

# POKÉMON™

## Perissodactyla Pack Manual



BIOS 457 "I Spy" a Mammal Project

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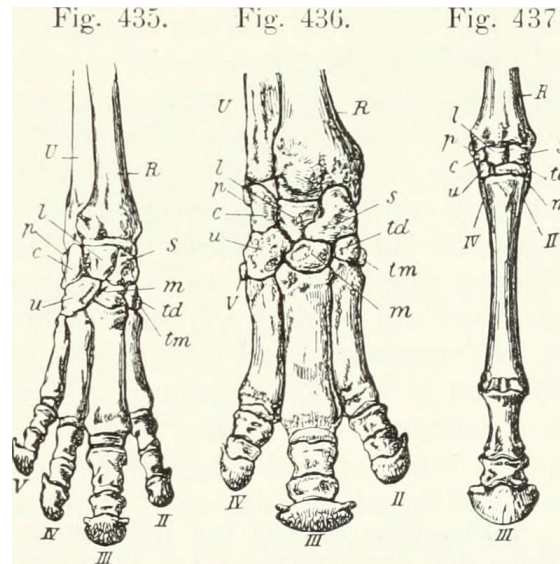
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*Dedicated to the one Perissodactyla who touched my heart, helped me conquer my fears, and led me on a path to grow and reach my true potential: Chip the Wonder Horse. I miss having you by my side, but know that you are safe and so loved in your new home.*

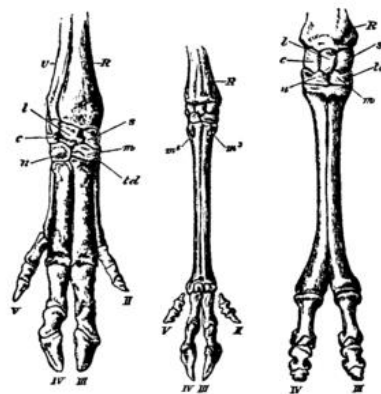
# Perisso-WHAT?

**Often when I mention Perissodactyla the first thing out of people's mouths is "Is that some kind of dinosaur?". It often shocks them to learn that the term is for the order of mammals known as the "odd-toed ungulates". This means that the species in this group bear their weight on one toe and have one or three toes on each foot. This includes horses, rhinoceroses, and tapirs.**



From left to right: Tapir, Rhinoceros, Horse (Internet Archive Book Images)

**This foot structure is what differentiates them from Artiodactyla which are the "even-toed ungulates" like deer and cattle. These species walk on two-toed hooves that have the weight distributed equally between the two toes.**



From left to right: Pig, Red Deer, Camel (New World Encyclopedia)



# Perissodactyla Card Pack

**BASIC** **Black Rhinoceros** HP 200 



Rhinocertidae species Diceros bicornis weighing in at 800-1300 kg


  **Charge** 50  
Charges at opponent at full speed with their horn. If territory is being invaded attack increases by 10%


 **Stomp** 25  
Uses strong three-toed hooved feet adapted to their body weight to stomp on opponent

weakness  x2    resistance  -30    retreat 

  While much heavier and slower than other odd-toed ungulates their reenforced leg bones and muscles add sturdiness and power to support their massive frame


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**BASIC** **Domestic Horse** HP 100 




Equidae species Equus cabullus weighing in at 380-600 kg

**Ability** **Domestication**  
This social species bonds with humans. When in battle if relationship with trainer is strong then moves do 2x damage

  **Buck and run** 20  
Uses strong, muscular back legs to kick at opponents then flees on well adapted one-toed hooves to evade attacks. If horse has been in stall most of the day zoomies activate and attack is increased 1.5x

weakness  x2    resistance    retreat 

  Adored by many for providing transportation and friendship, the social domestic horse is built to run and has outstanding stamina.

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BASIC

# Mountain Zebra

HP 95



Equidae species Equus zebra weighing in at 240-380 kg



## Sea of Stripes

Gathers as a herd to collectively confuse an opponent and evade attacks for 2 turns.



## Bite

10

Delivers a bite against opponent if grabbed. Only effective if fully grown and predator is smaller than lion.

weakness x2

resistance

retreat



While it is not definitively known why these odd-toed ungulates have stripes, the most common hypotheses are to disorient predators and/or flies

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BASIC

# South American Tapir

HP 75



Tapiridae species Tapirus terrestris weighing in at 220 kg

Ability

## Ecosystem Engineer

Being browsers who move around land and water, they can disperse seeds around a large area to effectively spread vegetation. If in play, other teammates gain 5 hp each turn.



