A CATALOGUE OF THE COLLECTION OF TARSOMETATARS (AVES) FROM THE HERITAGE OF THE "GRIGORE ANTIPA" NATIONAL MUSEUM OF NATURAL HISTORY, BUCHAREST, ROMANIA

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Abstract. The bird collection of the "Grigore Antipa" National Museum of Natural History mainly consists of naturalized-mounted birds, skins, skeletons and bones, eggs, nests, stomach contents and pellets of birds, etc. These are accompanied by a collection of 832 bird tarsometatarsi. This type of collection was initiated by Robert Ritter von Dombrowski during 1895-1912. He collected and prepared 89 tarsometatarsi (89 species), which were to be presented in the new exhibition of the Museum, opened in 1908 in a new building. Unfortunately, these preparations were no longer exhibited, as the initiative was interrupted by the outbreak of the First World War, when Dombrowski was forced to leave Romania. A large number of tarsometatarsi, 448 specimens, were collected by Ștefan Negru, a zoologist, specialist in forest entomology, who worked as a museographer at the "Grigore Antipa" Museum. His scientific pursuits included, in addition to forest entomology, the research of mallophagans, for which he collected a large number of passerines, from which he kept only the tarsometatarsus. The collection also contains 210 tarsometatarsi collected by Aurel Papadopol, the ornithologist of the "Grigore Antipa" museum between 1946-1988. Other 95 specimens were collected by the museum specialists: Matei Tălpeanu, ornithologist, Dumitru Murariu, mammalogist, Nicolae Semen, taxidermist, Mihai Băcescu, oceanologist, Ștefan Torcea, mammalogist and Ioan Dianu, donor.

Keywords: vertebrate, bird, collection, tarsometatars, museum, Bucharest.

Rezumat. Catalogul colecției de tarsometatarsuri (Aves) din patrimoniul Muzeului Național de Istorie Naturală „Grigore Antipa", București, România. Colecția de păsări a Muzeului Național de Istorie Naturală „Grigore Antipa" este formată în principal din păsări naturalizate, piei, schelete și oase de păsări, ouă, cuiburi, conținuturi stomacale și ingluvii etc. Alături de acestea se află și o colecție de 844 de tarsometatarsuri de păsări din 182 de specii 49 familii și 16 ordine, unică in muzeele din România. Acest tip de colecție a fost inițiat de Robert Ritter von Dombrowski între 1895-1912. El a colectat și a preparat 89 de tarsometatarsuri, care urmau să fie prezentate în noua expoziție a Muzeului, deschisă în 1908 într-o clădire nouă. Din păcate, aceste preparate nu au mai fost expuse, inițiativa fiind întreruptă de izbucnirea Primului Război Mondial, când Dombrowski a fost nevoit să părăsească România. Un număr mare de tarsometatarsuri, 448 de exemplare, au fost donate de Ștefan Negru, zoolog, specialist în entomologie care a lucrat ca muzeograf la Muzeul Grigore Antipa. Colecția conține și 218 tarsometatarsuri colectate de Aurel Papadopol și Matei Tălpeanu, ornitologii Muzeului „Grigore Antipa" între anii 1946-1988. Alte 89 de exemplare au fost colectate și donate de alți specialiști ai muzeului.

Cuvinte cheie: vertebrate, păsări, colecție, tarsometatars, muzeu, București.

INTRODUCTION

The feet of birds underwent changes related to the bipedal, digitigrade position, the adaptation of the forelimbs to flight and the absence of fingers, while the functions of perching, catching, holding and killing prey, as well as building the nest, were taken over by the foot and beak. The changes undergone by the leg include a shorter femur. The tibia is more developed and always longer than the femur. Since the leg does not perform lateral and rotational movements, the fibula (peroneum) is greatly reduced and welded to a large extent with the tibia. The proximal tarsal bones are also welded to the tibia, therefore this segment of the leg is called the tibiotarsus. At the joint of the tibiotarsus with the femur, is the knee. The tibia continues with the tarsometatarsus, and their joint forms the heel. The tarsometatarsus is an elongated, strong bone formed by the fusion of the distal tarsal bones with the three metatarsal bones fused into a single bone, which continues with the toes. Birds have four fingers, but there are species that have lost some fingers: *Struthio camelus* (two fingers) or *Otis tarda* or *Picoides tridactylus* (three fingers) (Fig. 1I).

Birds have the ability to change the position of their toes. According to the orientation of the fingers, we distinguish several types of feet in non-passeriformes and passerines: anisodactyl (Fig. 1H), sindactyl, heterodactyl, zygodactyl (ectropodactyl in woodpeckers) and pamprodactyl (swifts) (RAIKOW, 1985; ABOURACHID et al., 2017). The anisodactyl foot is considered the ancestral type by BOCK & MILLER (1959) and BOCK (2015), and the other types derived from the anisodactyl basal arrangement of the fingers. Other authors, in recent works, suggest that the anisodactyly of Passeriformes is derived from a zygodactyl foot (BOTELHO et al., 2014). The types of bird feet are the result of different adaptations for walking, running, jumping, climbing or perching (BEDDARD, 1898; STEINBACHER, 1935).

The integument covering the tarsometarsus is called the podotheca. It is heavily keratinized and forms scales. Bird scales are of several types. Four types of podotheca scales are distinguished: scutellate and scute - on the tarsometatarsus and the dorsal surface of the toes - reticulated and ringed (annulate) mainly on the plantar surface (LUCAS & STETTENHEIM, 1972). The scales vary in size, shape, overlap, and the degree of fusion on different parts of the leg, but also between species (STETTENHEIM, 2000). The scales have different origins: the reticulate scales are composed of α-keratin, while in feathers and the scutellate scales, claws and rhamphotheca are composed of β-keratin (STEWART, 1977). Scutellate scales are very similar to crocodilian scales, while reticulate scales are a later derived form with different properties (BRUSH & WYLD, 1980).

MATERIAL AND METODS

The collection of tarsometatarsi contains 844 specimens and was established in several stages. The first preparations were collected by Robert Ritter von Dombrowski while he was working to compile a scientific collection of birds for the Museum of Zoology in Bucharest. For a very long time, these preparations were not considered important. They were later discovered and valued by museum ornithologists Aurel Papadopol and Matei Tălpeanu, who also began to collect tarsometatarsi from waders and passerines. Another part of the collection was donated by Ștefan Negru, a zoologist, specialist in entomology who worked as a museographer at the "Grigore Antipa" Museum.

Each specimen introduced in the catalogue comes together with a reference including the following sequence of information: inventory number, collection number, names of species locality, geographic coordinates (longitude and latitude), date and the name of the collector, number of specimens. For the classification system and the scientific names of the family, order and species, we have used the taxonomic system of SIBLEY & AHLQUIST (1990), SIBLEY & MONROE (1990) and DICKINSON (2003), as amended and supplemented (*** http://avibase.bsc-eoc.org/) (Table 1).

The preparations are preserved dry, in cardboard boxes. Some – those from larger species, pelicans, herons, storks, swans – are treated with preservatives (probably formalin and arsenic), especially those prepared by Robert von Dombrowski. Others are only mummified and kept in storage with preservative substances, therefore some of them represent a valuable resource for studies of anatomy, morphology, but also for studies of genetics and probably toxicology (MUNDY et al. 1997). All the preparations are from species from Romanian fauna. The large number of species in this collection gives us the opportunity to observe considerable anatomical variation in the hind limbs of birds. This anatomical variation was noticed by 19th century anatomists (BEDDARD, 1898; FINN, 1894; FÜRBRINGER, 1888; von BOETTICHER, 1929), but they ignored it, considering it to be of no value for establishing the phylogenetic relationships of the main groups of birds (HÖFLING & ABOURACHID, 2021).

RESULTS AND CONCLUSIONS

The "Grigore Antipa" museum's collection of tarsometatarsi is unique in Romania. This type of collection was initiated by Robert Ritter von Dombrowski between 1895-1912. He collects and prepares tarsometatarsi from field expeditions in Dobrogea, the Danube Delta and the surroundings of Bucharest. These preparations mainly come from damaged specimens, which could not be used for naturalization or for skeletons. Once established, the collection was to be presented in the new exhibition of the Museum, opened in 1908 in a new building. Grigore Antipa, a student of Professor Ernst Haeckel, was concerned with the creation of a collection of comparative anatomy, which served to illustrate the concept of evolution. The new collection of tarsometatarsi was to illustrate, in the public exhibition, the great variety of birds, their adaptations to their living environments and feeding methods. Unfortunately, these preparations were no longer exhibited, the initiative being interrupted by the outbreak of the First World War, when Dombrowski had to leave Romania (PETRESCU & PETRESCU, 2017). After almost 80 years, Aurel Papadopol arranges these dishes in special boxes and exhibits them in the museum, in the hall of birds from the fauna of Romania, for two years, between 1989-1991. These preparations were successful, but, on the grounds that the display method is cumbersome and outdated, the collection was again closed and returned to storage.

There are 89 tarsometatarsi collected by Dombrowski from 89 species. Of these, 56 are from bird species adapted to the aquatic environment and from shorebirds (waders). Six species are terrestrial and arboreal (*Otis tarda*, *Coturnix coturnix*, *Tetrao urogallus* and three species of Columbidae).

In waterfowl, the *podotheca* can be studied very well, as consisting of small scales, a soft integument with specific adaptations to the living environment and the way of movement. These birds have their toes fully or partially joined by a thin, flexible sheet of skin called the interdigital membrane. The interdigital membrane increases the surface area, which increases the propulsive force the animal can generate with each foot strike. The function of podotheca as an adaptation for locomotion was studied in foot-swimming birds by ABOURACHID & HÖFLING (2012). Many waterfowl have interdigital webbing that connects the three forward-facing (palmated) toes. In the *palmate foot*, only the anterior digits (2, 3 and 4) are included within the webbing (Fig. 1B). This is the most common type of webbed foot and is found in ducks, geese, swans, gulls, terns and other aquatic birds; others have all four fingers covered by the interdigital membrane (totipalmate). *Totipalmate feet* are found in the cormorant and pelicans (Fig. 1A). *Semipalmated feet* means that a small web is present between the anterior digits (2, 3 and 4) (Fig. 1D). Semipalmated feet are found in some sandpipers and plovers, all grouse, and some domestic breeds or chickens. In the *lobate foot*, the anterior digits (2, 3 and 4) are edged with lobes of skin that expand or contract as the bird swims. Lobate feet are found in the grebes, although some palmate-footed ducks have lobes of skin on the hallux (Fig. 1C). In *Fulica atra* (coots) the toes have *semi-lobed* interdigital membranes: similar to the lobate ones, but with separate lobes on each joint of the toes, adaptation for movement on a soft substrate (Fig. 1D) (LUCAS & STETTENHEIM, 1972).

Robert Dombrowski also paid special attention to predatory species. Its collection includes 27 species, of which 7 species of Strigiformes and 20 species of Accipitriformes. The raptorial foot is characterized by long, strong digits armed with heavy claws for catching, holding and killing prey animals. Raptorial feet are found in kites, hawks, eagles and falcons (Fig. 1E, G). The cinereous vulture (*Aegypius monachus*) and the Eurasian griffon vulture (*Gyps fulvus*), i.e. carrion-eating predators, have strong legs with sharp talons to catch or kill prey and strong, curved beaks to tear off the meat. While the metatarsus of some accipitriformes and falconiformes is naked, covered with scales, in strigiformes it is covered with fine plumage almost like claws, an adaptation that allows them to hunt silently (Fig. 1F).

