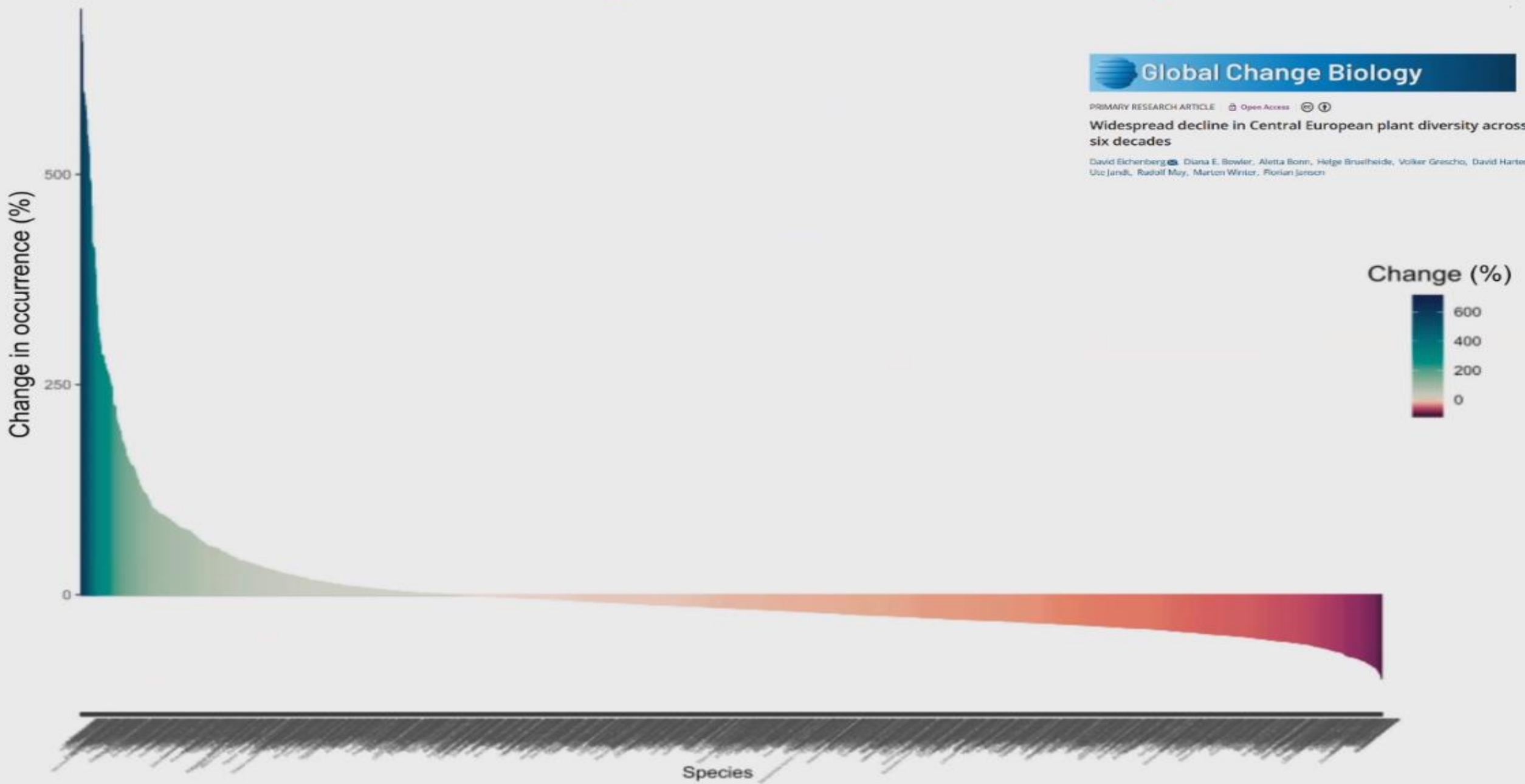


# Byrådets møde med boligorganisatio nerne 2024

Naturforvalter Anders Adams



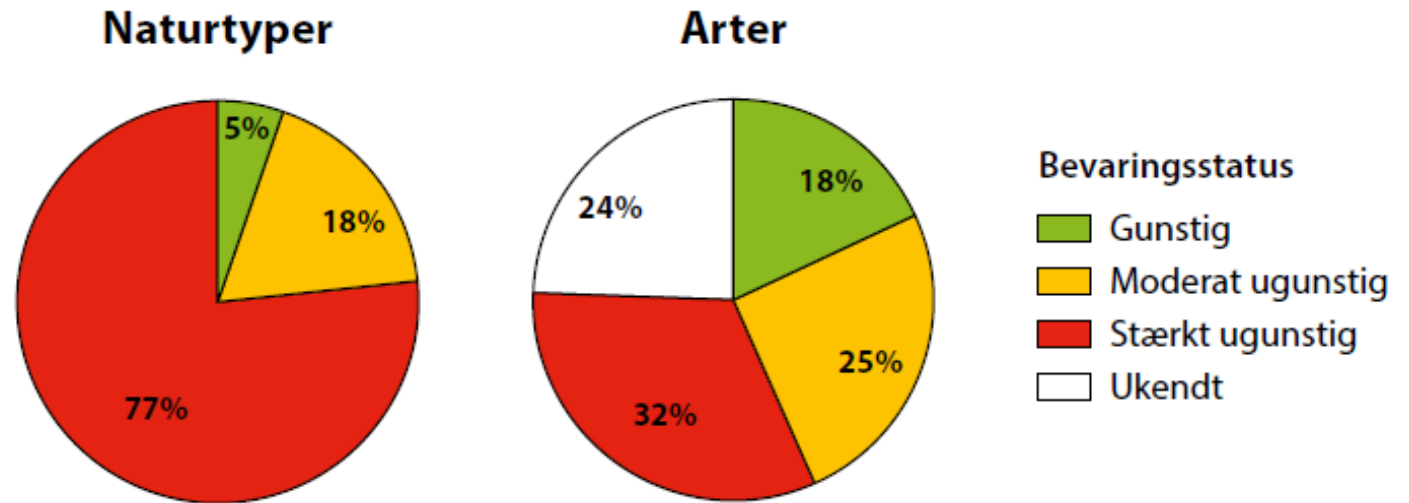
# Floraforandring 1960-2000 i Tyskland



# BEVARINGSSTATUS FOR NATURTYPER OG ARTER – 2019

(DCE – Aarhus universitet 2020)

**Figur 1.3.** Den procentvise fordeling af bevaringsstatus for de vurderede 60 naturtyper og 84 arter omfattet af habitatdirektivet.



Naturen mangler plads!



