

## Oklahoma High School Animal Sports Team Names and the Potential for Conservation Connection

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**Abstract:** *The way humans view animals has long-term implications for the conservation of species. Negatively viewed animals receive less funding, less media attention, and less public support than positively viewed animals. However, negative perceptions of animals can be changed through connections to conservation. One path of conservation connection that has been underutilized is joining conservation messaging to animal sports team names and mascots. A total of 475 Oklahoma high schools had sports team names identified, with 272 being animal-themed. Vertebrates were more common than invertebrates, with mammals, birds, and even-toed ungulates the most common groups of animals chosen. The most common animal overall was the tiger (*Panthera tigris*) followed by the domestic dog (*Canis familiaris*). Future studies should focus on temporal and regional patterns in sports team names and mascots to better understand naming patterns. Additionally, we provide guidance on raising conservation awareness using sports team mascots.*

**Keywords:** mascots; tiger; bison; bulldog; species bias; athletics; sports fans; zoos

### Introduction

The way humans view animals has long-term implications for the conservation of species (Kellert 1993, Caro et al. 1994, Ceriaco 2012, Estren 2012). Negatively viewed animals receive less funding (Ceriaco 2012, Collény et al. 2017), less media attention (Clucas et al. 2008, Geest et al. 2021), and less public support (Liordes et al. 2017) than positively viewed animals.

Negative associations of animals can change by having members of the public connect to conservation through everyday actions (Clayton et al. 2009). Connections to conservation can also increase overall involvement in animal species conservation (Lindsey et al. 2007, Skibins et al. 2012) and promote positive environmental behavior (Kals et al. 1999, Tam 2013, Clayton et al. 2011). Connections to conservation can occur in a multitude of ways including through backyard bird feeding (Cox et al. 2016), community science participation (Lewandowski and Oberhauser 2017, Newman et al. 2017, McKinley et al. 2017), as well as



visiting local zoos and aquariums (Skibins and Powell 2013, Howell et al. 2019, Clayton et al. 2009, Klesspies et al. 2022) with stronger connections associated with stronger conservation concerns (Clayton et al. 2014). However, an understudied path of connection to conservation is through the joining of conservation messaging to local sports team names and mascots (Baltz and Ratnaswamy 2000, Sartore-Baldwin and McCullough 2019).

Even though mascots such as Smokey the Bear have a long history of use with conservation campaigns (McDaniel et al. 2006, Brown 2014, Brown and Ponsonby-McCabe 2014, Hayden and Dills 2015), connecting sports team mascots to conservation is believed to have only begun in 1999 (Baltz and Ratnaswamy 2000, Elbein 2016). Professors at the University of Missouri Columbia joined together to create a campaign called *Mizzou Tigers for Tigers* to raise awareness for tiger conservation (Baltz and Ratnaswamy 2000, Elbein 2016). Since then, the program has grown into a national association called the *National Tigers for Tigers Coalition* of loosely grouped universities connecting their team names or mascots to conservation campaigns. These campaigns have successfully lobbied for an increase in appropriations for Fish and Wildlife Service as well as legislation such as the Wildlife Trafficking Enforcement Act (Elbein 2016).

The *National Tigers for Tigers Coalition* chapter out of University of Alabama called *Tide for Tusks* has raised thousands of dollars for African elephant conservation in Tanzania (Elbein 2016). Tufts University took the idea further creating a larger conservation program called *Jumbos for Jumbos: Tufts Elephant Conservation Alliance* that brings together faculty from multiple disciplines to promote outreach, research, teaching, courses, and providing scholarships on elephant conservation entirely because the university's mascot is Jumbo the elephant (Tufts Elephant Conservation Alliance 2023).

Other universities such as Baylor University incorporates conservation as one of the three guiding pillars of the university and became the first university to have their campus habitat for their live bear mascot accredited by the American Association of Zoos and Aquariums (Baylor 2021). The University of Houston, whose mascot is a mountain lion, partners with the Houston Zoo annually to celebrate the campus legend of mountain lions guarding class rings while promoting conservation of mountain lions in Texas (Houston Zoo 2019, Galvin 2022). However, despite the success stories of universities connecting their sports programs to conservation messaging and action, many chapters of the *National Tigers for Tigers Coalition* have grown smaller or entirely disbanded (Elbein 2016). There are few, if any, known examples of primary or secondary education institutions connecting conservation messaging to sports team names or mascots.

