

Piotr Daszkiewicz (*Institute for the History of Science, Polish Academy of Science, Warszawa, AFB- Muséum national d'Histoire naturelle Paris*)

THE FORGOTTEN TRADE OF EUROPEAN POND TURTLE *Emys orbicularis* IN CENTRAL EUROPE IN THE 18th AND 19th CENTURIES – AN ESSENTIAL INTRODUCTION TO HISTORICAL AND ECONOMIC INVESTIGATION

Abstract. A drastic decrease in the European pond turtle population occurred at the end of 18th century and during the first half of 19th century. The exploitation of this species, as a source of food and drug substances, is nowadays almost forgotten. The present paper aimed at, firstly, underlining some historical sources concerning the exploitation of the European pond turtle. Secondly, its goal is to answer the following question: to what extent did the exploitation of the species contribute to the decline of the population? The author concludes with the importance and necessity of historical and economic analysis in order to understand the phenomenon of the decline of the European pond turtle population. This research, which must be continued by historians, will help the naturalists in action to protect and reintroduce the species into its former geographical range.

Key words: European pond turtle, animal's trade, species' decline, importance of historical sources in ecology

doi:10.2478/sho-2018-0006

INTRODUCTION

A drastic decrease in the European pond turtle population occurred at the end of 18th century and in the first half of the 19th century. The destruction of habitats of the species is undoubtedly one of the main causes of this decline. The agricultural and industrial transformation of Europe's landscapes had strongly impacted the habitats of the species. The climate change and the little Ice Age are also sometimes considered as additional causes of this regression. Fishing and turtle consumption are only very rarely taken into account as a factor contributing to the decline of the species. Exploitation of this species as a source of food and drug substanc-

es, probably on a large scale, is today almost forgotten and remains unknown even to historians of science and zoologists. The author aims at, firstly, underlining some historical sources concerning the exploitation of European pond turtle. Secondly, although habitat destruction is probably the main cause of this decline, **he intends to** answer the following question: to what extent did the exploitation of the species contribute to the fall of the population? We have only very little information on this phenomenon that happened in the 18th and 19th century, including critical period for this species. Paradoxically, we have more information on its consumption, sometimes on a large scale, in prehistorical times and in the Middle Ages [Cheylan M. 1976: 41-46; Cheylan M. 1998: 47-65; Forest V., Cheylan M. 2003: 143-150; Vlachos E., Delfino M. 2016: 158-171] than in the 17th and 19th century. This question is even more important since it has been proved that the consumption of a species may, in certain cases, lead to its disappearance.

THE CISTUDE AS FOOD, AND LENTEN DISH AND MEDECINE

The European pond turtle has long been exploited as source of food, especially for Lenten dishes, but also as a source of medicinal substances. Observations of the cistude outside its usual range and habitats are probably related to the ancient monastic practices of breeding animals consumed during the Lenten period. There was also a belief in the medicinal virtues of this species. For example, we can read in *Nouveau dictionnaire d'histoire naturelle, appliquée aux arts, à l'agriculture, à l'économie rurale et domestique*:

There are still living European pond turtle at several apothecaries in Paris, who bring them from Provence to make broths, considered very useful in diseases of the pulmonary diseases, and to repair the forces exhausted by the excess pleasure of the love. They are eaten in the countries where they are, but their flesh, as I have been able to judge, is much inferior in quality to that of the American turtles. [Desmarest A. G. 1819]

Cassagne [Cassagne L.-A. 1808] attributes virtues of curing tuberculosis and syphilis to European pond turtle meat. In the French *Pharmacopoeia* of 1827, it is classified as *medicated food* [Ratier F.-S., 1827: 159]. In a book devoted to physiology, Gautier described European pond turtle as *very*

good to eat. They provide a comforting, refreshing and, it is said, sudorific broth [Gautier A. 1874: 66]. This exploitation continued until the beginning of the 20th century, and in some areas even later.

MEAT CONSUMPTION AND RAREFACTION OF SPECIES

To what extent has this exploitation influenced the population decline? It must be remembered that European pond turtles reach the age of reproduction very late and that the removal of individuals can easily destabilize the population dynamics and the renewal of generations. However, the species seems to be, at least locally, very present until the mid-19th century. Lacepède [Lacepède B. comte de la 1799: 183-184] wrote that in a little marsh, situated in the plain of the Durance, turtle's population provided for more than three months of food for the peasants. J.-E. Gilibert found, without any trouble European pond turtles in the market of Vilnius [Daszkiewicz P., Bauer A. 2010: 6-19], to do his anatomical work. L. H Bojanus dissected around 500 turtles to prepare his monumental *Anatome Testudinis Europae* [Edel P., Daszkiewicz P. 2015: 60]. He also used animals bought at the market of Vilnius. The species was apparently still very common later on. This fact, the consumption of European pond turtles, is nowadays forgotten. The author made a small survey in his entourage in Poland. Out of 50 people from various socio-professional categories interviewed by the author, none was aware of this use of turtles in Poland in the past. Yet, Kluk described in his book its fishing and farming, as well as the consumption of its meat [Kluk K. 1780: 148-149]. Figuier wrote again in 1876: *Although the flesh of the European pond turtles is far from having an excellent taste, it is eaten wherever it is common* [Figuier L. 1876: 454]; and Maigne in 1891 described the practice of fattening European pond turtles in Prussia [Maigne M. W. 1891: 78].