# Nordlige Eurasien

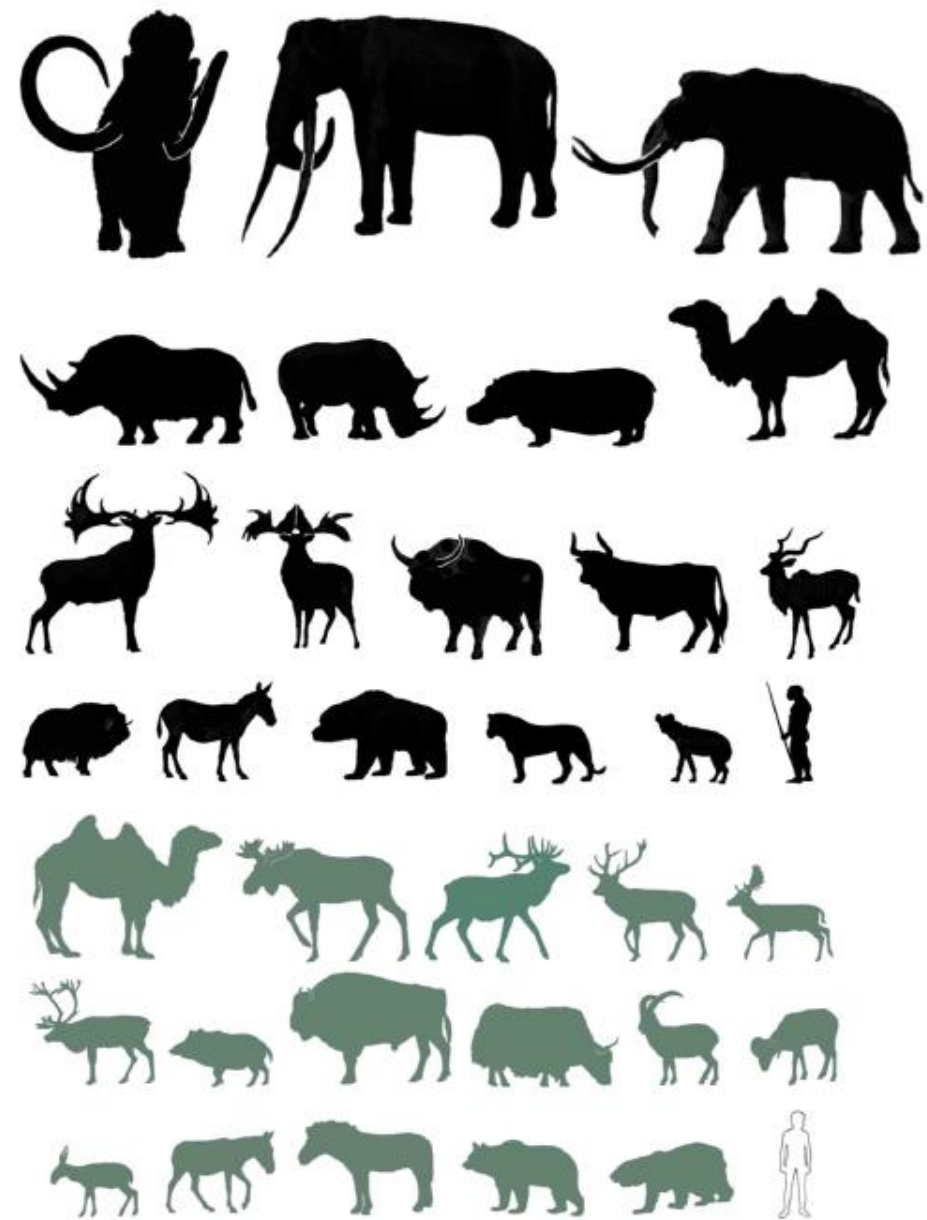


Figure 1. Northern Eurasia (Palearctic Ecoregion). Selected extinct species (black): *Mammuthus primigenius*<sup>H</sup>, *Palaeoloxodon antiquus*, *Palaeoloxodon naumanni*, *Coelodonta antiquitatis*, *Stephanorhinus hemitoechus*, *Hippopotamus amphibius*<sup>\*</sup>, *Camelus knoblochi*, *Megaloceros giganteus*<sup>H</sup>, *Sinomegaceros yabei*, *Bison priscus*, *Bos primigenius*<sup>H</sup>, *Spiroceros kiakhtensis*, *Ovibos moschatius*<sup>\*</sup>, *Equus hydruntinus*<sup>H</sup>, *Ursus spelaeus*, *Panthera spelaea*, *Crocota crocuta*<sup>\*</sup>, *Homo neanderthalensis*. Selected living species: *Camelus bactrianus*, *Alces alces*, *Ursus elaphus*, *Dama dama*, *Rangifer tarandus*, *Sus scrofa*, *Bison bonasus*, *Bos mutus*, *Capra ibex*, *Ovis canadensis*, *Saiga tatarica*, *Equus hemionus*, *Equus ferus*, *Ursus arctos*, *Ursus maritimus*. Outline *Homo sapiens* gives approximate scale. <sup>\*</sup>Extirpated in Last Glacial, <sup>H</sup>extirpated in Holocene, <sup>\*</sup>extinct in Holocene. This figure is available in colour online at [wileyonlinelibrary.com/journal/gj](http://wileyonlinelibrary.com/journal/gj)

# Nordamerika

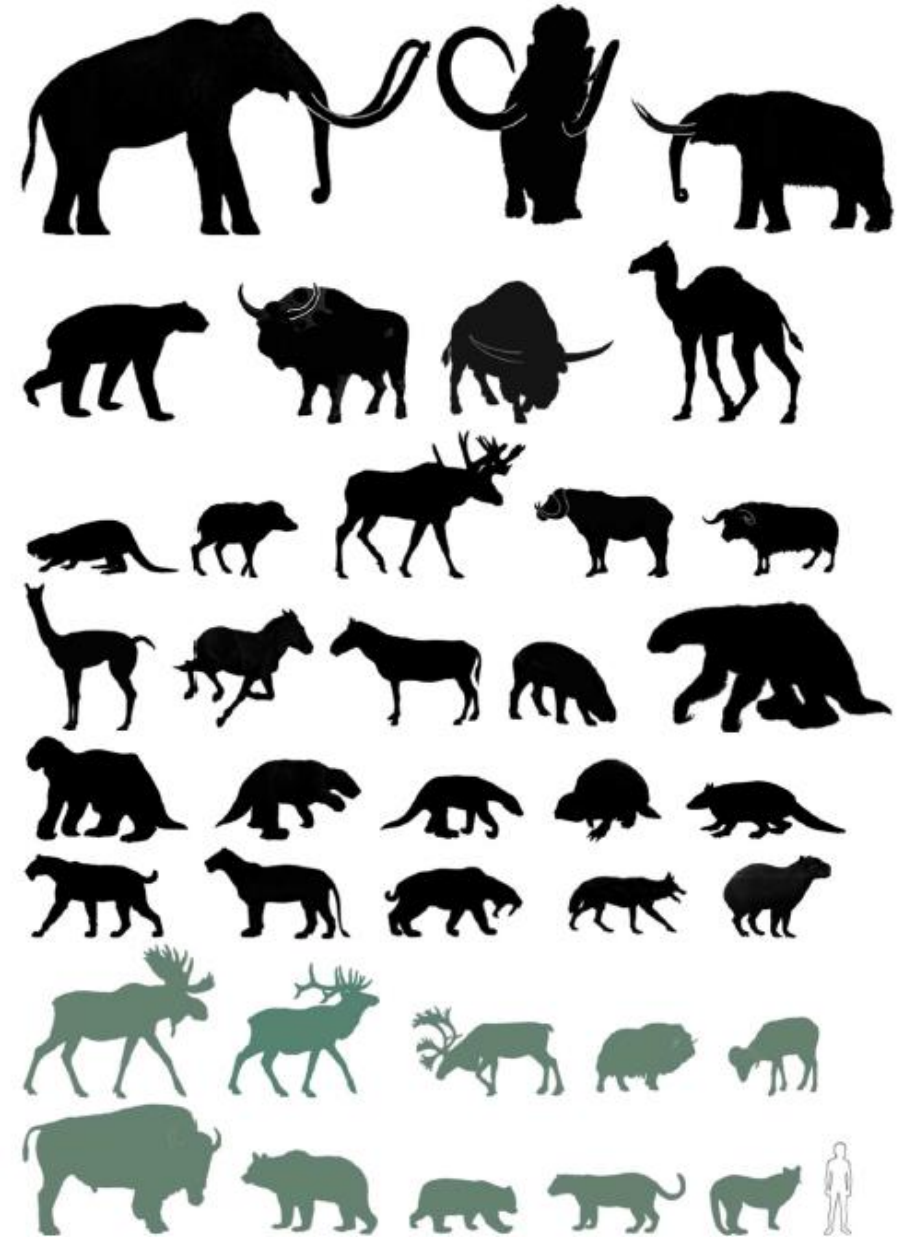


Figure 4. North America, south of 60° latitude (Nearctic Ecoregion). Selected extinct species (black): *Mammuthus columbi*, *Mammuthus primigenius*, *Mammuth americanum*, *Arctodus simus*, *Bison priscus*, *Bison latifrons*, *Camelops hesternus*, *Castoroides ohioensis*, *Platygonus compressus*, *Cervalces scotti*, *Bootherium bombifrons*, *Euceratherium collinum*, *Hemiauchenia macrocephala*, *Equus occidentalis*, *Equus scotti*, *Tapirus veroensis*, *Eremotherium laurillardii* (*E. rusconi*), *Megalonyx jeffersonii*, *Paramylodon* (*Glossotherium*) *harlani*, *Nothrotheriops shastensis*, *Glyptotherium floridanum*, *Holmesina septentrionalis*, *Homotherium serum*, *Panthera atrox*, *Smilodon fatalis*, *Canis dirus*, *Neochoenus pinckneyi*. Selected living species: *Alces alces*, *Cervus canadensis*, *Rangifer tarandus*, *Ovibos moschatus*, *Bison bison*, *Ursus arctos*, *Ursus americanus*, *Panthera onca*, *Puma concolor*. Outline *Homo sapiens* gives approximate scale. This figure is available in colour online at [wileyonlinelibrary.com/journal/gj](http://wileyonlinelibrary.com/journal/gj)

