Camels Out of Place and Time: The Dromedary (*Camelus dromedarius)* in Australia

Sarah L Crowley, Environment and Sustainability Institute, University of Exeter, Penryn Campus, Penryn, Cornwall TR10 9FE, UK. E-mail: s.crowley@exeter.ac.uk

Abstract

The deserts of the Australian outback are ideal territories for dromedary camels, *Camelus dromedarius*. Dromedaries' flexible adaptations allow them to eat 80% of Australian plant species and they obtain much of their water through ingesting vegetation; they thrive where other species perish. In many ways, the dromedary could be said to "belong" in this harsh environment. Yet for numerous Australians, particularly ranchers, conservation managers, and increasingly local and national governments, camels are perceived as pests and unwelcome invaders. Anthropologists studying human classifications of nonhuman animals have suggested that those species or populations that fail to fit neatly into existing classification systems come to be considered "out of place," particularly when they enter human domains or disturb existing perceptual boundaries of environmental order. Through exploring and analyzing academic, government, and media publications, this review proposes that today's Australian dromedaries exemplify "animals out of place" and discusses how and why they have developed this status. It is further suggested that in addition to being classified as "out of place" in Australia, the dromedary has also become "out of time," as its classification has transformed with temporal shifts in human circumstances, cultural values, and worldviews.

Keywords: Australia, camels, culture, environment, feral, invasive

The deserts of the Australian outback are perfectly suited for one-humped dromedary camels, *Camelus dromedarius*. The camel's adaptations to arid environments include a powerful ability to conserve water and a highly flexible diet; camels can eat 80% of Australian vegetation (Saaldfeld and Edwards 2008) and obtain much of their water through the plants they consume, allowing them to thrive where other species perish (Irwin 2009). In many ways, the camel could be said to belong in this environment, perhaps even more so than many native species; few other mammals survive, for example, in the harsh Simpson Desert (Berra 1998). Yet, for many Australians, notably ranchers (Zeng and Edwards 2008a), conservation managers (Zeng and Edwards 2008b), some Aboriginal communities (Vaarzon-Morel 2008), and local and national governments, camels are increasingly perceived as pests, vermin, and unwelcome "invaders" (e.g., *ABC News* 2007; *PM* 2008; Australian Government 2010). The current population estimate stands at 1,000,000 individuals, but has varied widely over the past decade (Al-Mansoori 2004; Saaldfeld and Edwards 2008). As their population burgeons, camels encroach more frequently upon human settlements and agricultural lands, raising their media profile and increasing local animosity toward them.

Following Lévi-Strauss' assertion that animals are "good to think [with]" (1969, p. 162), structuralist approaches toward human perceptions of animals often consider how different cultures classify nonhumans (Knight 2000). Mary Douglas, in her influential book *Purity and Danger*, suggested that those substances classified as "dirt" or "pollution" can often be understood as "matter out of place" (1966, p. 35); for example, soil becomes "dirt" when it is brought inside a human home. Douglas

explored this concept in terms of food taboos, using the animals forbidden in the Biblical Book of Leviticus as an example. She proposed that ambiguous species (those which fail to fit neatly into classification systems) become pollutants and therefore taboo. John Knight (2000) developed this concept by suggesting that pest species become "animals out of place*"* when they encroach upon human domains or disturb human perceptual boundaries of "environmental order" (2000, p. 14). Some species achieve this status by physically crossing physical or symbolic human boundaries. For example, rodents entering human homes become inedible pollutants (Fiddes 1991) and hyenas disturbing gravesites are thought to desecrate areas of symbolic importance (Glickman 1995). These concepts all have relevance to camels, whose transgressive status is increasingly problematic in Australia. In this review I suggest that today's Australian dromedaries exemplify "animals out of place" and attempt to identify how and why they have developed this status. I also propose that the camel is not only increasingly considered "out of place" in Australia, but also "out of time," as its classification and treatment have transformed in concordance with temporal shifts in human circumstances, cultural values, and worldviews.

