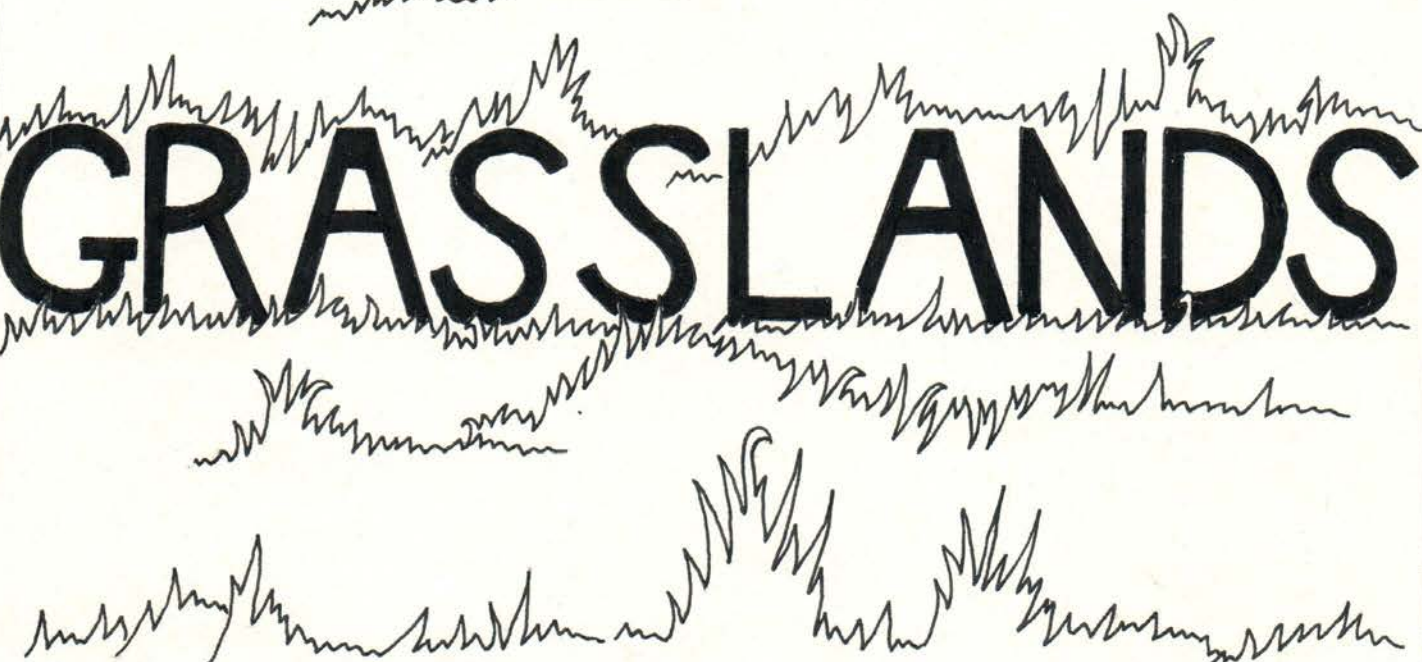


A teachers' guide to exploring:



GRASSLANDS

This pack aims to:

aid the pursuit of relevant topics,
provide information, ideas and resources.

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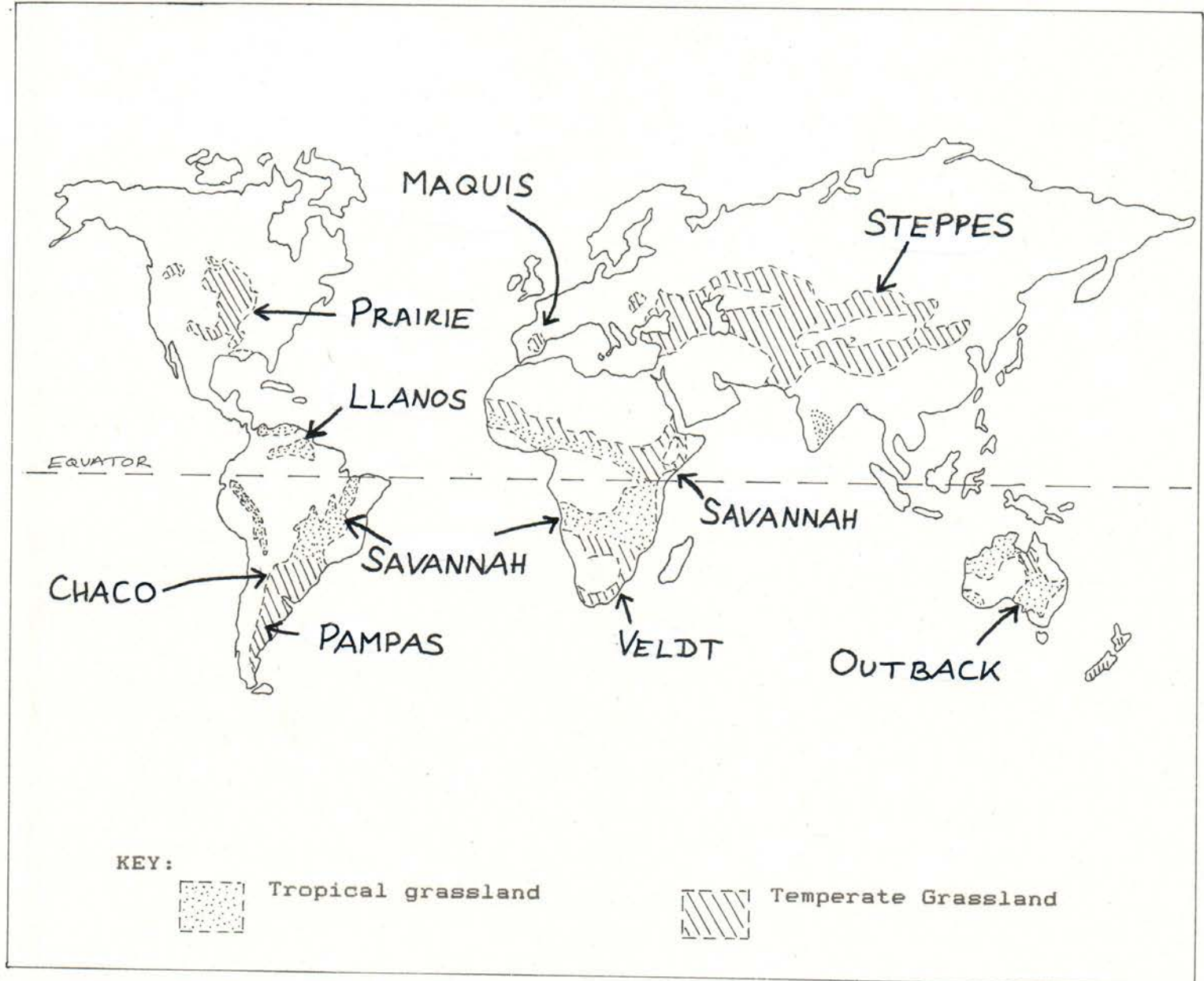
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WHERE ARE THE GRASSLANDS

Grasslands are found in areas where there is too little rain to support forests, but too much for desert conditions. There are basically two types of grasslands - temperate and tropical (or savannah), both have a short rainy season.

DISTRIBUTION OF GRASSLANDS ~



Temperate grasslands have hot summers and cold winters and include:
North American Prairies, Eurasian Steppes, Australian Lowlands, South American Pampas and the Patagonian Steppes.