Although often used by the public interchangeably, sport team names, mascots, and logos are not synonymous (Zeitler 2018). Sport team names are the official name of a team (ex: St. Louis Cardinals), the mascot is a three-dimensional character (ex: Fred Bird for the St. Louis Cardinals), and the logo is an emblem (ex: the overlapping S, T, and L for the St. Louis Cardinals) (Zeitler 2018, MLB 2023). Animal mascots rarely depict a species accurately (Baltz and Ratnaswamy 2000, Dydynski and Mäekivi 2018) often anthropomorphizing a



species into a cuddly figure (Baltz and Ratnaswamy 2000, Dydynski and Mäekivi 2018). Animal-themed mascots have desired traits overemphasized such as large eyes to appear cute (Dydynski and Mäekivi 2018). Mascots are not always representative of the team name, especially if the team name is more abstract or an object. At the University of St. Louis Missouri, even though the team name is the Tritons (represented as a trident), the mascot is a newt named Louie (UMSL 2023).

Sports team names and mascots reflect characteristics with which a sports team wishes to be associated such as intimidation, strength, or victory (Zeitler and Petzold 2001, Zeitler 2018) or team names may be named after a connection to the community such as a common career or historical figure (Zeitler 2018, Lewis 2021). In comparison, mascots are relatively new in sports having only begun in the 1970s (Elbein 2016), but are a key piece of sports marketing and branding (Mason and Paul 1988). Team names and subsequent mascots have also changed over time due to various reasons including relocation of a team to a new community, association with undesirable traits, financial/marketing reasons, honoring history, or political reasons (Deprisco 2020, Lewis 2021). An ongoing debate with sports team names and mascots surrounds the use of indigenous names and imagery in sports (Conolly 2016, Lewis 2021).

The combination of changing public opinion, new NCAA policy, and state legislation has led many organizations that had been using indigenous names or imagery to update their sports team names and/or mascots (Schultz and Sheffer 2017, Lewis 2021). However, when team name and mascot changes become political, it can take longer for fans to embrace new sports identities than changes for non-political reasons (Schultz and Sheffer 2017, Lewis 2021). Part of this is due to the culture surrounding sports which includes social identities and social connections to sports teams and mascots (Schultz and Sheffer 2017). Fans have to re-learn the culture of their sport and long-time fans can be resentful over the removal of a piece of their social identity (Schultz and Sheffer 2017) or feel that a new sports identity is being forced upon them (Schultz and Sheffer 2017, Lewis 2021). As animal-themed sports team names and mascots tend to be controversy-free they tend to be chosen as replacement names or mascots for sports teams (Lewis 2021).

Nationally, the most common animal sports team names are large predators (Baltz and Ratnaswamy 2000, Zeitler 2018). Large predators are also the same species undergoing population declines due to human-wildlife conflict (Meriggi and Lovari 1996, Karanth et al. 1999, Polisar et al. 2003, Baltz and Ratnaswamy 2000, Goldman et al. 2010, Marchini and Crawshaw 2015) brought on by habitat destruction/degradation (Fergus 1991, Mizutami 1999, Siedensticker et al. 1999, Michalski et al. 2006). Even though highly engaged fans have increased interest in learning about their team's species (Sartore-Baldwin and McCullough 2019), only a few collegiate teams have utilized this interest to connect conservation messaging to their team names and mascots (Baltz and Ratnaswamy 2000, Elbein 2016). Similarly, there have been few programs with zoos and aquariums connecting conservation messaging between animals in their care and local sports team names and mascots.



Also, despite the creation of a national sports team name list (Zeitler 2018), little is known on sports team names at smaller local scales, such as within a single state. By investigating not only which types of animals are frequently used for sports team names at smaller scales, but also if patterns exist in characteristics of animals chosen such as diet, conservation status, and habitat then overall conservation messaging can be better tailored to desired audiences. Dietary traits can be predictive of animals chosen (Clucas et al. 2008). Carnivores and herbivores tend to be overrepresented in western media compared to other diets (Clucas et al. 2008) and this may lead to an overrepresentation of predator or herbivore animals used as team names.

