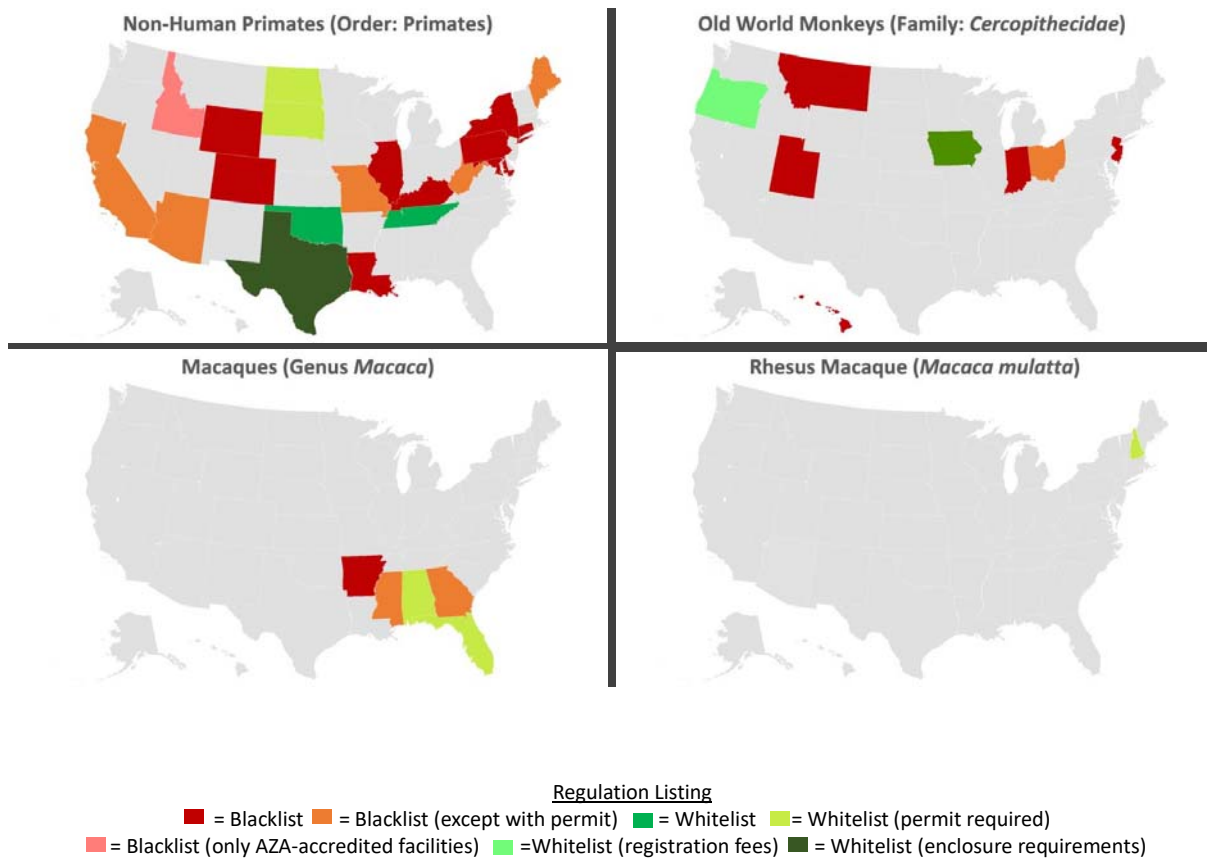


## **Appendix S1: Inconsistent Regulation of the rhesus macaque and monk parakeet across US states**

Since 1975, Federal Quarantine Regulation 42 CFR § 71.53 has prohibited importation of non-human primates as pets to protect US residents from severe infections, including viral hemorrhagic fevers (e.g., Ebola virus disease), Mpox, yellow fever, and B virus. Old world primates of the genus *Macaca* are frequently infected with macacine herpesvirus 1 (McHV-1, B-virus), which can be transmitted to humans if they are bitten or scratched by an infected animal, or they have contact with the eyes, nose, or mouth of an infected animal (Ostrowski et al., 1998; Wisely et al., 2018). Despite prohibitions on the importation of *Macaca* as pets into the US to protect public health, rhesus macaques are bred and sold as pets within US borders (Seaboch & Cahoon, 2021). There is no documented evidence that pet rhesus macaques have transmitted B-virus to owners, but zoonotic risks remain, especially since adult macaques bite to establish social dominance (Ostrowski et al., 1998). B-virus infections cause fatal encephalitis in humans if left untreated, and B virus has been detected in pet macaques that have bitten or scratched humans and in feral macaque populations (Ostrowski et al., 1998; Wisely et al., 2018). Rhesus macaques are also successful invaders in the US owing to plasticity in their habitat requirements, and have destroyed red mangroves (*Rhizophora mangle*) and adversely impacted bird populations through nest predation (Anderson et al., 2016). Although 28 states (54.9%) implemented laws pertaining to trade in primates or the Family *Cercopithecidae*, only New Hampshire regulated the rhesus macaque at the species level (Figure 1). Florida, in which the rhesus macaque has established an invasive population that is infected with B-virus (Anderson et al., 2016; Wisely et al., 2018), and Alabama whitelisted the genus *Macaca* (permits required), but the neighboring states of Georgia and Mississippi blacklisted *Macaca* without appropriate

