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The Heinz Neumann egg collection from the patrimony of the "Grigore Antipa" National Museum of Natural History, Bucharest, Romania

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Abstract. The Heinz Neumann collection entered the heritage of the "Grigore Antipa" Museum in Bucharest from 2021 through the donation and goodwill of his son, forest engineer Horst Neumann, which completes and enriches the egg collection of the museum in Bucharest. It contains 620 eggs from 168 clutches, from 84 species and 33 families. These are common species in various habitats. The collection does not contain pieces from endangered or vulnerable bird species. Through our study we want to make this collection known, and the publication of the catalog to be a tribute to Heinz Neumann, musician, teacher, ornithologist and lepidopterologist, refined intellectual, romantic who loved the beauty of nature.

Keywords: collection, eggs, donation, "Grigore Antipa" Museum, Heinz Neumann.

Introduction

Collecting bird eggs has been an activity of people since ancient times, especially to supplement food. Then they began to be used as art objects (painted eggs, ostrich eggs for chandeliers, Fabergé eggs). Their use as objects of collection for their special shape and colors appears after 1800. This concern took a particular extent until 1930, when the collection of nests was considered harmful to birds and was tempered by laws specific to each country.

Avian museum collections are important elements in studies regarding environmental changes as their data is easily available through digitization and open to further analysis (georeferencing, chemical analysis or molecular studies) (Norris et al. 2023). New classification studies were obtained by egg white analysis (Sibley & Ahlquist 1972), proving that eggs and eggshells represent an important source of valuable information for phylogenetic and taxonomic studies. These analyses need to take into consideration protocols of careful sampling of the eggs from the museum collections, because as they age, they become more delicate and brittle (Stewart et al. 2015). New information regarding the temporal and geographical differences or the drifting habitats and climate changes can be brought from analyzing the nest collections (Russell et al. 2013).

The largest scientific collections are now stored in several museums of natural sciences in the world: The Natural History Museum of London, BMNH/NHM, Tring, UK – 450,000 clutches; Western Foundation of Vertebrate Zoology, WFVZ, Camarillo, CA, USA - 275,000 clutches; National Museum of Natural History (NMNH) - Smithsonian/USA - 47,500 clutches; Zoologisches Forschungsinstitut und Museum “Alexander Koenig”, ZFMK, Bonn, Germany - 60,000 clutches; Museum für Naturkunde, ZMB or ISZ, Berlin, Germany - 50,000 clutches; National Museums Scotland, NMS, Edinburgh, UK - 45,000 clutches; Naturalis, Nationaal Natuurhistorisch Museum, RMNH, Leiden, The Netherlands - 39,459 clutches; Hungarian egg collections at the Hungarian Natural History Museum, Hungary - 23,945 clutches (Pereszlényi et al. 2019, Marini et al. 2020, Norris et al. 2023, Roselaar 2003).

Collections of eggs at museums in Romania

Some egg collections are stored in museums in Romania, but they have remained unknown. The egg collection of the Țării Crișurilor Museum (Museum of the Criș Rivers Region) in Oradea is the largest egg collection in Romania. It includes 13,812 eggs, 3,573 clutches and 659 species. The catalog of the collection was published by Béczy (1971). This collection consists of three parts: the Ladislau Dobay collection, with material collected from the Târnăveni area, where Dobay worked as a public official, known through the works of Tamás Béczy (1964, 1966); collection of Ernő Andrassy (1894-1968), who was a physician, ornithologist and archaeologist; and the third part represents the collection established after 1950 by the museum specialists, the ornithologists Tamás Béczy, Ludovic Kováts and Rozalia Poliș (Béczy 1971).

From our personal data we add that the Zoological Museum in Cluj-Napoca has one of the largest egg collections; it is in second place after the one in Oradea, and it is made up of 4392 eggs from 850 clutches, of which 514 eggs are on public display, 1141 are considered reserve eggs, a collection established between 1853-1920. The Banat Museum in Timișoara has a collection consisting of 2184 eggs, 537 clutches from 198 species, with a catalog published by Andrei Kiss (1997).

The Mureș County Museum has a collection of 1879 eggs, 382 clutches, from 82 species, published by Zoltan Szombath (2012). The "Răsvan Angheluță" Museum Complex of Natural Sciences in Galați has a collection of 1670 eggs, 592 clutches, 101 species. The collection comes from the materials collected by Ion I. Cătuneanu (Patrichi & Mancu 2006). The Vrancea Museum in Focșani, Natural Sciences Section, has an oological collection of 432 eggs from 107 species (Szombath 2012). The Oltenia Museum in Craiova has 352 eggs, 158 species, from the Licherdopol collection, with a catalog published by Ridiche (2003). The Sibiu Museum of Natural Sciences has an egg collection made up of approximately 1900 eggs from 207 species (Stein-von Spiess et al. 2005). The Eco-Museum Research Institute in Tulcea, the Eco-Tourist Museum Center, has a collection of eggs that contains 291 eggs from the Danube Delta and some eggs

from Australia and Africa; the data are taken from the Museum's official website, because the collection of eggs was not published.

The Ion I. Cătuneanu collection was established between 1925-1970, part of which is at the Museum of Natural Sciences in Bacău since 1974 (432 eggs and 63 nests, from 107 species and 36 families) and the other part has entered the heritage of the "Răsvan Angheluță" Museum Complex of Natural Sciences Galați (Patrichi & Mancî 2006). The egg collection of the Natural History Museum in Iași ("Al. I. Cuza" University) contains 890 eggs and 217 clutches (Mândru 1985).

Ladislau Kalaber in Reghin (a private collection) has 116 species, 413 broods, 2009 eggs and has the published catalog from 1976 (Kalaber 1976). Zoltán Szombath (2012) mentions in his work the catalog of the egg collection at the Târgu-Mureș Museum, about the private collection of Dorin Lupean from Sibiu, which contains 400 eggs from 100 species. These data have also been verified from articles published in the press.

Brief history of the Egg Collection of the "Grigore Antipa" Museum

The collection of the "Grigore Antipa" Museum now contains 2455 eggs from 566 clutches. The first eggs were collected by Carol Walstein and Carlo Ferrerati in the period 1854-1868, and then by Ion I. Licherdopol, who has been hired in 1877 as an assistant at the Museum of Zoology in Bucharest by Gregoriu Ștefănescu, the director of the museum. Over time, he chose mollusks as his field of study and began an intense activity to collect and publish. Along with mollusk shells, Licherdopol also collected bird eggs. This collection was acquired by the museum twice, in 1904 and 1911, by Grigore Antipa, while the ornithologist Robert Ritter von Dombrowski was employed at the museum. Until 1916, when he left Romania, the latter added other items to this small collection. In the period 1916-1950 the collection stagnated, very few eggs were purchased from individuals, donated by various people, or collected by the museum staff. A better period for the collection was after 1950-1970, when the two ornithologists of the museum, Aurel Papadopol and Matei Tâlpeanu, as well as other specialists of the museum,

collected during field expeditions especially destroyed and abandoned nests. A private collection of eggs from Apoldul de Sus, Sibiu, established in the period 1840-1960, unfortunately without data, was also purchased. In 1990, the Museum acquired a collection of eggs from the Romanian ornithologist Dimitrie Radu, which consisted of eggs collected from the species he raised in captivity while he was the director of the Bucharest Zoo. The most recent donation is the egg collection of Heinz Neumann, which arrived because of the purchase made by the "Grigore Antipa" Museum in 2019, when it bought his collection of Lepidoptera. His son, the forestry engineer Horst Neumann, donated the egg collection to the museum on this occasion.