The Camel in Australia

When the camel was first brought to Australia in the 1800s, the country was in the midst of a flurry of colonial activity, including numerous attempts to explore the "Red Centre" (McKnight 1969; Al-Mansoori 2004; Irwin 2009). Camels were recognized by pioneers as the most appropriate mode of transport for the challenging environment they were attempting to traverse; they require significantly less water, feed on a wider variety of vegetation, and are capable of carrying heavier loads than horses and donkeys (Vaarzon-Morel and Edwards 2010). Dromedaries (primarily

managed by west Asian immigrants who were familiar with their husbandry) were therefore highly influential in the establishment of Australia's modern infrastructure, notably the laying of the Darwin–Adelaide Overland Telegraph Line and the construction of the Transnational Railway (Irwin 2009). Once this infrastructure was in place, however, and motorized transport became increasingly widespread, camels were no longer indispensible. In the early part of the 20th century they rapidly lost their economic value and their displaced handlers either shot their wards or released them into the outback (Al-Mansoori 2004, Jones and Kenny 2010). In 1925, South Australia introduced the "Camels Destruction Act," permitting landowners to shoot loose dromedaries on private land.

In the following years, Australia's remaining camels effectively faded into the desert, and away from human society, for the first time in hundreds of years. In 1969 McKnight noted that, "The Australian camel is a vague element in Australian consciousness … only a small proportion realizes that feral camels exist today in large numbers" (1969, p. 122). Their re-emergence into the Australian cognizance coincided only with times of drought, when thirsty dromedaries congregated at water sources, often the same places humans had chosen to settle (McKnight 1976). It was not until the 1980s that surveys of Australia's interior hinted at the true extent of the camel's population growth and only in 2001 that reports of damage caused by camels were brought to the general populace (Vaarzon-Morel and Edwards 2010). In 2006, severe drought caused hundreds of camels to arrive at the town of Dockers River, an event that received considerable media attention and arguably inspired current attempts to manage the population. Over the past decade, media coverage regarding free-roaming camels has increased and has remained predominantly negative.

The Australian deserts are climactically comparable with the camel's presumed "EEA" (Environment of Evolutionary Adaptation, most likely the desert areas of the Middle East: Bulliet 1985, 2005; Clutton-Brock 1987). As the Australian desert parallels the arid environments dromedaries evolved to exploit, it is unsurprising that they have flourished there. To the outsider, therefore, it might seem that rather than being "out of place," the camel is very much *in* place in Australia; indeed, the outback supports the only known wild population of dromedary camels in the world (Simberloff and Rejmánek 2011). Yet over the past decade, the camel has become a source of contention and debate in Australian discourse (e.g., Malkin 2009; Everingham 2009; Gabbatt 2009; Henderson 2009), primarily following well-publicized concerns about the economic and environmental damage caused to property and land by large numbers of "uncontrolled" camels (Edwards et al. 2008). Whilst most agree that the Australian camel now requires management, there remains debate as to how this should be implemented long-term, particularly between those who would cull the camels and those who wish to see them farmed for meat or mustered and exported to interested nations, particularly in the Middle East (see Theodoulou 2010; Wills 2011). As of September 2012, the Australian Feral Camel Management Project (AFCMP) had reduced numbers by 100,000 since its implementation and continues to cull at a rate of 75,000 camels per year (*The Telegraph* 2012; AFCMP 2012).

Camels Out of Place

Physical Transgressions

Dromedaries are on average six feet tall at the shoulder (Irwin 2009), diminishing somewhat the effectiveness of cattle fencing as an obstacle to their movement. By some accounts, camels may not even see small fences and consequently walk straight through them (McKnight 1976; *PM* 2008). Alternatively, camels may intentionally push through fencing to reach a water source, which they can sense from up to three kilometers away (Al-Mansoori 2004). Groups of camels arriving on agricultural properties and settlements in Australia, normally in times of severe drought, can cause significant damage in their search for water (Edwards, Zeng and Saalfeld 2008). By "trespassing" in this way, camels are crossing physical boundaries erected by humans (though these have often been primarily designed to keep livestock in rather than camels, specifically, out). For people in the affected areas—and those who read the subsequent reports—camels consequently undergo a perceptual shift, from unobtrusive desert nomads to deviants, invading human space and competing with humans and their livestock for water and vegetation. Although camels rarely physically threaten humans, their large bulk and group sizes intimidate human populations, who may have received little information as to how to cope with their arrival (Vaarzon-Morel 2008).