## Dive

10

Uses its natural swimming abilities to evade opponents by entering a body of water. Splashes opponent in process and evades attacks for 2 turns.

weakness x2

resistance

retreat



One of the smallest odd-toed ungulates, the South American Tapir is nocturnally active and prefers to browse for twigs and leaves near the forest floors.

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BASIC

# African Wild Ass

HP 100



Equidae species Equus africanus weighing in at 250 kg



## Kick

20

Kicks with strong hind legs at opponent. This attack seems to be used most often among this species.



## Headbutt

10

Pins ears back and uses head to ram into opponent as an act of aggression.

weakness x2

resistance

retreat



This odd-toed ungulate is thought to be the wild relative of domestic donkeys. They are not very social and seem to switch between solitude and small groups (fission-fusion grouping).

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BASIC

# Przewalski's Horse

HP 80



Equidae species Equus ferus przewalskii weighing in at 200-300 kg

Ability

## Back from the Brink

Being brought back from the brink of extinction empowers other Perrisodactyla species and raises all of their attacks by 1.3x when this card is in play.



## Graze

+13

Grazes on the vegetation of nature reserves in Mongolia to regain 13 hp. Protection of reserve halves opponent's attacks.

weakness x2

resistance -30

retreat



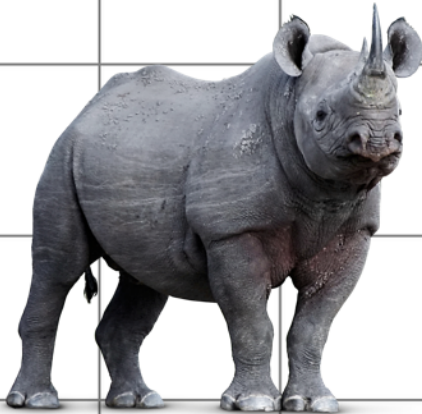
As the last true wild horse species in existence, Przewalski's horse escaped extinction with the help of human intervention through a captive breeding program of 13 individuals.

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# Perissodactyla “Pokédex”

## ▼ INFO



### BLACK RHINOCEROS

Rhinocerotidae species (*Diceros bicornis*)



STEEL

Three-toed Perissodactyla

**WT** ~800-1300 kg (~1763-2866 lbs)

Being the largest family in the Perissodactyla order, Rhinocerotidae has some of the heaviest species and some of the strongest. Such an example is the Black Rhinoceros who is indigenous to Africa and wields a large horn to use for territorial defense (or to fight for a mate if male). This species has three toes (as well as other rhino species such as the Black Rhino, Indian Rhino, Sumatran Rhino, and Javan Rhino) is known to be solitary, and spends time staying rather sedentary in one area where they browse for food.

PokéDex (c)Pokemon Nintendo, Base reproduced by RiaStarChazer

## ▼ INFO



### DOMESTIC HORSE

Equidae species (*Equus caballus*)



NORMAL

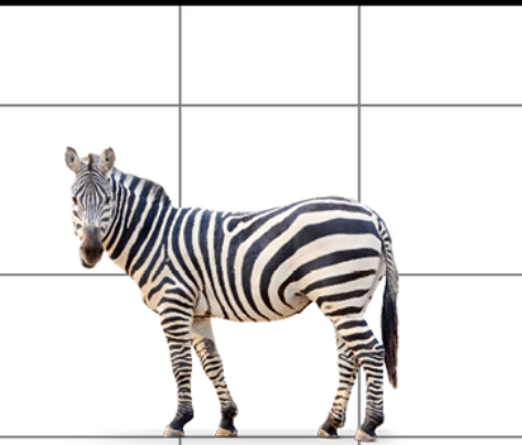
One-toed Perissodactyla

**WT** ~380-600 kg (~837-1322 lbs)

There are many species in the Equidae family within the Perissodactyla order, yet one definitely stands out more than others within human culture. The Domestic Horse is beloved by many for companionship as well as for aiding humans with labor (ex. transportation, agricultural work, pulling heavy loads). Through selective breeding humans have been able to breed an assortment of different kinds of horses from the malicious Miniature Ponies to the behemoth Belgian Draft. All have one toed hooves and are often built to have high stamina.