# Sydamerika

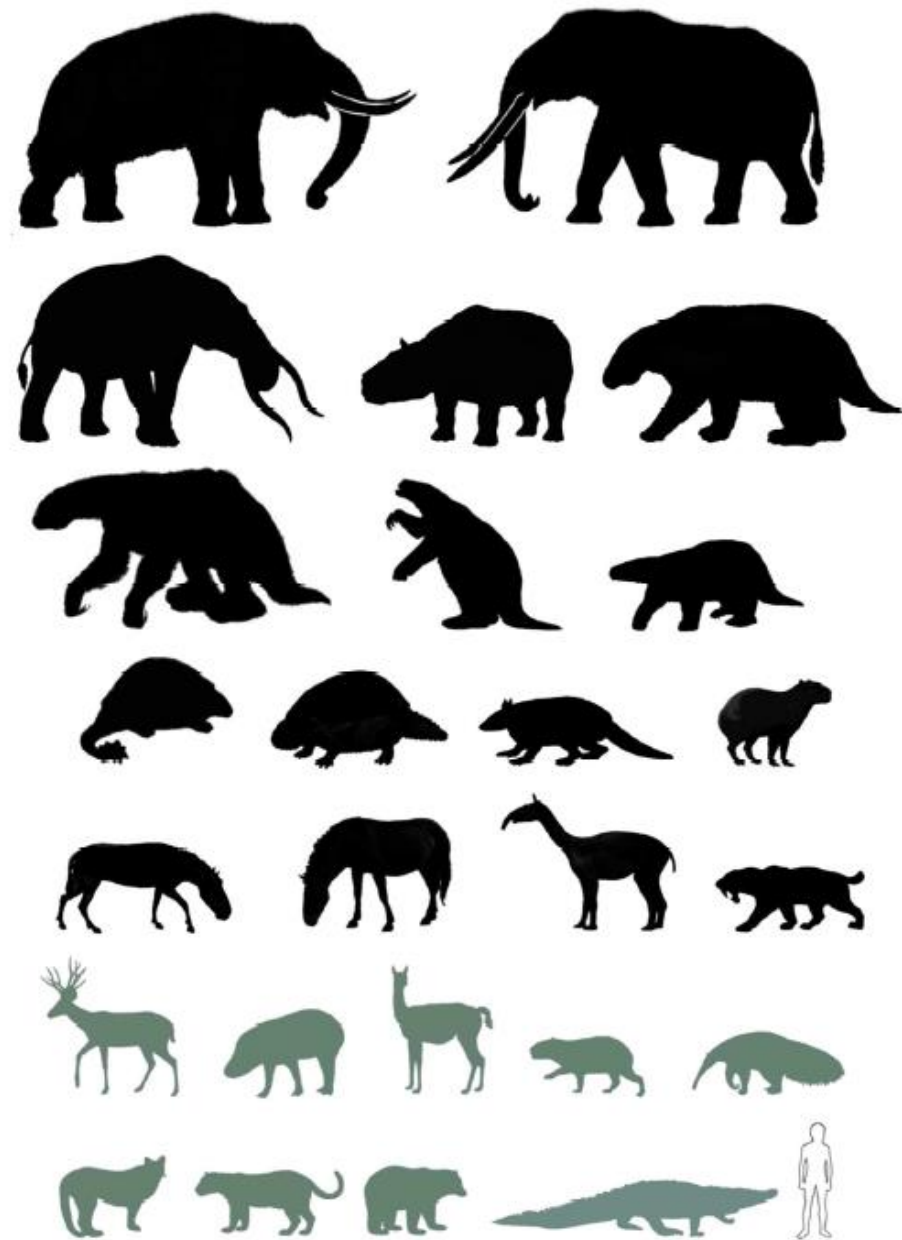


Figure 5. South America (Neotropic Ecoregion). Selected extinct species (black): *Haplomastodon waringi*, *Notiomastodon (Stegomastodon) platensis*, *Cuvieronius hyodon*, *Toxodon platensis*, *Megatherium americanum*, *Eremotherium laurillardii*, *Catonyx cuvieri*, *Mylodon darwini*, *Doedicurus clavicaudatus*, *Glyptodon clavipes*, *Holmesina septentrionalis*, *Neocchoerus pincneyi*, *Hippidion saldiasi*, *Equus* sp., *Macrauchenia patachonica*, *Smilodon populator*. Selected living species: *Blastoceros dichotomus*, *Tapirus bairdii*, *Lama guanicoe*, *Hydrochoerus hydrochaeris*, *Myrmecophaga tridactyla*, *Puma concolor*, *Panthera onca*, *Tremarctos ornatus*, *Crocodylus acutus*. Outline *Homo sapiens* gives approximate scale. This figure is available in colour online at [wileyonlinelibrary.com/journal/gj](http://wileyonlinelibrary.com/journal/gj)

# Oceanien

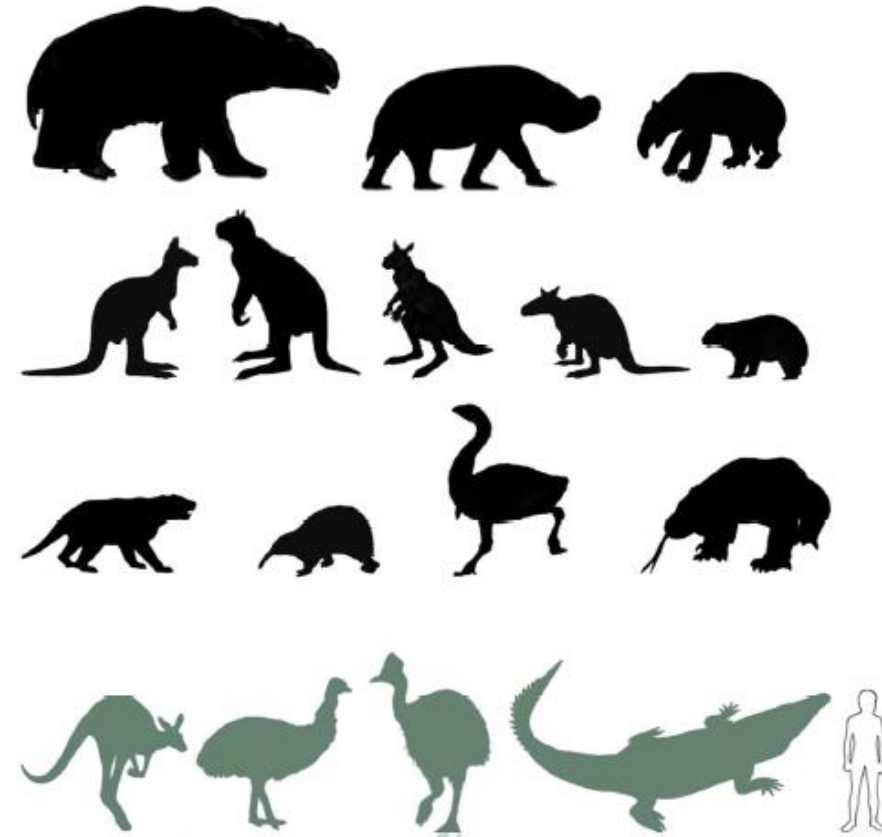


Figure 6. Australasia (Australasian Ecoregion). Selected extinct species (black): *Diprotodon optatum*, *Zygomaturus trilobus*, *Palorchestes azeal*, *Macropus ferragus*, *Procoptodon goliath*, *Sthenurus* sp., *Protemnodon brehus*, *Phascolonus gigas*, *Thylacoleo canifex*, *Zaglossus hacketti*, *Genyornis newtoni*, *Varanus priscus* (*Megalania prisca*). Selected living species: *Macropus giganteus*, *Dromaius novaehollandiae*, *Casuarius casuarius*, *Crocodylus porosus*. Outline *Homo sapiens* gives approximate scale. This figure is available in colour online at [wileyonlinelibrary.com/journal/gj](http://wileyonlinelibrary.com/journal/gj)



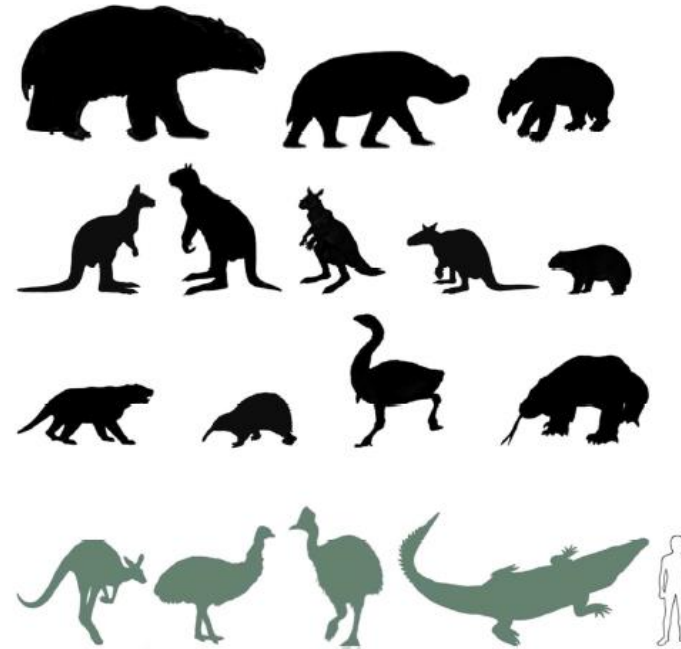


Figure 6. Australasia (Australasian Ecoregion). Selected extinct species (black): *Diprotodon optatum*, *Zygomaturus trilobus*, *Palorchestes azeal*, *Macropus ferragus*, *Procoptodon goliath*, *Sthenurus* sp., *Protomnodon brehus*, *Phascolonius gigas*, *Thylacoleo camifex*, *Zaglossus hacketti*, *Genyornis newtoni*, *Varanus priscus* (*Megalania prisca*). Selected living species: *Macropus giganteus*, *Dromaius novaehollandiae*, *Casuarus casuaris*, *Crocodylus porosus*. Outline *Homo sapiens* gives approximate scale. This figure is available in colour online at [wileyonlinelibrary.com/journal/gj](http://wileyonlinelibrary.com/journal/gj)

