

Social behaviours in Siberian huskies

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Abstract: *Social behaviours in Siberian huskies.* The behaviour of a pack of 14 Siberian huskies dogs of different sex and ages was observed. Based on observation of different dominant, submissive and affiliate behaviours of each dog, pack hierarchy was described. Behavioural patterns and frequencies of different behaviours were compared with those, previously described in wild wolves. Social structure and linear hierarchy proved very similar, whereas there were some differences as far as single specimens are concerned. The alpha male did not display overt aggression towards the omega male, and he was – at least to some extent – involved in controlling and ceasing conflicts. Husky pack displayed several behaviours, common in wolves, yet seldom reported in domestic dog, e.g. feeding area marking, leg lifting during urination in females and full range of vocal patterns.

Key words: affiliate behaviour, *Canis familiaris*, canine, dominance, dog, pack, social behaviour, submission,

INTRODUCTION

According to Wood-Gush (1983), behaviours of domesticated species differ from those of their wild ancestors only due some modifications, related to levels of threshold stimuli, and their actual expression. Goodwin et al. (1997) classify all breeds of dogs in terms of changes in their morphology, body posture and facial expression, by comparing to

those of wolves. They conclude that these changes influence both intra-species communication and social behaviours in different breeds of dogs. They also claim that dogs, morphologically similar to wolves, such as Siberian huskies, display greatest variety of signalling, resulting in modulations of agonistic interactions. Additionally original utility of Siberian huskies brings some added importance.

This breed descends from sledge dogs, bred by Chukchi tribes in Eastern Siberia and Kamtschatka. Dogs worked and were fed in winters, but in summers they were roaming free and had to care for themselves. All year they lived in packs and their survival depended mainly on well functioning pack structure. Even today, albeit many huskies are kept as companion dogs, they are often kept in packs and trained for sledge sports.

The aim of the study was to test the hypothesis that although huskies form strong bonds with the owners, their social behaviours in the pack are close to those of wolves.

MATERIAL AND METHODS

A pack of Siberian huskies, composed of 14 dogs – 8 males and 6 females was observed. There were four unrelated adults:

ten years old male SK, eight years old bitch SO, one and half years old male KO and eight years bitch CH. The remaining dogs were children of the latter female: five years old male TA, three years old bitches WE and WA, six years old males BO, BJ and BU, six years old bitches BA and BY and her children three years old male SO and one and half years old male HA (Fig. 1).

All dogs lived permanently in a grass-covered yard, measuring approximately 400 m². They were provided with 11 m² shelter and two-storey kennel with 6 m² bedding. The yard was shaded by several trees and bushes.

First the preliminary observations was conducted. It lasted for a period of one year, and was carried several times a day at different times. Pack hierarchy was