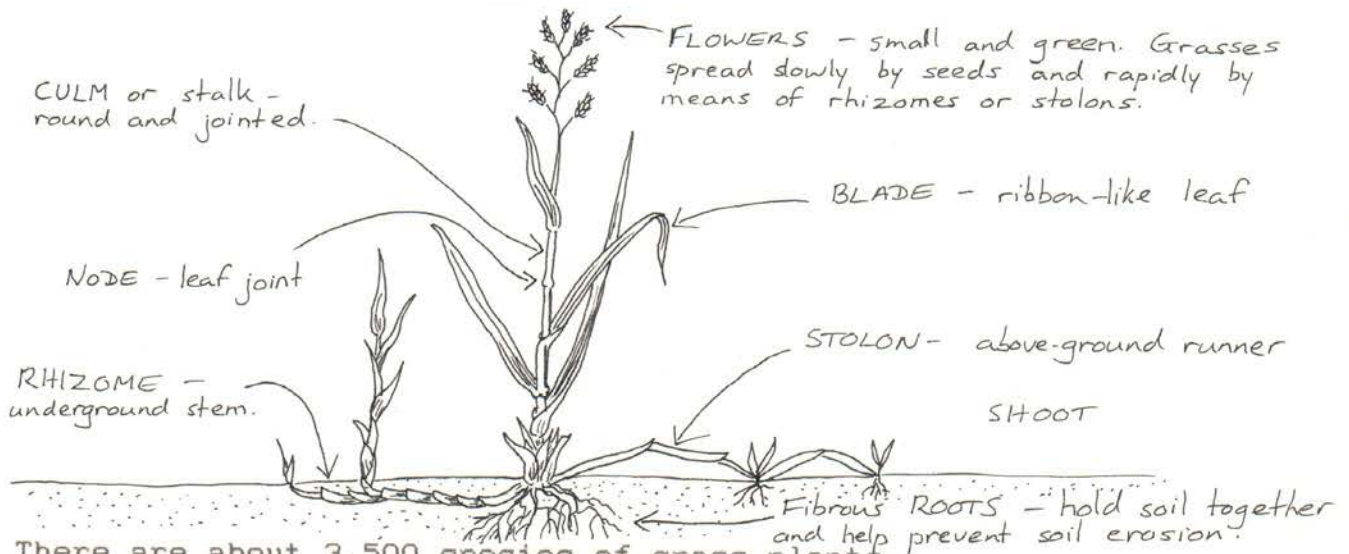
Tropical grasslands have a high temperature all year round and include:
Brazilian Chaco, Venezuelan Lanos, African Savannah, South African Veldt, Asian Savannah and Australian Savannah.

WHAT IS A GRASSLAND ?

A grassland is a transition zone between forest and desert, which is dominated by plants called grasses.

These are special plants which:

- * have prodigious root growth,
- * have a wider range than any other family of flowering plant,
- * recover quickly from grazing or cutting (usually),
- * will not grow in deep shade,
- * contain nutrients accessible and palatable to humans, domestic livestock and many wild animals,
- * are drought and fire tolerant.



There are about 3,500 species of grass plants.

The amount of rainfall determines the species growing:

Tall grasses grow where the rainfall is higher -

eg. Bluestem grass of the eastern prairies grows to 2.5m tall.

Medium sized grasses grow in areas with less rainfall -

eg. Rye Grass of European meadows grows up to 60cm tall.

Shorter grasses grow in more arid areas -

eg. Western Wheat Grass of the western prairies hugs the ground.

Some grasses:

Blue Grama Grass
(N. American Prairie)



Red Oat Grass
(African Savannah)



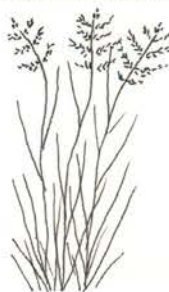
Cheat Grass
(Europe)



Dallis Grass
(S. America)



Spinifex
(Australia)



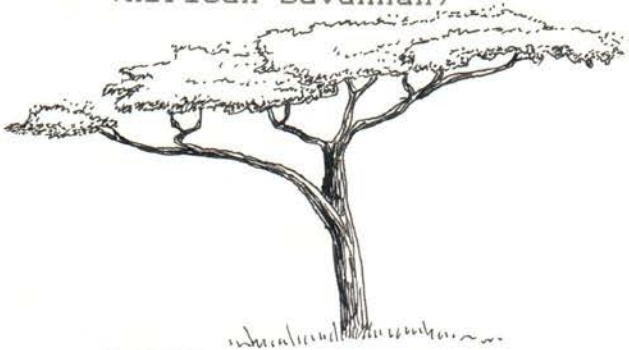
Crested Wheat Grass
(Russian Steppes)



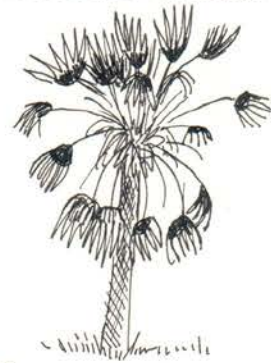
GRASSLAND PLANTS

So grasslands are dominated by grasses. But many other plants grow in these areas they are more widely spaced but just as important to the animals living there.

Acacia Tree
(African Savannah)



Fanleaf Palm
(S. American Chaco)



DAISY
(Eurasia)



Poppy
(Eurasia)



Grasslands form the basis of the world's agriculture - providing the majority of staple diets and food for domestic livestock for meat and other products.

KEY.

▨ = Arable land

▤ = Grazing land

Wheat & maize

The eastern plains of North America are the greatest wheat producing areas of the world.

Barley & oats

are hardy grasses. Oats can grow on poor soil; barley thrives in cool climates.

Rice

Staple food of more than half the world. Nearly 90% of all rice is grown in Asia.

Potatoes

Introduced to Europe from S. America. These tubers form a large part of Western European diets today.

Wheat - possibly the most widely grown grain in the world.

Cattle

Europe has a large dairy industry.

Cattle

The average American citizen eats 110kg of meat per year.

Cattle

Raised on the pampas mainly for the beef-burger industry. The plains also support a large wheat crop.

Millet

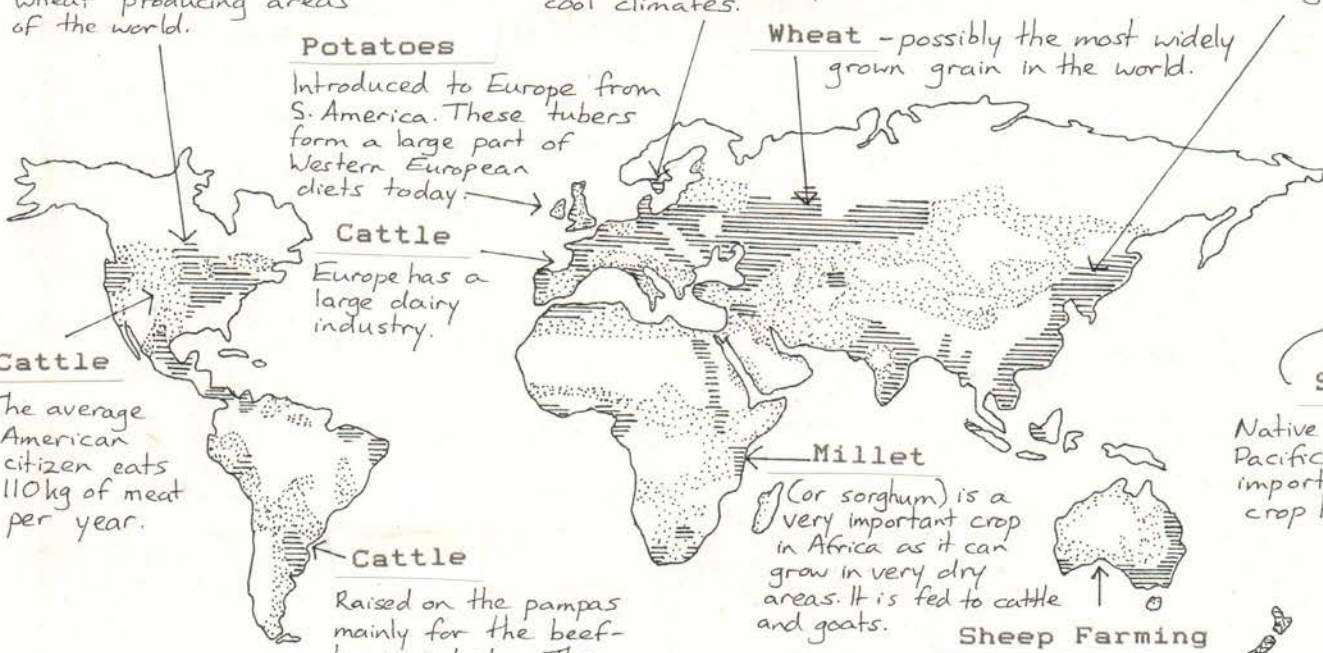
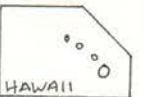
(Or sorghum) is a very important crop in Africa as it can grow in very dry areas. It is fed to cattle and goats.

