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Preference for artificial drinkers in British native ponies

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Introduction: British native ponies

- Native ponies from: Dartmoor, Exmoor, New Forest
- Unbroken (not halter trained), live outdoors
- Experience handling once a year when rounded up during ‘drifts’ (autumn)
- First time young ponies encounter handling and transport and (for some) a market experience

Introduction: markets and drinkers

- Markets
  - first time ponies encounter artificial water systems
  - different types of drinking systems
- Research on (handled) horses shows aversion to automatic drinking bowls *(Nyman & Dahlborn, 2001; Krawczel et al. 2006)*

Aim

To assess the preference for different types of artificial drinkers in young, unbroken native ponies

Animals

- 18 young unbroken Dartmoor ponies
- 10 females, 8 males, approx. 5 months old
- Housed in groups of three (pen size: 4x5 m)
- Feed: forage (hay) only

Methods

- Group preference tests for (novel) drinkers in an unfamiliar environment and after transport
- Individual preference tests for novel drinkers
  - automatic water bowl
  - bucket
  - flowing water trough
- Test period: 4 days

Drinkers

Bucket

Flowing water trough

Automatic water bowl

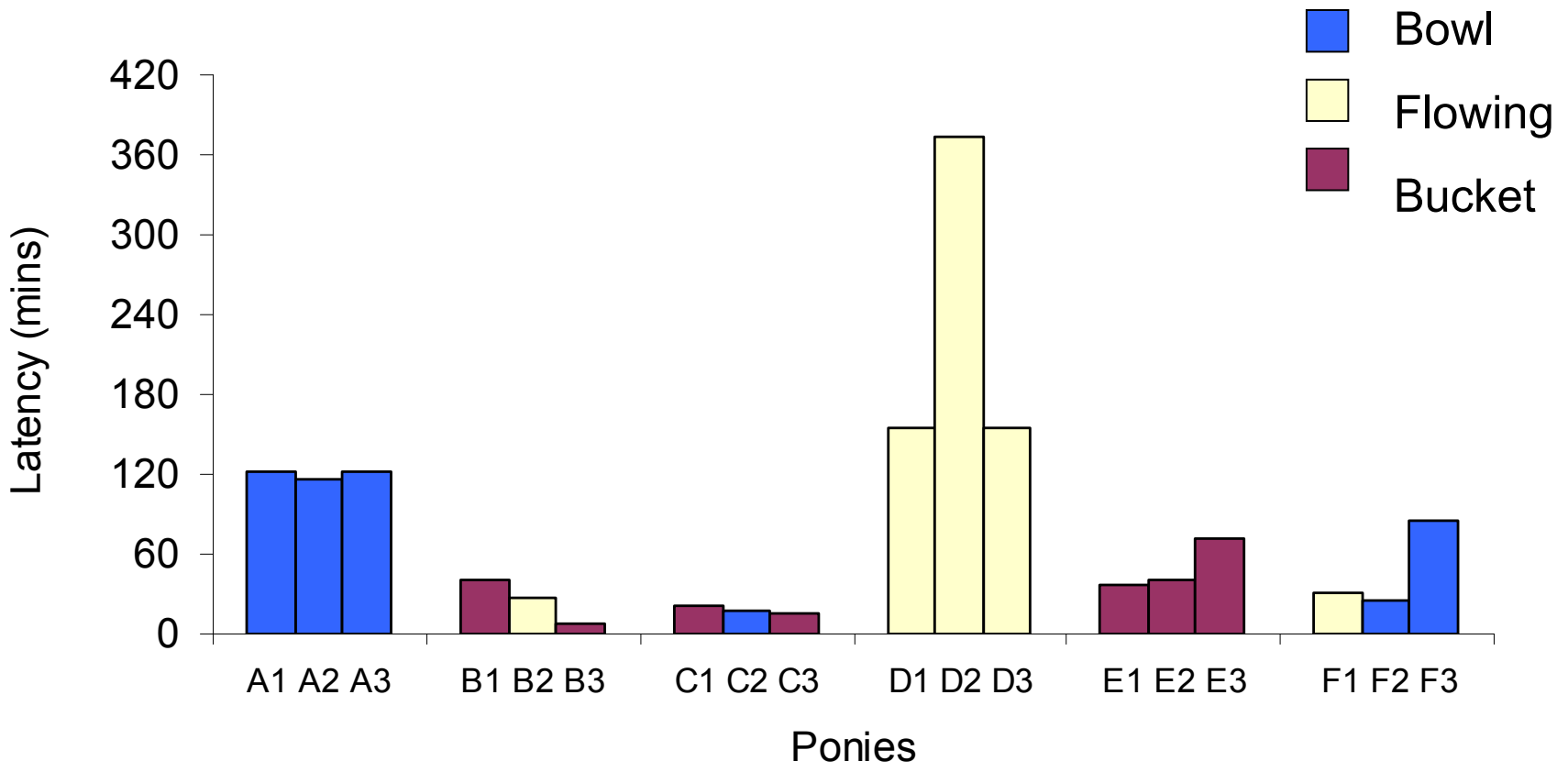
Test pen (4x5 m)