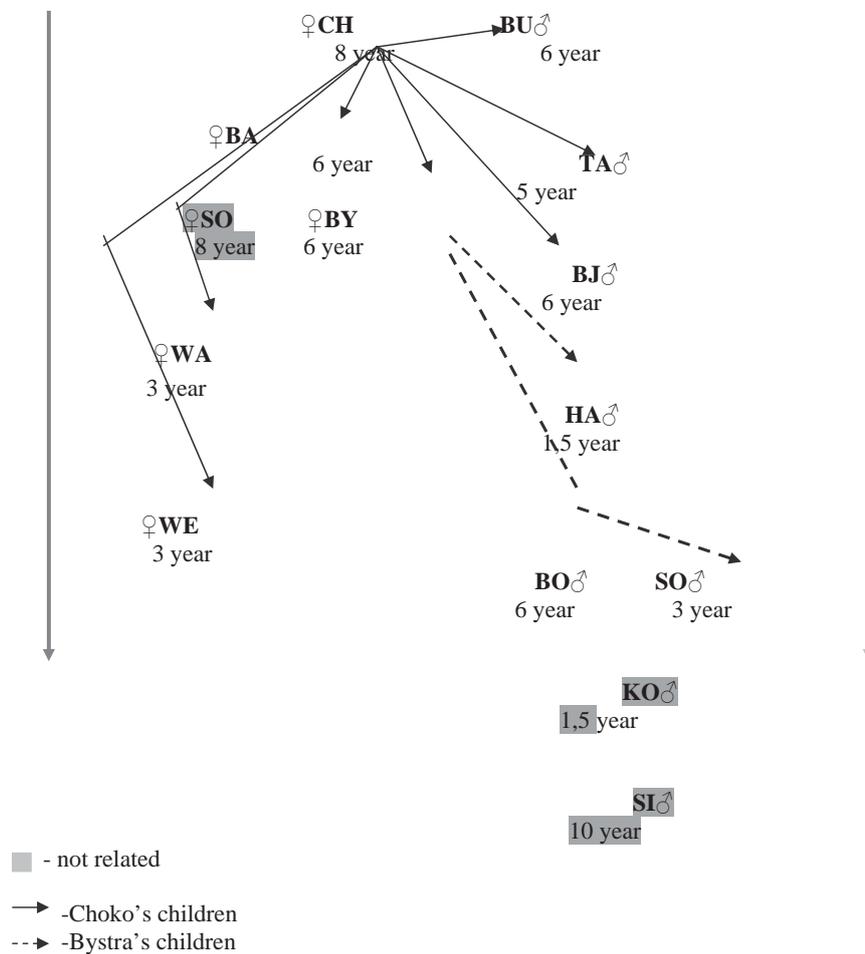


FIGURE 1. Family relation and hierarchy in pack

recognized with these observations. The more detailed observations of individual dogs with two VHS cameras followed.

Overall observations lasted for 105 days and consisted each of 5 sessions, divided into 6 sequences 5 minutes each. Each sequence was followed by 1-minute break. Each dog was observed twice at same times, therefore total observation time for each dog was 5 hours. Observations were conducted at resting time and never during feeding, grooming, exercising or training.

RESULTS AND DISCUSSION

Observations on dominant and submissive behaviours enabled to establish pack hierarchy. It is more clearly seen in males (Figs 2, 3).

The dominant **alpha** position is held by BU male, which displayed the gre-

atest number of dominant behaviours and never appeared submissive. **Beta** dog remains TA male; he was the one usually challenged by BU yet very seldom reacted in same way and never went into real fight. However, he was often dominant towards other males. The next male in hierarchy was BJ. Occasionally he displayed dominant behaviours towards Beta – TA, but more frequently was challenged and dominated by him. He also happened to be challenged by BO male, placed lower in rank, what gives an extra proof to his **gamma position**. The next male is HA. It was difficult to establish positions of two males, namely BO and SO, exhibiting similar behaviours. Such situations were observed in wolves (Ginsburg, 1987), their relations sometimes not being clearly defined. Males of uncertain positions are

