

Titel

Predator V Pet – the difference between wolves and dogs

Abstract

Dogs play a prominent role in modern day society. Most of them are kept for companionship which translates into a very close dog-human relationship. *Canis familiaris* have adapted incredibly well to man-made society however with an increasing number of cases ending up in shelters it is fair to say that this subject still needs further exploration. A lot has been written about the way dogs behave and how owners can improve their relationship with their pet. A very popular vision on dog behaviour is the wolf pack theory also called lupomorphism. For a long time the interpretation of this vision consisted in the need for a dog owner to be a leader by any means. If an owner is not strong enough as a leader a dog will try to take over this role and show behaviour that is not desirable. Recent studies have shown that there are gaps in this theory. The vision on how a wolf pack functions has changed and there is an increasing number of experts that agree that the best study subject for dog behaviour is in fact the dog itself. The goal of this thesis is to clarify how dogs and wolves relate to each other as species both biologically and psychologically. A lot of literature research has gone into this thesis to try and find out what really goes on inside a dog's head and if comparing them to wolves is useful to grasp that idea. On the side line whenever possible observation was done on study subjects within the RSPCA and UKWCT to get practice knowledge to sustain the theory. The result is a work that aims to clarify and improve the relationships between dogs and humans.

Keywords

- Wolves, Ethology, Dog behaviour, Evolutionism,

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Technical data UKWCT

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E-mail:	clive@ukwolf3.demon.co.uk
Manager/Head of office:	Teresa Palmer, Sue Hull, Charles Hicks, Nigel Bulmer, Anne Carter
Internship mentor:	Clive Readings (Head keeper)
Field:	Wolf Conservation
Department/Group within the company:	Zoo keeping/educational
Number of employees:	3
Annual Turnover:	N/A
Products:	Wolf Walks, Seasonal activities, gift shop (wolf related items), Wolf keeper days, Howl nights, seminars
Specialisation field:	Wolves – Education to public about the species and Conservation
Two relevant publications from UKWCT:	Wolf Print
Additional information:	N/A

Technical data RSPCA

Name internship company:	RSPCA (Royal society for the prevention of cruelty to animals) Stubbington Ark
Adres:	174-176 Ranvilles Lane, Fareham, Hants, PO14 3EZ, UK
Telephone number:	+44 1329 66 75 41
Mobile:	N/A
Faxnumber:	+44 1329 66 52 62
E-mail:	enquiries@rspca-solent.org.uk
Manager/Head of Office:	Mike Ward
Internship mentor:	Mark Fuge
Field:	Animal shelter/charity
Department/Group within the company:	Everything
Number of staff:	40
AnnualTurnover:	N/A
Products:	Shelter, animals for adoption, pet food and accessories, veterinary care
Specialisation field:	Charity shelter for all animals
Two relevant publications from RSPCA:	RSPCA monthly magazine
Additional information:	N/A

1 Goal

The social dynamics of a wolf pack is often used as a model for dog-dog and dog-human interactions. I have seen dog people (and wolf people as well) caught up in the idea of always maintaining high rank by aggressive means, believing their only choices are forcibly dominating the animal or submitting to it. The problem with this approach is two-fold. Firstly, aggression may well escalate, and secondly, an either-or choice between forcible dominance or submission is not the only choice available to wolves, to dogs or to humans. (P.Goodman, 2006)

These words of Pat Goodman describe a philosophy that is very popular within the dog behaviour discipline. The number of physical incidents with dogs keep rising causing a great number of them to end up in shelters. What does this tell us about the human-dog relationship? Has this approach proven to be sufficient in providing an explanation for dog behaviour? How does this philosophy affect the welfare of dogs and their owners?

The goal of this thesis is to:

- research how dogs and wolves relate to each other as species both biologically and psychologically;
- determine whether lupomorphism is useful and how it should and shouldn't be applied to dogs.

Within that main goal there are three important questions to consider:

- a. What can lupomorphism contribute towards understanding dog behaviour? ;
- b. How useful are the behavioural patterns of wolves within dog training?
- c. Is the Wolf the only *Canidae* species suitable to help research the depths of dog behaviour?

A lot has already been written about this subject especially in the past decades. Still there are some facts that are left unknown and riddles left unsolved. Due to the nature of the relationship between dogs and humans it is vital to keep searching for the right answers. Dogs are dependent on humans not only for shelter and food but also for their general wellbeing. Most dogs are very important to their owners and alongside the role of pet fulfil the role of friend. If the message they send us gets lost in translation there is too much that can go wrong. Misinterpretations often translate into misery of some sort.

In the past decades biologists are discovering more about what really makes the dog tick, but this new understanding has proven slow to drip through to the owners. (J. Bradshaw, 2011).

It is ultimately the goal of this dissertation to find a vision about dogs that is not the caricature of the wolf in a dog suit but the real dog. (J.Bradshaw, 2011).

2 Preface/Literature study

2.1 Introduction

Dogs and wolves share 99,96% of their DNA, this means that with modern day equipment it is virtually not possible to make a distinction between the two species based exclusively on a DNA sample like e.g.: a blood sample. However when it comes to behaviour and appearance there are clear differences between the two species.

In the next chapters dog and wolf will be compared to each other from different angles. It is the intention to explore the different facets that make up the nature of each species and see how they compare to one and other on each aspect. In chapter 2.6 the difference between domestication and socialisation is explored as it is a vital aspect in trying to understand how dogs and wolves diverged.

2.2 Classification and taxonomy

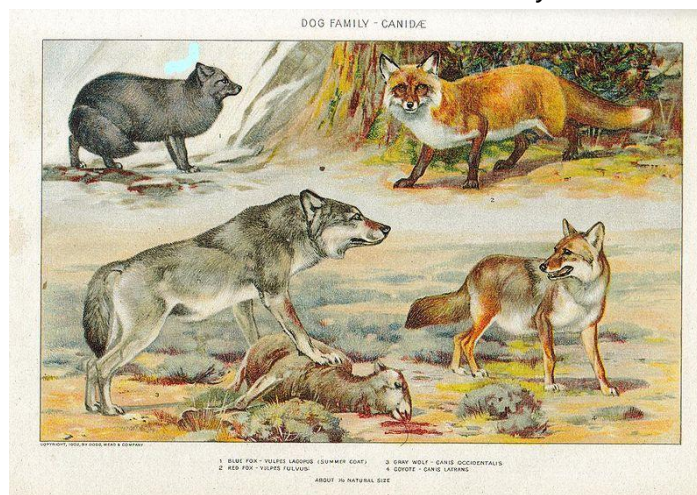
2.2.1 Gray wolf

Table 1: Scientific Classification Grey wolf (Linnaeus C., 1758)

Kingdom	<i>Animalia</i>
Phylum	<i>Chordata</i>
Subphylum	<i>Vertebrata</i>
Class	<i>Mammalia</i>
Order	<i>Carnivora</i>
Family	<i>Canidae</i>
Subfamily	<i>Caninae</i>
Genus	<i>Canis</i>
Species	<i>Canis lupus</i>

The Gray wolf is the largest member of the *Canidae* family, Genus *Canis* or dog like animals. This classification is still roughly the same as originally stated by Linnaeus. The *Canidae* family is divided into two tribes: *Canini* (dog-like) and *Vulpini* (fox-like). Members of the *Canidae* families share, amongst others, the following traits: all canids are digitigrade; they possess non-retractile claws, in their penis male canids have a baculum which is part of the cause of copulatory tie after mating; their diet is carnivorous or omnivorous and most Canids have 42 teeth, the upper forth premolar and the lower first molar are adapted as Carnassial teeth for sharing flesh.

Id. 1: Members of the Canidae family



Biologists distinguish two geographical groups within the *Canis lupus* species: North-American and Eurasian wolves. North-American wolves are taller and more slender than Eurasian wolves. Generally it can be said that northern are larger than southern wolves, however some subspecies form an exception to that rule.

Within the North-American group twenty-four subspecies of the *Canis lupus* are accepted, twelve in the Eurasian group. Of the twenty-four North-American subspecies eight are extinct, sixteen are still extant to day.

The twenty-four species within the North-American wolves are (Busch, R.H., 1995): fourteen extant subspecies: *Canis lupus arctos* (Arctic wolf), *Canis lupus bailey* (Mexican wolf), *Canis lupus crassodon* (Vancouver Island wolf), *Canis lupus hudsonicus* (Hudson Bay wolf), *Canis lupus irremotus* (Northern Rocky Mountains wolf), *Canis lupus labradorius* (Labrador wolf), *Canis lupus ligoni* (Alexander archipelago wolf), *Canis lupus lycaon* (Eastern wolf), *Canis lupus mackenzii* (Mackenzi river valley wolf), *Canis lupus manningi* (Baffin Island wolf), *Canis lupus occidentalis* (Mackenzi valley wolf), *Canis lupus orion* (Greenland wolf), *Canis lupus pambasileus* (Yukon wolf), *Canis lupus tundrarum* (Alaskan Tundra wolf) and ten extinct subspecies: *Canis lupus alces* (Kenai peninsula wolf), *Canis lupus beothucus* (Newfoundland wolf), *Canis lupus bernardi* (Bernard's wolf), *Canis lupus columbianus* (British Columbia wolf), *Canis lupus fuscus* (Cascade Mountain wolf), *Canis lupus griseoalbus* (Manitoba wolf), *Canis lupus mogollonensis* (Mogollan mountain wolf), *Canis lupus monstrabilis* (Texas wolf), *Canis lupus nubilus* (Buffalo wolf), *Canis lupus youngi* (Southern Rocky Mountains wolf).

Id. 2: *Canis lupus arctos*



Id. 3: *Canis lupus bailey*



The twelve subspecies of Eurasian wolves are: nine extant subspecies *Canis lupus albus* (Tundra wolf), *Canis lupus arabs* (Arabian wolf), *Canis lupus campestris* (Steppe wolf), *Canis lupus chanco* (Tibetan wolf), *Canis lupus cubanensis*, *Canis lupus desertorum*, *Canis lupus lupus* (Eurasian wolf), *Canis lupus pallipes* (Indian wolf), *Canis lupus signatus* (Iberian wolf) and four extinct species: *Canis lupus deitanus*, *Canis lupus hattai*, *Canis lupus hodophilax*, *Canis lupus minor*.

Furthermore also the *Canis lupus rufus* (Red wolf) and *Canis lupus familiaris* (domestic dog) are subspecies of *Canis lupus* but they don't fall under the geographic classification mentioned above.

The taxonomy classification of wolves is rather complicated and subject of much dispute. In this dissertation a general overview of the subspecies was given to show that within the wolf species there is a large variety between subspecies. In practice it is easier to distinguish some of the above subspecies but in a great number of cases it is difficult.

2.2.2 Dog

Table 2: Scientific Classification Domestic Dog (Linnaeus C., 1758)

Kindom	<i>Animalia</i>
Phylum	<i>Chordata</i>
Subphylum	<i>Vertebrata</i>
Class	<i>Mammalia</i>
Order	<i>Carnivora</i>
Family	<i>Canidae</i>
Subfamily	<i>Caninae</i>
Genus	<i>Canis</i>
Species	<i>Canis lupus</i>
Subspecies	<i>Canis lupus familiaris</i>

In his original classification Carolus Linnaeus classified the dog as *Canis canis* within the doglike or *Canis* genus. To this genus Linnaeus also included the wolf *Canis lupus* and the fox *Canis vulpes*. For a long time the dog was considered a species in its own right. In 1993 the American Society for Mammologists reclassified the dog as *Canis familiaris*, one of the subspecies of the Gray wolf (*Canis lupus*). This decision was made after extensive observations on behaviour, morphology, vocalisations and molecular biology led scientists to conclude that the Gray wolf can be considered the ancestor of all dog breeds.

Within *Canis lupus familiaris* there are approx. one hundred and sixty nine dog breeds that are classified as pure breeds by most kennel clubs. These are divided into seven groups according to the original purpose of the breed. All these breeds came to exist due to selective breeding and most of them are no older than two hundred years.

Id. 4: Selection of some of the most popular dog breeds¹



¹ Source: http://dogs.thefuntimesguide.com/2006/03/top_dog_breeds.php

2.3 Evolution of Genus *Canis*

The evolutionary history of the wolf is not totally clear, but many biologists believe that the species developed from primitive carnivores called *Miacids*. *Miacids* appeared approx. fifty-two million years ago. From these *Miacids* evolved the first *Canidae*.

The *Canidae* consists of 15 genera, one of which is the *Canis* genus, which consists of 7 wild species and the domestic dog (Sheldon, 1988). Aside from the wolf and the domestic dog, this genus also includes jackals, African wild dogs and coyotes.

The *Canidae* family is represented by two extinct subfamilies: *Hesperocyoninae* and *Borophaginae* and one living one: *Caninae*. (Wang, et al., 2004). Species belonging to these subfamilies originated 40 million years ago and evolved in North America.

Species belonging to the *Caninae* crossed over to Eurasia approx. 7-8 million years ago. The first recognised member of the *Caninae* subfamily is the *Leptocyon* which lived around 32 million years ago. The *Leptocyon* was a fox like animal that was the ancestor of the *Eucyon* and the first *Canis* genus. The *Eucyon* was jackal-sized animal that emerged approx. 10 million years ago and spread over Europe and Asia. Fast forwarding history, the *Eucyon* is the forefather of modern day coyotes (*Canis latrans*). (Miklosi A., 2007)

The first *Canis* genus developed in North-America approx. 5-6 million years ago. These animals looked a lot like modern day jackals and are the first hyper carnivorous species within the *Caninae*. Hyper carnivorous means that these animals relied only on a strictly carnivorous diet. From North-America *Canis* quickly diverged towards Europe, Asia and Africa. From the *Canis* genus developed the extinct *Canis etruscus* and *Canis mosbachensis*. These are considered to be the ancestors of the Gray wolves (*Canis lupus*), the dholes and African wild dogs.

