

# Tapir husbandry

CHESTER ZOO





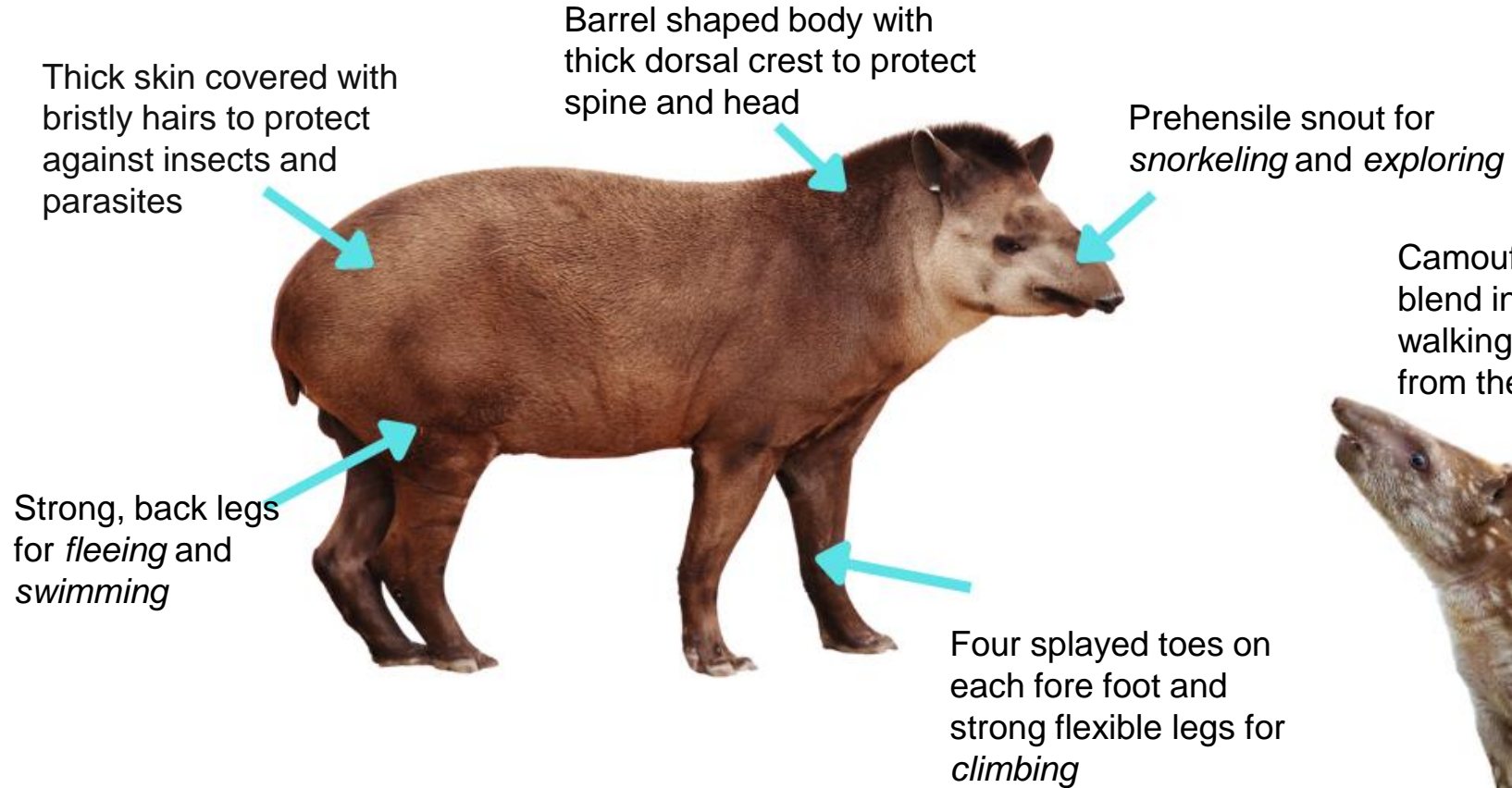
# Adaptations suitable to zoo environment?