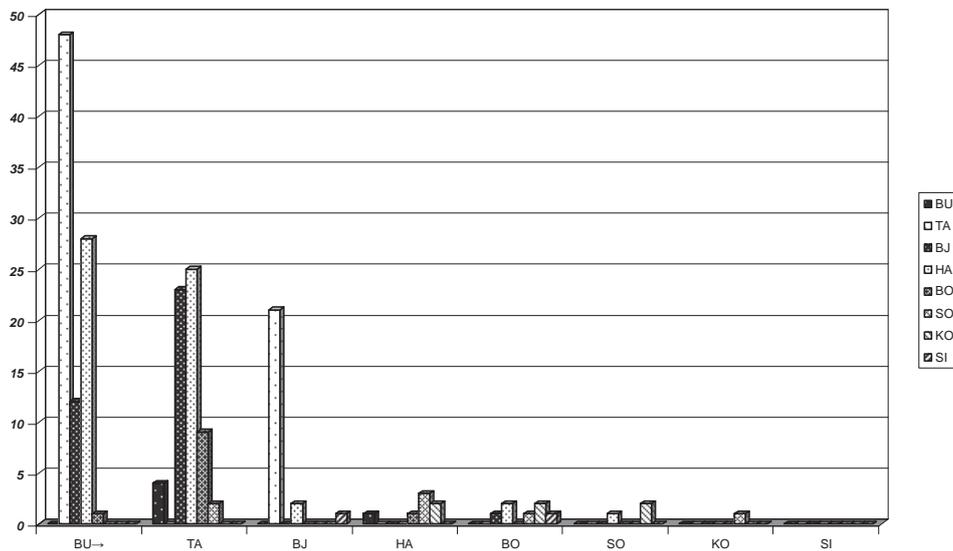


FIGURE 2. Dominant behavior among males

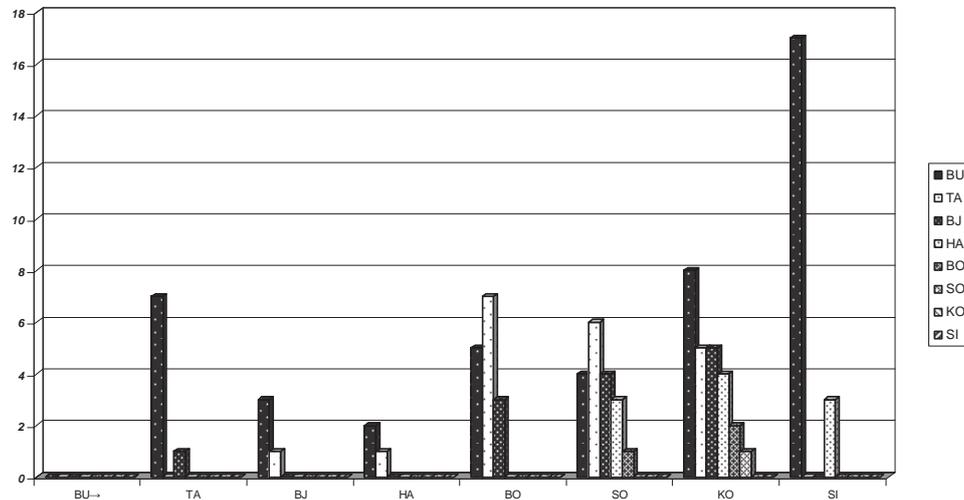


FIGURE 3. Submissive behavior among males

more likely to engage in conflicts. The lowest male in hierarchy was KO (one year old), showing mainly submissive behaviours.

Some interesting observations related to SI male. According to standard grading procedure, he was an **omega** dog. Seldom any dominant behaviours directed towards him was noticeable, but he frequently displayed submissive behaviours. It seems possible that, at time observations started, he had just lost his number one position. Many attacks towards him by other members of the pack were observed. Those attacks started with no apparent reasons and without any prior displays of dominant behaviour. Attacks were mainly initiated by **beta** male, followed by other males as well as by some females. A single attack towards him started by either **alpha** male or female was never observed.

Pack hierarchy among females was not as clear as that among males (Figs 4, 5) Two bitches – CH and BA did not display any submissive and/or defensive behaviour. BA showed the highest level of general dominance, even though it was CH bitch that most frequently displayed dominant postures and T position. Interestingly, she was generally avoided by all other bitches, with the exception of SO bitch. Apparently, most of all dominant behaviours displayed by CH were directed towards SO. It may be presumed that CH bitch is alpha female in this pack.

Similar results for agonistic behaviours were found with Ba bitch, ranked as **beta**. Most of her dominant behaviours, however, were directed towards two young bitches, WE and WA. Their positions were probably not fully established, therefore they were regarded as a potential threat