A large number of tarsometatarsi, 448 specimens, were donated by Ștefan Negru (1923-1970), a zoologist, specialist in entomology who worked as a museographer at the "Grigore Antipa" Museum between 1963 and 1970. Among his scientific concerns was, in addition to forest entomology, the research of malophages in Romania, for which he collected a large number of passerines, between the years 1955-1970, from which he kept only the tarsometatarsus. He graduated from the Faculty of Forestry at the Polytechnic Institute of Bucharest in 1946 and the Faculty of Biology from Bucharest, where he studied during 1946-1950. He worked for a while at the Sinaia Zoological Research Station of the University of Bucharest, and from 1963 he transferred to the "Grigore Antipa" Museum of Natural History, in the entomology department. He published 97 works, of which 13 dealt with malophages (DRĂGHIA, 1972). The birds collected for research on malophages, especially passerines, collected during the time he worked at the Sinaia Zoological Station, could not be preserved, and because of this he only collected the tarsometatarsi. The collection organized in this activity was donated by the author to the "Grigore Antipa" Museum, and it includes 72 species of birds from 33 families and eight orders, among which passerine species predominate. This collection is completed by other 218 tarsometatarsi collected by Aurel Papadopol (1923-2009) and Matei Tălpeanu (1927-2020), ornithologists of the "Grigore Antipa" museum during 1946-1988 (PETRESCU, 1995; PETRESCU & PETRESCU, 2015; PETRESCU et al., 2020). Other 89 specimens were collected and donated by other museum specialists (Mihai Băcescu, Dumitru Murariu, Ștefan Torcea, Nicolae Semen, Matei Petre Bogdan, Ioan Dianu, etc.)

As we know, the foot acts as an interface between the bird and the substrate, and its morphology involves its bone shape and the integument that comes in contact with the substrate (HÖFLING & ABOURACHID, 2021). The nonfeathered surface of the avian foot presents two types of scales. The larger scutes are found on the anterior tarsometatarsus and the caudal tarsometatarsal surface. The second type, termed reticulate scales, are found on the lower posterior tarsometatarsus and plantar surface of the toes (LUCAS & STETTENHEIM, 1972). The scutellate scales overlap each other, while the reticulate scales generally do not.

According to the shape and arrangement of the scales on the dorsal, lateral and medial face, we distinguish several types of covers of the tarsometatarsus classified in older studies in: *taxaspidean* - having the posterior tarsal scales, or scutella, rectangular and arranged in regular rows; *pycnaspidean* - having the posterior side of the tarsus covered with small irregular scales; *holaspidean* - having a single row of large scutes on the posterior side of the tarsus; *endaspidean* -having the anterior scutes extending around the tarsus on the inner side; *exaspidean* - having the anterior scutes extending around the tarsus on the outer side, leaving the inner side naked; *ocreat* (*booted*): scutella fused into a single smooth sheath or boot; *laminiplantar* having the tarsus covered behind with a horny sheath, continuous on both side, as in most songbirds (REICHENOW, 1913).

In recent works, the used terminology mainly refers to the shape of the scales of the podotheca and thus the feet of birds can be classified into several categories. *Scutellate* feet are characterized by rectangular scale arranged in overlapping rows along the anterior edge of the tarsus and foot. Birds with scutellate scales are mostly passerines, gallinaceous birds, kingfishers, corvids, swallows, finches, buntings, titmice, verdin, nuthatches (in front), brown creeper, wrens (in front, sometimes behind), wagtails, pipits, waxwings, shrikes, European starlings, warblers, sparrows, house sparrows and blackbirds (CLARKE, 1972). Birds with scutellate scales at the front only are members of the heron family, woodcock, snipe, sandpipers, phalaropes, and ducks. In the *reticulate foot*, the tarsometatarsus is covered by irregularly arranged granular scales, a fine patchwork of small irregularly shaped plates in a reticulated (netlike) pattern. *Reticulated feet* are found in many birds, such as whistling-ducks, swans, geese, storks, wood ibises, ibises, spoonbills, loons, plovers, oystercatchers, pelicans, avocets, stilts, ospreys, falcons. *Scutellate-reticulate* feet have both scutes and reticulate scales on the foot, tarsometatarsus. Found in pigeons and doves *scutellate-reticulate*, these plates are scutellate in front and reticulate behind such as in dowitchers (*Limnodromus*) and woodpeckers. Hawks and eagles have plates that are more scutellate than reticulate and feathered or booted. *Booted* or *ocreate* (smooth**)**: the skin of the tarsus is continuously smooth without scales or plates. This occurs in dippers, thrushes, and kinglets. The *scutellate-booted* foot has a scutellate anterior edge and a single booted scale on the posterior edge. This occurs in flycatchers, larks, and some thrashers (PROCTOR & LYNCH, 1993).

On the underside of the toes and on the distal end of the tarsometatarsus, we find reticulated scales in papillae that form thick pads (*pulvinus*) to resist compression, especially in terrestrial species. The papillae and pads roughly correspond to the phalanges, and at the base of the joints they are separated by flexible transverse plates or folds, which open and close as the fingers are bent. The folds and papillae vary morphologically and histologically between species depending on the length of the toes, their need for support and the nature of the substrate the birds use (LENNERSTEDT, 1975 a, b).

The structure of the foot of birds was studied by HANAU (1881), who investigated the histology of the sole in a few species, and BOETTICHER (1929) described its anatomy briefly. GYLDENSTOLPE (1917) described the heelpads of nestlings of hole-breeding birds as adaptations for creeping about in the nest hole; LONNBERG (1926) and BOETTICHER (1930) considered the horny fringes on the sides of the toes of tetraonidae as an adaptation for walking in loose snow; and the long-pointed papillae of the Osprey, *Pandion haliaeetus*, have been shown to be an adaptation for catching and holding fish (BOETTICHER, 1929). MADSEN & WINGSTRAND (1959) examined the soles of terrestrial wintering birds in Greenland and found a thicker horn layer there than on the feet of birds from warmer regions. Penguins in the Antarctic are also considered to have special adaptations to cold in the foot structure (TAYLOR, 1961). STAALAND (1964) investigated of the relation of sole structure to climate, but the great morphological variations encountered made it clear that other ecological factors, as well as systematic ones, also be important. LENNERSTEDT (1974) described the plantar surface of several bird species focusing on the pads and folds of this surface, emphasizing their role and functionality (KORNER-NIEVERGELT, 2004).

The "Grigore Antipa" Museum collection of tarsometatarsi is unique in Romania. All preparations are from species from Romania's fauna. The large number of species in this collection gives us the opportunity to observe the considerable anatomical variation in the hind limbs of birds. The *tarsometatarsi* collection of the "Grigore Antipa" museum was established in several stages. The first preparations were collected by Robert Ritter von Dombrowski in the period 1895-1912. They were discovered later, after 1950, and valued by museum ornithologists Aurel Papadopol and Matei Tălpeanu, who began to collect tarsometatarsus from waders and passerines. Another part of the collection was donated by Ștefan Negru, zoologist, specialist in entomology who worked as a museographer at the "Grigore Antipa" Museum. The 844 tarsometatarsi are mummified and kept in storage with preservatives, therefore some of them represent a valuable resource for studies of anatomy, morphology, but also for studies of genetics and probably toxicology.

Table 1. A systematic list of species from the collection of tarsometatarsi (Aves) from the heritage of the "Grigore Antipa" National Museum of Natural History.

No. coll.	Species	Locality	GPS coordinates	Collection data	Legit	No. ex.
	Order GAVIIFORMES Family GAVIIDAE					
6194/12	*Gavia arctica* (Linnaeus, 1758)	Romania	wd	1895-1912	RD	1
	Order PODICIPEDIFORMES Family PODICIPEDIDAE					
6194/10	*Podiceps grisegena* (Boddaert, 1783)	Romania	wd	1895-1912	RD	1
6194/11	*Podiceps cristatus* (Linnaeus, 1758)	Romania	wd	1895-1912	RD	1
	Order PELECANIFORMES Family PELECANIDAE					
6194/13	*Pelecanus onocrotalus* Linnaeus, 1758	Romania	wd	1895-1912	RD	1
15242/342	*Pelecanus onocrotalus* Linnaeus, 1758	Balta Uzlina, Murighiol,	45.075005, 29.235224	26.11.1956	AP	1
	Family TRESKIORNITHIDAE					
6192/3	*Platalea leucorodia* Linnaeus, 1758	Romania	wd	1895-1912	RD	1
	Family ARDEIDAE					
6192/4	*Ardea cinerea* Linnaeus, 1758	Romania	wd	1895-1912	RD	1
15242/343	*Ardea cinerea* Linnaeus, 1758	Canalul Filipoiu, Brăila	45.228844, 28.027527	11.07.1958	ST	2
15242/344	*Ardea cinerea* Linnaeus, 1758	Insula Brăilei, Brăila	45.259693, 28.021514	29.06.1960	RD	2
17810	*Ardea cinerea* Linnaeus, 1758	Romania	wd	wd	AP	2
6192/5	*Ardea purpurea* Linnaeus 1766	Romania	wd	1895-1912	RD	1
6192/6	*Ardea alba* Linnaeus, 1758	Romania	wd	1895-1912	RD	1
6192/7	*Egretta garzetta* (Linnaeus, 1766)	Romania	wd	1895-1912	RD	1
15242/341	*Egretta garzetta* (Linnaeus, 1766)	Tulcea	45.186049, 28.749875	05.1960	AP	2
6192/8	*Nycticorax nycticorax* (Linnaeus, 1758)	Romania	wd	1895-1912	RD	1
6192/9	*Ardeola ralloides* (Scopoli, 1769)	Romania	wd	1895-1912	RD	1
6192/10	*Ixobrychus minutus* (Linnaeus, 1766)	Romania	wd	1895-1912	RD	1
15242/287	*Ixobrychus minutus* (Linnaeus, 1766)	Pipera, București	44.495045, 26.114188	27.7.1959	ȘtN	2
15242/293	*Ixobrychus minutus* (Linnaeus, 1766)	Sărătura Murighiol,Tulcea	45.030216, 29.147100	21.05.1960	ȘtN	2
	Order SULIFORMES Family PHALACROCORACIDAE					
6194/14	*Microcarbo pygmaeus* (Pallas, 1773)	Romania	wd	1895-1912	RD	1
6194/15	*Phalacrocorax carbo sinensis* (Staunton,1796)	Romania	wd	1895-1912	RD	1
	Order ANSERIFORMES Family ANATIDAE					
6194/16	*Anser anser* (Linnaeus, 1758)	Romania	wd	1895-1912	RD	1
6194/26	*Anser albifrons* (Scopoli, 1769)	Romania	wd	1895-1912	RD	1
6194/27	*Anser fabalis* (Latham, 1787)	Romania	wd	1895-1912	RD	1