The Heinz Neumann Collection

Neumann Enric-Alivin (Heinz) (3 Oct. 1938 – 7 July 2013) was born in Timișoara. He graduated from the "Lenau" High School in Timișoara in German, and in parallel studied the piano as his main instrument at the Music High School in Timișoara. He continued his studies at the "Gheorghe Dima" Academy of Music in Cluj, at the Faculty of Composition, majoring in composition, conducting and pedagogy. He graduated in 1965 and then taught piano, music theory and music history at the Popular Art School in Timișoara. During the period 1965-1975 he had an intense concert activity, with numerous concerts for which he prepared with passion. After 1975 he continued his teaching activity at the "Ion Vidu" Music High School in Timișoara, where he taught piano, theory and solfege. He retired from this school in 1998. In addition to Heinz Neumann's passion for music, he also had a great love for nature. Since childhood, he has been passionate about trips, fishing, and observing nature, and his grandfather also initiated him into beekeeping. Beekeeping was a passion that started for him in childhood when he procured himself a swarm of bees from the forest. During his life, he became a beekeeper with extensive experience, an occupation that allowed him to supplement his modest income as a music teacher (Rákossy 2014). The observations accumulated over time on bees and the species that feed on bees

culminated in the publication of a well-documented and extremely important work on the biology, ecology, and behavior of the species *Merops apiaster*, a unique study at that time in Romania (Neumann 1983).

Throughout his life, such activity was carried out on two levels, musical-artistic and scientific research. The latter first started in the field of ornithology in his youth and continued with the study of Lepidoptera from 1975 until the end of his life. His collection of Lepidoptera, today in the patrimony of the “Grigore Antipa” Museum, contains 34,336 specimens from over 2,000 species. The collection was completed between 1970-2013 and is accompanied by 12 published studies on butterflies from the Banat area, Romania (Neumann 1993, 1995, 1997b, 1998, 1999, 2000a, 2000b, Neumann & Varga 1995, Rákósy & Neumann 1990, Rákósy & Neumann 1997).

Starting from 1956, around the age of 18 and thanks to the observations on the behavior of birds, which he started at the bird's nests, he laid the foundations of a collection of eggs on which he worked until 1976, then sporadically until 1980, when the last observations appear in the notes. Scientific research in the field of ornithology was based on hundreds of observations collected and carefully recorded in notebooks. An excellent self-taught naturalist, he managed to publish 12 scientific articles with lepidopterological content and 10 with ornithological content. In his studies of ornithology, he mainly pursued new aspects regarding the situation of waterfowl in Timiş County (Neumann 1982). He wrote about bird colonies in wetlands, about Ardeidae and Anatidae, and the heron colony at the Murani dam, Timiş County (Neumann & Kiss 1983, Kiss & Neumann 1985); the study of the dynamics of gray heron (*Ardea cinarea*) populations in Banat, and of its trophic behavior (Neumann 1996); the dynamics of some populations of Anatidae in the Banat plain (Neumann 1991a); the cormorant (*Phalacrocorax carbo sinensis*) in the western plain of Romania (Neumann 1991b); the ornitofauna of the Sacoşu Turcesc fish farm, Timiş County (Neumann 1997a); avifaunistic novelties, etc.

The collection was established between 1955 and 1971, and he added sporadically a few pieces until 2011, when the last collection date appears. The clutches collected in 1955 are without complete collection data and without

localities due to the lack of experience and the absence of the necessary knowledge for such an activity. Probably at the beginning, as an artist, he was attracted by the beauty of the shapes, colors, and designs specific to each bird species. Over time, he managed to cover this gap and today we see a real scientific collection, even though the person who created it was an autodidact.

We note that the eggs in the collection are grouped by species, with labels, in wooden drawers covered with glass, to avoid contact with dust, which has meant that for over 60 years the eggs are protected and look impeccable. For each species he noted the scientific name and the vernacular name in German (Heinz's mother tongue). All the pieces were collected and processed by him. Emptying the contents is a laborious activity, easier to do if the egg is fresh. Eggs hatched in the first stages are difficult to empty because their shell becomes fragile and breaks easily. Of the total of 620 eggs, 14 specimens are cracked, of which 7 are broken, fragmented and could not be measured.

Collecting eggs is a special action, which involves an active search in the research area, distributive attention, and knowledge of the behavior of the tracked species, but also of the nesting periods. The collection includes clutches from various habitats (aquatic, riparian, terrestrial, arboreal) (Fig. 1).

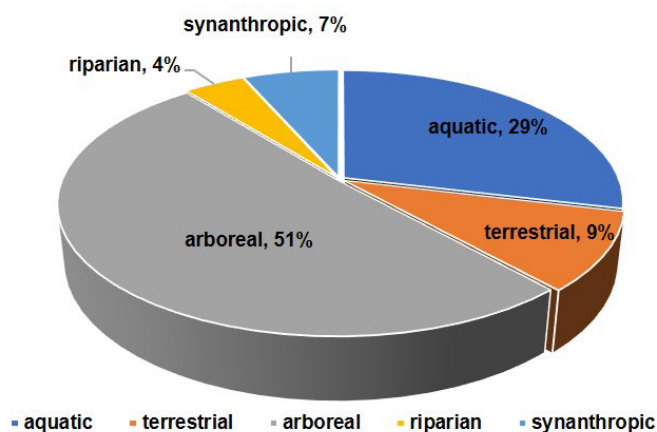


Fig. 1. Clutches from various habitats

In the collection, 51% of the eggs are from species that live and nest in forests, parks, and bushes and whose life is linked to the arboreal environment. Fig. 2 shows the families, the species, the number of clutches and the number of eggs, and among the arboreal species, the fringillids, the sylvins, the accipitrids, the falconids, the corvids, the picids, the muscicapids, etc.

29% of the species are from the aquatic environment. The large number of eggs collected from this environment is also related to the research done by Heinz Neumann in the wetlands of Banat, as he published several studies related to the avifauna of fish farms or wetlands, such as Murani or Satchinez in Timiș County. In addition to these two categories, there are also synanthropic species (7%), those that live in dense environments, near people (*Ciconia ciconia*, *Hirundo rustica*, *Passer domesticus*, *Passer montanus*); *Hirundo* and *Passer* are easy to collect, but *Ciconia ciconia* involves a high degree of difficulty, therefore there is only one type in the collection.