Wolves emerged 130 000 – 300 000 years ago and according to archaeological records have remained unchanged morphologically until today. During this period wolves were not top predators as they had to compete for food with at least 11 carnivorous species of the Mega fauna, most of which were bigger. For reasons that scientists are uncertain about these Mega fauna species suddenly disappear. Wolves survived and spread their territory worldwide.

Providing a realistic evolutionary chronology on when and where the dog domestication process started is difficult. Based on DNA analysis alone there is no doubt that the dog is descended only from the grey wolf, *Canis lupus* (C. Vila, 1997). Foxes, coyotes, jackals, wolves and dogs are able to interbreed and bring forth fertile offspring. So it is possible that other members of the *Canidae* family might have contributed the dogs genetic pool as well. The evolution of the domestic dog is still a matter of much debate. Some believe that the dog descended from the wolf, while others think they evolved separately from a common ancestor. Some scientists are starting to point out the importance to consider a common ancestor of both dogs and wolves instead of modern day gray wolves as a model for study of dogs.

An important milestone in determining dog ancestry and evolution is found in a research led by Dr. Robert Wayne in 1997. He led a research team to analyse the blood samples of dogs and compare them to blood samples of wolves, jackals and foxes. Results of this experiment found that wolves show the closest match to dog DNA. He determined that especially Middleeastern wolves contributed to the dog genetic pool.

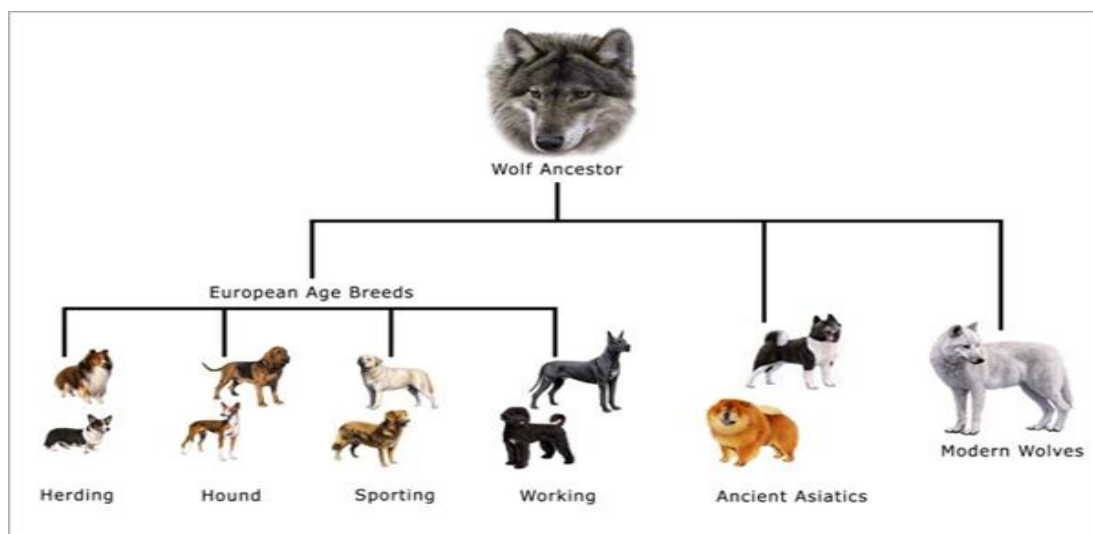
Speculations are that instead of one domestication events, several have occurred in different parts of the world. The oldest dog remains found to date are located in Goyet cave in Belgium. The skull has been carbon dated to 31 000 years ago. There is conclusive evidence that shows that dogs diverged from wolves at least approx. 15 000 ago.

Id. 5: Goyet Cave dog remains



Most dog breeds as we know today are no older than 200 years. During the Victorian era (1800's) intensive selective breeding started to create dogs with a certain appearance and function. Breeds came to exist by selecting on certain traits within something known as the predatory sequence. All mammalian predators follow five basic steps in what is called the predatory sequence: search; eye-stalk; chase; grab bite and kill bite. Every breed has come to exist because the Victorians selected on part of this predatory sequence and enhanced it. That is why a herding dog reacts completely different to certain situations than e.g.: a terrier type dog. Part of the difficulty in determining the nature and evolution of dogs lies in the fact that in no other species there are so many variations in size, colour and behaviour.

Id.6: Phylogenetic tree representing canine divergence from the wolf²



² Source: <http://www.wisdompanel.co.uk/breedinfo/>

2.4 Wolf V Dog – biology

Whenever observing wolves and dogs it is generally easy to notice morphological differences between species. In practice it has proven to be difficult to find traits that occur globally in only one of the species. This task becomes even more difficult when wolves are compared to wolf-like dogs. Two main factors play a role in this: first of all within the species *Canis familiaris* is a large variety in physical traits that varies according to breed and second, wolves and dogs share most of their genetic material.

There are five morphological traits that can be compared between the two species, however three of these are traits that only appear in some dog breeds so cannot be applied to all dogs. Dew claws, sickle shaped tails and droopy ears are three traits that will never occur in wolves. However these are characteristics that only appear in some dog breeds as well so do not serve as general distinction. The supra-caudal gland is absent or reduced in dogs. Finally dogs have a turned-back apex on the lower jaw which is absent in wolves.

One morphological trait that might be more reliable for comparison is the skull. It is mainly the proportions between the skull and other body parts that can provide clues towards species identification.

Beneath an overview of the useful skull proportions in wolf – dog comparisons:

- Skull and body: skulls of dogs are shorter and smaller for the same body weight;
- Skull and teeth: teeth are smaller in relation to skull;
- Skull length and width: the muzzle is wide relative to its length, in the skull the palate and maxillary region became shorter and wider, in relation to skull length, this is why a dog appears to have a shorter nose;
- Skull and sinuses: frontal sinuses are enlarged in dogs;
- Skull and bullae: the auditory bullae are smaller and flatter in dogs;
- Skull and forehead: the angle of the forehead tends to be larger in dogs;
- Skull and orbit: in the dog the shape of the orbit is more rounded, and the eyes look more directly forwards;
- Mandible and teeth: the upper tooth row is more bowed and the angle of the mandible deeper with the ventral edge more convex, mandible deeper in wolves. Teeth in dogs are often more compacted, especially in the premolar region.

Id. 7: Neopolitan mastiff skull (above) Gray wolf skull (below)³



³ Source: <http://retrieverman.wordpress.com/2011/02/26/neapolitan-mastiff-skull-compared-with-that-of-a-wolf/>

2.5 Wolf V Dog – behaviour

General behavioural observations on various dog breeds, mongrels or feral dogs suggest that they represent certain “mosaic” constructions of the ancestral wolf pattern. (Coppinger, et al., 1987; Goodwin, et al., 1997). When humans first started selecting on certain behaviour patterns, they were selecting on certain traits that are natural to wolves, also described as the predatory pattern (see chapter 2.3).

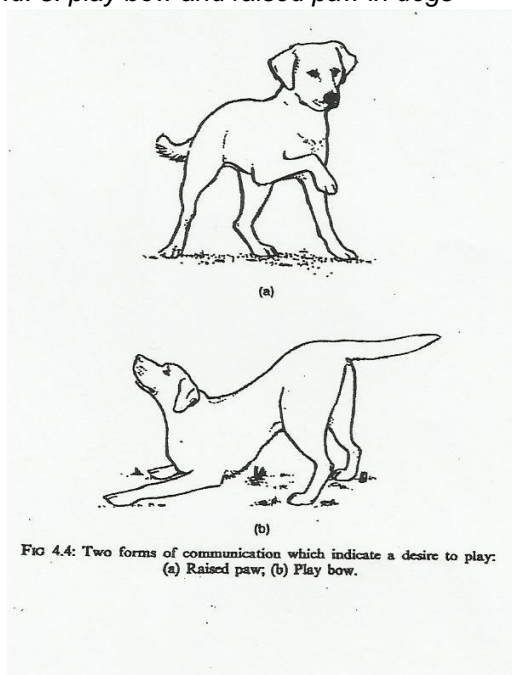
A very big difference between wolves and dogs is observed in the reproduction patterns. Where wolves gestate only one litter a year and wolf females only come into cycle once a year, dogs can breed all year. For this reason dog bitches are more sensitive to phantom pregnancies and infections related to the reproductive organs. Dogs show sexual maturity at an earlier stage and tend to be less picky in their choice of sexual partners. Wolves tend to stay with the alpha partner of choice and produce several litters with that same individual.

Dogs are a lot more sociable than wolves. Wolves from different packs will try to avoid one and other. If they do meet they usually fight, sometimes to the death. The reason for this is survival. Dogs on the other hand are extremely outgoing and usually are perfectly happy to meet other unknown individuals from the same or different breed.

Perhaps the most remarkable difference between these two species lies in the fact that so far there is no evidence showing that a group of dogs will organize in a well-defined structure like wolves do. Observations on feral dogs have shown that while some aspects of the “wild” dogs social structure are similar to those of wolves, their sexual and parental behaviour are radically different.

In fact feral dogs show patterns that are rather found in the behaviour of other species within the *Canidae* family, e.g.: the Coyote. In a wolf pack, only the alpha pair will breed. In feral dogs when a female comes in heat she will be courted by many males, mostly from outside her pack. Given the fact that these feral dogs don't organise their societies in the same way a wolf does it seems unlikely that pet dogs would do so either. (Bradshaw J., 2011)

Id. 8: play bow and raised paw in dogs



Use of different vocalisations varies significantly between wolves and dogs. Both wolves and dogs have the ability to bark but it is well known that this behaviour is rare in wolves. Howling is a vocalisation form that occurs often in wolves and a lot less in dogs.

It has been mentioned before that adult wolves are less playful than adult dogs. One very common indication of that is the absence of visual gestures that indicate the will to play. Submissive signals like licking around the lips and assuming a lower position are present in both wolves and dogs. However two very characteristic traits seen in dogs and rarely in wolves are the “play bow” and “raised paw”. Both signals are used to indicate the will to play.

2.6 Domestication V socialisation

Dogs are often referred to as being “artificial animals”, probably because of their history of being “domesticated”. (A. Miklosi, 2007; Lorenz, 1954). The term “artificial animal” is used to refer to the kind of animal that has only come to exist because of the intervention of man and therefore has no natural environment in the wild. Domesticated animals depend completely on humans for food and shelter. To study natural dog behaviour there is the need to determine a natural environment for it. Dogs have to follow humans in many aspects of social behaviour. In fact dog populations even feral ones can hardly be considered outside of a human population.

Domestication is generally viewed as an evolutionary process controlled by human influence (Price 1984). It takes several generations of selected individuals to get a domesticated animal. This process cannot be done without the input of man. The process results in an animal that has diverged from the original animal both in appearance and behaviour. Domestication happens to a population that is put through a selection pressure.

Socialisation means that an animal will be desensitised to the presence of humans in order to facilitate handling, feeding and keeping stress levels down. This process can be done to one single animal during its own lifetime. There is no guarantee that a socialised animal will be totally acceptant towards humans after reaching adult age.

Big questions remain on which part of evolution gave rise to the domestication process that led to modern day dogs. One hypothesis is the well know theory of wolves living in close environment with humans and being selected for social behaviour. According to A. Miklosi comparing dogs solely to present-day wolves might be too restrictive. From the time wolves and dogs diverged from each other both species may have adapted to a different environment, and the ancestor wolves could have represented a different set of behavioural traits.

Dog pups can stay with the bitch until they are weaned and still form strong attachments with humans. On contrary wolf cubs have to be taken away from their progenitors during their socialisation period (2-12 weeks) in order for them to be able to develop a social acceptance towards humans. During this time wolves can develop strong attachments to humans but will still prefer the company of adult wolves over humans. After they become adolescents and adults though they will still have a natural weariness towards humans.

Even though dog pups can form strong attachments with humans they are not born with it. It is crucial that dogs are exposed to and grow up in an environment close to humans during their socialisation period. Emotional attachments generally occur between 6 and 8 weeks. Hence the reason why this is considered to be the ideal moment for new dog owners to acquire a pup.

Compared with wolves, dogs will more often look up to humans in problem-solving situations and follow human directional gestures to come to a solution. This shows the existence of genetic predispositions related to the domestication process in the emergence of social cognitive abilities in dogs. (Topal J., et al., 2005) Different experiments performed on both wolves and dogs have shown that dogs are so successful within the human world because they have developed something called social cognition. Dogs seem to have developed the ability to read part of the visual signals that humans send.

3 Material and methodology

3.1 Introduction

To come to substantial conclusions a broad literature research was done. Aside from books also scientific research papers, reports and documentaries have been accessed. Reference to these works can be found in throughout this entire work.

In order to compare the behaviour of dogs to wolves a number of ethograms were made at the UKWCT and the RSPCA. Ethograms developed by other researchers have been taken into account to serve as an example. The ethology prospectus provided during my course at KATHO was the cornerstone throughout this bit of the research.

Last but not least, during my work experience at the UKWCT and the RSPCA I got in contact with experts that have been dealing with dogs and wolves for a long time. Talking to them and asking questions has helped me to develop worthy conclusions. I have taken an interview of one of these people and included it in this paper. Her name is Lynn Royce and the full interview can be found in chapter 3.4.