# Oceanien

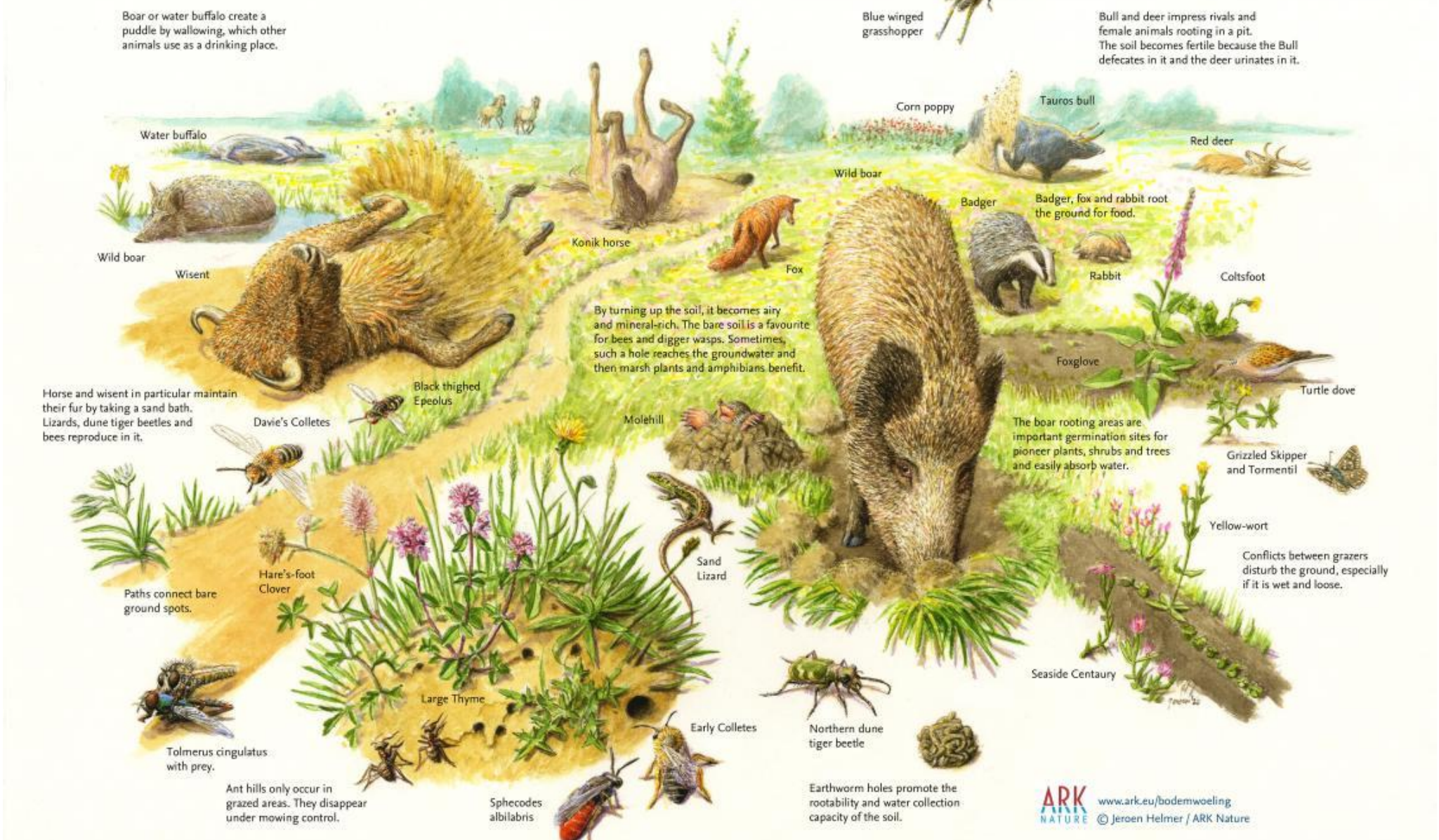
# Selvforvaltende natur

- Brand
- Storm
- Naturlig hydrologi
- Geodiversitet
- Sandflugt
- Store planteædere



# Soil disturbance

and its key role in nature



Boar or water buffalo create a puddle by wallowing, which other animals use as a drinking place.

Blue winged grasshopper

Bull and deer impress rivals and female animals rooting in a pit. The soil becomes fertile because the Bull defecates in it and the deer urinates in it.

Water buffalo

Corn poppy

Tauros bull

Red deer

Wild boar

Wild boar

Badger

Badger, fox and rabbit root the ground for food.

Wisent

Konik horse

Fox

Rabbit

Coltsfoot

By turning up the soil, it becomes airy and mineral-rich. The bare soil is a favourite for bees and digger wasps. Sometimes, such a hole reaches the groundwater and then marsh plants and amphibians benefit.

Foxglove

Turtle dove

Horse and wisent in particular maintain their fur by taking a sand bath. Lizards, dune tiger beetles and bees reproduce in it.

Black thighed Epeolus

Davie's Colletes

Molehill

The boar rooting areas are important germination sites for pioneer plants, shrubs and trees and easily absorb water.

Grizzled Skipper and Tormentil

Paths connect bare ground spots.

Hare's-foot Clover

Sand Lizard

Yellow-wort

Conflicts between grazers disturb the ground, especially if it is wet and loose.

Tolmerus cingulatus with prey.

Large Thyme

Early Colletes

Northern dune tiger beetle

Seaside Centaury

Ant hills only occur in grazed areas. They disappear under mowing control.

Sphex albilabris

Earthworm holes promote the rootability and water collection capacity of the soil.

ARK NATURE [www.ark.eu/bodemwoeling](http://www.ark.eu/bodemwoeling)  
© Jeroen Helmer / ARK Nature

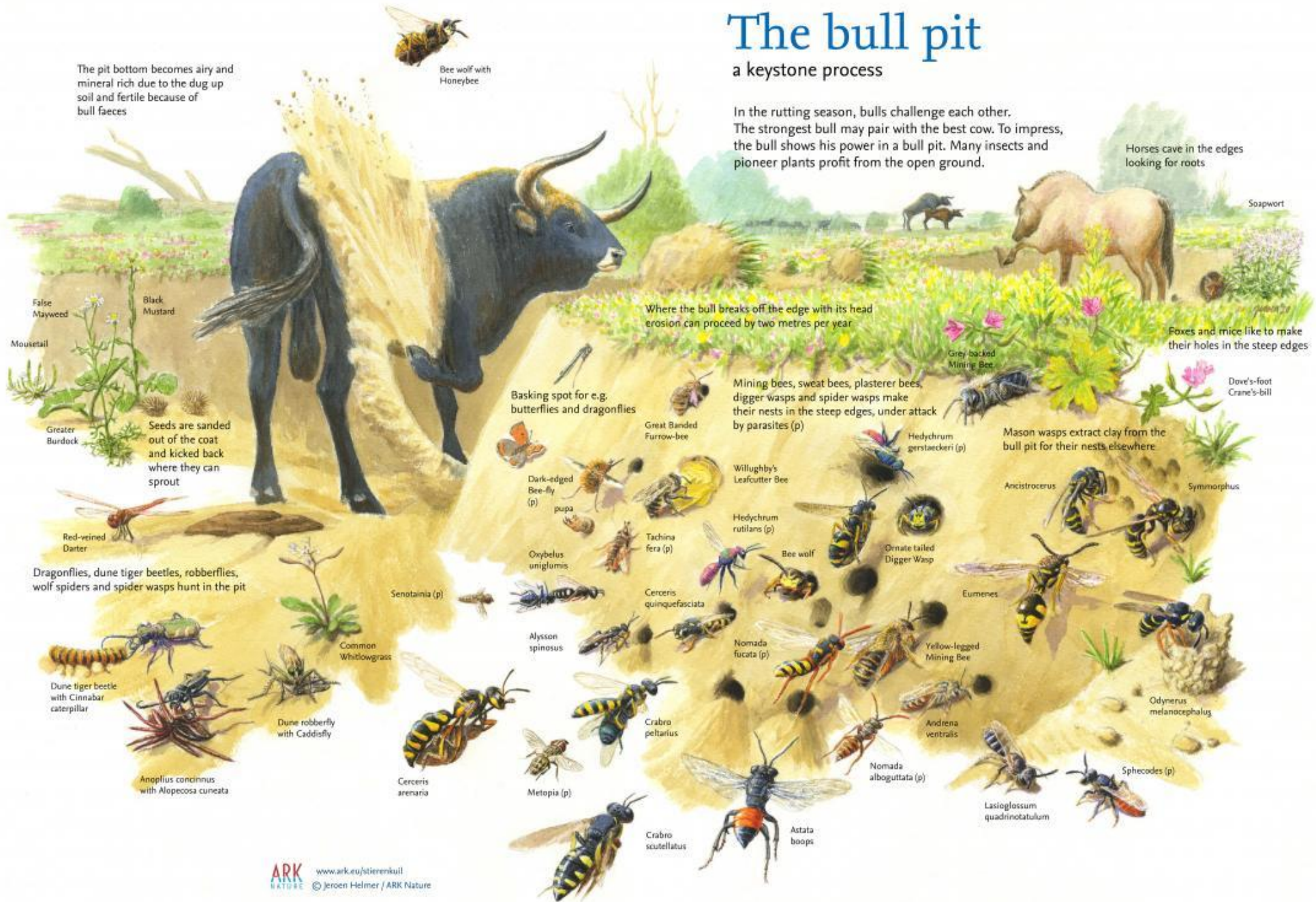
# The bull pit

## a keystone process

The pit bottom becomes airy and mineral rich due to the dug up soil and fertile because of bull faeces

In the rutting season, bulls challenge each other. The strongest bull may pair with the best cow. To impress, the bull shows his power in a bull pit. Many insects and pioneer plants profit from the open ground.