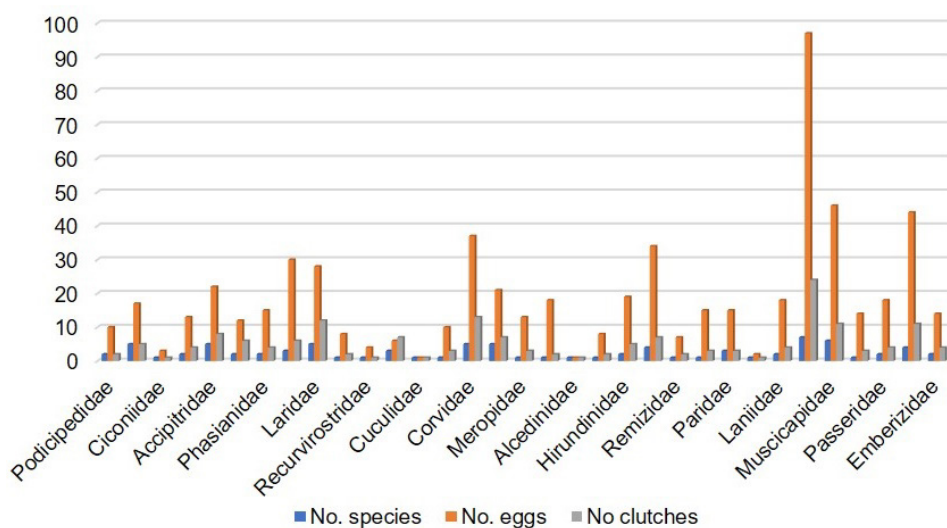


Fig. 2. The number of eggs and clutches by species and families.

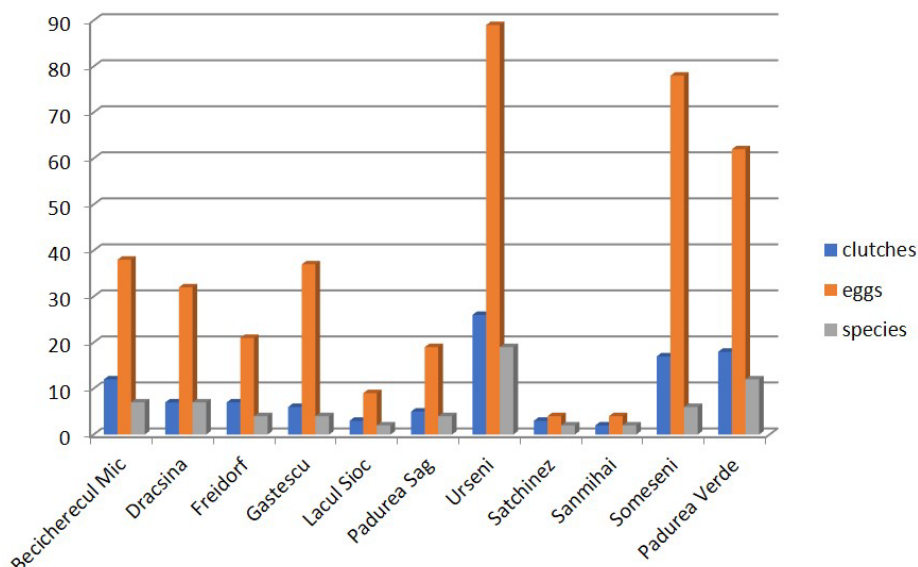


Fig.3. Number of species, eggs, and clutches per locality where they were collected.

Terrestrial species account for 1.9%. This category includes Phasianidae (*Coturnix coturnix* and *Phasianus colchicus*), alaudids (*Galerida cristata*), motacilides, namely all those species that prefer to nest on the ground.

The clutches were collected over time from 34 localities spread over five counties (Timiș, Cluj, Arad, Dolj and Tulcea). Most of the towns are from Timiș County. Urseni, Someșeni, Becicherecul Mic, and Pădurea Verde from Timișoara are the localities where the most specimens were collected. There are 7 collection points from Timișoara, where eggs from 22 species were collected. These data are particularly important in a current study on urban biodiversity in Timișoara and can show us the evolution of avifauna over the past 60 years (Fig. 3).

In conclusion, the collection contains 620 eggs from 168 clutches, from 84 species and 33 families (Tab. 1). They are common species in various habitats (Figs. 4-7). The collection does not contain pieces from endangered or vulnerable bird species. In the collection there is a cuckoo egg (*Cuculus canorus*) in a clutch with two *Acrocephalus palustris* eggs. In the patrimony of the "Grigore Antipa"

Museum, we have a specimen from Apoldul de Sus and a specimen from the collection of the ornithologist Dimitrie Radu. This particular collection, the Heinz Neumann one, which has entered the heritage of the "Grigore Antipa" Museum through the donation and the goodwill of his son, forestry engineer Horst Neumann, completes and enriches the egg collection of the Bucharest Museum, which is otherwise quite poor.

We want our study to make this collection known, to be researched, and the data to be used in various future studies. We also want our study and the publication of this catalog to be a tribute to Heinz Neumann, a musician, teacher, ornithologist and lepidopterist, refined intellectual, and a romantic person who loved the beauty of nature.

Table 1. The Heinz Neumann egg collection in the patrimony of the "Grigore Antipa" National Museum of Natural History, Bucharest (Romania)

No. col.	Species	Collection data	No. eggs	Dimensions (Height X diameter, mm)
PODICIPEDIDAE				
17609	<i>Podiceps cristatus</i> (Linnaeus, 1758)	6.06.1964 Lake Șioc Timișoara, Timiș	3	1-54.87x34.45; 2-53.26x35.62; 3-53.62x35.39;
17610	<i>Tachybaptus ruficollis</i> (Pallas, 1764)	29.05.1956 Freidorf, Timișoara, Timiș	7	1-37.06x26.17; 2-38.02x26.66; 3-36.8x26.09; 4-37.91x26.22; 5-37.78x26.08; 6-35.76x25.26; 7-37.83x26.55
ARDEIDAE				
17611	<i>Ardea purpurea</i> Linnaeus, 1766	05.1971 Becicherecul Mic, Timiș	5	1-57.99x41.58; 2-61.07x39.68; 3-58.73x41.65; 4-59.02x41.91; 5-57.86x40.79
17612	<i>Ardea cinerea</i> Linnaeus, 1758	4.04.1981 Dracșina, Timiș	3	1-61.97x42.76; 2-58.94x43.51; 3-61.17x42.63;

