Tomáš Čejka, Zbyšek Šustek, Mirko Bohuš

Terrestrial fauna monitoring

Danube Monitoring Scientific Conference Publication, Slovak Section, chapter:

V.2.5. Use of terrestrial molluscs for bioindication of the impact of the Gabčíkovo hydraulic structures
Tomáš Čejka

V.2.14. Carabid and Stahylinid communities as indicators of changes in floodplain forests in the area affected by the Gabčíkovo project
Zbyšek Šustek

V.2.15. Bird fauna and bio-monitoring concept of the Danube flood plain affected by the Gabčíkovo project
Mirko Bohuš

Monitoring of the terrestrial fauna covered three animal groups of strongly different indicative abilities and supplyied data of different information value:

MOLLUSCS (PUHATESTŰEK)

- monitored continuously from 1992 to 2005
- strongly bound to the habitat, extremely limited migration ability
- spatial indication range – within 10 – 50 m

CARABIDS (FUTRINKÁK) AND STAPHYLINIDS (HOLYVÁK)

- monitored continuously from 1989 to 1997, some data from 1987
- strongly bound to the habitat, but most species inhabiting alluvial ecosystems have a considerable migration ability and can escape and re-colonize the habitats by flight
- spatial indication range – within 200 – 300 m

BIRDS (MADARAK)

- monitored in different ways from 1991 – 2003
- the data not alwys fully comparable
- spatial indication range – varies according to season and trophic relations from ca. 100 to several tens kilometers

Molluscs and beetles

Molluscs

Central Europe ca. 300 sp.
Gabčíkovo area 66 sp.

Size from 1 to 40 mm

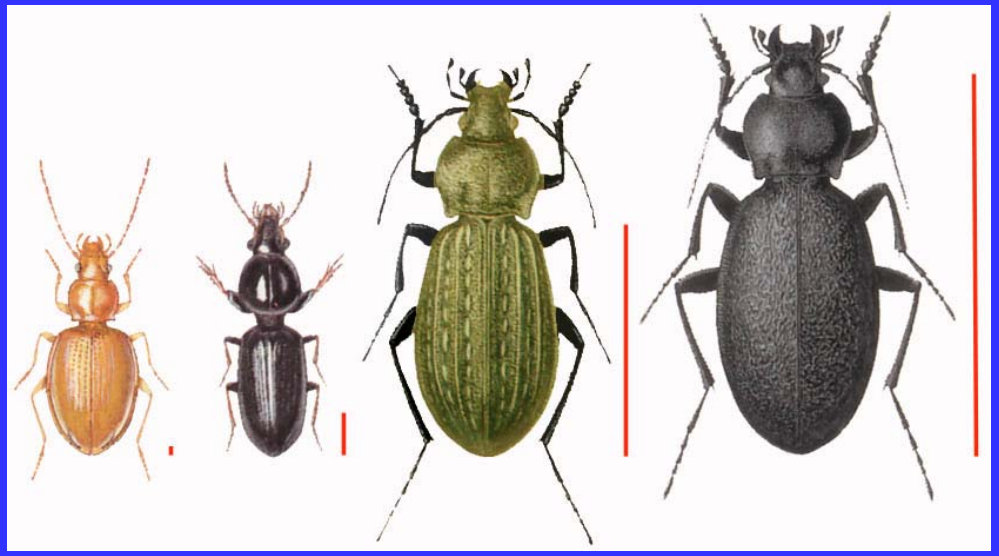
In alluvial ecosytsem mostly phytophagous, small species predominatly detritophagous

Carabids

Central Europe ca. 560 sp.
Gabčíkovo area ca. 120 sp.

