the centenary [of Martha's death] as a teaching moment to inform people about the Passenger Pigeon story and then to use that story as a portal into consideration of current issues related to extinction, sustainability, and the relationship between people and nature."

If we heed this warning, a priority action that we in the birding and conservation community should take is to move beyond documenting and discussing the Tricolored Blackbird's status and act, as citizens, conservation group members, and individuals, to help secure the species status before it joins the disgraceful history occupied by the Passenger Pigeon. Conservation opportunities may be surfacing soon as the results of the 2014 statewide Tricolored Blackbird survey are summarized and disseminated.

#### LITERATURE CITED

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