No. coll.	Species	Locality	GPS coordinates	Collection data	Legit	No. ex.
6194/17	*Cygnus olor* (Gmelin, 1789)	Romania	wd	1895-1912	RD	1
6194/18	*Mergus merganser* Linnaeus, 1758	Romania	wd	1895-1912	RD	1
6194/19	*Aythya nyroca* Güldenstdät, 1770	Romania	wd	1895-1912	RD	1
17811	*Aythya nyroca* Güldenstdät, 1770	Chirnogi, Călărași	44.268864, 26.911780	27.03.1960	NS	2
6194/20	*Aythya fuligula* (Linnaeus, 1758)	Romania	wd	1895-1912	RD	1
6194/21	*Aythya ferina* (Linnaeus, 1758)	Romania	wd	1895-1912	RD	1
6194/22	*Anas crecca* Linnaeus, 1758	Romania	wd	1895-1912	RD	1
6194/23	*Spatula querquedula* (Linnaeus, 1758)	Romania	wd	1895-1912	RD	1
17778	*Spatula querquedula* (Linnaeus, 1758)	Balta Ratca,Dridu Ialomița	44.813695, 26.563518	15.03.1996	MPB	2
6194/24	*Anas acuta* Linnaeus, 1758	Romania	wd	1895-1912	RD	1
6194/28	*Anas platyrhynchos* Linnaeus, 1758	Romania	wd	1895-1912	RD	1
17779	*Anas platyrhynchos* Linnaeus, 1758	Balta Ratca, Dridu, Ialomița	44.820970, 26.569647	27.04.996	MPB	2
6194/29	*Anas strepera* Linnaeus, 1758	Romania	wd	1895-1912	RD	1
6194/25	*Tadorna ferruginea* (Pallas, 1770)	Romania	wd	1895-1912	RD	1
	Order CICONIIFORMES **Family CICONIIDAE**					
6192/1	*Ciconia ciconia* (Linnaeus, 1758)	Romania	wd	1895-1912	RD	1
6192/2	*Ciconia nigra* (Linnaeus, 1758)	Romania	wd	1895-1912	RD	1
	Order OTIDIFORMES **Family OTIDIDAE**					
6192/11	*Otis tarda* Linnaeus,1758	Romania	wd	1895-1912	RD	1
	Family RALLIDAE					
6192/33	*Fulica atra* Linnaeus, 1758	Romania	wd	1895-1912	RD	1
15242/339	*Fulica atra* Linnaeus, 1758	Rast, Dolj	43.870508, 23.328662	6.07.1960	MVT	2
6192/32	*Gallinula chloropus* (Linnaeus, 1758)	Romania	wd	1895-1912	RD	1
15242/317	*Gallinula chloropus* (Linnaeus, 1758)	Lacul Agigea	44.098158, 28.625752	13.08.1956	StN	2
15242/337	*Gallinula chloropus* (Linnaeus, 1758)	Reșca, Olt	44.202579 , 24.445688	19.04.1964	ȘtN	2
17780	*Gallinula chloropus* (Linnaeus, 1758	Balta Ratca, Ialomița	44.813695, 26.563518	27.04.1996	MPB	2
15242/11	*Porzana porzana* Linnaeus, 1766	Mamaia Constanța	44.234623 28.622528	04.1955	AP	1
	Order GALLIFORMES Family **PHSIANIDAE**					
6192/16	*Tetrao urogallus rudolfi* Dombrowski, 1912	Romania	wd	1895-1912	RD	1
6192/15	*Coturnix coturnix* (Linnaeus, 1758)	Romania	wd	1895-1912	RD	1
	Order COLUMBIFORMES Family **COLUMBIDAE**					
15242/10	*Columba oenas* Linnaeus 1758	Valea Ialomiţei	44.657822, 27.839963	30.03.1960	AP	1
6192/12	*Columba oenas* Linnaeus 1758	Romania	wd	1895-1912	RD	1
6192/13	*Columba livia domestica* Gmelin, 1789	Romania	wd	1895-1912	RD	1
6192/14	*Streptopelia turtur* (Linnaeus, 1758)	Romania	wd	1895-1912	RD	1
15242/173	*Streptopelia turtur* (Linnaeus, 1758)	Grădiștea, Giurgiu	44.233072, 26.141942	22.05.1962	ȘtN	2
	Order CHARADRIIFORMES Family **CHARADRIIDAE**					
6192/21	*Charadrius dubius curonicus* Gmelin, 1789	Romania	wd	1895-1912	RD	1

No. coll.	Species	Locality	GPS coordinates	Collection data	Legit	No. ex.
15242/73	*Charadrius dubius curonicus* Gmelin, 1789	Techirghiol, Constanța ,	44.037063, 28.607767	3.09.1957	AP	2
15242/124	*Charadrius dubius curonicus* Gmelin, 1789	Sărăturile Murighiol, Tulcea	45.032922, 29.155317	20.05.1960	ȘtN	2
6192/22	*Anarhynchus alexandrinus* (Linnaeus, 1758)	Romania	wd	1895-1912	RD	1
6192/17	*Vanellus vanellus* (Linnaeus, 1758)	Romania	wd	1895-1912	RD	1
17781	*Vanellus vanellus* (Linnaeus, 1758)	Balta Ratca, Dridu, Ialomița	44.820970, 26.569647	27.04.1996	MPB	2
17782	*Vanellus vanellus* (Linnaeus, 1758)	Balta Ratca, Dridu, Ialomița	44.820970, 26.569647	27.03.1996	MPB	2
17796	*Vanellus vanellus* (Linnaeus, 1758)	Balta Ratca, Dridu, Ialomița	44.693258, 26.407293	13.08.1996	MPB	2
	Family RECURVIROSTRIDAE					
6192/29	*Recurvirostra avosetta* Linnaeus, 1758	Romania	wd	1895-1912	RD	1
6192/30	*Himantopus himantopus* (Linnaeus, 1758)	Romania	wd	1895-1912	RD	1
	Family SCOLOPACIDAE					
6192/19	*Numenius arquata* (Linnaeus, 1758)	Romania	wd	1895-1912	RD	1
15242/346	*Numenius arquata* (Linnaeus, 1758)	Beibugeac, Constanța	45.028085, 29.127921	05.1965	AP	1
6192/18	*Limosa limosa* Linnaeus, 1758	Romania	wd	1895-1912	RD	1
15242/255	*Scolopax rusticola* Linnaeus, 1756	Comana, Giurgiu	44.167505, 26.124938	16.04.1959	ȘtN	2
15242/3	*Gallinago gallinago* (Linnaeus, 1758)	Romania	wd	fără date	AP	1
15242/345	*Gallinago gallinago* (Linnaeus, 1758)	Cumpătu, Sinaia, Prahova	45.375514 25.543009	25.1.1961	ȘtN	2
6192/28	*Capella media* (Latham, 1787)	Romania	wd	1895-1912	RD	1
6192/23	*Actitis hypoleucos* (Linnaeus, 1758)	Romania	wd	1895-1912	RD	1
15242/63	*Actitis hypoleucos* (Linnaeus, 1758)	Sinaia, Pârâul Tufa	45.373567, 25.594465	19.05.1958	StN	2
15242/129	*Actitis hypoleucos* (Linnaeus, 1758)	Sinaia, Prahova	45.373366, 25.5431856	24.04.1960	ȘtN	2
6192/24	*Tringa glareola* Linnaeus, 1758	Romania	wd	1895-1912	RD	1
6192/25	*Tringa ochropus* Linnaeus, 1758	Romania	wd	1895-1912	RD	1
6192/27	*Tringa totanus* (Linnaeus, 1758)	Romania	wd	1895-1912	RD	1
15242/12	*Tringa totanus* (Linnaeus, 1758)	Lacul Brateș, Galați	45.501923, 28.041811	24.06.1960	AP	1
15242/335	*Tringa totanus* (Linnaeus, 1758)	Grindul Lupilor, Lacul Sinoe	44.641011, 28.785817	14.08.1958	AP	2
6192/26	*Tringa erythropus* (Pallas, 1764)	Romania	wd	1895-1912	RD	1
6192/20	*Calidris alpina* (Linnaeus, 1758)	Romania	wd	1895-1912	RD	1
15242/42	*Calidris minuta* (Leisler, 1812)	Comana, Giurgiu	44.187458, 26.132966	1.09.1959	AP	2
	Family GLAREOLIDAE					
6192/31	*Glareola pratincola* (Linnaeus, 1766)	Romania	wd	1895-1912	RD	1
15242/6	*Glareola pratincola* (Linnaeus, 1766)	Grindul Lupilor	44.628496, 28.808746	14.08.1958	AP	1
	Family LARIDAE					
6194/5	*Ichthyaetus melanocephalus* (Temminck, 1820)	Romania	wd	1895-1912	RD	1
15242/7	*Ichthyaetus melanocephalus* (Temminck, 1820)	Techirghiol, Constanța	44.032542, 28.602646	07.1957	AP	1
6194/6	*Chroicocephalus ridibundus* Linnaeus, 1766	Romania	wd	1895-1912	RD	1
15242/313	*Chroicocephalus ridibundus* Linnaeus, 1766	Sărătura Murighiol,	45.033354, 29.141384	20.05.1960	ȘtN	2
17783	*Chroicocephalus ridibundus* Linnaeus, 1766	Balta Ratca, Dridu, Ialomița	44.813695, 26.563518	17.08.1993	MPB	2
15242/314	*Hydrocoloeus minutus* (Pallas, 1776)	Călărași	44.233156, 27.274510	28.06.1963	AP	2

No. coll.	Species	Locality	GPS coordinates	Collection data	Legit	No. ex.
6194/7	*Chroicocephalus genei* (Breme 1839)	Romania	wd	1895-1912	RD	1
6194/8	*Larus cachinnans* Pallas, 1811	Romania	wd	1895-1912	RD	1
17784	*Larus cachinnans* Pallas, 1811	Balta Ratca, Dridu, Ialomița	44.798415, 26.563572	12.08.1996	MPB	2
15242/340	*Larus cachinnans* Pallas, 1811	Periteaşca, Zmeica, Tulcea	44.754237, 29.059653	14.08.1958	AP	2
6194/9	*Larus argentatus* Pontoppidan, 1763	Romania	wd	1895-1912	RD	1
15242/4	*Gelochelidon nilotica* (Gmelin, 1789)	Periteaşca, Jurilovca Tulcea	44.730167, 29.008617	13.07.1958	AP	1
6194/3	*Gelochelidon nilotica* (Gmelin, 1789)	Romania	wd	1895-1912	RD	1
6194/4	*Hydroprogne caspia* (Lepechin, 1770)	Romania	wd	1895-1912	RD	1
6194/1	*Chlidonias niger* (Linnaeus, 1758)	Romania	wd	1895-1912	RD	1
15242/121	*Chlidonias niger* (Linnaeus, 1758)	Călăraşi	44.233156, 27.274510	28.06.1963	AP	2
6194/2	*Chlidonias leucopterus* (Temminck, 1815)	Romania	wd	1895-1912	RD	1
15242/64	*Sterna hirundo* Linnaeus, 1758	Călăraşi	44.233156, 27.274510	23.06.1962	AP	2
15242/318	*Sterna hirundo* Linnaeus, 1758	Rast, Dolj	43.859970, 23.270564	6.07.1960	MVT	2
	Order STRIGIFORMES **Family STRIGIDAE**					
6193/1	*Bubo bubo* (Linnaeus, 1758)	Romania	wd	1895-1912	RD	1
6193/2	*Otus scops* (Linnaeus, 1758)	Romania	wd	1895-1912	RD	1
6193/3	*Tyto alba* (Scopoli, 1769)	Romania	wd	1895-1912	RD	1
6193/4	*Asio flammeus* (Pontoppidan, 1763)	Romania	wd	1895-1912	RD	1
6193/5	*Asio otus* (Linnaeus, 1758)	Romania	wd	1895-1912	RD	1
6193/6	*Athene noctua* (Scopoli, 1769)	Romania	wd	1895-1912	RD	1
15242/81	*Athene noctua* (Scopoli, 1769)	Romania	wd	1895-1912	AP	2
15242/290	*Athene noctua* (Scopoli, 1769)	Suceava	47.698171, 26.293341	10.09.1959	ŞtN	2
17785	*Athene noctua* (Scopoli, 1769)	Ratca, Ialomița	44.803161, 26.555997	27.04.1996	MPB	2
6193/7	*Strix aluco* Linnaeus 1758	Romania	wd	1895-1912	RD	1
15242/334	*Strix aluco* Linnaeus 1758	Cumpătu, Sinaia, Prahova	45.375514 , 25.543009	17.11.1958	ŞtN	2
15242/2	*Glaucidium passerinum* (Linnaeus, 1758)	Sinaia	45.326481 25.543782	29.03.1960	AP	2
	Order FALCONIFORMES **Family FALCONIDAE**					
6193/8	*Falco peregrinus* Tunstal, 177l	Romania	wd	1895-1912	RD	1
6193/9	*Falco cherrug* Gray, 1834	Romania	wd	1895-1912	RD	1
6193/10	*Falco subbuteo* Linnaeus, 1758	Romania	wd	1895-1912	RD	1
6193/11	*Falco tinnunculus* Linnaeus, 1758	Romania	wd	1895-1912	RD	1
15242/288	*Falco tinnunculus* Linnaeus, 1758	Techirghiol, Constanța	44.060280, 28.580014	27.06.1964	AP	2
17812	*Falco tinnunculus* Linnaeus, 1758	Lilieci, Ialomița	44.549530, 26.371584	15.03.1996	MPB	2
6193/12	*Falco naumanni* Fleischer, 1818	Romania	wd	1895-1912	RD	1
6193/13	*Falco vespertinus* Linnaeus, 1766	Romania	wd	1895-1912	RD	1
	Family ACCIPITRIDAE					
6193/26	*Aegypius monachus* (Linnaeus, 1766)	Romania	wd	1895-1912	RD	1