Horses cave in the edges looking for roots



Bee wolf with Honeybee

False Mayweed  
Black Mustard  
Mousetail  
Greater Burdock

Seeds are sanded out of the coat and kicked back where they can sprout

Red-veined Darter  
Dragonflies, dune tiger beetles, robberflies, wolf spiders and spider wasps hunt in the pit

Dune tiger beetle with Cinnabar caterpillar  
Anoplus concinnus with Alopecosa cuneata  
Common Whitlowgrass  
Dune robberfly with Caddisfly

Where the bull breaks off the edge with its head erosion can proceed by two metres per year

Basking spot for e.g. butterflies and dragonflies

Dark-edged Bee-fly (p)  
Tachina fera (p)  
Oxybelus uniglomis  
Senotainia (p)  
Alysson spinosus  
Cerceris arenaria  
Metopia (p)  
Crabro scutellatus

Mining bees, sweat bees, plasterer bees, digger wasps and spider wasps make their nests in the steep edges, under attack by parasites (p)

Great Banded Furrow-bee  
Willughby's Leafcutter Bee  
Hedychrum rutilans (p)  
Bee wolf  
Nomada fucata (p)  
Crabro peltarius  
Astata boops  
Crabro scutellatus

Grey-backed Mining Bee

Mason wasps extract clay from the bull pit for their nests elsewhere

Hedychrum gerstaeckeri (p)  
Ancistrocerus  
Symmorphus  
Ornate-tailed Digger Wasp  
Eumenes  
Yellow-legged Mining Bee  
Odynerus melanocephalus  
Andrena ventralis  
Nomada alboguttata (p)  
Lasioglossum quadrinotatum  
Sphecodes (p)

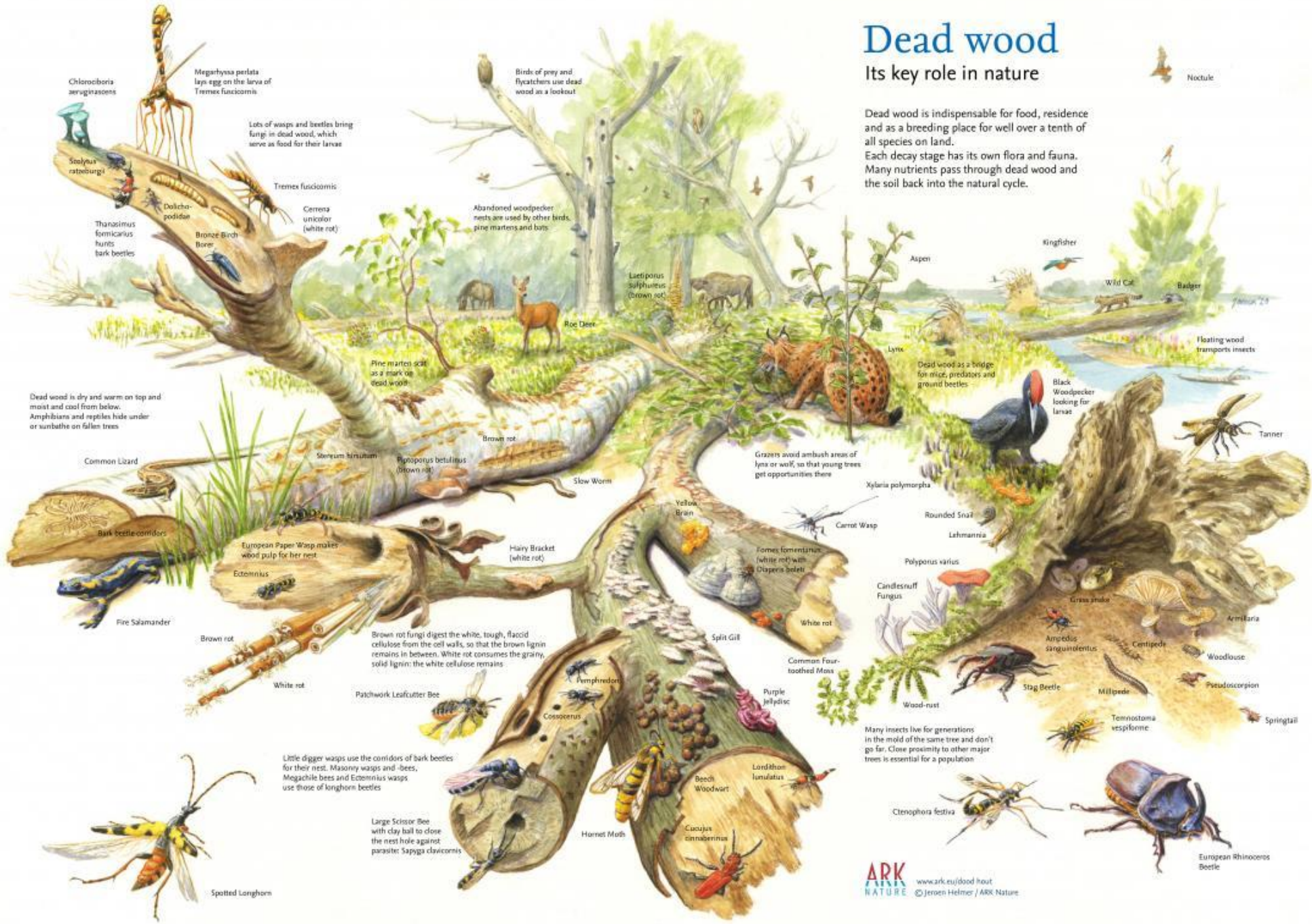
Foxes and mice like to make their holes in the steep edges

Dove's-foot Crane's-bill

# Dead wood

## Its key role in nature

Dead wood is indispensable for food, residence and as a breeding place for well over a tenth of all species on land. Each decay stage has its own flora and fauna. Many nutrients pass through dead wood and the soil back into the natural cycle.



Dead wood is dry and warm on top and moist and cool from below. Amphibians and reptiles hide under or sunbathe on fallen trees

Lots of wasps and beetles bring fungi in dead wood, which serve as food for their larvae

Birds of prey and flycatchers use dead wood as a lookout

Abandoned woodpecker nests are used by other birds, pine martens and bats

Grazers avoid ambush areas of lynx or wolf, so that young trees get opportunities there

Many insects live for generations in the mold of the same tree and don't go far. Close proximity to other major trees is essential for a population

*Chlorociboria aeruginosa*

*Megarhyssa perla* lays egg on the larva of *Tremex fuscicornis*

*Scolytus ratzeburgi*

*Tremex fuscicornis*

*Thanosinus formicarius* hunts bark beetles

*Dolichopodidae*

Bronze Birch Borer

*Cerrena unicolor* (white rot)

*Laetiporus sulphureus* (brown rot)

Roe Deer

Pine marten scit as a mark on dead wood

Brown rot

*Stromyctes hirsutum*

*Piptoporus betulinus* (brown rot)

Slow Worm

Common Lizard

Bark beetle corridors

European Paper Wasp makes wood pulp for her nest

*Ectemnius*

Fire Salamander

Brown rot

White rot

Brown rot fungi digest the white, tough, flaccid cellulose from the cell walls, so that the brown lignin remains in between. White rot consumes the grainy, solid lignin: the white cellulose remains

Patchwork Leafcutter Bee

Hairy Bracket (white rot)

