

Rufphänologie von Laubfröschen (*Hyla arborea*)

Ergebnisse von Ruferkartierungen und Vorschläge für Bestandserfassungen

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Phenology of European tree frog (*Hyla arborea*) chorus calling – Results of calling surveys and monitoring recommendations

Since 2006, the development of a reintroduced population of European tree frogs at lake Steinhuder Meer, Lower Saxony, has been surveyed. Between 2007 and 2018 the first calling males at the ponds were present from March 25th on, the latest detection of first calling males was on April 21st. Between 2007 and 2014 the number of calling males was monitored at least once per spring day decade within the whole populated area (identical with the survey area). The maximum calling activity, determined by the highest number of calling males per investigation, in 5 out of 8 years took place in the last decade of April, while the earliest was found on April 11th and the latest on May 4th. As expected, the phenology was linked to weather conditions, but a late start of the calling season did not necessarily correspond with a late peak of calling activity. Two decades after the maximum, calling activity decreased strongly. At the end of May, in 4 out of 8 years less than 10 % of the maximum number of calling males were found. In the middle decade of June only single males were found calling, with one exception in 2013. In comparison with literature and its investigation guidelines, we found evidence for earlier maximum of calling activity in northwest Germany. So following the guidelines can result in (too) late investigations and – consequently – wrong estimations of tree frog numbers, population size and classification of the conservation status (for example in context with the EU-Habitats Directive monitoring). Eventually, this will have tree frogs insufficiently considered in landscape planning. Following the results of our surveys we offer suggestions for an effective survey of European tree frogs which are useful to apply at least in north-western Germany.

Key words: Amphibia, tree frog, *Hyla arborea*, nature protection measures, effective survey Steinhuder Meer, Lower Saxony, Germany.

Zusammenfassung

Seit 2006 wird die Populationsentwicklung von Laubfröschen *Hyla arborea* an einer wieder angesiedelten Population am Steinhuder Meer, Niedersachsen, intensiv untersucht. Erste Rufer an Gewässern konnten zwischen 2007 und 2018 ab dem 25.3. nachgewiesen werden, die späteste Feststellung erstrufender Laubfroschmännchen war am 21.4. zu verzeichnen. Die Zahl rufender Männchen wurde in den Jahren 2007 bis 2014 mindestens 1x pro Monatsdrittel bei möglichst günstigen Witterungsbedingungen auf der gesamten, von der Art besiedelten Fläche kartiert. Die Rufmaxima