

Collecting and killing of the Common Adder (*Vipera berus*) in Hungary between 1950-1970

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Abstract. We give an overview of the *Vipera berus* killing and collecting in Hungary between 1950-1970, based on a review of the forestry and hunting periodicals published in Hungary during this period and the collection catalogues of Museum's that store Hungarian adders. Peculiarly the killing of adders was encouraged or even funded by the Hungarian state authorities almost 50 years after the last big slaughter of "venomous snakes" in Europe (last known from Carinthia in 1916). Data on 1008 collected and killed adders have been gathered, from the three geographical regions of Hungary inhabited by the species. Thus 676 specimens (33.8 spec./year) are known to have been removed from the Zemplén Hills, most of them on request of the local Forestry Commission; 198 (9.9 spec./year) from the Valley of the Upper Tisza River, respectively 134 (6.7 specimens/year) specimens collected in Somogy and Zala counties for scientific purposes.

Key words: Viperidae, Zemplén Hills, valley of the Upper Tisza River, Somogy County, Zala County, conservation, *Vipera berus*.

Introduction

In the late 19th and early 20th centuries the deliberate killing of venomous snakes peaked in Europe, and was often encouraged or even funded by state authorities, by paying rewards for each snake or snake head presented. Such campaigns are known from the early 1900s from Bosnia and Herzegovina (Pawlowsky 1927, Veith 1915), Carinthia (Puschnig 1914, 1917) Tyrol (Dalla Torre 1912) and Styria (Sajović 1913, Marktanner-Turneretscher 1904).

Two species of venomous snake occur in Hungary, the Common adder (*Vipera berus*) and the Hungarian meadow viper (*Vipera ursinii rakosiensis*) (e.g. Dely 1978, Malina et al. 2008). The Hungarian meadow viper presently inhabits restricted areas of the Kiskunság region in central Hungary and Hanság region in

NW Hungary (Újvári et al. 2000). The common adder also has a fragmented range in the country, and occurs in three separate regions: in the Zemplén and Tokaj Hills in NE, in the valley of the Upper Tisza River in E, and in Somogy and Zala Counties in the SW part of the country (Fig. 1) (e.g. Dely 1978, Tóth & Farkas 2004, Malina et al. 2008).

Meadow viper populations were mainly decimated in the 1950s, the majority of specimens being sold throughout the Eastern (Soviet) Block for educational purposes to schools (Sochurek 1957). Unfortunately, exact statistics are unavailable, but the number of specimens collected presumably reached thousands. Based on rumors, numerous Common adders were slaughtered in Hungary during the post World War II years, but exact data were never made public. Additionally, due to

the lack of legal regulations several specimens were also collected for so-called scientific purposes.

The aim of the present paper is to give an overview of deliberate killings and collecting of common adders in Hungary between 1950 and 1970 and to discuss the background of the official decisions.

Material and methods

Statistics on the exact number of snakes collected and killed were never officially published in journals or reports, thus our data collection was performed by surveying all forestry and hunting periodicals published in Hungary in the 1950s-1970s, and additionally by relying on reports in local newspapers published in the regions where the adder occurs or occurred. Data on the specimens collected for scientific purposes in the period surveyed are based on the catalogues of the Hungarian Natural History Museum, Budapest, Hungary (HNHM), Móra Ferenc Museum, Szeged, Hungary (MFM) and Staatliches Museum für Tierkunde, Dresden, Germany (MTKD), which house specimens collected in Hungary in the period surveyed.

Results

In the following we present the results of our survey from the three main regions inhabited by *V. berus* in Hungary.

i) Zemplén Hills

The oldest and also the most numerous records on slaughtered adders come from this area of the country (Fig. 1). Resoluteness in killing was always initiated by an apparent "increase" of the number of snakes in a given area. Deliberate killing of adders was considered a common aim and everyone involved was rewarded (Major 1965). Major (1965) estimated a mean of 100-150 specimens were killed annually. According to reports from 1961 (Anonymous 1961a, 1961b), the local Forestry Commission not only actively encouraged the deliberate killing of adders, but held courses for rangers

