

Neue Daten zur Morphologie, Genetik und Verbreitung der Wasserfrösche (*Pelophylax* spp.) im Münsterland (NRW) unter besonderer Berücksichtigung des Kleinen Wasserfroschs (*Pelophylax lessonae*)

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New data on morphology, genetics, and distribution of water frogs (*Pelophylax* spp.) in the Münsterland with particular focus on the pool frog (*Pelophylax lessonae*)

In spring 2015 14 water frog populations were investigated in the Münsterland to better assess the situation of the pool frog (*Pelophylax lessonae*) in this region, a species which is protected according to the FFH directive of the European Union. The investigations comprised 14 areas of the Westfälische Bucht in the natural environments Westmünsterland, Kernmünsterland, and Ostmünsterland, all of which are characterized by agriculture. In total, 360 frogs were caught with gauze box traps, and 231 of these were genotyped. Among them were 6.5% *P. lessonae* genotypes, 6.1% *P. ridibundus* genotypes and 87.4% *P. esculentus* genotypes. In contrast to previous findings the genetic data also indicate the occurrence of triploid individuals in Westphalia. Based on the shape of the metatarsal tubercle in concert with three morphometric indices, 96% of the individuals could be assigned to their genotypes. However, 53% of the *lessonae* genotypes did not exhibit the *lessonae* typical semicircular tubercle but instead a tubercle where the highest point was shifted towards the tip of the first toe. Such a shape was only found in one of the *esculentus* individuals for which, however, the values of all morphometric indices occurred outside the *lessonae* specific range. Hence, this type of tubercle can be considered as *lessonae* specific. *P. lessonae* was found in five areas under investigation, all except one of them were situated in the south of the city of Münster. Based on the recorded genotypes, four populations belonged to the *lessonae-esculentus* (L-E) and two to the *ridibundus-esculentus* (R-E) system (Uzzell & Berger 1975). Seven populations represented pure *esculentus* populations and in one population all three forms were observed. The percentage of *P. lessonae* varied between 4% and 24% in populations of the L-E system including the *lessonae-ridibundus-esculentus* population. In the two populations of the R-E system 8% and 57% of *ridibundus* individuals were observed. The *ridibundus* percentage of the only *lessonae-ridibundus-esculentus* population amounted to 5%. Especially the FFH area „Davert“ represents a very important area for *P. lessonae*. Here, most of the populations and highest abundances of this species were observed. The relatively small number of pool frog records and waters populated by this species in