No. coll.	Species	Locality	GPS coordinates	Collection data	Legit	No. ex.
6193/27	*Gyps fulvus* (Hablizl, 1783)	Romania	wd	1895-1912	RD	1
6193/23	*Aquila heliaca* Savigny, 1809	Romania	wd	1895-1912	RD	1
6193/24	*Aquila chrysaetos* (Linnaeus, 1758)	Romania	wd	1895-1912	RD	1
6193/20	*Accipiter nisus* (Linnaeus, 1758)	Romania	wd	1895-1912	RD	1
6193/21	*Accipiter brevipes* (Severtzov, 1850)	Romania	wd	1895-1912	RD	1
6193/22	*Accipiter gentilis* (Linnaeus, 1758)	Romania	wd	1895-1912	RD	1
15242/338	*Accipiter gentilis* (Linnaeus, 1758)	Cumpătu, Sinaia, Prahova	45.372093, 25.550734	15.08.1951	ȘtN	2
6193/14	*Circus pygargus* (Linnaeus, 1758)	Romania	wd	1895-1912	RD	1
6193/15	*Circus macrorus* (Gmelin, 1770)	Romania	wd	1895-1912	RD	1
6193/16	*Circus cyaneus* (Linnaeus, 1766)	Romania	wd	1895-1912	RD	1
6193/17	*Circus aeruginosus* (Linnaeus) 1758	Romania	wd	1895-1912	RD	1
17786	*Circus aeruginosus* (Linnaeus) 1758	Balta Ratca, Dridu, Ialomița	44.813695, 26.563518	27. 04.1996	MPB	2
6193/25	*Haliäeetus albicilla* (Linnaeus, 1758)	Romania	wd	1895-1912	RD	1
6193/18	*Buteo buteo vulpinus* (Gloger, 1833)	Romania	wd	1895-1912	RD	1
6193/19	*Buteo lagopus* (Pontoppidan, 1763)	Romania	wd	1895-1912	RD	1
	Order CORACIIFORMES Family UPUPIDAE					
15242/150	*Upupa epops* Linnaeus, 1758	Suceava	47.693842, 26.299282	15.09.1959	ȘtN	2
15242/151	*Upupa epops* Linnaeus, 1758	Pipera, București	44.498463, 26.129986	9.08.1959	ȘtN	2
	Family MEROPIDAE					
15242/145	*Merops apiaster* Linnaeus, 1758	Suceava	47.693842, 26.299282	15.09.1959	ȘtN	2
15242/146	*Merops apiaster* Linnaeus, 1758	Pipera	44.491194, 26.110308	10.08 .1959	ȘtN	2
	Family CORACIIDAE					
15242/291	*Coracias garrulus* Linnaeus, 1758	Suceava	47.693842, 26.299282	12.09.1959	ȘtN	2
15242/294	*Coracias garrulus* Linnaeus, 1758	Tâmpa, Brașov	45.635562, 25.596786	29.05.1959	ȘtN	2
15242/295	*Coracias garrulus* Linnaeus, 1758	Suceava	47.693842, 26.299282	12.09.1959	ȘtN	2
	Order PICIFORMES Family PICIDAE					
15242/41	*Jynx torquilla* Linnaeus, 1758	Știoborani, Vaslui	46.755526, 27.847860	17.06.1959	AP	2
15242/289	*Picus viridis* Linnaeus 1758	Comana, Giurgiu	44.158681, 26.109864	23.07.1963	ȘtN	2
15242/276	*Picus canus* Gmelin, 1788	Pădurea Brănești, Ilfov	44.486163, 26.344469	17.04.1959	ȘtN	2
15242/297	*Picoides tridactylus alpinus* C. L. Brehm, 1831	Sinaia, Prahova	45.361246, 25.543845	26.06.1958	ȘtN	2
15242/32	*Picoides tridactylus alpinus* C. L. Brehm, 1831	Sinaia, Prahova	45.360124, 25.535768	19.01.1958	StN	2
15242/8	*Dryocopus martius* (Linnaeus, 1758)	Sinaia, Prahova	45.341697, 25.542321	25.11.1957	AP	1
15242/315	*Dryocopus martius* (Linnaeus, 1758)	Tismana, Gorj	45.074553, 22.931812	1960	AP	2
15242/270	*Dendrocopos major pinetorum* (C. L. Brehm, 1831)	Pipera, București	44.491846, 26.109807	7.06.1958	ȘtN	2
15242/298	*Dendrocopos major pinetorum* (C. L. Brehm, 1831)	Pădurea Brănești, Ilfov	44.48054, 26.336121	17.04.1959	ȘtN	2
15242/34	*Dendrocopos major pinetorum* (C. L. Brehm, 1831)	Pădurea Comorova, Constanța	43.879607, 28.594464	1.09.1958	AP	2

No. coll.	Species	Locality	GPS coordinates	Collection data	Legit	No. ex.
15242/307	*Dendrocopos major pinetorum* (C. L. Brehm, 1831)	Tunari, Bucureşti	44.543663, 26.115916	22.06.1956	ŞtN	2
15242/72	*Dendrocopos leucotos* (Bechtein, 1803)	Sinaia, Pădurea Zamora	45.367245, 25.551384	18.12.1957	AP	2
15242/302	*Dendrocopos leucotos* (Bechtein, 1803)	Munţii Cozia, Stânişoara	45.300516, 24.343164	8.02.1965	ŞtN	2
15242/332	*Dendrocopos leucotos* (Bechtein, 1803)	Stejărişul Mare Braşov	45.629129, 25.552504	16.04. 1955	ŞtN	2
	Order PASSERIFORMES Family ORIOLIDAE					
15242/190	*Oriolus oriolus* (Linnaeus, 1758)	Pădurea Brănești, Ilfov	44.490315, 26.352638	17.04.1959	ŞtN	2
15242/186	*Oriolus oriolus* (Linnaeus, 1758)	Suceava	47.676283, 26.227353	11.09.1959	ŞtN	2
15242/329	*Oriolus oriolus* (Linnaeus, 1758)	Pipera, Bucureşti	44.499520, 26.143750	27.07.1959	ŞtN	2
	Family LANIIDAE					
15242/224	*Lanius excubitor* Linnaeus, 1758	Grădiştea, Călăraşi	44.232775, 26.145311	11.12.1954	ŞtN	2
15242/226	*Lanius minor* Gmelin, 1788	Valul lui Traian, Constanța	44.179981 28.462432	12.06.1958	AP	2
15242/220	*Lanius collurio* Linnaeus, 1758	Lunca Prahovei, pârâul Şipa, Cumpătu, Sinaia	45.372093, 25.550734	25.05.1958	ŞtN	2
15242/227	*Lanius collurio* Linnaeus, 1758	Rezervația Aninișul Cumpătu, Sinaia	45.368614, 25.552437	28.05.1958	ŞtN	2
15242/228	*Lanius collurio* Linnaeus, 1758	Agigea, Constanța	44.088485, 28.642140	7.08.1962	ŞtN	2
15242/229	*Lanius collurio* Linnaeus, 1758	Tulcea	45.161173, 28.816560	20.05.1960	ŞtN	2
15242/309	*Lanius collurio* Linnaeus, 1758	Valul lui Traian, Constanța	44.171386, 28.475819	12.06.1958	AP	2
	Family CORVIDAE					
15242/176	*Garrulus glandarius* (Linnaeus, 1758)	Suceava	47.693842, 26.299282	12.09.1959	ŞtN	2
15242/254	*Garrulus glandarius* (Linnaeus, 1758)	Pipera, Bucureşti	44.495114, 26.111464	7.06.1958	ŞtN	2
15242/256	*Garrulus glandarius* (Linnaeus, 1758)	Tâmpa, Braşov	45.630660, 25.590250	29.05.1959	ŞtN	2
15242/258	*Garrulus glandarius* (Linnaeus, 1758)	Tunari, Bucureşti	44.543080, 26.117637	22.06.1956	ŞtN	2
15242/259	*Garrulus glandarius* (Linnaeus, 1758)	Sinaia, Prahova	45.360855, 25.548556	18.03.1964	ŞtN	2
15242/5	*Garrulus glandarius* (Linnaeus, 1758)	Gurghiu, Pădurea Mociar	46.769719, 24.819017	19.07.1958	AP	1
15242/9	*Garrulus glandarius* (Linnaeus, 1758)	Sinaia, Prahova	45.360855, 25.548556	27.06.1958	AP	1
15242/285	*Garrulus glandarius* (Linnaeus, 1758)	Sinaia, Prahova	45.360855, 25.548556	25.11.1963	ŞtN	2
15242/286	*Garrulus glandarius* (Linnaeus, 1758)	Cumpătu, Sinaia	45.372093, 25.550734	24.07.1959	ŞtN	2
15242/292	*Garrulus glandarius* (Linnaeus, 1758)	Pădurea Brănești, Ilfov	44.490315, 26.352638	17.04.1959	ŞtN	2
15242/321	*Pica pica* (Linnaeus, 1758)	Bucureşti	44.458556, 26.084672	24.02.1960	AP	2
15242/263	*Nucifraga caryocatactes* (Linnaeus, 1758)	Tâmpa, Braşov	45.630660, 25.590250	29.05.1959	ŞtN	2
15242/336	*Corvus corax* Linnaeus 1758	Sinaia, Prahova	45.372093, 25.550734	14.03.1958	AP	2
17787	*Corvus cornix* Linnaeus, 1758	Dridu, Ialomița	44.79040, 26.560961	20.03.1996	MPB	2
17788	*Corvus frugilegus* Linnaeus 1758	Balta Ratca, Dridu, Ialomița	44.79040, 26.560961	10.02.1996	MPB	2
17789	*Corvus frugilegus* Linnaeus 1758	Parc Herăstrău, București	44.479631, 26.083395	25.01.1995	MPB	2