**Nocturnal or Crepuscular**- most active at dawn and dusk hours



**Multiple habitats**- including forests, wetlands, shrublands, and grasslands



## Can we meet all their natural history requirements?

# Species overview

- There are 4 extant species of tapir-
  - Lowlands
  - Malaysans
  - Baird's
  - Mountain
- Lowland tapirs are listed as CITES II, while mountain, Bairds, and Malayan Tapirs are listed as CITES I.



# Tapir husbandry... Can we treat all species the same?

The simple answer is not really...

Although we see much overlap between different tapir species, they also have varying husbandry requirements, largely due to their differences in temperament and physical characteristics.



## Case study- Lowland vs Malayan







- Lowlands are managed at CZ in a free contact set up, due to their generally relaxed and friendly nature, and smaller stature. However, keepers remain alert as they always have the potential to be unpredictable.
- Lowland tapir are commonly seen in zoo's. Although solitary in the wild they are held successfully in family groups.
  - Males can be kept in family groups with tapir calves.

Species holding report for: *Tapirus terrestris* / South American tapir

All 197 Institutions, 5 Regions

248

229

1

13

0

0

0

478

Lowland tapir (CITES II)



- At CZ, Malayan tapir are managed in a protected contact set up- due to a more nervous temperament and higher risk to life due to their considerable size.
  - Wild females have been recorded as 140kg larger than the largest female Lowland tapir.
- Malayan tapir are less commonly seen. Their solitary nature is evident even in captive sp's., where even pairs are not always successful or common, breeding does not come without complications.

Species holding report for: *Tapirus indicus* / Malayan tapir

All 61 Institutions, 4 Regions      86      98      1      9      0      0      0      185

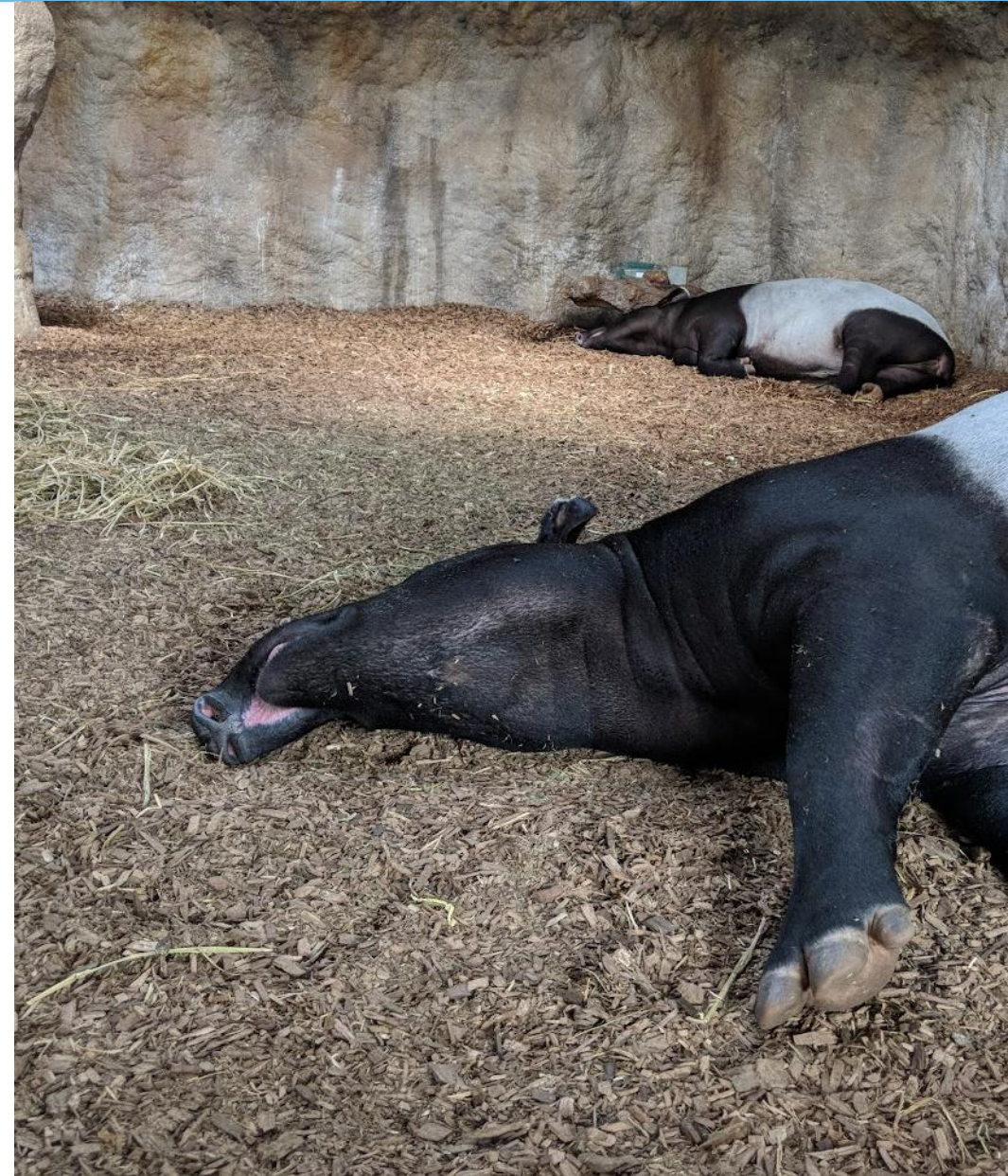
Malayan tapir (CITES I)