3.2 Literature study

At the end of this dissertation is a full list of all the sources that have supported the content of this work.

3.3 Ethograms

3.3.1 Introduction

An ethogram or action catalogue is used to record the behaviour in terms of frequency, duration and the sequence of behavioural units (Lehner, 1996). To be able to provide true insight into the behaviour actions and patterns of a study object the observer needs to be trained and reliable.

Not enough ethograms were taken in context of this dissertation to provide solid empiric conclusions. However observation was an important factor in gaining perspective on the behavioural differences between dogs and wolves.

Each ethogram was performed ad libitum, this means that every observation was done when it was convenient during the work schedule within the internship companies. Each observation was done for a period of 30 minutes. Through sequence sampling all observed behaviour elements were recorded onto a piece of paper. Observations were done on either one single individual or a group of two to three animals.

Chapters 3.3.2 and 3.3.3 show a sample of the ethograms taken for this dissertation.

Two important factors need to be taken in to account when considering the actions described in the next 2 chapters:

- 1) Study subjects at the RSPCA are dogs in a shelter environment. Due to the nature of life in a shelter there is a factor called kennel stress that greatly affects the behaviour of these dogs. Therefor their behaviour cannot be fully representative of that of dogs in a family home since these two habitats are very different;

- 2) Study subjects at the UKWCT are wolves that live in captivity. Although the enclosures at the UKWCT have a decent size, they still keep the wolves confined to a certain space which again has an impact on their behaviour.

3.3.2 Wolf Ethograms

The overall behaviour of the wolves was calm and not a lot would happen in a period of 30 minutes. One of the most observed behaviours was resting.

Ethogram 1:

Name: Tala

Species: North-Western wolf

Sex: Female

Age: 9 months

Observation time: 30 minutes

Time of day: 15:00 until 15:30

Additional information: confined to a smaller enclosure due to injury, isolated from siblings

00:00 – 00:30	walk
01:00 – 02:00	run in circles around fence
02:00 – 03:00	stop, look through fence ears up, tail down
03:00 – 03:15	urinated
03:30 – 04:00	run around
04:00 – 04:15	urinated
04:15 – 05:30	run around
05:30 – 07:30	walk around in circles around enclosure close to fence
07:30 – 08:00	stand and look through fence in direction of siblings
08:00 – 11:30	walk around enclosure, look around
11:30 – 13:30	look through fence at siblings
13:30 – 30:00	lay down, eyes closed

3.3.3 Dog Ethograms

The study subjects at the RSPCA were overall more reactive than the study subjects at the UKWCT. A lot more stress signs were seen and overall more behaviour elements within a session.

Ethogram 1:

Name: Alfie

Breed: Jack Russel

Sex: Male

Age: 4 ½ years

Information on identification sheet: Suitable for general dog ownership, friendly, outgoing, bouncy, needs to build rapport with his owner. Children 8+ that are calm, not cat friendly.

Observation time: 30 minutes

Time of the day: 15:00 until 15:30 (feeding time)

00:00 – 0:24	running in circles
00:24 – 00:26	runs outside panting (tongue sticks out of mouth, breathing fast)
00:26 – 00:30	drinks out of water bowl

00:30 – 00:34	walks outside looks at what's going on outside of dog block tail and ears are up, muscles relaxed
00:34 – 00:36	walks back inside tongue sticks out of its mouth panting
00:36 – 01:58	sit down next to bed
01:58 – 02:14	walk outside stop at fence look outside
2:14 – 02:16	walk back inside

This same behaviour pattern was repeated 5 times between 02:16 and 06:50.

06:50 – 08:58	sit down next to bed look around pen
08:58 – 09:32	walk back and forth tongue sticking out panting
09:32 – 09:44	barking (after hearing other dogs bark) running around in circles
09:44 – 10:22	barking but no more running in circles
10:22	all dogs stop barking, also Alfie
10:22 – 13:57	walk back and forth inside pen
13:57	member of staff walks into dog block
13:57 – 14:05	running in circles barking stare at door through bars of enclosure
14:05 – 15:05	run back and forth in enclosure
15:05	receives bowl with food
15:05 – 16:24	eats
16:24 – 16:43	licks bowl
16:43 – 16:47	walks to bed
16:47 – 17:02	stops and looks at me
17:02 – 17:04	walk back to bowl
17:04 – 17:23	licks bowl
17:23 – 17:54	walk back and forth in enclosure
17:54 – 17:56	walk to bowl
17:56 – 18:30	licks bowl
18:30 – 30:00	lay down look around
18:52 – 19:27	lick paws

Ethogram 2:

Name: Kez

Breed: German Shepard

Male

Age: 8 months

Information on character assessment sheet: the dog was reserved so this information could not be accessed at the time.

Observation time: 30 min

Time of the day: 15:00 until 15:30 (feeding time)

Additional information: Kez has to fast in preparation of a hysterectomy the next day

Id. 9: Kez



00:00 – 00:11	lay down
00:11	stand up
00:11 – 00:20	stand
00:20 – 00:44	sit down look around
00:44 – 03:47	lay down
00:44 – 01:02	tries sniffing at me through fence
01:02 – 03:47	look around
00:00 – 03:47	body language: dog looks calm, no panting, muscles relaxed, ears and tail relaxed
03:47 – 04:00	barking (triggered by other dogs barking)
04:00	stops barking
04:00 – 04:34	walk back and front agitated
04:34 – 05:06	stand still at back fence barking, looking outside into yard
05:06	stopped barking
05:06 – 05:23	sit down
03:47 – 05:23	body language: dog is panting, ears are up, tail is up, muscles tense
05:23 – 05:43	sit down outside next to fence look outside
05:43 – 06:20	lay down eyes are closed
06:20 – 06:56	other dogs start barking Kez starts barking as well
06:47	member of staff comes in with food
06:56	Kez stops barking
06:56 – 07:19	looks for staff member through fence
07:19	member staff stands in front of kennel Kez sits down, licks lips, ears are up
07:20	member of staff passes by Kez's kennel Kez didn't get food
07:20 – 09:04	jump up against the fence Barking
09:04 – 09:35	stands still, look for member of staff ears are up, muscles tense

09:35 – 09:54	sit down, sniff through fence
09:54	member of staff passes by
09:54 – 10:20	stand up, look at member of staff
10:20	member of staff exits block
10:20 – 10:38	running in circles, very agitated
10:55 – 11:16	run back and forth barking
11:16 – 11:31	sniffing through fence
11:48 – 12:10	stand, look through fence, whining
12:10 – 12:22	run back and forth, panting
12:22 – 12:41	lays down next to fence, look at block door
12:41 – 12:53	stand up, look at door block
12:53	jump up against fence
12:53 – 13:34	lay down, ears relaxed
13:34 – 13:54	run back and forth, panting, whining
13:54 – 14:29	sit down, whining, look at door block
14:29	member of staff comes in block, starts filling up water bowls
14:29 – 14:45	look at member of staff, ears up, body tense
14:45	member of staff starts filling up Kez's water bowl
14:45 – 14:55	wagging tail, look at member of staff
14:55 – 15:25	drinking
15:25 – 15:38	run in circles
15:38 – 16:44	run back and forth
16:44	stops next to bed
16:44 – 17:44	sniffing bed
17:44 – 17:46	walk outside
17:46 – 17:58	urinates
17:58	walk to bed and lay down
17:58 – 30:00	lay down in bed

3.4 Interview

Lynn Royce has been a volunteer at the RSPCA since 1991. Her job is described as “animal welfare advisor”. She plays a major role in assessing the behaviour of all dogs at the shelter. Part of that function is to determine the character of the dog, whether it is suitable to go up for homing and which kind of environment would be most suited to help the rehabilitation process. Lynn uses a hands off approach and uses mainly food as a motivation for training. Aside from her job at the RSPCA she is also a nutrition advisor for Eukaneba and Hills.

1) *Lynn, what is your training background on dog behaviour?*

L. (Lynn): I read a lot of books about dog behaviour out of interest. When I first started working at the RSPCA I was in reception and I never imagined I would be doing what I do today. However I felt there was a need to assess the dogs before they were put up for adoption to guarantee they wouldn't come back to the shelter and so prospective owners know beforehand what they can expect from their new pet. So I started to look for courses that I could do. I did a course at the Animal Care School taught by John Fischer. John Fischer's teachings are based on the philosophy of Ian Dunbar. I also followed a weekend workshop taught by Turid Rugaas. Her calming signals are an important part of my work method.

2) *How do you make an assessment of a dog? How do you assess its character?*

L.: When a dog is brought into the RSPCA I observe its behaviour. I try to assess if it is nervous, friendly or shy. The next day I take the dog for a walk and try to expose it to different types of stimulants to see how it reacts. This will help assess if the dog can be

placed in an environment with cats, children, other dogs, if it has any reservation towards males or females amongst other things. I also assess if the dog likes to be handled so I will expose it to combing, hugging or putting on the lead. In all these handlings it is important to observe the body language of the dog. All conclusions are written down on an assessment sheet. (an example of this assessment sheet can be found in the attachments) After the assessment is done each dog will get colour: red, yellow or green. Red means that the dog can only be handled by experienced dog handlers. Yellow means that the dog is suited to be walked by dog walkers. Green means that the dog is ok to be handled by everyone. One important factor in assessments is remembering that the dogs at the shelter are exposed to a lot of stimulants in their environment and this causes stress levels to rise. The dogs come in to an environment they don't know and there are a lot of strange smells, dogs, cats, members of the public and all of these affect its behaviour. So an assessment is always done in the moment and a dog can show a completely different type of behaviour once it is placed in a home.

3) *Do you use other tools like e.g.: a Campbell test to support your assessments?*

L.: I don't use a Campbell test nor a MAG test to assess the dogs at the shelter. To judge the character of the dogs at the RSPCA I base my observations on the adoption test by Sue Steinberg. The animals that are brought into Stubbington Ark often got exposed to trauma of some sort. So these dogs tend to be quite stressed. Staff at the RSPCA will assess if any of the dogs show signs of food possession when they feed the dogs and report this back to me. If I suspect that any of the dogs has a certain trouble area I will also ask members of staff to make observations.

4) *What is your opinion on kennel stress? What do you think is the cause for it?*

L.: The dog blocks at the RSPCA are a little outdated. The dogs are still housed in line blocks which limits their capacity for social interaction. The play area is placed in the middle of all dog blocks, for the dog inside the play area this is extremely stressful. They can hear all the other dogs and literally almost smell them. I think these are factors that help develop kennel stress. Whenever I walk a dog I try to take it off site onto the road right outside the shelter. Stress is contagious as well. Once 1 dog starts to bark, quickly all other dogs follow. Members of the public walk in and out of the dog blocks all day long and this entices the dogs. Unfortunately members of staff are so busy during the day that the dogs don't get enough 1 on 1 time and mental stimulation. Everyone is highly motivated though and there are major efforts to try and make it better. There are kongs on site and recently the inside blocks are closed for members of the public after 2 pm.

5) *What do you think about the comparison between wolves and dogs?*

L.: I think this idea is a little branched out. In my eyes, feral dogs would be a more suitable subject of study for dog psychology and behaviour than wolves.

6) *Which area within dog behaviour would you think needs more research?*

L.: I'm not sure I am the right person to ask that question to. I'm very instinctual when it comes to dogs, not much of a scientist. I am sure there are lots of areas that still need to be explored but when it comes to me, I will read what is out there but I am very focused on what I can do for the dogs specifically in this shelter. The problem is that there is very good information out there but because of the limited resources of the RSPCA I cannot always put it into practice and that frustrates me.

7) *Do you feel there is enough information out there about dog behaviour?*

L.: There are some very good resources out there, some books I would definitely recommend are: *The other end of the leash* by Patricia Conwell and *Dogs* by Ray Coppinger. They offer very good insight into the world of dogs without getting too technical about it.

4 Internship non related to the thesis

The internship was split in two blocks, each of these performed at a different company. The first block of ten days was carried out at the UKWCT (UK Wolf conservation Trust). The second block of thirty days was fulfilled at the RSPCA (royal society for prevention of cruelty towards animals) Solent Branch. All information about the UKWCT can be found in chapter 4.1. Chapter 4.2 contains all details related to the RSPCA.

4.1 Work Experience UKWCT

4.1.1 Introduction

The UK Wolf Conservation Trust (UKWCT) was set up by Roger and Tsa (Teresa) Palmer in 1995. For over 20 years Roger and Tsa kept wolves as private individuals, first in Dorney in Buckinghamshire then after 1983 in Butlers Farm in Beenham. Roger's passion for wolves was built in after a personal wolf encounter during a trip to Alaska in the 1970's. When he returned to the UK he decided to acquire a wolf himself. He obtained his first wolf "My Lady" from Kessingland Park in Norfolk. "My lady" was hand reared and therefore became especially friendly and tolerant towards humans, including children.

In 1995 Roger and Tsa Palmer decided to set up the UKWCT because they felt it was necessary to educate the public about the true nature of the wolf. Currently the site is still located in Butlers Farm in Beenham, in the heart of the Berkshire area between Winchester and London.

The UKWCT has four main goals:

- To enhance public awareness and knowledge of wild wolves and their place in the ecosystem;
- To provide opportunities for ethological research and other research that may improve the lives of wolves both in captivity and in the wild;
- To raise money to help fund wolf related conservation projects around the world;
- To provide wolf related education programs for young people and adults.

Id.10: Pumpkin enrichment for the Arctic wolves



The UKWCT is not a zoo, so it is not open to the public daily. Periodically there are a variety of programs and events surrounding wolves. These activities are organized to introduce new ideas about wolves to members of the public and help clear-out misconceptions about them as a species. On open days the public is allowed to visit the site without previous booking.