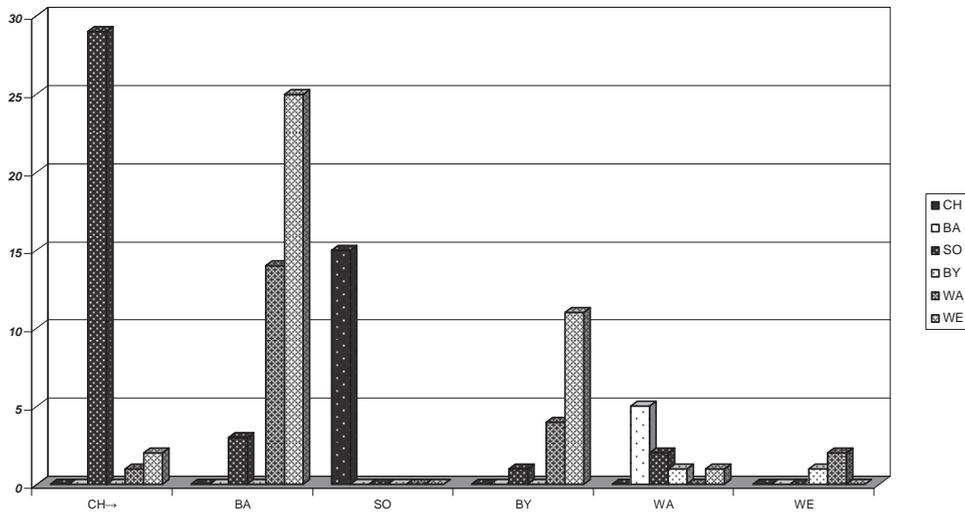


FIGURE 4. Dominant behavior among bitches

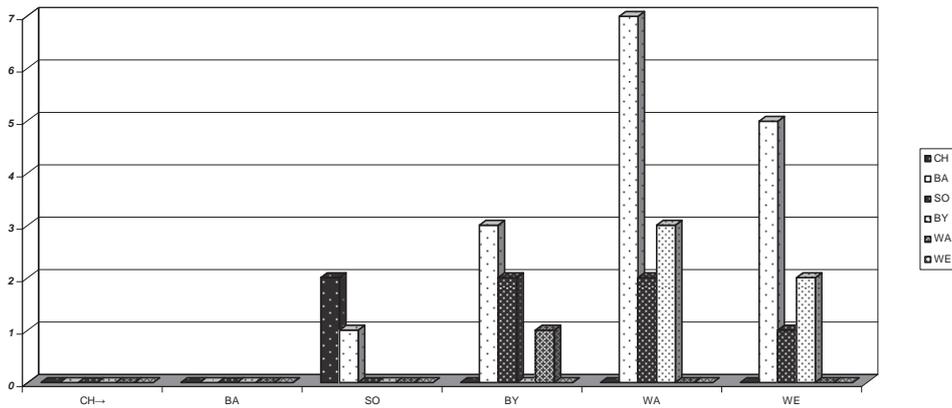


FIGURE 5. Submissive behavior among bitches

to her current status. Similarly to what was observed in males, it was difficult to establish any clear ranks of SO bitch (eight years old) and BY bitch (six years old). They displayed similar levels of dominant behaviours; although they were slightly more frequent in case of SO, she also displayed distinctly more

frequent defensive behaviours. WA and WE bitches were the two lowest ranked. The hierarchy in the observed pack can be presented as double linear and can be presented as follows figure 1.

Contrary to what was reported by Mech (1999) in wild wolves, no dominant and/or submissive behaviours

among dogs of opposite sex was observed. Even in case of **alpha** male, who was a son of **alpha** female, no display of dominant or submissive behaviours between the two was observed.

It is worthy to note that only two dominant behaviours were observed, whereas Scott and Fuller in their classic work (1965) described 5 of them. The only two observed were dominating a laying dog by standing over it and growling, or standing or walking on stiff legs with tail carried high and straight (T-position). Placing feet on other dog's withers, combined with growling, mounting and nipping on neck with tail carried low, or threatening with head and tail carried low was not observed.

In case of dominant behaviours or even fights, which were about to start between two males, it was the **alpha** male (BU) who took an intervention and broke conflicts. He did it either by approaching them and displaying T-position, or by ear-licking, usually that of a dog ranked higher. Similar intervention in case of fighting females was never observed, and neither did the **alpha** female.

Several specific behaviours were observed, and usually they were influenced by the actual ranking (Figs 6, 7).

As for exploitative behaviours, they were displayed mainly by the **alpha** male. They were often engaged in patrolling, sniffing, listening and watching