# Tapir husbandry 101

Looking at the natural history of tapirs to provide a suitable ex-situ environment.

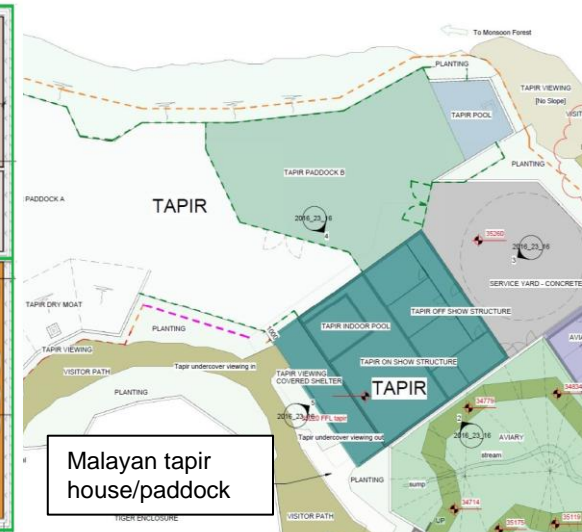
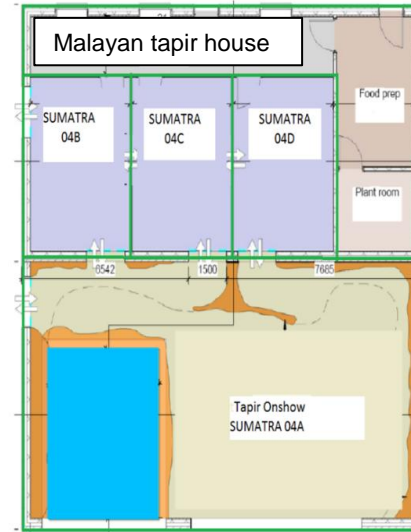
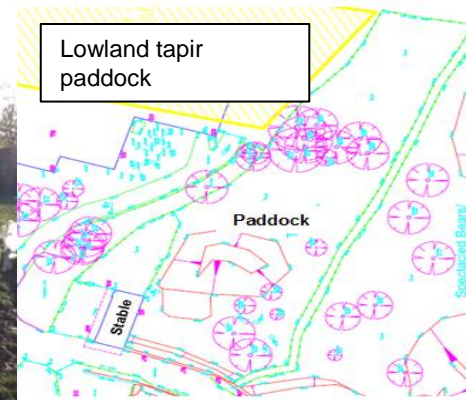
- Enclosure design
- Diet
- Social and life stages





