

# Occurrence and origin of flea-bitten pattern in grey Purebred Arabian Horses

A. Stachurska, M. Pięta, A. Brodacki and P. Tomczyk

University of Life Sciences, Akademicka 13, 20-950 Lublin, Poland

anna.stachurska@up.lublin.pl

## Material and methods

2136 descriptions of 1140 grey Purebred Arabians. Scale of pattern intensity: 1-6 (lack, only on head, slight, medium, intensive, very intensive).

Factors regarded in analysis of variance: gender, age, kind of main coat colour.

## Results

### Pattern occurrence

Flea-bitten pattern occurs in 24.0% grey Arabians: 9.7% stallions and 31.9% mares. Reddish-brown spot colour in 96.7% horses.

### Pattern intensity

Flea-bitten pattern intensity is  $1.74 \pm 0.04$  in stallions and  $1.94 \pm 0.04$  in mares. Difference significant at  $P < 0.01$ .

### Pattern origin

Phenotype analysis of parents and progeny show that at least two loci may control the appearance of the flea-bitten pattern. The heritability of the pattern amounts to 0.43.

## Conclusion

The occurrence and intensity of the flea-bitten pattern depends on the gender and age of the horse and is not related to the main coat colour covered with grey hair. The appearance of the flea-bitten pattern may be controlled by at least two loci or polygenic mechanism.