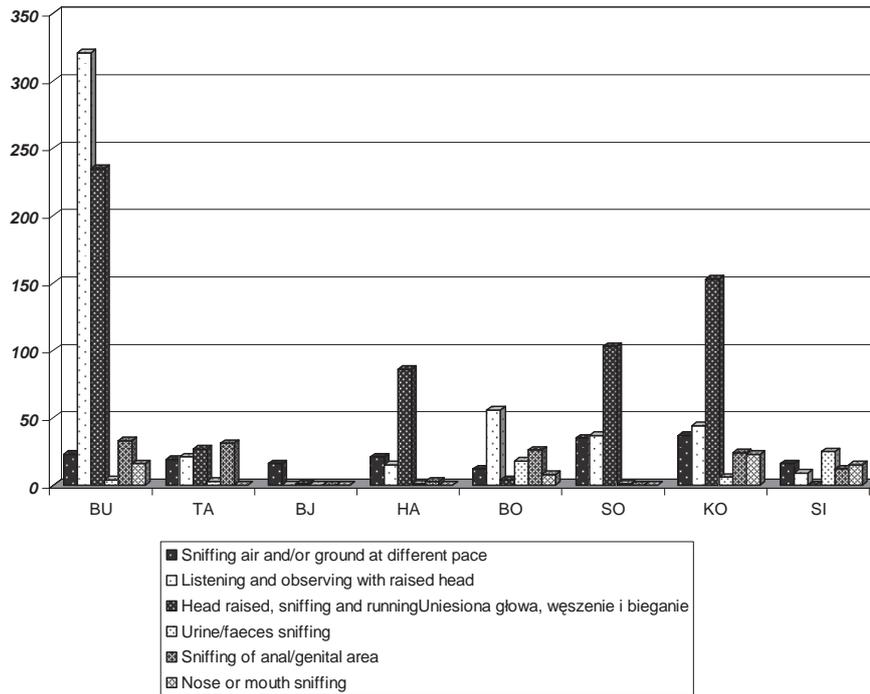


FIGURE 6. Explorative behaviour in males

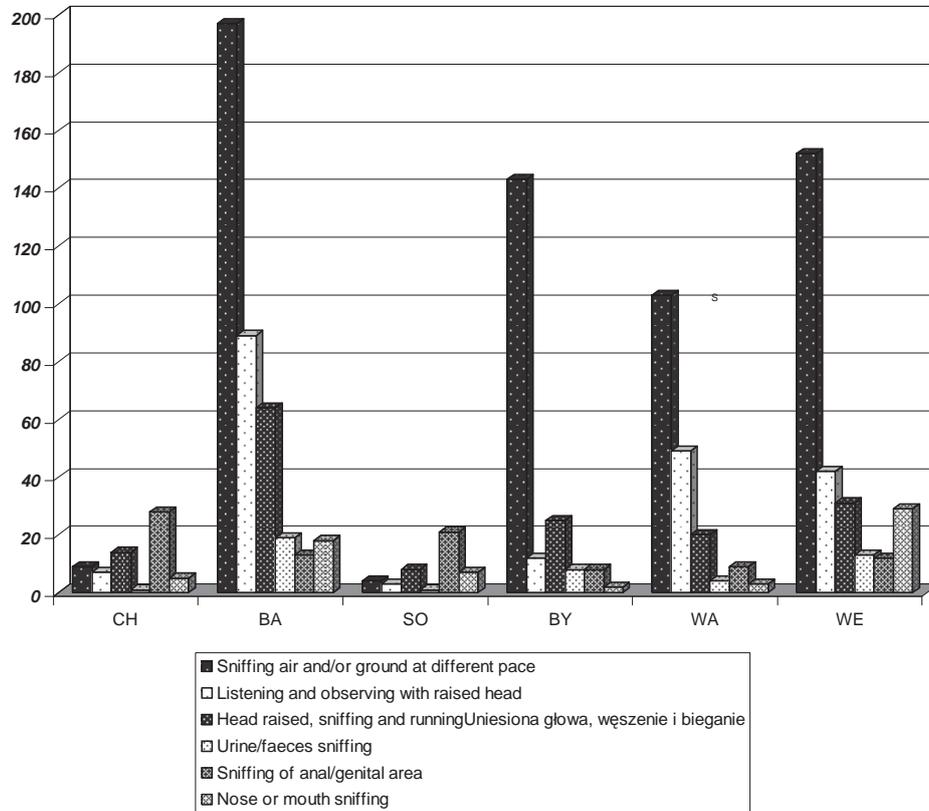


FIGURE 7. Explorative behaviour in females

around. Same activities were observed in case of the **beta** bitch and the youngest ones, whereas the **alpha** bitch was very seldom involved in similar activities, most probably because she was eight years old and felt safe in well-known yard and territory, where she had spent five years. Affiliative behaviours were more frequently observed in males, than in females (Figs 8, 9), the only exception being two bitches – CH and SO. It seems, however, that it was more imitation than real bond forming. Similarly to what was described by Mech (1999) in

relation to wolves, we found that young dogs were likely to keep in closest proximity of other dogs, as shown in Figures 10 and 11.

Some interesting observations relate to urination in females, displayed as territory marking. Highest ranked females tend to lift hind leg during urination, similarly to males. The **alpha** bitch tends to scratch ground with all paws. We also observed frequent urination into empty bowls and onto fences.