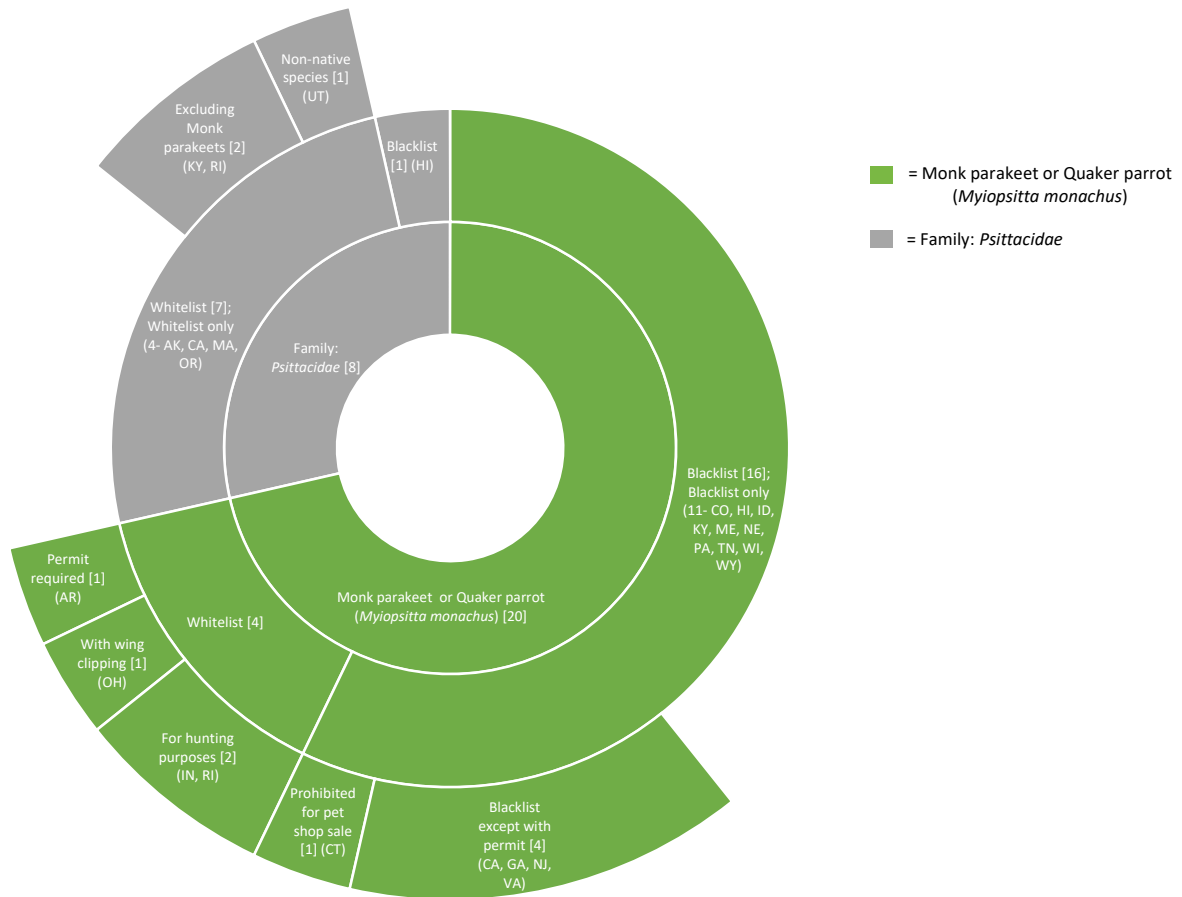
permits. Based on our review of state laws, the rhesus macaque is whitelisted in 10 states (19.6%, usually with appropriate permits, enclosures, or fees) and is not regulated in 17 states (33.3%). Inconsistent regulations allow the rhesus macaque to be traded across the US, and facilitate the acquisition of the rhesus macaque in states where blacklists apply.



**Figure 1.** States that implemented laws that apply to trade in the rhesus macaque (*Macaca mulatta*), United States, February 2023. Blacklists and whitelists were implemented at the order, family, genus, and species levels.

The monk parakeet is one of the most successful parrot invaders globally, with growing populations across the US (Avery et al., 2008; Russello et al., 2008). In addition to outcompeting

native birds for resources in urban areas (Rodríguez-Pastor et al., 2012), monk parakeets use energy power structures as nesting substrates, resulting in an estimated 1,027 power outages costing \$585,000 in south Florida in 2001 (Avery et al., 2002). Nest removal in south Florida cost \$1.3 to \$4.7 million from 2003 to 2007, and other states are also faced with power disruptions and nest removal costs owing to the establishment of monk parakeets (Avery et al., 2008). Although the Federal Wild Bird Conservation Act prohibits the importation of monk parakeets into the US, monk parakeets are popular cage birds and are widely bred and sold as pets in the US (Russello et al., 2008). In total, 20 states (39.2%) implemented regulations that specifically referred to the monk parakeet, with 16 states blacklisting the monk parakeet (Figure 2). Connecticut, in which one of the largest populations of monk parakeets is found (Rossello et al., 2008), has prohibited the sale of monk parakeets in pet shops. California and Kentucky whitelisted *Psittacidae* but blacklisted monk parakeets. In total, 27 states (52.9%, including Florida) did not specifically mention *Psittacidae* or monk parakeets in their laws, despite the costs of removing monk parakeet nests from electric utility structures in multiple states (Russello et al., 2008), thereby facilitating continued interstate trade in the monk parakeet.



**Figure 2.** States that implemented laws that apply to trade in the monk parakeet (*Myiopsitta monachus*), United States, February 2023. Blacklists and whitelists were implemented at the family and species levels.

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