Whilst these transgressions strongly affect the humans who experience them, they are perhaps less influential upon the general Australian psyche than the camels' wider "boundary-crossing": into Australia itself. Given the substantial impact on the Australian environment of introduced plants, rabbits, foxes, cats, and cane toads (see McKnight 1976; McLeod 2004; Van Driesche and Van Driesche 2004), many Australians (and indeed, concerned parties outside Australia) have developed broadly negative perceptions of non-native species (Johnstone and Marks 1997; Franklin

2007). Such species, particularly in conservationist discourse, cross two important perceptual boundaries. First, they are "alien," in that humans associate them with a different country or environment from that which they now occupy, and second, they are often simultaneously "unnatural," in that humans have introduced them (Milton 2000). For conservationists who, Milton suggests, aim to maintain nature in some (usually historical), ideal form, camels are quite literally in the wrong place. Thereby even where there is little objection to the actions of individual camels, or even where camels are absent, as a species they become classified as unnatural inhabitants of the Australian ecosystem.

An interesting parallel can be drawn here between Australia's camels and their original cameleers, generally referred to as "Afghans," though most actually emigrated from British India. The "Afghan" label, it has been suggested, "Served the purpose of classifying them as Alien or Asiatics under various restrictive laws curtailing their rights to own property, land, or engage in independent business" (Ganter 2008, p. 490). The camel's initial popularity in transport and haulage allowed cameleers to become successful and relatively well-established. However, they faced continuous opposition from competing bullock teamsters, and in the 1890s a rise in White Australian nationalism and "Anti-Afghan groups" culminated in the introduction of fees for camel grazing and cameleer use of public highways. In 1897, the Imported Labour Registry Act prevented "colored aliens" from importing more immigrant workers to expand their businesses (Ganter 2008; Jones and Kenny 2010).

As a result of their evolutionary origin and centrality to Islamic and Middle Eastern culture, dromedaries are often considered symbolic of Islam or of Arabia and North

Africa (Simoons, 1994; Irwin 2009). It should be emphasized, however, that I do not believe camels serve as a metaphor for non-white immigrants or Australian Muslims in this context. Although negative attitudes to camels and negative attitudes to non-white immigrants both appear to stem from conflicted constructions of nativity and otherness, there is little to suggest that human racial or cultural prejudice has any significant causative or obligatory relationship with concerns about non-native species. For example, there is no indication that eco-warriors vehemently opposing "invasive" non-native species are more likely hold the same beliefs, even subliminally, about human immigrants (Simberloff 2003; Smout 2009). Rather, there are parallels apparent in the dialogues surrounding these conflicts and, importantly, much of the same language is drawn upon in both debates. As Smout (2009) notes, the terms "native" and "alien" are hardly value neutral, even though they are often intended as such in scientific literature; the latter is inherently linked with outsiders and "otherness".

Although their status as non-native has become increasingly relevant as part of the modern debate, I propose that the Australian camels' most significant physical transgression is, somewhat ironically, their success in the outback and, as a result, their sheer numbers. Reports estimate there are upwards of a million free-ranging camels in Australia and predict that this number could double every eight years (Saalfeld and Edwards 2008). Many of the prominent environmental concerns about the population, such as soil degradation, are related specifically to large numbers of camels. Individually, the soft, evenly weight-distributing pads of dromedary feet have little impact on the ground (Berra 1998), and as camels are generalists and continuously moving browsers, they are unlikely to deplete localized or particular

types of vegetation in the long term unless they are in large numbers, or enclosed (Dörges and Heucke 2003). Greater population sizes also increase pressure on water sources, particularly in times of drought (Saalfeld and Edwards 2008).