Dogs presented great variety of vocalisation, displaying all 11 patterns known

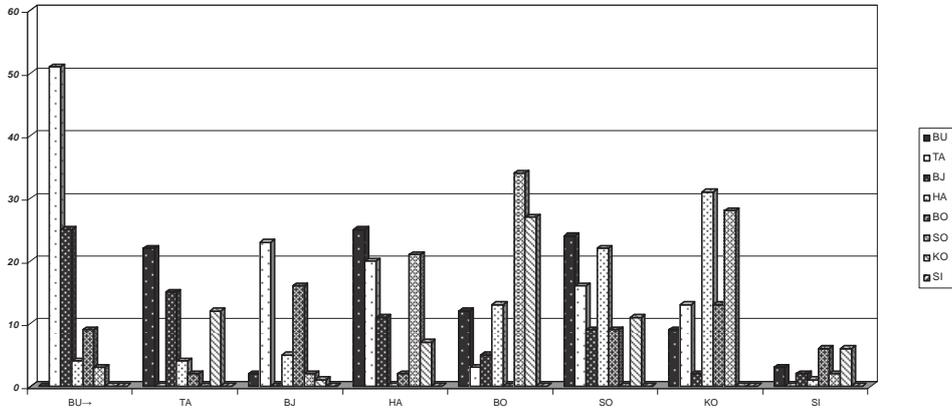


FIGURE 8. Affiliate behaviour among males

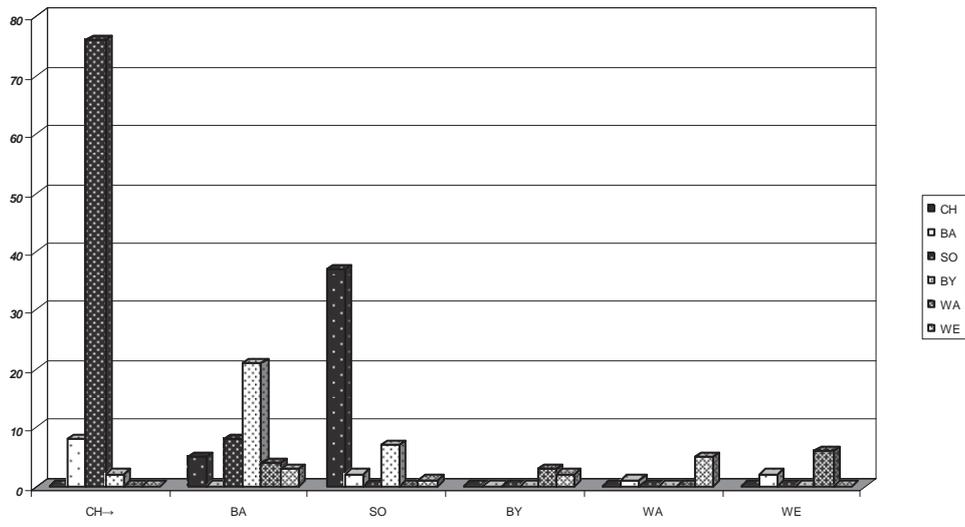


FIGURE 9. Affiliate behaviour among female

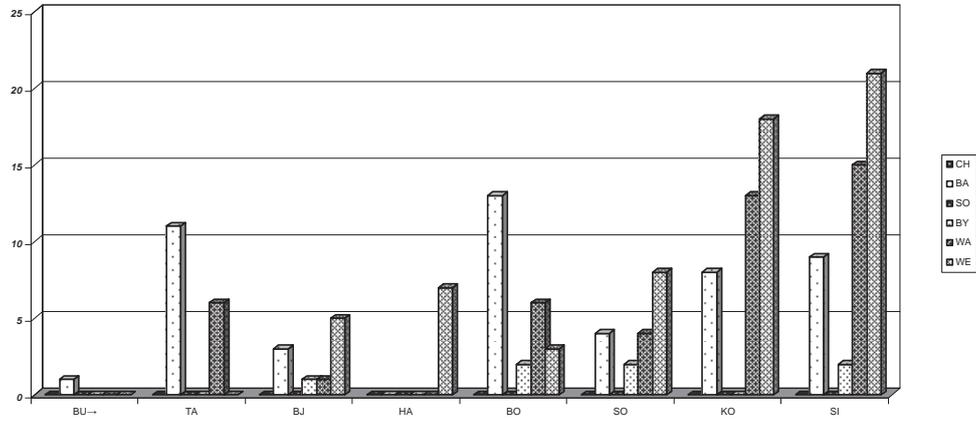


FIGURE 10. Affiliate behaviour males vs. females

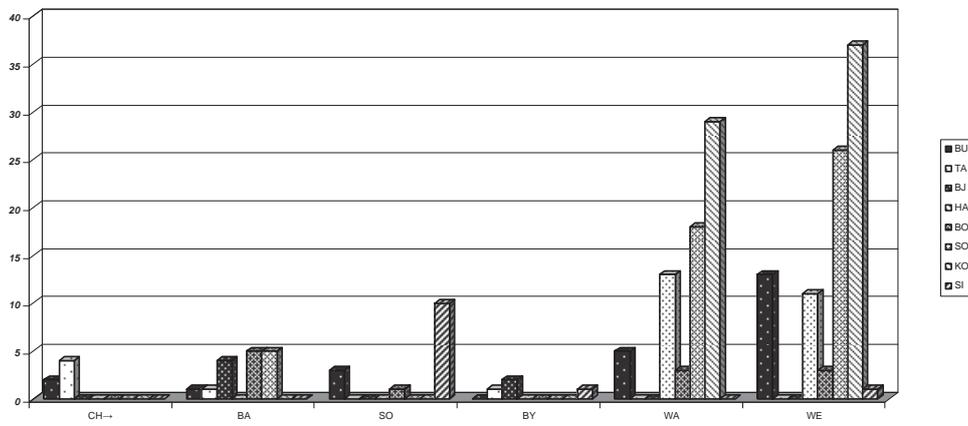


FIGURE 11. Affiliate behaviour females vs. males

in wolves. The most frequent was howling, initiated by a single male; barking seemed of lesser importance and was employed only as alarming signal or attraction seeking behaviour.

CONCLUSION

All of these observations lead to the confirmation of the hypothesis that behaviours and social relations in Siberian Huskies pack show striking similarities to those of wild wolves. Starting from social structure, through affiliate and territorial behaviours, as well as vocalisation, huskies are pretty similar to wolves, probably far more than other, more „advanced” breeds. The pack leader (**alpha** male) was predominantly involved in explorative and territorial behaviours and was instrumental in controlling and ceasing potential conflicts. Feeding area was scent-marked with urine. Urination with lifted leg was part of territorial behaviours typical of high-ranked females (Fig. 7).

REFERENCES

- GINSBURG B.E., 1987: The wolf pack as a socio-genetic unit. In: Frank, H. (ed.). *Man and Wolf* : 401–413 Dordrecht, The Netherlands.
- GOODWIN D., BRADSHAW J.W.S., WICKENS S.M., 1997: Paedomorphosis affects agonistic visual signals of domestic dogs. *Anim. Behav.* 53: 297–304.