17613	<i>Botaurus stellaris</i> (Linnaeus, 1758)	05.1971 Becicherecul Mic, Timiș	1	1-46.45x38.72;
17614	<i>Nycticorax nycticorax</i> Linnaeus, 1758	3.05.1966 Satchinez, Timiș	2	1-46.39x32.37; 2-47.5x32.79;
17615	<i>Nycticorax nycticorax</i> Linnaeus, 1758	06.1994 Satchinez, Timiș	1	1-45.75x32.09
17616	<i>Ixobrychus minutus</i> (Linnaeus, 1766)	28.05.1966 Covaci, Timiș	5	1-34.45x25.45; 2-34.51x25.59; 3-34.75x25.44; 4-34x25.36; 5-34.77x25.69
CICONIIDAE				
17617	<i>Ciconia ciconia</i> (Linnaeus, 1758)	2.06.1966 Becicherecul Mic, Timiș	3	1-73.03x51.77; 2-74.83x50.22; 3-71.47x52.14;
ANATIDAE				
17618	<i>Anas platyrhynchos</i> Linnaeus, 1758	20.04.1958 Freidorf, Timișoara, Timiș	9	1-58.49x41.26; 2-59.06x40.67; 3-57.52x41.29; 4-60.7x41.11; 5-59.8x41.06; 6-60.13x41.37; 7-58.01x41.33; 8-58.32x41.62
17619	<i>Anas platyrhynchos</i> Linnaeus, 1758	No date Freidorf, Timișoara, Timiș	1	1-58.88x41.49;
17620	<i>Anas platyrhynchos</i> Linnaeus, 1758	5.04.1957 Freidorf, Timișoara, Timiș	2	1-57.06x41.01; 2-58.12x41.13
17621	<i>Aythya sp.</i>	No data	1	1-60.41x39.37
ACCIPITRIDAE				
17622	<i>Accipiter gentilis</i> (Linnaeus, 1758)	4.05.1958 Urzeni, Timiș	2	1-56.17x44.84; 2-55.82x45.1;
17623	<i>Accipiter gentilis</i> (Linnaeus, 1758)	No data	3	1-58.79x43.62; 2-57.41x44.07; 3-55.65x44.26;
17624	<i>Accipiter nisus</i> (Linnaeus, 1758)	6.05.1956 Pădurea Verde, Timișoara, Timiș	2	1-40.78x29.76; 2-39.16x30.52
17625	<i>Buteo buteo</i> (Linnaeus, 1758)	7.04.1966 Urzeni, Timiș	3	1-55.16x45.83; 2-55.41x45.68; 3-53.53x43.44

17626	<i>Buteo buteo</i> (Linnaeus, 1758)	27.04.1958 Urzeni, Timiș	1	1-53.37x43.03
17627	<i>Milvus migrans</i> (Linnaeus, 1758)	25.04.1958 Urzeni forest, Timiș	2	1-52.36x43.32; 2-52.99x43.51;
17628	<i>Circus aeruginosus</i> (Linnaeus, 1758)	6.06.1964 Lake Sioc	4	1-51.69x36.47; 2-50.35x37.14; 3-49.77x37.96; 4-52.62x38.64
17629	<i>Circus aeruginosus</i> (Linnaeus, 1758)	2.05.1964 Lake Sioc	5	1-47.95x38.64; 2-49.23x37.8; 3-47.94x37.71; 4-50.27x37.11; 5-47.98x38.69
FALCONIDAE				
17630	<i>Falco tinnunculus</i> Linnaeus, 1758	06. 1958 Urzeni forest, Timiș	2	1-38.66x30.69; 2-40.4x29.88
17631	<i>Falco tinnunculus</i> Linnaeus, 1758	06. 1958 Pădurea Verde, Timișoara,	1	1-37.91x29.74;
17632	<i>Falco tinnunculus</i> Linnaeus, 1758	24.04.1956 Faunne Park	2	1-36.95x31.06; 2-37.6x31.33;
17633	<i>Falco tinnunculus</i> Linnaeus, 1758	16.05.1965 Dracșina	3	1-36.96x30.37; 2-36.84x30.75; 3-36.96x29.85
17634	<i>Falco vespertinus</i> Linnaeus, 1766	4.06.1957 Bega River, Sânmihaiu, Timiș	3	1-36.39x29.02; 2-37.53x28; 3-36.36x28.37;
17635	<i>Falco vespertinus</i> Linnaeus, 1766	4.06.1957 Bega River, Sanmihaiu, Timiș	1	1-35.93x28.92;
PHASIANIDAE				
17636	<i>Phasianus colchicus</i> Linnaeus, 1758	No date Satchinez, Timiș	1	1-42.72x34.01;
17637	<i>Phasianus colchicus</i> Linnaeus, 1758	05.1965 Dracșina, Timiș	11	1-44.54x34.24; 2-45.56x33.68; 3-43.93x33.64; 4-44.71x33.8; 5-44.01x33.69; 6-43.68x32.63; 7-45.34x34.14; 8-45.29x33.46; 9-45.58x33.77; 10-44.85x33.19; 11-43.9x33.61;
17638	<i>Coturnix coturnix</i> (Linnaeus, 1758)	No data	1	1-29.57x22.33;

17639	<i>Coturnix coturnix</i> (Linnaeus, 1758)	31.08.1988 Giulvăz, Timiș	1	1-29.53x22.19;
RALLIDAE				
17640	<i>Rallus aquaticus</i> Linnaeus, 1758	1.06.1964 Someșeni, Cluj	1	1-33.54x24.32;
17641	<i>Rallus aquaticus</i> Linnaeus, 1758	5.06.1964 Someșeni, Cluj	7	1-33.25x24.04; 2-33.14x23.39; 3-31.09x22.23; 4-33.18x24.46; 5-32.84x25.03; 6-32.21x23.13; 7-32.46x23.53
17642	<i>Gallinula chloropus</i> (Linnaeus, 1758)	5.07.1957 Urseni, Timiș	4	1-41.47x29.86; 2-43.91x28.36; 3-44.17x28.87; 4-38.2x27.45
17643	<i>Gallinula chloropus</i> (Linnaeus, 1758)	12.05.1957 Urseni, Timiș	7	1-42.4x28.21; 2-39.55x27.89; 3-41.29x26.78; 4-40.67x29.31; 5-41.31x28.35; 6-41.37x28.69; 7-43.27x29.81;
17644	<i>Gallinula chloropus</i> (Linnaeus, 1758)	5.06.1956 Berecsău, Timiș	4	1-43.17x31.23; 2-42.77x31.22; 3-42.55x31.79; 4-41.54x32.14
17645	<i>Fulica atra</i> Linnaeus, 1758	11.05.1958 Urseni, Timiș	7	1-55.06x37.46; 2-54.31x37.8; 3-53.9x37.77; 4-52.77x38.15; 5-53.4x37.72; 6-56.42x37.8; 7-55.37x36.56
LARIDAE				
17646	<i>Chroicocephalus ridibundus</i> (Linnaeus, 1766)	5.07.1957 No data	2	1-51.79x35.9; 2-52.47x35.5;
17647	<i>Chroicocephalus ridibundus</i> (Linnaeus, 1766)	8.05.2011 No data	1	1-51.93x37.56
17648	<i>Chroicocephalus ridibundus</i> (Linnaeus, 1766)	No data	1	1-45.64x33.01
17649	<i>Thalasseus sandvicensis</i> (Latham, 1787)	9.07.1971 No data	1	1-29.56x22.35;

