

Kādus populāciju stāvokļa rādītājus izmanto lielo plēsēju monitoringā Latvijā?

Cik lielu daļu no Latvijā nomedītajiem vilkiem veido dzīvnieki līdz viena gada vecumam?

Raksturojiet vilku barības sastāvu Latvijā.

**Aklimatizācija -
reaklimatizācija**

**Introdukcija -
reintrodukcija**

Aklimatizācija (-zēšanās)

- 1) Individuāla pielāgošanās vides apstākļiem, arī nebrīvei.
- 2) Dzīvo organismu grupas pielāgošanās jaunai dzīves vietai, arī biotiskajiem faktoriem. Notiek daudzu paaudžu laikā.

Aklimatizācijas teorija vislabāk izstrādāta bijušajā PSRS - priekšnosacījumus veidoja plašie introdukcijas/reintrodukcijas pasākumi:

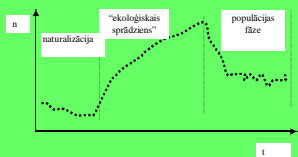
- pēc revolūcijas daudzas vērtīgas sugas atradās uz iznīkšanas robežas,
- vajadzība pēc ārzemju valūtas,
- pragmatisms zinātnē (B. Žitkovs, P. Manteifels)

1925 - 1977: 45 zīdītāju, 8 putnu sugas

Peter van der Werff, 2003, Skye, Scotland

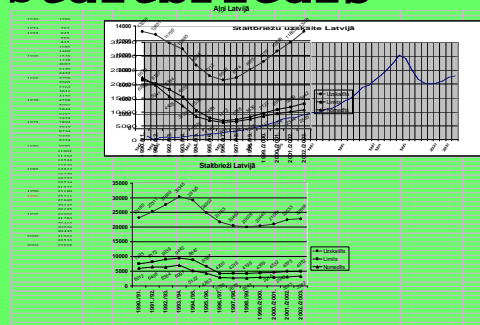
"Ethical aspects of human - wildlife interaction."

- Pirmatnējā kopiena - cilvēks kā dabas sastāvdaļa.
- Agrārais laikmets - daba kā cilvēka ienaidnieks (un otrādi).
- Modernais jeb industriālais laikmets - dabu mēģina pielāgot cilvēka vajadzībām.
- Postmodernais jeb pēcindustriālais laikmets - cilvēkam nākas pielāgoties dabai.

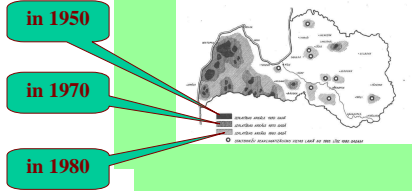


Molekulāri genētiskais līmenis:	nicīga mainība, zīd homeostāze	pieaug mainība	atjaunojas homeostāze
Ontogēnētiskais līmenis:	individuāla pielāgošanās	auglības palielināšanās	pielāgojumu nostiprināšanās ar iedzimtību
Populācijas līmenis:	kontakta meklēšana	populācijas struktūras veidošanās	populācijas struktūras stabilizācija
Biocenotiskais līmenis:	konkurence, ienaidnieki	veidojas stabils barošanās sītes	nostabilizējas biocenozes struktūra

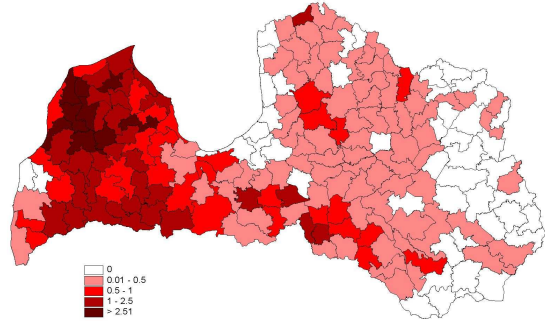
Staltbriedis



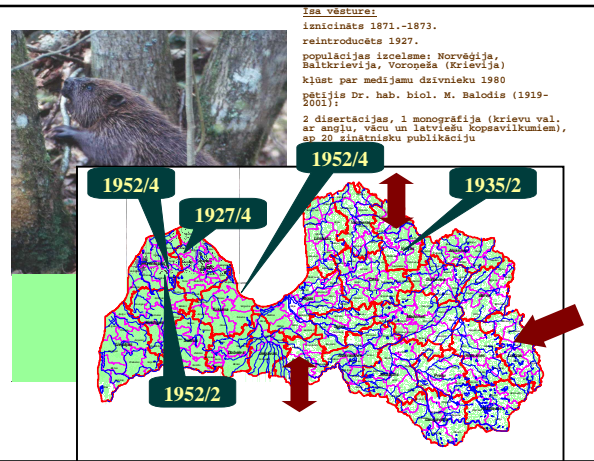
Dynamics of red deer distribution by Skriba 1984:



