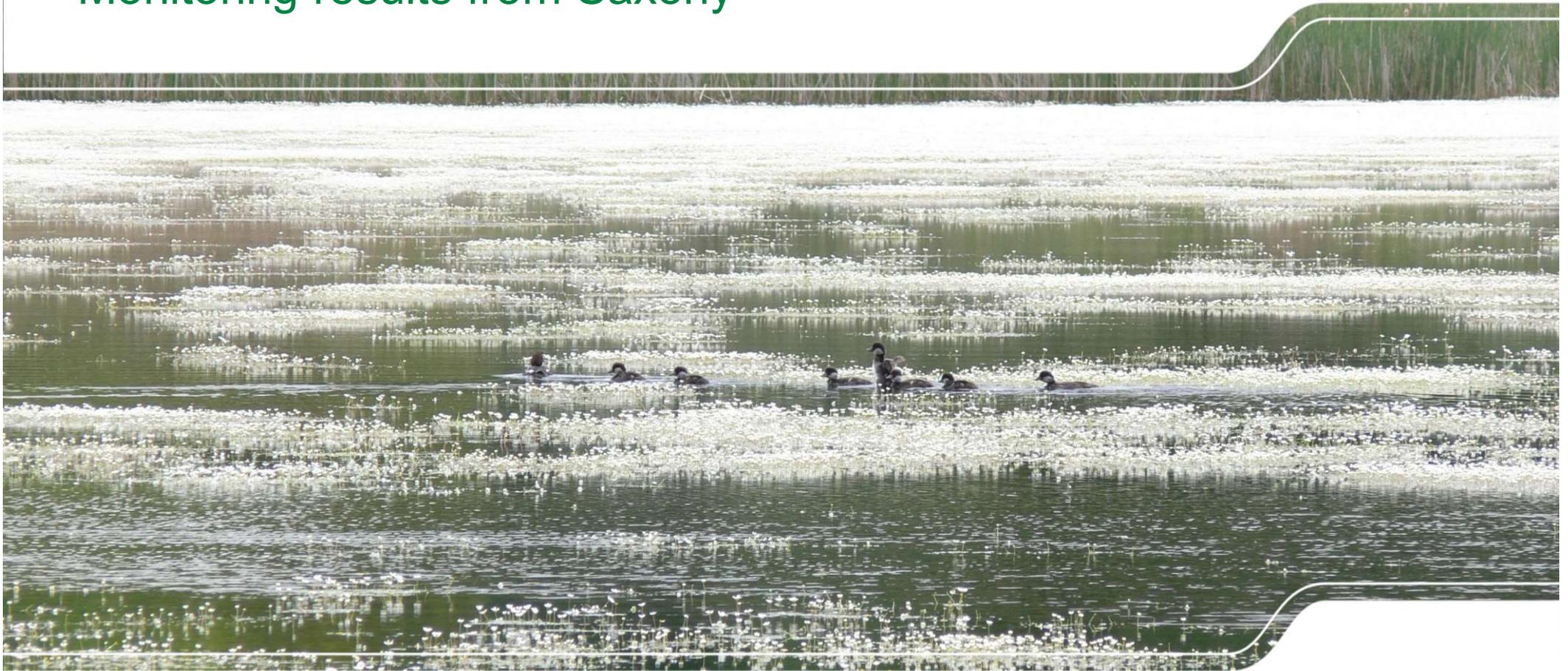


Breeding waterbirds on Carp ponds

Monitoring results from Saxony

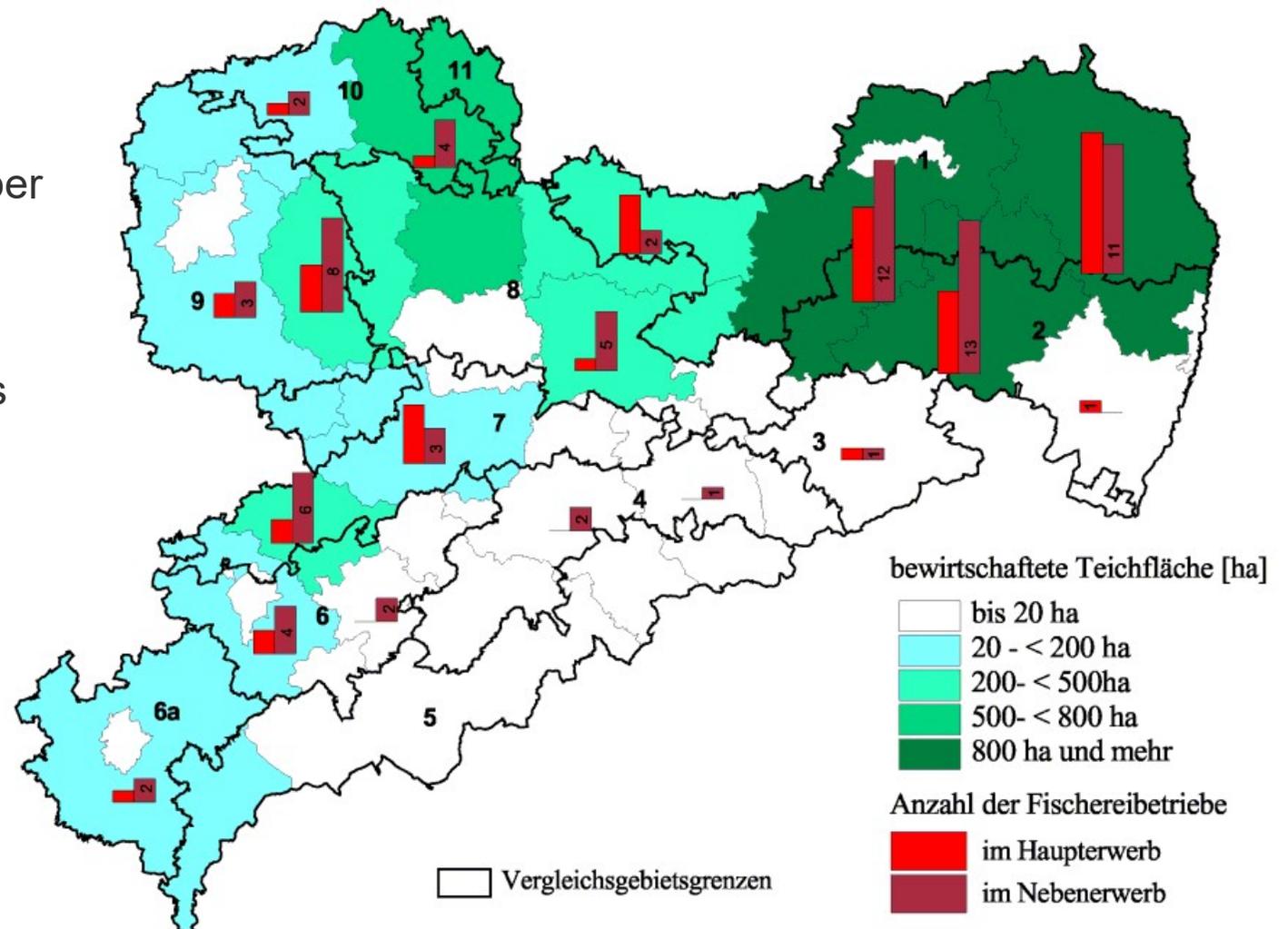


Sächsische
Vogelschutzwarte
Neschwitz

Jochen Bellebaum

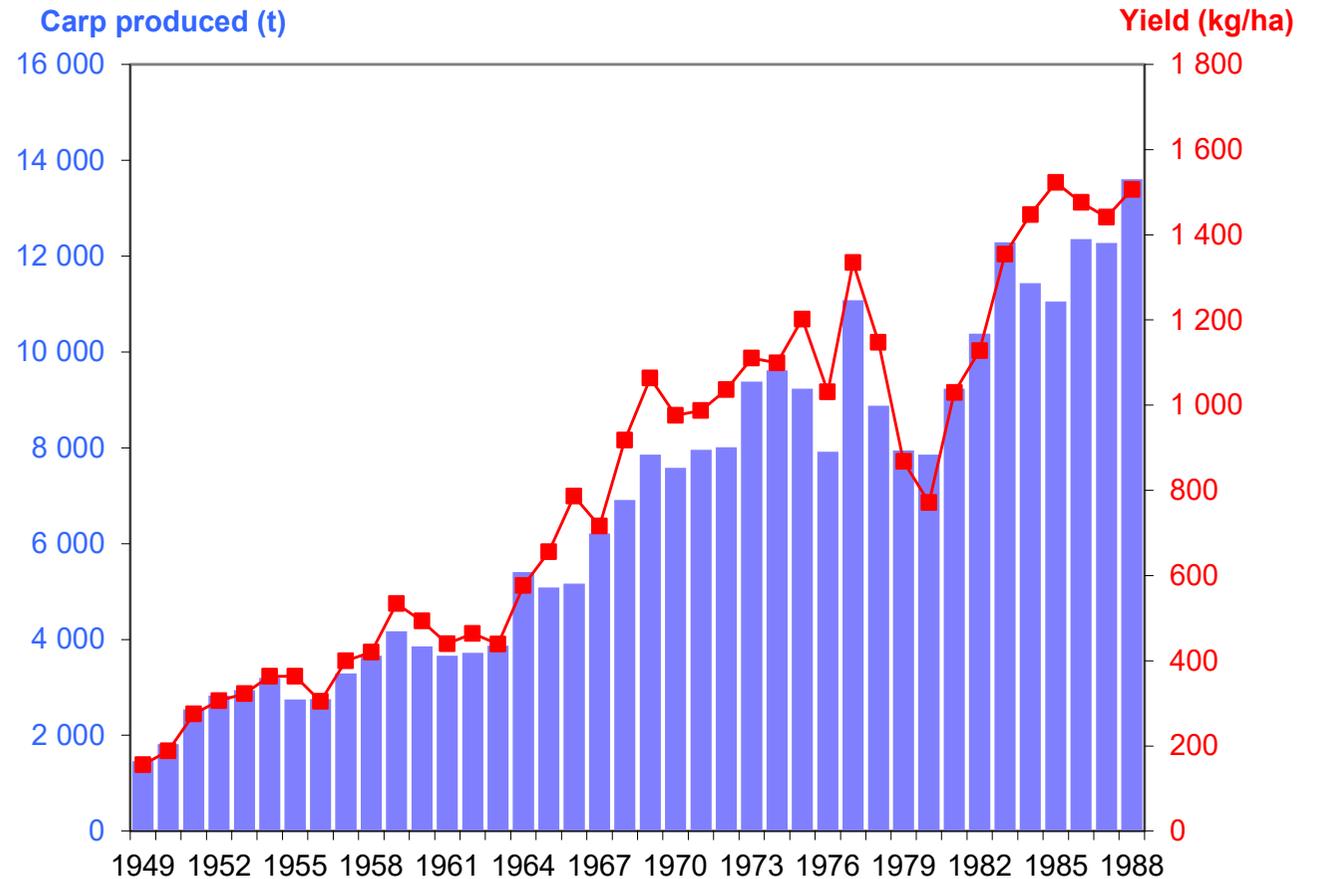
Carp ponds in Saxony

- | ~8,400 ha (2016)
- | 5,174 ha (62%) in Upper Lusatia
- | 350 ha unstocked for conservation purposes