Sheep Farming

the main agricultural industry in Australia and New Zealand. Raised for wool and meat.

Sugar Cane

Native to the South Pacific - it is an important grass crop here.



PRAIRIE ANIMALS

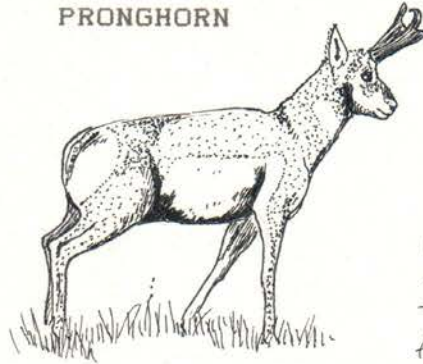
Prairies are found in N. America and range from short, hardy grasses on the high western plains to medium sized grasses of the central plains as the rainfall increases, to the tall grasslands of the well-watered eastern plains.

PRAIRIE FOWL



Spring mornings echo to the booming sounds of courting Prairie Chickens. Feed mainly on seed, also take buds and foliage.

PRONGHORN



North America's fastest animal, reaching speeds of 60mph in short bursts and can run at 30mph (50 km/h) for 3 to 4 miles. The white rump flashes a warning to other pronghorn.

PRAIRIE DOG



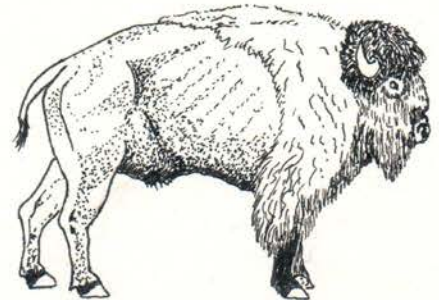
A burrowing squirrel, living in large family burrows called coteries. Population has decreased due to development of agriculture.

JACK RABBIT



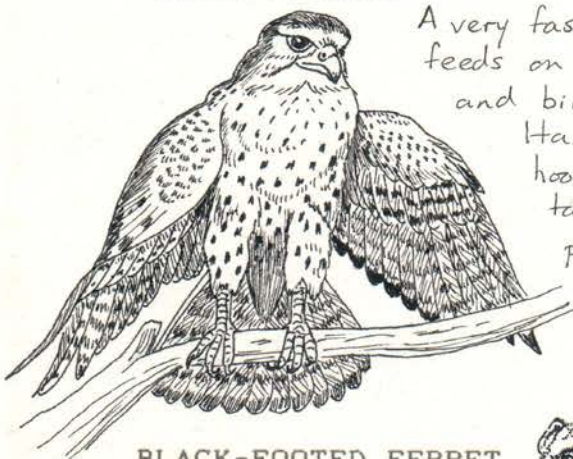
A type of hare. Rely on hearing and speed to escape from predators.

BISON



North America's largest animal. They live in large herds grazing on grass. Almost exterminated last century, they are now found only in refuges and parks.

PRAIRIE FALCON



A very fast, agile hunter; feeds on small mammals and birds. Has good eyesight, hooked beak and talons. Can take prey on the ground and in the air.

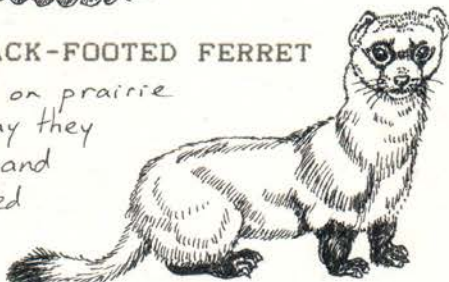
WHITE-FOOTED MOUSE



A gregarious rodent - stays with the family, often interbreeding. They provide food for most of the larger prairie predators. Nocturnal, eat seeds.

BLACK-FOOTED FERRET

Feeds only on prairie dogs. Today they are rare and endangered due to the declining prey population.



COYOTE



Smaller than a wolf, tends to hunt alone or in pairs, so can easily hide. Has a wide range of food - from insects to rodents and carrion. A swift runner - up to 40mph (60 km/hr).

PAMPAS ANIMALS

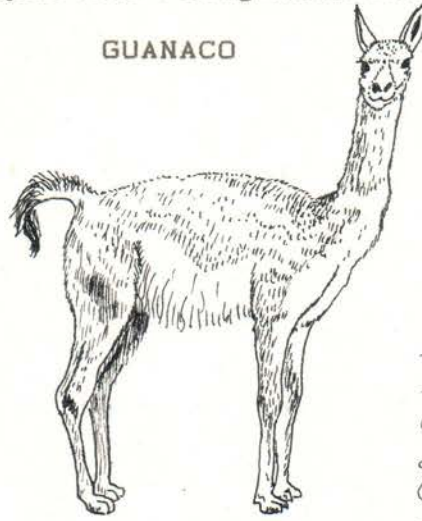
The grasslands of South America reach southward from the Amazon rainforests, east of the Andes to the southern reaches of Patagonia; and include Chaco, Pampas and Patagonian Steppe.

GIANT ARMADILLO



Covered in hard, horny plates on the back, head and limbs. Has 80 to 100 tiny, peg-like teeth. Nocturnal. Powerful front claws dig out insects and small vertebrates, and its underground burrows.

GUANACO



Live in herds, grazing on grass and browsing on shrubs; they do not need to drink. Related to the camel, two domestic forms are descended from it - the Llama (as a pack animal) and the Alpaca (bred for its long soft hair).

OVEN BIRD



Builds domed nests of mud & straw from which it obtains its name, as they look like traditional baking ovens.

BURROWING OWL



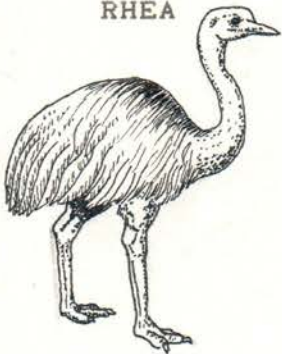
Nests in burrows, usually ones abandoned by the excavators, where it keeps cool during the day. Is also found on the North American Prairies.

VISCACHA



Lives in tunnels and burrows. The grass around tunnel entrances is stripped to help see approaching predators.