Recent distribution of the red deer according to the hunting bag of season 2002 (ind./1000ha)

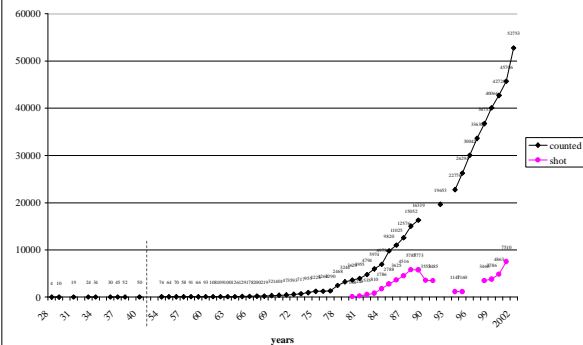


Dambrieži
Mufloni
Meža cūka
Bebrs



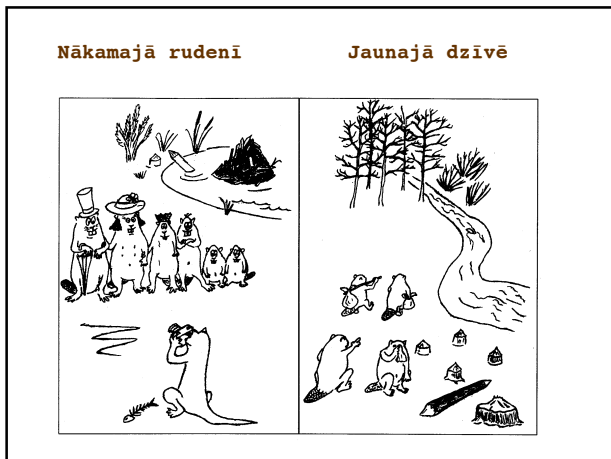
isā vēsturei:
ieminētas 1871.-1873.
reintroducēts 1927.
populācijas izcelsme: Norvēģija,
Baltkrievija, Voroņeža (Krievija)
kļūst par medījumu dzīvnieku 1980
pētījis Dr. hab. biol. M. Balodis (1919-
2001):
2 disertācijas, 1 monogrāfija (krievu val.
ar angļu, vācu un latviešu kopsavilkumiem),
ap. 20 zinātnisku publikāciju

Beaver *Castor fiber* numbers in Latvia (official game statistics)



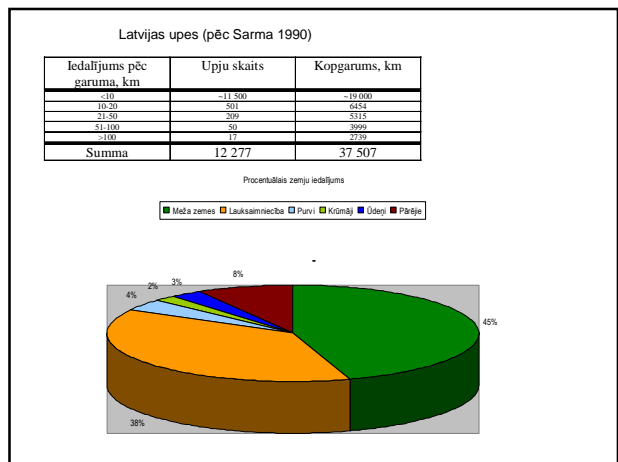
Ziemas beigas Pēc trīs mēnešiem...





Bebru biotopu raksturojums (krastu līnijas garums) vidēji uz km² Latvijas ainavas:

Lielās upes (>50m) – 12m;
Vidējās upes (20-50m) – 8m;
Mazās upes (2-20m) – 123m;
Strauti (<2m) – 62m;
Grāvji (<2m) – 636m;
Kanāli (>2m) – 99m;
Ezeri – 122m
Kopā – 1062m



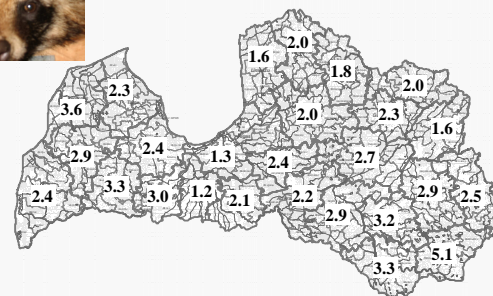
Sibīrijas vāvere:
***Sciurus vulgaris exalbidus* Pall.**

Savvaļas trusis
***Oryctolagus cuniculus* L.**

Jenotsuns

Pirmo reizi konstatēts
1943. Tuvākā introdukcija
Baltkrievijā 1936.
Latvijā introducēts 1948.