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17790	*Coloeus monedula* (Linnaeus 1758)	Afumați, Ilfov	44.524960, 26.245477	25.03.1996	MPB	2
	Family PARIDAE					
15242/179	*Periparus ater* (Linnaeus, 1758)	Posada, Câmpina, Prahova	45.278838, 25.622195	13.09.1961	ȘtN	2
15242/192	*Periparus ater* (Linnaeus, 1758)	Pădurea Cumpătu, Zamora, Sinaia,	45.372093, 25.550734	15.01.1958	ȘtN	2
15242/187	*Poecile lugubris* (Temminck, 1820)	Eşelniţa, Mehedinți	44.702468, 22.359886	23.10.1968	MVT	2
15242/67	*Poecile montanus* (Baldenstein, 1827)	Cumpătu, Sinaia, Prahova	45.368614, 25.552437	26.06.1958	AP	2
15242/15	*Cyanistes caeruleus* (Linnaeus, 1758)	Mogoşoaia, Ilfov	44.524880, 25.994060	22.09.1961	AP	2
15242/185	*Cyanistes caeruleus* (Linnaeus, 1758)	Pădurea Cumpătu, Zamora, Sinaia,	45.368614, 25.552437	16.05.1960	ȘtN	2
15242/191	*Cyanistes caeruleus* (Linnaeus, 1758)	Comana, Giurgiu	44.147890, 26.097622	27.08.1961	AP	2
15242/189	*Cyanistes caeruleus* (Linnaeus, 1758)	Pădurea Brănești, Ilfov	44.490315, 26.352638	17.04.1959	ȘtN	2
15242/306	*Cyanistes caeruleus* (Linnaeus, 1758)	Reşca, Olt	44.178600, 24.394411	19.04.1964	ȘtN	2
5160	*Parus major* Linnaeus, 1758	Ţigăneşti, Ciolpani, Ilfov	44.727234, 26.079782	25.03.1970	DM	1
15242/21	*Parus major* Linnaeus, 1758	Afumați, Ilfov	44.534486, 26.245031	11.03.1962	AP	2
15242/37	*Parus major* Linnaeus, 1758	Bucureşti	44.453710, 26.084325	22.01.1962	AP	2
15242/45	*Parus major* Linnaeus, 1758	Bucureşti	44.453710, 26.084325	22.01.1962	AP	2
15242/50	*Parus major* Linnaeus, 1758	Bucureşti	44.453710, 26.084325	23.01.1962	AP	2
15242/184	*Parus major* Linnaeus, 1758	Pădurea Cumpătu, Zamora, Sinaia,	45.368614, 25.552437	15.01.1958	ȘtN	2
15242/188	*Parus major* Linnaeus, 1758	Pădurea Brănești, Ilfov	44.490315, 26.352638	17.04.1959	ȘtN	2
15242/280	*Parus major* Linnaeus, 1758	Pădurea Brănești, Ilfov	44.490315, 26.352638	17.04.1959	ȘtN	2
15242/183	*Parus major* Linnaeus, 1758	Pădurea Cumpătu, Zamora, Sinaia	45.368614, 25.552437	15.01.1958	ȘtN	2
	Family ALAUDIDAE					
15242/53	*Alauda arvensis cantarella* Bonaparte, 1850	Valu lui Traian, Constanța,	44.179981 28.462432	30.09.1957	AP	2
15242/33	*Galerida cristata* (Linnaeus, 1758)	Pipera , București	44.499868, 26.126347	21.10.1958	AP	2
15242/177	*Galerida cristata* (Linnaeus, 1758)	Pipera, București	44.490326, 26.101249	7.06.1958	ȘtN	2
15242/178	*Galerida cristata* (Linnaeus, 1758)	Pipera, București	44.490326, 26.101249	7.06.1958	ȘtN	2
15242/181	*Galerida cristata* (Linnaeus, 1758)	Pipera, București	44.499701, 26.127714	7.06.1958	ȘtN	2
15242/182	*Galerida cristata* (Linnaeus, 1758)	Pipera, București	44.499701, 26.127714	7.06.1958	ȘtN	2
	Family ACROCEPHALIDAE					
15242/175	*Acrocephalus arundinaceus* (Linnaeus, 1758)	Pipera, Bucureşti	44.499159, 26.123417	28.08.1959	ȘtN	2
15242/235	*Acrocephalus arundinaceus* (Linnaeus, 1758)	Pipera, București	44.499159, 26.123417	28.08.1959	ȘtN	2
15242/304	*Acrocephalus arundinaceus* (Linnaeus, 1758)	Ciupercenii Noi, Balta Mărginița, Dolj,	44.304485, 25.406634	10.05.1963	AP	2
15242/1	*Acrocephalus arundinaceus* (Linnaeus, 1758)	Rast, Dolj	43.870508, 23.328662	6.07.1960	AP	2
15242/13	*Acrocephalus schoenobaenus* (Linnaeus, 1758)	Comana, Giurgiu	44.162150, 26.102724	27.08.1961	AP	2

No. coll.	Species	Locality	GPS coordinates	Collection data	Legit	No. ex.
	Family LOCUSTELLIDAE					
15242/74	*Locustella fluviatilis* (Wolf, 1810)	Bucureşti	44.438943, 26.204592	6.09.1959	AP	2
	Family HIRUNDINIDAE					
15242/118	*Hirundo rustica* Linnaeus, 1758	Limanu, Constanța	43.794332 28.527422	14.10.1959	ȘtN	2
15242/122	*Hirundo rustica* Linnaeus, 1758	Limanu, Constanța Dobrogea	43.799481 28.547184	14.09.1959	ȘtN	2
15242/126	*Hirundo rustica* Linnaeus, 1758	Floreasca, Bucureşti	44.465863 26.093933	17.05.1965	ȘtN	2
15242/130	*Hirundo rustica* Linnaeus, 1758	Limanu, Constanța Dobrogea	43.799481 28.547184	14.09.1959	ȘtN	2
15242/131	*Hirundo rustica* Linnaeus, 1758	Limanu, Constanța	43.801748 28.522169	14.09.1959	ȘtN	2
	Family SYLVIIDAE					
15242/174	*Sylvia atricapilla* (Linnaeus, 1758)	Pipera, București,	44.500856, 26.122155	7.06.1958	ȘtN	2
15242/296	*Sylvia atricapilla* (Linnaeus, 1758)	Sinaia, Prahova	45.360855, 25.548556	26.06.1958	ȘtN	2
15242/76	*Sylvia atricapilla* (Linnaeus, 1758)	București	44.453158, 26.083820	9.09.1957	AP	2
15242/46	*Sylvia atricapilla* (Linnaeus, 1758)	București	44.453242, 26.083948	6.10.1959	AP	2
15242/48	*Sylvia atricapilla* (Linnaeus, 1758)	București	44.457172, 26.082190	09.1958	AP	2
15242/28	*Sylvia borin* (Boddaert, 1783)	Știoborani Vaslui	46.759947, 27.849831	17.07.1959	AP	2
15242/38	*Sylvia borin* (Boddaert, 1783)	București, parc muzeu	44.453588 26.083611	27.08.1958	AP	2
15242/77	*Curruca curruca* (Linnaeus, 1758)	Știobori, Vaslui	46.754341, 27.855701	17.07.1959	AP	2
15242/52	*Curruca curruca* (Linnaeus, 1758)	București	44.453978, 26.084428	5.09.1958	AP	2
15242/44	*Curruca communis* (Latham, 1787)	București parc muzeu	44.453978, 26.084428	5.09.1958	AP	2
15242/31	*Curruca communis* (Latham, 1787)	București parc muzeu	44.453718, 26.084160	6.09.1959	AP	2
	Family PHYLLOSCOPIDAE					
15242/91	*Phylloscopus sibilatrix* (Bechstein, 1793)	București, parc muzeu	44.457502, 26.083902	27.04.1858	AP	2
15242/20	*Phylloscopus collybita* (Vieillot, 1817)	București	44.453684, 26.083865	12.09.1959	AP	2
15242/39	*Phylloscopus collybita* (Vieillot, 1817)	București	44.453684, 26.083865	6.09.1959	AP	2
15242/164	*Phylloscopus collybita* (Vieillot, 1817)	Cariera Piatra, Sinaia	45.347740, 25.524892	28.11.1960	ȘtN	2
15242/166	*Phylloscopus collybita* (Vieillot, 1817)	Cariera Piatra, Sinaia,	45.347740, 25.524892	28.11.1960	ȘtN	2
15242/167	*Phylloscopus collybita* (Vieillot, 1817)	Posada, Câmpina, Prahova	45.278838, 25.622195	13.09.1961	ȘtN	2
15242/170	*Phylloscopus collybita* (Vieillot, 1817)	Cariera Piatra, Sinaia	45.347740, 25.524892	28.11.1960	ȘtN	2
15242/172	*Phylloscopus collybita* (Vieillot, 1817)	Posada, Câmpina, Prahova	45.278838, 25.622195	13.09.1961	ȘtN	2
15242/92	*Phylloscopus collybita* (Vieillot, 1817)	București	44.457418, 26.082475	1957	AP	2
15242/14	*Phylloscopus trochillus acredula* (Linnaeus, 1758)	București	44.453672, 26.084497	30.09.1961	AP	2
15242/79	*Phylloscopus trochilus trochilus* (Linnaeus, 1758)	București, parc muzeu	44.453158, 26.083820	22.04.1958	AP	2
15242/308	*Phylloscopus trochilus trochilus* (Linnaeus, 1758)	Valea lui Bogdan M-ții Bucegi	45.473475 25.320362	21.07.1962	ȘtN	2

No. coll.	Species	Locality	GPS coordinates	Collection data	Legit	No. ex.
	Family BOMBYCILLIDAE					
15242/59	*Bombycilla garrulus* (Linnaeus, 1758)	Sinaia, Prahova	45.365787, 25.547155	14.03.1958	AP	2
15242/237	*Bombycilla garrulus* (Linnaeus, 1758)	Tismana, Gorj	45.074553, 22.931812	8.02.1958	NS	2
	Family CINCLIDAE					
15242/149	*Cinclus cinclus aquaticus* (Bechstein, 1797)	Cumpătu Sinaia	45.368451, 25.551644	17.03.1958	ȘtN	2
15242/18	*Cinclus cinclus aquaticus* (Bechstein, 1797)	Sinaia, Prahova	45.360855, 25.548556	23.03.1958	AP	2
	Family MUSCICAPIDAE					
15242/36	*Muscicapa striata* (Pallas, 1764)	București	44.453684 26.083865	3.09.1958	AP	2
15242/206	*Erithacus rubecula* (Linnaeus, 1758)	Sinaia, Prahova.	45.348154, 25.526362	24.07.1959	ȘtN	2
15242/209	*Erithacus rubecula* (Linnaeus, 1758)	Sinaia, Prahova	47.695979, 26.294776	24.07.1959	ȘtN	2
15242/210	*Erithacus rubecula* (Linnaeus, 1758)	Cantonul Jepi, Bucegi	45.387108, 25.499036	16.06.1958	ȘtN	2
15242/211	*Erithacus rubecula* (Linnaeus, 1758)	Cumpătu, Sinaia,	45.368614, 25.552437	3.05.1958	ȘtN	2
15242/305	*Luscinia luscinia* (Linnaeus, 1758)	Hanul Conachi, Galați	45.592375, 27.573912	16.05.1956	AP	2
15242/71	*Luscinia luscinia* (Linnaeus, 1758)	Valea Siliștei, Vaslui	46.750589, 27.834343	23.07.1959	AP	2
15242/87	*Ficedula albicollis* (Temminck, 1815)	Sinaia (Rezervaţie de Anini), M-ții Bucegi	45.361007, 25.5554974	19.05.1958	ȘtN	2
15242/95	*Ficedula albicollis* (Temminck, 1815)	Periprava, Tulcea	45.387487, 29.547110	19.04.1966	ȘtN	2
15242/96	*Ficedula albicollis* (Temm., 1815)	Izvorul Dorului M-ții Bucegi	45.328554, 25.522116	17.07.1961	ȘtN	2
15242/97	*Ficedula albicollis* (Temminck, 1815)	Sinaia (Rezervaţie de Anini) M-ții Bucegi	45.361007, 25.555497	19.05.1958	ȘtN	2
15242/98	*Ficedula albicollis* (Temminck, 1815)	Pârâul Tufa, Cumpătu Sinaia	45.374157, 25.551569	18.05.1958	ȘtN	2
15242/99	*Ficedula albicollis* (Temminck, 1815)	Stejăriș, Brașov	45.640427, 25.561028	14.04. 1955	ȘtN	2
15242/100	*Ficedula albicollis* (Temminck, 1815)	Lunca Prahovei, Pârâul Șipa, Cumpătu Sinaia	45.372093, 25.550734	25.05.1958	ȘtN	2
15242/101	*Ficedula albicollis* (Temminck, 1815)	Izvorul Dorului, M-ții Bucegi	45.328554, 25.522116	15.05.1960	ȘtN	2
15242/102	*Ficedula albicollis* (Temminck, 1815)	Grădiștea, Giurgiu	44.213720, 26.146334	22.05.1962	ȘtN	2
15242/103	*Ficedula albicollis* (Temminck, 1815)	Caransebeș, Caraș-Severin	45.412430 22.195967	5.04.1959	ȘtN	2
15242/104	*Ficedula albicollis* (Temminck, 1815)	Posada, Câmpina, Prahova	45.278838, 25.622195	13.09.1961	ȘtN	2
15242/105	*Ficedula albicollis* (Temminck, 1815)	Piatra Arsă, M-ții Bucegi	45.383082, 25.489046	2.06.1960	ȘtN	2
15242/272	*Ficedula albicollis* (Temminck, 1815)	Pipera, București	44.499332, 26.124160	7.06.1958	ȘtN	2
15242/279	*Ficedula albicollis* (Temm., 1815)	Pădurea Brănești, Ilfov	44.490315, 26.352638	17.04.1959	ȘtN	2
15242/84	*Ficedula hypoleuca* (Pallas, 1764)	București, parc muzeu	44.453588 26.083611	21.04.1958	AP	2
15242/68	*Ficedula parva* (Bechstein, 1792)	București	44.453588 26.083611	9.09.1957	AP	2
15242/107	*Ficedula parva* (Bechstein, 1792)	București	44.453588 26.083611	9.05.1960	ȘtN	2
15242/19	*Phoenicurus phoenicurus* (Linnaeus, 1758)	București	44.4587082, 26.085085	14.09.1958	AP	2

