

Diplomarbeitsthema: Ecology of feral American mink (*Mustela vison* Schreber, 1777) in

Sachsen-Anhalt / Germany

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Abstract:

The American mink (*Mustela vison*) – a native species of North America – was introduced in Europe and Asia in the early 20th century for fur breeding because of its excellent fur coat quality. During the years, many animals escaped from fur farms or were released into the wild. Therefore, many free-living populations have been established also in Germany, especially in the eastern part. But there are only a few investigations about the influence of this carnivorous newcomer on the indigenous biocoenosis.

Within the scope of a graduate project at the Martin-Luther-University Halle-Wittenberg, a questionnaire was handed out to different people (hunter, forester, angler and conservationist) in Sachsen-Anhalt in order to locate the current range of feral mink in the study area. Furthermore, it was asked for additional information about ecological aspects of this species.

As the established screen map shows, the mink - a semi-aquatic mammal - could be verified mainly in the great water meadow areas (Elbe and Mulde) in the eastern part of Sachsen-Anhalt. But there also were some records in the Helme-Unstrut-region and the Saale-Elster-region. Altmark, Harz and Harzvorland are regions without many evidence of mink. The delayed colonisation in these areas is probably caused by sub optimal habitats, poor in water systems. Nevertheless, there also can be estimated a colonisation of all nearby natural lakes and rivers within the years to come.

Furthermore, 113 mink carcasses were collected in the study area (Sachsen-Anhalt/Germany) during a period from 11/1999 to 3/2002. They either were caught or found already dead. Stomach contents and reproduction status were analysed, the age of the minks was determined by counting the cementum annuli of canines and biometrical datas were taken.

The results of the food analysis (food biomass) demonstrate, that fish (38 %), small mammals (23 %) and birds (23 %) represent the main prey groups, whereas amphibians (8 %), insects (<1 %), crustaceans (7 %) and molluscs (<1 %) play a secondary role in the diet of the investigated animals. That opportun diet of the feral mink corresponds to another similar investigation in Europe.

The age class distribution of the investigated minks is characterised by a low portion of juveniles (28 %) and a comparatively high average age. These results are first indications of stable mink populations with relative high density, at least in habitat with good quality.

Altogether a strongly negative ecological impact of feral mink on native prey populations could not be found. But other studies indicate, that there is a negative impact, especially on water bird populations. Thus, there is urgent demand for more research on this subject.

Veröffentlichungen zur Diplomarbeit:

ZSCHILLE, J.; HEIDECHE, D.; STUBBE, M. (2004): Verbreitung und Ökologie des Minks – *Mustela vison* SCHREBER, 1777 (Carnivora, Mustelidae) – in Sachsen-Anhalt. – Hercynia N.F. 37: 103-126.

ZSCHILLE, J.; STUBBE, M.; HEIDECHE, D. (2004): Der Mink (*Mustela vison*) – Ergebnisse einer Fragebogenerhebung in Sachsen-Anhalt. – Beiträge zur Jagd- und Wildforschung 29: 275-293