17650	<i>Sterna hirundo</i> Linnaeus, 1758	11.07.1971 Sahalin, Tulcea	3	1-45.94x32.15; 2-41.54x30.58; 3-43.46x31.58;
17651	<i>Chlidonias leucopterus</i> Temminck, 1815	10.07.1970 Becicherecul Mic, Timiș	2	1-31.83x23.96; 2-33.22x24.14;
17652	<i>Chlidonias leucopterus</i> Temminck, 1815	11.05.2008 Becicherecul Mic, Timiș	2	1-43.39x31.06; 2-43.48x31.94; 3- 42.73x31.89; 4- 43.92x30.84;
17653	<i>Chlidonias hybrida</i> Pallas, 1811	10.6.1970 Becicherecul Mic, Timiș	3	1-36.67x28.35; 2-39.08x27.14; 3-39.95x27.7
17654	<i>Chlidonias hybrida</i> Pallas, 1811	10.06.1970 Becicherecul Mic, Timiș	3	1-38.73x27.35; 2-40.29x28.96; 3-40.56x28.53;
17655	<i>Chlidonias hybrida</i> Pallas, 1811	10.06.1970 Becicherecul Mic, Timiș	3	1-40.1x29.1; 2-38.44x20.11; 3-38.96x28.28;
17656	<i>Chlidonias hybrida</i> Pallas, 1811	10.06.1970 Becicherecul Mic, Timiș	3	1-42.78x30.23; 2-42.25x30.64; 3-41.34x29.64
17657	<i>Chlidonias hybrida</i> Pallas, 1811	10.06.1970 Becicherecul Mic, Timiș	3	1-41.02x29.31; 2-37.41x28.88; 3-39.78x29.8;
CHARADRIIDAE				
17658	<i>Vanellus vanellus</i> (Linnaeus, 1758)	7.04.1965 Someșeni, Cluj	4	1-47.9x34.45; 2-46.06x34.07; 3-47.76x33.69; 4-47.04x33.91;
17659	<i>Vanellus vanellus</i> (Linnaeus, 1758)	6.04.1965 Someșeni, Cluj	4	1-45.64x34.11; 2-46.92x33.21; 3-47.92x33.36; 4-44.42x31.74
RECURVIROSTRIDAE				
17660	<i>Himantopus himantopus</i> (Linnaeus, 1758)	11.05.2008 Ghilad, Timiș	4	1-43.39x31.06; 2-43.48x31.94; 3-42.73x31.89; 4-43.92x30.84
Columbidae				
17661	<i>Streptopelia decaocto</i> (Frisvaldszky, 1838)	No data	1	1-30.78x23.58;

17662	<i>Streptopelia decaocto</i> (Frivaldszky, 1838)	27.05.1956 Şag forest	2	1-31.09x24.19; 2-31.91x24.97;
17663	<i>Streptopelia turtur</i> (Linnaeus, 1758)	7.05.1956 Pădurea Verde, Timișoara, Timiș	2	1-30.65x21.99; 2-28.8x21.74;
17664	<i>Columba palumbus</i> Linnaeus, 1758	5.06.2009 Toagheș, Timiș	1	1-45.31x30.07;
STRIGIDAE				
17665	<i>Asio otus</i> (Linnaeus, 1758)	4.1956 Padurea Verde, Timișoara, Timiș	3	1-40.02x31.92; 2-39.82x32.18; 3-39.87x31.93
17666	<i>Asio otus</i> (Linnaeus, 1758)	6.1958 Urseni, Timiș	2	1-38.87x32.16; 2-39.28x31.51
17667	<i>Asio otus</i> (Linnaeus, 1758)	15.4.1967 Pădurea Verde, Timișoara, Timiș	5	1-40.05x31.72; 2-41.59x32.01; 3-40.21x32.57; 4-39.96x32.56; 5-40.84x32.55;
CORVIDAE				
17668	<i>Corvus corone cornix</i> Linnaeus, 1758	No data	1	1-41.25x30.49;
17669	<i>Corvus corone cornix</i> Linnaeus, 1758	24.04.1966 Dracșina, Timiș	5	1-37.24x27.96; 2-40.48x29.37; 3-39.51x29.48; 4-35.68x27.84; 5-42.33x28.36;
17670	<i>Corvus corone cornix</i> Linnaeus, 1758	29.04.1956 Urseni, Timiș	3	1-44.2x30.79; 2-43.22x29.75; 3- spart
17671	<i>Corvus corone cornix</i> Linnaeus, 1758	11.04.1958 Giroc, Timiș	2	1-47.15x31.03; 2-47.36x31.05;
17672	<i>Corvus corone cornix</i> Linnaeus, 1758	No data	1	1-43.65x35.12;
17673	<i>Corvus frugilegus</i> Linnaeus, 1758	12.04.1964 Bontida, Cluj	4	1-35.28x26.78; 2-37.55x26.74; 3-34.8x26.42; 4-36.44x26.66;
17674	<i>Pica pica</i> (Linnaeus, 1758)	No data	1	35.76x26.33;
17775	<i>Pica pica</i> (Linnaeus, 1758)	No data	4	1-36.71x23.08; 2-32.03x23.39; 3-32.79x23.64; 4-32.74x23.52;

17675	<i>Coleus monedula</i> (Linnaeus, 1758)	25.04.1958 Padurea Verde, Timișoara	2	1-29.79x23.42; 2-30.54x23.37;
17676	<i>Coleus monedula</i> (Linnaeus, 1758)	25.04.1958	1	1-30.54x23.37;
17776	<i>Coleus monedula</i> (Linnaeus, 1758)	24.04.1966 Dracșina, Timiș	5	1-34.87x24.98; 2-33.64x24.42; 3-35.95x24.85; 4-34.44x24.81; 5-37.09x24;
17677	<i>Garrulus glandarius</i> (Linnaeus, 1758)	26.04.1959 Urseni, Timiș	2	1-29.41x20.18; 2-29.15x21.23;
17678	<i>Garrulus glandarius</i> (Linnaeus, 1758)	2.05.1957 Șag forest	6	1-30.23x22.61; 2-30.91x21.8; 3-31.02x22.9; 4-30.78x22.64; 5-30.56x22.78; 6-31.6x22.73;
PICIDAE				
17679	<i>Dendrocopos major</i> (Linnaeus, 1758)	2.05.1958 Pădurea Verde, Timișoara	2	1-25.97x20.2; 2-26.4x19.79;
17680	<i>Dendrocopos syriacus</i> (Hemprich & Ehrenberg, 1833)	1955 No data	2	1-24.13x19.98; 2-24.57x19.75;
17681	<i>Dendrocopos medius</i> (Linnaeus, 1758)	27.04.1958 Urseni forest, Timiș	1	1-24.15x18.58;
17682	<i>Dendrocopos medius</i> (Linnaeus, 1758)	8.05.1957 Urseni, Timiș	3	1-23.58x19.7; 2-24.32x19.56; 3-23.97x19.67;
17683	<i>Dendrocopos medius</i> (Linnaeus, 1758)	24.04.1959 Urseni, Timiș	7	1-23.94x18.14; 2-24.15x18.15; 3-24.52x18.01; 4-24.55x17.27; 5-23.36x18.29; 6-24.05x17.43; 7-24.31x18.41;
17684	<i>Dendrocopos minor</i> (Linnaeus, 1758)	No data	1	1-24.06x18.61;
17685	<i>Jynx torquilla</i> (Linnaeus, 1758)	1955 No data	5	1-20.11x15.52; 2-20.5x15.07; 3- 19.54x15.49; 4-20.92x14.97; 5-20.14x15.46;

