

# Horses in Company

## Contents

	Introduction	7
CHAPTER 1	<b>Thinking About Behaviour</b> Reflex and innate behaviour. Early work by Tinbergen and Lorenz. Learning. Tinbergen's four questions. Motivation. Strategies, costs and benefits. Emotion. Anthropomorphism. Applied ethology.	9
CHAPTER 2	<b>What Horse Evolution Can Tell Us</b> Natural selection pressures evident in the fossil record. Domestication effects.	23
CHAPTER 3	<b>Equine Ethology Studies</b> Feral horses: natal bands, stallions and mares. Bachelor bands. Natal dispersal. Multi-stallion bands. My own studies: different populations.	29
CHAPTER 4	<b>Natural Life, With Puma</b> A stampede. Analysis of defence behaviour. Self-organizing behaviour and the flight algorithm: cohesion, synchrony of velocity and direction, collision avoidance. Initiators of changes.	48
CHAPTER 5	<b>Social Life Revisited</b> Cohesion and synchrony in everyday life. Leadership but no fixed leaders. Collision avoidance or respect for individual space. Keystone characters? A self-organizing society.	66
CHAPTER 6	<b>Interactions</b> Band and herds. Stallion tolerance and its influences. Population dynamics of the llanos herd. Survival. Competition for resources? Male competition for mares. Bachelor strategies. Stallion attractiveness to mares. Paternal protection of foals. Two-stallion bands. Social relations and bonds within natal bands. Aggressive actions and their causes. Conclusions.	77
CHAPTER 7	<b>'Horses Have Strict Dominance Hierarchies'</b> Definition of dominance and the history of the concept. Measurement. Correlations. Results of horse studies. Problems: unacceptable assumptions, practices and parallels. No single hierarchy. Re-interpreting dominance studies. Feral, free-living and domestic groups. Learned aggression in imposed resource competition. Stress-related aggression.	120

## 6 Contents

CHAPTER 8	<b>The Dominance Hierarchy Paradigm in the Horse World</b> Misinterpretations of ethological statements and of behaviour in popular literature and everyday horse-keeping. Bacon's idols.	137
CHAPTER 9	<b>Changing the Paradigm</b> New fields of research in equine ethology. Practical considerations regarding attitudes in handling and riding horses.	145
	Notes and References	155
	Index	159

Copyrighted material