No. coll.	Species	Locality	GPS coordinates	Collection data	Legit	No. ex.
15242/135	*Phoenicurus phoenicurus* (Linnaeus, 1758)	Cariera Piatra, Sinaia	45.347740, 25.524892	16.05.1962	ȘtN	2
15242/136	*Phoenicurus phoenicurus* (Linnaeus, 1758)	Sinaia, Cumpătu, Prahova	45.368451, 25.551644	19.07.1960	ȘtN	2
15242/133	*Phoenicurus phoenicurus* (Linnaeus, 1758)	Valea Horoabei, Bucegi	45.389534, 25.434518	17.07.1961	ȘtN	2
15242/138	*Phoenicurus phoenicurus* (Linnaeus, 1758)	Sinaia, Cumpătu, Prahova	45.368451, 25.551644	14.06.1960	ȘtN	2
15242/140	*Phoenicurus phoenicurus* (Linnaeus, 1758)	Valea lui Bogdan M-ții Bucegi	45.473475 25.320362	27.06.1962	ȘtN	2
15242/141	*Phoenicurus phoenicurus* (Linnaeus, 1758)	Valea lui Bogdan M-ții Bucegi	45.473475 25.320362	24.06.1962	ȘtN	2
15242/60	*Phoenicurus phoenicurus* (Linnaeus, 1758)	București	44.455686, 26.085185	9.09.1957	AP	1
15242/324	*Phoenicurus ochruros gibraltariensis* (J.F.Gmelin, 1774)	Piatra Arsă, Munții Bucegi	45.378048, 25.488020	19.08.1959	ȘtN	2
15242/326	*Phoenicurus ochruros gibraltariensis* (J.F.Gmelin, 1774)	Canton Jepi, Bucegi	45.387108 25.499036	16.06.1958	ȘtN	2
15242/333	*Phoenicurus ochruros gibraltariensis* (J.F.Gmelin, 1774)	Varful Caraiman, Bucegi	45.412228, 25.497724	18.08.1959	ȘtN	2
15242/269	*Phoenicurus ochruros gibraltariensis* (J.F.Gmelin, 1774)	Stânca lui Varsanufie, Bucegi	45.373144, 25.504953	22.07.1958	ȘtN	2
15242/274	*Phoenicurus ochruros gibraltariensis* (J.F.Gmelin, 1774)	Canton Jepi, Bucegi	45.387108 25.499036	16.06.1958	ȘtN	2
15242/278	*Phoenicurus ochruros gibraltariensis* (J.F.Gmelin, 1774)	Canton Jepi, Bucegi	45.387108 25.499036	16.06.1958	ȘtN	2
15242/283	*Phoenicurus ochruros gibraltariensis* (J.F.Gmelin, 1774)	Mtii Bucegi, Vf Caraiman	45.412228, 25.497724	18.08.1959	ȘtN	2
15242/299	*Phoenicurus ochruros gibraltariensis* (J.F.Gmelin, 1774)	Mtii Bucegi, Vf Caraiman	45.412228, 25.497724	18.08.1959	ȘtN	2
15242/301	*Phoenicurus ochruros gibraltariensis* (J.F.Gmelin, 1774)	Valea lui Bogdan M-ții Bucegi	45.473475 25.320362	21.07.1962	ȘtN	2
15242/312	*Phoenicurus ochruros gibraltariensis* (J.F.Gmelin, 1774)	Piatra Arsă, Bucegi	45.380469, 25.4935380	9.08.1959	ȘtN	2
15242/162	*Monticola saxatilis* (Linnaeus, 1766)	Caransebeș, Caraș-Severin	45.457445, 22.244640	6.04.1959	ȘtN	2
15242/168	*Monticola saxatilis* (Linnaeus, 1766)	Caransebeș, Caraș-Severin	45.457445, 22.244640	7.04.1959	ȘtN	2
15242/22	*Saxicola rubetra* (Linnaeus, 1758)	Sinaia, Prahova	45.360855, 25.548556	17.05.1961	AP	2
15242/47	*Saxicola rubetra* (Linnaeus, 1758)	Pipera, București	44.499866, 26.125241	21.09.1958	AP	2
15242/169	*Saxicola torquata rubicola* (Linnaeus, 1766)	Caransebeș, Caraș-Severin	45.412430, 22.195967	5.04.1959	ȘtN	2
15242/110	*Oenanthe oenanthe* (Linnaeus, 1758)	Băneasa, Constanța, Dobrogea	44.068877, 27.719627	18.09.1964	ȘtN	2
15242/112	*Oenanthe oenanthe* (Linnaeus, 1758)	Piatra Arsă, Bucegi	45.379287 25.489932	17.08.1959	ȘtN	2
15242/139	*Oenanthe oenanthe* (Linnaeus, 1758)	Piatra Arsă, Bucegi	45.379287 25.489932	17.08.1959	ȘtN	2
15242/148	*Oenanthe oenanthe* (Linnaeus, 1758)	Piatra Arsă, Bucegi	45.379287 25.489932	17.08.1959	ȘtN	2
15242/56	*Oenanthe oenanthe* (Linnaeus, 1758)	Maliuc, Delta Dunării, Tulcea	45.184550 29.099932	1.10.1958	AP	2
15242/303	*Oenanthe pleschanka* (Lepechin, 1770)	Agigea, Constanța	44.086131, 28.639045	8.06.1956	AP	2
	Family TURDIDAE					
15242/75	*Turdus philomelos* C. L. Brehm, 1831	Mila 23, Delta Dunării Tulcea	45.227814, 29.253906	4.10.1958	AP	2

No. coll.	Species	Locality	GPS coordinates	Collection data	Legit	No. ex.
15242/113	*Turdus philomelos* C. L. Brehm, 1831	Mogoșoaia, Ilfov	44.524880, 25.994060	27.10.1958	ȘtN	2
15242/115	*Turdus philomelos* C. L. Brehm, 1831	Mogoșoaia, Ilfov	44.524880, 25.994060	27.10.1958	ȘtN	2
15242/82	*Turdus philomelos* C. L. Brehm, 1831	Cumpătu, Sinaia, Prahova	45.368614, 25.552437	18.05.1958	AP	2
15242/262	*Turdus philomelos* C. L. Brehm, 1831	Piatra Arsă, Bucegi	45.384993, 25.487783	20.08.1959	ȘtN	2
15242/330	*Turdus philomelos* C. L. Brehm, 1831	Pădurea Brănești, Ilfov	44.490315, 26.352638	17.04.1959	ȘtN	2
15242/69	*Turdus philomelos* C. L. Brehm, 1831	Baloteşti, Ilfov	44.621461, 26.111964	19.10.1958	AP	2
15242/70	*Turdus philomelos* C. L. Brehm, 1831	Bucureşti	44.453584, 26.083501	29.10.1958	AP	2
15242/253	*Turdus viscivorus* Linnaeus, 1758	Sinaia,Prahova	45.370673, 25.549564	12.7.1959	ȘtN	2
15242/257	*Turdus viscivorus* Linnaeus, 1758	Valea Rea Sinaia	45.345036, 25.552494	1.04.1958	ȘtN	2
15242/260	*Turdus viscivorus* Linnaeus, 1758	Sinaia, Prahova	45.34242, 25.540052	12.07.1959	ȘtN	2
15242/261	*Turdus viscivorus* Linnaeus, 1758	Poiana Șarânga, Sinaia, Cumpătu	45.369548, 25.548897	22.03.1959	ȘtN	2
15242/264	*Turdus viscivorus* Linnaeus, 1758	Poiana Șarânga, Sinaia, Cumpătu	45.369548, 25.548897	22.03.1959	ȘtN	2
15242/320	*Turdus viscivorus* Linnaeus, 1758	Sinaia, Prahova	45.370023, 25.550981	12.10.1965	ȘtN	2
15242/83	*Turdus iliacus* Linnaeus, 1758	Parcul Muzeului, Bucureşti,	44.453584, 26.083501	17.12.1961	AP	2
15242/83	*Turdus iliacus* Linnaeus, 1758	Parcul Muzeului, Bucureşti	44.453584, 26.083501	17.12.1961	AP	2
15242/311	*Turdus pilaris* Linnaeus, 1758	Sinaia, Prahova	45.368026, 25.552273	18.03.1964	ȘtN	2
15242/319	*Turdus pilaris* Linnaeus, 1758	Bucureşti	44.453684, 26.083865	15.02.1962	AP	2
15242/323	*Turdus pilaris* Linnaeus, 1758	Sinaia, Prahova	45.362409, 25.552920	20.05.1958	ȘtN	2
15242/58	*Turdus pilaris* Linnaeus, 1758	Giurgiu	43.904469, 25.982800	23.12.1961	AP	1
15242/117	*Turdus pilaris* Linnaeus, 1758	Parcul Muzeului, Bucureşti	44.453584, 26.083501	19.12.1961	AP	2
15242/123	*Turdus pilaris* Linnaeus, 1758	Tunari, Ilfov	44.539595, 26.112740	22.12.1960	ȘtN	2
15242/86	*Turdus merula* Linnaeus, 1758	Sinaia, Rezervaţie de Anini, Bucegi	45.366359, 25.553504	19.05.1958	ȘtN	2
15242/114	*Turdus merula* Linnaeus, 1758	Slătioara, Pârâul lui Bucur, Suceava	47.382427, 26.101014	11.09.1969	MB	2
17791	*Turdus merula* Linnaeus, 1758	Poiana Brașov, Brașov	45.608076, 25.551893	11.03.1996	MPB	2
15242/325	*Turdus torquatus alpestris* (C. L. Brehm, 1831)	Masivul Bucegi, M-ții Jepi	45.406499, 25.525053	18.08.1959	ȘtN	2
	Family STURNIDAE					
15242/120	*Sturnus vulgaris* Linnaeus, 1758	Basarabi, Medgidia, Constanța	44.183510 28.403802	20.07.1957	ȘtN	2
15242/128	*Sturnus vulgaris* Linnaeus, 1758	Hagieni, Constanța	43.801029 28.444663	14.09.1959	ȘtN	2
15242/132	*Sturnus vulgaris* Linnaeus, 1758	Techirghiol, Constanța	44.047798 28.580500	7.08.1956	ȘtN	2
15242/316	*Sturnus vulgaris* Linnaeus, 1758	Hărman, Brașov	45.732510 25.668324	29.05.1954	ȘtN	2

