

Studies on Pleistocene and Holocene Mammals from Poland: The Legacy of Edward Feliks Lubicz-Niezabitowski (1875–1946).

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“Unable to place the future without respect for the past.”
(Own thought)



Fig. 1. Portrait of Professor Niezabitowski. (www.amu.edu.pl)

INTRODUCTION

Edward Feliks Lubicz-Niezabitowski (1875–1946) was a Polish scientist, biologist, zoologist, and physician. In the years 1928–1929, he served as *Rektor* (Chancellor) of the University of Poznań.

His scientific achievements include about 150 works in medical and natural sciences, and in topics as diverse as entomology, botany, zooarcheology, and the study of modern vertebrates and Pleistocene mammals. At the same time, he also dealt with issues of natural protection.

The purpose of work

The purpose of this work is to present the legacy of Edward Feliks Lubicz-Niezabitowski in the form of published results of his studies of Pleistocene-Holocene mammalian remains found at various sites in Poland. His legacy has both methodological and scientific significance. Reading his morphological descriptions of remains, one is struck with how easy it is to visualize the specimens. The measurements of the specimens are described in excellent detail. In fact, rewriting the descriptions into today's standards would present no problem. The locations of the finds, where known, are so precisely described that today, over a century later, they can be easily found on a map.

Methods

This article does not attempt to verify the descriptions of the specimens, but instead provides a summary based on the sources available in the bibliography. The current storage locations of the specimens have not been checked. However, an attempt was made to find specimens in the collections of the researcher's institution (Institute of Geology, Adam Mickiewicz University), which turned up certain of the specimens, such as the woolly rhinoceros skull fragment. The year of discovery of a specimen is not known in all cases; where unknown, Tables 1–10 give an indicative date that precedes the publication of the find.

RESULTS

All of his published and accessible analyses of fossil material were used to prepare a faunal list specified for each taxon, reconsidering the names of sites, which have in some cases been renamed, due to geographical updates.

The collected results of his analyses show the taxonomic diversity of mammals. Among others, he identified remains of woolly mammoth (*Mammuthus primigenius*- Table 1), straight-tusked elephant (*Elephas (Palaeoloxodon) antiquus*- Table 1), woolly rhinoceros (*Coelodonta antiquitatis*- Table 2), giant deer (*Megaloceros giganteus*- Table 3), Eurasian elk (*Alces alces*- Table 4), European bison (*Bison bonasus*- Table 5), steppe wisent (*Bison priscus*-Table 6), reindeer (*Rangifer tarandus*-Table 7), horse (*Equus* sp.- Table 8), Eurasian cave lion (*Panthera leo spelaea*- Table 9), and cave bear (*Ursus spelaeus*- Table 10), and other taxa (*Capra hircus*, *Cervus elaphus*, *Canis lupus*,

Tab.1 Woolly mammoth (*Mammuthus primigenius*) and straight-tusked elephant (*Elephas (Palaeoloxodon) antiquus*).

Elephantine remains were described by Niezabitowski from 19 localities. The bones from one (Nowy Targ) represent elements of a single individual.