Symbolic Transgressions

As Putman comments, "Some animal pests … are only pests when in inappropriate numbers or in the wrong context" (1989, p. 2 cited by Knight 2000). Given that the Australian dromedary wasn't generally considered a pest species until recent years (McKnight 1969 cf. Edwards et al. 2008; it goes unmentioned by Fitzgerald, Fitzgerald and Davidson 2007), it appears that this increase in numbers has been the primary cause of its reclassification as a pest. Arguably, then, the camel's status as an introduced species—hitherto ignored, or even celebrated (McKnight 1969; Berra 1998)—has been transformed by its transgressions. By multiplying, expanding their range, and coming into direct conflict with humans and livestock, Australian dromedaries have now been classified as "invasive." Definitions of this term vary (cf. DEFRA 2011; US Department of Agriculture 2012; Australian Government 2013), but the primary qualifying characteristics are non-nativity and acting (or having the potential to act) as a threat to native biodiversity, "natural" ecosystems. It is worth noting here that the term "invasive" is somewhat contentious, as it inherently implies a disruptive, somewhat militaristic intentionality that is highly unlikely to describe the manner in which camels and other "invasive" species truly act (Larson, 2008; Davis, 2009; Selge, Fischer and van der Val 2011). The implicit negativity of this language, however, serves to highlight the significance and stigma attached to stepping "out of place"; by becoming members of the "invasive" group, camels are unavoidably associated with environmental degradation and biological threat. Thus, the extent and

form of the camels' physical boundary-crossing, intentional or otherwise, has drastically affected their perceptual categorization and symbolic associations (for a similar discussion in relation to changing perceptions of Australia's feral donkeys, see Bough [2006]).

In comparison, for many nomadic pastoralist cultures (such as the Bedouin in the Middle East and the Tuareg and Somalis in North Africa) the concept of too many camels is inconceivable. It is currently understood that dromedaries were domesticated in the hot deserts of the Middle East between two and four thousand years ago (Irwin 2009). Dromedaries have repeatedly been singled out from other domestic species by desert pastoralists due to their adaptive "design," resilience, and consequential value to those humans living in harsh climactic conditions. In the Qur'an, for example, camels are referred to as "ta Allah," God's gift (Al-Mansoori 2004). In such traditions, camels have become symbolic of life, power, and success; indeed, in some cultures they were historically the currency against which all wealth was measured (Toth 1997; Al-Mansoori 2004).

In Australia, however, camels have a less distinguished history. Dromedaries were an uncommon addition to the "ecological imperialism" described by Crosby (1986), by which European expansionists brought their familiar fauna and flora with them as they emigrated to new lands. The preferred domestic species within this "colonial biota" were those to which settlers were acclimatized and experienced at husbanding and utilizing. These species also adapted relatively successfully to new habitats comparatively free from predation and disease (Crosby 1986). As noted above, camels were initially imported specifically for the purposes of traversing and

preparing Australia's inhospitable environment for the settlement of the "colonial biota." However, dromedaries were as alien to most European immigrants as the native fauna and, though initially widely utilized, they were later largely overlooked by settling pastoralists in favor of sheep, cattle, and horses. As a result, camels secured no firm place in the developing Australian economy and culture.

At the time of their introduction, camels also held little cultural relevance to resident Aboriginal populations (Franklin 2006). Unlike native species, dromedaries have no "Dreaming," or totemic links with the people and "country" (Vaarzon-Morel 2008). Whilst the presence of camels is generally ignored, tolerated, or in some cases utilized (e.g., through tourism) they may eat plants or foul water holes that are considered sacred, thus damaging and polluting "country" (Vaarzon-Morel 2008). However, some informants perceive camels as symbolic of the development of Aboriginal settlements and therefore an adopted part of "country" and their area's history (Tangentyere Landcare 2005; Vaarzon-Morel 2008). Bough suggests that:

> Aboriginal people are far more accepting of an animal species that has proved its worth and lived for generations on the land. It is a European derived notion that there is somehow an environmental and biological "purity" to which we can return through the eradication of feral animals … (2006, p. 394)

Though introduced as domesticates, the majority of Australian dromedaries are now free ranging. They are consequently categorized by the wider Australian populace as a feral species. "Feral" is defined as, *"*In a wild state, especially after escape from captivity or domestication*"* (*OED* 2011). Ingold suggests that the definition of a wild

animal is essentially one that is "out of control" and that feral animals are consequently "likened to convicts on the run" (1994, p. 3). Feral species, therefore, are "out of place" by definition; they are escapees from the confines of human control. Compare the Australian dromedary with the two-humped Wild Camels *(Camelus ferus)* in the Gobi Desert, which have recently been granted additional conservationist protection because they have been acknowledged as a distinctly separate species from the domesticated Bactrian camel, *Camelus bactrianus* (Burger 2011; Hare 2011) and are no longer simply feral cousins. By this simple distinction the Wild Camels have earned their classificatory freedom (and, in turn, their real-world freedom from persecution).