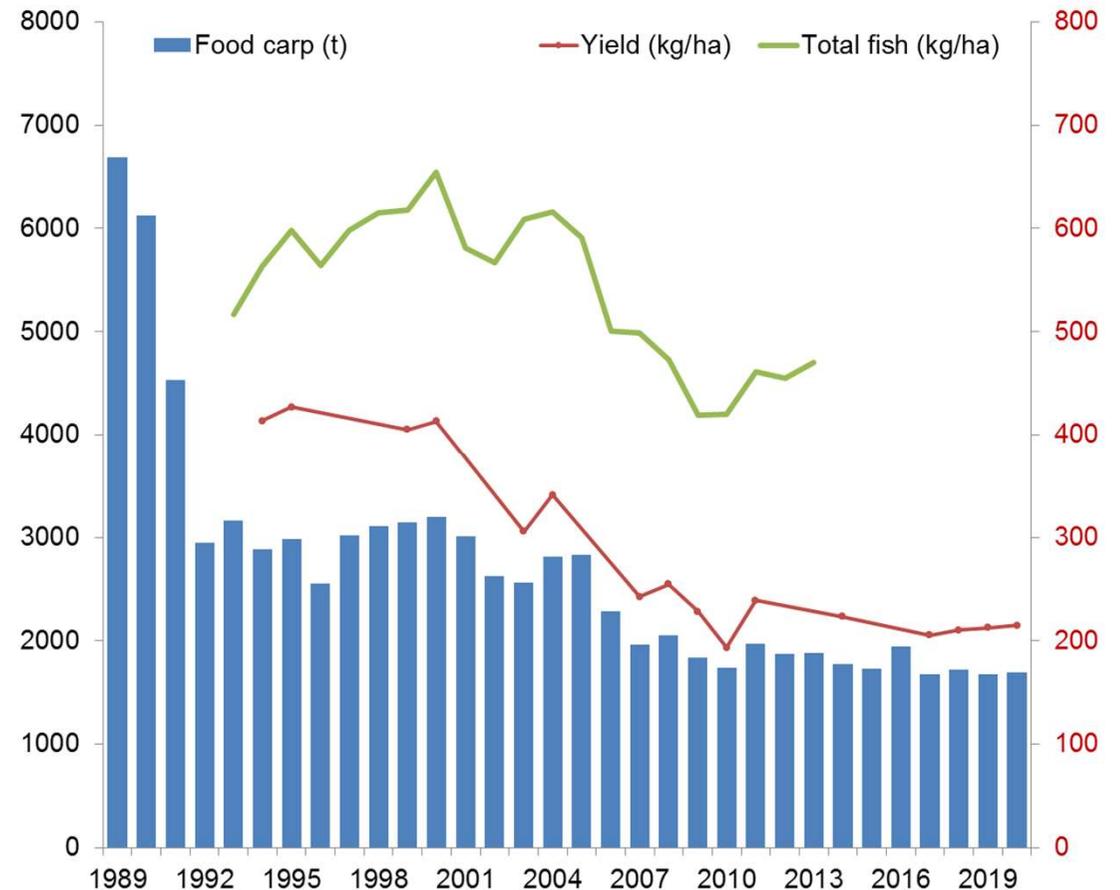
Ponds

- | Intensive carp production for food in GDR
- | Pellet feeding, manuring and ventilation of ponds, waterfowl production
- | Pond reconstruction: larger ponds, reed removal



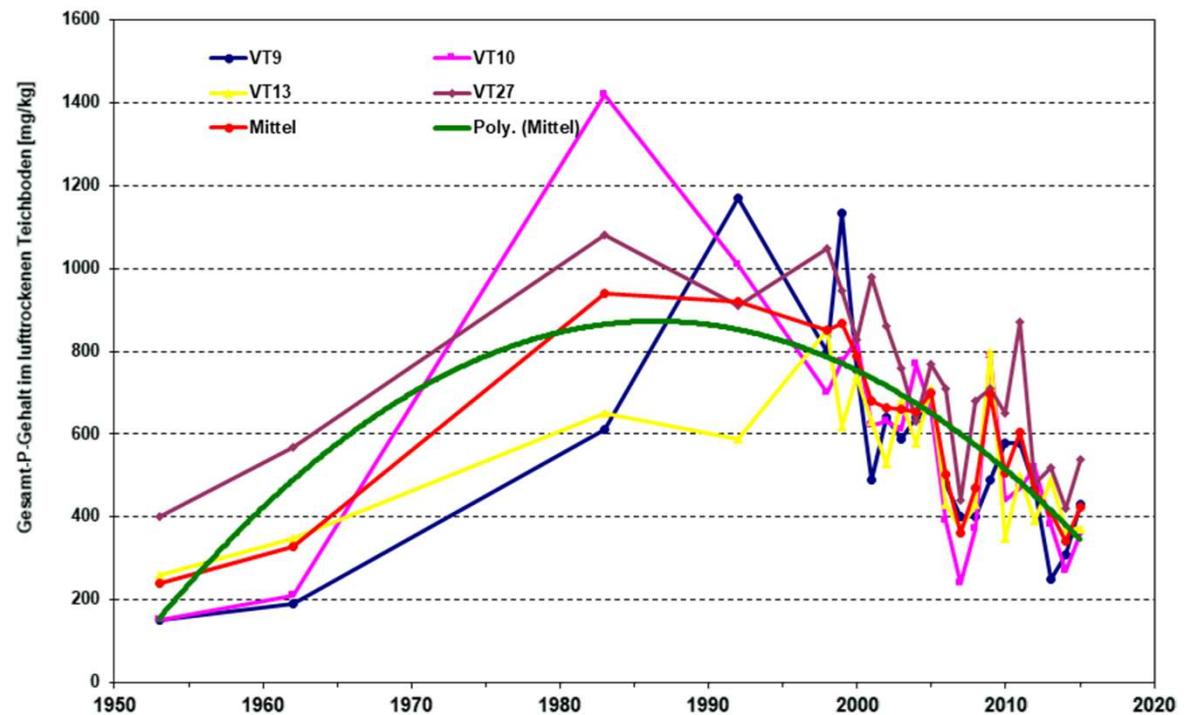
Ponds

- | Carp production –50 % since 1990
- | production of stocking fish, other species
- | grain feeding, manuring mostly restricted to 0+ ponds



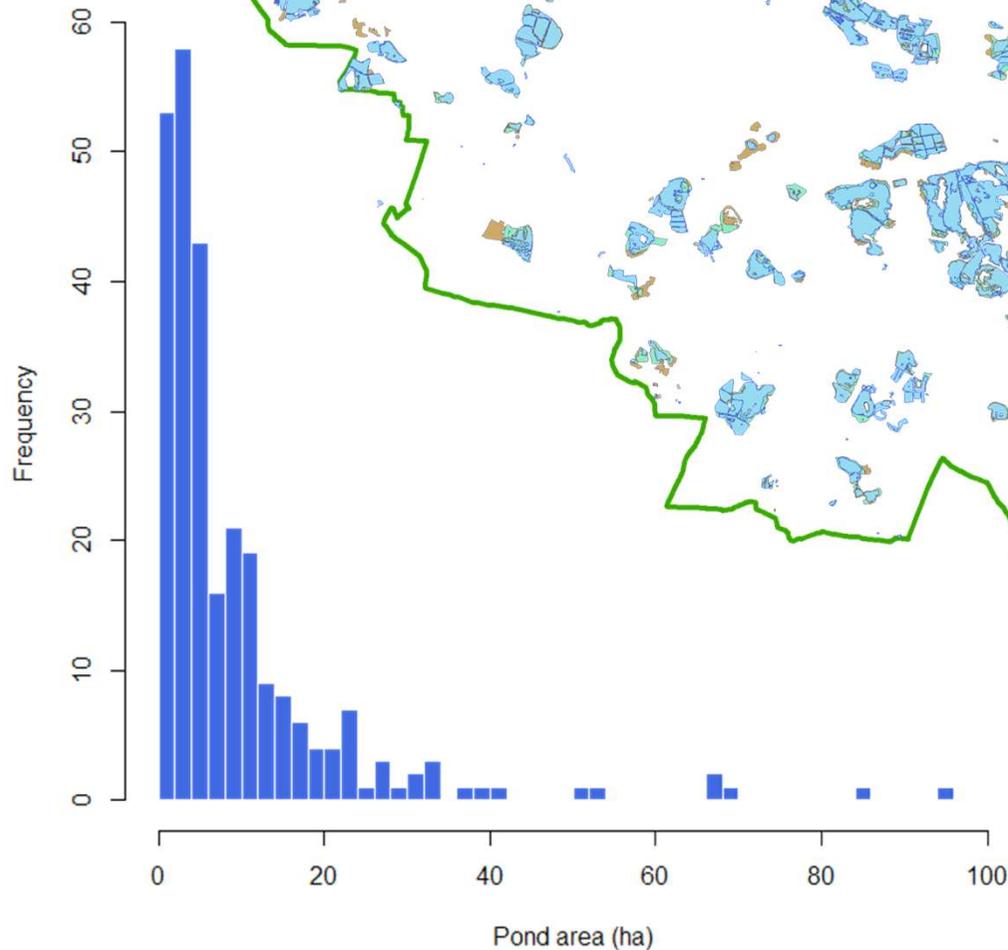
Ponds

- | Carp production –50 % since 1990
- | production of stocking fish, other species
- | grain feeding, manuring mostly restricted to 0+ ponds
- | P elimination in sewage water after 1990





Oberlausitz Biosphere Reserve
286 ponds, > 2,500 ha
30.5 % of Saxonian pond area

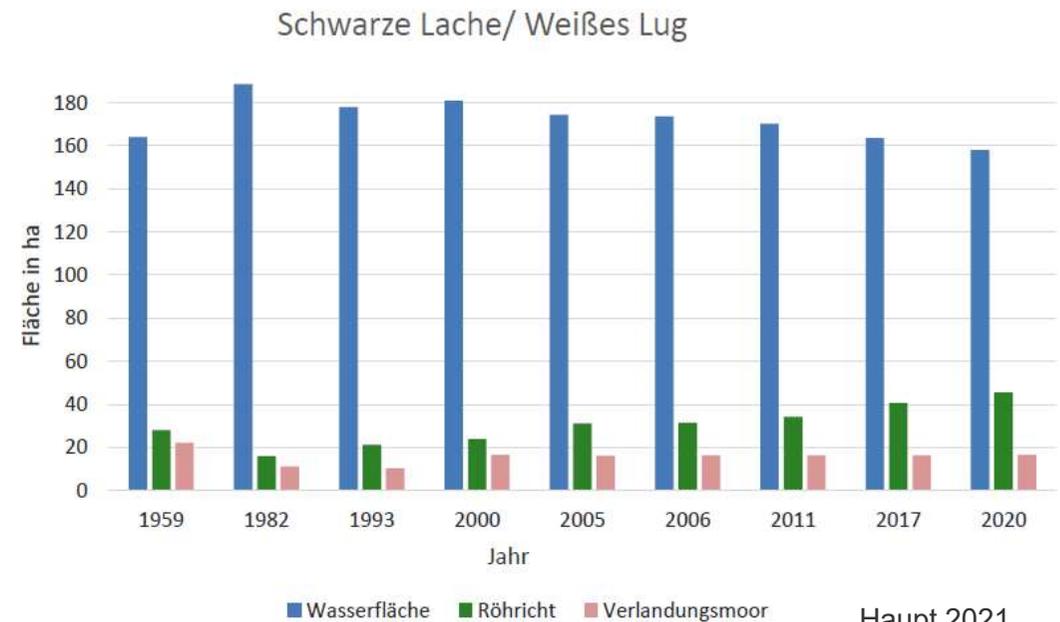
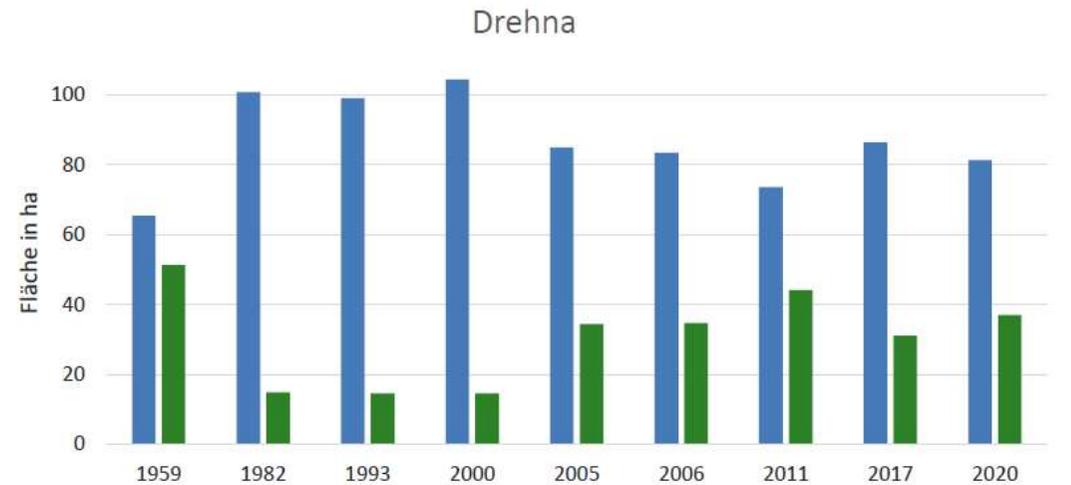


median size 4.9 ha
few large ponds from reconstruction 1970-1990
and new ponds after 1990