PokéDex (c)Pokemon Nintendo, Base reproduced by RiaStarChazer

INFO



 **MOUNTAIN ZEBRA**  
Equidae species (*Equus zebra*)



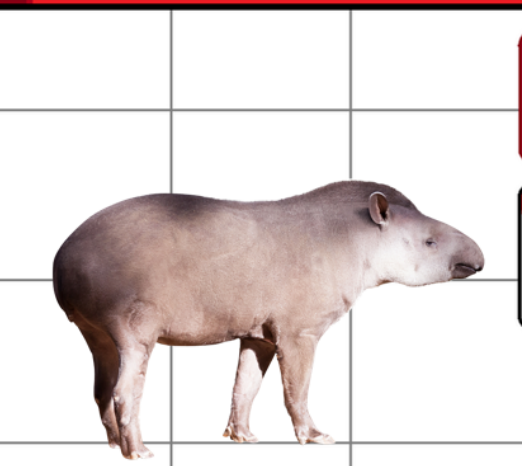
**PSYCHIC**

One-toed Perissodactyla  
WT ~240-380 kg (~529-837 lbs)

Being a rather iconic figure at zoos, zebras are well known as they catch everyone's attention with their distinctive striping. The Mountain Zebra is a specific species of zebra that can be found on the African continent along with its other sister species (Plains Zebra, Grevy's Zebra, and Hartmann's Mountain Zebra). As a collective, zebras are social animals that live in large groups or herds and often migrate long distances to find new food to graze. They have one-toed hooves, and it is hypothesized that their stripes may deter biting flies or confuse predators.

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INFO



 **SOUTH AMERICAN TAPIR**  
Tapiridae species (*Tapirus terrestris*)



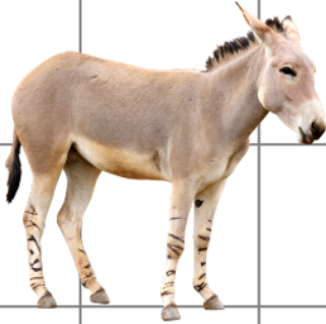
**WATER**

The oddest-toed Perissodactyla  
WT ~220kg (~485 lbs)

The family Tapiridae holds some of the most unique species of Perissodactyla. Tapirs, like the South American Tapir, are the oddest-odd-toed ungulates in the order as they have three hooved toes on their back feet and 4 hooved toes on their front feet. Regardless they are still odd-toed ungulates as the majority of their weight is distributed on their middle toe on all four limbs. This species is native to South America and are exceptionally good swimmers that cross bodies of water to get to food sources. They live relatively solitary lives and act as important seed dispersers

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▼ INFO



AFRICAN WILD ASS

Equidae species (*Equus africanus*)



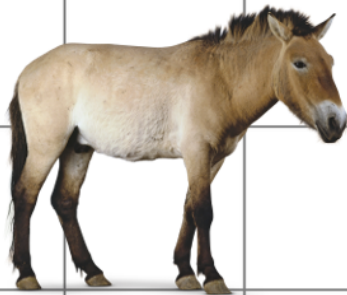
One-toed Perissodactyla

**WT** ~250 kg (~551 lbs)

While many are familiar with the domestic donkey, most are not aware of the wild relatives it shares. The African Wild Ass hails from Africa and is thought to be the wild species that domestic donkeys were derived from. This species is known to be relatively solitary with intermittent groups forming during certain seasons (perhaps due to resource availability). One study found that most interactions between members of a group were often aggressive in nature compared to more cooperative behavior.

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▼ INFO



PRZEWALSKI'S HORSE

Equidae species (*Equus ferus przewalskii*)



