

## Verbreitung und aktuelle Situation des Moorfrosches (*Rana arvalis*) in Niedersachsen

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### Distribution and recent status of the moor frog (*Rana arvalis*) in Lower Saxony

Lower Saxony, a federal state (»Bundesland«) of 47624 km<sup>2</sup> in the north-west of Germany, is part of the moor frog's (*Rana arvalis*) more or less coherent range within the Central (North) European Lowlands. Areas of concentration are situated in the natural areas »Lüneburg Heath and Wendland« (including Lower Saxony's part of the Elbe River valley) and »Weser-Aller-Lowland«, both located in the state's east. In the hilly and mountainous southern regions 80 metres above sea-level, the species is almost absent, and the coastal areas with marshland and the East Frisian Islands in the North Sea are also not inhabited naturally. Moors, the valleys of lowland rivers and streams as well as boggy, loamy and especially the poor sandy soils in the North German Lowlands seem to be of special importance for the distribution of *Rana arvalis*. But the moor frog does not only occur in moors, as it is often presumed. In central and north-eastern parts of Lower Saxony the highest abundances are in the floodplains of the Elbe Glacial valley. In the western regions the species' dependence on peat bogs is more pronounced. At the same time, its occurrence there is less continuous, which partly might be connected with the near western border of its range, or with habitat loss. Ombrotrophical and transitional bogs, regenerating peat exploitation areas, fens, swamp forests as well as wet meadows are inhabited. Small natural bodies of stagnant water are used as spawning sites, e. g. pools, peat excavations, ditches, and inundated meadows. Terrestrial hibernation often seems to take place in woodlands, which sometimes may have less moist conditions (including pine forest on sandy dunes). The moor frog is found in association with most other native amphibian species (e. g. *Rana temporaria*, *Bufo bufo*, *Rana esculenta*, *Triturus vulgaris*, *Pelobates fuscus*, *Triturus cristatus*, *Hyla arborea*, *Rana ridibunda*, *Rana lessonae*, *Bombina bombina*). *Rana arvalis* still occurs frequently in many parts of Lower Saxony, with reproduction communities of often some hundred adults. The most abundant single breeding site, a temporarily water-filled shoal basin of 10000 m<sup>2</sup> near Gorleben (Elbe River valley), contained more than 6400 spawn clumps in March 2007. Declines in population densities appear to be widespread. Main causes for the declines are the destruction or succession of spawning sites, drainage and other agricultural measures, isolation, stocking fish in spawning ponds and increasing traffic on roads. Another problem is the acidification of spawning sites in some moor- and heathlands, leading to fungal infections of many spawn clumps. Therefore, the moor frog is still categorized as »vulnerable« in the Red-Data-List of Lower Saxony. The species can benefit from nature conservation and development measures like the omission of