Pond structure

- | Reed cover variable, some small overgrown ponds
- | reed removal during reconstruction 1970-1990
- | after 1990 increasing reed cover in most ponds, still less emergent vegetation other than reed and cattail (e.g. sedges, rushes)

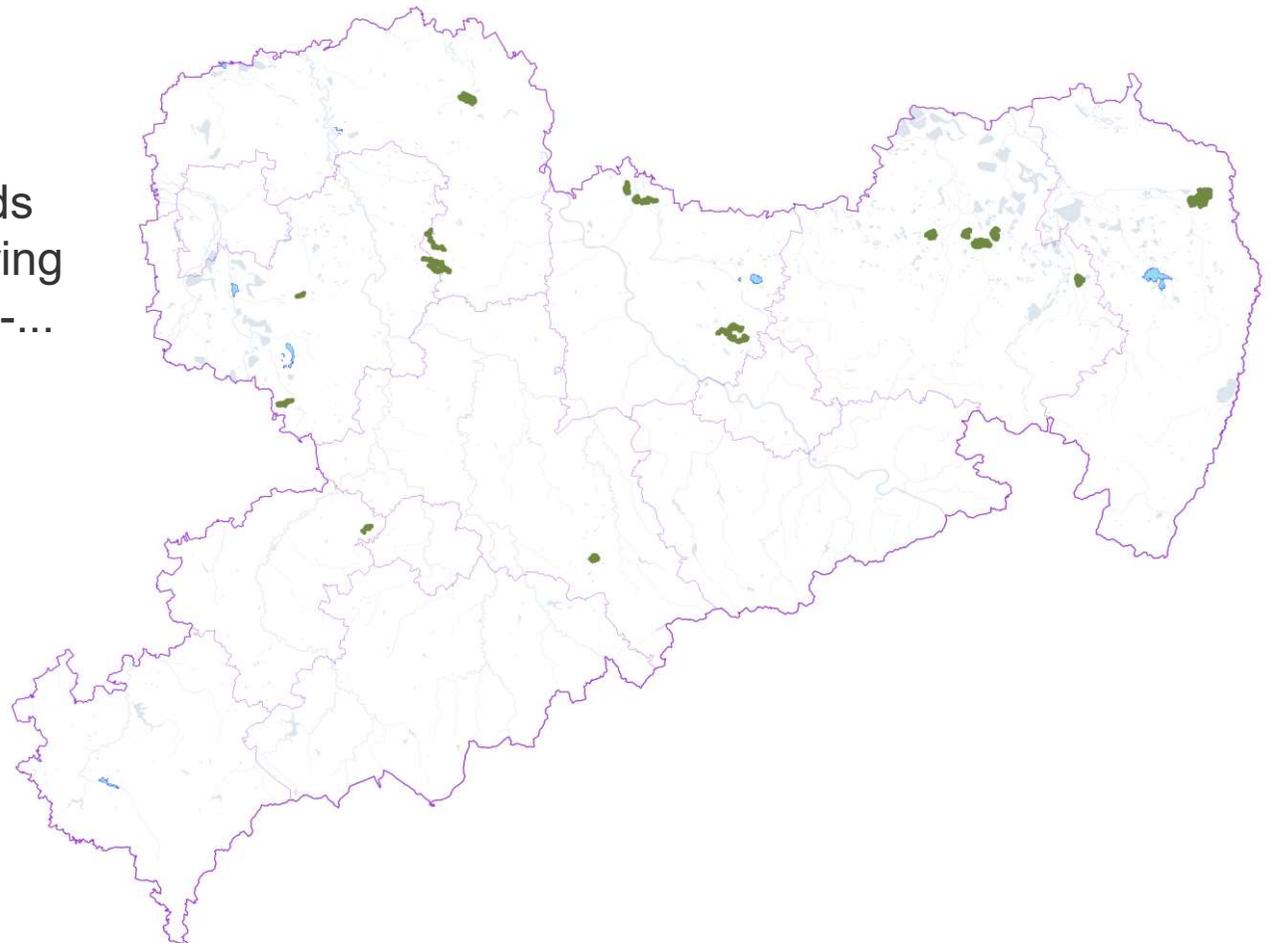
Biosphärenreservat
Oberlausitzer Heide-
und Teichlandschaft



Haupt 2021

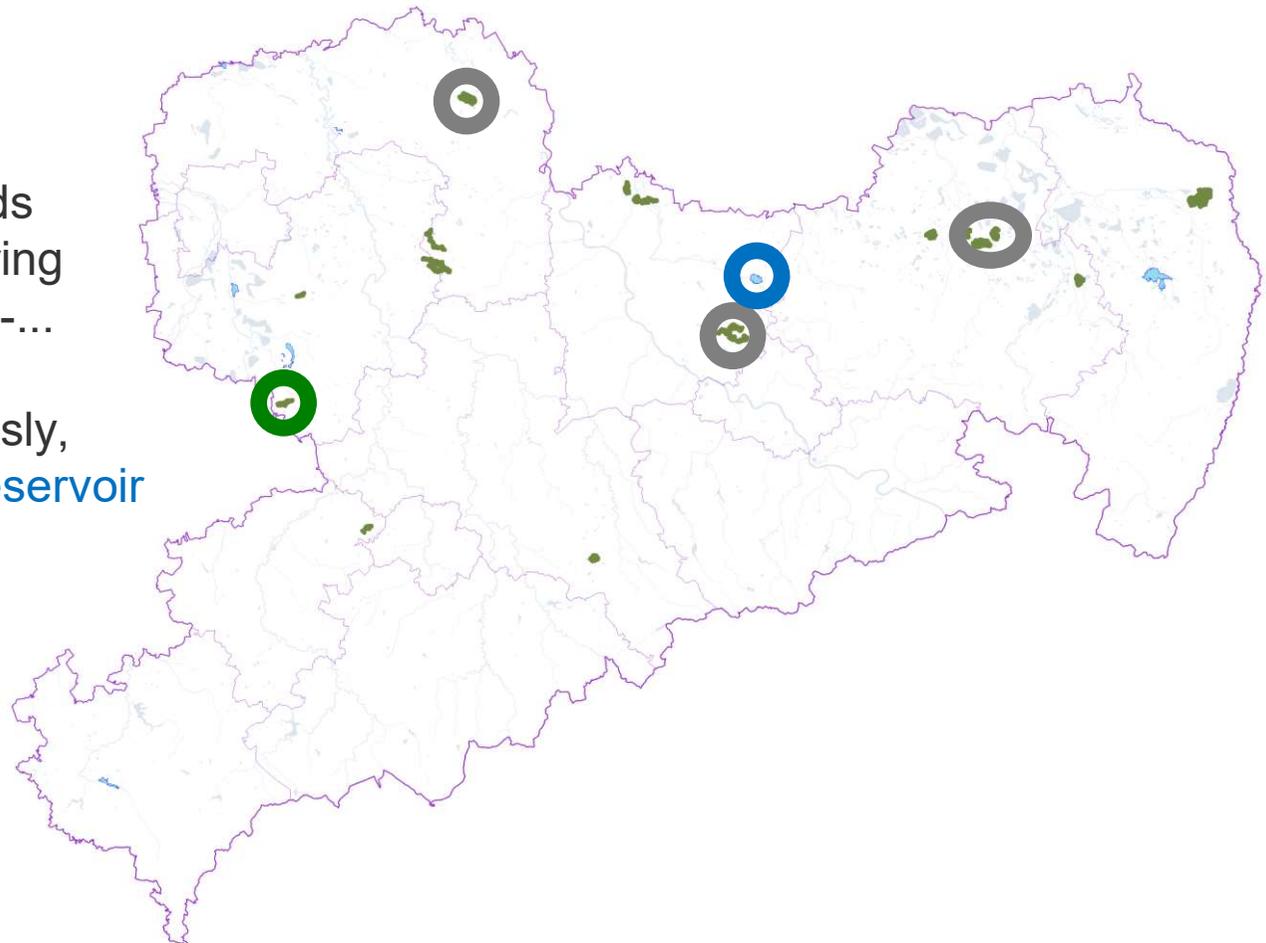
Breeding waterbird monitoring

- | 15 carp pond areas
- | surveys of breeding waterbirds (territories, pairs, broods) during 2000-2003, 2014-2017, 2022-...



