

Holistic science in veterinary medicine, animal husbandry and management

## TECHNICAL INFORMATION

### GENETICS AND NUTRITION

For many years, the idea that dogs have evolved from wolves has generally underpinned our assumptions about the way in which we should treat and feed them. The general theory has been that the dog is essentially a pack animal and in order to make him comply with our wishes, the owner must be above the dog in the social hierarchy, because that is the way it works in the wild. Feeding should also be informed by the natural diet of the wolf - although this has been largely ignored by the modern dog food industry.

Another idea has been developed recently, mainly from comparative behavioural studies of wild wolves and dogs. These observations are claimed to support the idea that dogs have evolved (or are evolving) as a separate species and as such are so far removed from their wolf ancestors that they don't respond well to the conventional method of 'hierarchical' training. Many progressive modern behaviourists tend to think of the relationship as a partnership. The traditional 'carrot and stick' method, which of course is just a figure of speech meaning giving reward for desirable behaviour and chastisement for undesirable behaviour, has always been the underlying principle in dog education, but the new methods focus more on, 'carrot' and less on 'stick'.

This is somewhat reminiscent of the traditional books on dog training, which although rooted in no-nonsense Victorian discipline, warn of being too pushy and overbearing, which can make some individuals 'drop out'. They make the point that there is a spectrum of different types, some of which respond much better to encouragement and praise; these 'sensitive' types often being the most rewarding to work with in terms of results. What is new though, is that the more modern training techniques based on a partnership theory, can involve the use of treats, which was an anathema to the traditional trainers of dogs (but, interestingly, not of other species, such as sea lions and hawks!).

Protagonists of this latest theory also support the idea that the modern dog has evolved from the wolf, but as a separate species, and possibly involving hybridisation with other canids, rather than being the result of man having captured and domesticated him. This idea is based on the observation that the modern wolf is a shy creature and cannot be tamed; also it does not seem to have the potential to produce the variety of colours seen in the modern dog. Furthermore certain behavioural traits in modern dogs cannot be seen in wolves and vice versa.

What is being proposed may be termed the 'dump dog theory'. It introduces the idea that the progression from the wolf to the dog was first as a camp follower scrounging on dumping grounds, gradually becoming less timid as a species, so approaching man, rather than being captured and trained by him as was thought previously. This may have been a midway stage in the evolutionary process or a 'missing link' in the wolf / dog development. This idea is certainly plausible, although it goes against the generally accepted principles of evolution, in that it appears to have only taken thousands of years, instead of millions, for the changes to occur.

We should not lose sight of the fact that actual evidence of physical development to support any theory is limited to very scant fossil remains, upon which, all the scientific 'models' are based. It should also be remembered that the new model introduces assumptions of behavioural patterns of the ancestors of both the wolf and the dog, based on modern equivalents – and, as such, this must be purely speculation. Inevitably, some researchers are also introducing work carried out on DNA to support various hypotheses concerning behaviour and this should be examined with the rigour it deserves before conclusions are drawn.

The new theory is nevertheless intriguing - and also very attractive. Even though the traditional view, i.e. the modern domestic dog is physiologically close to the modern wolf, the idea does not seem to be quite so comfortable from a behavioural point of view. For example the modern wild wolf, in common with other carnivorous pack animals has some very unpleasant habits, such as disembowelling its victims, including pregnant females, whilst they are still struggling hopelessly to escape. Most modern owners would like to think that their dogs would not descend to such base instincts - but who is to say what they would do if they had to fend for themselves?

With regard to nutrition, the question is raised regarding how the 'dump dog' theory relates to the current understanding of the evolved dietary requirements of the dog, which is still informed by that of the modern wolf? If we accept the proposed theory that dogs have evolved from camp followers, rather than directly from 'trained wolves', his diet should still be similar to the wolf (and possibly other canids through hybridisation) and also to that of early mankind i.e. – meat, bones, vegetables, carbohydrates, etc.

Today many dogs exist on man – made dumps through the world, simply as scavengers. These animals are generally consuming diets which are far removed from their natural diets, or that of early man, because of our over consumption of un-healthy products, such as fast foods. Also domesticated dogs have been fed on the wrong types of ingredients in commercial foods for the last fifty years. These observations are often put forward spuriously to support the idea that the modern dog has evolved to cope with the use of adulterants such as artificial colours, flavours, unsuitable carbohydrates, not enough variety and not enough vegetable matter, in commercially produced diets. Certainly a robust digestive system will be able to cope with minor changes in the diet, but this only goes so far – a fundamental change takes millions of years.

**Recommended reading**

The Language of the Genes, (2000). Steve Jones, Flamingo. London  
Dogs, (2001). Raymond Coppinger. Scribner, US  
The Domestic Dog, (1995), James Serpell, CUP, Cambridge

**For free information on integrated nutrition and medicine and for advice  
in specific circumstances contact: [tech.help@bahnm.org.uk](mailto:tech.help@bahnm.org.uk)**

© BAHNM 2006

This information may be reproduced provided it is not changed in any way.