Jenotsuņu blīvums uz 1000ha
vid. 2.5



Ieviesušies no nebrīves vai
kaimiņvalstīm:

Amerikas ūdele,
ondatra,
nūtrijs (neizdzīvo)

Sibīrijas stirna

1955. neveiksmīgi
introducēti 13 indivīdi
Rīgas un Ugāles MRS
mežos

Ziemeļbrieži

1930. gados Šlīterē un
Latgalē

Mednieks Leslie Prehn

Introdukcijai/reintrodukcijai **medību
saimniecībā** ir dažas principiālas
atšķirības no reintrodukcijas **sugas
saglabāšanas** mērķim:

- Par introdukcijas/reintrodukcijas
sekmēm var spriest tikai gala fāzē.
- Sugu var izmantot medībās, ja
zināms, kurā fāzē process atrodas.
- Biotehniskajiem pasākumiem ir jēga
tikai gala fāzē.

Eiropas ūdeņu (re-)introdukcija Hiiumaa salā

2.3 Releases of European mink - 2000

Preparation of European mink for the release

Selecting animals from the captive population of the Endangered Species Centre, the following considerations were taken into account:

A captive population is the basis of the whole mink conservation work, being also a guarantee that the species can be restored when it has entirely disappeared from the wild. In conservation management the requirements of the captive population are considered of primary importance and for the release only such animals are selected who, with regard to their genetic or other qualities, are not needed for the captive population.

Specimens least related to each other should be selected.

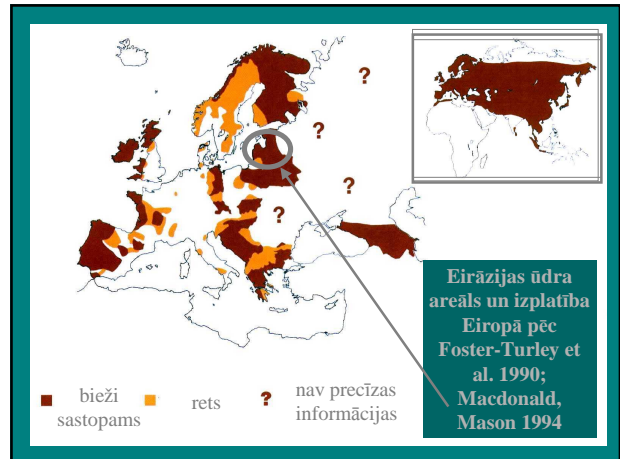
As the reproductive lifespan of the females is short, possibly young animals should be chosen for the release - one or two year old specimens would be the best. The sex ratio should be equal.

As the majority of the European mink in The Endangered Species Centre are of the first, second or third captive generations, there is no doubt that their behaviour is greatly different from that of the animals living in the wild.

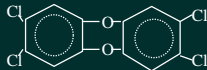
Investigations at Tallinn Zoo have shown that animals living in captivity:

almost entirely lack the ability of human avoidance (Foto 8);
are not so agile and successful hunters of prey (frogs, crayfish, fish, small rodents, etc.) as animals living in the wild;
in some cases (with no pool in the enclosure) have lost the swimming ability and cannot cope in aquatic environment (some are afraid of water, some can swim but cannot dive and are unable to catch fish);
are not afraid of greater carnivores.

To increase the survival chances of the released animals during the period of adaptation to natural environment, all the animals should be kept in the enclosure before the release.



Polihlorbifenili PCB



- Vairāk nekā 200 savienojumu.
- Plaši izmantoja 1950.-60. gados.
- 1966. gadā atzina par kaitīgiem.
- 1976. gadā Eiropas valstīs sāka ierobežot izmantošanu.
- Izplatās ar gaisa piesārņojumu.
- Ķīmiski stabils un šķīst taukos.
- Strauji uzkrājas saldūdens biocenozēs.
- Traucē olbaltumvielu sintēzi molekulārā līmenī.
- Kavē augšanu un izsauc neauglību.