Localities (old name)	Year when found	Context	Species	Cranial elements	Post-cranial elements	Niezabitowski
1 Kraków, vicinity	-	-	Ea.	molars: upper M2		1912a
2 Oborniki	before 1903	gravel pit	Ea.	molars: upper M2 and lower M3		1912a, 1926
3 San river near Przemyśl	1888	fluvial	Ea.	molar: lower M1		1912a
4 Warszawa Szczygłowie (Warszawa)	before 1883, 1884	fluvial	Ea.	3 molars		1912a
5 Dunajec river near Tarnów	-	fluvial	Ea./Mammuthus sp.	molars: upper M1, upper M2, upper M2		1912a
6 Barycz near Przemyśl	-	fluvial, gravel	M.p.		bones	1912b
7 Dunajec river near Ludźmierz	-	loess	M.p.	molar: upper M2		1912a, 1938d
8 Góra Bronisław, Kraków	-	loam, brickyard	M.p.		bones, one individual: cervical vertebra, thoracic vertebra, rib, carpal bone, calcaneus	1912b
9 Nowy Targ	-	-	M.p.		bones	1926
10 Oborniki	before 1900	gravel pit	M.p.		bones	1926
11 Okienik Cave near Ojców	before 1938	cave	M.p.	molars: 2 lower deciduous M2 (presumably one individual)		1938c, 1938d
12 Poznań Główna (Główna)	before 1926	-	M.p.		bones	1926
13 Rogoźnik, Rogoźnicki stream	before 1852	fluvial	M.p.	tooth		1926, 1929a
14 Zalesie near Jarocin	1906	depth: 3.5-4m	M.p.		bones	1926
15 Oborniki	-	-	M.t.?	lower deciduous M3		1912a
16 Wisłok river	-	fluvial, gravel	Mammuthus		bones	1931
17 Oborniki	before 1905	gravel pit	Mastodon longirostris?	tooth		1918, 1924, 1926
18 Toruń, vicinity	-	-	Mastodon zadachi?			1924
19 Mammutowa Cave near Ojców	-	cave			bones	1932
Ukraine						
1 Sgśladowice near Sambor	-	groundworks, clay, depth: ca 5m	Ea.	molar: lower M2?		1912a
2 Sławuta, Wołyń	-	-	E.t.	molar: M2		1912a
3 Starunia	-	ozocerite mine	M.p.		skeleton and skin	1911, 1914
4 Lwów Łyczaków	1913	sands, Miocene	Mastodon tapiroides	tooth		1918, 1924

Among the remains of woolly rhinoceros, which are known from 22 localities, fragments of skulls and loose teeth are almost as well represented as bones.

Tab. 2 Woolly rhinoceros (*Coelodonta antiquitatis*).

Localities (old name)	Year when found	Context	Species	Cranial elements	Post-cranial elements	Niezabitowski
1 Czarnków	1909	-	Ca.		scapula	1926
2 Czarnów (Poznań Czarnów), Warta river	1910	fluvial	Ca.		radius	1926
3 Gofażyn near Oborniki	-	-	Ca.	lower tooth		1926
4 Jarosław	1909	-	Ca.		tibia	1926
5 Karacz near Gostyń	12/03/1889	-	Ca.		pelvis, femur	1926
6 Kąkolice (Główna)	-	-	Ca.		metacarpal III	1926
7 Kowalowo near Oborniki	-	-	Ca.	cranium fragment, upper tooth, lower tooth		1926
8 Kowalowo near Oborniki	-	-	Ca.	mandibula with tooth		1926
9 Kowalowo near Oborniki	-	-	Ca.	lower teeth		1926
10 A Luboń near Poznań (Luboń near Poznań)	-	-	Ca.	upper tooth		1926
B Luboń (Zabikowo)	-	-	Ca.	mandibula with tooth, lower tooth		1926
11 Mechowo near Swarzędz	20/03/1890	gravel	Ca.	cranium fragment, mandible with teeth, lower teeth	metacarpal IV, pelvis	1926
12 Oborniki	before 1900, 1905, 1908, 1909, 1911, 1912, before 1926	gravel pit	Ca.	cranium fragment, upper teeth, mandibula with teeth, lower teeth	thoracic vertebra, scapulae, humeri, radii, pelvis, femur, astragalus, metatarsal III	1926
13 Ostrowski	1910, 1912, 1918	-	Ca.	cranium fragment		1926
14 Poland	1910, 1912, 1918	-	Ca.	upper teeth	scapulae, ulnae, tibiae, astragalus	1926
15 A Poznań Dębice (Dębice near Poznań)	1905, 1907, 1909, 1911, 1913	-	Ca.	crania	scapulae, humeri, metacarpal IV, pelvis	1926
B Poznań Główna (Główna)	-	-	Ca.		bones	1926
C Poznań Malta	25/10/1889	-	Ca.	mandibula with teeth	pelvis	1926
D Poznań Starobka (vicinity of Starobka)	-	-	Ca.		radius	1926
E Poznań Szelągowska (Szeląg near Poznań)	1913	-	Ca.		radius, tibia, metatarsal III	1926, 1929a
F Poznań Wilczy Młyn (Wilczy Młyn Poznań)	1906	-	Ca.		pelvis	1926
G Poznań Wilcze	1897	-	Ca.		humerus, radius	1926
H Poznań Zegrze (Zegrze near Poznań)	1909	-	Ca.	lower tooth	pelvis	1926
I Poznań, vicinity	-	-	Ca.	cranium fragment		1926
16 Proszna river	-	peat	Ca.	mandibula with teeth	rib	1926
17 Srem	1907	-	Ca.		atlas	1926
18 Wielkopolska	-	-	Ca.		ulna	1926
19 Wiercienica near Mechowo	-	-	Ca.		radius	1926
20 Zalesie near Jarocin	1906, 1910	depth: 3.5-4m	Ca.	lower tooth	scapulae, pelvis	1926
21 Oborniki	-	gravel pit	R.m.	tooth		1926
22 Okienik Cave near Ojców	before 1938	cave			bones	1938d
Ukraine						
1 Białka Cerkiew (Zoty Potok)	before 1853	-	Ca.	cranium		1913a, 1926
2 Starunia	1929	-	Ca.		skeleton and skin	1911, 1914