Breeding waterbird monitoring

- | 15 carp pond areas
- | surveys of breeding waterbirds (territories, pairs, broods) during 2000-2003, 2014-2017, 2022-...
- | several sites surveyed previously, including a **protected area**, **reservoir**

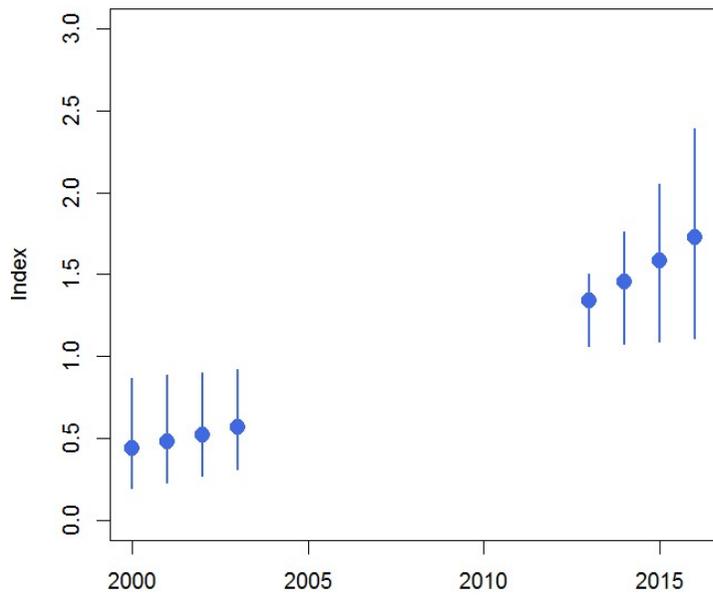


Trends

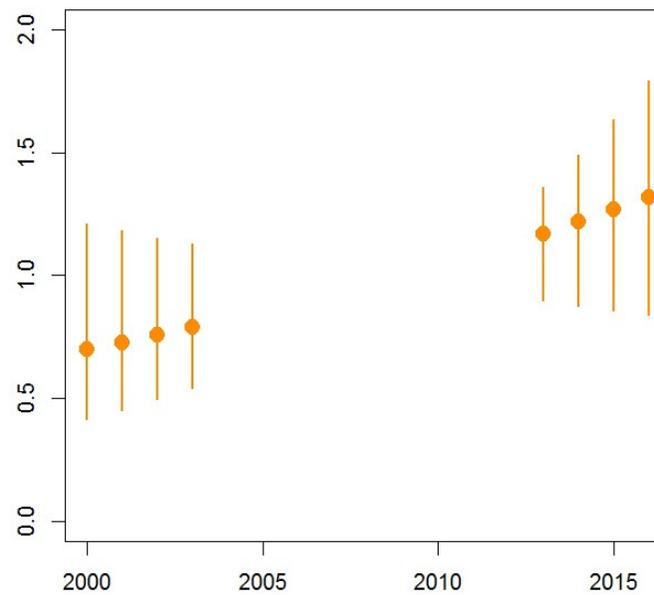
- Reedbed breeders: recent increases



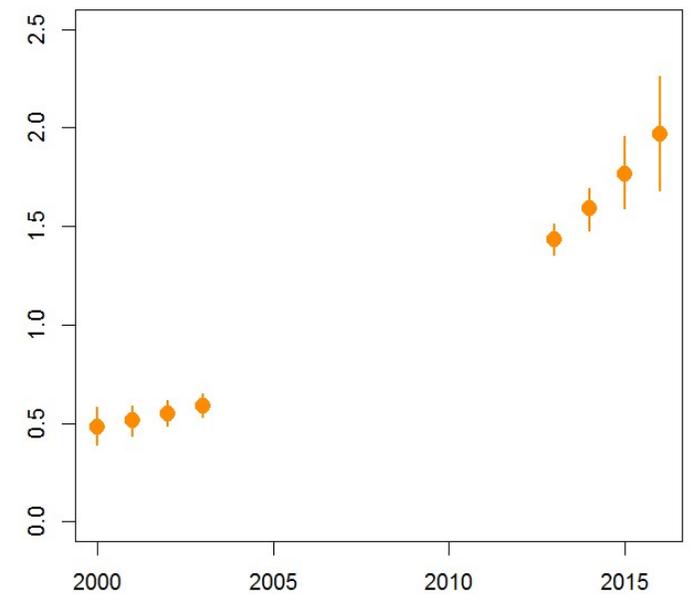
Moorhen



Water rail



Great reed warbler

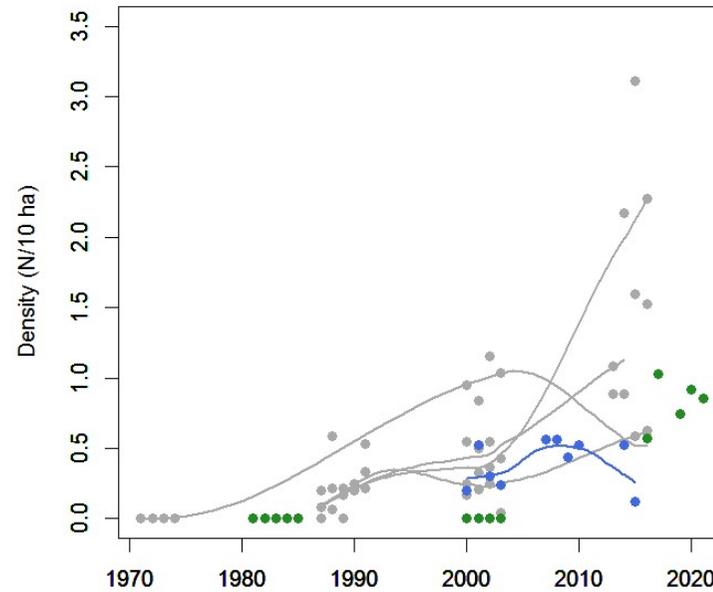


Trends

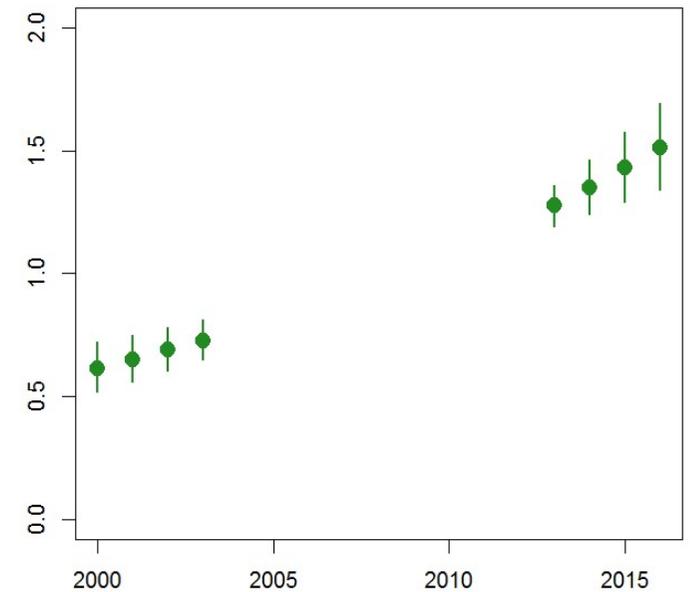
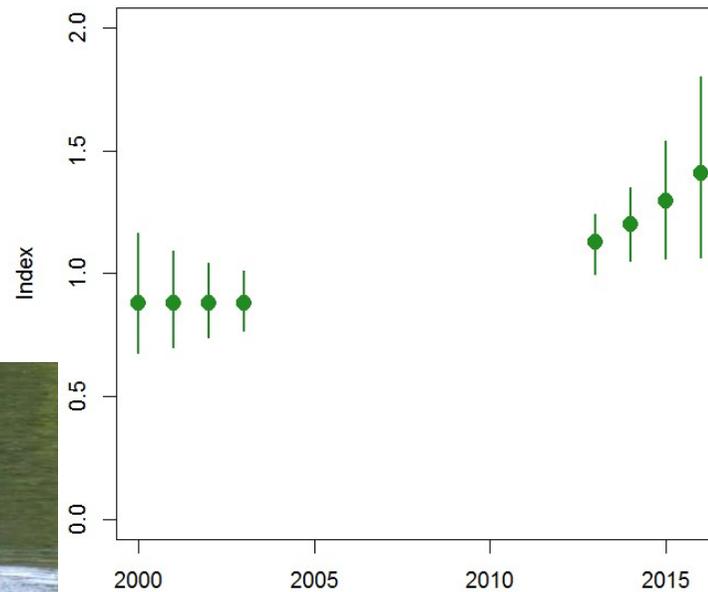
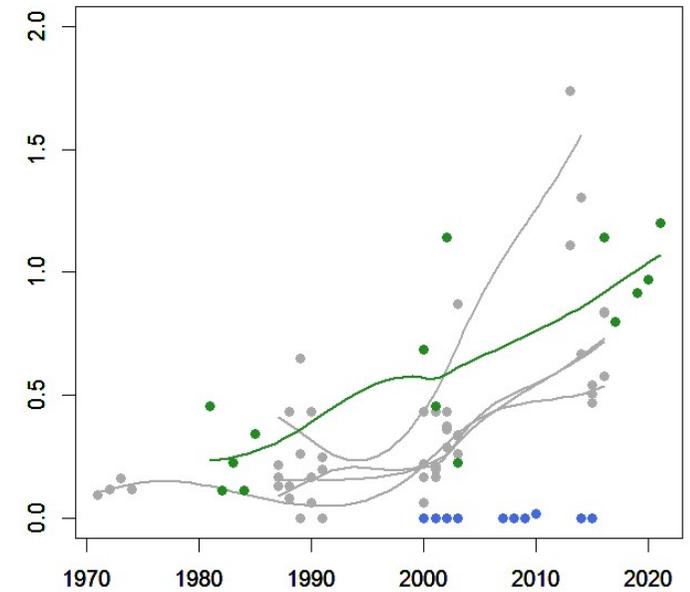
- | Large herbivores: colonisation >1920, strong increase
- | importance of grazing on land outside ponds
- | increase throughout Europe in 20th century