No. coll.	Species	Locality	GPS coordinates	Collection data	Legit	No. ex.
17792	*Sturnus vulgaris* Linnaeus, 1758	Balta Ratca, Dridu, Ialomița	44.693258, 26.407293	13.08.1996	MPB	2
17793	*Sturnus vulgaris* Linnaeus, 1758	Balta Ratca, Dridu, Ialomița	44.693258, 26.407293	13.08.1996	MPB	2
17794	*Sturnus vulgaris* Linnaeus, 1758	Balta Ratca, Dridu, Ialomița	44.693258, 26.407293	13.08.1996	MPB	2
17795	*Sturnus vulgaris* Linnaeus, 1758	Balta Ratca, Dridu, Ialomița	44.693258, 26.407293	13.08.1996	MPB	2
17797	*Sturnus vulgaris* Linnaeus, 1758	Balta Ratca, Dridu, Ialomița	44.693258, 26.407293	13.08.1996	MPB	2
17798	*Sturnus vulgaris* Linnaeus, 1758	Balta Ratca, Dridu, Ialomița	44.693258, 26.407293	13.08.1996	MPB	2
17799	*Sturnus vulgaris* Linnaeus, 1758	Balta Ratca, Dridu, Ialomița	44.693258, 26.407293	13.08.1996	MPB	2
17800	*Sturnus vulgaris* Linnaeus, 1758	Balta Ratca, Dridu, Ialomița	44.693258, 26.407293	13.08.1996	MPB	2
17801	*Sturnus vulgaris* Linnaeus, 1758	Balta Ratca, Dridu, Ialomița	44.693258, 26.407293	13.08.1996	MPB	2
17802	*Sturnus vulgaris* Linnaeus, 1758	Balta Ratca, Dridu, Ialomița	44.693258, 26.407293	13.08.1996	MPB	2
17803	*Sturnus vulgaris* Linnaeus, 1758	Balta Ratca, Dridu, Ialomița	44.693258, 26.407293	13.08.1996	MPB	2
17804	*Sturnus vulgaris* Linnaeus, 1758	Balta Ratca, Dridu, Ialomița	44.693258, 26.407293	13.08.1996	MPB	2
17805	*Sturnus vulgaris* Linnaeus, 1758	Balta Ratca, Dridu, Ialomița	44.693258, 26.407293	13.08.1996	MPB	2
17806	*Sturnus vulgaris* Linnaeus, 1758	Balta Ratca, Dridu, Ialomița	44.693258, 26.407293	13.08.1996	MPB	2
17807	*Sturnus vulgaris* Linnaeus, 1758	Balta Ratca, Dridu, Ialomița	44.693258, 26.407293	13.08.1996	MPB	2
17808	*Sturnus vulgaris* Linnaeus, 1758	Balta Ratca, Dridu, Ialomița	44.693258, 26.407293	13.08.1996	MPB	2
17809	*Sturnus vulgaris* Linnaeus, 1758	Balta Ratca, Dridu, Ialomița	44.693258, 26.407293	13.08.1996	MPB	2
	Family REGULIDAE					
15242/265	*Regulus regulus* (Linnaeus, 1758)	Pădurea Zamora, Sinaia	45.369163 25.548551	12.01.1958	ȘtN	2
15242/152	*Regulus regulus* (Linnaeus, 1758)	Pădurea Zamora, Sinaia	45.369163, 25.548551	12.01.1958	ȘtN	2
15242/25	*Regulus ignicapillus* (Temminck, 1820)	București	44.453534, 26.083465	12.10.1959	AP	2
15242/49	*Regulus ignicapillus* (Temminck, 1820)	București, parc muzeu	44.453534, 26.083465	6.10.1961	AP	2
	Family TICHODROMIDAE					
15242/142	*Tichodroma muraria* (Linnaeus, 1766)	M-ții Bucegi	45.415588, 25.497668	05.1958	ȘtN	2
15242/143	*Tichodroma muraria* (Linnaeus, 1766)	Abruptul Caraiman, Bucegi	45.415588, 25.497668	1.09.1962	ȘtN	2
15242/144	*Tichodroma muraria* (Linnaeus, 1766)	M-ții Bucegi	45.415588, 25.497668	08.1959	ȘtN	2
15242/147	*Tichodroma muraria* (Linnaeus, 1766)	M-ții Bucegi	45.415588, 25.497668	07.1961	ȘtN	2
	Family SITTIDAE					
15242/78	*Sitta europaea caesia* Wolf, 1810	Sinaia, Prahova	45.360855, 25.548556	29.04.1958	AP	2

No. coll.	Species	Locality	GPS coordinates	Collection data	Legit	No. ex.
15242/171	*Sitta europaea caesia* Wolf, 1810	Posada, Câmpina, Prahova	45.278838, 25.622195	13.09.1961	ȘtN	2
15242/165	*Sitta europaea caesia* Wolf, 1810	Caransebeș, Caraș-Severin	45.412430 22.195967	5.04.1959	ȘtN	2
15242/159	Sitta europaea caesia Wolf, 1810	Poiana Brașov, Brașov,	45.595106 25.552255	06.1956	ȘtN	2
15242/160	*Sitta europaea caesia* Wolf, 1810	Sinaia, Prahova	45.360855, 25.548556	24.07.1959	ȘtN	2
15242/161	*Sitta europaea caesia* Wolf, 1810	Poiana Brașov, Brașov,	45.595106 25.552255	06.1956	ȘtN	2
15242/156	*Sitta europaea caesia* Wolf, 1810	Sinaia, Prahova	45.360855, 25.548556	24.07.1959	ȘtN	2
15242/300	*Sitta europaea caesia* Wolf, 1810	Pădurea Dealul Bobului, Fălcoiu, Olt	44.210250 24.367739	21.03.1964	ȘT	2
	Family CERTIIDAE					
15242/180	*Certhia familiaris* Linnaeus, 1758	Pădurea Cumpătu, Zamora, Sinaia	45.368614, 25.5524374	15.01.1958	ȘtN	2
	Family TROGLODYTIDAE					
15242/40	*Troglodytes troglodytes* (Linnaeus, 1758)	București, parc muzeu	44.453588 26.083611	6.10.1959	AP	2
15242/85	*Troglodytes troglodytes* (Linnaeus, 1758)	Știoborăni, Vaslui	46.738915 27.866571	30.11.1958	AP	2
15242/134	*Troglodytes troglodytes* (Linnaeus, 1758)	Cariera Piatra, Sinaia Prahova	45.347740, 25.524892	15.04.1962	ȘtN	2
15242/137	*Troglodytes troglodytes* (Linnaeus, 1758)	Cariera Piatra, Sinaia Prahova	45.347740, 25.524892	15.04.1962	ȘtN	2
	Family PRUNELLIDAE					
15242/93	*Prunella modularis* (Linnaeus, 1758)	Piatra Arsă, Bucegi	45.378217, 25.489299	20.08.1959	ȘtN	2
15242/106	*Prunella modularis* (Linnaeus, 1758)	Piatra Arsă, Bucegi	45.378217, 25.489299	20.08.1959	ȘtN	2
15242/108	*Prunella modularis* (Linnaeus, 1758)	Piatra Arsă, Bucegi	45.378217, 25.489299	16.06.1958	ȘtN	2
15242/328	*Prunella modularis* (Linnaeus, 1758)	Munții Bucegi	45.406206 , 25.498122	7.05.1958	ȘtN	2
15242/109	*Prunella collaris* (Scopoli, 1769)	Izvorul Dorului, Bucegi,	45.327881 , 25.522665	15.05.1960	ȘtN	2
15242/111	*Prunella collaris* (Scopoli, 1769)	Munții Bucegi, Vf Caraiman,	45.412228, 25.497724	18.08.1959	ȘtN	2
	Family PASSERIDAE					
15242/27	*Passer domesticus* (Linnaeus, 1758)	București	44.452919, 26.084251	05.1961	AP	2
15242/51	*Passer domesticus* (Linnaeus, 1758)	Afumați, Ilfov	44.513134, 26.247308	19.03.1962	AP	2
15242/62	*Passer domesticus* (Linnaeus, 1758)	București, parc muzeu	44.452919, 26.084251	20.04.1958	AP	2
15242/43	*Passer montanus* (Linnaeus,1758)	Mogoșoaia, Ilfov	44.524880, 25.994060	22.09.1958	AP	2
15242/90	*Passer montanus* (Linnaeus,1758)	Știoborăni, Vaslui	46.751146, 27.853888	30.11.1958	AP	2
15242/214	*Passer montanus* (Linnaeus,1758)	Vidra, Giurgiu	44.275471, 26.175297	23.05.1962	ȘtN	2
15242/216	*Passer montanus* (Linnaeus,1758)	Pipera, București	44.503578, 26.128040	27.12.1960,	ȘtN	2
15242/219	*Passer montanus* (Linnaeus,1758)	Comana, Giurgiu	44.171482, 26.133575	15.04.1959	ȘtN	2
15242/222	*Passer montanus* (Linnaeus,1758)	Pipera, București	44.505470, 26.125712	27.12.1960	ȘtN	2
15242/231	*Passer montanus* (Linnaeus,1758)	Vidra, Giurgiu	44.275471, 26.175297	15.04.1959	ȘtN	2