CATCHING OTTERS FOR DUTCH REINTRODUCTION



2002 and 2004

12 years of preparation

- Improvement of waterquality
- Restoration of otterhabitats
- Enlargement of wetlands
- Connections of wetlands
- Measures near roads and bridges
- Fyke net protection
- Adaptation of muskrat traps
- Feasibility studies (i.e. PHVA)



Results in 2002

Catching period April – June 2002

fit otters Latvia	1 otter
fit otters Belarus	2 otters
non fit otters Belarus	3 otters

Bred and orphaned otters March – July 2002

Orphaned Czech otters	2 otters
Bred Swedish otters	2 otters

Released otters July 2002

wild otters	3 otters
orphaned/bred otters	4 otters
total	7 otters

(Results 2002)



Catching period September – October 2002

fit otters Latvia	5 otters
not fit otters Latvia	2 otters
dead otters Latvia	1 otter
fit otters Belarus	3 otters
dead otters Belarus	3 otters

Released otters Oktober – November 2002

wild otters Latvia	5 otters
wild otters Belarus	3 otters
total	8 otters

Results in 2004

In less than 2 weeks 12 otters were caught:

- 12 May male (too old)
- 14 May male (escaped, perhaps fit)
- 16 May probably female (escaped, perhaps fit)
- 18 May otter escaped (sex unknown)
- 18 May male (bad teeth)
- 18 May female (fit, name Libe)
- 19 May male (fit, name Tilt)
- 20 May female (fit, name Tone)
- 20 May male (bad condition)
- 21 May vrouwtje (fit, found dead)
- 23 May vrouwtje (pregnant)
- 24 May vrouwtje (fit, name Ala, not definitive name)



In total 12 otters, of which 5 ♂♂ and 5, maybe 6 ♀♀.

Results in 2004

only Latvia

- The GSM trap transmitters allowed for quick release of animals caught in traps
- On average after alarm only 20 – 30 minutes were necessary to get to the trapped animal
- In two cases the trap transmitters did not work because of frost (-8 °C)
- The batteries of the used Siemens phones are very sensitive for low temperatures
- In one case the otter caught did not pull off the magnet on top of the transmitter (no alarm signal)

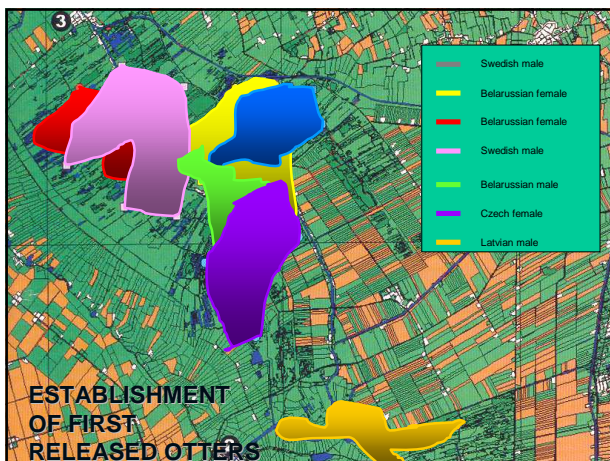
REINTRODUCTION AREA



12.000 ha of wetlands



Location:
SW of Friesland and
NW of Overijssel



Transport and care of fit otters

- Transport to enclosures
- At arrival check of condition and behaviour
- Good care of otters
 - food
 - veterinary care
- Vaccinations (rabies) and treatment against parasites (stronghold)
- Veterinary check before transport
- Transport to airport (Riga/Minsk)
- Transport to Netherlands
 - Riga-Helsinki-A'dam
 - Minsk-Frankfurt-A'dam



Minimizing Leg-hold Trapping Trauma for Otters with Mobile Phone Technology

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ABSTRACT

We present and evaluate a protocol for the capture of otters (*Lutra lutra*) using padded leg-hold traps coupled with Global System for Mobile communication (GSM) trap alarms. The trapping method was highly efficient, capturing 46 otters at 6.9 trap-nights each. Functioning alarms allowed us to remove 36 otters from their traps within 22 (SD \pm 14) minutes of capture. We caught 10 otters in trap sets with malfunctioning trap alarms and retrieved them the following morning, after 24 hours. Functioning alarms reduced the injuries suffered from an average cumulative score of 77.7 to just 5.5 on the International Organization for Standardization (ISO) 10990-5 trauma scale (Z \pm 5.074, P \leq 0.001). As a result, we strongly encourage the use of GSM trap alarms under the principle of refinement in animal experiments.

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