Greylag goose

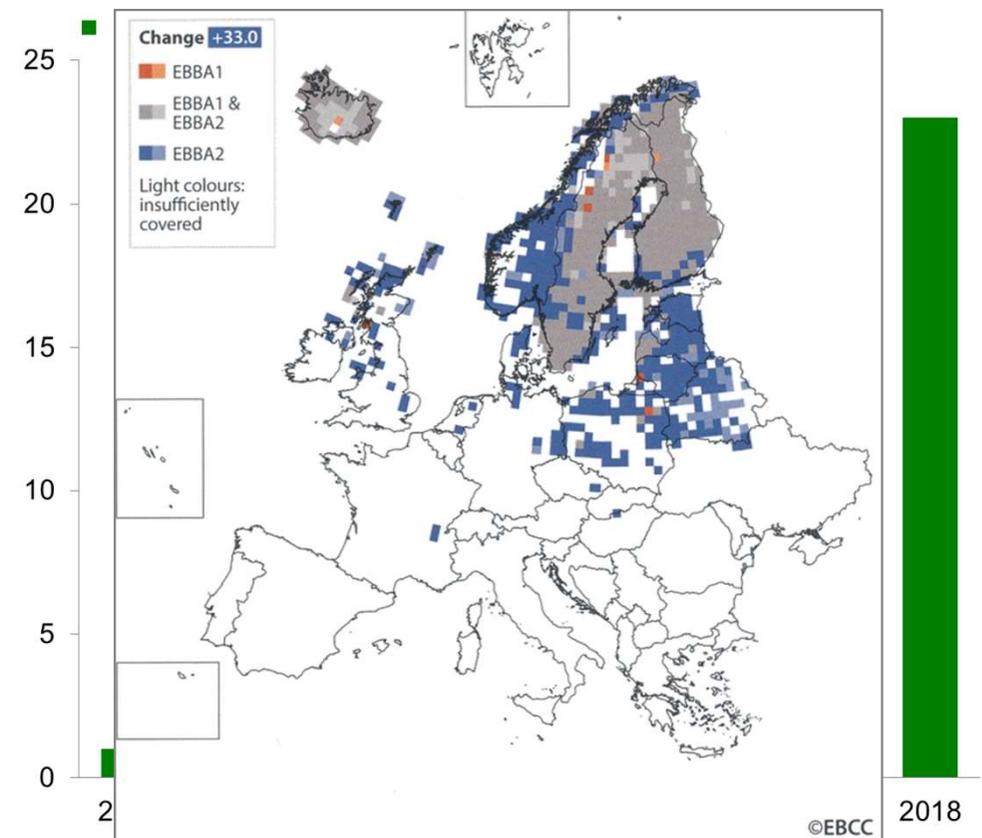


Mute swan



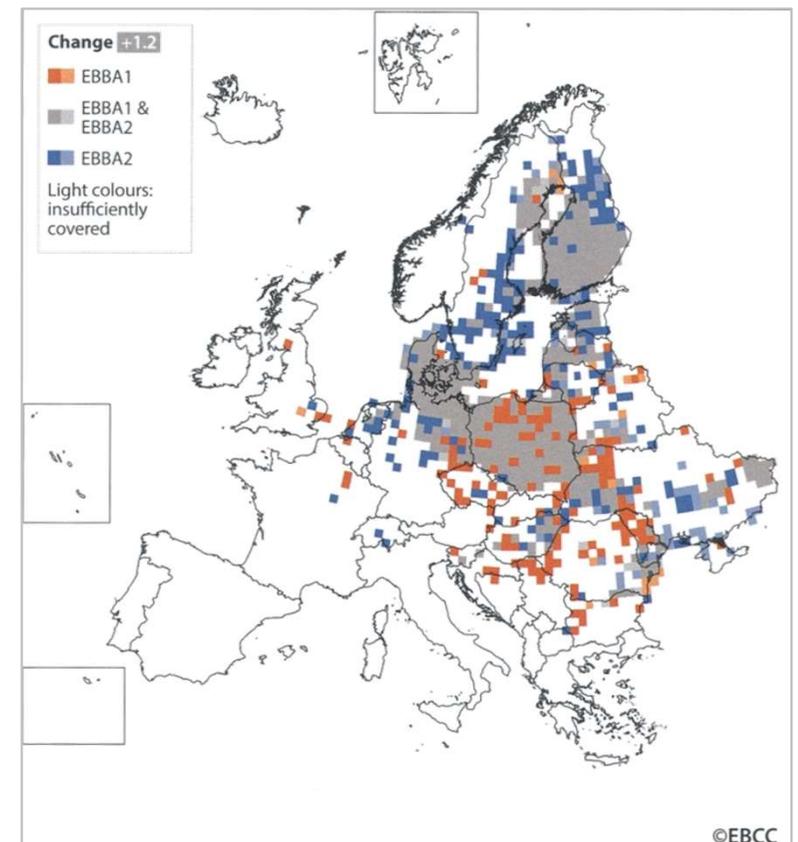
Trends

- | Whooper swan – first breeding in 1998, now > 50 pairs
- | on ponds with well developed reed and submerged vegetation



Trends

- | Red-necked grebe: continuous decline from > 200 pairs (~1960) -> 0 on fishponds
- | large scale trend in continental inland habitats
- | lack of suitable ponds in spring, range shift ?



Trends

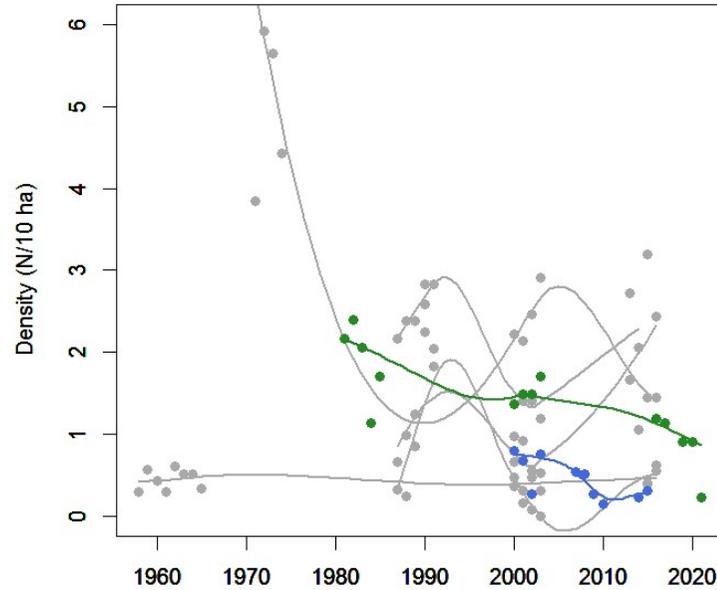
- Contrasting trends of common dabbling ducks (also in winter)

- Gadwall: regular breeder <1960

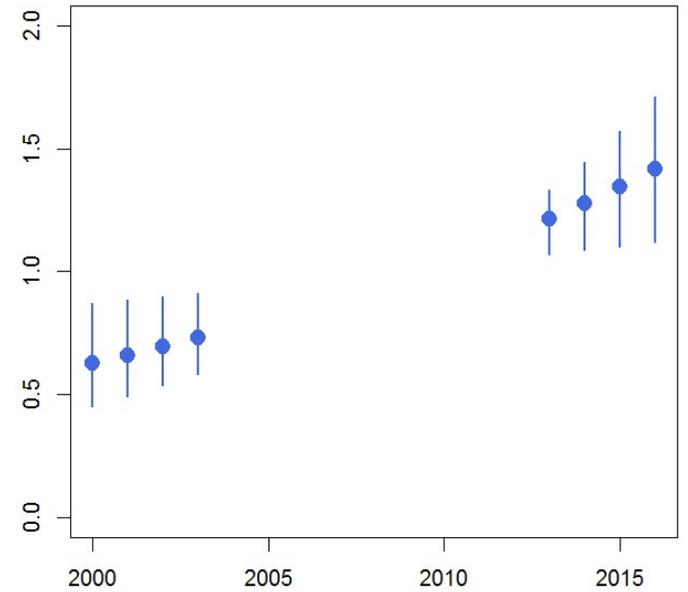
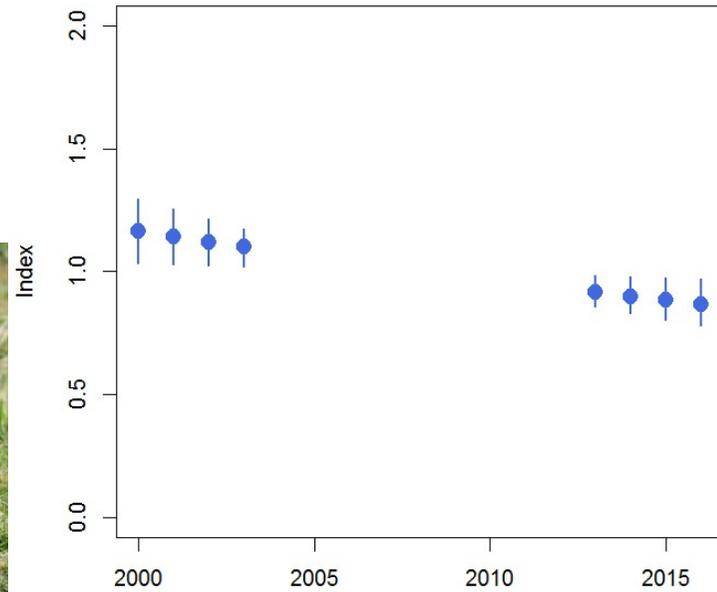
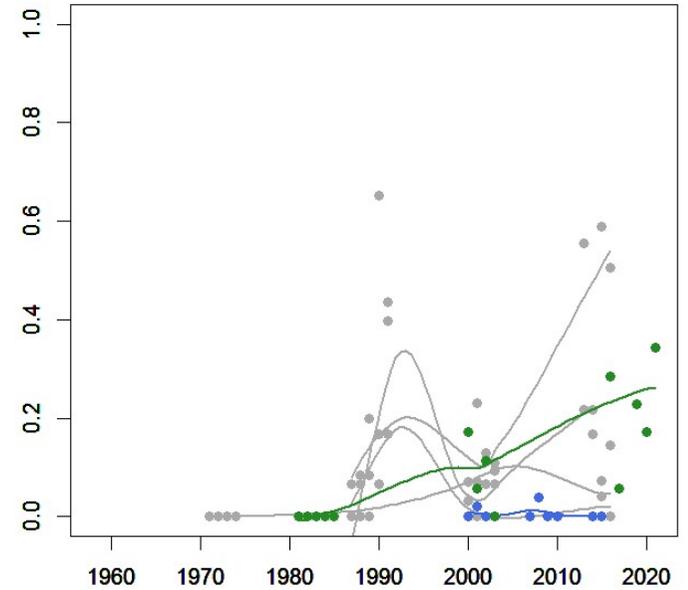


A. Hejland

Mallard

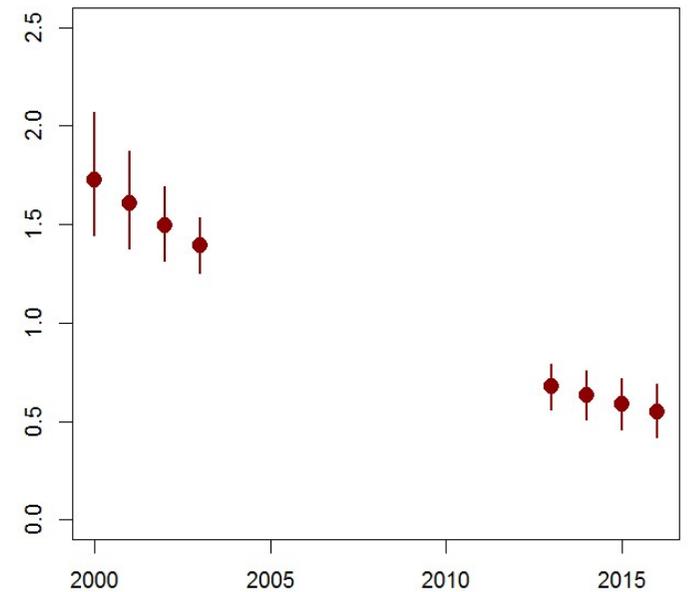
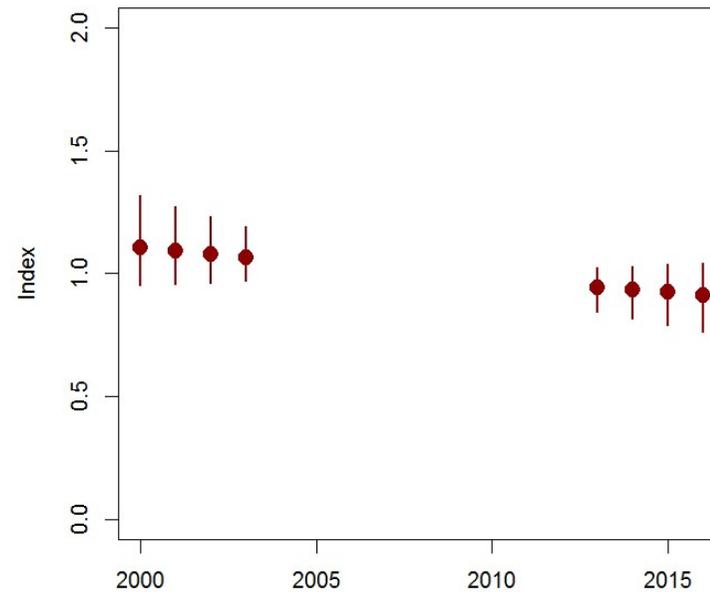
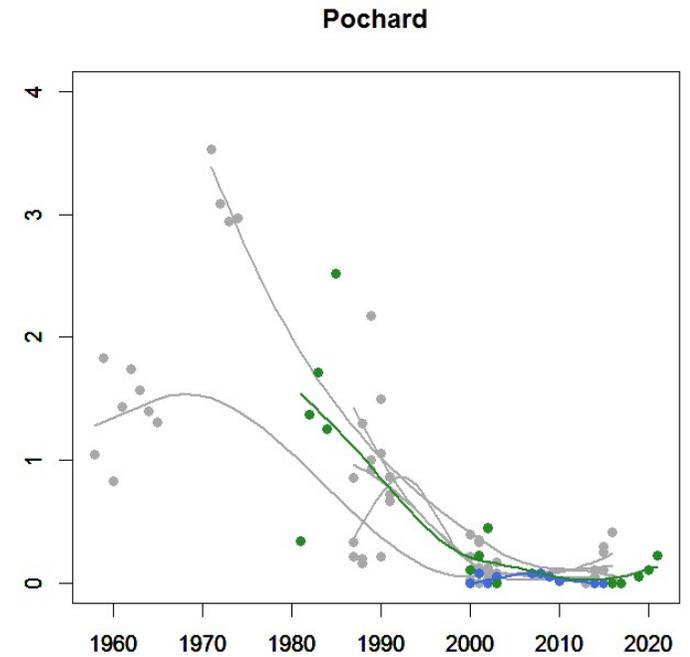
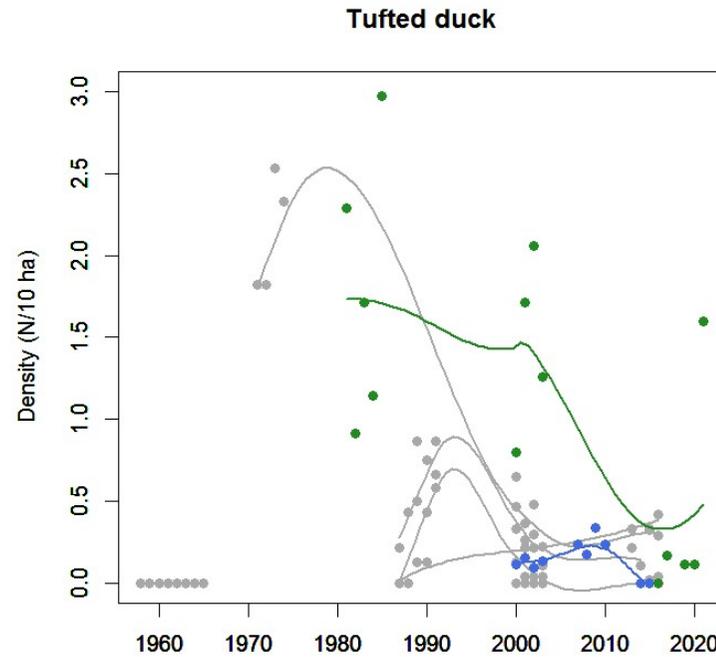