MEROPIDAE			
17686	<i>Merops apiaster</i> Linnaeus, 1758	10.06.2011 Uliuc, Timiș	6 1-26.98x22.63; 2-26.38x22.7; 3-25.99x22.91; 4-25.88x22.23; 5-27.2x22.54; 6-27.16x22.77;
17687	<i>Merops apiaster</i> Linnaeus, 1758	27.05.1956 Șag, Timiș	2 1-30.39x22.64; 2-30.18x23.01;
17688	<i>Merops apiaster</i> Linnaeus, 1758	4.06.1973 Timiș riverbank	5 1-26.8x22.01; 2-24.39x21.3; 3-24.81x21.86; 4-26.52x22.1; 5-25.77x20.38;
UPUPIDAE			
17689	<i>Upupa epops</i> Linnaeus, 1758	10.05.1964 Gâștescu, Cluj	8 1-27.05x17.7; 2-27.46x17.58; 3-26.49x17.52; 4-26.33x17.86; 5-27.52x17.33; 6-26.79x17.46; 7-26.22x17.49; 8-27.19x17.83;
17690	<i>Upupa epops</i> Linnaeus, 1758	9.05.1964 Gâștescu, Cluj	10 1-24.15x15.82; 2-25.54x16.99; 3-26.72x16.42; 4-26.03x17.72; 5-27.41x17.01; 6-26.13x17.57; 7-25.6x17.7; 8-26.43x17.73; 9-24.89x18.12; 10-26.71x17.5;
ALCEDINIDAE			
17691	<i>Alcedo atthis</i> (Linnaeus, 1758)	7.07.1980	1 1-22.48x18.88;
ALAUDIDAE			
17692	<i>Galerida cristata</i> (Linnaeus, 1758)	10.04.1966 Freidorf, Timișoara, Timiș	4 1-22.2x16.59; 2-22.14x16.83; 3- 22.21x16.65; 4-22.09x16.39;
17693	<i>Galerida cristata</i> (Linnaeus, 1758)	6.04.1966 Freidorf, Timișoara, Timiș	4 1-23.05x17.26; 2-21.63x17.08; 3-22.54x17.26; 4-22.94x17.46;

HIRUDINIDAE				
17694	<i>Hirundo rustica</i> Linnaeus, 1758	18.05.1966 Becicherecul Mic, Timiș	5	1-19.55x12.99; 2-19.43x13.8; 3-19.12x13.12; 4-19.57x13.66; 5-20.06x13.4;
17695	<i>Hirundo rustica</i> Linnaeus, 1758	21.06.1964 Fundătură	5	1-20.21x12.95; 2-19.8x12.88; 3-19.1x12.92; 4-19.76x13.03; 5-19.27x13.29;
17696	<i>Riparia riparia</i> (Linnaeus, 1758)	06.1958 Urșeni, Timiș	4	1-17.92x12.9; 2-16.38x12.66; 3-16.9x12.89; 4-17.17x12.66;
17697	<i>Riparia riparia</i> (Linnaeus, 1758)	06.1958 Urșeni, Timiș	4	1-17.33x12.84; 2-17.82x12.68; 3-17.93x12.36; 4-17.99x12.98;
17698	<i>Riparia riparia</i> (Linnaeus, 1758)	10.06.2011 Uliuc, Timiș	1	1-17.49x11.37;
MOTACILLIDAE				
17699	<i>Motacilla flava dombrowskii/a</i> (Tschusi zu Schmidhoffen, 1903)	5.06.1964. Someșeni, Cluj	6	1-18.74x14.18; 2-18.54x14.28; 3-19.96x14.32; 4-19.18x14.16; 5-18.44x13.73; 6-18.61x14.06;
17700	<i>Motacilla flava dombrowskii/b</i> (Tschusi zu Schmidhoffen, 1903)	7.06.1964. Someșeni, Cluj	7	1-18.7x14.41; 2-19.8x14.29; 3-19.33x14.9; 4-18.34x14.76; 5-20.02x14.73; 6-18.82x14.73; 7-18.59x14.5;
17701	<i>Motacilla flava dombrowskii/c</i> (Tschusi zu Schmidhoffen, 1903)	7.06.1964. Someșeni, Cluj	4	1-19.1x14.56; 2-18.61x14.54; 3-18.33x14.72; 4-19.53x14.45;
17702	<i>Motacilla flava dombrowskii/d</i> (Tschusi zu Schmidhoffen, 1903)	7.06.1964. Someșeni, Cluj	6	1-19.3x14.61; 2-18.54x14.3; 3-19.51x14.71; 4-19.6x14.37; 5- 19.27x14.4; 6-19.43x14.56;

17703	<i>Motacilla flava feldegg</i> Michahelles, 1830	No data	3	1-20.28x14.86; 2-20.08x14.66; 3-20.17x14.18;
17704	<i>Motacilla cinerea</i> Tunstall, 1771	No data	4	1-19.51x14.3; 2-19.71x14.48; 3-19.92x14.56; 4-19.75x14.52;
17705	<i>Motacilla alba</i> Linnaeus, 1758	No data	4	1-19.08x14.6; 2-19.13x14.22; 3-19.19x14.35; 4- 19.46x14.52;
REMIZIDAE				
17706	<i>Remiz pendulinus</i> (Linnaeus, 1758)	No data	2	1-17.71x10.48; 2-17.8x10.4;
17707	<i>Remiz pendulinus</i> (Linnaeus, 1758)	4.08.1971 Becicherecul Mic, Timiș	5	1-16.12x11.06; 2- 16.3x11.48; 3-16.23x11.29; 4-16.31x10.81; 5-15.97x11.05;
AEGITHALIDAE				
17708	<i>Aegithalos caudatus</i> (Linnaeus, 1758)	16.04.1958 Pădurea Verde	6	1-13.88x11.14; 2-13.74x10.9; 3-13.83x10.92; 4-14.19x10.65; 5-13.52x10.79; 6-13.89x10.96;
17709	<i>Aegithalos caudatus</i> (Linnaeus, 1758)	16.04.1956 Pădurea Verde	6	1-14.56x11.26; 2-14.15x10.99; 3-14.11x11.82; 4-14.27x11.16; 5-14.15x10.84; 6-13.44x11.02;
17710	<i>Parus major</i> Linnaeus, 1758	07.1958 Bega riverbank, Electrica public pool, Timiș	3	1-17.58x13.78; 2- 18.44x14.08; 3-18.65x13.62;
17711	<i>Cyanistes caeruleus</i> (Linnaeus, 1758)	27.04.1958 Urzeni forest, Timiș	6	1-15.49x12.01; 2- 14.19x12.04; 3-14.98x11.91; 4- 15.4x12.11; 5-15.29x11.98; 6-15.61x11.94;
17712	<i>Poecile palustris</i> (Linnaeus, 1758)	4.05.1958 Urzeni forest, Timiș	4 (1)	1-15.9x11.86; 2-15.87x11.96; 3-16.37x11.96; 4-15.97x11.05;