Programs and activities organized throughout the year need to be pre-booked and can be followed for a fee. "Wolf walks" and "Adult

keeper for the day” are organised weekly. Both activities are restricted to members of the UKWCT of 12 years and older. Once a month there are “howl nights”. On “howl nights” communication between wolves is the main subject.

The Trust makes an effort to organise themed events during school holidays and wolf walks for children younger than 12. A good example of this is the Halloween pumpkin carve organised for school children between 4 and 12. A group of approximately 20 children is assigned carve a pumpkin for each wolf and fill it up with “treats”. These treats consist of cheese cubes, ham, tuna and sausage. After filling up the pumpkins the group is led around the site where each wolf gets a pumpkin. Aside from providing a learning opportunity for children this is a good enrichment for the wolves as well. Each activity organised at the Trust embraces the 4 main goals stated above, so even though the previous event was themed around Halloween, education officers will still seize the opportunity to talk about the wolves.

A full calendar with all the events can be found on the website of the UKWCT: <http://ukwct.org.uk/index.php?page=events>.

4.1.2 The Wolves

The wolves at the UKWCT are socialized in order to make them suitable for wolf meets and walks with the public. Though socialized they are not domestic animals, so everyone handling them should still do so with care.

Each volunteer at the trust is given a few guidelines concerning the way they should behave around the wolves to avoid unnecessary accidents. An overview of these guidelines can be found in the “Work experience safety manual” which is part of the appendix at the end of this dissertation.

An explanation about the difference between the process of domestication and socialisation can be found in chapter 2.2.

There are currently 12 wolves living at the UKWCT that are divided over 5 groups:

- Torak and Mosi;
- Lunca and Duma;
- Mai and Motomo
- The Arctic Pack: Pukkak, Massak and Siko;
- The Beenham Pack: Nuka, Tundra and Tala.

Fact Sheets:

TORAK

Id..11 : Torak



Canis lupus lupus x canis lupus occidentalis
European/Northwestern wolf cross

Alpha Male

Born: 22th of April 2006 at the Anglian wolf society

Character: Torak means “perfect” in Inuit. His name was chosen based on a character out of the book of Michelle Paver “Chronicles of Ancient Darkness”. Torak can be wary and timid in the presence of a large group of people. He loves to play with Mosi and to retreat in bushes of his enclosure.

MOSI

Id. 12 : Mosi

Canis lupus occidentalis
Northwestern wolf

Alpha Female
Born: 27th April 2006 at Dartmoor Wildlife Park
Is the sibling of Mai.

Character: Mosi means “cat” in the Navajo indian language. She is energetic, curious and adventurous.



LUNCA

Id. 13: Lunca



Canis lupus lupus
European wolf

Subordinate Female
Born: 3rd of May 1999 at the UKWCT

Character: calm and stoic, good ambassador, loves food. Assumes role of subordinate individual. Was part of the first litter of European wolves to be born in the UK in 500 years. Lunca is very calm and friendly when she goes out on wolf walks. This trait makes her the perfect wolf ambassador.

DUMA

Id.14 : Duma

Canis lupus occidentalis
Northwestern wolf

Alpha Female
Born: 12th of May 1998 at Woburn Safari Park

Character: oldest wolf at the UKWCT, perfect ambassador, calm, tolerant, amenable and adaptable. When out on walks she will show her affection (mainly towards men) by peeing on their foot. She is confident and a strong leader which makes her ideal to live with Lunca.



MAI

Id. 15: Mai



Canis lupus occidentalis
Northwestern wolf

Alpha Female
Born: 27th of April 2006 at Dartmoor Wildlife Park

Character: Mai means “Coyote”. Gave birth in May 2011 to the Beenham pack cubs. She is playful, elegant and calm. A lot of volunteers and members of the public consider her the greatest wolf of the Trust.

MOTOMO

Canis lupus occidentalis
Northwestern wolf

Alpha Male

Born: 19th of May 2008 at Combe Martin Wildlife and Dinosaur Park

Character: Motomo means “he who goes first”. He is the only wolf at the UKWCT that has only been hand-reared for the first two weeks of his life. This means that he is not as social as the other wolves. He tends to shy away and hide at the back of the enclosure. He will not be used on walks with the publics and is at the trust mainly to keep company to Mai. Mai and Motomo get along well. He fathered the cubs of the Beenham pack in May 2011.

Id.16: Motomo



ARCTIC PACK

Canis lupus arctos
Arctic wolf

2 male and 1 female

They are too young to establish a pack hierarchy yet.

Born: 8th of March 2011 at Parc Safari in Quebec, Canada

PUKAK

Id.17: Pukak



Pukak means “first snow” in Inuit. He is the only one of the 3 cubs that doesn’t have ginger colouring in his coat. Pukak loves get attention and is generally the first one up against the fence to meet people.

Id.18: Sikko (left) and Massak (right)

MASSAK

Massak means “soft snow” in Inuit. He is shy at first but will eventually come up to the fence with his siblings. He’s the biggest one out of the Arctic pack and has tan colouring in



his coat. Massak is very confident and likes to do things on his own terms.

SIKKO

Sikko means “ice” in Inuit. She is the only female in the Arctic pack and just as Massak has tan colouring in her coat. She is the smallest of the three and is very inquisitive.

BEENHAM PACK

Canis lupus occidentalis
Northwestern wolf

1 male and 2 female
Born: 3rd of May 2011 at the UKWCT

NUKA

Nuka means “youngest sibling” in Greenlandic and he is the only male in the pack. He is the biggest cub of the pack and is inquisitive, friendly and extremely confident.

Id. 19: Nuka



Id. 20: Tundra



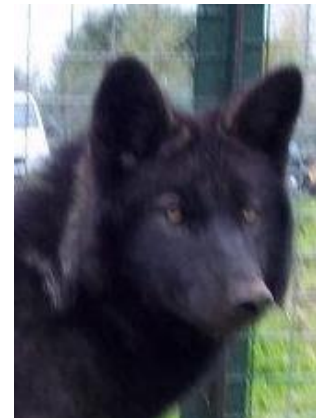
TUNDRA

Tundra means “frozen arctic plain”. She is the larger female in the pack and tends to be shy. She is very inquisitive though and loves to play with water. After play she is always the last one to settle down. Both Tundra and Nuka have the same coat colour as Motomo

TALA

Tala means “wolf”. Her coat looks exactly like Mai. She is friendly, playful and can jump very high. She is the smallest cub of the pack and got injured on her left foreleg during play. Due to this injury she had to be kept separate from her siblings for 6 weeks to let the wound heal. Tala was kept in the inside pen of the beenham cub enclosure. This allowed her to still see her siblings and be able to sniff at them through the pen. It isn't large enough for her to be kept there all day so during this time she was kept in a small enclosure on the field next to the cub enclosure. It still isn't large enough for her to get rid of energy but it was a good place to allow her wound to heal nicely. At the end of the day all cubs are taken out on a walk so that they can have time to interact with each other and get used to being walked on a lead.

Id. 21: Tala



During the day when Tala was in her enclosure 2 volunteers had to stay with her to make sure she wouldn't jump over the fence. Just like Mai, Tala can jump very high, and in trying to jump over the fence she could not only escape but also injure herself.

Id. 22: Inside enclosure



Id. 23: Tala's injured front leg



4.1.3 Work practices

Table 3: Daily roster UKWCT

Time	Monday	Tuesday	Wednesday	Thursday	Friday
9:00 – 10:00	Prepare & administer medication Change all external water buckets Ensure all wolves are out	As for Monday			
10:00 – 11:00	Kennel cleaning				
11:00 – 12:00	Feed birds	Perimeter check	Feed birds	Perimeter check	Feed birds
12:00 – 13:00	Lunch	As for Monday			
13:00 – 14:00	Site Maintenance	As for Monday			Thorough cleaning food shed
14:00 – 15:00					Thorough clean of Porter cabin
15:00 – 16:00	Study Period	As for Monday			
16:00 – 17:00	Prepare and Administer food Set up night time kennel arrangements				

Work at the UKWCT was quite straightforward as the schedule illustrates. The first priority in the morning is to prepare and administer medication to the wolves that are following treatment. During the month of November there were three treatments that needed to be handled each morning. Duma and Lunca got a supplement due to their old age, Tala was getting NSAID's due to an injury she had suffered in her enclosure. In small animals veterinary practices it is often possible administer pills directly into the mouth. This practice cannot be applied to non-domesticated wolves as there is a great chance of injury. To make sure they get their medication it is mixed into a meatball.

MEATBALL RECIPE

Makes 1 serving

Preparation time: 5 minutes

Ingredients:

Approximately 100gr. minced meat
1 egg
½ can of tuna
some of the oil from the tuna can
required medication

Preparation:

1. mix the 4 first ingrediets together in a container. Use a spoon or hands to do this.
2. powder the medication and add in to the mixture
3. roll the mixture into a small ball, the size of a medium egg.
4. Feed ball to required wolf

Id. 24: Feeding Mai

Whenever feeding wolves there are a few guidelines that need to be taken into consideration. It is important to either lay the food in the palm of the hand or hold it in a fist. These techniques provide the safest way to feed them and will keep accidents to a minimum. A pinch position of the hands should be avoided as this puts the fingers in the path between the wolf's mouth and its food. From that moment the fingers of the handlers become part of the food and could be accidentally chewed on.



In the wild wolves don't feed daily. They will make a kill every few days and can sometimes go a week without feeding. To mimic this pattern at the UKWCT feeding happens only once a day, in the evening and there is a weekly starve day. Just as they would in the wild the wolves at the UKWCT are fed raw meat. Their diet consists of a mixture of chicken carcasses, rabbit, deer, beef and visceral parts. The quantities are determined according to weight, sex and bulk of the wolf. A large male wolf like Torak and Motomo gets 1,2kg of meat, a wolf cub of 9 months like Nuka or Tundra will get about 900 grams, adult female wolves like Mai and Mosi get 1 kg of food.

After administering medication to the wolves all inside enclosures are checked to see if any of them needs cleaning. The wolves at the UKWCT rarely use their inside closures. Outside enclosures don't need cleaning as they are large enough and don't have any paved areas. The maintenance of the outside enclosures is done by staff on a monthly and yearly basis. This maintenance includes reseeding of the grass, planting of herbs amongst other jobs.

After kennel cleaning (in case needed) work experience students are asked to do a variety of tasks according to need. Around the area of the Trust are different bird feeders that need to be filled up every other day. The main task of work experience is to assist staff in wolf walks with the public. This consists of forming a line and making sure that the members of the public don't get too close to the wolves during the walk, help set up material for presentations and activities and serve up drinks. During presentations and walks it is the ideal time for work experience students to gain all the general information about the UKWCT and general information about wolves as a species.

Every day students get 1 hour in the afternoon for research and/or observation on the wolves at the Trust.

4.2 Working at the RSPCA

4.2.1 Introduction

The RSPCA is the abbreviation for Royal Society for the prevention of cruelty to animals. It is one of the largest and oldest animal welfare charities in the world with over 1500 employees. Funds for the organisation is completely depended upon voluntary donations from members of the public. The charity was founded in 1824 as the Society for Prevention of Cruelty to Animals (SPCA) by Heather Robertson. In 1840 the royal family gave permission to add the prefix R to show their support for the cause. The first RSPCA inspector started operating in the late 1830s.

Id. 25: RSCPA logo



The vision of the RSPCA is to: “work for a world in which all humans respect and live in harmony with all members of the animal kingdom”.⁴ Ultimately it is the goal to increase animal welfare and change the law so it becomes illegal to mistreat animals. In practice this comes down to five pledges, also known as the RSPCA pledges.

THE RSPCA PLEDGES

1. We pledge to end the overpopulation of companion animals and tackle the related issues;
2. We pledge to end the euthanasia of any rehomeable animal;
3. We pledge to increase the proportion of animals reared under higher welfare systems in the UK
4. We pledge to reduce the number of animals in the UK who undergo severe suffering when used in experiments
5. We pledge to reduce the number of kept as human pets and increase their human care

As an organisation, the RSPCA is subdivided into hospitals, centres, branches, groups and regions. The Stubbington Ark is the Solent branch of the RSPCA and one of the largest RSPCA animal shelters in the United Kingdom. The site opened in 1987 on the 8 acres Ranvilles farm site after the original site in Park Gate could not cope with growing numbers of animals in need of take-in and adoption. Today the site has 117 kennels, 81 cat units, accommodation for small animals, birds, a wildlife unit, 3 stables and a veterinary unit. Intake and isolation are separate from the rest to avoid cross-contamination. Furthermore there is a puppy unit, puppy play/socialisation area and free exercise for adult dogs. A vet is on site 7 days a week to ensure all health issues can be addressed immediately. All cats, dogs, rabbits and ferrets get a microchip and are up to date with vaccination before being adopted.

RSPCA practices are founded upon the 5 F's (5 freedoms for animals). The 5 F's were first developed by Professor Roger Bambell in 1965 after concerns were raised about the welfare of farm animals.