Gadwall



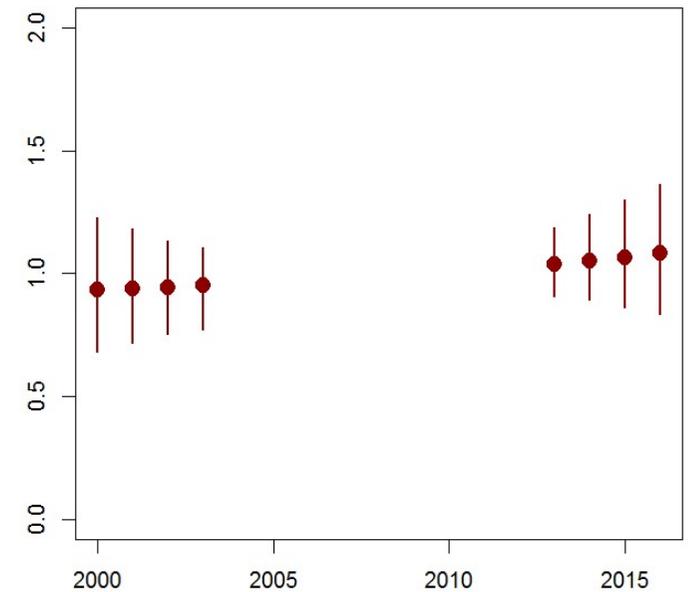
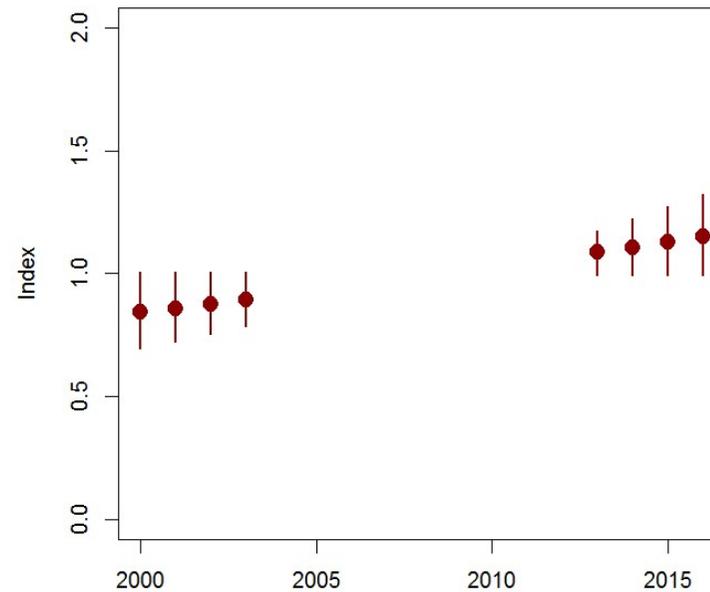
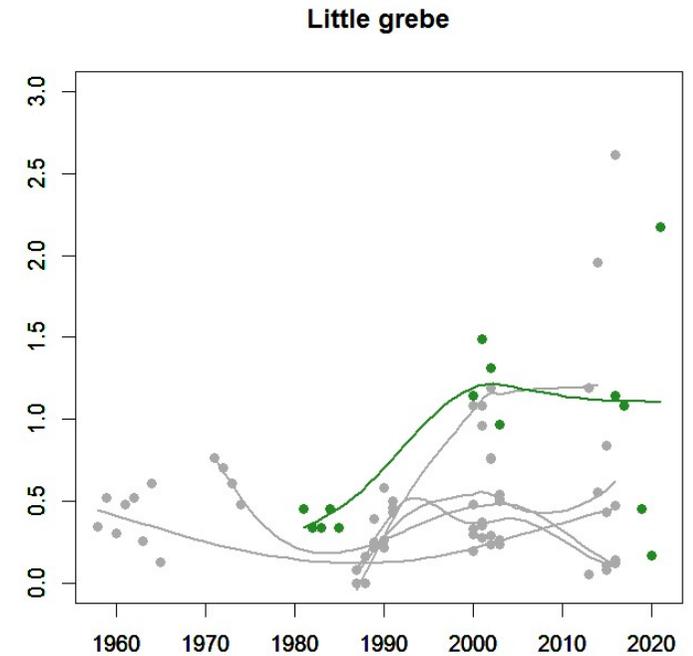
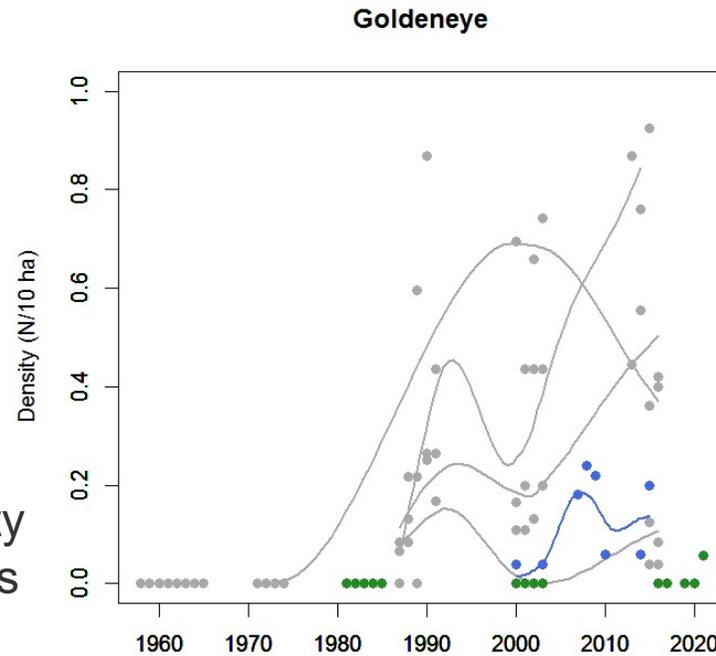
Trends

- | Benthic/omnivorous ducks: declines of ground-breeding species
- | Tufted duck only locally <1950
- | Ferruginous duck common <1950, peak numbers of Pochard ~1940 (2nd most abundant duck)



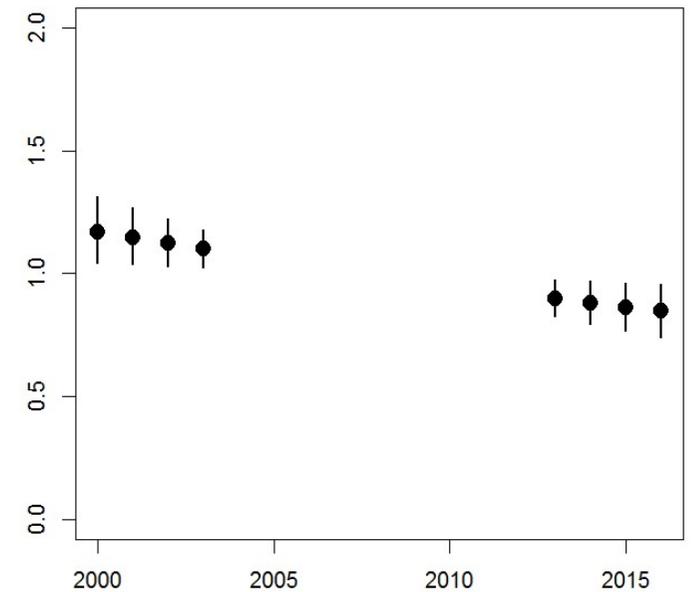
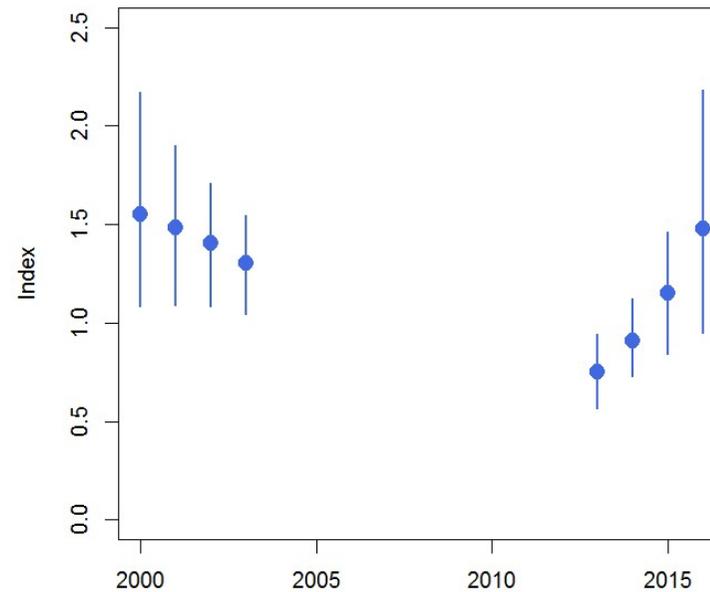
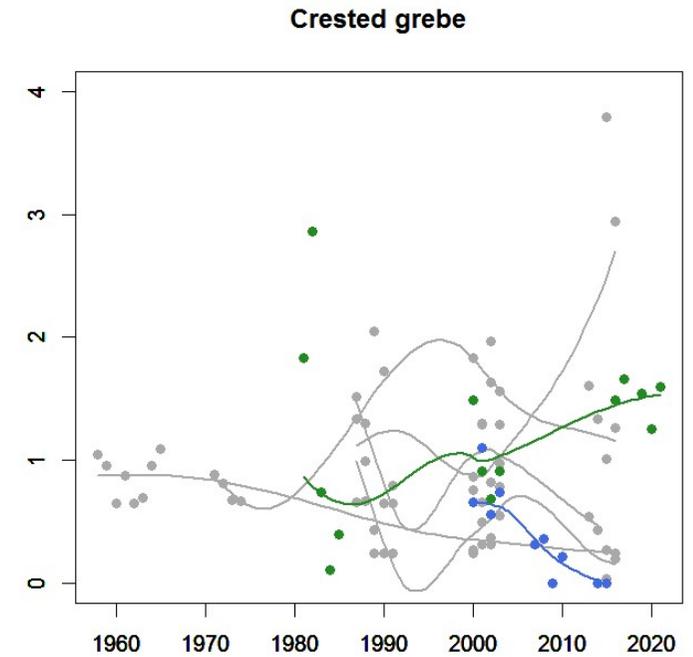
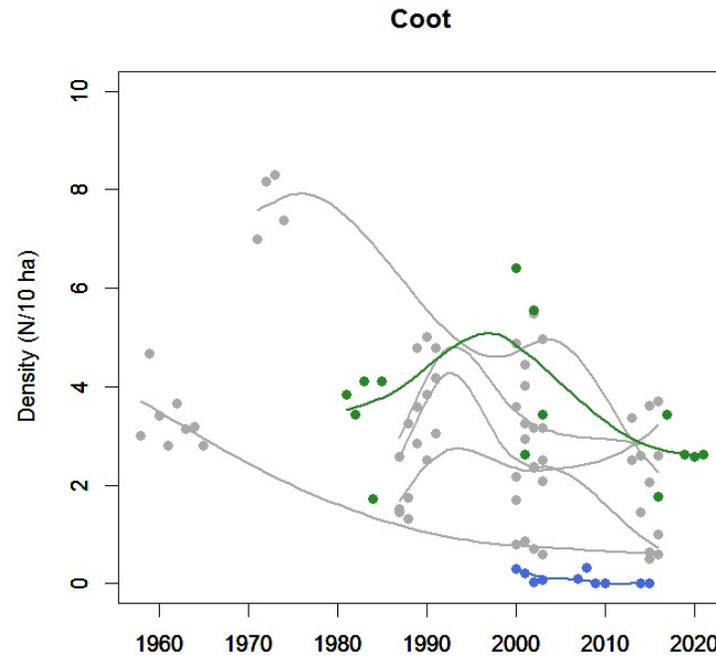
Trends