ORIOLIDAE			
17713	<i>Oriolus oriolus</i> (Linnaeus, 1758)	06.1956 Urseni, Timiș	2 1-28.46x21.15; 2-32.89x21.87;
LANIIDAE			
17714	<i>Lanius minor</i> Gmelin, 1788	3.06.1956 Freidorf, Timișoara, Timiș	3 1-24.82x17.81; 2- 25.22x17.46; 3-23.89x17.61;
17715	<i>Lanius collurio</i> Linnaeus, 1758	27.05.1956 Pădurea Șag, Timiș	4 1-21.69x16.82; 2-21.82x16.54; 3-21.18x15.99; 4- 21.13x16.17;
17716	<i>Lanius collurio</i> Linnaeus, 1758	27.05.1956 Pădurea Șag, Timiș	5 1-20.86x15.45; 2-21.96x16.44; 3-20.91x15.84; 4-20.87x16.11; 5-21.1x16.51;
17717	<i>Lanius collurio</i> Linnaeus, 1758	1955 No data	6 1-21.27x16.53; 2-22.16x16.27; 3-23.19x15.86; 4-21.01x16.36; 5-21.76x15.85; 6-22.31x16.4;
SILVIIDAE			
17718	<i>Acrocephalus arundinaceus</i> (Linnaeus, 1758)	29.05.1956 Freidorf, Timișoara	1 1-21.95x17.22;
17719	<i>Acrocephalus arundinaceus</i> (Linnaeus, 1758)	07.1958 Bega, Timiș	5 1-23.78x16.53; 2-23.83x16.56; 3-23.87x16.24; 4-23.34x16.1; 5-24.08x16.18;
17720	<i>Acrocephalus palustris</i> with <i>Cuculus canorus</i> egg	No data	3 1-22.1x16.99; 2-18.61x13.56; 3-18.36x13.45;
17721	<i>Acrocephalus palustris</i> (Bechstein, 1798)	No data	8 1-18.19x13.23; 2-18.42x13.03; 3-19.1x13.97; 4-18.9x13.88; 5-18.77x13.36; 6-18.49x13.53; 7-19.19x13.14; 8-18.66x13.3;
17722	<i>Acrocephalus palustris</i> (Bechstein, 1798)	7.06.1964 Someșeni, Cluj- Napoca	4 1-17.66x13.21; 2-18.03x13.77; 3-18.48x13.44; 4-17.49x13.45;

17723 <i>Acrocephalus palustris</i> (Bechstein, 1798)	7.06.1964 Someșeni, Cluj- Napoca	5	1-17.78x13.46; 2-18.99x13.49; 3-18.61x13.51; 4-17.76x13.36; 5-17.79x13.35;
17724 <i>Acrocephalus palustris</i> (Bechstein, 1798)	5.06.1964 Someșeni, Cluj- Napoca	4	1-18.81x13.67; 2-17.89x13.61; 3-18.34x14.07; 4-18.63x13.49;
17725 <i>Acrocephalus palustris</i> (Bechstein, 1798)	21.05.1956 Amenhaus	5	1-18.48x14.14; 2-16.97x13.2; 3-17.45x14.07; 4-17.62x13.58; 5-16.8x13.72;
17726 <i>Acrocephalus schoenobaenus</i> Linnaeus, 1758	12.06.2010 Dumbrăvița, Timiș	2	1-18.26x13.84; 2-18.56x14.38;
17727 <i>Acrocephalus schoenobaenus</i> Linnaeus, 1758	1.06.1964 Someșeni, Cluj- Napoca	5	1-17.55x13.67; 2-17.37x13.86; 3-18.18x13.84; 4-17.68x13.69; 5-17.66x13.31;
17728 <i>Acrocephalus schoenobaenus</i> Linnaeus, 1758	1.06.1964 Someșeni, Cluj-Napoca	2(2)	1-16.89x13.2; 2-17.43x13.03;
17729 <i>Acrocephalus schoenobaenus</i> Linnaeus, 1758	1.06.1964 Someșeni, Cluj- Napoca	5	1-16.9x13.52; 2-16.77x13.71; 3-16.66x13.51; 4- 17.03x13.64; 5-16.58x13.38;
17730 <i>Acrocephalus schoenobaenus</i> Linnaeus, 1758	7.06.1964 Someșeni, Cluj- Napoca	4	1-17.22x13.3; 2-18.02x14.05; 3-17.37x13.8; 4-17.2x13.92;
17731 <i>Sylvia nisoria</i> (Bechstein, 1792)	19.05.1968 Pădurea Verde, Timișoara, Timiș	3	1-20.11x15.08; 2-18.86x13.84; 3-19.01x14.22;
17732 <i>Sylvia atricapilla</i> (Linnaeus, 1758)	1955 No data	5	1-19.05x14.66; 2- 19.15x14.48; 3-18.56x14.91; 4-18.15x14.49; 5-18.82x14.61;
17733 <i>Sylvia atricapilla</i> (Linnaeus, 1758)	11.05.1965 Giroda forest	4	1-18.46x13.87; 2-19.15x14.12; 3-19.23x14.37; 4-18.7x14.07;

17734	<i>Sylvia atricapilla/b</i> (Linnaeus, 1758)	17.05.1958 Pădurea Verde, Timișoara, Timiș	4	1-18.76x14.64; 2-20.31x14.99; 3-19.09x14.53; 4-19.5x14.8;
17735	<i>Sylvia atricapilla/a</i> (Linnaeus, 1758)	17.05.1958 Pădurea Verde, Timișoara, Timiș	5	1-19.32x14.52; 2-19.19x14.33; 3-18.41x14.38; 4-19.17x14.6; 5-19.49x14.54;
17736	<i>Sylvia atricapilla</i> (Linnaeus, 1758)	No data	3	1-20.57x14.76; 2-18.82x14.57; 3-20.25x14.74;
17737	<i>Curruca communis</i> (Latham, 1787)	05.1964 Gâșteni, Cluj	5	1-18.22x13.6; 2- 18.02x13.62; 3-19.01x13.65; 4-18.78x13.98; 5-18.29x13.64;
17738	<i>Curruca communis</i> (Latham, 1787)	1955	3	1-18.16x14.12; 2-17.63x14.2; 3-18.05x14.12;
17739	<i>Curruca curruca</i> (Linnaeus, 1758)	06.1958 Urseni, Timiș	4	1-16.33x12.97; 2-16.73x12.88; 3-16.47x12.76; 4-16.38x12.67;
17740	<i>Curruca curruca</i> (Linnaeus, 1758)	12.05.1964 Gâșteni, Cluj	3	1-17.41x12.87; 2-17.29x12.97; 3-17.01x12.94;
17741	<i>Curruca curruca</i> (Linnaeus, 1758)	1955 No data	3	1-16.04x12.73; 2-15.96x13.14; 3-16.87x12.36;
MUSCICAPIDAE				
17742	<i>Muscicapa striata</i> (Pallas, 1764)	3.06.1999 Ciupercenii Noi, Dolj	3	1-18.31x13.32; 2-18.32x13.39; 3-17.97x13.23;
17743	<i>Muscicapa albicollis</i> (Temminck, 1765)	25.05.1967 Pădurea Verde, Timișoara, Timiș	4	1-17.89x13.3; 2-18.9x13.21; 3-17.87x13.22; 4-17.57x13.33;
17744	<i>Turdus merula</i> Linnaeus, 1758	No data	4	1-30.85x21.62; 2-30.45x20.9; 3-30.36x20.57; 4- 27.3x21.69;
17745	<i>Turdus merula</i> Linnaeus, 1758	No data	4	1-29.8x21.7;