# Environment and enclosure design

- Environment
  - Light/Humidity
  - Temperature
  - Substrate
  - Space and complexity
- Enclosure design
  - Group size, structure.
  - Conspecifics
  - Environmental enrichment.
- Containment
  - Access for loading and unloading
  - Protected contact/ free contact
  - Holding areas





- In general, it is recommended that the diet is based mainly around a high-quality commercial concentrate for horses, alfalfa/lucerne and foliage. Fruits and vegetables should be present, but in smaller amounts. Mineral and vitamin supplementation is important.
- It is suggested that the main portion of a tapir diet should include mostly forage and a high fibre herbivore pellet.
- A typical captive diet usually consists of a concentrate pellet, fruit and vegetables, lucerne and browse. A review into the amounts and types of fruits currently offered to lowland tapirs in collections, is strongly recommended.



Lowland Tapir Diet Sheet

**Species Information**

Est. Weight: ~203kg

♀ Mani (C2044) housed in enclosure TW1 02 with dam.  
History of stiffness in hind legs.

Daily Diet	UOM	Min	Max	Current	Notes
Vitality LR rolls	g	550	1100	750	
Move joint supplement	g				
Cabbage/lettuce	g			1500	
Carrot	g			330	
Sweet potato	g			70	
Turnip	g			70	
Parsnip	g			55	
Swede	g			55	
Lucerne hay UK				Ad lib	
Haylage				Ad lib	
Browse				Ad lib	

Variable Diet Schedule	M	T	W	Th	F	S	S	uom	Other
Silage	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		October-March



# Reproduction, mixing and life stages



Group or solitary?

Breeding?