RHEA



Largest animal on the Pampas, standing 5 ft (1.5 m) tall. Wings are useless for flight, but strong, long legs enable it to easily outrun the fastest horse.

MANED WOLF



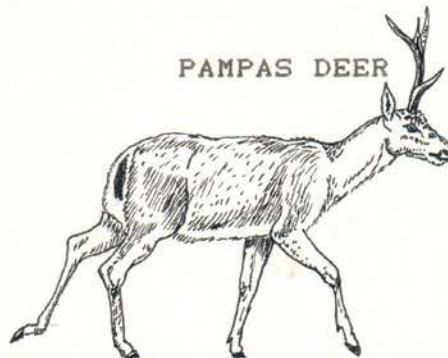
Related more to foxes, it is nocturnal and wary. Has stilt-like legs which enable it to see over grass and run down its quarry of small mammals and reptiles. Will also eat seasonally available fruits.

GIANT ANTEATER



No teeth, long narrow tongue with tiny backward pointing spines & sticky saliva to aid in feeding on ants & termites. Walk on sides of front feet to protect the large claws.

PAMPAS DEER

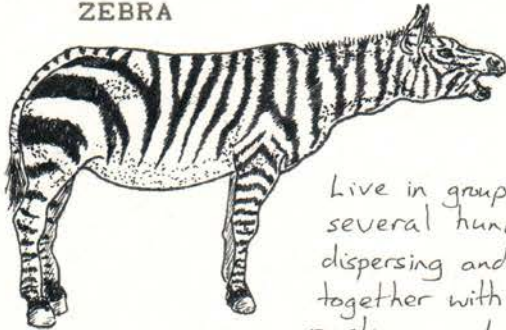


Glands on the rear hooves of the male emit an odour which can be detected more than a mile (1.5 km) away!

AFRICAN SAVANNAH ANIMALS

African savannah ranges from plains of just grasses to those with trees and shrubs. The grass in the wettest parts is lush and can be up to 3m high - Elephant Grass. The savannah can also be very arid, here the grasses are very short; these areas are known as Sudan Savannah.

ZEBRA



Live in groups of two to several hundred, dispersing and coming together with changes in pasture and water

availability. The stripes disrupt the body outline, making it difficult for predators to single out an individual.

GERENUK



Unique among antelopes, in its ability to manoeuvre on its hind legs allowing it to browse at heights out of reach to many ungulates.

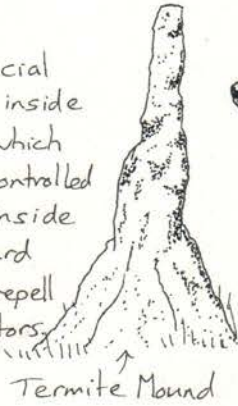
Each species is adapted to eat slightly different food - allowing total use of grasslands with no competition.

TERMITE



Male - King termite

Live in social colonies inside mounds which have a controlled 'climate' inside and is hard enough to repel most predators.



Termite Mound

RATEL



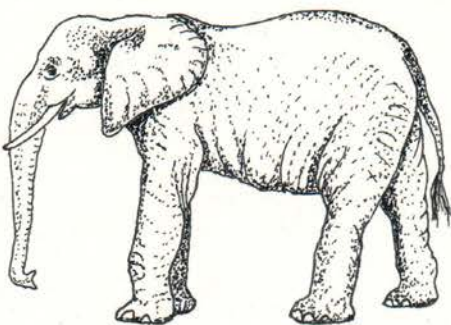
Or Honey Badger has strong claws for digging its burrows and to help obtain its food of small animals, roots & its favorite - honey.

GIRAFFE Adapted to browse on high foliage out of reach for other ungulates.



Males feed at full stretch, females with heads bent, so reducing competition for food.

ELEPHANT



Largest living land animal. Feed on grasses, shrubs, roots & bark using the flexible trunk and the tusks.

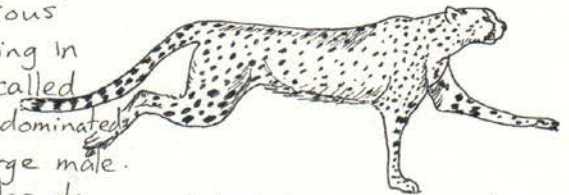
LION



The only truly gregarious cat, living in groups called prides dominated by the large male.

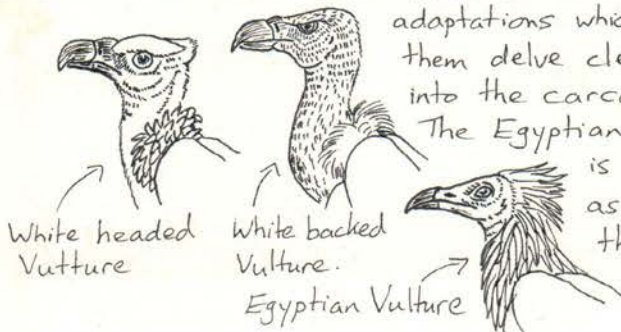
The females do most of the hunting - stalk the prey in group formation aided by their dry-grass coloured fur for camouflage

CHEETAH



Fastest land animal, its long legs and flexible spine allowing speeds of 60 mph (96 km/h) in short bursts of 30m (100ft) or so.

VULTURE Naked heads & necks are adaptations which let them delve cleanly into the carcass.



White headed Vulture

White backed Vulture.

Egyptian Vulture

The Egyptian vulture is feathered as it eats scraps thrown aside.

HUNTING DOG

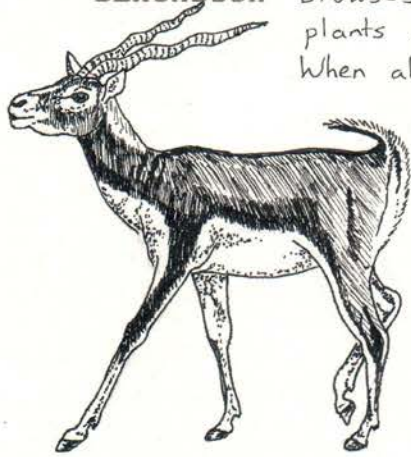


Live in social groups similar to lions but with the sex roles reversed. The pack is dominated by a female, and the males do most of the cooperative hunting.

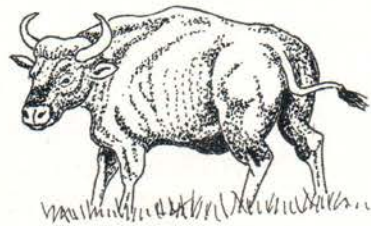
ASIAN SAVANNAH ANIMALS

Much of the Asian grasslands have a monsoon climate with a hot, dry "summer", a wet season and a cool, dry "winter". The Deccan Plateau in central India is an open plain with patches of scrubland and deciduous forest.

BLACKBUCK Browses on herbs, woody plants and grasses. When alarmed the white tail shows as a sign of danger and they move by stotting or pronking (bounce along stiff legged with all four legs together)



GAUR



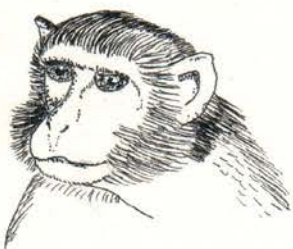
Largest of the wild cattle bulls can be over 1.8m (6ft) high at the shoulder. Feed on grass & bamboo shoots.

TIGER



Found in tall grasses and scrubland. They are solitary-stalk-and-ambush hunters. Its typical prey are medium sized deer and wild pigs. Stripes help to camouflage it in the grasses.