Interestingly, Australia's dromedaries might actually fall somewhere *between* the categories of domesticated, wild, and feral. It is possible that camels are one example of a species that was, or is, "tame in the wild" (Bulliet 2005, p. 99). Bulliet (2005) suggests that Camelids, which have no apparent defensive weapons nor a strong flight response, evolved to avoid predation through adapting to and exploiting ecological niches such as inhospitable deserts or plains. He points to the remarkable lack of response to human presence and disturbance shown by wild guanacos (a small South American Camelid from which llamas descend), coupled with the stark absence of wild dromedaries in modern North Africa and the Middle East, to support his theory that Camelid species could have been "domesticated" through a relatively passive process by which humans, "Assume control over a more or less tame in the wild species, rather than from a period of long-term captivity and reproductive isolation from wild stock, as presumed in standard theories of domestication" (Bulliet 2005, p. 99). While the "wild" dromedary may simply have become extinct, given the

accumulative nature of nomadic pastoralism in the Middle East, it is also plausible that "wild" dromedaries were assimilated into existing herds. Indeed, they would have been a favored pastoral species *because* of their pre-existing adaptations to the desert environment and may thus have been little altered by human selection. At present, however, Australian dromedaries have been assigned to the feral category and are consequently primarily perceived as a species that can and should be under human control. This serves the purpose of stripping camels of any protection or advocacy as a "wild" species (unlike the dingo, for example, the wild/feral status of which remains under debate [Smith 1999]).

The salient point here is that the classificatory systems of much of Australia's contemporary human population have not evolved to incorporate camels in any significant sense. Therefore, as well as being perceived as physically "alien," camels are also culturally and symbolically "out of place." The European-descended population does not recognize them as traditional, useful domesticates and for many Aboriginal peoples they lack historical and religious significance. Without this cultural identity, camels come to represent just another invasive, feral species, out of the captivity in which they are presumed to belong and thus primarily symbolic of unnatural, uncontrolled deviancy.

Camels Out of Time

In his book *Hunters, Herders and Hamburgers*, Richard Bulliet (2005) introduced the concept of the "post-domestic" society, which he characterizes in two ways. Firstly, post-domestic citizens are physically and psychologically distanced from most of the

animals they depend on and are not involved with the processes by which these animals are made consumable. Secondly, this distancing causes feelings of guilt and disgust when post-domestic peoples are required to confront and consider the aforementioned processes, which is done "as seldom as possible" (Bulliet 2005, p. 3).

In contrast, Bulliet describes traditional nomadic pastoralist societies (such as the Bedouin) and notes that, "Within pastoral groups, many day-to-day transactions are based on the societal convention that animals have value as living beings regardless of the products their bodies might yield" (2005, p. 176). Although generalizations, Bulliet's analyses reasonably describe "typical" post-domestic and traditional pastoralist cultures and are therefore useful for the purposes of this discussion.

The transformation to domestic societies, Bulliet argues, began in North America with the market economy, in which, "Small numbers of people pastured enormous numbers of livestock on vast tracts of land" (2005, p. 179) for the purpose of sale. Consequently, the landowners—"ranchers"—were increasingly required to perceive animals in terms of money or goods received in exchange, rather than as valuable in themselves. Post-domestic societies are described as the (seemingly inevitable) conclusion of this trajectory, in which animals are perceived, processed, and sold as commodities. It is Bulliet's "ranching" rather than "pastoralist" model that became established in Australia: large numbers of European livestock, particularly sheep and cattle, were introduced and grazed across vast ranges. From this foundation, Australia has developed into the textbook "post-domestic" society described by Bulliet (2005), with the majority of the population living in urban areas and far removed from the herding, mustering, and slaughter of the animals they consume.

The Australian camel, once again, does not fit into this picture. Removed from the intrinsic value granted by traditional desert pastoralism (itself a diminishing way of life), once Australia's dromedaries had fulfilled their original economic purpose they retained little value in post-domestic Australia.

