

# High mobility and flexibility in habitat use of pikeperch (*Sander lucioperca*) based on mark-recapture experiment in a deep reservoir

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## Introduction

Detection of stocked fish is crucial for assessment of the stocking success. Mark-recapture experiments of sensitive fish larvae are rare. Piscivorous fish as pikeperch have a key effect on maintaining high water quality in drinking water reservoirs.

## Methods

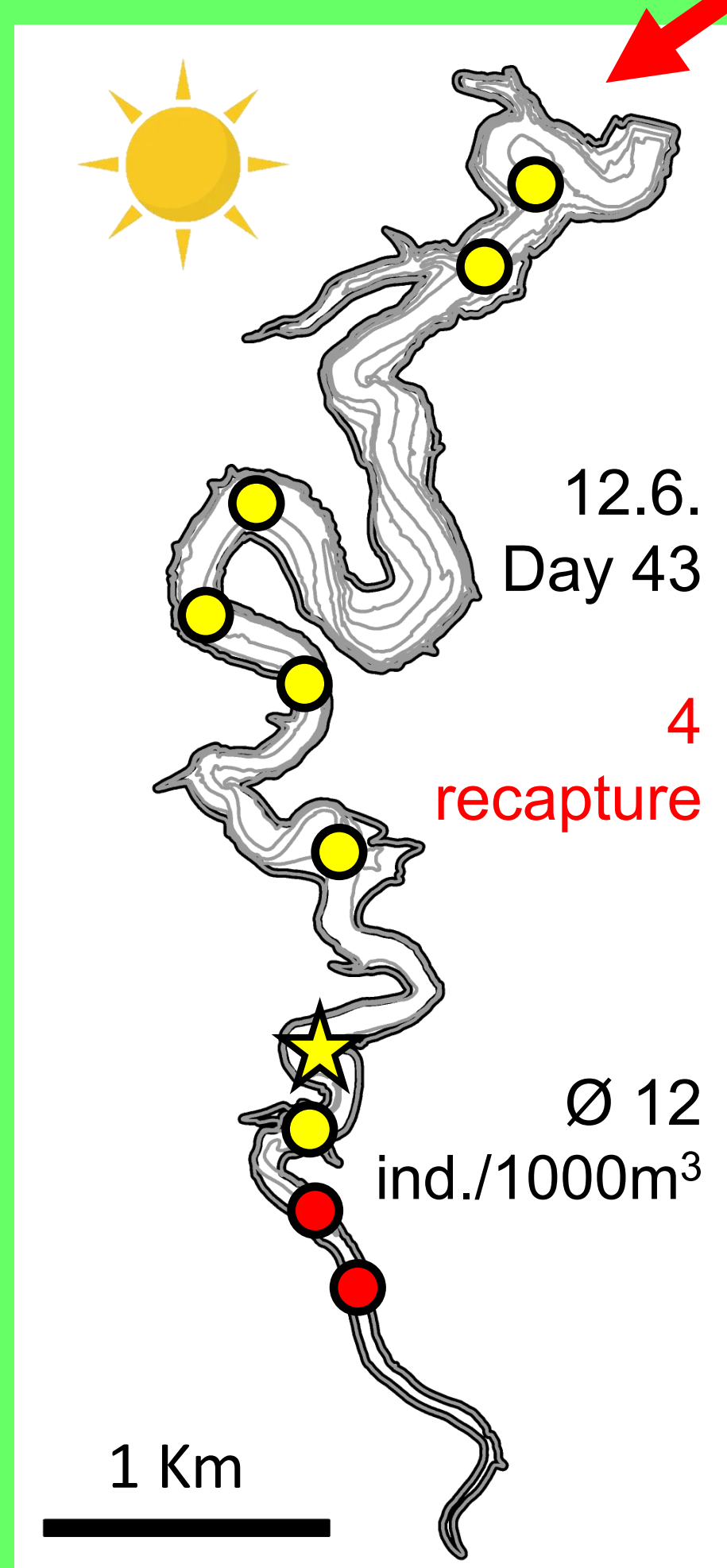
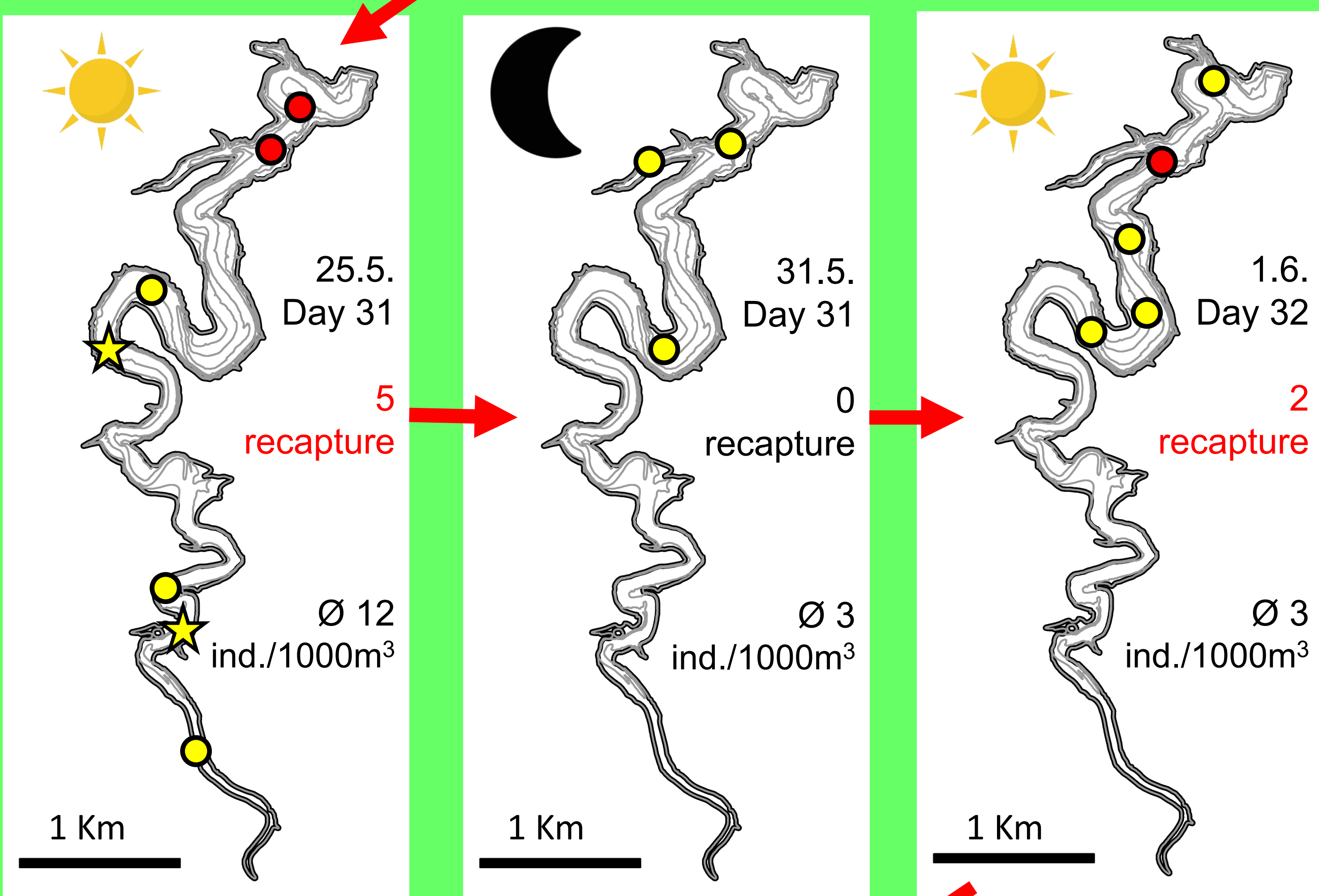