on snake collecting practices. The Zemplén Forestry Commission paid 20 Hungarian forints for each snake (Anonymous 1963a, 1963b, 1963c, 1965d, 1965e), and the same reward applied for each embryo removed from gravid females (Anonymous 1965d). Between 1957-1959 168 adders were killed at Füzérkömlös and Vilyipusztá as follows: Füzérkömlös 1957-53 spec., 1958-71 spec., 1959-16 spec.; Vilyipusztá 1957-11 spec., 1958-9 spec., 1959-8 spec. (Vásárhelyi 1965) (Table 1). In 1960-1961 146 adder heads collected from various places in Zemplén were presented by lumbermen to the Forestry Commission (Anonymous 1961b). In 1963 altogether 155 adders were killed (35 by lumbermen and 120 by tourists) in the vicinity of Kemence Valley (Pálháza), Füzérkömlös, Vilyipusztá, Telkibánya, Kókapu and Sátoraljaújhely (Anonymous 1963a, 1963b, 1963c). In the following year (until mid-summer) hunters killed 150 specimens at various locations of the Zemplén Hills (Anonymous 1964). The killing also continued in 1965, in the surroundings of Füzérkömlös, Telkibánya, Boldogkőváralja and Erdőbénye (Anonymous 1965e), but we have been unable to document the actual number of adders killed. Additionally, in 1953 one specimen was collected by a herpetologist at Kemencefej (Telkibánya) and 14 at Hollóháza (Vásárhelyi 1965). Forty-three specimens collected in Zemplén Hills in the period surveyed are kept in two Hungarian museums as follows: Baskó- 1 spec. coll. in 1963 MFM, Bodrogkeresztúr-1 spec. coll. in 1959 MFM, Füzér- 1 spec. coll. in 1967 HNHM, Füzérkajata- 3 spec. coll. in 1959 HNHM, Füzérkömlös- 6 spec. coll. in 1959 and 1 in 1966 HNHM, Hollóháza- 9 spec. coll. in 1958, 1 in 1959 and 17 in 1966 HNHM and Nyíri- 2 spec. coll. in 1959 HNHM (Table 1).

ii) Valley of the Upper Tisza River

The exact number of killed *V. berus* could not be specified. Presumably, the head-fee paid was the same as in the Zemplén Hills (i.e. 20

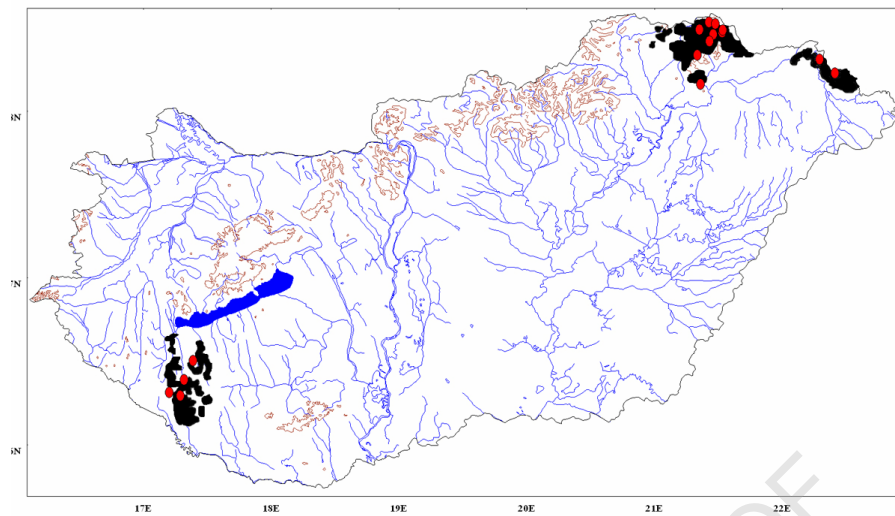


Figure 1. Location of populations from where collecting and killing of adders could be documented. Legend: black shading marks the distribution of the species in Hungary.

Table 1. Number of specimens collected and killed at different adder populations in Hungary (*specimens collected by, or for herpetologists).