In 2008, the reports of economic and environmental damage and concern caused by camels culminated in a government-commissioned project and publication by Edwards et al., which was intended to assess the impact of feral camels and human attitudes toward them. The researchers aimed to record the perspectives of "key stakeholders" in feral camel management: ranchers, "conservation managers," and "Aboriginal peoples." Notably, the camels themselves were not recognized as valid stakeholders in their own existence, nor were they represented by humans acting on their behalf (e.g., as the interests of native species are represented by conservation managers). The interests of the camels were arguably precluded from consideration because they had been pre-classified as invasive aliens, or feral escapees, with no legitimate claim on the territories they inhabit. Thus, human perceptions of camels were to some extent apparent before the study investigating them had even begun.

Although there were variations in methodology, one trend was clear: a strongly utilitarian attitude prevailed. Camels were perceived as pests primarily because of the economic damage they caused to the "infrastructure" of properties (Edwards et al. 2008). The only positives investigated by the surveyors were also utilitarian—whether key stakeholders had sold, eaten, or made "any other income" from camels (Zeng and Edwards 2008a, b).

Another significant concern, also enforced by media reports, was that feral camels "compete with livestock" (e.g., Theodoulous 2010) for food and water, although this has not yet been confirmed by researchers (Zeng and Edwards 2008a). Again, this highlights a post-domestic perspective. Much of the camels' territory overlaps with that of cattle (ABS 2006 cf. Saalfeld and Edwards 2008). Both are introduced species, yet cattle retain their economic value to humans as part of Australia's vast red meat industry, whereas camels do not. In competition, therefore, cattle are protected as valued domesticates, while camels, outside the sphere of human protection, are considered pests.

Economic considerations also thread through much of the debate surrounding how the growing camel population should be managed. In 2009, a large-scale culling operation began. There were objections to this from animal welfare groups and some landowners (Firth 2009; Gabbatt 2009; *The Telegraph* 2012) who were concerned that the method of culling (from helicopters, leaving the bodies to waste) is inhumane. Most objectors, however, were primarily concerned that culling is economically wasteful; they felt that the camels should be mustered for slaughter or export (see *ABC News* 2008; Firth 2009; Phillips 2009; *The Telegraph* 2012).

Aboriginal informants were also keen for camels to be "utilized" rather than culled, but their position was less economically focused and more comparable with the worldview that, "Animals are offended by *unnecessary* killing: that is, by killing as an end in itself rather than to satisfy genuine consumption needs" (Ingold 1994, p. 9).

Crucially, the Aboriginal informants' perspectives differed from that of the researchers and the ranchers in that it engaged with the camels themselves:

> In considering what is at stake, they have weighed up their concern for feral camels as sentient beings against their concern for country … they are willing to consider culling if it is the only option. In their view, culling has a vital purpose—the maintenance and renewal of country. On the one hand, this position represents a significant shift in perspective from one where culling is perceived as "killing for nothing." On the other hand it is consistent with the Aboriginal ethic which stresses the need to care for country and related beings. (Vaarzon-Morel 2008, p. 118)

Here, this "concern for country" is informed partially through the Aboriginal peoples' observations of camels damaging local vegetation and watering holes, but also through the predominant perception of camels as a wider environmental threat.

This perception, reinforced by the Australian and international media (e.g., *PM* 2008; Hubble 2009; Marshall 2011), appears largely grounded on Edwards et al.'s (2008) report which implied that in large numbers, camels significantly damage vegetation and degrade the ground, thus impacting the balance of local ecosystems. There are also concerns regarding the global environment, as camels are ruminants and thus produce methane, contributing to Australia's carbon emissions (Morello 2010). Although the accuracy of these assertions is not questioned here, it is important to note that the environmental impacts of even 1,000,000 feral camels pales in comparison to that of the 28,500,000 cattle currently residing in the country (*ABS*

2011a, b). Yet following reports of dust storms gathering over Sydney, the camels were blamed for increased desertification of "country" (Hubble 2009; Vaarzon-Morel and Edwards 2010).

Lexicographer Jay Arthur believes that, "There are vocabularies associated with particular animals which are concerned not merely with violent opposition, but which testify to a sense of corruption, of the place being polluted with the[ir] presence" (2003, p. 176). Camels are now referred to as "humped pests," "a plague," "real danger" (*The Telegraph* 2009), and "menacing" (*AM* 2009), and their actions described as "ravaging" (*PM* 2008) and "marauding" (*The World Today* 2009). Here, the camels are suddenly attributed agency; their crossing of acceptable human boundaries is somehow deemed purposeful and rebellious. These accusations lie in stark contrast to the praise laid upon those dromedaries who assisted colonists in the exploration and establishment of modern Australia, and highlight how temporal changes in culture—specifically, shifting economic and environmental values—have affected human interpretations of the presence, purpose, and even behavior of Australian camels.