The lacks of population estimate of the European pond turtles as well as the lack of statistical data on fishing and consumption are due to the fact that the results of any analysis of this topic will remain very approximate, not to say imperfect. Information from old natural history publications is usually very general and vague. Often, we are limited to the use of indirect information, such as the observation that the culinary and medicinal use of this species can be found in most French dictionaries of Natural History of the late 18th and early 19th century. Later on, this information

became increasingly rare, even though information on the consumption of other turtle species was still present. The French dictionaries of Natural History indicated Southern Germany as a region of important consumption of European pond turtles' meat and a country to export its meat.

I. S. Raicevich, author traveling in Central Europe in the 1820, described the practice of fishing for European pond turtles:

Amphibious turtles are still kept and goat meat fed in ditches until September. They are then transported in sacks in Germany, without giving them any food they can do without all winter [Raicevich E. I. 1822: 45].

From this statement, we can conclude that European pond turtles fishing was at the time an important branch of the fishing economy in the Danube basin. Only four species of fish are mentioned in this chapter, and European pond turtles are cited just after the sturgeons and information on caviar production. Despite the relatively high transport costs, it was profitable to transport these turtles from the territories of present-day Romania to Germany. We can therefore assume that at least for some parts of Germany, European pond turtles had become so rare that local production was no longer able to satisfy the needs of its own market. This happened before a period of large-scale destruction of habitats of this species. European pond turtles probably became relatively rare already at the beginning of the 19th century, in some parts of Europe. Another piece of information from Raicevich is very important for the history of economic exploitation of this species. The description of transportation (means of captivity, time of year to reduce losses) indicates the existence, and a long tradition, of a real cycle of production related to the fishing and marketing of European pond turtles.

CONCLUSION

Today European pond turtles are the subject of various studies, and programs of protection and reintroduction. Studies done by biologists, and especially those responsible for protection programs, must be based on a solid understanding of the causes of population decline. Yet, there is no solid analysis of the species trade in the 18th and 19th centuries. Practices in transporting and rearing wild-collected animals may have influenced the genetic structure of the population. In-depth research, and

taking into account these factors made by historians is necessary for naturalistic research. These researches may have a great importance in the action of the protection of this species in Europe.

BIBLIOGRAPHY

- Cassagne L.-A. (1808), *Essai sur les tortues, les huîtres, les écrevisses et l'ichtyocolle*, Montpellier.
- Cheyland M. (1976), *La consommation de la tortue cistude *Emys orbicularis* (L.) au post-glaciaire dans la grotte de Fontbregoua (Salernes-Var.)*, "Bulletin du Museum d'Histoire Naturelle de Marseille", 36, pp. 41-46.
- Cheyland M. (1998), *Evolution of the distribution of the European pond turtle in the French Mediterranean area since the post-glacial*, "Mertensiella", 10, pp. 47-65.
- Daszkiewicz P., Bauer A. (2010), *Jean-Emmanuel Gilibert a Lost Chapter in the history of Chelonian Anatomy*, "Bibliotheca Herpetologica", 8 (2), pp. 6-19.
- Desmarest A. G. (1819), *Nouveau dictionnaire d'histoire naturelle, appliquée aux arts, à l'agriculture, à l'économie rurale et domestique, à la médecine*, Chez Deterville, Paris.
- Edel P., Daszkiewicz P. (2015), *Louis Henri Bojanus: zoologiste, pédagogue, précurseur de l'anatomie compare*, Vent d'Est, Strasbourg.
- Figuier L. (1876), *Les Animaux articulés, les poissons et les reptiles*, Hachette, Paris.
- Forest V., Cheyland M. (2003), *La consommation de la Cistude d'Europe, *Emys orbicularis*, au bas Moyen Âge. L'exemple de Saint-Romain de Jalionas (Isère)*, Pages d'archéologie médiévale en Rhône-Alpes, V/VI. Actes de 5 et 6 rencontres Rhône-Alpes d'archéologie médiévale (1198-1999), Lyon, Centre interuniversitaire d'histoire et d'archéologie médiévale.
- Gautier A. (1874), *Chimie appliquée à la physiologie, à la pathologie et à l'hygiène : avec les analyses et les méthodes de recherche les plus nouvelles*, 1 / 2 vol, Paris.
- Kluk K. (1780), *Zwierząt domowych i dzikich, osobliwie krajowych, historii naturalnej początki i gospodarstwo*, t. 3, Warszawa.
- Lacepède B. comte de la (1799), *Histoire naturelle des quadrupèdes ovipares et des serpens*, Paris, L'an VII. Chez Saugrain.
- Maigne M. W. (1891), *Nouveau manuel complet de l'alimentation. Substances alimentaires*, Roret, Paris.
- Raicevich E. I. (1822), *Voyage en Valachie et en Moldavie avec des observations sur l'histoire la physique et la politique augmenté de notes et additions pour l'intelligence de divers points essentiels*, Chez Masson et fils, Paris.
- Ratier F.-S. (1827), *Pharmacopée française, ou Code des médicamens, nouvelle traduction du Codex medicamentarius, sive Pharmacopoea gallica*, Paris, s. 159
- Vlachos E., Delfino M. (2016), *Food for thought: Sub-fossil and fossil chelonian remains from Franchthi Cave and Megalopolis confirm a glacial refuge for *Emys orbicularis* in Peloponnesus (S. Greece)*, "Quaternary Science Reviews" 150, pp. 158-171.