- Increasing numbers of reedbed and cavity breeding insectivores
- may benefit from water quality, reduced stocking, submerged vegetation
- Goldeneye: peak numbers in 1930s, disappeared after 1942



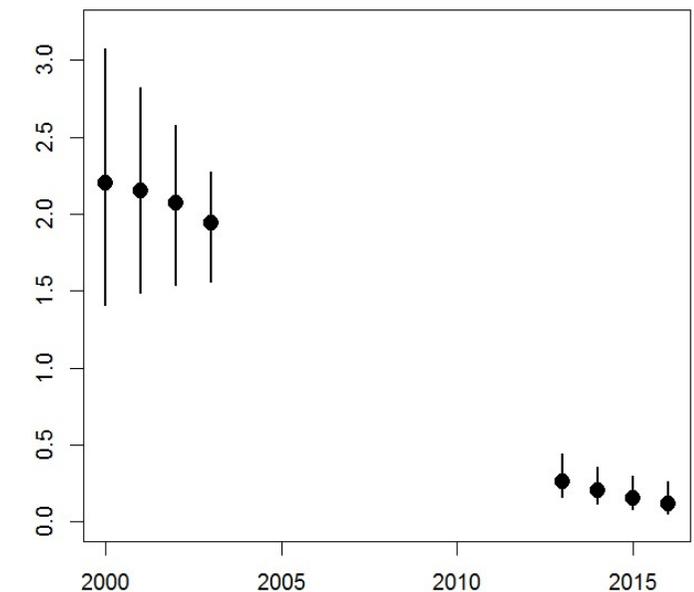
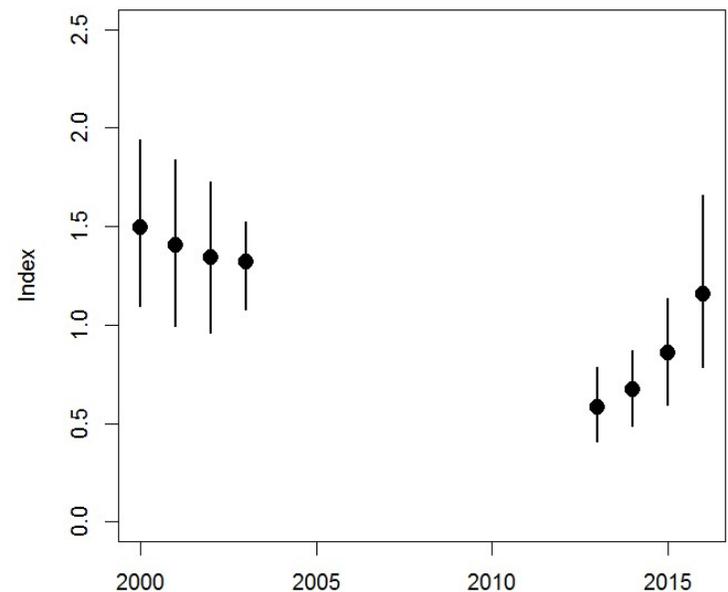
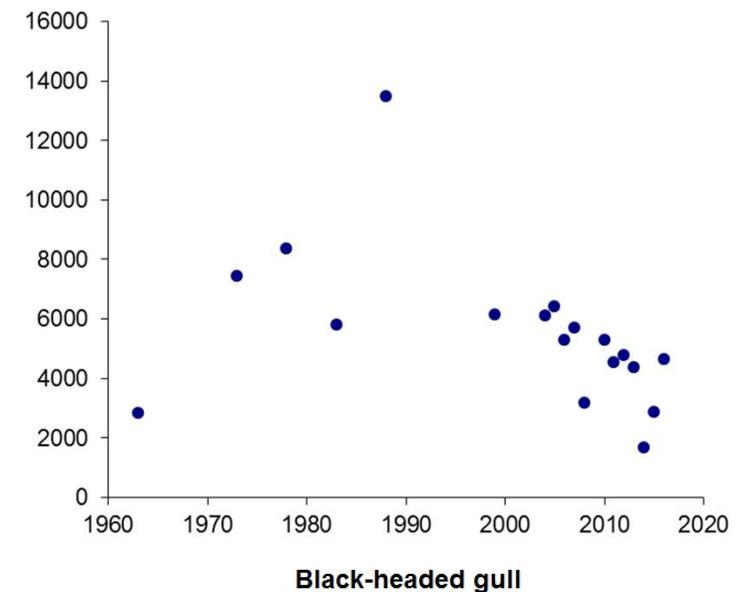
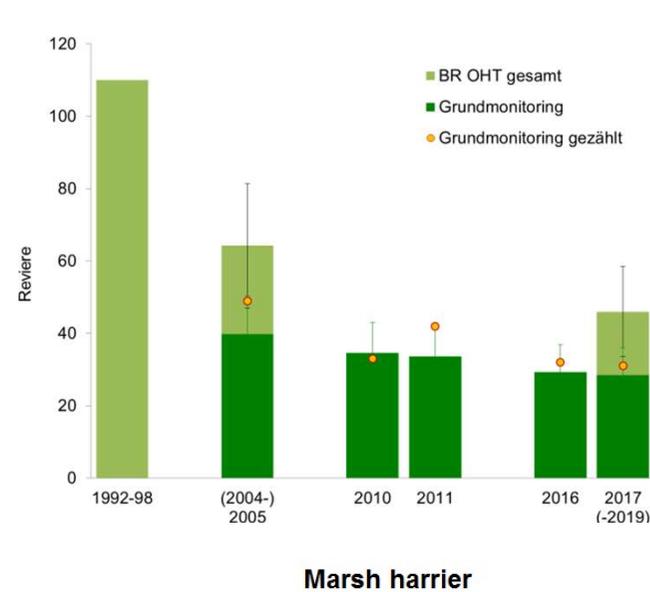
Trends

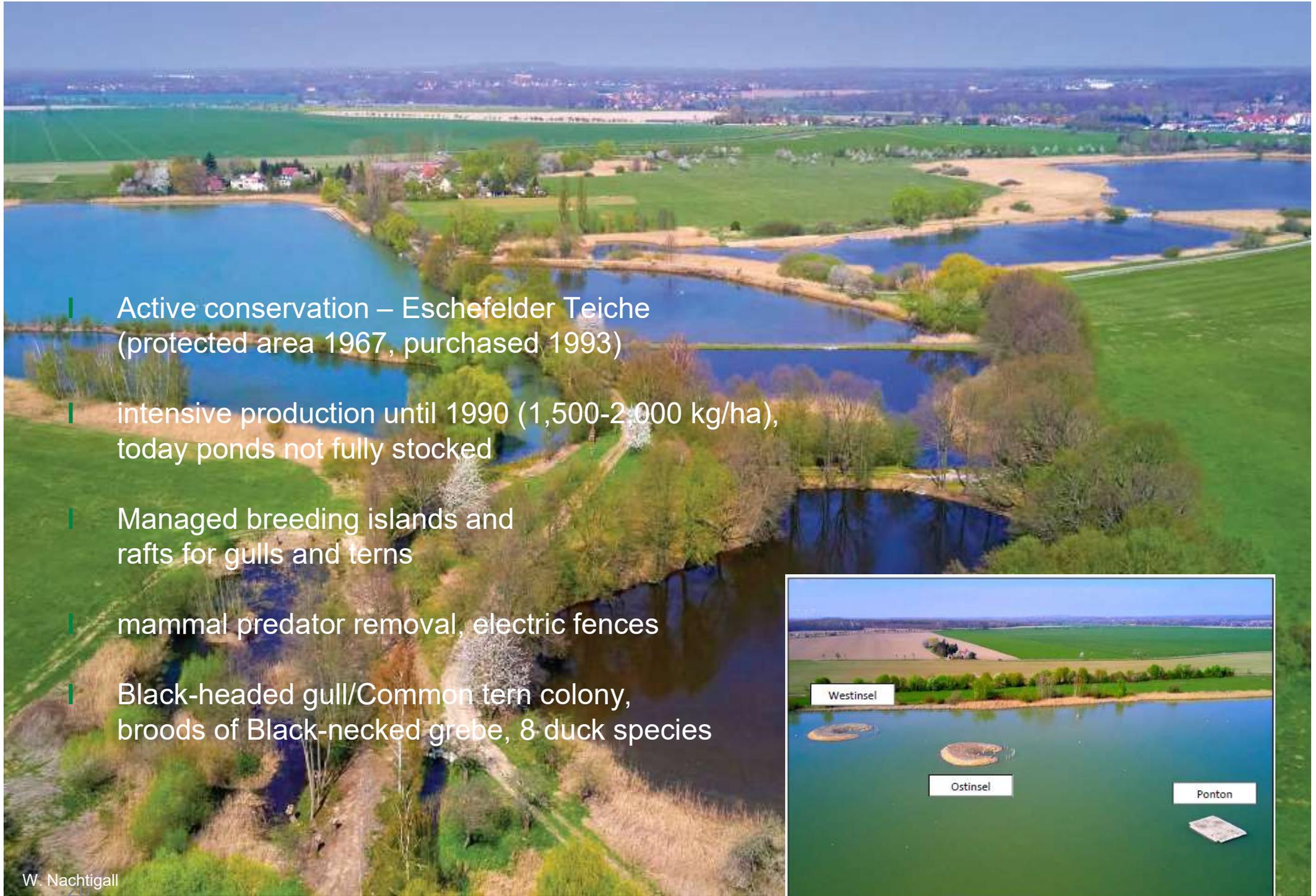
- Recent unexplained declines in still common species
- Raccoon predation suspected
- Effect of stocking regime (Carp age class) ?