Size from 1 to 40 mm

In alluvial ecosytsem mostly predaceous or scavengers



Dunajské kriviny

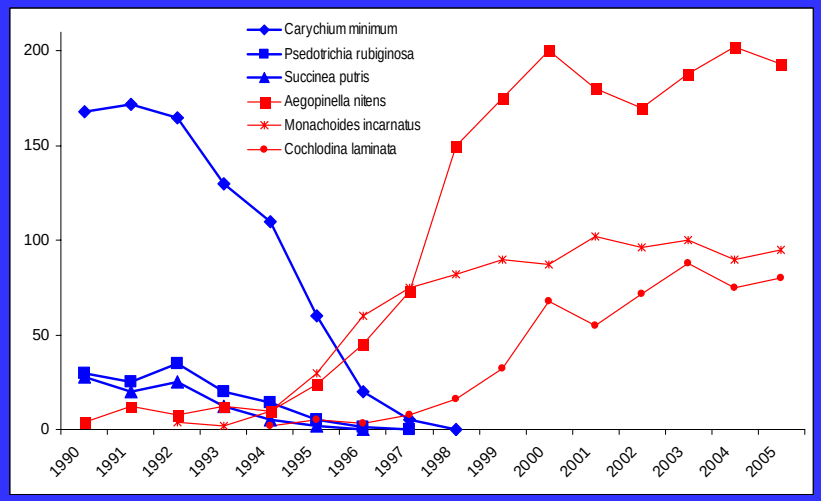
one of the most affected monitoring plots due to draining effect and absence of water supply