- MECH L.D., 1999: Alpha status, dominance, and division of labor in wolf packs. *Canadian Journal of Zoology* 77: 1996–2003.
- SCOTT J.P., FULLER J.L. 1965: *Genetics and the Social Behavior of the Dog*. University of Chicago Press, Chicago.
- WOOD-GUSH D.G.M., 1983: *Elements of Ethology: a Textbook for Agricultural and Veterinary Students*. Chapman & Hall, London.
- Streszczenie:** *Zachowanie społeczne u Siberian husky*. Obserwowano zachowanie stada psów rasy husky składającego się z 14 osobników obu płci w różnym wieku. W trakcie obserwacji określano kształtowanie hierarchii stada na podstawie występowania zachowań dominacyjnych, submisyjnych i afiliacyjnych poszczególnych psów. Obserwowano także zachowania afiliacyjne i wokalizacje. Częstość występowania i wzorce poszczególnych zachowań porównywano do opisywanych w literaturze zachowań stadnych wilków. Struktura grupy socjalnej i podwójna hierarchia liniowa okazały się takie same, jak opisywano u wilków, zachowanie poszczególnych osobników było jednak nieco odmienne. Osobnik α nie wykazywał agresji w stosunku do psa ϕ , a także w pewnej mierze kontrolował i tłumił konflikty w obrębie stada. Uboższy był repertuar zachowań dominacyjnych i brak submisji aktywnej między psami. Obserwowano również u badanej sfory zachowania typowe dla wilków, a opisywane jako niewystępujące lub rzadko występujące u psów, jak: znakowanie miejsca posiłku, podnoszenie nogi w czasie urynacji suk i pełen zakres sygnałów wokalnych.

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