Western culture also has a fascination for rare species (Clucas et al. 2018), but tends to only have experience with non-native species at zoos or circuses (Baltz and Ratnaswamy 2000, Clucas et al. 2018) or through television programs (Clucas et al. 2018). Due to this limited exposure, team names may be chosen for their perceived uniqueness or rarity (Zeitler 2018) or endangered species status (Clucas et al. 2018). Alternatively, sports team names are also chosen as reflections of communities (Zeitler 2018) and common animals or animals specific to habitat types that reflect the community in which the sports team is based may also drive patterns in team name decisions.

This interdisciplinary study is novel in bringing together the field of conservation biology which includes the social science aspect of connecting people to conservation (Soulé 1985) with sports administration which focuses on sports marketing, branding, and promotion of sports teams (Mason and Paul 1988). In order to conserve at-risk species, it is necessary to connect conservation topics to unique and underutilized audiences such as sports fans (Baltz and Ratnaswamy 2000, Sartore-Baldwin and McCullough 2019). By highlighting potential conservation opportunities, ideally sports administrators will see the value in elevating their programs by connecting audiences to conservation themed causes. As such, the aims of this paper are to 1) identify commonly used animals for secondary high school team names in Oklahoma; and 2) investigate patterns in characteristics of animals chosen for team names including diet, status, and habitat type in order to understand potential for conservation messaging; as well as to 3) provide guidance to sports administrators on connecting sports programs to conservation by examining a mascot-themed conservation program.

## Methods

### *Oklahoma High School Animal Team Names*

A list of secondary schools within the state of Oklahoma was acquired through the Oklahoma Department of Education. Every school's website was located through internet searches in combination with physical addresses and county locations. After identifying a school's website and confirming its address, the homepage and sports team pages were searched to locate the school's sports team name and recorded. A total of 475 high schools sports team names were compiled.



### *Mascot Challenge Program*

In order to examine the potential of connecting secondary school sports team mascots with conservation, a program called the Mascot Challenge Program was evaluated as a case study. Starting in February of 2022, the Oklahoma City Zoo and Botanical Garden (OKC Zoo) encouraged high schools across Oklahoma to change their sports mascot to any real, non-mythical animal or insect. In exchange, OKC Zoo awarded every student, teacher, and school employee with two general admission tickets to the Zoo. The program lasted for 12 months, and was promoted through news channels and social media (OKC Zoo 2022). The goal of the program was mainly promotional, but included information about tigers being critically endangered. Tigers were chosen as a focal species for the program, because tigers are common mascots in Oklahoma and 2022 was the Year of the Tiger in the Chinese Zodiac (OKC Zoo 2022). Records were obtained from OKC Zoo of any school that participated in the program including the former mascot as well as the species the mascot was changed into.

### *Analysis*

To examine Oklahoma high school animal team names and mascot challenge program participant name data, a descriptive analysis approach was used to categorize names. Any school with an animal-themed sports team name had animal identified down to species, if possible, by comparing common names to the logo and mascot depictions. For names that were unable to be identified to the species level, the lowest taxonomic level was used instead (i.e., Family: Strigiformes, for owls). After names were categorized, each identified animal had habitat type (terrestrial or aquatic), diet (omnivore, carnivore, or herbivore), and native status to Oklahoma recorded (IUCN 2023, ODWC 2023) to provide further insight into which animals are selected to represent sport teams. In order to understand conservation messaging potential, the International Union for Conservation of Nature (IUCN) conservation status was recorded for non-domestic animals that could be identified to the species level (IUCN 2023). Chi-square tests were used to determine if differences existed by a species' status (native, non-native, or domestic) and type of animal, diet, or IUCN listing. Due to low numbers, non-native and domestic species were combined for chi-square analysis. For IUCN listing status analysis, endangered, critically endangered, vulnerable, and near threatened were grouped together to compare to species of least concern. Both domestic and extinct species were excluded from this analysis.

### **Results**

Out of 475 high schools in Oklahoma, 272 or 57% had an animal as a team name. Vertebrates ( $n = 254$ ) were more common than invertebrates ( $n = 18$ ) (Table 1). The most represented taxonomic class in vertebrates was Mammalia ( $n = 233$ ) followed by Aves ( $n = 19$ ) with only one school having a Reptilia team name and one school having an Amphibia team name. For invertebrates only the phylum Arthropoda ( $n = 18$ ) was present (Table 1).



