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Game Farms for Wildfowl

Waterfowl hunting was a source of sustenance, recreation, and occupation on the east coast through the formation of the nation as we know it. After the Civil War, there was a major shift in waterfowl hunting from sustenance to sport and business. As there was rapid urbanization, the market arose in cities such as New York City and Boston for waterfowl as a luxury in restaurants. People of means took up waterfowl hunting as an activity for their leisure time. After a short time, waterfowl populations were decimated. The Migratory Bird Act prohibited the market for waterfowl and this, along with other conservation plans, helped to restore some of the wild populations (Eshelman et al. 2004). Bag limits and other regulations now ensure that species are not overhunted. Game farms for mallards (*Anas platyrhynchos*) and hunting preserves rose to popularity so people with the means to do so could shoot farm raised birds, without touching wild populations. The ring-necked pheasant (*Phasianus colchicus*), native to Asia, was introduced to Europe in the mid 16th century by the Romans. Since then, pheasant hunting for sport has been occurring. Gamekeepers preserved the birds by managing nests. It wasn’t until the popularization of pheasant shoots by the royal family and the invention of the breech loading shotgun that made farm raised pheasants in demand. Pheasants were not successfully introduced to North America until the late 1800s. The first hunting season for pheasants was in Oregon in 1892, 50,000 birds were harvested in 75 days. They spread throughout the Midwest quickly, experiencing a decrease in population size with the destruction of grasslands for agriculture. With grassland restoration and maintenance programs in place, pheasants have thrived in many states since then. The exotic beauty of the birds, the history of the hunt, and the culture surrounding pheasants brought pheasants to have a market in places that they are not able to thrive as successfully, generating a considerable market for game farm raised birds (Paulson 2014). Though each bird provides a drastically different service to the environment and hunting community, both ring-necked pheasants and mallards are released across North America. Each distinct species originating from the game farm setting has its own set of complications and rewards.

Duck hunting was often seen as favoring the wealthy, as hunting preserves and tower shoots cost a small fortune to participate in. Surprisingly large numbers of these farm raised mallards escape into the wild, benefiting hunters on private and public lands, as well as bolstering wild mallard populations. Many survive and begin reproducing with wild mallards. This may, on the surface, look like a potential solution to any population decrease issues, though the reality of it is this may be the very reason populations are declining. Mallard breeding populations are currently experiencing a rapid decline in the past 20 years. This is only occurring in the Atlantic flyway (NYS DEC 2018), however, and populations from central and western North America seem to be stable (Schummer 2022). The greatest speculation is that breeding populations are decreasing in size due to integration of game farm genetics. Despite game farm mallards and wild mallards looking the same on the surface, there are many miniscule morphometric and behavioral differences that make them less adapted for life in the wild (Lavretsky). The wild mallard and the American black duck (a similar species of dabbling duck) have about 1.5% difference in their genome, while wild and game farm mallards are approximately 5-10% genetically different, theoretically making them distinct enough for speciation. Currently in eastern United States and Canada, 2% of mallards in the wild have pure wild mallard genetics. 2% of mallards have pure game farm genetics, with the remaining 96% being some level of game farm-wild mallard hybrid. Wild mallard populations in western United States are currently experiencing the integration of game farm genetics, while not as prevalent as the eastern US, more so than previously estimated (Schummer 2022).

Morphometric differences include game farm bills to be more goose-like, which refers to a shorter, wider, and taller bill than that of a wild mallard. Perhaps due to these morphometric differences, game farm mallards of both sex have significantly lower feeding efficiencies compared to wild mallards. Females, especially have less than half the feeding efficiency of a wild hen. Feeding efficiency is especially important in hens because of the stress of reproduction. Game farm hens then tend to take more time and more stress to build up lipid stores to lay a clutch of eggs. They are away from the nest for longer periods of time for slower feeding, which increases the risk of predation of the eggs. It then takes this hen double the time and effort to obtain enough lipids to produce another clutch of eggs (Schummer 2022). This lack of efficiency may lead to higher hen mortality and less successful reproductive episodes in the wild, perhaps causing wild populations to have a subsequent loss in feeding efficiency due to hybridization and gene flow.

One of the main arguments against game farms for pheasants is the aspect of “fair chase.” As stated in our North American Model for Wildlife Conservation, wildlife can only be killed for a legitimate purpose (Gurarie 2022). One might argue that it is not “fair chase” to release a pen-raised bird with practically no survival skills, just for some to be shot and the rest to most likely perish shortly after release. Comparing survivability of pen-reared birds to wild birds, pen-reared pheasants in certain places do very poorly post release, with nearly 0.0 survivability. Wild female pheasants are eight times more productive and ten times more likely to survive until the nesting season (Musil and Connelly 2009).

Unlike the problem with mallards, released pheasants do not alter wild populations in North America, as they are not a native bird. This does, however, raise the question of potential competition with native upland birds, such as grouse and turkeys. No evidence has shown any ill effects of released pheasants on these native birds, as there is not a huge overlap in niche space and in many locations, these pheasants do not survive long enough to provide any real competition. In the United Kingdom, however, there have been population declines in their native grey partridge, though for reasons other than simple niche overlap. These released pheasants act as a reservoir species and are transmitting a caecal nematode (*Heterakis gallinarum)* which parasitizes the partridge. With the added pressure of illness, the released pheasants seem to be out competing with grey partridges, causing a decline in populations (Prenter et al. 2004). While they may not cause any direct effects on native upland birds, there is a risk that released pheasants may spread diseases or parasites.

Many may not agree that pheasants should be released, as they are a non-native species. On the contrary, this non-native bird is the most widely hunted upland game bird in North America (Hunting in America 2018). Without a doubt, if a person does not grow up in a hunting household, it is much more difficult and unlikely for them to start later in life. Pheasant hunting is one of the easiest types of hunting to get into and have access to. Some states have pheasant releasing programs on state land for the public to hunt (NYS DEC 2022). Pheasants released on hunting preserves or at tower shoots disperse widely so people within a few mile radius will have hunting opportunity. It does not require extensive equipment and is fairly easy to pick up on. Unlike most other types of hunting, mid to late day is best for pheasant hunting, so no early rising is necessary (Harpole’s Heartland Lodge). Pheasant hunting gives many young hunters a good chance to participate in hunting and build lasting memories with friends and family (Schummer 2022).

Pheasant and duck hunting are important culturally and drivers of conservation. Due partially to taxes hunters pay on licenses and equipment, billions of dollars go towards habitat and population conservation and preservation. Duck stamps alone have raised $1.1 billion towards wetland conservation (Hunting in America 2018). The presence of these species and the drive to continue observing and hunting them drive participation in organizations such as Ducks Unlimited, Inc. and Pheasants Forever, which purchase and restore millions of acres of wetlands and grasslands. In an indirect way, game farms for wildfowl may encourage new hunters to take up the endeavor, as well as the continued purchases of licenses, duck stamps, and equipment.

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