Trends

- | Terrestrial feeders
- | Lack of food, increasing nest predation?
- | Gull colonies are important for other Black-necked grebe and ducks





- | Active conservation – Eschefelder Teiche (protected area 1967, purchased 1993)
- | intensive production until 1990 (1,500-2,000 kg/ha), today ponds not fully stocked
- | Managed breeding islands and rafts for gulls and terns
- | mammal predator removal, electric fences
- | Black-headed gull/Common tern colony, broods of Black-necked grebe, 8 duck species

Conclusions

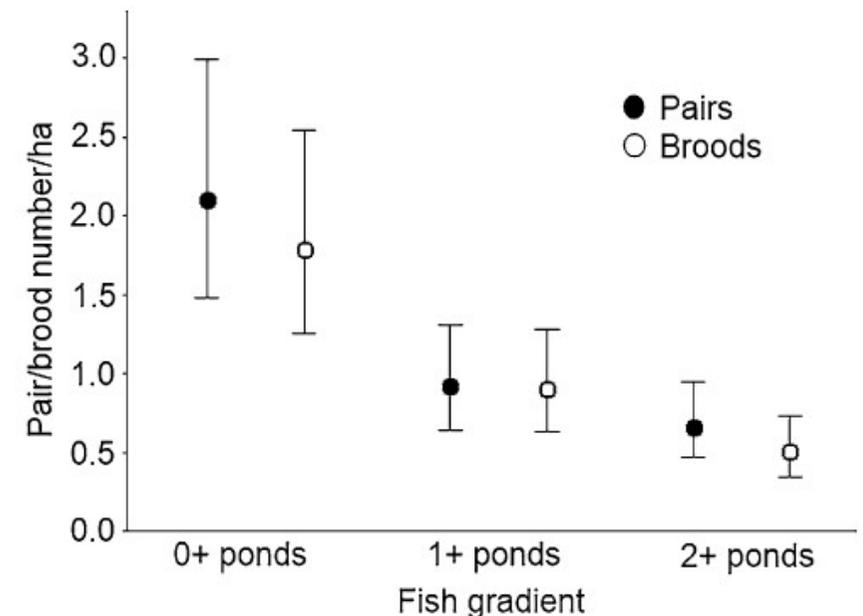
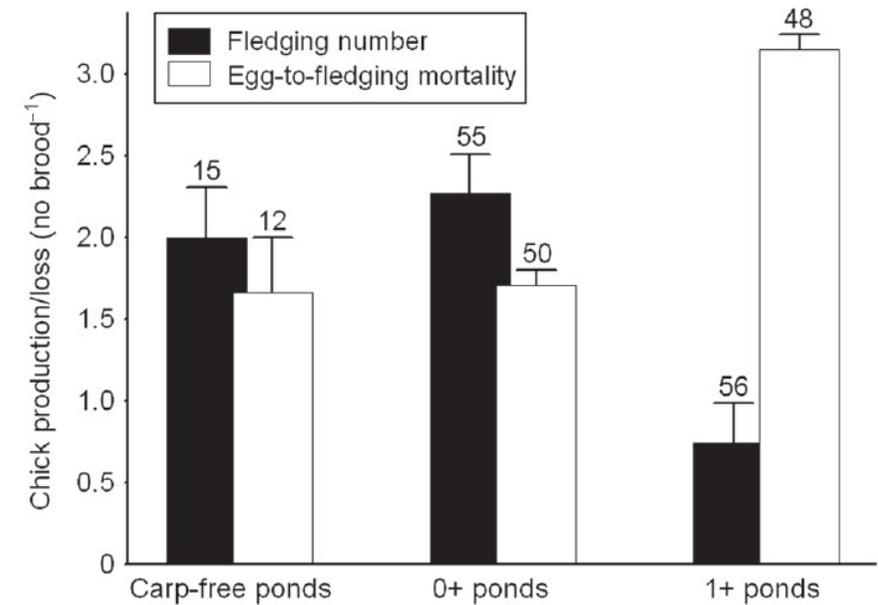
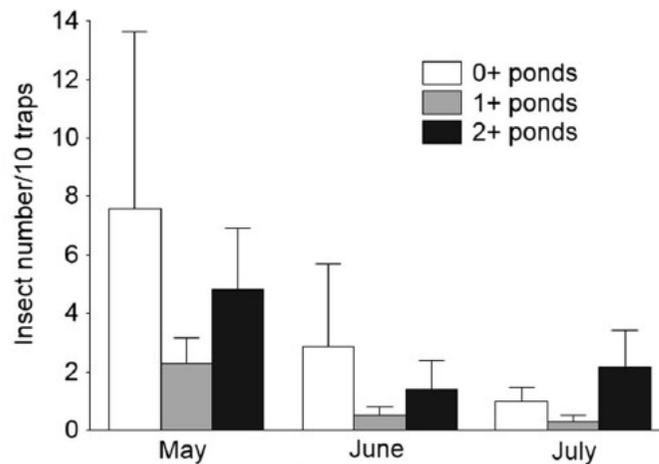
- | Increases and decreases happened over the last 100 years (peak numbers of many ducks before WWII) – waterbird communities are not static
- | Current trends are observed across countries and habitats – not (only) driven by local fishpond management
- | Effects from surrounding environment: herbivore food resources on land, increasing numbers of ground predators (Red fox, Raccoon)
- | Effects of reduced nutrient input and stocking (and climate change) vary with species – more reed and submerged vegetation, possible food shortages for some species
- | Active management for conservation can make a difference

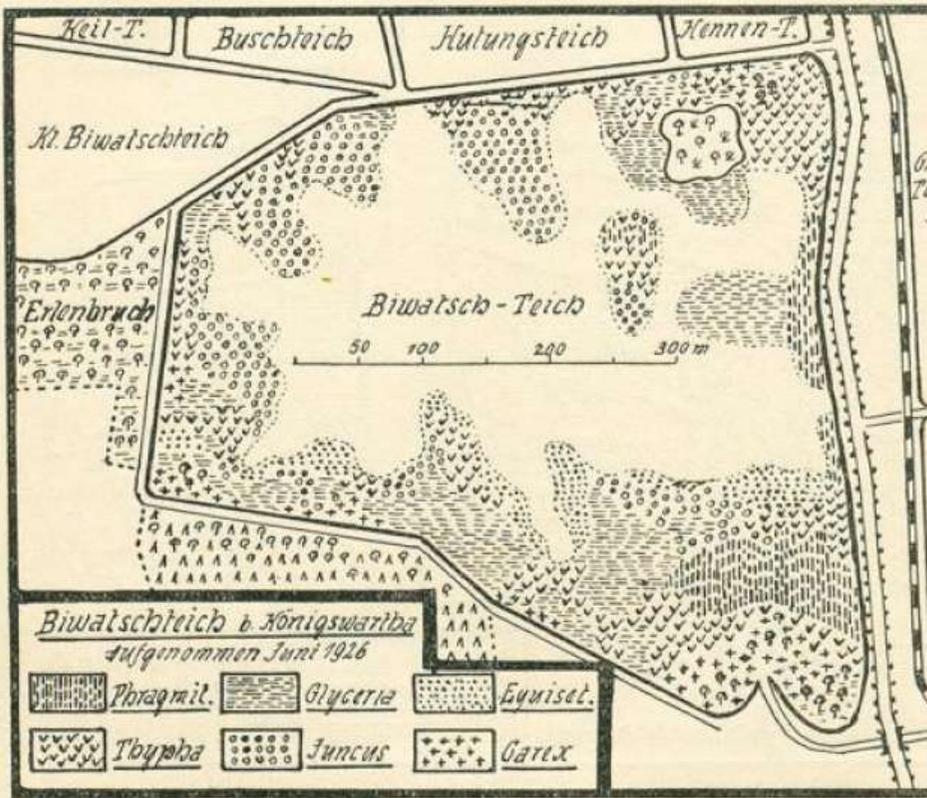


Thank you
Gert Füllner, Winfried Nachtigall, Dirk Weis for data and figures
Petr for invitation to this workshop
and for your interest

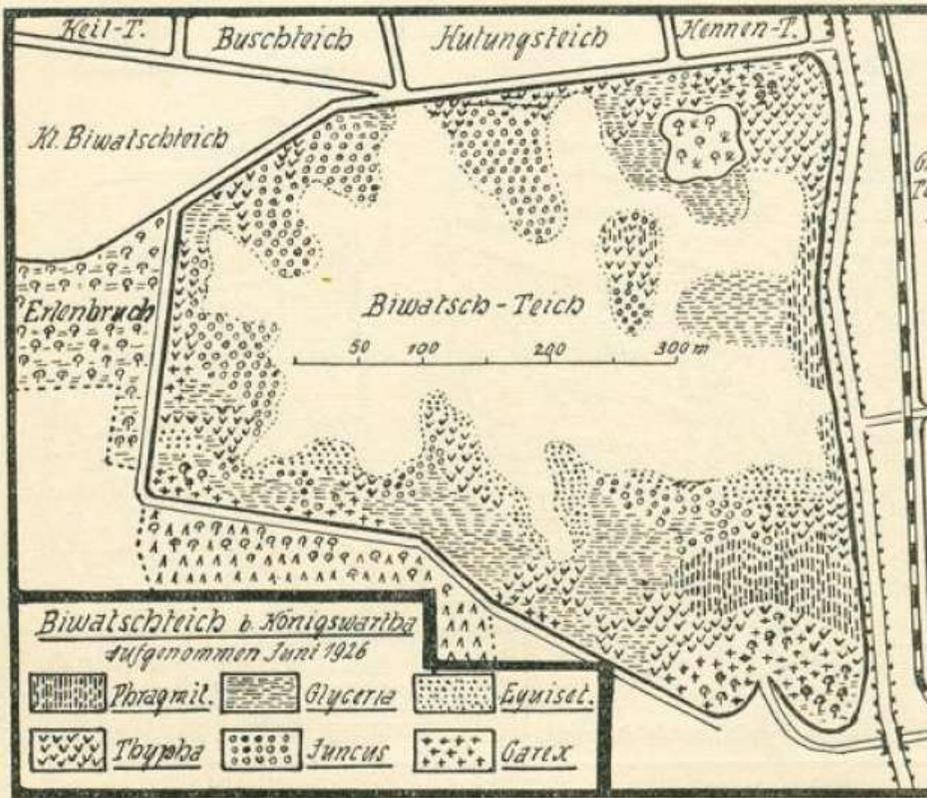
Carp age – 0+ ponds

- No/weak food competition from 0+ carp – favourable for Red-necked grebe, Coot, amphibians, ... (J. Kloskowski)
- nowadays empty until end of May – late for mo breeding birds (except Moorhen, Little grebe)
- Unstocked ponds as alternative





	Pairs 1925-1932	Pairs 2014-2015
Greylag goose	0	2-3
Mute swan	0	1-2
Mallard	10	2-3
Gadwall	2-3	1
Shoveler	1-2	0
Garganey	2-3	0
Teal	2-3	0
Ferruginous duck	1-2	0
Pochard	6-8	0-1
Goldeneye	1-2	1-2



	Pairs 1925-1932	Pairs 2014-2015
Crested grebe	2-3	1-3
Red-necked grebe	1-2	0
Black-necked grebe	6-10	0
Little grebe	5-6	1
Crane	0	1
Coot	10-12	3-4
Moorhen	2-3	0-1
Water rail	3-4	0
Black tern	20-30	0
Great reed warbler	8-10	6-8
Sedge warbler	10-15	0