				2- 30.11x21.57; 3-29.96x21.7; 4-29.11x21.94;
17746	<i>Turdus philomelos</i> Brehm, 1831	No data	3	1-26.4x20.18; 2-25.93x20.3; 3-29.01x20.55;
17747	<i>Turdus philomelos</i> Brehm, 1831	No data	3	1-24.99x20.18; 2-25.51x20.4; 3-26.72x20.19;
17748	<i>Turdus philomelos</i> Brehm, 1831	No data	5	1-27.21x20.62; 2-28.14x20.3; 3-27.13x20.89; 4-26.95x20.28; 5-26.32x20.32;
17749	<i>Phoenicurus phoenicurus</i> (Linnaeus, 1758)	10.05.1964 Gâştescu, Cluj	7	1-18.66x14.45; 2-18.27x14.42; 3-18.08x14.27; 4-18.95x14.53; 5-18.6x14.71; 6-18.72x14.44; 7-17.63x14.11;
17750	<i>Phoenicurus phoenicurus</i> (Linnaeus, 1758)	1960 No data	6(7)	1-18.18x13.62; 2-19.49x13.47; 3-19.55x13.42; 4-19.25x13.62; 5-19.49x13.68; 6- 18.93x13.46;
17751	<i>Phoenicurus phoenicurus</i> (Linnaeus, 1758)	10.05.1964 Gâştescu, Cluj	4	1-17.69x14.19; 2-17.67x13.75; 3-17.36x13.17; 4-17.91x14.22;
17752	<i>Erithacus rubecula</i> (Linnaeus, 1758)	6.05.1981 Dracşina	2	1-18.99x14.61; 2-17.38x13.82;
STURNIDAE				
17753	<i>Sturnus vulgaris</i> Linnaeus, 1758	27.04.1958 Urseni forest, Timiş	3	1-29.65x20.79; 2-30.74x20.79; 3-30.35x20.74;
17754	<i>Sturnus vulgaris</i> Linnaeus, 1758	24.04.1959 Urseni forest, Timiş	6	1-30.86x20.96; 2-30.58x20.58; 3-32.28x20.88; 4-32.74x21.31; 5-29.84x21.56; 6- 28.85x21.93;

17755	<i>Sturnus vulgaris</i> Linnaeus, 1758	24.04.1959 Urşeni forest, Timiş	5	1-28.76x21.3; 2-30.99x21.79; 3-28.84x21.61; 4-29.42x21.99; 5-29.13x21.87;
PASSERIDAE				
17756	<i>Passer domesticus</i> (Linnaeus, 1758)	No data	4	1-22.05x15.22; 2- 22.09x15.92; 3-23.92x16.09; 4-19.11x13.89;
17757	<i>Passer domesticus</i> (Linnaeus, 1758)	No data	6	1-21.93x16.2; 2-22.28x15.92; 3-23.39x16.24; 4- 22.43x16.25; 5-20.57x16.07; 6- 22.77x15.75;
17758	<i>Passer montanus</i> (Linnaeus, 1758)	No data	3	1-17.84x13.97; 2-18.28x14.27; 3-18.55x13.84;
17759	<i>Passer montanus</i> (Linnaeus, 1758)	No data	5	1-19.42x13.91; 2- 19.31x14.04; 3-18.31x13.79; 4-18.64x14.17; 5-18.03x13.92;
FRINGILLIDAE				
17760	<i>Fringilla coelebs</i> Linnaeus, 1758	6.05.1956 Pădurea Verde, Timişoara, Timiş	3	1-18.47x14.39; 2-18.17x15.02; 3-18.17x15.02;
17761	<i>Fringilla coelebs</i> Linnaeus, 1758	1955 No data	4	1-20.7x15.13; 2-19.8x15.38; 3-20.24x15.26; 4-19.51x15.09;
17762	<i>Fringilla coelebs</i> Linnaeus, 1758	7.05.1956 Pădurea Verde Timişoara, Timiş	4	1-19.2x15.64; 2-19.16x14.67; 3-18.42x15.25; 4-19.2x15.57;
17763	<i>Fringilla coelebs</i> Linnaeus, 1758	23.04.1956 Pădurea Verde, Timişoara, Timiş	4	1-18.91x14.67; 2- 19.04x14.78; 3-19.11x14.74; 4-18.52x14.63;
17764	<i>Coccothraustes coccothraustes</i> (Linnaeus, 1758)	8.05.1958 No data	3	1-23.14x17.45; 2-23.6x18.14; 3-22.99x17.92;

17765	<i>Coccothraustes coccothraustes</i> (Linnaeus, 1758)	24.05.1964 No data	3	1-22.36x18.11; 2-23.02x18.21; 3-22.81x18.04;
17766	<i>Coccothraustes coccothraustes</i> (Linnaeus, 1758)	22.04.1959 Pădurea Verde Timișoara, Timiș	5	1-22.3x17; 2-23.61x16.73; 3-23.61x16.9; 4-22.26x16.44; 5-23.39x16.32;
17767	<i>Chloris chloris</i> (Linnaeus, 1758)	19.05.1964 Students' Park, Timișoara, Timiș	6	1-21.61x15.57; 2-22.04x15.92; 3-22.26x15.53; 4-22.64x15.86; 5-21.98x15.77; 6-22.07x15.64;
17768	<i>Chloris chloris</i> (Linnaeus, 1758)	26.04.1959 Urseni forest, Timiș	3	1-20.51x14.04; 2-20.46x13.69; 3-20.35x13.68;
17769	<i>Carduelis carduelis</i> (Linnaeus, 1758)	No data	4	1-16.93x12.92; 2-17.96x13.62; 3-17.92x13.9; 4-18.1x13.5;
17770	<i>Carduelis carduelis</i> (Linnaeus, 1758)	19.05.1964 Agronomy Park, Timișoara, Timiș	5	1-16.52x12.68; 2-17.78x13.35; 3-16.91x12.93; 4-16.6x12.55; 5-16.64x13.34;
EMBERIZIDAE				
17771	<i>Emberiza citrinella</i> Linnaeus, 1758	1977 No data	1	1-17.93x14.51;
17772	<i>Emberiza citrinella</i> Linnaeus, 1758	06.1958 Urseni, Timiș	5	1-21.02x16.81; 2-21.18x16.84; 3-21.39x16.87; 4-20.81x16.66; 5-21.83x16.76;
17773	<i>Emberiza calandra</i> Linnaeus, 1758	17.05.2002 Dracșina, Timiș	3	1-22.87x17.63; 2-22.92x17.52; 3-22.8x17.78;
17774	<i>Emberiza calandra</i> Linnaeus, 1758	14.06.2004 Căpâlnaș, Arad	5	1-24.69x18.32; 2-23.89x17.75; 3-24.81x18.04; 4-24.55x17.88; 5-24.13x17.81;

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Fig. 4. The Neumann egg collection - general aspect.



Fig. 5. Various eggs of water birds (*Vanellus*, *Chlidonias*, *Himantopus* etc.).



Fig. 6. Various eggs of birds (*Anas*, *Chroicocephalus*, *Gallinula*, *Phasianus* etc.).



Fig. 7. Various eggs (*Upupa*, *Merops*, *Asio* etc.).