The skull from Barycz with a deformity in one antler is an especially important find among the remains of giant deer.

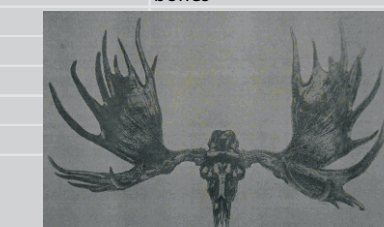
Tab. 3 Giant deer (*Megaloceros giganteus*).

Localities (old name)	Year when found	Context	Cranial elements	Post-cranial elements	Niezabitowski
Poland					
1 Barycz near San river	1934/5?	loess	cranium and antlers		1934, 1935
2 Białystok Dąbki (Dąbki near Białystok)	before 1899	-	antler		1934, 1935
3 Gnatowice	before 1882	-	antler		1934, 1935
4 Ludwinów near Kraków	before 1911	-	cranium and antlers		1934, 1935
5 Małpolska	before 1912	-	6 fragments of cranium and antlers		1934, 1935
6 Masków na Śląsku	before 1731	-			1934, 1935
7 Oborniki	before 1900	gravel pit		bones	1926
8 Proszna river near Robaków	before 1896	fluvial	antler		1934, 1935
9 Wielkopolska	before 1913	-			1934, 1935
Ukraine					
1 Turza river near Włodzimierz Wołyński	1887	peat	whole antler		1935



Tab. 4 Eurasian elk (*Alces alces*).

Localities (old name)	Year when found	Context	Cranial elements	Post-cranial elements	Niezabitowski
Poland					
1 Będziary near Pobiedziska	-	peat	antler		1929b
2 Dunajec river	-	-	antlers		1929b
3 Gocieszyn near Obrą river	-	-	antler fragment		1929b
4 Jaszczurówka near Zakopane	1889	-		skeleton, female	1929b, 1932
5 Kądzielnica	-	-	antler fragment		1929b, 1932
6 Kzeflice near Pobiedziska	1861	marl		almost complete skeleton	1929b, 1932
7 Lubosz	-	-	antler fragment		1929b
8 Łabiszyn near Noteć river	-	-	antler		1929b
9 Łukaszewko near Trzemesno	1928	marl, groundworks		almost complete skeleton	1929b, 1932
10 Miłosław	-	-	antler fragment		1929b
11 Niz Polski	-	-			1932
12 Polajewo near Oborniki	-	-	antler fragment		1929b
13 Poznań Główna (Główna near Poznań)	1928	-		skeleton	1929b
14 Proszna river	-	fluvial	antler fragment		1929b
15 Rogoźnik	-	-	antler fragments		1929b
16 Środa	-	-	antler fragment		1929b
17 Warta river near Oborniki	-	fluvial	3 cranium and antler fragments		1929b
18 Wielkopolska	-	-	antler fragments		1929b
19 Wielowieś	-	fluvial, gravel		bones	1931
20 Wisłok river	-	-	cranium		1931
21 Zabikowo	-	-			1929b
Ukraine					
1 Strwiąż river near Izbyszyń	-	peatland	antlers		1932
2 Strwiąż river near Głęboka	-	-			1929b



In peatlands, especially in Wielkopolska and Pomorze, complete skeletons of elk, bison, aurochs, and deer were found in situ, as were redeposited skulls and bones of these animals (Niezabitowski, 1933b).

