



UNIVERSITÄT  
HOHENHEIM



# **From science (not) to practice: case example yellow bellied toad**

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# Yellow-bellied toad: Protection status and habitat requirements



## ➤ Protection status - strictly protected

- listed in Annex II and IV of the EU Habitats Directive
- national responsibility species - (South-) Germany a global center of distribution
- priority species for BW under the EU restoration directive

## ➤ Conservation Status

- unfavorable - bad (national assessment under the Habitats Directive)
- Red list „strongly endangered“ (RL2)
- strongest decline of all amphibian species in the state

## ➤ Pioneer species (habitat dynamics)

- predator free reproduction sites considered as bottle-neck for the conservation of the species
- reproductive success linked to turnover of small ponds or puddles (habitat dynamics)



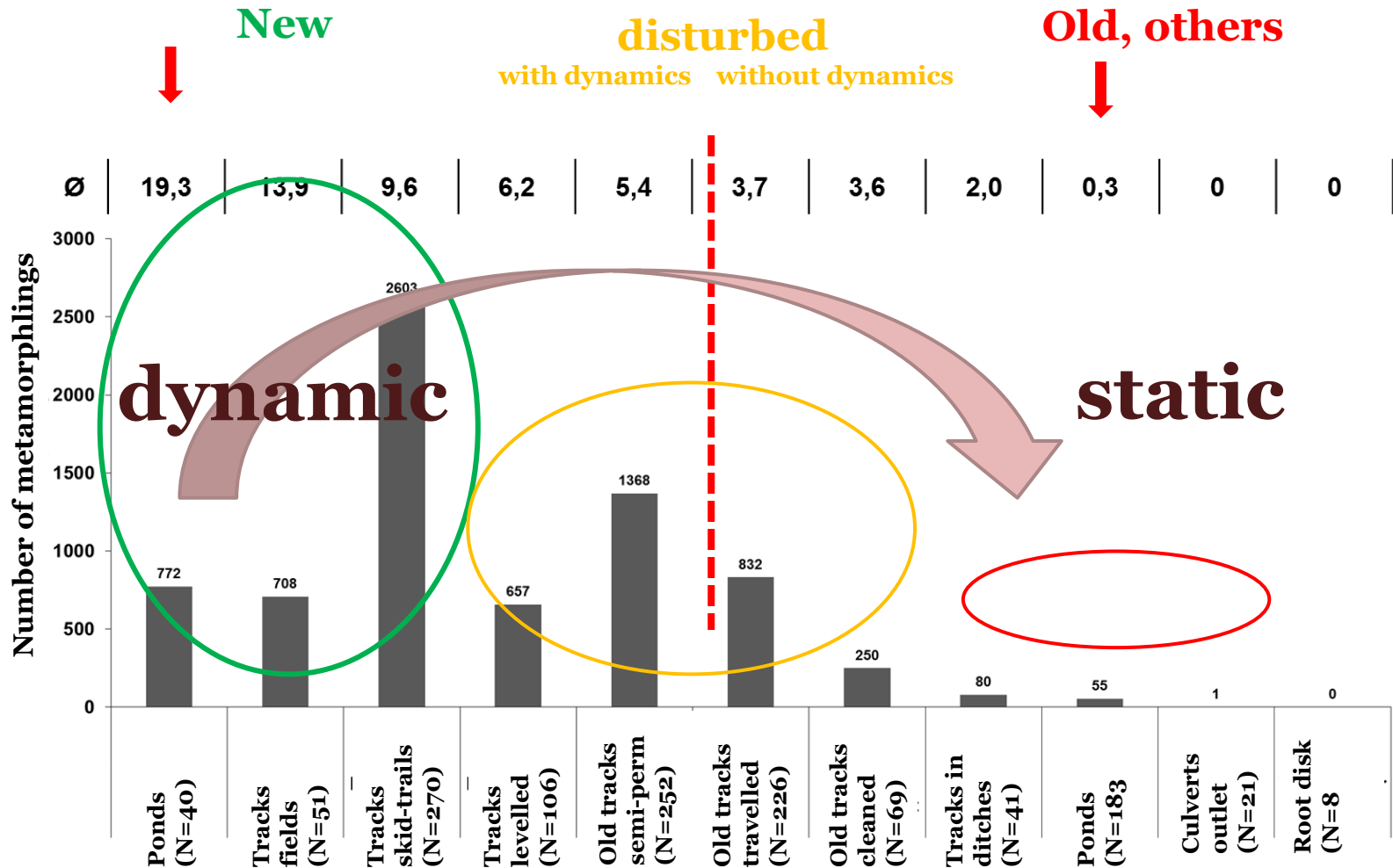
# Research project „Management of the yellow-bellied toad“ (2018-22)