Region/Locality	Period / Number of specimens collected				SUM
	1950-1955	1956-1959	1960-1965	1966-1970	
Zemplén Hills					676
Baskó			1*		
Bodrogkeresztúr		1*			
Füzér				1*	
Füzérkajata		3*			
Füzérkomlós		146 (6*)		1*	
Hollóháza	14*	10*		17*	
Kemencefej (Telkibánya)	1*				
Nyíri		2*			
Vilyipuszta		28			
without exact locality			451		
Valley of the Upper Tisza River					198
Bockerek Forest (Vámosatya)	4*	11*	13*	4*	
Mátyus and Lónya		4*	162*		
Somogy and Zala Counties					134
Lake Baláta (Kaszópuszta)	9*	3*	50*		
Mesztegyő			1*		
Nagybajom	3*				
Somogyszob	3*	4*		34*	
without exact locality	5*	19*	3*		

Hungarian forints). The deliberate killings began, or peaked, in the mid-1960s, as reported in a national newspaper article by Dolecskó (1964), published with the striking title "Attention! Viper danger! X mark on the head.". The author stated that adders became very numerous in eastern Hungary, but concluded that readers had nothing to worry about as massive killings were presently undertaken in all these areas. We know from Vásárhelyi's (1965) report that the herpetologist Miklós Janisch (1922-2002) collected 4 adders in Bockerek Forest (Vámosatya) in 1954, and an additional 123 specimens in the forests between the localities Mátyus and Lónya in 1964 with the help of a ranger, József Zán, a well-known collector who sold adders to universities and pharmaceutical companies (Anonymous 1967). Benke (1999, 2001) reported (presumably based on personal communication of Zán) that the ranger collected 500-600 adders in the area in the 1950s-1960s and mailed them to Budapest, where the preserved specimens were used for educational purposes in schools. Interestingly, 120 live adders collected by the ranger, were sent to the Butantan Institute in the same period (Benke 1999), but further details could not be gathered about this shipment. During three weeks in 1964 a ranger from Mátyus collected 39 *V. berus*, and mailed them to the University of Veterinary Medicine to Miklós Janisch (Dolecskó 1964). Between 1956-1959 additional 15 adders were collected for scientific purposes at the same localities and are now kept in Hungarian museums (Bockerek Forest-1958: 4 HNHM, 4 MFM; 1959: 3 HNHM; Mátyus and Lónya-1957: 3 HNHM; 1958: 1 MFM). Seventeen specimens are kept in HNHM and MFM collected in Bockerek Forest between 1960-1970 (1960: 2 HNHM, 1 MFM; 1961: 3 MFM; 1962: 6 MFM; 1964: 1 MFM; 1966: 1 MFM; 1967: 3 HNHM).

iii) Somogy and Zala Counties

We do not possess any information about rewards paid out by the Forestry Commission in these two counties, but several Hungarian and German herpetologists obtained live and sometimes preserved adders caught in this part of Hungary (Anonymous 1965a). The hunters and rangers in Somogy County often raised their income by collecting adders. We know from reports from 1965 (Anonymous 1965a, 1965b, 1965c), that the ranger Endre Szászi in 1965 caught 50 adders in the area of Lake Baláta (Kaszópuszta, Somogy County). In an interview with Szászi published by Mezei (2000), the ranger reported that he had received in the 1960s 80 Hungarian forints for each specimen collected, and mailed most of them to Budapest, and a few to Szeged. He even financed his driver's license from the money had received from his adder collecting (at that time a driver license fee was about 3000 Hungarian forints) (Mezei 2000). The ranger recalled to have collected 400-500 specimens in the course of his snake hunting career. Tóth & Farkas (2004), and Tóth & Sós (2003), reported the same number of specimens captured in the surroundings of Somogyszob (the area with the highest adder density), based on personal communication with ranger József Pitonyák, who instead considered that the 400-500 specimens was the overall number of adders collected in Somogy and Zala counties by different rangers for scientific purposes. The two data are conflicting to some extent, but we presume that the number of snakes collected during the 1960s-1970s exceeded 500 adders.

Twelve specimens from Lake Baláta collected between 1952 and 1957 are with one exception (caught in 1957 and deposited at MFM) kept in HNHM (1952: 1, 1953: 1, 1954: 5, 1955: 2, 1956: 1, 1957: 1). One specimen was collected in 1964 at Mesztegnyő, two at Nagybajom in 1952 and one in 1953, all of which are kept in HNHM now. Somogyszob was a well-known

locality of the adder, thus several specimens were collected here as well: 1953-1 HNHM, 1955-2 HNHM, 1956-1 HNHM, 1 MFM, 1957-1 HNHM, 1 MFM, 1967-29 MTKD, 1969-5 MTKD. Additional collected specimens without exact locality data are: 1955-5 HNHM, 1956-2 HNHM, 1959-17 MFM, 1960-2 MFM, 1963-1 MFM.