Yellow Brain

*Fomes fomentarius* (white rot) with *Diaperia boleti*

White rot

Split Gill

Common Four-toothed Moss

*Pemphredon*

*Cossocorus*

Purple Jellydisc

Beech Woodwart

*Lordithon lunulatus*

Hornet Moth

*Cucujus cinnabarinus*

Aspen

Kingfisher

Wild Cat

Badger

Dead wood as a bridge for mice, predators and ground beetles

Lynx

Floating wood transports insects

Black Woodpecker looking for larvae

Tanner

*Xylaria polymorpha*

Carrot Wasp

Rounded Snail

*Lehmannia*

*Polyporus varius*

Candlesnuff Fungus

*Grasshopper*

*Ampedus sanguinolentus*

Centipede

Woodlouse

Wood-nest

Stag Beetle

Millipede

*Temnostoma vesperione*

Springtail

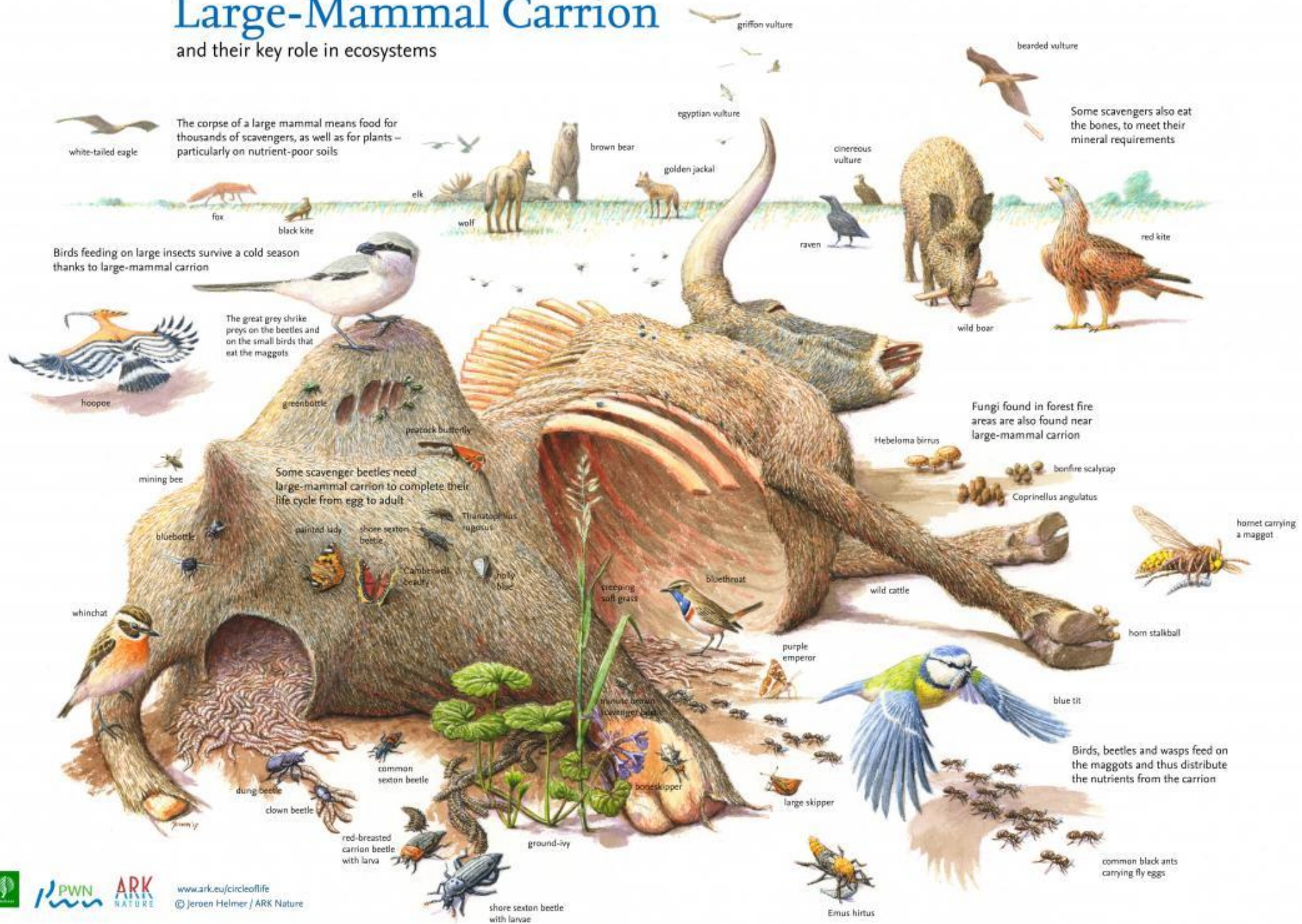
*Ctenophora festiva*

European Rhinoceros Beetle

Spotted Longhorn

# Large-Mammal Carrion

and their key role in ecosystems

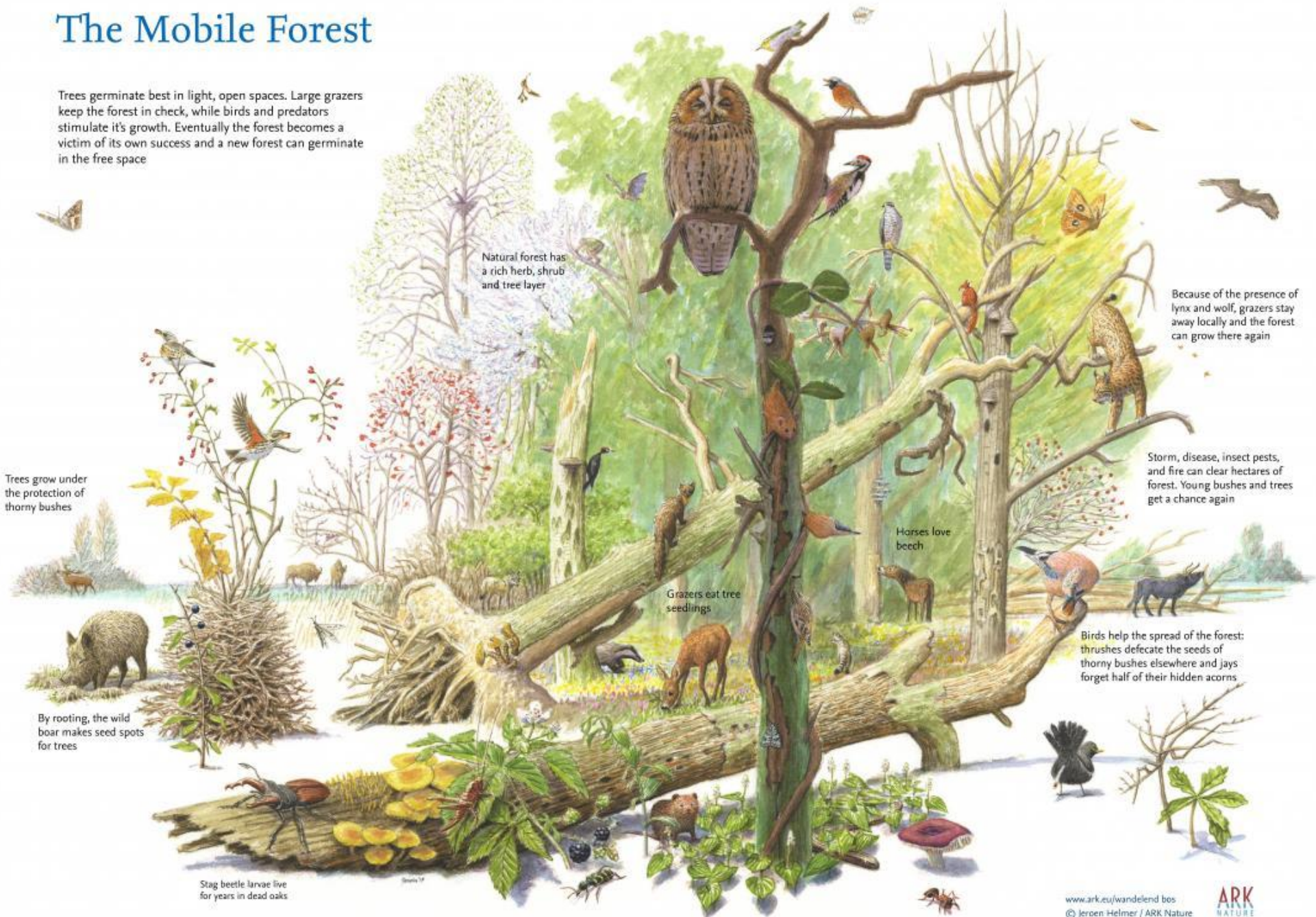


PWN  
NATURE

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© Jeroen Helmer / ARK Nature

# The Mobile Forest

Trees germinate best in light, open spaces. Large grazers keep the forest in check, while birds and predators stimulate its growth. Eventually the forest becomes a victim of its own success and a new forest can germinate in the free space



Natural forest has a rich herb, shrub and tree layer

Because of the presence of lynx and wolf, grazers stay away locally and the forest can grow there again

Storm, disease, insect pests, and fire can clear hectares of forest. Young bushes and trees get a chance again

Trees grow under the protection of thorny bushes

Horses love beech

Grazers eat tree seedlings

Birds help the spread of the forest: thrushes defecate the seeds of thorny bushes elsewhere and jays forget half of their hidden acorns