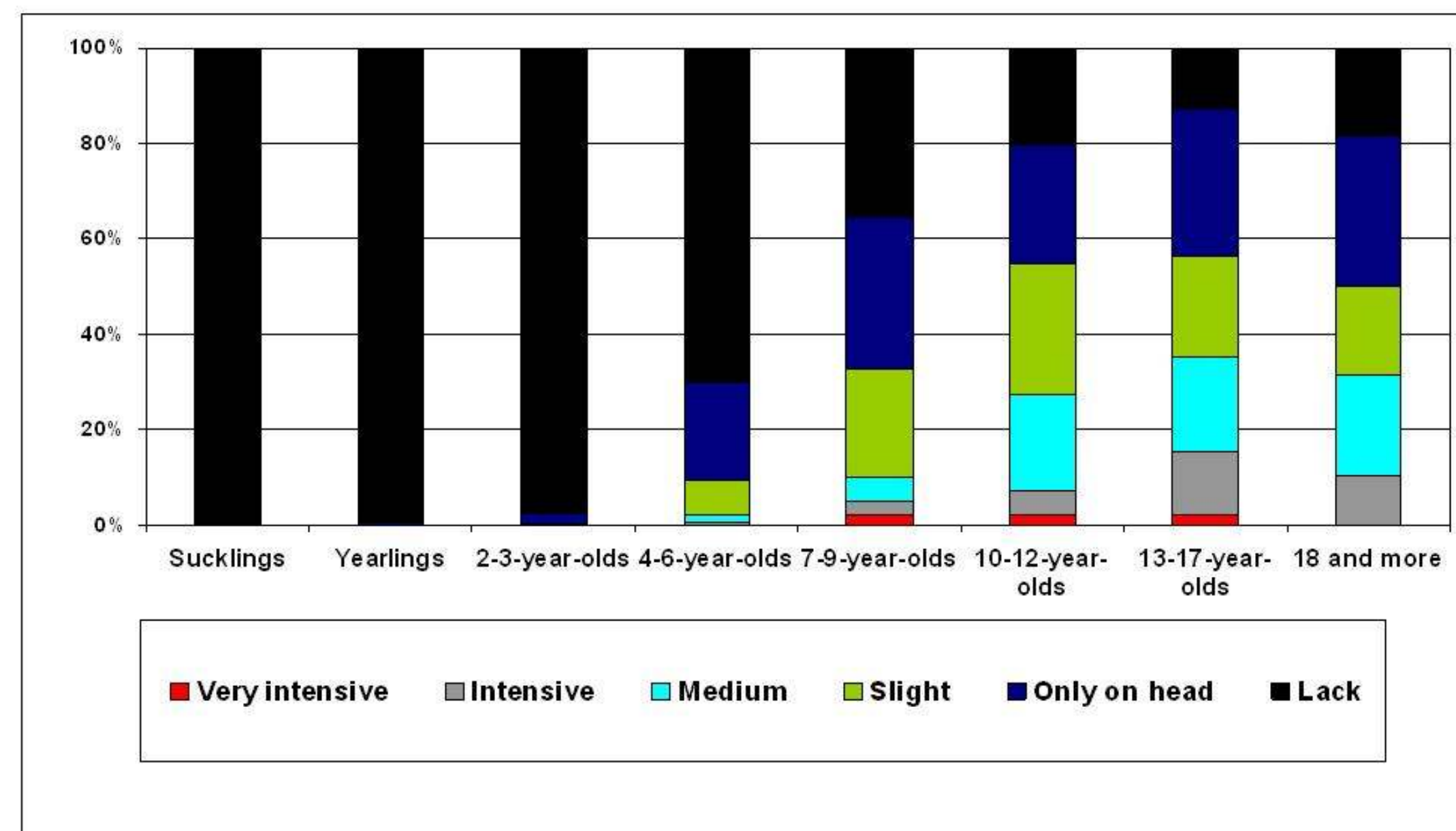


Figure 1. Flea-bitten pattern occurrence with regard to the age and intensity (in %)

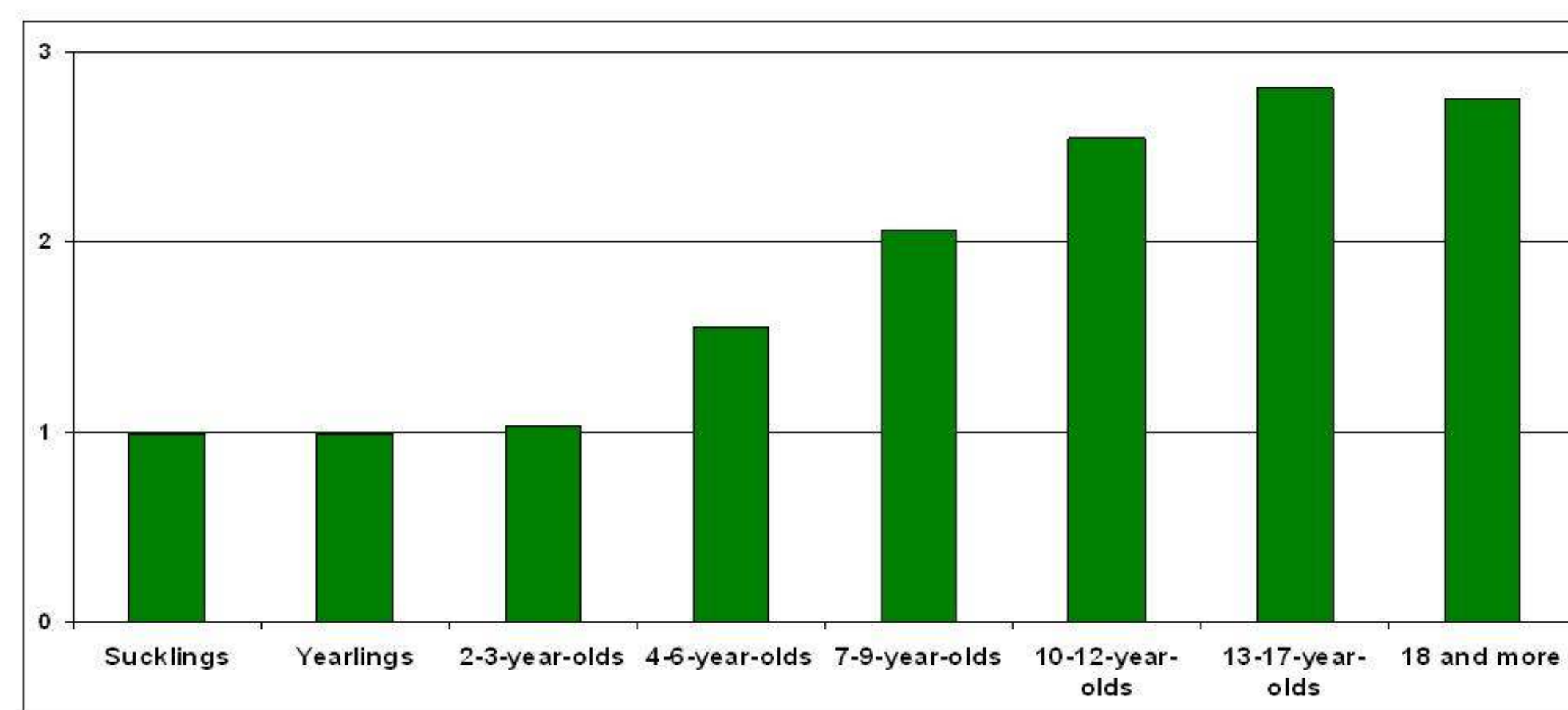


Figure 2. Flea-bitten pattern intensity with regard to the age. Most differences significant ( $P < 0.01$ )