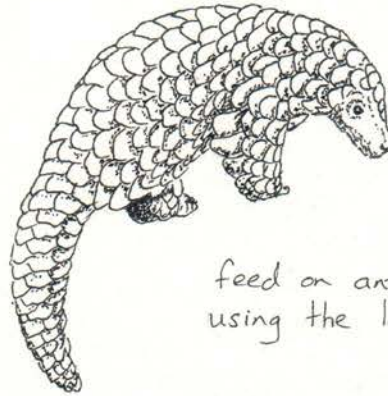
RHESUS MACAQUE



Possess cheek pouches, into which they can quickly cram food when danger looms.

Live on forest edges, foraging in the grasslands for fruit, young leaves, crops & small animals.

PANGOLIN Covered in overlapping, horny body scales. When curled up tightly in a ball the Pangolin is safe from all but the larger cats and hyenas. Mostly nocturnal; feed on ants and termites using the long, sticky tongue.



HOOPOE



Feeds on invertebrates by probing the ground with its long bill. Nests in holes, laying the eggs on the bare floor.

COMMON JACKAL



Live in arid, short grassland. They are opportunistic foragers - eating fruits, invertebrates, frogs, birds, small mammals & carrion. Hunt cooperatively for larger prey.

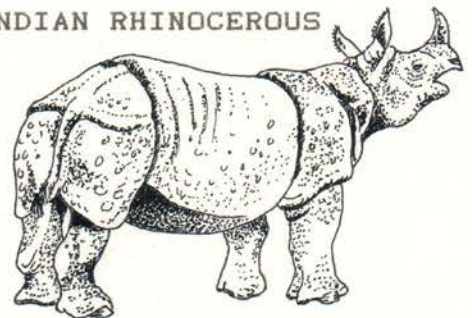
CATTLE EGRET



Very adaptable, has taken to feeding on insects around domestic livestock. Its range has expanded considerably, along with that of cattle, since the late 1930s.

INDIAN RHINOCEROS

Covered in folds of tough skin. Live on the Indian floodplains, mainly grazing on grass but taking some fruit too.

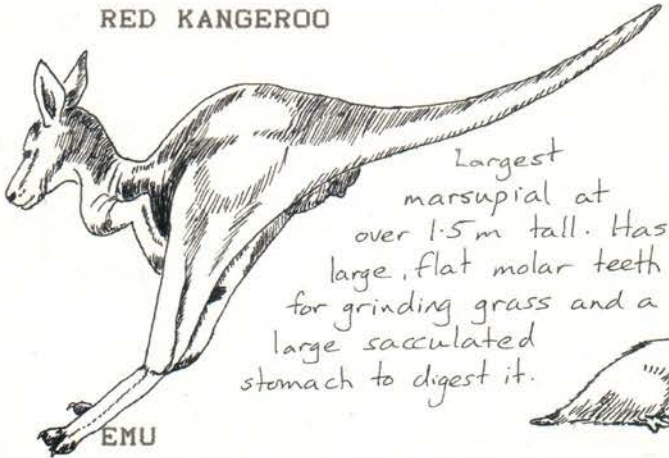


Endangered - almost extinct due to hunting for its horn.

AUSTRALIAN BUSH ANIMALS

Most of Australia is desert, but there are large areas of bush - grasslands with scattered shrubs and trees.

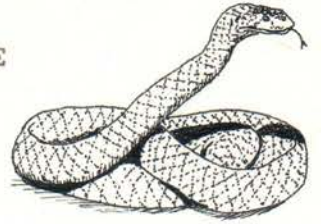
RED KANGEROO



Largest marsupial at over 1.5 m tall. Has large, flat molar teeth for grinding grass and a large sacculated stomach to digest it.

MULGA SNAKE

A highly venomous, front-fanged snake. Australia has over 70 species of these snakes, more than any other continent.

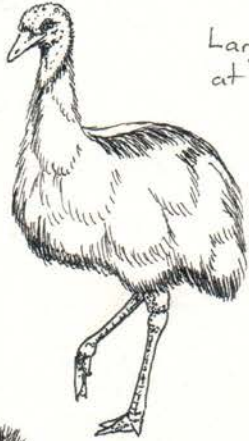


MARSUPIAL MOLE

Only Australian mammal specialized for a burrowing life. Lives in sandy soils such as Spinifex grassland. Has large front claws, protective, horny head shield & no functional eyes.



EMU



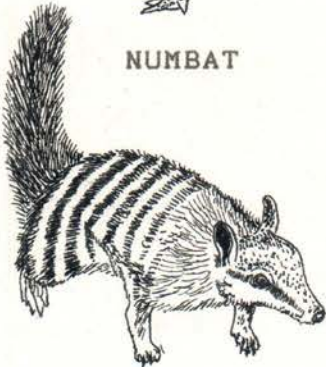
Largest Australian bird at 1.9 m in height. Flightless, but a fast runner. The male is left to incubate the 6 to 12 eggs and to rear the chicks.

DINGO



Descended from the wolf, they have lived unchanged in Australia for at least 8,000 years when Aboriginies brought them there. Feed on a variety of food from insects and small mammals, to larger mammals and carrion.

NUMBAT



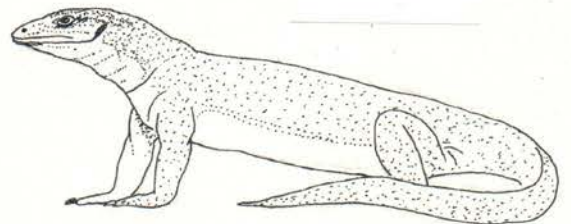
Feeds only termites using the long thin tongue which darts in and out. The termites are swallowed without being chewed.

ECHIDNA



This monotreme feeds on ants & termites, using the tiny mouth at the tip of the snout. Adults have few predators due to protective spines & ability to dig quickly.

GOANNA



These monitor lizards are widespread in Australia. Capable of running very fast and able to climb well despite its large size (up to 1.3 m long).

RED-NECKED WALLABY



Smaller than kangeroos. Adapted to graze on open plains. Large hind legs and long, balancing tail aid in fast hopping. Young are called Joeys.

SULPHUR-CRESTED COCKATOO



Found in lowland forest and savannah in flocks of over a hundred. These noisy, conspicuous birds feed on seeds, nuts, berries, flowers, roots, & insects. Their strong beake enable them to open nut & seed shells.

EURASIAN STEPPE ANIMALS

The heartlands of this large continent is an almost treeless corridor of grass, reaching from eastern Europe to the Orient.

BOBAC MARMOT



About the size of a small cat, these social rodents feed on grasses, herbs and invertebrates.

Whenever danger is present, the marmots utter warning cries which can be heard $\frac{1}{3}$ mile (500m) away.

LOCUST



Feeds on vegetation. When in large migratory swarms they can invade and devastate large areas. Hop using long hind legs. Wings used for migrating.

GREAT BUSTARD

One of the worlds largest birds at over 1m tall with a 2.4 m wingspan. Needs a long running start before it can take off. Feeds on leaves, shoots, flowers, seeds & insects.

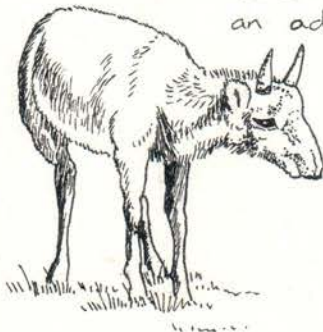


DEMOISELLE CRANE

Perform elaborate courtship dances in April. Lay two eggs in a shallow pit on the ground. Eat seeds, vegetation & some insects.