5 F's

Freedom from hunger and thirst
Freedom from discomfort
Freedom from pain, injury and disease
Freedom to express normal behaviour
Freedom from fear and distress

⁴ www.rspca.co.uk

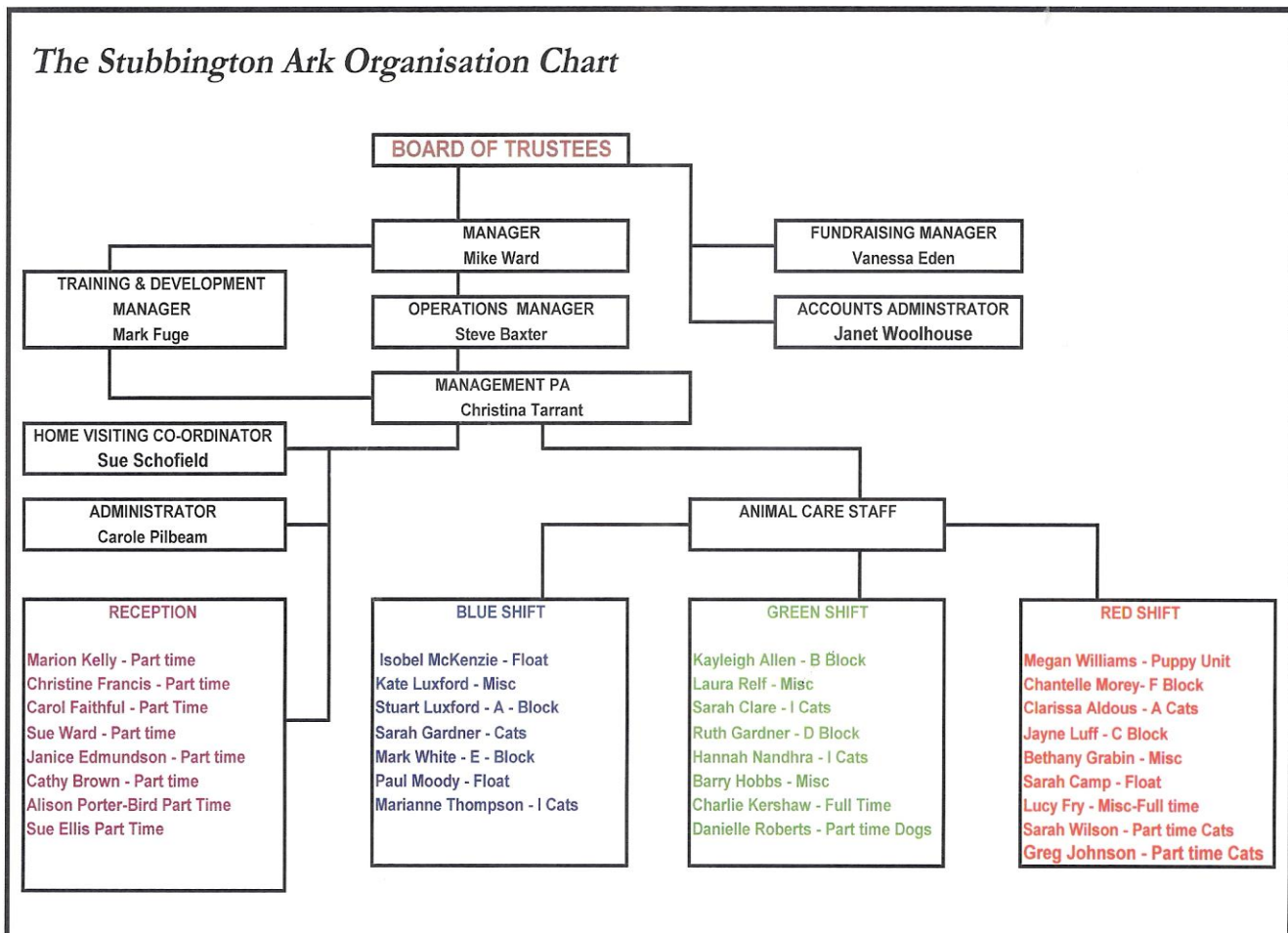
4.2.2 Stubbington Ark – site and technical data

Stubbington Ark does not rely on the main headquarters of the RSPCA for funds. Therefore there is some liberty regarding policy and operating regulations. General guidelines are still consistent with general RSPCA practices. That is why before making any major decision, head management of Stubbington Ark owes liability towards the board of trustees (see personnel chart in chapter 4.2.2).

The site is open to the public from 10am until 4pm, seven days a week. Staff is on site between 8am and 6pm. Out of hours there is always a manager and/or senior staff member on site for emergency case. An emergency case includes not only disaster scenarios like a fire but also inspectors that need to bring in an animal out of hours. Whenever possible it is encouraged to bring in animals during opening hours to make sure staff can prepare everything to take it in.

There are currently 40 members of staff working at the RSCPA, Id. : Staff structure Stubbington Ark shows an overview of this. Stubbington Ark is a large site and every type of animal brought in to the shelter has different needs. A variety of enclosures have been built to ensure that every animal gets the type of housing they need. This translates into: 10 different kennel blocks, 3 rodent units, 2 wildlife units, 10 outside ferret kennels, 10 outside poultry and waterfowl kennels, 5 paddocks for livestock, 10 isolation units, 3 outside cat pens and 2 out of hours units. Blocks are organised according to species and adoption status. In practice this comes down to animals of the same species being housed together in the same block. There is a subdivision for animals that are ready for adoption and animals that aren't. A complete overview of each department can be found in chapters 4.2.2.1 until 4.2.2.4.

Id.26 : Staff structure Stubbington Ark



There are 3 main reasons why animals are brought into the RSPCA:

- Sign over
- Stray
- Case

Sign over animals are signed over by owners voluntarily when they don't have the possibility to keep their pet. This type of animal can be brought in by initiative of the owner him-/herself or the RSPCA inspectors. By signing over their animal the owners generally avoid legal persecution.

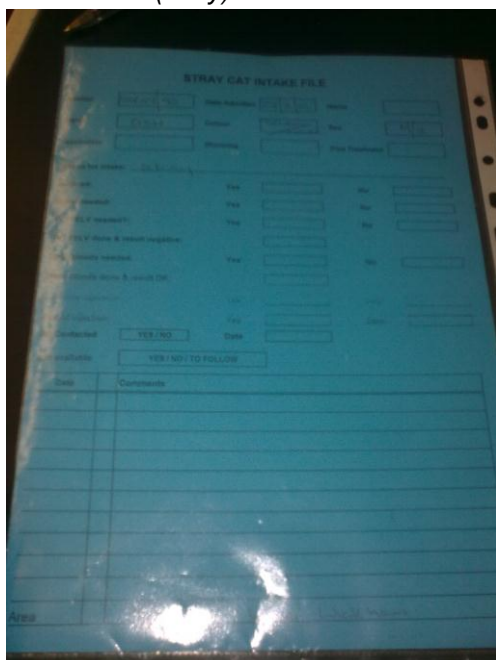
Stray animals can be brought in by RSPCA inspectors or members of the public. They will only be accepted if they have been found in very poor health conditions and need urgent treatment. When this is not the case the RSCPA will try to sign the animal over to one of the other shelters in the local area.

Case animals are animals that have been confiscated by RSPCA inspectors. These animals are brought in because they have been forced to live in horrible conditions and often show serious health issues. Sometimes a case animal turns into a sign over if the owner accepts liability. More often owners of case animals are brought to court in order to prove their guilt, liability for treatments and a sentence for the damage they caused. When the RSPCA wins a case the owner is often banned from being able to get another pet for a certain amount of time. Unfortunately, reality doesn't always match the ideal so in practice it can happen that animal abusers don't get convicted or that they will still manage to get another pet even if they have been prohibited to do so.

Every animal that is brought into the shelter gets an intake file and a number. There are 4 different colours for intake files each of which represents one of the categories: stray, sign over or case. Blue stands for stray, pink is for case animals, yellow or orange cards are for sign over animals. Each colour has its own number count-up. At the beginning of each year the counting gets reset back to 1.

So e.g.: a stray cat is brought in on the 4th of April 2012, this cat will get a blue card and the number 25, in the administration this cat is stray 25 2012.

Id 27.: Blue (stray) cat intake file



Id.28 : Pink (case) dog intake file



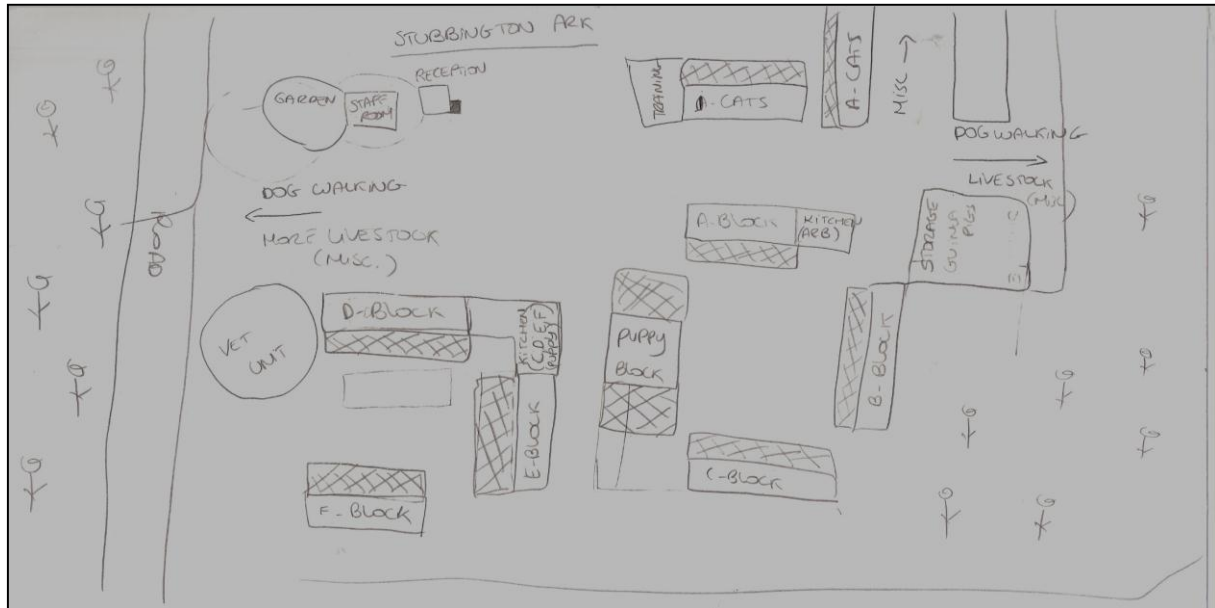
4.2.3 Departments

There are five main departments at Stubbington Ark:

- Cats
- Dogs
- Misc. (abbreviation for Miscellaneous)
- Veterinary clinic
- Reception

Id. 29: map Stubbington Ark

I-cats (Isolation Cattery); A-cats (adoption cattery); A-, B- and C-blocks



Within each department there are separate areas for adoption and isolation. Id. : map of Stubbington Ark gives a general overview of the layout onsite. Here follows a brief overview of the purpose of each block (from left to right):

- D-block: case dogs
- E-block: isolation kennel
- F-block: boarding kennel
- Puppy-block: puppies and miniature dogs
- I-cats: Isolation cattery
- A-cats: Adoption cattery
- A-, B- and C-blocks: adoption kennels

In chapters 4.2.3.1 until 4.2.3.4 a more detailed description is given of the purpose and work system of each block. An overview of isolation and adoption blocks within Misc. can be found in chapter 4.2.3.1. Id: map showing location of each subdivision within Misc.

All animals that are not ready for adoption stay in the isolation block. These include animals that have been signed over, are sick and case animals waiting for their case to be settled in court. Once the animal has been cleared for rehoming they are moved to an adoption block.

4.2.3.1 Misc.

Misc. is the most varied department at the Stubbington Ark. Within Misc. 8 units can be distinguished:

- Rabbits;
- Poultry and water fowl;
- Wildlife unit;
- Ferrets;
- Aviaries;
- Rodents;
- Livestock;
- Isolation.

Any animal that isn't a dog or cat gets placed in Misc.

Id. 30: map showing location of each subdivision within Misc.



Rabbits are one of the most represented animals within Misc.. There are 36 rabbit units in the rabbit block. The rabbit block has an occupancy rate of approx. 90% most of the year. Each unit has an inside space and a large outside pen. Rabbits are housed individually or in pairs. Some of the animals in the rabbit block have been brought in for boarding.

All units are cleaned daily and all dirty bedding is tossed instead of washed. Cleaning is done with a solution of Safe-4® and water. Dilution ratios are the same as given in Id. in chapter 4.2.4.2., which is 4 pumps of 30ml for a bucket of 12 litres. After cleaning every unit needs to be dried with a towel. Every unit has a different towel to avoid cross-contamination. After drying the unit, fresh towels are laid out over the floor of the inside hutch and bed. The towels on the hutch floor are there to avoid injury due to slipping. Since all hutches are made of plastic rabbits don't have much grip on them.

Rabbits are fed once a day with Burgess Excel rabbit food®. There are separate buckets for Excel adult and junior/dwarf. Each rabbit gets 50 grams of feed and hay ad libitum. The RSPCA gets a donation of fresh vegetables on occasion. Whenever there are carrots, cabbages or other green leaved vegetables available the rabbits get a small amount of these at feeding time as well. The nutritional value of each Excel rabbit food can be found in tables 5 - 7 in chapter 4.2.4.3.

