DO XOLO'S HAVE INTELLIGENCE?

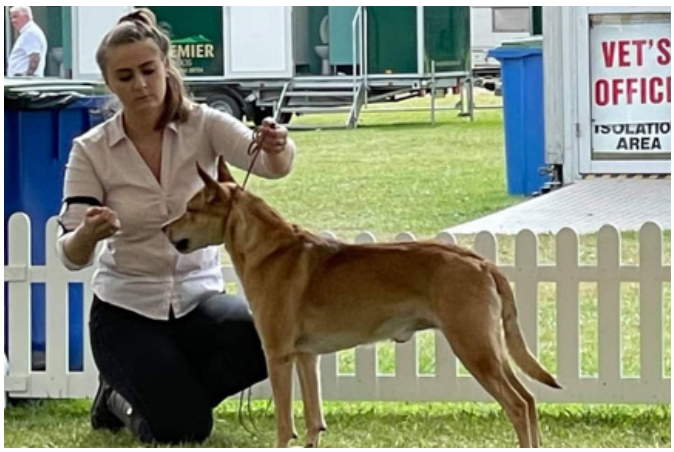
How clever is your Xolo?

Do Xolo's have Intelligence?

Do Xolo's have intelligence? No doubt all owners, breeders and exhibitors of Xolo's will most definitely agree that this breed is intelligent, however what is the depth of their cognitive thinking? This is something that has not yet been answered within this breed, however the field of primitive breed intelligence is becoming an interesting and recognised field under canine cognitive behavioural science.

This breed has been documented since 4,000 years ago, with the Mayan civilization being the suggested source of developing this breed, fast forward to 2015 and this was the year that I came into contact with this wonderful breed. The first Xolo that I handed was a standard naked called Reggie, he was absolutely wonderful and we were fortunate enough to have a enjoyable show career. However, I then came into contact with the coated varieties, which from personal experience were completely different!

From my time showing this variety, they were somewhat slightly more docile compared to their naked counterparts, each one I have handled has also had exceptional movement. Whilst the same breed, I felt the two varieties had significant differences in terms of their behaviour and characteristics, this same question could be applied to the different sizes found within the breed. If one thing can be said about this breed, it is that there is variance!



Whilst sitting in a scientific research meeting exploring what areas of cognition could be explored within canines, the idea of whether there are cognitive differences between the Xolo varieties was thought up. Could there be a cognitive difference between the sizes and varieties? Firstly, I took to the world of scientific literature to discover whether there was an answer, however there was not. Nobody in the thousands of years of this breed existing has this question been explored.

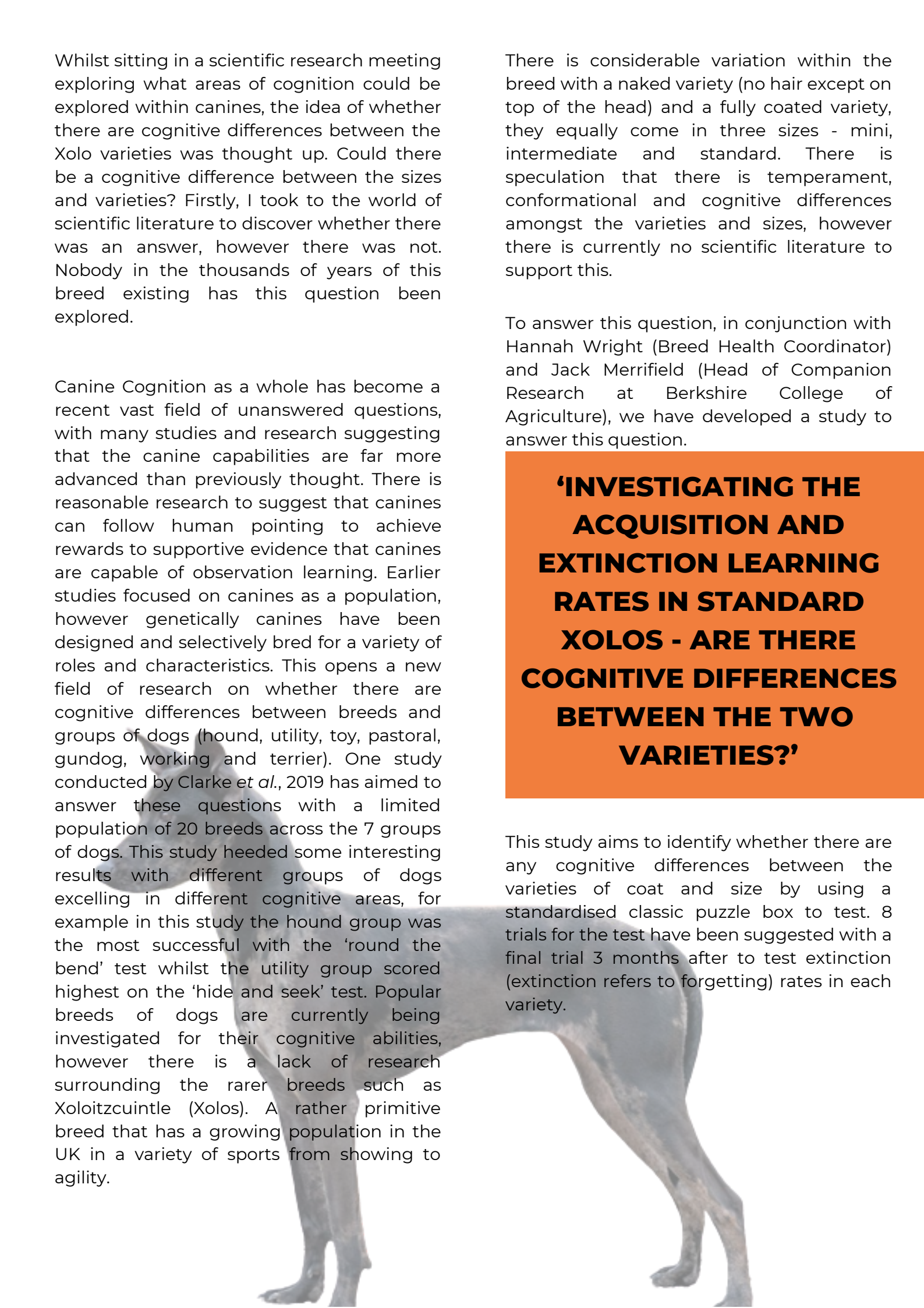
Canine Cognition as a whole has become a recent vast field of unanswered questions, with many studies and research suggesting that the canine capabilities are far more advanced than previously thought. There is reasonable research to suggest that canines can follow human pointing to achieve rewards to supportive evidence that canines are capable of observation learning. Earlier studies focused on canines as a population, however genetically canines have been designed and selectively bred for a variety of roles and characteristics. This opens a new field of research on whether there are cognitive differences between breeds and groups of dogs (hound, utility, toy, pastoral, gundog, working and terrier). One study conducted by Clarke *et al.*, 2019 has aimed to answer these questions with a limited population of 20 breeds across the 7 groups of dogs. This study heeded some interesting results with different groups of dogs excelling in different cognitive areas, for example in this study the hound group was the most successful with the 'round the bend' test whilst the utility group scored highest on the 'hide and seek' test. Popular breeds of dogs are currently being investigated for their cognitive abilities, however there is a lack of research surrounding the rarer breeds such as Xoloitzcuintle (Xolos). A rather primitive breed that has a growing population in the UK in a variety of sports from showing to agility.