SAIGA The strange nose may be an adaptation for moistening and warming inhaled, dusty air. Hunted almost to extinction - today they are stringently protected.



STEPPE EAGLE



Found on the drier plains. This eagle nests on the ground, laying two eggs in April/May. Feeds on small rodents, chicks and carrion.

COMMON HAMSTER

Once widespread, the introduction of modern agricultural methods caused a decline in its numbers. Its front paws are very dextrous, making it easy to put food into its cheek pouches.



CORSAC FOX

A large fox with thick winter fur. Has no fixed home site, uses another animals burrows as a temporary den. Opportunistic feeder taking mainly rodents, but will also eat birds, reptiles frog and large insects.



EUROPEAN WHIP SNAKE

Can reach 3m (10ft) in length. Feeds on lizards, small snakes, rats, mice, birds & eggs. Harmless, but can be quite aggressive - racing about & biting if disturbed.



BRITISH GRASSLAND

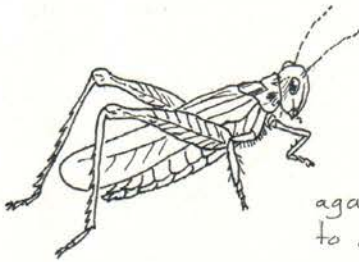
Most of the grasslands of this country have been made by man over the years since the Iron Age, by felling the forests or draining the marshes. Chalk downs are good examples as they are only maintained by constant grazing of sheep or rabbits - take these away and the land reverts to scrubland and eventually to forest if left long enough.

Very few of these uncultivated grasslands exist in Britain today. The modern versions of meadows are probably the motorway verges which have never been sprayed with chemicals or cut. Meadows contain a vast variety of plant and animal life, so motorway verges are important habitats for our wildlife.

Plants found in meadows include:

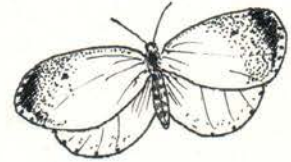
Cowslips, Fritillary, Poppies, Dandelions, Cornflowers & Orchids.

GRASSHOPPER The male produces a series of 6 to 10 half-second chirps in 12 seconds, by rubbing the back legs with rows of tiny pegs against the stout wing veins, to attract a female.



ORANGE-TIP BUTTERFLY

Found in meadows in springtime. Males have distinctive orange patches, females are white, both have mottled underwings.

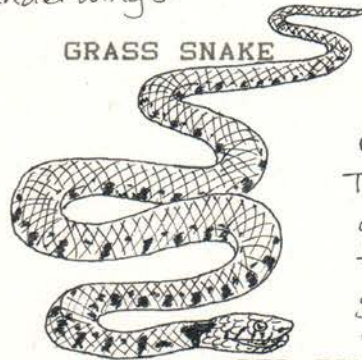


HARVEST MOUSE

One of our smallest mammals (weighs less than a 2p coin). Has a unique prehensile tail for gripping grass stalks. Makes a round grass nest high up among grasses & grain crops.

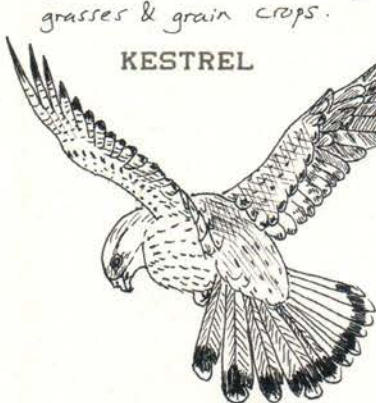


GRASS SNAKE



At 120 cm long - Britain's largest snake. Olive or grey-green. This harmless snake can be found in field borders, wet grasslands, ponds and ditches.

KESTREL



Britain's most common bird of prey; favouring open country. Hovers in the air and drops down, pouncing and gripping the prey with its talons.

RED FOX



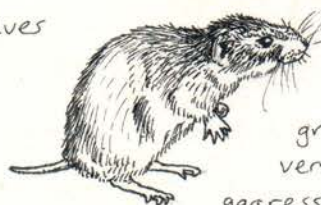
Active mainly by night, foraging for any available food such as rodents, insects, berries and carrion. At least 50,000 are killed each year in Britain as farm vermin or for 'sport'.

GREY PARTRIDGE



Adults feed on seeds, leaves & shoots; young eat insects. A popular game bird, its numbers have declined due to the use of insecticides decreasing the food supply.

FIELD VOLE



Feed mainly on grasses. Are very noisy & aggressive rodents. An important food source to many predators.

SKYLARK



Rises almost vertically in a hovering flight, then sinks to the ground singing its clear warbling song.

GRASSLAND PEOPLE

Many ancient civilisations have depended on grasslands for thousands of years. Today, most of them have taken up a more "modern" lifestyle incorporating Western European cultures.

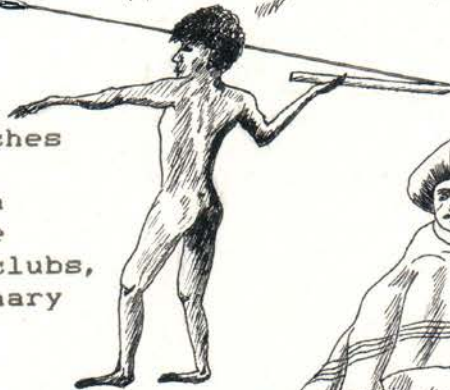
MONGOLS ~

Asiatic people united in the early 13th century by Genghis Khan. Mongols are traditionally nomadic, living in tents and moving with the herds. They are excellent horsemen. A nation of stock-raisers whose communist government has settled most of them in vast ranches since the 1950s. Today their ranch cooperatives have shops, schools, clubs, medical and veterinary facilities.



AMERICAN PLAINS INDIANS ~

or Sioux (a confederation of tribes) have lived in North America for some 30,000 years, having arrived from Asia when it was attached to Alaska. These people lived in tents of buffalo hide - teepees. They relied on the bison for food, clothing, housing, arrows etc. Today only some 100,000 live in America, mostly on reservations where there is 30% unemployment.



ABORIGINES ~

Hunters and gatherers who inhabited Australia thousands of years before European settlers. Today about 136,000 live in Australia, a small proportion of which still maintain their nomadic way of life - living in bark huts called mia-mias, are threatened by encroachments on their lands. They have an ancient culture with a rich and elaborate mythology, including accounts of the Creation during the primeval dawn (Dream Time). Paintings of which are found in religious places such as Ayres Rock.

GAUCHOS ~

Nomadic cattleherders of the S. American Pampas in the 18th and 19th centuries. Today they drive jeeps rather than ride horses, and those who still ride do so on western saddles rather than the traditional sheep-skin ones. They are some of the greatest meat eaters in the World, but recently vegetables have entered their diets.

Today, Gauchos have mostly disappeared due to the ploughing of the Pampas and the introduction of cattle ranching.

MASAI ~

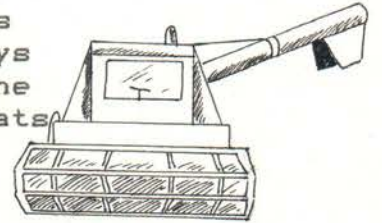
Nomadic people of Kenya and Tanzania, Africa - whose economic system is based on the number of cattle a person has. Milk and blood from live cattle form a large part of their diet. They regard the Savannah wildlife as cattle, so protect it as it is an indication of their wealth.

THREATENED GRASSLAND

We have increased the area of the Worlds' grasslands - mainly by destroying forests and introducing farm crops. We have also destroyed areas of natural grasslands by poor farming practices including overgrazing and the ploughing up of complex grassland ecosystems.