ADOPTION PROCEDURE RABBITS

Intake: general health check, done by animal care staff Misc. department

Health check:

- Teeth: size and colour
- Nails: size
- Skin: look for mites and general condition
- Eyes: colour of eyeball, wounds
- Ears: mites, wounds
- Weight

Upon suspicion of health issues make an appointment with vet (vet-run)

Prepare unit

Monitor rabbit for **7 days**: assess food intake, water intake, weight, urine and faeces

After 7 days **3 possible outcomes**:

1. rabbit has healthy teeth and eats enough hay – ready for adoption
2. rabbit has bad teeth but eats enough hay – ready for adoption
3. rabbit has bad teeth and does not eat enough hay – euthanasia

Id. 31: Supreme Science® bathing sand

Opposite the rabbit block is the rat shed. In this area are not only rats but also degu's which are generally housed in small groups ranging from 2-5. Each cage has plenty of tubes, toys, hanging mats and shelters to provide enough enrichment and places for the animals to retreat to. The floor of each degu cage is covered with cat litter and a tray filled with supreme science® bathing sand is provided to give the animals the opportunity to dust bathe. Degu's and rat cages only need cleaning once week.



Behind the rabbit block and the rat shed is an outside area dedicated to water fowl and poultry. In the beginning of 2011 building started to create a pond in the middle of this area for the waterfowl. Completion of this project is yet to be achieved. In the meantime waterfowl gets access to bathing trays of approximately 2m x 0,5m. Cleaning out of this area happens also only once a week.

On the west side of the rat shed (see Id. : map showing location of each subdivision within Misc.) are the ferret enclosures and wildlife unit. There are 10 ferret units in total. Each ferret unit can keep groups from 2-10 individuals. Separate sleeping areas and enrichment material is provided in each unit. Ferrets are fed daily with Felix® cat food. There is an isolation area for ferrets next to the wildlife unit.

Id. 32: a couple of canaries – aviaries Stubbington Ark



South of the rat shed (see Id.: map showing location of each subdivision within Misc.) are the aviaries. Cleaning and feeding in these facilities happen once a week. The bottom of each aviary is covered with sanding paper. This sanding paper is eaten by the birds because the sand on it facilitates the digestion process.

Next to the aviaries is the gerbil shed. Each gerbil is normally housed individually. Exceptionally groups of 2 or more gerbils will be kept together. This happens only if they were brought into the Ark as a group and are used to being in the same environment together. Each gerbil cage is filled halfway up with wood shavings.

South of the gerbil shed is a barn that has 3 separate sections: the first section is a storage area for hay and straw, the second section is the inside pen for livestock and the third section is the guinea pig area. Each guinea pig is homed in an individual pen. They are fed Burgess Excel guinea pig food® daily.

West from the aviaries and the gerbil shed are the livestock paddocks. Some of these paddocks are reserved for dog walking

Id.33 : goats at paddocks behind storage barn



4.2.3.2 Cats

There are 2 cat blocks: A-cats (adoption cattery) and I-cats (isolation cattery). Cats that are suitable for adoption are placed in A-cats all other cats stay in I-cats.

Every cat unit has an inside area and an outside area. Cats are normally housed individually however if they are brought in as part of a pair they will not be separated.

Id.34 : Inside units I-cats



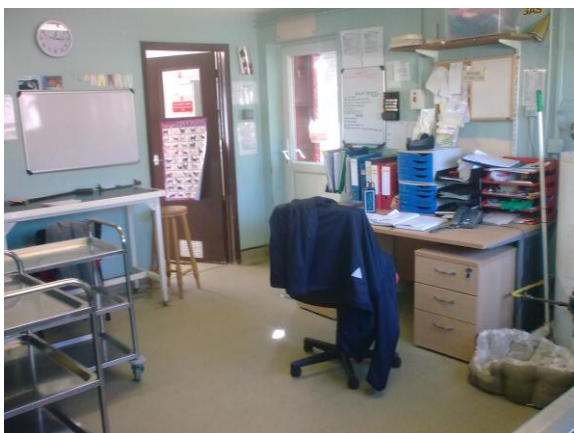
Id. 35: Outside units I-cats



In every unit enrichment and shelter places are provided. Enrichment is given in two ways: toys are provided so the cats have the opportunity to present hunting behaviour, a chair and shelves are put into the outside units so that cats can retreat to higher areas. Both behaviours form part of the natural behaviour patterns of cats. There is always a carrier basket in the inside unit and another one in the outside unit. These are there to provide a shelter space for the cat to retreat to if it feels threatened.

General guidelines are the same to those in the other departments within the RSPCA. The First priority of the day is to feed all the animals and administer any prescribed medication. All protocols about food and cleaning are displayed throughout the kitchen area as a visual reminder.

Id. 36 : Kitchen I-cats



Depending on their age, general health condition and general food intake cats will be fed two to three times a day. There is a vast selection of feeds to ensure that every cat gets the diet appropriate to its needs. Cats with a medical condition get an appropriate diet within the Royal Canin® range. All other cats get a combination of biscuits and wet food from Felix®.

Id. 37: Food list – nr of meals per feed type

MORNING & EVENING FOOD LIST	
PROPLAN ADULT	6
PROPLAN SENIOR	
PROPLAN ADULT MIX SENSITIVITY	
PROPLAN ADULT MIX SENSITIVITY	
ROYAL CANIN KITTEN +4 MONTHS	19
ROYAL CANIN - 4 MONTHS	22
ROYAL CANIN KITTEN 6	
ROYAL CANIN - 4 MONTHS	
PROPLAN ADULT MIX - 4 MONTHS	
PROPLAN ADULT MIX + 4 MONTHS	
ROYAL CANIN SENSITIVITY	1 1
AD	1 1
AD	
AD	
AD	
YUMMY	9
CALM	9
DIRTY FOOD	
Calm (m) - 1st (p) - L23	

Id. 38: range of Royal Canin® feeds



Cat socialisation is an important part of the daily work schedule. Socialising means to handle the cats. This process is a key element in rehabilitating the animals. Most animals that are brought into the RSPCA have suffered abuse in some form. The main benefits of socialisation are the association of the presence of humans with something positive, reduce stress levels and build up confidence. Socialisation can be done mainly in two ways: direct contact through stroking either directly with hands or with a fluff on a stick and playing. Play means to trigger that natural hunting instinct of felines through throwing balls, agitating a fluff and encourage to cat to chase it. Triggering hunting action patterns is a very effective tool in stress relieve for cats.

A socialisation chart is in place to record the handling frequency of each cat and by who it was performed. There are different gradations of nervous cats at the shelter. The worst cases can only be handled by senior staff members. When a cat is really intolerant of the presence of humans and other cats visual barriers like towels are put in place to give the cat the chance to shelter away from these stimulants. Nervous cats can only be handled by experienced staff members or volunteers. This is always indicated on the chart.

Id. 39: Cat socialisation chart I-cats

Kennel number	Cat number name	Date	initials	Priority Socialising
L1	marlie + poppy	24-3	SC	
L2	marley + marla			
L3	Ruby	25/3	59	
L4	ode	25/3	Full/Follow	
L5	misty	25/3	Public	
L6	muchlein	23-3	Ree	
L7	maple	12-3	SC	SC = 2- only
L8				
L9	Teddy	25-3	59	
L10	Scr/80			
L11	Bob	25-3	59	
L12	132	25/3	59	POSS FIV AND CASE
L13	Bobby	25/3	59	

Cats that are suspected to be infected with HIV or cat flu are not allowed outside of their units to avoid cross-contamination. Whenever socialising an animal suspected to be or already infected with HIV or cat flu it is important to do so socialising non infected animals. Whoever is socialising cats should wash their hands or use a hand sanitizer between two sessions. All unneutered young males are suspected to be infected with HIV until cleared by a vet.

All units are cleaned daily with Safe4®. Each cat gets an individual litter tray. So if there are two cats in one unit they each get a separate litter tray. Part of the reason for that is cross-contamination another reason for this is to avoid conflict between the cats. Once a week the communal floors in the block get treated with Virkon®.

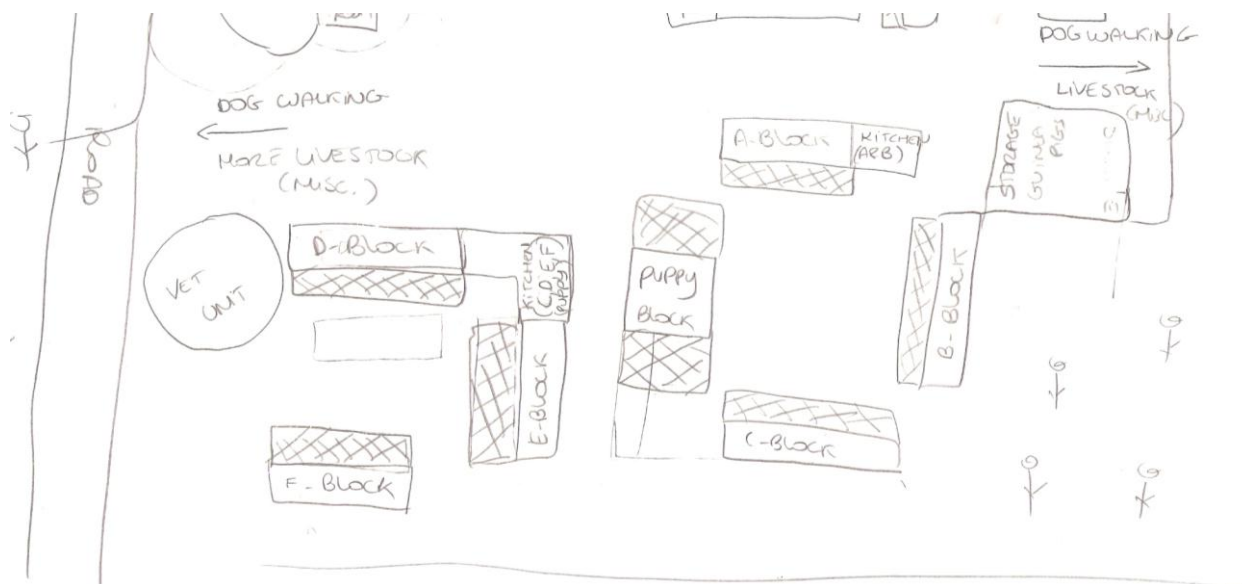
4.2.3.3 Dogs

There are 6 different dog blocks at Stubbington Ark:

- A;
- B;
- C;
- D;
- E;
- F;
- Puppy.

A, B and C hold the dogs that have been cleared for adoption. D and E hold dogs that are not cleared for adoption. In E block are all the case-dogs that are waiting for their case to be settled in court. F-block is reserved for boarding dogs. The puppy block as the name indicated is dedicated to puppies but also miniature dogs that might be too intimidated in the regular sized kennels. Each block has approx. 20 individual kennels. There is one double kennel in A-block that is reserved for pairs or very large dogs. In the centre of A-, B- and C-blocks is the play area. In this area dogs can spend time off the lead. In each kennel there is an outside run and an inside area separated by a trap door. The trap door is open throughout the day allowing the dogs to switch between the inside and the outside area. During the night these trap doors are closed confining the dogs to the inside kennels.

Id. 40: Map Stubbington Ark



Id.41 : dog food mixture

The first job of the day is feeding all animals and administering prescribed medication. Whenever medication needs to be taken in Po., these will be mixed in a ball of wet food to make sure dogs take it all in. Members of staff are allowed to administer injections Sc. and Im. but never Iv. Special diet requirements are taken into consideration e.g.: puppies get food for young dogs. Normally unless anything else is stated all dogs get a mixture of wet tin food and biscuits. According to size dogs will get $\frac{1}{3}$ of a scoop, $\frac{1}{2}$ scoop or 1 scoop of this mixture two times a day. There are also different sizes of bowls. Large dogs get their food- and water bowl on a stand to make it more comfortable for them to eat. Puppies and very skinny dogs are fed three times a day. Each block has a list



with an overview of dietary requirements per dog. After all bowls of food have been prepared, they are laid out in the outside runs before opening the trap doors. After this all dogs are allowed in the outside runs which gives staff time to clean the inside kennels. The daily cleaning routine happens in the same order as given in chapter 4.2.4.2.

Once all kennels are cleaned the rest of the day it is important to socialise the dogs. This can be done by taking them into the play area and going on walks. Fortunately the RSPCA can rely on regular help of volunteers to assist in this area.

Every dog that is brought into the shelter gets a character assessment to determine the adoption prospects of the dog and assess what kind of home it would fit best into.

4.2.3.4 Veterinary Clinic

The veterinary clinic at Stubbington Ark is not part to the RSPCA. All staff at the clinic gets their pay check from a company called pet doctors. This is one of the reasons why normally work experience students are not allowed to work in this unit. Lucky enough staff at the vet unit was kind enough to let me assist them for a period of seven days.

Working schedule at the veterinary clinic is slightly different than in the other areas of the Stubbington Ark. The first priority of the day is to care for the animals that stayed in the clinic overnight. This is done by feeding them, refresh their water bowl, give any prescribed medication and monitor their general health condition. After this it is the task of the nurse to prepare the clinic according to the vets schedule that day.

Preparing the clinic routine:

1. turn on lights in prep. Room, x-ray and theatre;
2. switch on main gas and oxygen supply in op. prep. Room;
3. plug in anaesthesia equipment and turn on oxygen supply;
4. plug in Rx equipment.

After the clinic has been prepared an overview of that day's schedule is written down on a big white board in the kitchen. Table 4 illustrates an example as to how this overview might look like.

Table. 4: daily overview vet clinic

Unit	Number	Type of animal	What needs to be done	weight
1	52	Cat	Castration	3,5 kg
10	89	Dog	Leg amputation	35 kg
8	45	Rabbit	Dental	1,55 kg

Any case in this list gets a score from 1 to 10 points. Quotation depends on the amount of work and time it will take a vet to finalise the task. E.g. cat castration gets a quotation of 2 points, a leg amputation will be quoted at 10 points. Marking a score for every case helps the vets to assess how many cases they can handle in one day. Members of staff bring in the animals that need to be treated between 9 and 10am. The vet nurses can prepare the units in advance or as the animals come in.