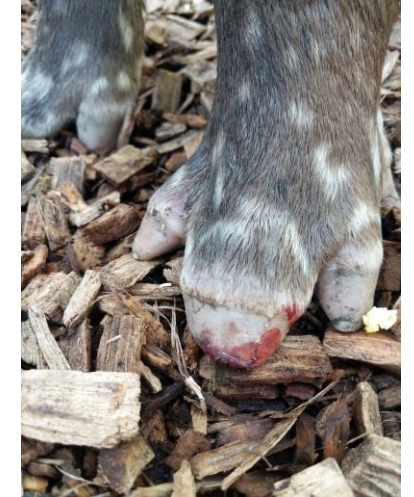
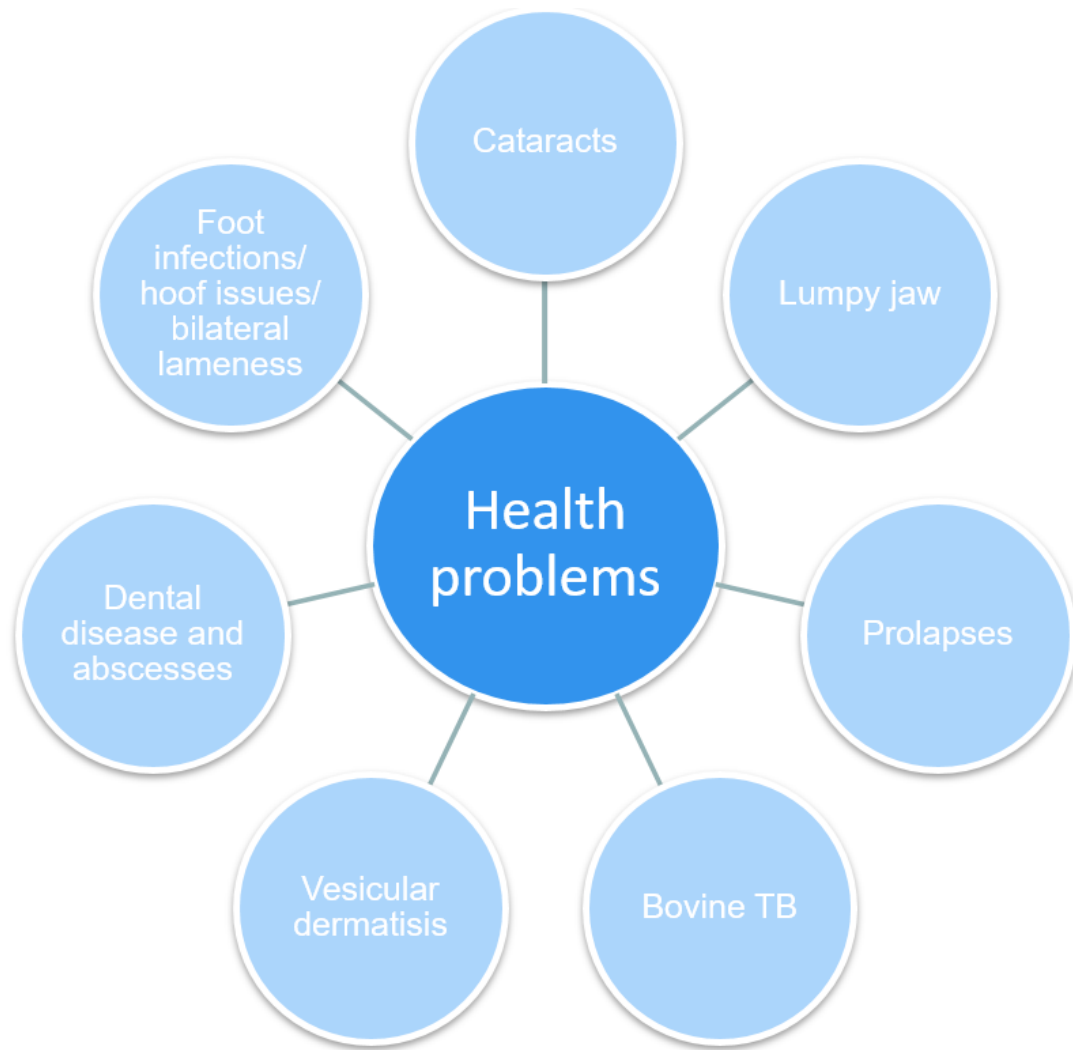


Sexual maturity?