One-toed Perissodactyla

**WT** ~200-300 kg (~440-661 lbs)

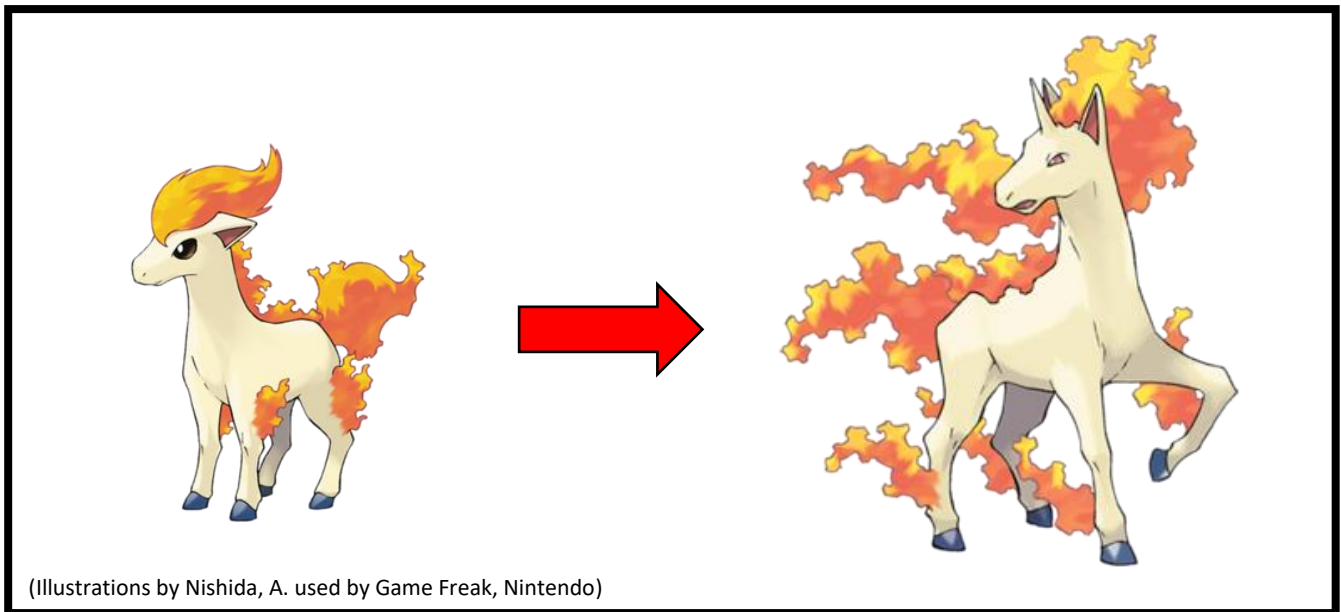
One of the lesser-known species of the Equidae family includes the Przewalski's Horse (also known as the Mongolian Wild Horse or Takhi) which nearly went extinct with only 13 individuals left in captivity. Through a captive breeding program this species was able to be reintroduced into the wild where some populations have been successful. Although brought back from the brink of extinction this species is still not out of the woods yet and needs our support! They have one toed hooves and are indigenous to semi-desert environments in Asia.

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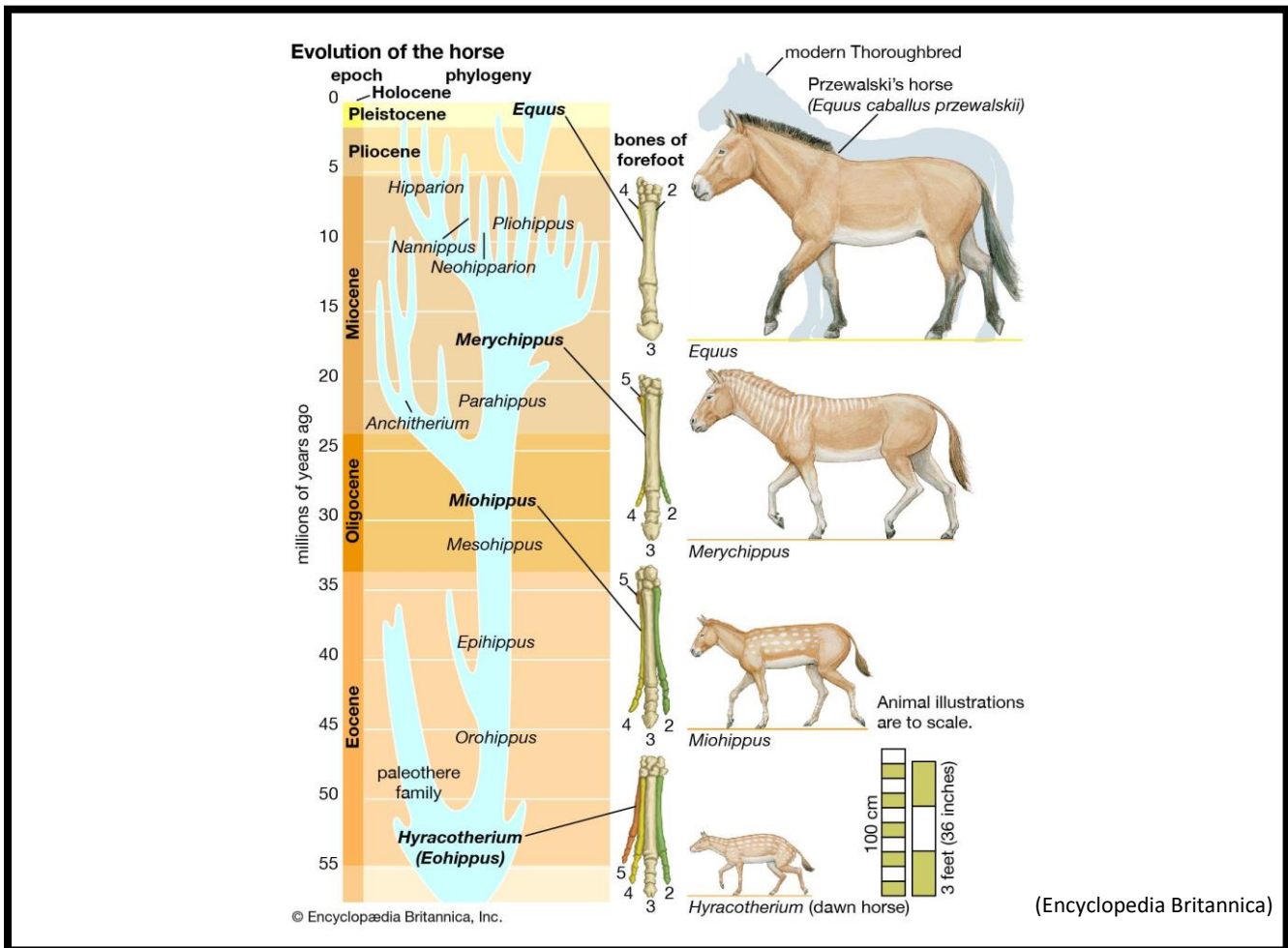
# Perissodactyla and Evolution