There is considerable variation within the breed with a naked variety (no hair except on top of the head) and a fully coated variety, they equally come in three sizes - mini, intermediate and standard. There is speculation that there is temperament, conformational and cognitive differences amongst the varieties and sizes, however there is currently no scientific literature to support this.

To answer this question, in conjunction with Hannah Wright (Breed Health Coordinator) and Jack Merrifield (Head of Companion Research at Berkshire College of Agriculture), we have developed a study to answer this question.

'INVESTIGATING THE ACQUISITION AND EXTINCTION LEARNING RATES IN STANDARD XOLOS - ARE THERE COGNITIVE DIFFERENCES BETWEEN THE TWO VARIETIES?'

This study aims to identify whether there are any cognitive differences between the varieties of coat and size by using a standardised classic puzzle box to test. 8 trials for the test have been suggested with a final trial 3 months after to test extinction (extinction refers to forgetting) rates in each variety.



Each dog will have 3 minutes to figure out the puzzle box, each trial will time how quickly the dog solves the puzzle. An example of a scientific puzzle box is pictured in figure 1, this specific puzzle box was used as a part of cognition study exploring whether learning rates were hindered by noise phobias (Overall *et al*., 2019) To test extinction rates, 3 months after the 8th trial, the dog will be faced with the same puzzle box to test whether they can recall the problem. This study aims to explore the new branch of primitive breed cognition with a core focus on the cognitive abilities of Xoloitzcuintles and extinction rates. This research will be beneficial for the future of the breed by establishing their cognitive abilities, this equally aids with the breed councils and breeders understanding of their breed. We are hoping to publish these results in breed and scientific journals as well as present at conferences to make a full impact.

Figure 1: Puzzle Box example that is used in canine cognition studies (Overall *et al*., 2019)

THIS IS WHERE EXHIBITORS, OWNERS AND BREEDERS ALIKE ARE NEEDED. WE NEED 10 NAKED STANDARD XOLOS AND 10 STANDARD COATED XOLO'S TO PARTAKE IN THE STUDY AND SUBSEQUENTLY BE PART OF BREED HISTORY. IF YOU WOULD LIKE TO PARTICIPATE IN THE STUDY, PLEASE CONTACT MYSELF ON CWAKELING@BCA.AC.UK (COGNIT CANINES) TO GATHER ADDITIONAL DETAILS. PLEASE REMEMBER, WE NEED ALL PARTICIPANTS TO COMMIT TO 9 TRIALS!

About the Author and Researcher: I have 17 years experience showing dogs across all breeds, however have taken a keen interest in showing Xolos over the years as well as a interest in their cognition and behaviours. I am a lecturer in Animal Behaviour, Anthrozoogly, Animal Training, Breeding and Genetics (Canine section) and Kennel Management. I run my own small canine business entitled Cognit Canines and hold a Masters in Animal Behaviour, I am a leading member of the canine behaviour and cognition research group at BCA.

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