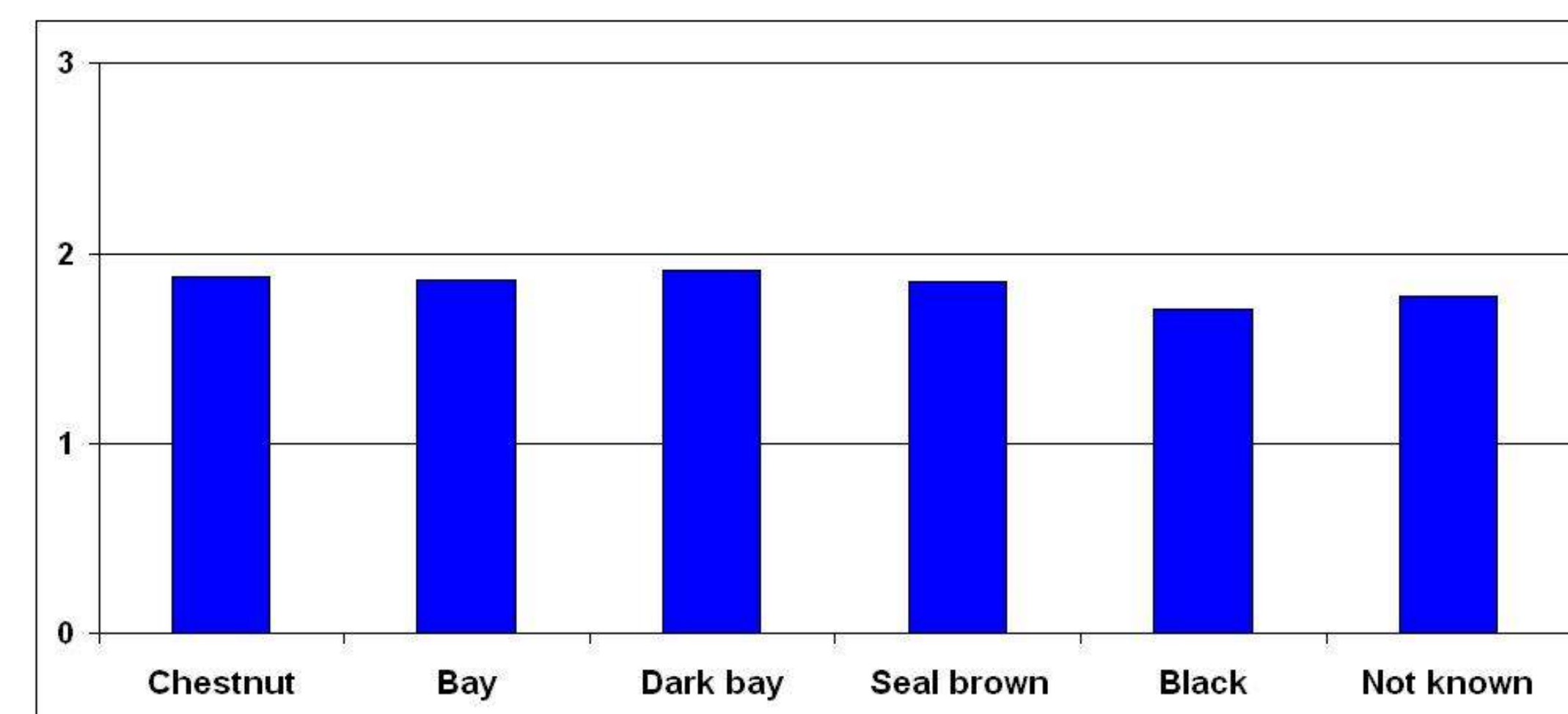


Figure 3. Flea-bitten pattern intensity with regard to the main coat colour covered with grey hair