Milton (1996) and Smith (2006) frame environmentalism as not just a socio-political movement, but also an "intrinsically cultural phenomenon" (Smith 2006, p. 370). Smith (2006) further proposes that Australian environmentalism can be considered as a form of mythology, a collection and amalgamation of stories relating to people and place. With this in mind, it is worth highlighting that the growing negativity in public attitudes toward dromedaries has coincided with the appearance of what Smith (1999) and Franklin (2006) refer to as "eco-nationalism," a somewhat complex form of

patriotism based on the linking of national identity and native species. Smith (1999) comments that contemporary concepts of non-native feral species simultaneously recognize and deny the human population's own status as (largely) "non-native" and suggests that this conflict, "Manifests itself as an anxious state of belonging" (Smith 1999, cited by Franklin 2006, p. 19). In trying to address Australia's apparent ecological concerns, it is perhaps less troublesome for the human population to concentrate on the impacts of nonhuman groups, such as dromedaries, which can be more definitively and less contentiously classified as outsiders and invaders.

I present these biases to underline the impact that the camel's lack of contemporary socio-cultural significance, and classification as alien, feral, and invasive has on its standing in public perceptions. Although cynical, it is also reasonable to suggest that these labels allow disproportionate blame to be placed upon camels, thus making them a problem that can be "managed." This is perhaps easier than acknowledging the true impact and challenges of a post-domestic system of large-scale animal production and consumption in a country that is poorly suited to the pressures placed upon it.

However, the extensive and continual changes to Australia's environment did not begin with colonial Europeans. The last significant extinction event, during the Pleistocene epoch, coincided with the arrival of humans on the continent. Whilst there is much debate as to whether climate change, human land management (such as large-scale burning), or direct hunting was the major cause, numerous species of "mega-fauna" went extinct during this period (Crosby 1986; Bulliet 2005). Australian ecologist Chris Johnson (quoted by Jones 2010) has alluded to the possibility of an Australian "re-wilding" initiative, similar to those proposed by Donlan and colleagues

474 in the United States (Donlan 2005; Donlan et al. 2006). These initiatives plan to
475 repopulate the Americas with species pushed to extinction in the Pleistocene, either
476 by reintroducing species such as horses, or importing appropriate replacements for
477 extinct types (such as Bactrian camels to replace extinct relative *Camelops*). It has
478 been suggested that in Australia, dromedaries may have re-occupied a niche left
479 empty by the extinction of large herbivores and actually helped to restore the balance
480 of Australia's damaged ecosystems (Jones 2010). This viewpoint is notable because it
481 clearly contrasts with current perceptions. For "re-wilders," then, the camel may
482 become a replacement for an extinct species and therefore regain its value, as a viable
483 and important part of the ecosystem.
484
485 **Conclusion**
486 What has been almost entirely absent from all of this discourse is any direct study or
487 consideration of the camels themselves, who are arguably also "key stakeholders" in
488 this debate. Although culls and management of camels reduces numbers, the outback
489 is clearly an ideal place for camels to thrive; the AFCMP has acknowledged that
490 management measures will need to be continuous (AFCMP 2012). Somewhat
491 ironically, despite the autonomy and agency of camels being largely ignored or
492 misrepresented in discussions about their position in Australia, it is this same
493 autonomy—their ability to thrive, without humans, in one of the world's harshest
494 environments—that has caused the debate. The Australian dromedary through human
495 eyes is an animal both out of place and time: it is physically and symbolically
496 problematic for the majority of the population, has served its economic purpose in
497 Australia, and is not represented or celebrated by a cultural heritage of camel
498 pastoralism.

For dromedaries, however, Australia has been a place of temporary respite, where their actions have been neither controlled nor directed by humans and where retreat into the harsh desert climate has, until recently, served to protect individuals from those who would hunt them. Despite the extensive culls, there is no doubt that camels can and will continue in the Australian desert—where humans cannot be—in a place they have made their own.

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