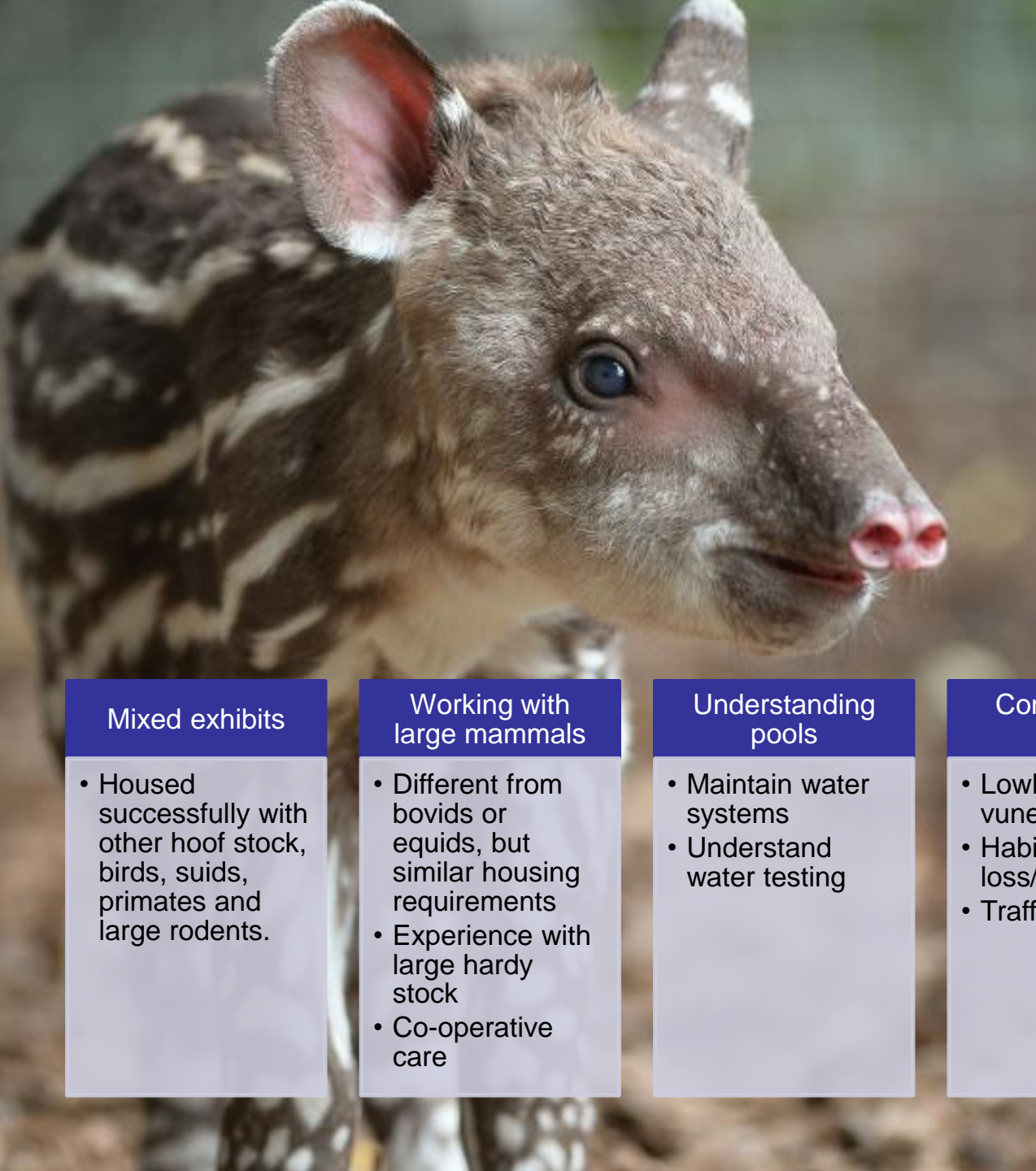
Surplus?



# Common health problems







# Benefits of holding tapirs in a teaching environment

There are a range of benefits for both students and collection managers.

## Mixed exhibits

- Housed successfully with other hoof stock, birds, suids, primates and large rodents.

## Working with large mammals

- Different from bovids or equids, but similar housing requirements
- Experience with large hardy stock
- Co-operative care

## Understanding pools

- Maintain water systems
- Understand water testing

## Conservation value

- Lowland tapirs – vulnerable
- Habitat loss/degradation
- Traffic

## Educational value

- Living fossils
- Adaptations
- Habitat engineering
- Nocturnal
- Semi aquatic

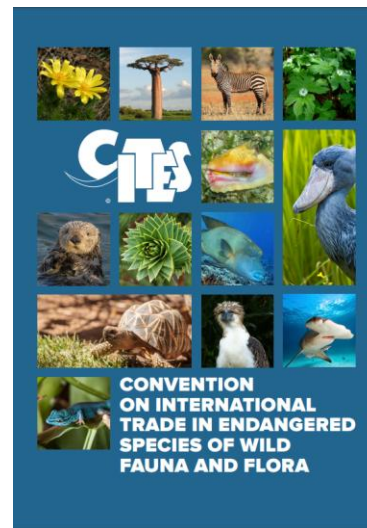
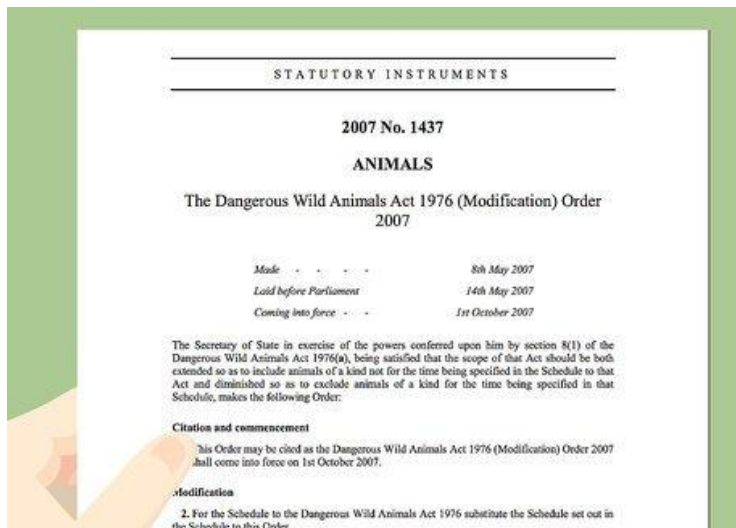




