RED FOXES IN THE MIDDLE EAST; A CALL FOR SAMPLES.

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Introduction

The red fox *(Vulpes vulpes)* is the most widely distributed terrestrial carnivore in the world, occurring throughout most of Asia, Europe, North Africa and North America in habitat conditions ranging from arctic tundra to temperate deserts (Lariviére and Pasitschniak-Arts 1996). The most common coat colour is a red-brown with a distinct white tip at the end of the tail, and black on the back of the ears and on the lower legs. Red foxes in the Middle East are typically a lighter colour, which likely results in lower heat absorbance and possibly better camouflage (MacDonald et al. 1999). The Middle Eastern red fox is also considerably smaller when compared to its more northerly relatives and this may reflect lower food availability in more barren desert environments (MacDonald et al. 1999). Although the red fox is one of the most common carnivores in the region it is relatively little studied. The Canid Diversity and Conservation Group, based at the University of California at Davis (http://www.vgl.ucdavis.edu/cdcg/home.php) is working on a project looking at the relationship between red fox populations in many locations around the world. We are seeking red fox samples from the Middle East to aid in this.

The Project

We use red fox samples (tissue, blood, hair etc) to uncover the genetic relationship of red fox populations in different locations. Our results so far have allowed us to identify three distinct lineages of red fox in North America (Aubry et al. in press). These lineages were isolated in disjunct forest refugia during the last glacial period. One of these lineages, mainly found in Alaska and Western Canada, is more closely related to populations in Eastern Siberia than to other North American populations. This is best explained by the fact that during the last glacial maximum the red fox population in Alaska was separated from the rest of North America by an ice sheet. While at the same time the sea level was lower, allowing the formation of a land bridge between Alaska and Eastern Siberia, facilitating animal movement between the two areas. Results such as these can aid in understanding the evolutionary relationship between populations and how past climactic events have impacted modern populations.

Our genetic analysis will answer many important conservation questions such as;

- Is a population genetically distinct?
  If so does it require additional conservation effort?
- Is a population relatively inbred/outbred.
  This will give an indication of the genetic health of the population.
- How are populations between two areas related?
  This can highlight areas of gene flow (animal movement) or barriers to gene flow that might not be otherwise apparent.

We are seeking red fox samples (tissue, blood, hair etc) from throughout the Middle East. Please contact Mark Statham (statham@ucdavis.edu) for further information. Any people/organizations we receive samples from will be appropriately acknowledged in resulting publications.

References

Aubry KA, Statham, MJ, Sacks, BN, Perrine, JP, Wisely, SM. Phylogeography of the North American red fox: vicariance in Pleistocene forest refugia. Molecular ecology, in press.

Lariviére S, Pasitschniak-Arts M (1996) *Vulpes vulpes. Mammalian Species* 537, 1-11.
Macdonald, DW., Courtenay, O, Forbes S, Mathews, F. (1999) The red fox *(Vulpes vulpes)* in Saudi Arabia: loose-knit groupings in the absence of territoriality. J. Zool., Lond. 249, 383-391

Fig1. Red fox pup.

Fig2. Common marmosets *(Callithrix jacchus)* were found to be particularly susceptible to encephalomyocarditis virus

ENCEPHALOMYOCARDITIS VIRUS IN THE UAE

Tom Bailey and Declan O'Donovan

We would like to alert veterinarians and managers of wildlife collections that encephalomyocarditis virus (EMCV), a picornavirus that causes myocarditis in nonhuman primates, elephants, pigs and other species was diagnosed in the UAE in 2006. In 2005 and 2006 significant mortality occurred in a collection of common marmosets *(Callithrix jacchus)* and squirrel monkeys *(Saimiri spp.)* in Dubai. Encephalomyocarditis was confirmed following pathological investigations by the Central Veterinary Laboratory (Dubai) and International Zoo Vet Group (UK). Pathological, virological and epidemiological features of this outbreak will be reported in due course in a doctoral thesis that has been completed at the University of Vienna. The reservoir host for EMCV is considered to be rodents and controlling rodent populations around nonhuman primates is considered important in preventing infection (Thompson et al, 2001). Vaccination of susceptible animals is also important (Vogelnest et al, 2006). Since a stringent rodent control program and annual EMCV vaccination was introduced at the Dubai collection no further mortalities from EMCV have occurred. It is important to note that EMCV can infect humans, although the condition is not highly contagious for people and infections are mainly asymptomatatic.

Further information

Thompson, G., Bengis, R., Brown, C. 2001. Picornavirus infections. In: Infectious diseases of wild mammals (ed Williams, E.S., Barker, I.K.). Manson Publishing, London. Pp 124-127.

Vogelnest, L., Hulst,F., Reiss, A., Barnes, J. 2006. Efficacy of an inactivated vaccine in the prevention of encephalomyocarditis virus in chimpanzees *(Pan troglodytes)* and other species. Proc Am Assoc Zoo Vets. Pp 164164.