Two of Niezabitowski's writings are wholly dedicated to his work on Eurasian elk remains (*Alces alces*), and this taxon is also dealt with in other writings (Niezabitowski 1929, 1932).

Tab. 5 European bison (*Bison bonasus*).

Localities (old name)	Year when found	Context	Cranial elements	Post-cranial elements	Niezabitowski
Poland					
1 Biedonica	-	-	cranium		1931
2 A Czudec, Wisłok river	before 1931	fluvial, gray silt and gravel	cranium-male		1931
B Czudec, Wisłok river	1925	fluvial	cranium-male		1931
3 Galińsk	before 1909	lake	cranium		1931
4 Grabów	-	peat, depth: 4-6m		skeleton-male (and human skeleton)	1931
5 Iwmo near Poznań	-	-	cranium fragment and horn cores		1938a, 1938b
6 Miłogostka	-	-	cranium-male, horn core-male		1931
7 Osieczek	-	peatbog	cranium		1931
8 Rzeszów, Wisłok river	-	fluvial	cranium-female		1931
9 Starokwiecie, Piłkowskie near Miłobów (Starokwiecie Piłkowskie near Miłobów)	-	peat		presumably complete skeleton, male	1938a, 1938b
11 Winnia Góra (Winnagóra)	06/1937	peat, depth: 2.6m		complete skeleton	1938a
Ukraine					
1 Malłowice	-	-	horn core-female		1931
2 Grodno	-	-	cranium-female		1931

Niezabitowski gave an overview of the 8 finds of European bison in Poland, in the context of the 10 bison finds in Europe of the time, in his work entitled "The fossil remains of bison (*Bison bonasus* L.) in Polish lands" (Niezabitowski, 1931).

Attention is there paid to the discovery of a bison skeleton and a human skeleton, found together at a depth of 4–6 m in peat in Grabów, in the northern part of Poland. Along with these two skeletons was found an artifact—a gneiss axe, according to Niezabitowski.

Tab. 6 Steppe wisent (*Bison priscus*).

Localities (old name)	Year when found	Context	Cranial elements	Post-cranial elements	Niezabitowski
1 Chelmo, Wisła river	before 1909	fluvial	cranium		1948b
2 Gryżyna	25/06/1937	sands, depth: 5m	cranium		1948b
3 Oborniki	before 1900	gravel pit		bones	1926
4 Okienik Cave near Ojców	before 1938	cave		bones	1938d
5 A Poznań	-	-	cranium		1929a
B Poznań Szelągowska (Szeląg near Poznań)	before 1929	-		bones	1929a
6 Tczew	before 1948	depth: 3.5-4m	cranium		1948b
7 Zalesie near Jarocin	1906	depth: 3.5-4m		bones	1926

Tab. 8 Horse (*Equus* sp.).

Localities (old name)	Year when found	Context	Species	Cranial elements	Post-cranial elements	Niezabitowski
1 Dunajec river	-	gravel			teeth	1912b
2 Oborniki	before 1900	gravel pit	E.c.		bones	1926
3 Okienik Cave near Ojców	before 1938	cave	E.c.		bones	1938d
4 A Poznań Główna (Główna)	-	-	E.c.		bones	1926
B Poznań Szeląg (Szeląg)	-	-	E.c.		bones	1926
C Poznań Szelągowska (Szeląg near Poznań)	before 1929	-	E. sp.		bones	1929a
5 Zalesie near Jarocin	1906	3.5-4m	E.c.		bones	1926
6 Złoczów	-	-	E.sp.	cranium		A&N, 1914



Tab. 9 Eurasian cave lion (*Panthera leo spelaea*).

Localities (old name)	Year when found	Context	Cranial elements	Post-cranial elements	Niezabitowski
Poland					
1 Bębło, Jaskinia Bębłowska Dola	before 1925	cave		2 bones	1925, 1938c, 1938d
2 Jaskinia Magurska, Tatra Mts. (Grota Magura, Tatra Mts.)	before 1938	cave		mandibula with teeth	1938c, 1938d
3 Kowalowo near Oborniki	-	gravel pit			1938d
4 Miłowice	-	sand mine			1925