Position of drinkers rotated between test pens

Parameters

- Amount of water drunk from each system (intake)
- Behavioural parameters (continuous time-lapse video): latency to drink, drinking duration, drinking bouts, bout length
- Calculated relative variables

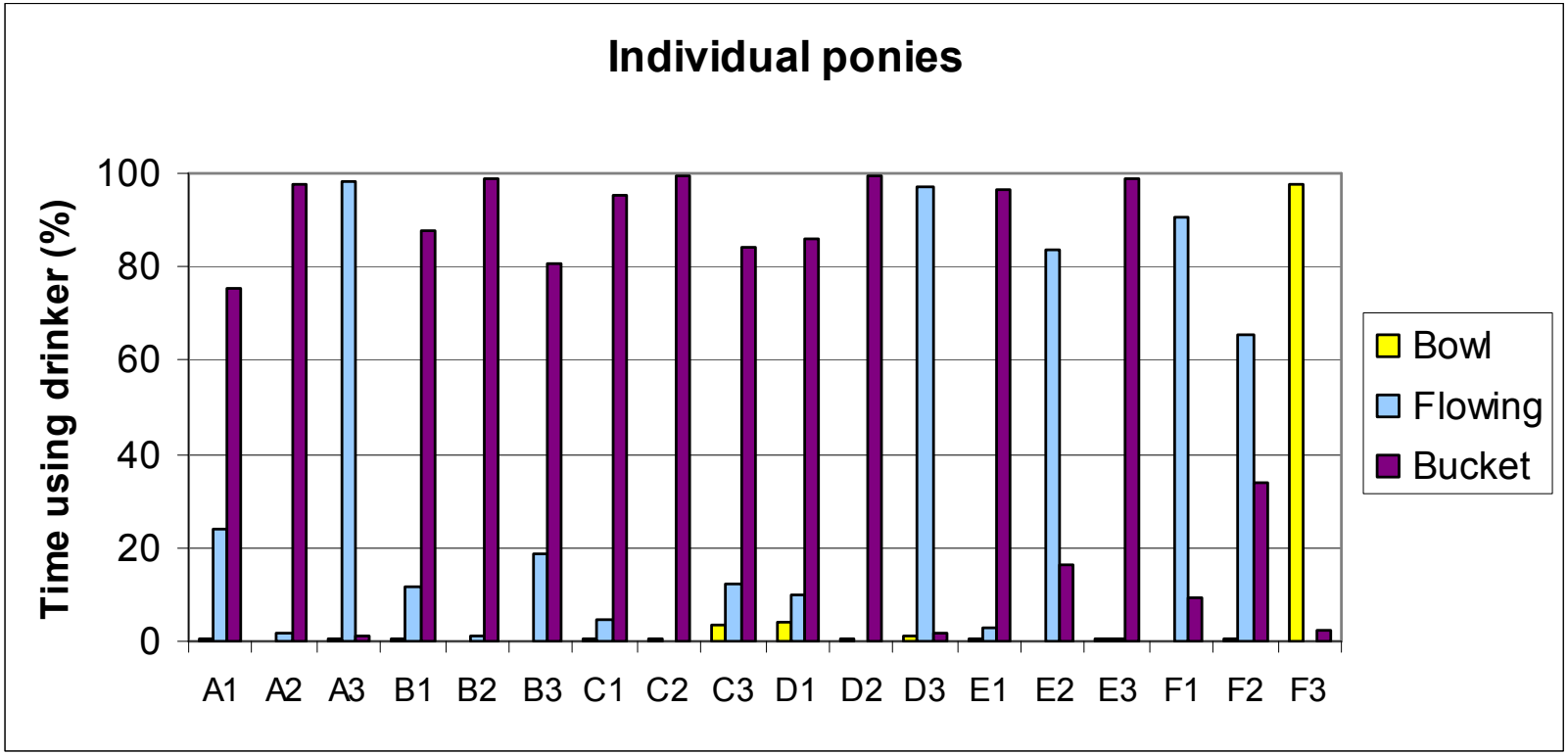
Latencies to drink after transport



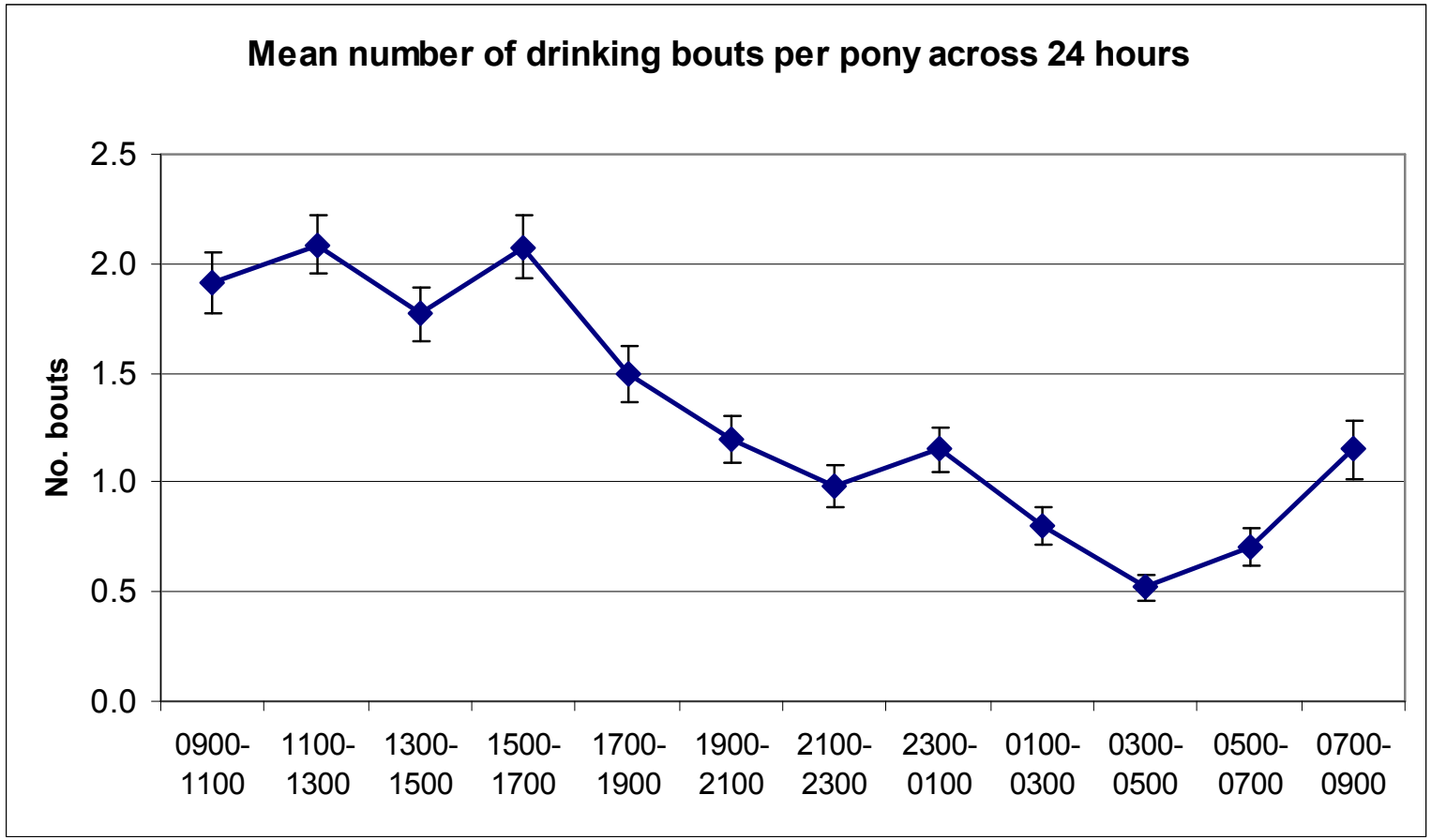
Drinker choice

No. of ponies	Automatic bowl	Flowing water trough	Bucket
Initial drinker choice	6	5	7
Drinker choice on last test day	3	3	12

Individual preferences



Diurnal drinking



Drinking facts

	Individual ponies
Intake	approx. 10 litres per day
Drinking time	approx. 10 minutes per day
Drinking bouts	19 bouts per day
Bout length	31 s (mean for all drinkers)

Differences between drinkers

Variable	Automatic bowl	Flowing water trough	Bucket
Time using drinker (%)	6.2 ± 5.4^{a}	29.1 ± 9.0^{b}	64.7 ± 9.5^{b}
Amount drunk (%)	2.3 ± 1.6^{a}	32.9 ± 9.3^{b}	64.8 ± 9.4^{b}