By rooting, the wild boar makes seed spots for trees

Stag beetle larvae live for years in dead oaks

# The wild horse

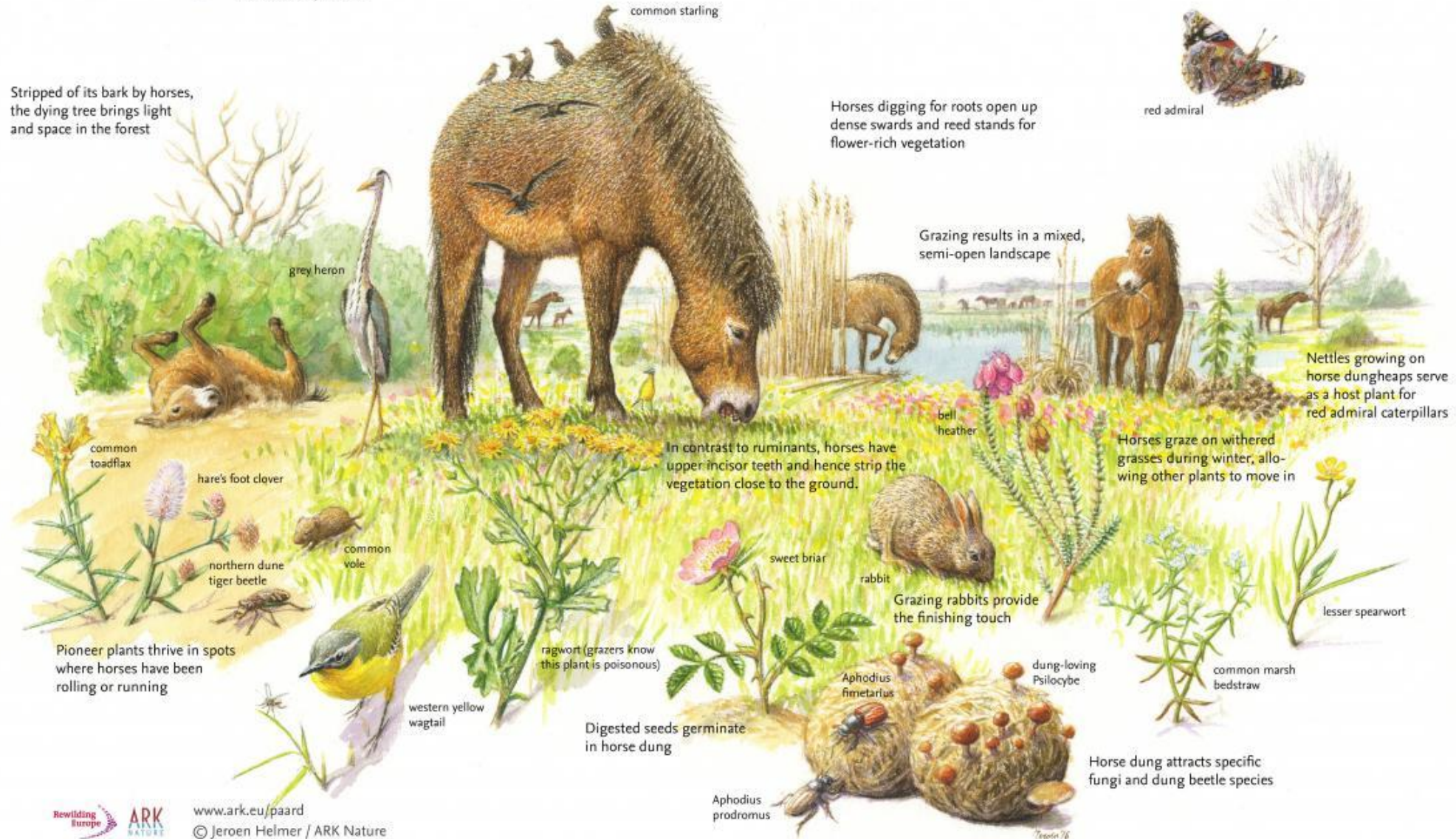
a keystone species



European stonechat

Birds feed on mice and insects disturbed by horses

Stripped of its bark by horses, the dying tree brings light and space in the forest



common starling



red admiral

Horses digging for roots open up dense swards and reed stands for flower-rich vegetation

Grazing results in a mixed, semi-open landscape

Nettles growing on horse dungheaps serve as a host plant for red admiral caterpillars

In contrast to ruminants, horses have upper incisor teeth and hence strip the vegetation close to the ground.

Horses graze on withered grasses during winter, allowing other plants to move in

Grazing rabbits provide the finishing touch

Pioneer plants thrive in spots where horses have been rolling or running

Digested seeds germinate in horse dung

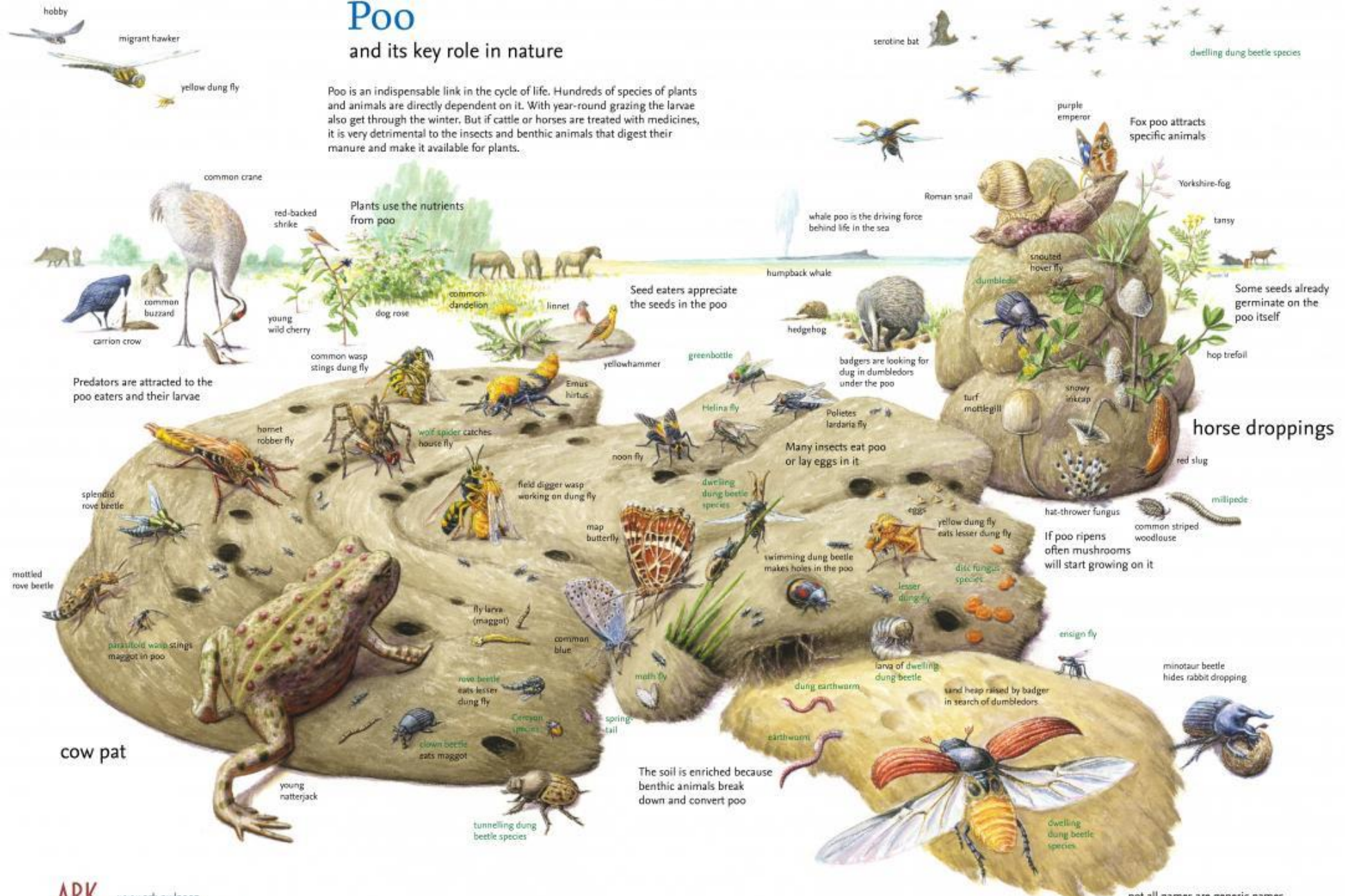
Horse dung attracts specific fungi and dung beetle species



# Poo

## and its key role in nature

Poo is an indispensable link in the cycle of life. Hundreds of species of plants and animals are directly dependent on it. With year-round grazing the larvae also get through the winter. But if cattle or horses are treated with medicines, it is very detrimental to the insects and benthic animals that digest their manure and make it available for plants.