# Legislation

All species of tapir, except the Brazilian or lowland tapir, are classified as Annex A species under the Convention on Trade in Endangered Species (CITES). This means that special permits are required to buy, sell, breed, or use them for commercial purposes. Therefore, CITES permits (ARTICLE 10 or 60) must be acquired.

Tapir are also listed under the Dangerous Wild Animals Act 1976. The wild animals covered by the Act require extremely specialised care and accommodation, and the licensing process ensures that both the animal's welfare and the safety of the keeper and the wider public will be protected.



# References and Thanks

- Clauss M, Wilkins T, Hartley A, Hatt JM. Diet composition, food intake, body condition, and fecal consistency in captive tapirs (*Tapirus* spp.) in UK collections. *Zoo Biol.* 2009 Jul;28(4):279-91.
- Downer C.C. (2001). Observations on the diet and habitat of the mountain tapir (*Tapirus pinchaque*). *Journal of Zoology (London)*, 254, 279–291
- Hohl, C., Codron, D., Kaiser, T., Martin, L., Müller, D., Hatt, J. and Clauss, M., 2020. *Chewing, dental morphology and wear in tapirs (Tapirus spp.) and a comparison of free-ranging and captive specimens*. *PLOS ONE*, 15(6), p.e0234826.
- Janssen D.L. (2003). Tapiridae. In: M.E. Fowler & R.E. Miller (Eds.). *Zoo & Wild Animal Medicine (5th edition)* (pp. 569–577). Philadelphia, PA: W.B. Saunders
- Medici E. P. (2010). Assessing the Viability of Lowland Tapir Populations in a Fragmented Landscape. Ph.D. Dissertation. Durrell Institute of Conservation and Ecology (DICE), University of Kent. Canterbury, UK.
- Medici E. P. (2011). Family Tapiridae (TAPIRS). In: D.E. Wilson & R.A. Mittermeier. *Handbook of the Mammals of the World - Volume 2: Hoofed Mammals*. Lynx Edicions, Spain.
- Medici E. P.; Desbiez A. L. J.; Gonçalves da Silva A.; Jerusalinsky L.; Chassot O.; Montenegro O. L.; Rodríguez J. O.; Mendoza A.; Quse V. B.; Pedraza C.; Gatti A.; Oliveira-Santos L. G. R.; Tortato M. A.; Ramos Jr., V.; Reis M. L.; Landau-Remy G.; Tapia A.; Morais A. A. (2007). Lowland Tapir (*Tapirus terrestris*) Conservation Action Plan. IUCN/SSC Tapir Specialist Group (TSG) & IUCN/SSC Conservation Breeding Specialist Group (CBSG).
- Morga J.M., & Hodgkinson M. (1999). The motivation and social orientation of
- Quse V & Fernandes-Santos RC (Eds). 2014. Tapir Veterinary Manual. 2nd Edition. IUCN/SSC Tapir Specialist Group (TSG). 155p.



Many thanks to Rosie Owen, Louise Jakobsen, the BIAZA USG and CZ giraffe team for their photos, diet sheets and husbandry care sheets.