**Table 1.** A list of taxa used as Oklahoma high school sports team names or mascots. In addition the status of taxa (native, non-native, or domestic), the International Union for Conservation of Nature (IUCN) listing status (D = domestic, NT = not threatened, LC = least concern, V = vulnerable, E = endangered, CE = critically endangered, EX= extinct), primary diet (O = omnivore, C = carnivore, H = herbivore), habitat type (aquatic or terrestrial), and total schools with that taxa type are listed.

Taxa	Status	IUCN Listing	Diet	Habitat	Total Schools
<b>Amphibia</b>					
American bullfrog ( <i>Lithobates catesbeianus</i> )	Native	LC	O	Aquatic	1
<b>Arthropoda</b>					
Bug (Hemiptera)	Native	-----	O	Terrestrial	1
Hornet (Hymenoptera)	Native	-----	O	Terrestrial	9
Scorpion (Scorpiones)	Native	-----	C	Terrestrial	1
Yellowjacket (Hymenoptera)	Native	-----	C	Terrestrial	7
<b>Aves</b>					
Bald Eagle ( <i>Haliaeetus leucocephalus</i> )	Native	LC	C	Terrestrial	30
Bluejay ( <i>Cyanocitta cristata</i> )	Native	LC	O	Terrestrial	2
Domestic Chicken ( <i>Gallus gallus</i> )	Domestic	D	O	Terrestrial	1
Falcon ( <i>Falco</i> spp.)	Native	-----	C	Terrestrial	3
Firehawk (Kite or Falcon)	Native	-----	C	Terrestrial	1
Golden Eagle ( <i>Aquila chrysaetos</i> )	Native	LC	C	Terrestrial	1
Northern Cardinal ( <i>Cardinalis cardinalis</i> )	Native	LC	O	Terrestrial	6
Owl (Strigiformes)	Native	-----	C	Terrestrial	3
Raptor	Native	-----	C	Terrestrial	1
Raven ( <i>Corvus</i> spp.)	Native	-----	O	Terrestrial	1
<b>Mammalia</b>					
American badger ( <i>Taxidea taxus</i> )	Native	LC	O	Terrestrial	1
American bison ( <i>Bison bison</i> )	Native	LC	H	Terrestrial	11
American black bear ( <i>Ursus americanus</i> )	Native	LC	O	Terrestrial	1
African lion ( <i>Panthera leo</i> )	Non-native	V	C	Terrestrial	10
Bear ( <i>Ursus</i> spp.)	Native	-----	C	Terrestrial	7
Bearcat ( <i>Arctictis binturong</i> )	Non-native	V	C	Terrestrial	8
Bobcat ( <i>Lynx rufus</i> )	Native	LC	C	Terrestrial	5
Brown bear ( <i>Ursus arctos</i> )	Native	LC	O	Terrestrial	2
Cougar ( <i>Puma concolor</i> )	Native	LC	C	Terrestrial	2
Coyote ( <i>Canis latrans</i> )	Native	LC	C	Terrestrial	1
Domestic cow ( <i>Bos taurus</i> )	Domestic	D	H	Terrestrial	7
Domestic dog ( <i>Canis familiaris</i> )	Domestic	D	C	Terrestrial	45
Domestic horse ( <i>Equus ferus</i> )	Domestic	D	H	Terrestrial	12
Domestic sheep ( <i>Ovis aries</i> )	Domestic	D	C	Terrestrial	3



Donkey ( <i>Equus africanus</i> )	Domestic	D	H	Terrestrial	1
Elk ( <i>Cervus canadensis</i> )	Native	NT	H	Terrestrial	2
Feral pig ( <i>Sus scrofa</i> )	Non-native	LC	O	Terrestrial	1
Fox (Caninae)	Native	-----	C	Terrestrial	1
Gray Wolf ( <i>Canis lupus</i> )	Native	LC	C	Terrestrial	8
Jaguar ( <i>Panthera onca</i> )	Non-native	NT	C	Terrestrial	46
Leopard ( <i>Panthera pardus</i> )	Non-native	V	C	Terrestrial	1
Panther ( <i>Panthera</i> spp.)	Non-native	-----	C	Terrestrial	7
Red wolf ( <i>Canis rufus</i> )	Native	CE	C	Terrestrial	1
Sabercat (Machairodontinae)	Non-native	EX	C	Terrestrial	1
Tiger ( <i>Panthera tigris</i> )	Non-native	E	C	Terrestrial	20
White-tailed deer ( <i>Odocoileus virginianus</i> )	Native	LC	H	Terrestrial	1
Wildcat ( <i>Felis</i> spp.)	Non-native	-----	C	Terrestrial	24
Wolverine ( <i>Gulo gulo</i> )	Non-native	LC	C	Terrestrial	4
Zebra ( <i>Equus</i> spp.)	Non-native	-----	H	Terrestrial	1

### Reptilia

Western diamondback rattlesnake ( <i>Crotalus atrox</i> )	Native	LC	C	Terrestrial	1
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Note: IUCN status is only available at a species level for non-domestic species.