No. of drinking bouts (%)	7.5 ± 5.3^{a}	32.3 ± 9.1^{b}	60.3 ± 9.5^{b}
Bout length (s)	10.3 ± 1.7^{a}	24.8 ± 3.8^{b}	34.8 ± 5.4^{b}

^{a,b}means with different superscripts within a row differ significantly at $P<0.02$

Daily preferences

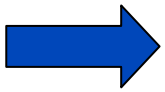
Individuals

Pony	Day 1	Day 2	Day 3	Day 4	Overall
A1	**Flowing**	**Flowing**	**Bucket**	**Bucket**	**Bucket**
A2	**Bucket**	**Bucket**	**Bucket**	**Bucket**	**Bucket**
A3	**Flowing**	**Flowing**	**Flowing**	**Flowing**	**Flowing**
B1	**Bucket**	**Bucket**	**Bucket**	**Bucket**	**Bucket**
B2	**Bucket**	**Bucket**	**Bucket**	**Bucket**	**Bucket**
B3	**Flowing**	**Bucket**	**Bucket**	**Bucket**	**Bucket**
C1	**Bucket**	**Bucket**	**Bucket**	**Bucket**	**Bucket**
C2	**Bucket**	**Bucket**	**Bucket**	**Bucket**	**Bucket**
C3	**Bucket**	**Bucket**	**Bucket**	**Bucket**	**Bucket**
D1	**Bucket**	**Bucket**	**Bucket**	**Bucket**	**Bucket**
D2	**Bucket**	**Bucket**	**Bucket**	**Bucket**	**Bucket**
D3	**Flowing**	**Flowing**	**Flowing**	**Flowing**	**Flowing**
E1	**Bucket**	**Bucket**	**Bucket**	**Bucket**	**Bucket**
E2	**Flowing**	**Flowing**	**Flowing**	**Flowing**	**Flowing**
E3	**Bucket**	**Bucket**	**Bucket**	**Bucket**	**Bucket**
F1	**Flowing**	**Flowing**	**Flowing**	**Flowing**	**Flowing**
F2	**Bucket**	**Flowing**	**Flowing**	**Flowing**	**Flowing**
F3	**Bowl**	**Bowl**	**Bowl**	**Bowl**	**Bowl**

Repeated measures analysis: NS

Summary & conclusion

- Latencies to drink after transport varied – effect of transport (+ weaning)?
- Ponies drank day and night
- Ponies made a clear drinker choice
  - most preferred was a bucket or flowing water trough
  - least preferred was the automatic drinker bowl (noise?)
- Ponies did not change preference once choice was made



Results have welfare implications for native ponies sold at livestock markets with automatic drinker bowls

Thank you!

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