Discussion

Although in most of Europe the killing of venomous snakes was long forgotten and even forbidden by law by the 1960s, due to the lack of any legal regulation this "industry" was still flourishing in Hungary. In the countries of the former Eastern Block, and thus Hungary as well, at that time all animals were grouped into two categories: useful or harmful from the viewpoint of national economy. As adder bites might pose a threat to human life the species was deemed harmful, and hence adder persecution became an aim to be achieved by all possible means.

Interestingly, we do not know about decisions or enactments from the 1900s that would have facilitated and/or ordered the killing of venomous snakes within the present borders in Hungary. Only one enactment issued by the Hungarian Ministry of Interior (Anonymous 1902) was found during our survey, according to which an amount of 50 fillérs (i.e. $\frac{1}{2}$ Austro-Hungarian krone) was to be paid in Szepes, Liptó, Krassó-Szörény, Temes and Hunyad counties, for each common adder head presented, as the number of snakes significantly increased in these areas, and posed a threat for house animals and humans. Szepes county is now part of the Košice and Prešov Regions (administrative districts Poprad, Kežmarok, Stará Ľubovňa, Spišská Nová Ves, Levoča and Gelnica) in Slovakia and Nowy Sącz County in Poland. Liptó county is located today in northern Slovakia as well, and makes part of Ruž-

omberok, Liptovský Mikuláš and Poprad Districts. Krassó-Szörény, Temes and Hunyad counties are today Caraș-Severin, Timiș and Hunedoara counties in Romania. Unfortunately, we were unable to find any data on the number of specimens or on the species that were persecuted according this enactment, but presumably several *Vipera ammodytes* specimens were killed as well, as this was (and still is) the most common venomous snake in Caraș-Severin and Hunedoara counties. The reward paid was smaller than in Styria (Sounther Austria), where between 1882 and 1903 three, from 1904 on one Austro-Hungarian krone was paid for each snake head (Sajović 1913, Marktanner-Turneretscher 1904).

Most data on collected and killed adders come from the Zemplén Hills. We know of 676 specimens killed, and on average 30.95 specimens were persecuted each year, whereas the collecting for scientific purposes resulted in a mean number of 2.85 specimens removed from the populations yearly. Our results might underestimate the actual number of specimens killed. As noted above, Major (1965) reported that 100-150 specimens were killed each year. From the Valley of the Upper Tisza River the collecting of 198 snakes could be documented, all killed for so-called scientific purposes. In mean 9.9 specimens were removed from these populations each year. We managed to trace 134 specimens collected in Somogy and Zala counties in the period surveyed. All were caught for, or by herpetologists. The mean number of specimens collected per year was the lowest among the three areas (6.7 specimens/year).

The magnitude of deliberate killing of snakes in Hungary was lower than that registered in other European countries in the early 1900s. The most frightening data come from the killings conducted in the early 1900s in Bosnia and Herzegovina where, according Pawlowsky (1927), altogether 863,000 snakes (mostly *Vipera ammodytes*) were killed within

just six years. In Carinthia 4,885 snake heads were handed over to the authorities only in 1913, of which 4,426 were *V. ammodytes*, 96 *V. berus*, and the remaining *Coronella austriaca* (Puschnig 1914).

Presumably the overall number of snakes collected and killed in Hungary during the 1950s-1970s reached several thousands. Paradoxically, the adder and all other amphibians and reptiles became protected by law in Hungary in 1973. Unfortunately, due to the lack of recent population ecological surveys, we are unable to estimate the effect of the killings on the present density of adders in the three regions of the country. However, recent data on the population demography of the Hungarian meadow viper strongly suggest that collecting by "herpetologists" may have been involved in the present dire straits of this taxon in Hungary (Ujvári et al. 2000). Thus, it seems likely that the extensive prosecution of adders in Hungary in the 1950s and 1960s may also have had a deleterious impact on these populations.

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