***Game farms for wildfowl*:** What are arguments for and against farming and releasing waterfowl & (non-native) pheasants?

**Intro/Thesis statement**

Traditionally, game farms have existed and released gamebirds and waterfowl for sport hunters to shoot for centuries. Only now are the ecological and ethical dilemmas they present being realized. The introduction of game farm-raised wildfowl and gamebirds is both unethical due to their poor survival rate and detrimental to the genetics of wildfowl populations. For mallard ducks of the Atlantic flyway, hybridizing with birds released from game farms has led to a drastic drop in population, as it is down by nearly 40% in New York and by nearly 29% for the entire Atlantic seaboard (McPhaul, 2018). It has recently been found in genetic analysis that mallard populations in the Atlantic Flyway in some states such as Kentucky showed that nearly 100% of the “wild” birds had a haplotype consistent with the haplotype found in domestic mallards, proving that there is significant interbreeding to the point where the wild type was nearly completely eliminated (Lavretsky et al., 2019). Domestic mallards that are raised on game farms have several features that distinguish them from wild mallards. They have a goose-like broader/taller beak shape, with bill lamellae that are spaced farther apart than wild mallards which makes it easier for them to eat large food such as pellets or corn (McPhaul, 2018). These features are great for living on a farm, but in the wild result in a lesser feeding efficiency for aquatic invertebrates and a reduced ability to successfully migrate and reproduce. Since these traits have mixed with the Atlantic flyway stock of mallards, the population has been decreasing overtime as they are maladapted to the conditions in the wild.

Non-native birds like ring necked pheasants and chukar partridges are also frequently stocked by both state conservation departments and private properties. These birds are pen raised in game farms, and as such become used to humans and are fed stationary food such as corn and gamebird feed. Due to them being raised in these conditions they become more docile and easier to hunt by both humans and animals, resulting in a very low survival rate when they are released. Ring-necked pheasants released from game farms mostly die due to non-human predation, with only around 4% of the released pheasant’s deaths being related to human hunting (Musil & Connelly, 2009). An abundance of state funding goes into releasing these birds for hunters to chase in order to get new hunters into the sport and generate revenue for conservation through the sale of hunting licenses and supplies, but as only around 4% of the released birds are being taken by hunters, the amount of effort spent on stocking pheasants for state programs may not be worth it. As pen-raised game birds are less reactive towards humans and other predators and are often only released one day to a week before hunting, this ensures that hunting released gamebirds isn’t true fair chase since they do not have time to adapt to their environment or see humans as a threat.

Game farms and other animal raising facilities are famously associated with the spread of diseases due to the high amount of animals in a small area and the generally unideal conditions they provide. As game farms are releasing animals into the wild to directly interact with wild populations of their species, the concern for the spread of disease is very real. It has been found that duck farms have a high prevalence of duck hepatitis A virus, which is considered fatal to most ducks (Soliman, 2015). Duck hepatitis A and other similar detrimental diseases can be present in a population of birds raised on a game farm, where the birds are eventually released into the wild. Once these birds interact with ones in the wild population, the diseases may spread and end up killing many of the wild birds.

**Background**

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 2004). Bag limits and other regulations now ensure that species are not overhunted. Game farms and hunting preserves rose to popularity so people with the means to do so could shoot farm-raised birds, mostly mallards (*Anas platyrhynchos*) 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, the hunting of pheasants 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 (Jones). 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).

**Main Points**

* Introduction of domestic animals into the wild population results in breeding between the two, and adoption of domestic traits into the wild population. As a result of extensive releases of domestic animals for hunting the genomes of wild populations have been extensively modified and the animals with domestic traits have a lower survival rate. A prime example is the mallard duck, which is in a steep population decline.
* Birds raised on game farms are conditioned to being fed, are used to humans, and have a reduced reaction to predators. As a result fair chase isn’t possible with pen raised birds.
* As pen-raised birds have a reduced ability to avoid predators, many of them are taken out by predators before hunters can even access them. They are “released to die” whether it be by humans or wild animals, but the survival rate of pen-raised gamebirds and waterfowl is incredibly low.
* Game farms are reservoirs of disease, and can harbor avian influenza, duck virus hepatitis, avian cholera, salmonella, parasites, and a host of other diseases that can heavily affect wild populations once the domestic birds are released to be hunted.

**Conclusion**

While game farms and releasing pen-raised gamebirds and waterfowl help to generate an interest in hunting. It also gathers money for conservation through the sale of hunting licenses and supplies. These effects of releasing the birds are detrimental to the genetics and health of the wild population and unethical to the released birds.

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**Planning and logistics**

* Communicate and share info through imessage, and work on shared google doc
* Responsibilities:
  + Intro-Olivia O’Hara
  + Main points - Abby/Macie
  + Conclusion- Conner
  + Interview(s) and background-Alexis
* Due dates:
  + Interview(s) done by Nov 22

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