Within the vet clinic at Stubbington Ark there are 7 different areas that serve different purposes. The first area you come into is reception. Since the clinic is not open to members of the public, this area is dedicated to members of staff and inspectors waiting to see the vet. After reception are 2 rooms: staff room and the consultation room. After that is the kitchen which includes the patient admission area, a surgery prep room with specialised equipment

for dentals and dog grooming, Rx area with basic lab analysis equipment and finally surgery theatre.

Throughout the day vet nurses are in charge of preparing premedication before surgery and assist vets in any way they might need. This includes during surgery, Rx imaging but also performing basic blood tests.

I will not go into the details of every single case that was handled throughout the seven day period I was in the vet clinic. However one case is definitely worth laying out. The first day in the vet clinic there was a leg amputation scheduled for a lurcher dog.

Reason for amputation was a fractured and misplaced patella caused by tendon rupture of the right leg. The dog was a male lurcher type weighing 21,5kg. First thing for the nurse to do is prepare and administer premedication. In the case of this dog 9ml of propofol and a combined injection of 0,21ml Temgesic® + 0,21 calmivet® were given.

To calculate this dosage following formulas can be used:

Temgesic® \Rightarrow weight \times 0,025

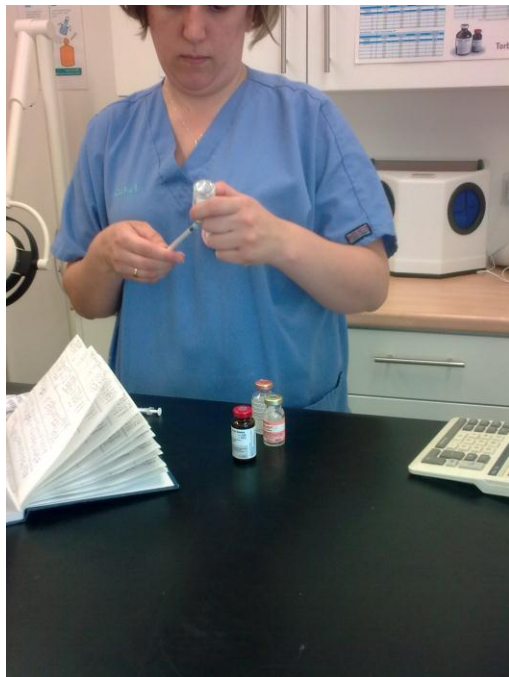
Calmivet® \Rightarrow weight \times 0,025

Propofol \Rightarrow weight/10 \times 4 (in case of dogs)

After induction the dog is intubated and prepared for surgery. During surgery the dog was anaesthetised using Isofloram®

When the dog is under general anaesthetic the vet nurse can start to prepare the surgical area while the vet prepares for surgery. First the area is shaved and cleaned with a solution of surgical scrub. After cleaning the area needs to be sterilised by spraying it with alcohol.

Id. 42: preparing premedication

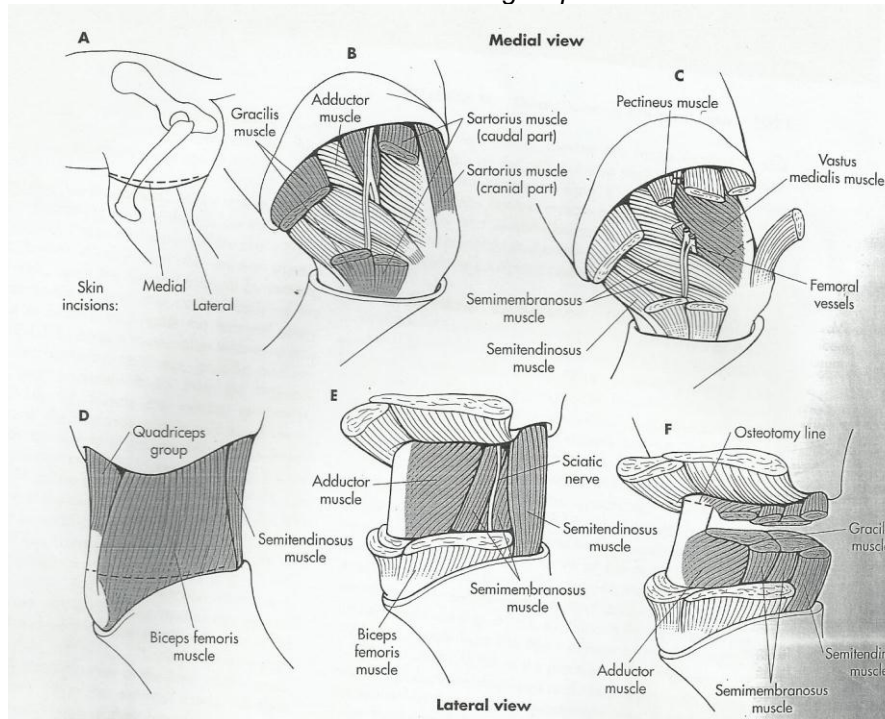


Id. 43: Administering premeds to Lurcher leg amputation



The surgery that was performed on this lurcher is called midfemoral amputation. The process is illustrated in Id. 44.

Id. 44: Mid femoral leg amputation



During surgery it is important that the vet nurse assists in passing necessary instruments but also monitor breathing and eye reflex. Whenever passing materials during surgery this needs to be done in a sterile way.

After the leg amputation has been concluded the dog needs to be monitored to see if it is recovering well.

Id. 45: Lurcher after dog amputation



4.2.4 Working practices

4.2.4.1 Daily routine

Daily work includes:

- Daily cleaning of all animal housing units;
- Cleaning of feeding and water bowls;
- Maintenance of kennels, kitchen preparation and general service area;
- Routine grooming and rehabilitation of animals, including leisure activities and socialisation.

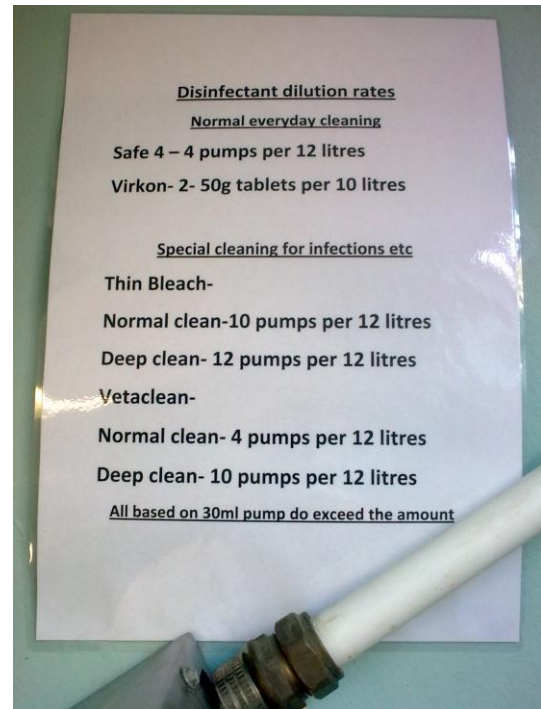
4.2.4.2 Cleaning

There are information sheets in every block concerning dilution rates for general cleaning.

For daily cleaning a solution of Safe-4® disinfectant and water is used at a ratio of 4 pumps of 30ml per bucket of 12 litres. Safe-4® is biodegradable, non-toxic and non-irritant. It is effective against: Canine parvovirus, Hepatitis C, Human herpesvirus 1, FIV, Feline leukemia virus, Mycobacterium bovis, Mycobacterium avis, Candida albicans, Microsporum canis, Trichophyton, Bordetella bronchiseptica, Campylobacter jejuni, Clostridium perfringens, Escheria coli, Listeria monocytogenes, Methycillin resistant staphylococcus aureus, Pseudomonas aeruginosa, Salmonella typhimorium and Staphylococcus aureus.

For deeper cleaning Virkon® will be used instead of Safe-4®. This is the case when an animal leaves a unit or whenever there is risk of contamination. The active ingredients in Virkon® are: Potassium peroxymonosulphate and Sodium Chloride. This product is proven to be effective in killing viral, bacterial and fungal agents. Virkon® is a broad spectrum disinfectant that consists with the properties of the ideal disinfectant.

Id. 46. : Disinfectant dilution rates



PROPERTIES OF THE IDEAL DISINFECTANT

Capable of killing all disease causing organisms
Fast acting
Cleans and disinfects in a single operation
Safe for staff and the environment
Safe for materials and equipment
Suitable for multiple uses
Multiple use products

Composition of washing solutions is the same in every block however the order in the cleaning routine can slightly vary.

A good rule of thumb is to clean from top to bottom and make sure not to touch faeces with the cleaning sponge. In every block all units get a general clean out daily and a deep clean weekly.

DAILY CLEANING

Start with inside enclosures:

Remove all faeces
Take out dirty bedding (if necessary),
Wash out drinking bowl and bed – leave to dry outside kennel
Pour approx. ¼ of bucket with safe4® solution onto the floor and scrub with brush if necessary

Let the floor soak (at least 5 minutes) while starting with the next unit

Squeegee dirty water out of kennel
Fill water bowl
Wash down block doors
Scrub communal block floor
Squeegee block floor

When floors are dry put beds in kennel, renew bedding

Outside enclosures:

Scrub door and floor
Clean trap door
Squeegee dirty water into drain

WEEKLY DEEP CLEAN

Once a week all units are washed from top to bottom, so not only floors but also walls and ceilings get washed with a solution of Safe4®

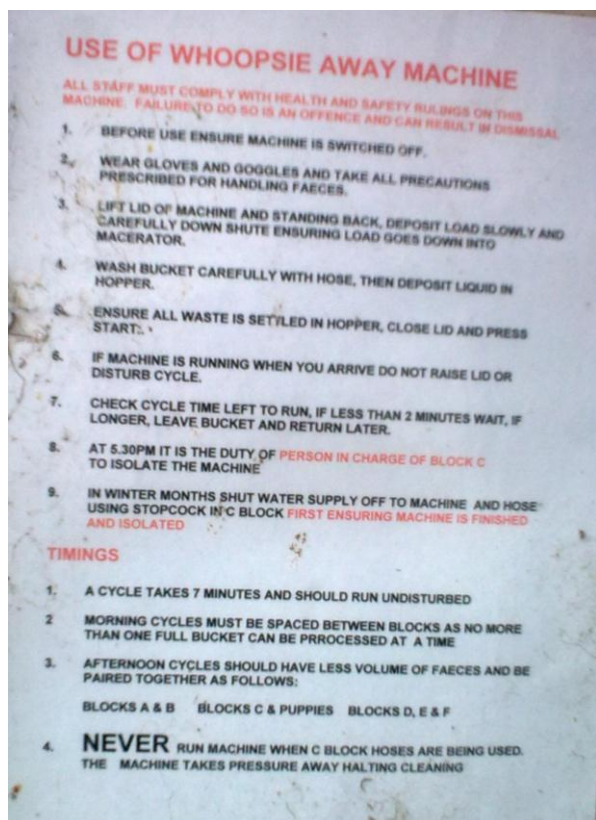
Block floors are cleaned with Virkon®

Animals produce a lot of waste that needs to be disposed of in the correct way. Legislation about waste management is dictated in The Environmental Protection Act of 1990 and the associated Environmental Protection (Duty of Care) regulations of 1991. One very peculiar waste management tool applied at the RSPCA is a machine called Whoopsie-away.

The Whoopsie away machine basically does one thing, it breaks down animal faeces into small lumps that are suitable to be drained in the regular sewage system. Each cycle lasts approx. 6 minutes.

Id.47 : Use of Whoopsie away machine

Id. 48: Whoopsie away machine



4.2.4.3 Feeding

This chapter contains a sample of some of the feeds used at the RSPCA. For each feed the name and an overview of its components is given. There are so many different types of animals at Stubbington Ark each with different nutritional needs that a complete description of all feeds would be a thesis in itself. The feeds described below serve just as an example to show that the animals at the RSPCA do get a balanced diet that is adapted to their physical needs.

Information about dosage for each different species can be found in chapters 4.2.3.1 until 4.2.3.2.

Table 5: nutritional value Burgess Excel – Adult rabbit® (source: www.burgesspetcare.co.uk)

Beneficial Fibre	39%
Crude fibre	19 %
Protein	13 %
Vit. C	50mg/kg
Vit. D3	1,500 iu/kg
Vit. E	120 mg/kg
Copper	12 mg/kg
Vit. A	15,000 iu/kg
Oils	3%

Ash	5,5%
Calcium	0,90%
Phosphorous	0,51 %

Ingredients: Grass, Lucerne, oat bran, wheat, Soya bean hulls, peas, yeast, molasses, mint, soya oil, calcium carbonate, monocalcium phosphate, lingo-cellulose, fructo-oligosaccharides 0.25%, salt, vitamins and minerals, natural antioxidants, contains no colours, flavours or preservatives.