**Although many of us are familiar with the dynamics of Pokemon evolution, this is actually not true evolution but rather just an example of transformation. For instance, the Pokemon Ponyta “evolves” into Rapidash by leveling up in battle; this is not a true example of evolution though as evolution is the change of trait frequencies (allele frequencies) in a population of individuals over time- hence it will not act on ONE individual as we see in Pokemon.**



**An example of the proper use of the term evolution can be seen in Perissodactyla, specifically the group *Equus* (horses, zebras, donkeys). Hypothetically, a population of common ancestors of these odd-toed ungulates most likely had variation in toe sizes and weight distribution that they walked on (that’s right, Perissodactyla species walk on their tiptoes!). Those that had a larger middle toe that held most of the body weight could have been able to run better and escape predators and therefore had more offspring.**

**So over time this trait of a larger middle toe could have become more prevalent over generations and eventually the other toes appear to have receded since they weren't needed to run fast and efficiently. This is only a hypothesis for horse evolution and would have taken millions of years to occur (as seen in the diagram below).**



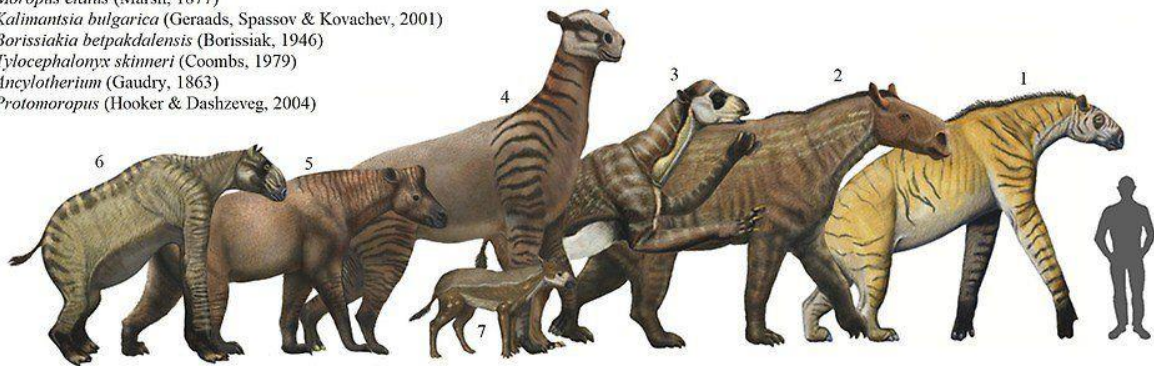
**Another fun and interesting fact regarding evolution is that Perissodactyla had some other groups within the order that displayed unique characteristics. This included Paraceratheriidae that had some of the largest land mammals in the history of life and Chalicotheriidae where some species in this family were hypothesized to be “facultative bipeds” that knuckle-walked!**



(Paraceratheriidae interpretation by Yu Chen)

### Chalicotheriidae (Mid Eocene - Early Pleistocene)

1. *Chalicotherium* (Kaup, 1833)
2. *Moropus elatus* (Marsh, 1877)
3. *Kalimantzia bulgarica* (Geraads, Spassov & Kovachev, 2001)
4. *Borissiakia belpakdalensis* (Borissiak, 1946)
5. *Tylocephalonix skinneri* (Coombs, 1979)
6. *Ancylotherium* (Gaudry, 1863)
7. *Protomoropus* (Hooker & Dashzeveg, 2004)



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