Twenty-two species of Mammalia were present with an additional 6 mammals that could not be identified down to species (panthers, sabercats, bear, zebra, wildcat, and fox) (Table 1). Seventy-nine schools had a big cat (*Panthera* spp.) with the most common team name in Oklahoma being the tiger (*Panthera tigris*) at 46 schools (Table 1). The second most common team name in Oklahoma was the domestic dog at 45 schools. Domestic dogs had five breeds (bulldogs, huskies, pugs, terriers, and whippets) and one non-breed (wardogs) present. Bulldogs made up the majority of the domestic dog mascots ( $n = 38$ ) compared to the other four breeds (whippets = 2, huskies = 2, pugs = 1, and terriers = 1).

Five species of birds were present, with an additional five bird groups that could not be identified down to species including ravens, falcons, firehawks, owls, and raptors (Table 1). The most common bird species used as a team name in Oklahoma was the bald eagle (*Haliaeetus leucocephalus*) at 30 schools followed by the northern cardinal (*Cardinalis cardinalis*) at 6 schools. The only reptile team name present was the western diamondback rattlesnake (*Crotalus atrox*) and the only amphibian team name was the American bullfrog (*Lithobates catesbeianus*). Within Invertebrates, no animal could be identified down to species but three taxonomic Orders were present: Hymenoptera, Hemiptera, and Scorpiones. The most common Arthropoda team name was wasps/hornets (Class: Hymenoptera) at 16 schools.

Animals that are primarily carnivorous had the highest representation ( $n = 204$ ) followed by herbivores ( $n = 38$ ) and omnivores ( $n = 30$ ), with non-native or domestic species more likely to be carnivores than native species ( $[X^2 2, N = 303] 39.25, p < 0.01$ ) (Table 1). Non-native or



domestic species were more prevalent ( $n = 196$ ) than species native to Oklahoma ( $n = 73$ ) (Table 1). Birds were more likely to be native species than mammals ( $[X^2 1, N = 283] 117.63, p < 0.01$ ). Arthropods, reptiles, and amphibians had too low of a sample size for analysis. No native species were listed as threatened under the IUCN, and thus no analysis was performed (Table 1). The most common animal team name native to Oklahoma was the bald eagle at 30 schools followed by the bison (*Bison bison*) at 11 schools (Table 1). Only one school had an aquatic animal (American bullfrog), all other names were terrestrial. For the 122 schools that had a non-domestic animal team name that could be identified down to species, conservation status was variable. One school had a species listed as extinct, one school had a species listed as critically endangered, 46 schools had species listed as endangered, 20 schools had species listed as vulnerable, 13 schools had species listed as near threatened, and 42 had species listed as least concern (Table 1).

One high school participated in the mascot challenge program and changed their mascot from a crown to an elephant wearing a crown.

## Discussion

Currently 272 high schools out of 475 in Oklahoma have animals as their team names. Team names in Oklahoma followed the same patterns of linguistic taxonomy as those of team names found nationally by Zeitler (2018), with vertebrates making up the majority of animals (Trimbe and van Aarde 2010), despite the world's fauna consisting mainly of invertebrates (Gaston 1991, Stork 1997, Stork et al. 2015). The pattern of vertebrates being overrepresented and invertebrates underrepresented is commonly found across multiple media forms (Clucas et al. 2008, Eishaurer et al. 2019, Geest et al. 2021). Mammals, birds, and to a lesser extent Artiodactyls were the most common animal types found in Oklahoma high school team names, with Zeitler (2018) finding similar patterns at a national level.