Table 6: nutritional value Burgess Excel rabbit food junior and dwarf® (source: www.burgesspetcare.co.uk)

Beneficial Fibre	36 %
Crude fibre	17 %
Protein	16 %
Vit. C	50mg/kg
Vit. D3	1,500 iu/kg
Vit. E	120 mg/kg
Copper	12 mg/kg
Vit. A	15,000 iu/kg
Oils	4 %
Calcium	0,90%
Ash	6 %
Phosphorous	0,5%

Ingredients: Grass, oat bran, wheat, Soya bean hulls, peas, yeast, molasses, mint, soya oil, calcium carbonate, monocalcium phosphate, lingo-cellulose, fructo-oligosaccharides 0.25%, salt, vitamins and minerals, natural antioxidants, contains no colours, flavours or preservatives, methionine

Table 7: nutritional value Burgess Excel Guinea Pig food®

Beneficial Fibre	36 %
Crude fibre	17 %
Protein	17 %
Vit. C	800 mg/kg
Vit. D3	1,500 iu/kg
Vit. E	100 mg/kg
Copper	12 mg/kg
Vit. A	22,000 iu/kg
Oils	4 %
Calcium	0,90%
Ash	6 %
Phosphorous	0,5%

Ingredients: grass, maize, wheat, lucerne, soya bean hulls, peas, soya, oat bran, unmolassed beet pulp, yeast, soya oil, lingo-cellulose, molasses, calcium carbonate, monocalcium phosphate, vitamins, fructo-oligosaccharides 0,25%, salt, minerals. Contains artificial colours, flavours or preservatives.

4.2.4.4 Health and Safety

Working with animals can be a risky business. There are several hazards that can affect staff and members of the public. All health and safety instructions can be found in the health and safety manual of the RSPCA.

The next paragraphs display some of the general guidelines and policies currently in practice at the Stubbington Ark.

Every member of staff is responsible for his/her own safety and that of others. With a little common sense and attention accidents can easily be avoided. Animals just like humans have their own temperament. Most of the animals at the shelter have a history of abuse and can be fearful of humans. When approaching an animal every member of staff has to do so with care and precaution.

Cleaning is a big part of the daily routine at the Ark. There are a number of cleaning products available on site. Each of these products can contain certain chemicals that can form a hazard. In every block there are instruction sheets that serve as a memory aid for cleaning procedures.

A hazard that is sometimes forgotten about is noise pollution. Dogs communicate in a number of ways and one of their communication tools is barking. The sound of 1 dog barking will not cause damage to the hearing abilities of a person but a group of 20 dogs barking together can cause damage in the long run. Therefore all personnel is asked to wear ear protectors whilst working in the dog blocks.

First Aid, there are 5 qualified first aiders at the Ark, all accidents must be reported to them.

5 Debate and overall conclusion

Some dog behaviour experts have claimed that understanding the wolf is the key to understanding the domestic dog. I disagree. My view is that the key to understanding the domestic dog is, first and foremost, understanding the domestic dog. (J. Bradshaw, 2011)

After extensive research the only conclusion I can come to is that essentially interpreting and understanding the behaviour of any species is not a simple task. Observing biological elements and interpreting these results supports for a great deal on empiric measures. Hormones, blood, reproduction systems, muscles, etc... are elements with a tangible nature. Behaviour study relies a lot more on subjective and abstract concepts. Feelings like love, hate or anger are not tangible concepts. This makes it hard because to interpret behaviour it is difficult to completely exclude subjective views.

Over the years scientists have compiled lists of features that can be used for identifying wolves and dogs. Most of these lists are based on qualitative traits or traits that can only be found in one of the two species. In a lot of ways dog and wolf behaviour is parallel. A fairly common expression is that observing dogs is almost like watching a wolf cub that hasn't grown up to become an adult. This is a very general statement though that cannot be translated into scientific facts. It is true that when compared superficially it seems like dogs stay very playful even at a more advanced age while in wolves this kind of behaviour is observed a lot less.

A big issue with the studies that are available at the moment is that first of all there is not enough data from wolves in the wild and second there have not been enough studies done into the behaviour of dogs. Most information that is commonly available on dogs is based on subjective experience and not as much on objective scientific observation. Especially in the past years a lot of catching-up has been started in this area. People are starting to realise that there are blanks in the history of the dog that call for filling.

Dogs that have been observed for the purpose of this study seemed "busier" than their wild cousins. In fact during observation of the wolves at the UKWCT there were hardly any behaviour actions to write down. Results of my literature study show that there seems to be a general shift in mentality within dog behaviour that is moving away from comparative ethology. In practice, partly subconscious, people still behave towards dogs with the idea that they need to be "dominant" over them.

So far no-one has been successful in proving that wild wolves can be turned into domesticated house dogs. The closest anyone has come to proving this theory is Dimitri Belyaev. Fifty years ago a scientist called Dimitri Belyaev started an experiment with silver foxes to explore the domestication process. The silver foxes used in Belyaev's experiment are selected based on their behaviour, the friendliest and tamest are selected and paired for reproduction. The result, after a few generations is a group of foxes that not only behaves very different from their wild cousins but also looks very different. The domesticated foxes present wide variation in fur coat colours and some individuals presented a curled tail and floppy ears, much like our domesticated dogs. However, the only thing this experiment proves is that a new sort of "animal" can be created from an existing animal. So I think it is right to state that it is not because two animals are genetically related that we can assume that the behaviour of one is comparable to the behaviour of the other.

Another aspect I came to realise is that in dog training owners often expect easy solutions. Behaviour however cannot be viewed simplistically as there is a great deal of variables that cannot be predicted in advance. A lot of the old fashioned training methods provide a simplistic view on dog behaviour. More and more people are realising that communication is

in the details. There are a lot of fine-tuned signals that both humans and dogs send to each subconsciously.

More than focusing on the evolutionary history of dogs and wolves I think scientists should approach dogs as being a species in its own right. Owners as well gain little benefit from knowing that dogs descend from wolves. First of all the nature of wolves is often misinterpreted by people and therefor if this vision is applied to dogs there is not a correct platform to start training on. Secondly by implementing a fear of losing your leader position in into a dog owner, the whole relationship revolves around that tension and cannot progress in a healthy way. It is far more useful to build on trust and respect between dogs then dominance and that is the most sour effect of years of dog and wolf comparisons in dog training.

6 Public Article

Dogs: wolves in a sheepskin?

Dogs are wonderful creatures. There is something about the twinkle in their eyes that makes them such a unique species. Like no other animal they have successfully found new ways to function in our human-made world. However their presence is not always filled with joy and happiness. As much as dogs seem to enjoy spending time with humans they still need us to treat them with the respect and handling that is appropriate to their nature.



Some dog owners are lucky enough to never have considerable trouble with their dogs. Often these owners share a strong and pleasurable relationship with their pet. An increasing number of dog owners though have found themselves struggling with their pooch. Cesar Millan has gained considerable popularity in his TV show “the Dog Whisperer” where he trains dogs based on the idea that they are much like wolves. As much as we enjoy watching Cesar Millan perform his magic on dogs the real question is: Does it take a wolf to understand a dog? In his book “In defence of dogs” J. Bradshaw writes: “the key to understanding the domestic dog is, first and foremost, understanding the domestic dog.” Unwillingly by applying comparative zoology scientists have caused some damage to both wolves and dogs.

Cesar Millan is not the only dog trainer using this philosophy. In fact, a considerable amount of other dog trainers base their training method on the idea that dogs are much like wolves. Wolves and dogs share 99% of their DNA so yes, genetically they are almost identical. However when observing the behaviour of these two species it is evident that they behave different in a number of ways. This makes sense because dogs live in a very different environment than wolves. To date scientists have not been able to complete the evolutionary puzzle of both wolves and dogs. Debating and speculation continues about whether dogs descended directly from wolves or if there was a common ancestor that gave origin to both species separately.

So far no-one has been successful in proving that wild wolves can be turned into domesticated house dogs. The closest anyone has come to proving this theory is Dimitri Belyaev. Fifty years ago he started an experiment with silver foxes to explore the domestication process. The silver foxes used in Belyaev’s experiment are selected based on their behaviour, the friendliest and tamest are selected and paired for reproduction. The result, after a few generations is a group of foxes that not only behaves very different from their wild cousins but also looks very different. The domesticated foxes present wide variation in fur coat colours and some individuals presented a curled tail and floppy ears, much like our domesticated dogs. However, the only thing this experiment proves is that a “new” sort of animal can be created from an existing animal. So I think it is right to state that it is not because two animals are genetically related that we can assume that the behaviour of one is comparable to the behaviour of the other.

In dog training settings owners are often taught to maintain a leader position at all times. Without a strong leader a dog will feel that it needs to try to take over the leading position.

This vision is based on what is now considered to be an outdated interpretation on how a wolf pack functions. At first it was assumed that wolves are constantly fighting for a leader position within a wolf pack. This conclusion came forth by observation on wolf packs in captivity. In captivity a wolf pack is not set up in the same way as in the wild. Today scientists have come to the conclusion that wolf packs function more like a family. An alpha pair gives gestation to a litter and assumes the leading role towards their progeny. Within wolf packs there is a clear structure and hierarchy much like it is in human families.

Healthy family relationships are built upon trust and respect. Children trust their parents to take care of them both physically and emotionally. Parents get respect from their children when they invest in knowing who their children are and direct them rather than oppress them. The greatest damage that came forth from that old-school wolf pack theory is exactly that. Imposing leadership upon dogs rather than earning it took the joy out of the dog-human relationship. Owners are told to maintain their leadership role at all cost. So what does that mean? Leadership comes forth from respect. Someone needs to take charge of the group to make sure that everything runs smoothly. Just like in human-human relationships respect is something you earn by accepting and respecting others.

Owners that expect easy straight forward answers when it comes to training their dogs should bury that idea and realise that it is a process not a method. There is no manual that tells you how a dog works. In the end it comes down to parenting the dog. Just like parenthood over small children it is a question of setting boundaries without compromising the integrity of the dog and picking battles.

7 Personal vision on internship and work experience location

Both internships were enriching and interesting overall experiences. The UKWCT and the RSPCA serve two very different purposes towards members of the public. This has an impact on the general working system of each company.

The main goal of the UKWCT is to sensitize everyone about wolves so that they may understand their true nature. That goal can only be achieved if members of the Trust themselves take initiative in truly understanding the wolf as a species. One of the strongest points of the UKWCT is exactly that. Continuous and extensive research is done by members of staff to make sure all given information is current and as accurate as possible. Vicky Hughes, the education officer is a great example of this, her knowledge is vast and she keeps looking for every development within the field to grow in that knowledge and adjust the theory wherever it might fail. Another strength of the UKWCT is the fact that it is not open to the public on a daily basis. This factor provides the wolves a peaceful environment which in turn raises up their wellbeing. Finally each work experience student is encouraged to truly get involved in the purpose of the trust. Each student has to make a poster about one aspect of wolves by the end of their internship and give a tour around the trust. By giving these small assignments students get engaged into broadening their knowledge.

Towards future jobs the UKWCT can give someone with my degree an important foundation towards vocation within conservation but also ethology, research, dog behaviour or zoo keeping.

As a company the RSPCA serves a different purpose than the UKWCT. The main goal of the RSPCA is to provide shelter, rehabilitate and rehome as many animals as possible. In doing so the company aims to improve animal welfare in Great Britain and inspire other countries to do the same. In practice unfortunately being a charity means limited funds and sometimes this can interfere with that ideal in some ways.

The most important strength of the Stubbington Ark is that every animal is given a chance to be rehomed, even those that other shelters might reject. To help attain that goal an important part of the job of every animal carer is socialisation. Socialisation is done either by members of staff or volunteers. To make sure socialisation is done well staff is encouraged to keep training and developing their handling- and behaviour skills. I think that stressing the importance of handling the animals is a very strong point within the system of the RSPCA. However it seems like the shelter struggles, in my eyes, with a shortage of staff. There is not always enough staff onsite to ensure that both cleaning and socialisation is done properly for each individual. A good example of this is the misc. department. Members of staff have a lot of cleaning to do throughout the week and rarely find time to socialise the rabbits, rats and gerbils. Unfortunately if not done daily it backdrops rehoming chances of these animals and that ultimately damages the ideal of the Ark.

Great care and detail is put into cleaning protocols, health check-ups and legislation. I think that is a great strength as these are important factors in assuring general wellbeing of all animals at the shelter.

A key problem area in my eyes is the size and lay-out of the dog blocks. There is only one double kennel on site that serves the purpose to house either a couple of small to medium dogs or one large to extra-large dog. All other kennels have exactly the same size. In my eyes this increases stress levels for two reasons: smaller dogs can feel intimidated by being in a space too big for them and large dogs get stressed because they are confined to a space that is not big enough for them.

Members of staff are continuously looking for ways to improve wellbeing of all animals of the shelter, a recent development in that area is that members of the public are not allowed inside the dog blocks anymore after 2pm. This gives the dogs some quiet time and helps bring their stress levels down. Another extremely positive point is the fact that Stubbington Ark has one member of staff that is responsible for all dog assessments. By specifically assessing dog behaviour in certain areas the chance of rehoming is increased and also the chance of coming back gets reduced.

For graduates in my field the RSPCA is a good place to learn about the nature of the relationship between humans and their pets, problem areas in that relationship and what can be improved. The RSPCA is also a good platform to compare the working systems from shelters in the UK towards shelters in Belgium and see how these countries can learn from each other. In that aspect it has to be said, I felt that training wise and approach towards dog behaviour the RSPCA is more advanced than is generally the case in Belgian shelters.

Both companies share the will to keep growing within their field and that is something every company should thrive for in the long run.

List of used abbreviations

UKWCT – United Kingdom Wolf Conservation Trust, UK Wolf Conservation Trust

RSPCA – Royal Society for the prevention of cruelty to animals

e.g. – for example

N/A – not applicable

Tsa – Teresa

Id. – Illustration

Approx. – Approximately

Po. - per oral (orally)

Im. – intra muscular

Sc. – sub cutaneous

Iv. – Intra-venous

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