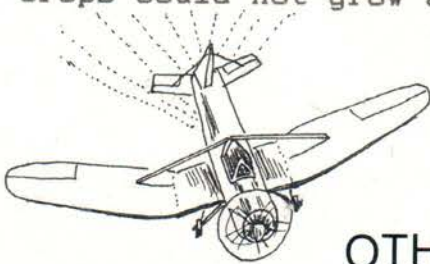
MONOCULTURES ~

Increased demands on land for food production has resulted in intensification of agriculture. Today's croplands often consist of huge fields of just one type of crop. Such monocultures reduce the habitats diversity and are "wildlife deserts".



SOIL EROSION ~

Soil is a crucial life support system - the bulk of all food production depends on it. If soil and vegetation are not in balance, erosion accelerates with disastrous consequences. Soil erosion is caused by poor farming practices. The 1930s Dust Bowl of USA was caused by farmers planting the same crops year after year without replenishing the soils nutrients. Consequently the crops could not grow and the dry soil blew away in the wind.



CHEMICALS ~

Chemicals are used to eradicate pests. Some pesticides (eg. some herbicides) are species specific and tend to do little ecological damage. Others not only kill the target pest (usually an insect) but many other animals as well.

OTHER THREATS ~

- *Poaching and hunting has caused the decline in numbers of many grassland animals. African Savannah animals are especially at risk today eg. Elephant (for ivory) Rhinoceros (for the horn).
- *Expansion of cities - grasslands occur in flat areas where it is easy to build houses, factories etc. Some grassland habitats are decreasing as urban sprawl continues to grow.

ENDANGERED ANIMALS ~

Loss of habitat, hunting, systematic killing are just some of the reasons for declining populations of grassland animals such as:

AMERICAN BISON (s)
PRAIRIE DOG (h)
BLACKFOOTED FERRET (d)
PRAIRIE FALCON (d)
VICUNA (s)
PAMPAS DEER (l)
JAGUAR (p)
LEOPARD (p)
TIGER (p, l)
MANED WOLF (h, l)

PRZEWALSKIS' HORSE (l)
ASIAN WILD ASS (l)
GREAT BUSTARD (l)
STEPPE EAGLE (d, l)
NAILTAIL WALLABY (h)
PRAIRIE CHICKEN (l)
BURROWING OWL (s, l)
ASIATIC CHEETAH (l, p)
AFRICAN WILD DOG (h)
etc.

KEY. (p) = poached
(h) = hunted as a crop or livestock pest
(s) = shot for sport etc.
(l) = loss of habitat to agriculture etc.
(d) = decline due to loss of prey

CONSERVATION

WORLDWIDE

Much of the Worlds' grasslands has been changed by the activities of humans. However their importance to wildlife is noted and many areas have been set aside for the conservation of the life found there.

The first protected area was established some 100 years ago - Yellowstone Park in N.America. Today there are many more worldwide (161 in Africa alone), and yet still more are urgently required.

Some grassland reserves are:

AFRICA - Serengeti National Park, Ngorongoro Conservation Area, Etosha National Park, Masai Amboseli Game Reserve.

ASIA - Gir National Park, Kanha National Park, Kazirange Wildlife Sanctuary, Royal Chitwan National Park.

AUSTRALIA - Wyperfeld National Park, Ayers Rock-Mount Olga National Park.

N. AMERICA - National Bison Range(Montana), Fort Niobrara National Wildlife Refuge, Wichita Mountains National Refuge.

S. AMERICA - Pampas Galeras National Reserve, Kaietur Falls National Park, Purace National Park.

Poaching remains a big problem in some places - organised gangs with sophisticated equipment are often no match for the small budgets and personnel of wildlife departments.

International agreements (eg. the Convention of International Trade in Endangered Species - CITES) prohibit trade in some species and monitor trade in others. Such agreements need careful policing and constant reviewing.

IN BRITAIN

Some species of British grassland animals and plants are threatened to such an extent that they require the protection of the law.

Did you know that it is illegal to.....

*kill, injure, take or sell "specially protected" animals, ie. otters, badgers, field crickets, swallowtail butterflies, adders, grass snakes, common lizard etc.

*disturb specially protected animals in their places of shelter.

*take eggs from, capture or kill all wild birds (with the exception of pest and game species - a licence is needed).

*uproot, pick or sell specially protected plants. In fact, it is illegal to uproot ANY wild plant.

The Nature Conservancy Council has labelled some grassland areas as Sites of Special Scientific Interest (SSSI), which are protected by law from damage by the owner or general public as they hold plants and animals not found in many other areas.

For more information read "Wildlife, The Law And You" which is a leaflet published by the NCC.

Useful Locations

The Zoo Centre is located next to Penguin Pool (7), between Burger Bar (4) and Waterfowl aviary (25)

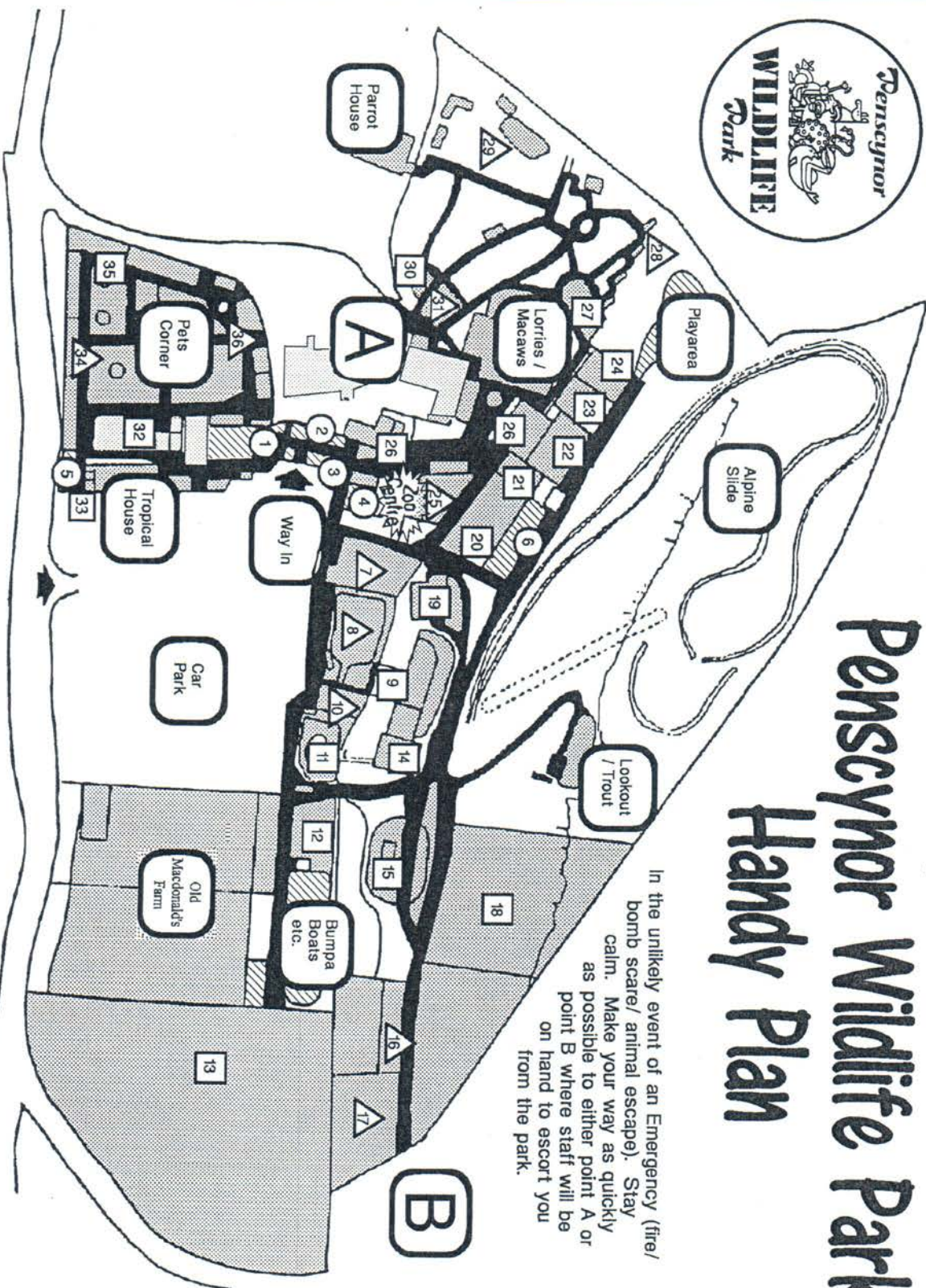
1. Main Office
First Aid Point
Gift shop
Copper Kettle Coffee Shop
2. Toilets
3. Toy Shop
Ice-Creams
4. Burger Bar
5. Book shop / Sweet shop
6. Picnic Area