Large cats are charismatic megafauna (Macdonald et al. 2015, Albert et al. 2018) often used as symbols of conservation (Clucas et al. 2008, Albert et al. 2018). Not only are large cats the most popular zoo animal (Morris 1960, Surinova 1971, Brodie 2009) but also the most widely used sports team name nationally (Baltz and Ratnaswamy 2000, Zeitler 2018) and in Oklahoma. Albert et al. (2018) found that large cats are often associated with perceptions of danger, beauty, and impressiveness, and these traits may be reflective of the image that a sports team is trying to portray. Especially, as sports team names tend to depict power, strength, and victory (Zeitler and Petzold 2001, Zeitler 2018).

Interestingly, domestic dogs were the second most used name. Dogs are one of the most common pets in the world (Stehr-Green and Schants 1987, Chomel 1992, Gray and Young 2015), and have a long history of domestication with humans (Miklósi 2009, Gray and Young 2015, Treves and Bonacic 2016). Dogs are unique among pets in that they are often associated with hunting or guarding tasks (Gray and Young 2015). Dog-themed team names may have been chosen to help reinforce the characteristics of aggression and strength





especially as the most common dog breed chosen was a bulldog, a breed known for an aggressive appearance (Nash 1989) and history of strength (Thomson 1996).

The majority of animal team names were not native to the state of Oklahoma. This is unsurprising as nationally many team names and mascots are non-native species (Baltz and Ratnaswamy 2000). The most common team names using species native to Oklahoma were the bald eagle and bison. The bald eagle is the national bird of the United States (Laurence 1990), and the bison is the national mammal of the United States as well as the state animal of Oklahoma (Hammerschlag and Gallagher 2017). The bald eagle is a species often portrayed as heroic and prideful in media (Geest et al. 2021) potentially due to the cultural connections Americans have with the bald eagle (Laurence 1990). Similarly, there are deep cultural connections between bison and indigenous people (Arthur 1975, Clark et al. 2016, Mamers 2020), with Oklahoma home to 39 tribal nations. Bison may also appear threatening due to their large body size (Geest et al. 2021) which may be a trait a sports team wishes to emulate to intimidate opponents.

For birds, the most common taxa groups were Accipitriformes and Passeriformes, which follows the same pattern found on magazine covers (Clucas et al. 2008) and bird-themed comic book characters (Geest et al. 2021). Raptors may have been chosen because these species have prominent talons and beaks (Sibley 2014) that could make the animals appear threatening. Within Passeriformes, northern cardinals were the most common bird species used as a sports team name. Northern cardinals are a common backyard garden bird (Malpass et al. 2017) across much of eastern and southern North America (Sibley 2014). The northern cardinal is also an easy to identify species with few similar species across the majority of its range (Sibley 2014). Species likeability increases when a species is readily identifiable (Cox and Gaston 2015), and brightly colored animals have been found to be perceived more favorably than dark or dull colored animals (Van Hook 1997, Prokop and Fančovičová 2013). The combination of bright red feathers, distinctiveness of the species in Oklahoma, and abundance may explain the prevalence of this species as a sports team name. The vertebrate groups with fewest representation were reptiles and amphibians, which is unsurprising as these animals are often feared (Davey 1994, Polák et al. 2016), viewed as imperfect (Tarrant et al. 2016), or not even considered animals at all (Bell 1981).

Within invertebrates, only three Orders existed: wasps/hornets in Hymenoptera, gold bugs in Hemiptera, and scorpions in Scorpiones. Wasps are often demonized by the public due to fears of painful stings and lack of knowledge (Lemelin et al. 2016, Sumner et al. 2018). Some of the most frequently used words to describe wasps include pain, dangerous, angry, and scary (Sumner et al. 2018). Similarly, scorpions receive similar reactions and disdain from the public (Byrne et al. 1984). These fears and perceived threats of wasps and scorpions may build into the idea of an intimidating opponent within a sports context.

Animals that are primarily carnivorous were six times as prevalent as herbivores. It was expected that carnivores would have higher representation due to Clucas et al. (2008) finding that carnivores and herbivores tend to be over-represented in comparison to other diet types.



However, it is interesting that herbivores were not more prevalent. Most likely, the perceived threatening nature of predators (Karanth and Chellam 2009, Bagchi 2019), is why carnivores had higher representation than herbivores as team names.

The two most represented conservation status categories for non-domestic animal team names were endangered and least concern. Clucas et al. (2008) noted that rare and unique animals are favored in western culture and this may explain the high prevalence of endangered animals as mascots. As team names are indicative of the communities they represent (Zeitler 2018), it is also not unexpected that commonly encountered animals may be chosen to represent the community, and this may explain the high number of animals with least conservation concern status.