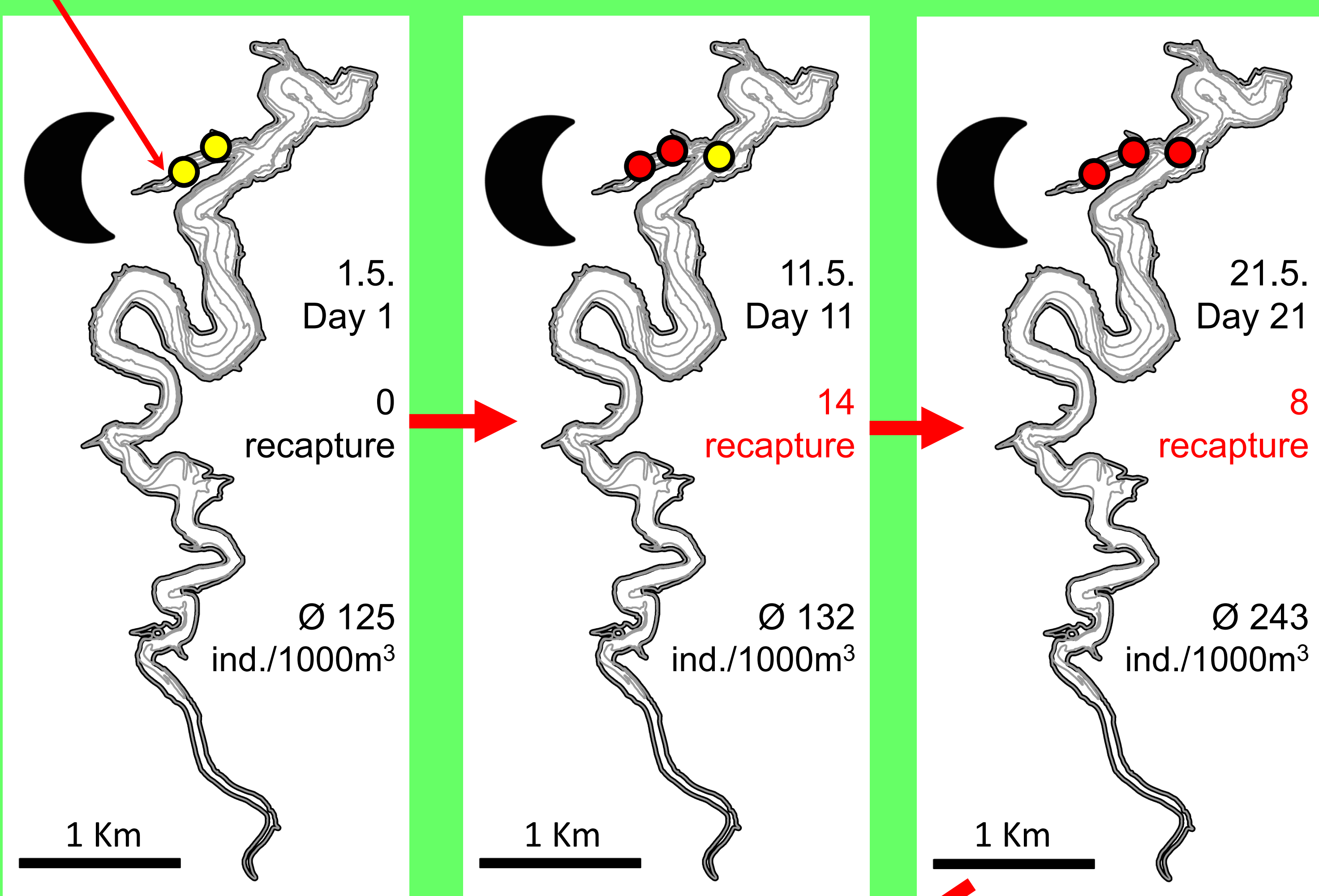
Early hatched pikeperch were marked by oxytetracycline hydrochloride in a hatchery and stocked in a semi-closed bay of Římov Reservoir in two consecutive years. Pikeperch were sampled by a fix-frame trawl.