## Types of waterbodies assessed for reproductive success (n = 1.267)

- **New**  
new ponds, truck track-puddles (skid-trails, tracks on fields)
- **Disturbed**
  - with dynamics - leveled and re-established, semi-permanent
  - without dynamics - cleaned but no drying, permanent with traffic
- **Old, others**  
old ponds or puddles, culverts (outlets), root-disk puddles



# Results – reproductive success





# Management Recommendations (knowledge based-dynamic)

- Assure turn-over of puddles suitable for reproduction
  - Leave/establish freshly developed puddles for the reproductive period (April – October)
  - Remove/level puddles after the reproductive period (October/November)
- Integrate puddle dynamics into management of fields:
  - establish „Wildäcker“ at suitable sites (wet spots)
  - use wet patches in regular crop fields
- Segregate puddles for yellow bellied toad reproduction from permanent water bodies and associated predators – reject the Laufer „pond-puddle complex for all species“ approach





# State program for Amphibian protection (LAP)

(2nd draft, Laufer et al. 2025)

## Management recommendations (opinion based-static)

- regularly establish new puddles  
Problem: suitable sites for establishment are (very) limited
- protect existing puddles, do not level puddles  
Problem: puddles unsuitable for toad reproduction in second year, predator built-up
- protection of amphibians in „pond/puddle complexes for all species“ with a central permanent pond  
Problem: foster mass occurrence of predators immediately adjacent to ponds established for toads
- within complexes, foster temporary water holding capacity in small puddles  
Problem: main drought period (evapotranspiration) corresponds to the main reproduction period of the toads
- ask farmers to transform grain fields into puddle fields  
Problem: farmers unlikely to cooperate

# LAP vs. Uni HOH – compare success

## LAP – Life+ „Rund ums Heckengäu“ (Laufer, 2013)

- 191 toad ponds/puddles (37 complexes) established 2015/16

## Results toad monitoring in 2024/25 (Dieterich & Genthner)

- toads recorded in 5 ponds, tadpoles recorded in 1 pond
- 186 ponds without toad activity

## Uni HOH – long term project site Talwald

- >2.000 ponds/puddles (since 1997), management focussing on dynamics (disturbance and pond turnover)

## Results of monitoring according to the provisions of the habitats directive (Raichle, 2023)

- 30 sites assessed in the central part of the State including the Talwald site
- conservation status of population in Talwald – excellent (best of all sites assessed)



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# Efforts to bring science to practice

## ➤ Kombiota statements

- Statement with regards to the first draft of the LAP – no apparent consideration of key points
- Statement with regards to second draft – response pending

## ➤ Expert statements

- Uni HOH – Prof. Dieterich (BfN expert for *B. variegata*)
- SMNS – State Herpetologist Alexander Kupfer

## ➤ Information for practitioners (brochure, workshops) – science into practice undermined by LAP

## ➤ Meetings and presentations





## Open question



**Will scientific findings be included in the Baden-Württemberg State management recommendations for the Yellow-bellied toad?**

**Or will the state contribute to undermine effective conservation of a key species in nature conservation?**