June 1989

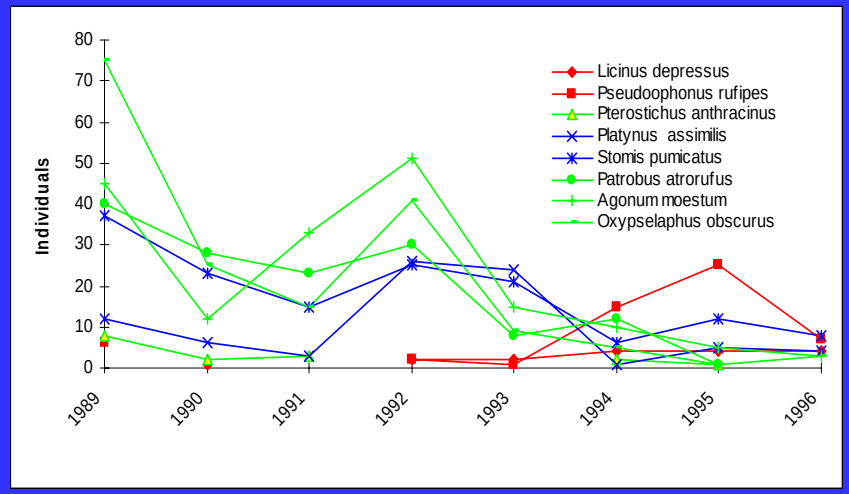
September 1989

June 1995

September 2003



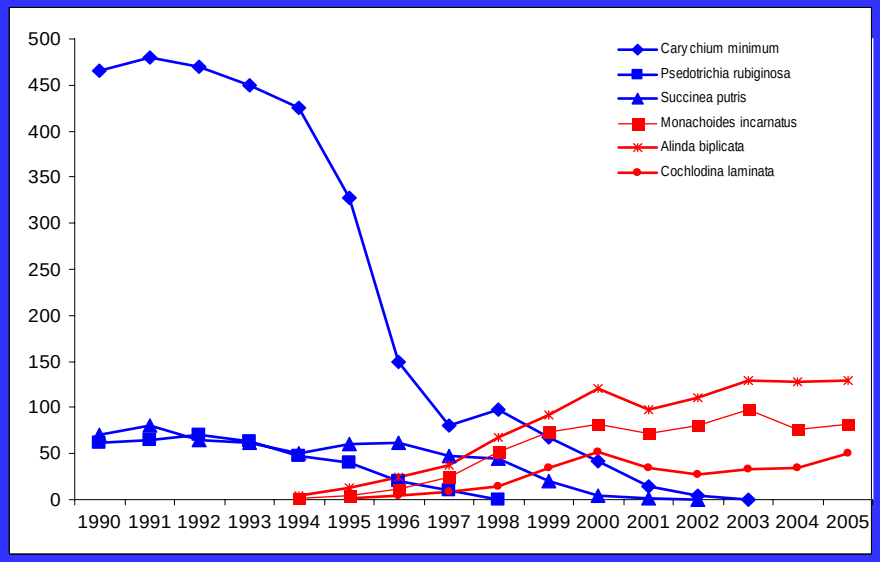
Molluscs

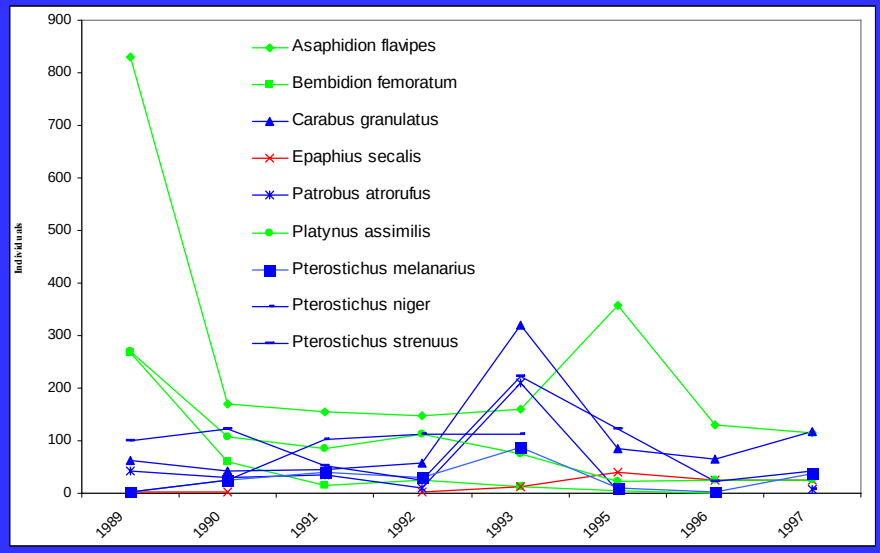


Carabidae - Futrinkák

Istragov

on of the relatively moderately influenced monitoring plots





Molluscs

Carabidae - Futrinkák

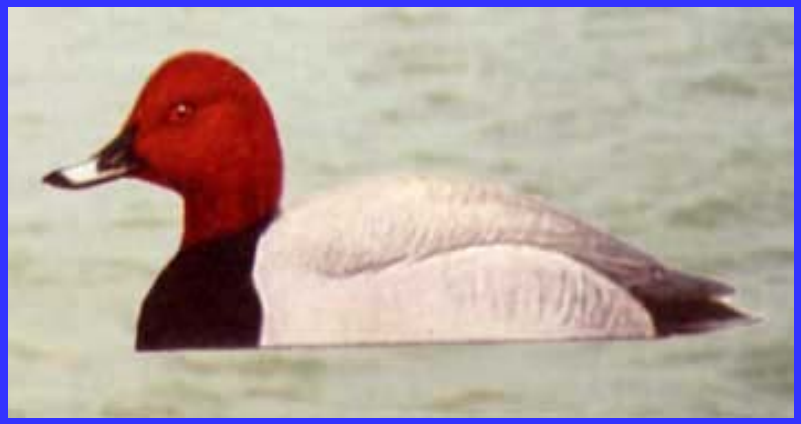
Efforts at restoration of the mollusc and beetle communities

Restoration of floodplain forest communities of molluscs Carabid and Staphylinid can be, according to experience from other localities succesfull within a relatively short time. Restoration of mollusc communities is slower, but also possible.
However, the hydrological regimen in the area also must provide conditions for communities of higly specialised beetle species living exclusively denuded shores of arms and oxbows

Birds

Monitoring of birds has shown contradictory tendencies:

1. Creation of suitable conditions of transmigrating and wintering waterfowl resulting in presence of huge numbers (up to 12.000) of different species, especially of ducks on the Čunovo reservoir, which represents now one of the most significant wintering places



Aythia ferina - barátréce

Aythia fuligula - kontyosréce

2. Disturbance, change or liquidation of hanitat conditions resulting in:
   - decline of number of breeding species
   - decline of number of species visiting the monitored habitats
   - reduction of opportunities of easy food collection or to build nests, most affected e. g. herons (gémek) or egrets (kócsagok)

Please, give us back something like this!

What can we search for here ???

3. Changes in occurrence of indifidual species in the floodplaind forests:

- Linear increase of representation of *Sylvia atricapilla* (Barátposzáta) and *Locustella fluviatilis* (Berki tücsökmadár) due to a high hergbage stratum in the forests

Sylvia atricapilla

Locustella fluviatilis

- Decline or complete extinction of *Phoenicurus phoenicurus* (Kerti rozsdafarkú)

Phoenicurus phoenicurus

4. Appearance of new species for the area - mostly in connection with general trends of their population size od distributional area dynamics.

- New breeders:

Larus melanocephalus
(Serencsesirály

Larus cachinnans
(sirály)

- Adaptation on new conditions within whole Europe:

Haliaeetus albicilla
(Rétisas)

KÖSZÖNEM A FIGGYELEMÉRT

ÉS TÜRELEMÉRT

ĎAKUJEM ZA POZORNOSŤ

A TRPEZLIVOSŤ

Thank you for attention

And patience