Enclosure key

- Mammals
- Birds



7. Penguins
Pelican
8. Waterfowl
Trout
Squirrel Monkeys
9. Chimpanzees
10. Scarlet Ibis
White Fronted Wood-Duck
11. Empty At Present
12. Meerkats
13. Shetland Pony
Guaraco
Deer
14. Black & White
Ruffed Lemurs



Penscynor Wildlife Park Handy Plan

In the unlikely event of an Emergency (fire/ bomb scare/ animal escape). Stay calm. Make your way as quickly as possible to either point A or point B where staff will be on hand to escort you from the park.

15. Emperor Tamarin Island
Trout
16. Rheas
17. African Crowned Crane
18. Wallaby's
Muntjac
19. Marmoset House
20. Prairie Dogs
21. Pygmy Goats
22. Empty at present.
23. Lar Gibbons
24. Ring-Tailed Lemurs
25. Sacred Ibis
26. Sooty Mangabey's
27. Asian Short-Clawed Otters
28. Hillside Parrot Avaries
29. Flamingos
30. Porcupines
Mongoose's
31. African Fish-Eagle
Colobus
32. Eastern Black and White
Colobus
33. Dourocouli Monkeys
34. Mixed Avaries
35. Farm Animals
Rabbits
Guinea Pigs
Polecats
36. Mixed Avaries

GRASSLAND ACTIVITIES

LOOK at the different ways of feeding in grassland animals - herbivores, carnivores, insectivores, omnivores.

MAKE a chart to compare the adaptations :

ANIMAL	FOOD	SHAPE OF TEETH	TIME SPENT FEEDING	OTHER ADAPTATIONS + NOTES

MAKE an African Savannah frieze, draw & paint lots of animals and stick them on.

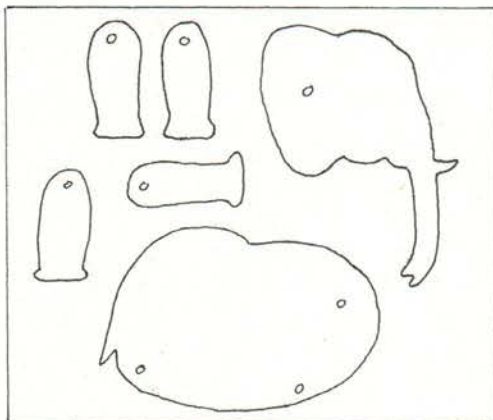
LOOK at camouflage of grassland animals - shapes, colours, patterns etc.

LOOK at eyes - who has them on the side of the head, and who has them on the front? Why?

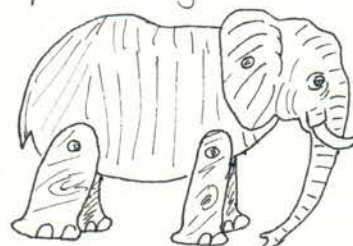
LOOK at grassland animal enclosures at the Park. Design your own enclosure, bearing in mind the needs of the animal and the keepers needs (safety first). Create a giraffe enclosure - bear in mind that they get cold quickly in winter. Why do you think Penscynor does not have giraffes?

MAKE animal masks
African tribal masks.

MAKE a clip together elephant -



1. Cut out head, legs & body from thin card.
2. Make small holes to put paper fasteners through.
3. Paint elephant & let it dry.
4. Fasten the parts together.

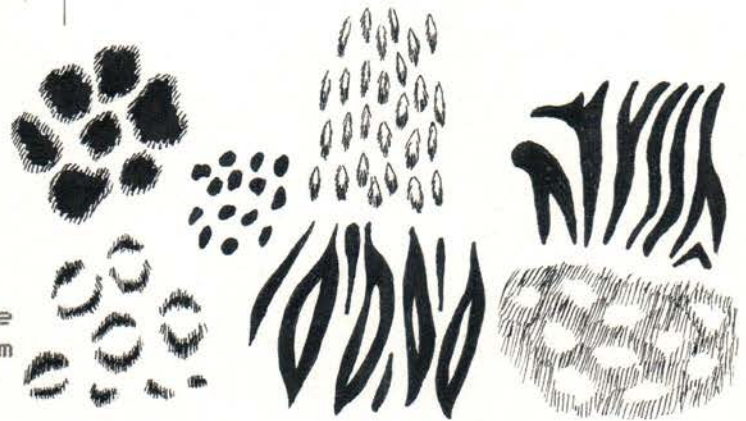


You can make other clip together animals in this way.

LOOK at grassland animals which rely on speed, eg. wallaby, guanaco, deer etc. what do they in common, are there any differences?

LOOK at the adaptations of prairie dogs (remember they are squirrels).

MAKE a grassland food-chain mobile.



USEFUL INFORMATION

BOOKS

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- ATTENBOROUGH D. (1979) Life On Earth. Collins/BBC.
- ATTENBOROUGH D. (1984) The Living Planet. Collins/BBC.
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- HUXLEY J. (1974) The Atlas Of World Wildlife. Mitchell Beazley.
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- MITCHELL J. (1977) The World Of Animals. Mitchell Beazley.
- MYERS N. (1978) The Gaia Atlas Of Planet Management. Pan.
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- YOUNG G. (1985) The Sunday Times Countryside Companion. Country Life.

GLOSSARY.

- Arachnid - invertebrates such as spiders, scorpions, ticks and mites.
- Carrion - any dead animal left by its original predator.
- Invertebrate - animals which do not possess a backbone eg, insects, arachnids, worms etc.
- Monoculture - a large area of land covered with a single crop species.
- Monotreme - egg-laying mammal eg. platypus and echidnas.
- Ungulate - mammal with hooves.

SOCIETIES.

- FAUNA & FLORA PRESERVATION SOCIETY - 78-83 North Street, Brighton, East Sussex, BN1 1ZA.
- ROYAL SOCIETY FOR THE PROTECTION OF BIRDS (RSPB) The Lodge, Sandy, Bedfordshire.
- WATCH (junior membership of the Royal Society for Nature Conservation), 22 The Green, Nettleham. Lincoln, LN2 2NR.
- WORLD WIDE FUND FOR NATURE U.K. 11-13 Ockford Road, Godalming, Surrey, GU7 1QU.