## Results

### 2007

39 hours, 94,694 m<sup>3</sup> filtered, 2,126 pikeperch captured, 635 examined, 33 recaptured

30.4. stocked 189,833 marked pikeperch larvae



### Summary

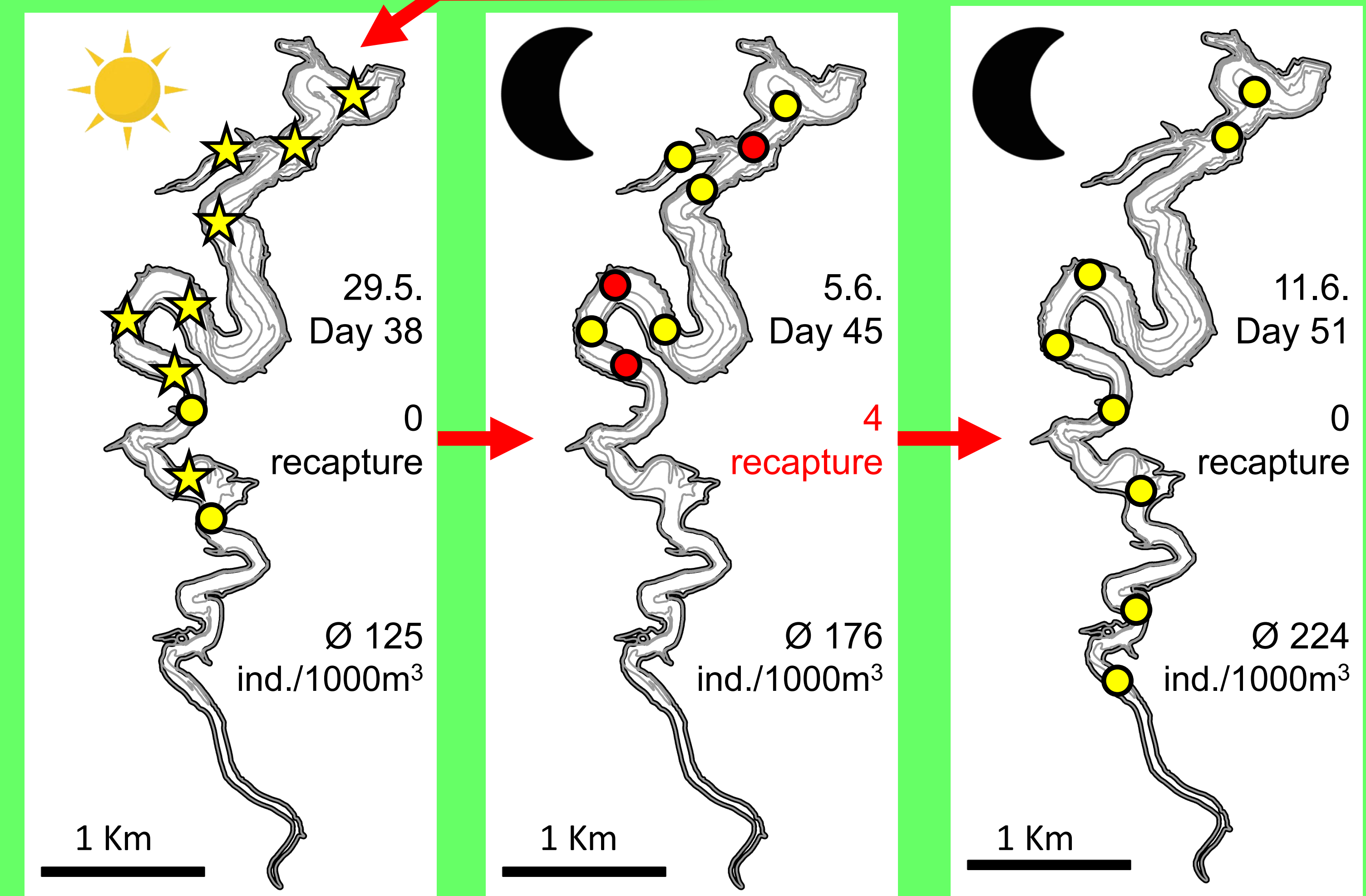
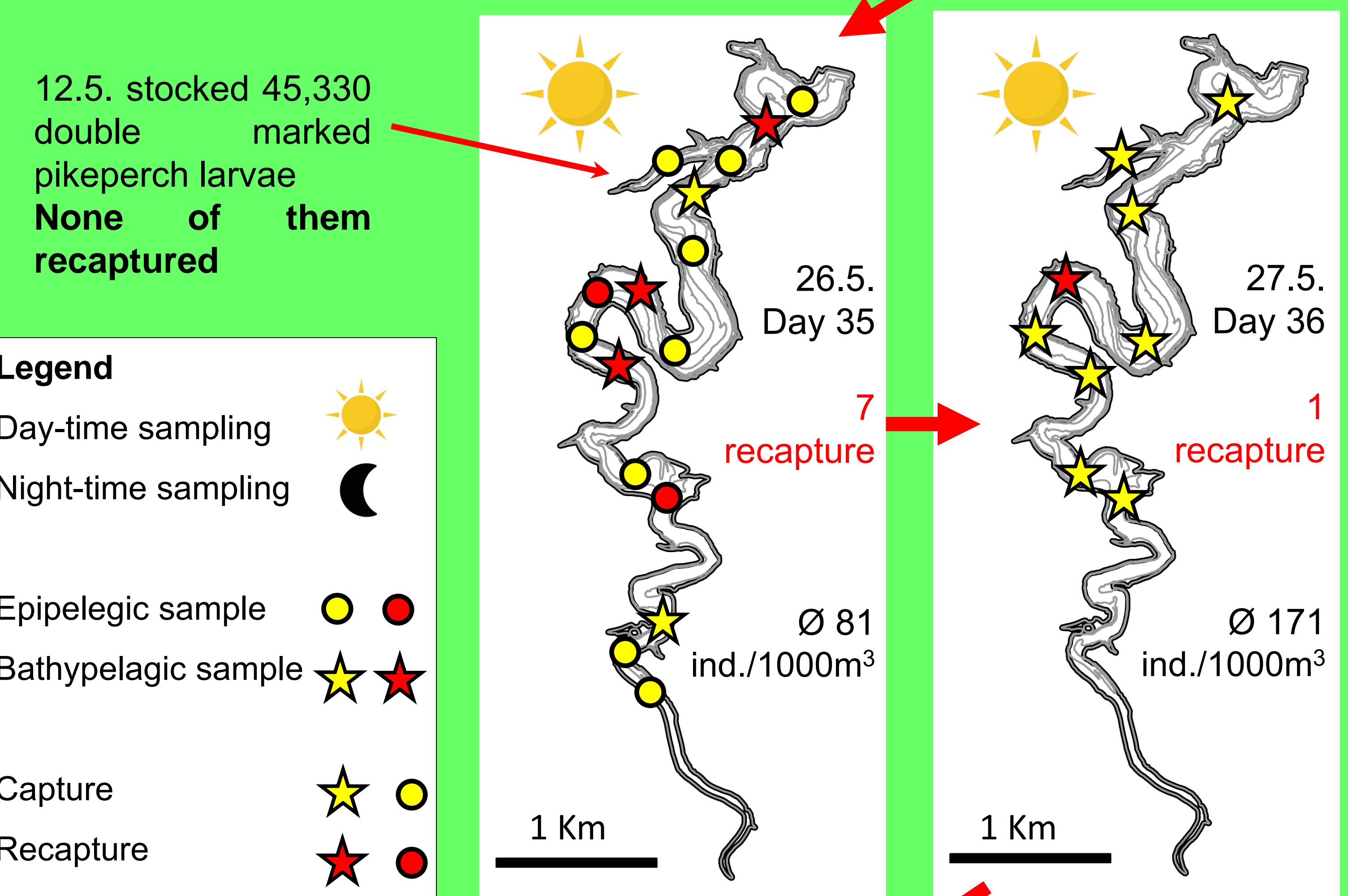
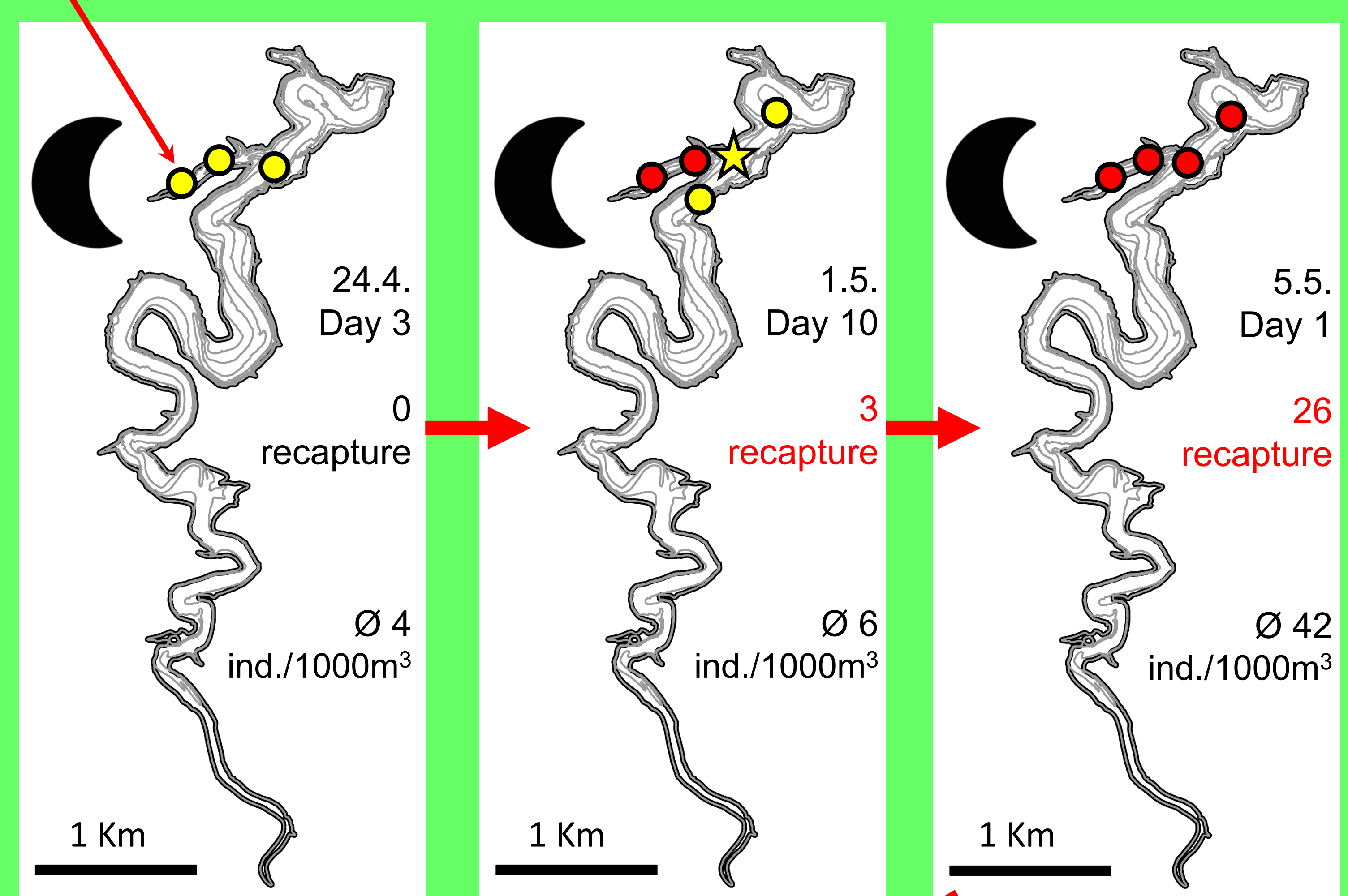
During the day-time sampling, marked pikeperch were captured in epipelagic layer above the thermocline and bathypelagic layer below the thermocline. The later represented a community of vertically migrating individuals which was originally believed to be composed of reservoir-born and reservoir-experienced fish only. This study demonstrates high mobility and flexibility of pikeperch early juveniles as well as their unexpected behavioural plasticity.

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### 2008

77 hours, 79,828 m<sup>3</sup> filtered, 9,448 pikeperch captured, 2,787 examined, 41 recaptured

21.4. stocked 306,500 single marked pikeperch larvae



12.5. stocked 45,330 double marked pikeperch larvae  
**None of them recaptured**

**Legend**

- Day-time sampling: Sun icon
- Night-time sampling: Crescent moon icon
- Epipelagic sample: Yellow circle, Red circle
- Bathypelagic sample: Yellow star, Red star
- Capture: Yellow star, Yellow circle
- Recapture: Red star, Red circle