Predators are attracted to the poo eaters and their larvae

Plants use the nutrients from poo

Seed eaters appreciate the seeds in the poo

whale poo is the driving force behind life in the sea

Fox poo attracts specific animals

Some seeds already germinate on the poo itself

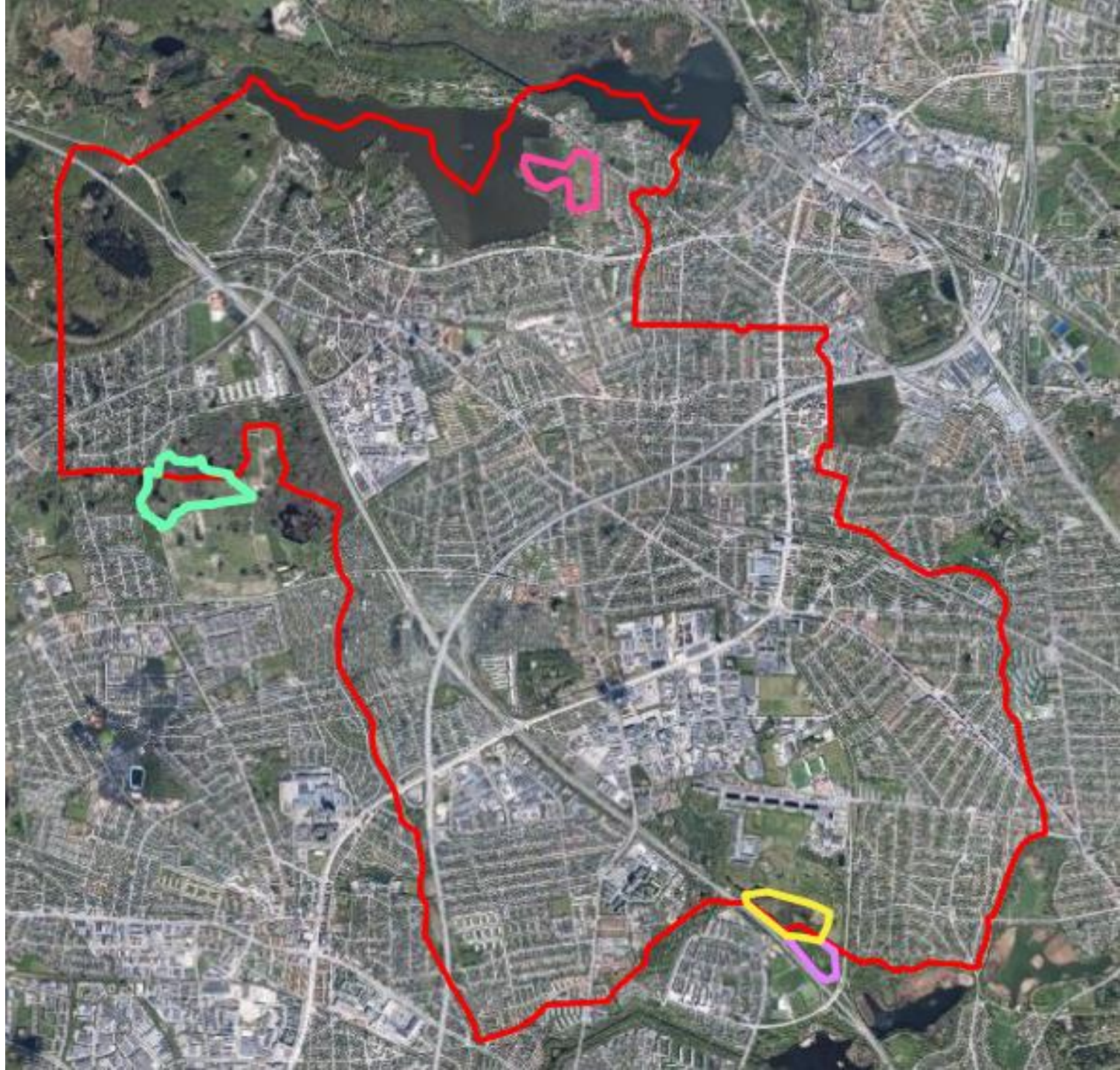
horse droppings

Many insects eat poo or lay eggs in it

If poo ripens often mushrooms will start growing on it

The soil is enriched because benthic animals break down and convert poo

not all names are generic names, some are collective names

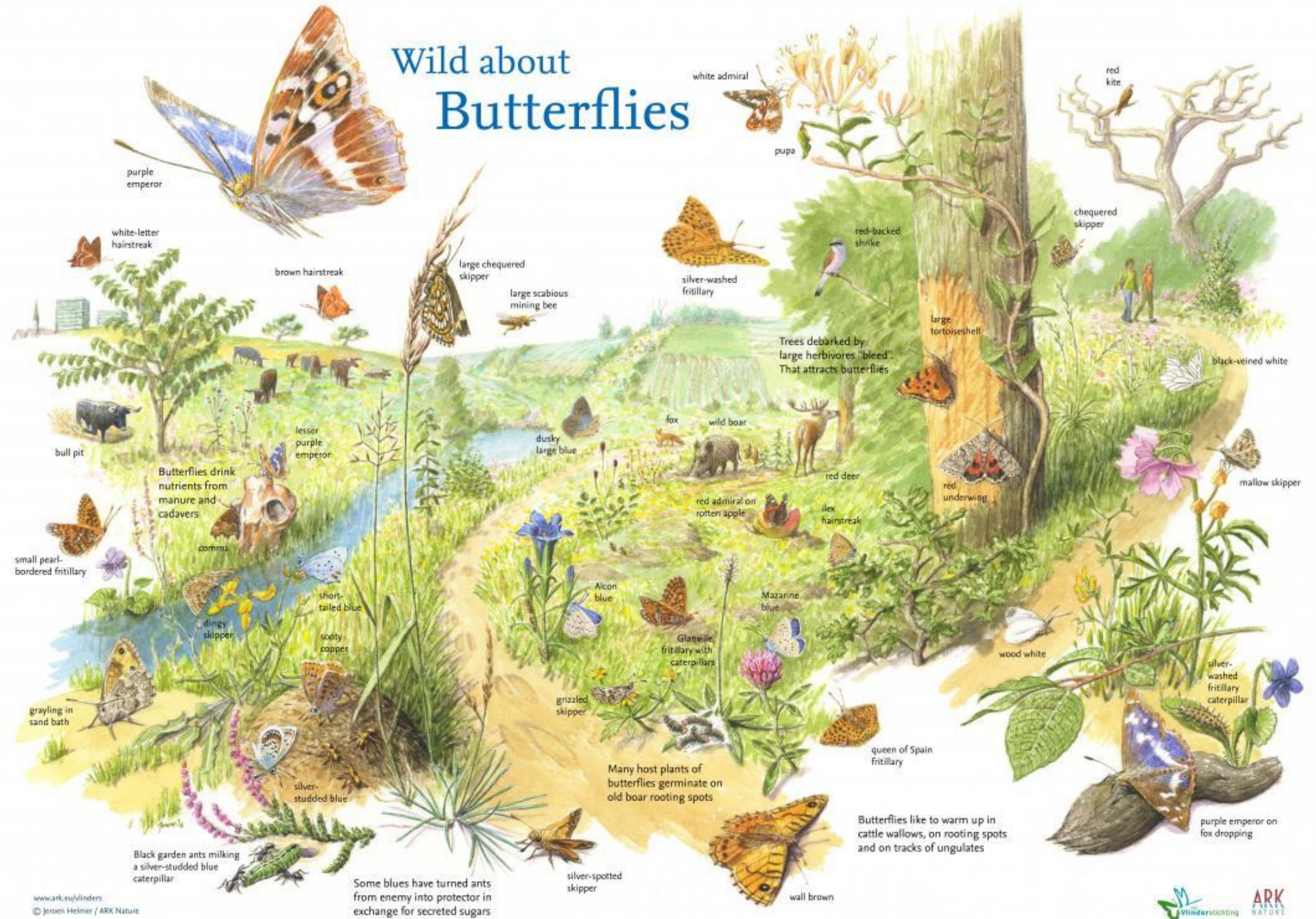




Februar 2021



# Wild about Butterflies



purple emperor

white-letter hairstreak

brown hairstreak

large chequered skipper

large scabious mining bee

white admiral

pupa

red kite

chequered skipper

red-backed shrike

silver-washed fritillary

large tortoiseshell

Trees debarked by large herbivores 'bleed'. That attracts butterflies

black-veined white

bull pit

lesser purple emperor

Butterflies drink nutrients from manure and cadavers

dusky large blue

fox

wild boar

red deer

red underwing

mallow skipper

small pearl-bordered fritillary

comma

dingy skipper

short-tailed blue

sooty copper

Alcon blue

Mazarine blue

Glauque fritillary with caterpillars

wood white

silver-washed fritillary caterpillar

grayling in sand bath

grizzled skipper

queen of Spain fritillary

Many host plants of butterflies germinate on old boar rooting spots

Butterflies like to warm up in cattle wallows, on rooting spots and on tracks of ungulates

purple emperor on fox dropping

Black garden ants milking a silver-studded blue caterpillar

Some blues have turned ants from enemy into protector in exchange for secreted sugars

silver-spotted skipper

wall brown

# Spørgsmål

[www.gladsaxe.dk/naturheste](http://www.gladsaxe.dk/naturheste)



# Grøn Guide

Foreningen Lokal Agenda 21 i Gladsaxe

## Hvad kan Grøn Guide bidrage med i jeres boligorganisation?

- Formidling af biodiversitet og bæredygtighed
  - fx bestyrelsesmøder, beboermøder el. lign.
- Forslag til driftsændringer
  - fx plejen af grønne områder
- Forslag til anlægsændringer
  - fx etablering af blomsterbede, vandhåndtering m.m.
- Forslag til inkludering af beboere/frivillige
  - Skabe lokal forankring, havedage m.m.

Lyder det interessant, så kontakt  
Grøn Guide Fredrik C. B. Sørensen på  
[fbs@ggglx.dk](mailto:fbs@ggglx.dk)