As team names are supposed to embody traits and characteristics of the community or sport they represent (Zeitler 2018), terrestrial animals may be better suited for a landlocked state such as Oklahoma and help explain the high presence of this animal habitat type. Further research on water-based sports team names compared to land-based sports team names as well as patterns in coastal community names versus inland community names is needed to discern if potential patterns by sport type and region exist. Alternatively, aquatic animal underrepresentation may simply be indicative of larger patterns of public perception of aquatic animals, with a perceived lack of charismatic features in aquatic animals reducing public empathy and interest (Zacharias and Roff 2001, Kolandai-Matchett and Armoudian 2020).

As frightening animals can also be charismatic (Albert et al. 2018), future research should examine if mascot traits such as stingers, teeth, and claws are also over-emphasized and if so for which species. Additionally, as communities shift and change over time, team names and mascots can change. Especially, as the public's affinity for a mascot species can also change over time (Brown 2014). In 1999, 68 colleges and universities had a tiger for a mascot, but by 2016 the number had fallen to 56 (Elbein 2016). Understanding temporal changes in team names and mascots may reveal shifting attitudes towards animals over time.

Only one secondary school in Oklahoma participated in OKC Zoo's Mascot Challenge Program in the span of twelve months and changed its mascot from a crown to an elephant wearing a crown. Even though sports team names, mascots, and logos are not synonymous (Zeitler 2018), many schools used the terms interchangeably on their websites which may have led to lower participation in the program. Schools may also be reluctant to change their mascots for a multitude of reasons including the value team names and associated mascots have in distinguishing a school from its neighbors (Zeitler 2018), the meanings assigned by members of the community (Zeitler 2018), and the sense of place names and associated mascots can create (Pred 1984, Williams and Stewart 1998, Kruger and Lakes 2003).

Beyond the complexity of identity and sense of place tied into mascots, the cost of rebranding and redesigning sports team names, mascots, and logos (Agha et al. 2016, Williams et al. 2021) may be prohibitive for high schools, especially those in impoverished communities.



Furthermore, brand loyalty can decrease (Williams et al. 2021) and sports game attendance can decline (Agha et al. 2016) if fans and community members do not embrace the rebrand. Unfamiliar mascots can also have a less of a messaging impact than mascots connected to a community (Butler et al. 2019). As such, care is needed when asking schools to change or alter their mascots or sports team names. However, as public opinion and policy shifts away from using indigenous team names and imagery for sports teams (Schultz and Sheffer 2017, Lewis 2021), many affected schools and sports teams are already currently in the process of rebranding (Schultz and Sheffer 2017, Change the Mascot 2023). As animal team name and mascot replacements are often considered non-political and non-controversial (Zeitler 2018, Lewis 2021), there is an opportunity for rebranding sports teams to consider conservation messaging as an aspect of the rebrand.

Although changing team names or mascots may be unlikely for many schools, encouraging schools to connect their existing mascots or team names to conservation messaging is possible. Conservation messaging could include fundraising opportunities for conservation programs for charismatic animals such as tigers and jaguars similar to how The University of Alabama's *Tides for Tusks* has raised money for elephant conservation (Elbein 2016). Similarly, the *National Tigers for Tigers Coalition* program launched a social media campaign using the hashtag #ProtectOurMascots to raise awareness for both tiger and elephant conservation that reached over a million views on social media (Tigers for Tigers 2016, Elbein 2016).

Local high schools could replicate the program by finding schools with similar mascots and joining together to raise funds for species of interest. Conservation messaging could also raise awareness about the threats a species faces by focusing on a species status and listing direct actions individuals can take to help conserve species of interest. For example, in Oklahoma, Capitol Hill High School's team name is the red wolves, an endangered native species in North America. Sports administrators could promote conservation messaging about the leading threats (i.e, poaching, car strikes, and poisoning) this species faces (AZA 2019) using social media campaigns, signage, special presentations at games, and student led projects.

More work is needed investigating successful and unsuccessful conservation connection programs to develop programs that can connect unique audiences to conservation. Overall, this research adds further context to existing animal species bias research, while examining an underutilized path for conservation connection.

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## Declarations of interest statement

The authors report there are no competing interests to declare.

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