No. coll.	Species	Locality	GPS coordinates	Collection data	Legit	No. ex.
15242/232	*Passer montanus* (Linnaeus,1758)	Comana, Giurgiu,	44.165726, 26.144605	15.04.1959	ȘtN	2
15242/225	*Passer montanus* (Linnaeus,1758)	Comana, Giurgiu	44.170551, 26.131040	16.04.1959	ȘtN	2
	Family MOTACILLIDAE					
15242/119	*Motacilla alba* Linnaeus,1758	Independența, Tulcea	43.946642 28.075444	24.09.1967	AP	2
15242/125	*Motacilla alba* Linnaeus,1758	Poiana Brașov	45.595106 25.552255	20.06.1951	ȘtN	2
15242/127	*Motacilla alba* Linnaeus,1758	Floreasca, Bucureşti	44.466273 26.096507	19.05.1957	ȘtN	2
15242/116	*Motacilla flava* Linnaeus, 1758	Grădiștea, Giurgiu	44.214582, 26.144514	22.05.2962	ȘtN	2
15242/17	*Motacilla flava feldegg* Michahelles, 1830	Rast, Dolj	43.874234, 23.271838	6.07.1960	MVT	2
15242/310	*Motacilla flava feldegg* Michahelles, 1830	Ciupercenii Noi, Dolj, Balta Mărginita	44.304763, 25.408857	7.05.1960	NS	2
15242/88	*Anthus campestris* (Linnaeus, 1758)	Hanul Conachi, Galați	45.598916, 27.581385	21.8.1958	AP	2
15242/55	*Anthus trivialis* (Linnaeus, 1758)	Maliuc, Delta Dunării, Tulcea	45.179278, 29.092623	30.9.1958	AP	2
15242/23	*Anthus trivialis* (Linnaeus, 1758)	Sinaia, Poiana Sarânga	45.370758, 25.549822	5.05.1961	AP	2
15242/80	*Anthus spinoletta* (Linnaeus, 1758)	Piatra Arsă, M-ții Bucegi	45.379956, 25.490132	8.05.1958	AP	2
15242/153	*Anthus spinoletta* (Linnaeus, 1758)	Piatra Arsă, Bucegi	45.382339, 25.489500	8.05.1958	ȘtN	2
15242/154	*Anthus spinoletta* (Linnaeus, 1758)	Piatra Arsă, Bucegi	45.385330, 25.488309	16.06.1958	ȘtN	2
15242/155	*Anthus spinoletta* (Linnaeus, 1758)	Piatra Arsă, Bucegi	45.384215, 25.484322	16.06.1958	ȘtN	2
15242/157	*Anthus spinoletta* (Linnaeus, 1758)	Piatra Arsă, Bucegi	45.383087, 25.485729	16.06.1958	ȘtN	2
15242/158	*Anthus spinoletta* (Linnaeus, 1758)	Piatra Arsă, Bucegi	45.380349, 25.493831	16.06.1958	ȘtN	2
15242/163	*Anthus spinoletta* (Linnaeus, 1758)	Piatra Arsă, Bucegi	45.384988, 25.482463	16.06.1958	ȘtN	2
	Family FRINGILLIDAE					
15242/246	*Fringilla coelebs* Linnaeus, 1758	Călăraşi	44.204280, 27.327823	14.12.1962	ȘtN	2
15242/24	*Fringilla montifringilla* Linnaeus, 1758	Bucureşti	44.469629, 26.085630	12.02.1962	AP	2
15242/57	*Coccothraustes coccothraustes* (Linnaeus, 1758)	Bucureşti, parc muzeu	44.452919, 26.084251	18.01.1958	AP	2
15242/66	*Coccothraustes coccothraustes* (Linnaeus, 1758)	Sinaia, Prahova	45.365787, 25.547155	26.06.1958	AP	2
15242/213	*Coccothraustes coccothraustes* (Linnaeus, 1758)	Sinaia, Prahova	45.365787, 25.547155	26.06.1958	ȘtN	2
15242/215	*Coccothraustes coccothraustes (Linnaeus, 1758)*	Lempeş, Hărman Braşov,	45.725539, 25.670121	27.02.1959	ID	2
15242/217	*Coccothraustes coccothraustes* (Linnaeus, 1758)	Comana, Giurgiu	44.160026, 26.135874	15.04.1959	ȘtN	2
15242/218	*Coccothraustes coccothraustes* (Linnaeus, 1758)	Sinaia, Prahova	45.365787, 25.547155	24.07.1959	ȘtN	2
15242/221	*Coccothraustes coccothraustes* (Linnaeus, 1758)	Pădurea Brănești, Ilfov	44.490315, 26.352638	17.04.1959	ȘtN	2
15242/223	*Coccothraustes coccothraustes* (Linnaeus, 1758)	Pădurea Zamora, Cumpătu, Sinaia	45.368614 25.552437	16.07.1961	ȘtN	2
15242/234	*Coccothraustes coccothraustes* (Linnaeus, 1758)	Băneasa, Ilfov	44.499689, 26.074768	30.02.1961	ȘtN	2

No. coll.	Species	Locality	GPS coordinates	Collection data	Legit	No. ex.
15242/230	*Coccothraustes coccothraustes (Linnaeus, 1758)*	Lunca Prahova, Cumpătu, Sinaia	45.365787, 25.547155	19.01.1958	ȘtN	2
15242/89	*Pyrrhula pyrrhula* (Linnaeus, 1758)	Braşov	45.629129, 25.552504	21.10.1958	AP	2
15242/233	*Pyrrhula pyrrhula* (Linnaeus, 1758)	Pădurea Dumbraveni, Slătioara	47.382427, 26.101014	13.09.1969	MB	2
15242/239	*Pyrrhula pyrrhula* (Linnaeus, 1758)	Piatra Arsă, Bucegi, Prahova	45.379287, 25.489932	20.80.1959	ȘtN	2
15242/243	*Pyrrhula pyrrhula* (Linnaeus, 1758)	Piatra Arsă, Bucegi, Prahova	45.379287, 25.489932	20.08.1959	ȘtN	2
15242/245	*Pyrrhula pyrrhula* (Linnaeus, 1758)	Piatra Arsă, Bucegi, Prahova	45.379287, 25.489932	29.10.1964	ȘtN	2
15242/247	*Pyrrhula pyrrhula* (Linnaeus, 1758)	Pădurea Cumpătu, Zamora, Prahova	45.368614, 25.552437	8.12.1957	ȘtN	2
15242/250	*Pyrrhula pyrrhula* (Linnaeus, 1758)	Bucureşti	44.453584, 26.083501	28.10.1958	AP	2
15242/16	*Chloris chloris* (Linnaeus, 1758)	Sinaia, Prahova	45.370450, 25.546205	27.03.1958	AP	2
15242/193	*Chloris chloris* (Linnaeus, 1758)	Cumpătu, Sinaia Prahova	45.368614, 25.552437	17.11.1958	ȘtN	2
15242/195	*Chloris chloris* (Linnaeus, 1758)	Sinaia, Valea Prahovei	45.370450, 25.546205	16.08.1959	ȘtN	2
15242/331	*Chloris chloris* (Linnaeus, 1758)	Cumpătu, Sinaia, Prahova,	45.370450, 25.546205	17.11.1958	ȘtN	2
15242/65	*Linaria cannabina* (Linnaeus, 1758)	Ştioborăni, Vaslui	46.751146, 27.853888	23.11.1958	AP	2
15242/200	*Linaria cannabina* (Linnaeus, 1758)	Grădiştea, Călăraşi	44.208739, 26.145393	12.12.1962	ȘtN	2
15242/202	*Linaria cannabina* (Linnaeus, 1758)	Grădiştea, Călăraşi	44.208739, 26.145393	12.12.1962	ȘtN	2
15242/94	*Loxia curvirostra* Linnaeus, 1758	Cantonul Jepi, Bucegi	45.387108, 25.499036	2.09.1962	ȘtN	2
15242/194	*Carduelis carduelis* (Linnaeus, 1758)	Sinaia, Valea Prahovei	45.370450, 25.546205	16.08.1959	ȘtN	2
15242/196	*Carduelis carduelis* (Linnaeus, 1758)	Sinaia, Lunca Prahovei	45.370450, 25.546205	27.04.1960	ȘtN	2
15242/197	*Carduelis carduelis* (Linnaeus, 1758)	Sinaia, Lunca Prahovei	45.370450, 25.546205	27.04.1960	ȘtN	4
15242/199	*Carduelis carduelis* (Linnaeus, 1758)	Sinaia, Lunca Prahovei,	45.370450, 25.546205	27.04.1960	ȘtN	2
15242/201	*Carduelis carduelis* (Linnaeus, 1758)	Sinaia, Lunca Prahovei	45.370450, 25.546205	27.04.1960	ȘtN	2
15242/204	*Carduelis carduelis* (Linnaeus, 1758)	Sinaia, Lunca Prahovei	45.370450, 25.546205	27.04.1960	ȘtN	2
15242/205	*Carduelis carduelis* (Linnaeus, 1758)	Pădurea Cumpătu, Sinaia	45.368614, 25.552437	27.04.1959	ȘtN	2
15242/207	*Carduelis carduelis* (Linnaeus, 1758)	Lempeş, Hărman Braşov	45.725539, 25.670121	27.02.1959	ID	2
15242/208	*Carduelis carduelis* (Linnaeus, 1758)	Pădurea Cumpătu, Sinaia,	45.368614, 25.552437	27.04.1959	ȘtN	2
15242/212	*Carduelis carduelis* (Linnaeus, 1758)	Lempeş, Hărman, Braşov,	45.720571, 25.663168	27.02.1959	ID	2
15242/61	*Serinus serinus* (Linnaeus, 1766)	Sinaia, Prahova	45.366359, 25.553504	26.06.1958	AP	2
15242/203	*Serinus serinus* (Linnaeus, 1766)	Sinaia, Prahova	45.366359, 25.553504	26.10.1957	ȘtN	2
15242/266	*Serinus serinus* (Linnaeus, 1766)	Sinaia, Prahova	45.366359, 25.553504	26.10.1957	ȘtN	2
15242/198	*Serinus serinus* (Linnaeus, 1766)	Sinaia, Prahova	45.366359, 25.553504	26.10.1957	ȘtN	2
15242/327	*Serinus serinus* (Linnaeus, 1766)	Sinaia, Prahova	45.366359, 25.553504	26.10.1957	ȘtN	2

No. coll.	Species	Locality	GPS coordinates	Collection data	Legit	No. ex.
15242/30	*Spinus spinus* (Linnaeus, 1758)	Nucet, Dâmbovița	44.788010, 25.534934	24.10.1961	AP	2
15242/267	*Spinus spinus* (Linnaeus, 1758)	Cumpătu, Sinaia, raul Șipa	45.366675, 25.552989	27.02.1960	ȘtN	2
15242/268	*Spinus spinus* (Linnaeus, 1758)	Cumpătu, Sinaia, raul Șipa	45.366675, 25.552989	27.02.1960	ȘtN	2
15242/275	*Spinus spinus* (Linnaeus, 1758)	Cumpătu, Sinaia, râul Șipa	45.366675, 25.552989	13.11.1960	ȘtN	2
15242/271	*Spinus spinus* (Linnaeus, 1758)	Rezervația Aniniș, Cumpătu, Sinaia	45.366675, 25.552989	19.05.1958	ȘtN	2
15242/273	*Spinus spinus* (Linnaeus, 1758)	Cumpătu, Sinaia, raul Șipa	45.366675 25.552989	13.11.1960	ȘtN	2
15242/277	*Spinus spinus* (Linnaeus, 1758)	Cumpătu, Sinaia, Șipa river	45.366675, 25.552989	13.11.1960	ȘtN	2
15242/281	*Spinus spinus* (Linnaeus, 1758)	Nucet, Dâmbovița	44.788010, 25.534934	24.10.1961	AP	2
15242/282	*Spinus spinus* (Linnaeus, 1758)	Nucet, Dâmbovița	44.788010, 25.534934	24.10.1961	AP	2
15242/284	*Spinus spinus* (Linnaeus, 1758)	Rezervația Aniniș, Cumpătu, Sinaia	45.366359, 25.553504	19.05.1958	ȘtN	2
	Family EMBERIZIDAE					
15242/252	*Emberiza calandra* Linnaeus, 1758	Vidra, Giurgiu	44.258926, 26.190500	15.04.1959	ȘtN	2
15242/240	*Emberiza schoeniclus* (Linnaeus, 1758)	Pipera, Bucureşti	44.501322, 26.120600	27.12.1960	ȘtN	2
15242/241	*Emberiza schoeniclus* (Linnaeus, 1758)	Comana, Giurgiu	44.160235, 26.105168	15.04.1959	ȘtN	2
15242/242	*Emberiza schoeniclus* (Linnaeus, 1758)	Pipera, Bucureşti	44.496186, 26.116268	27.12.1960	ȘtN	2
15242/26	*Emberiza citrinella* Linnaeus, 1758	Știoborani, Vaslui	46.7506879, 27.849797	29.11.1958	AP	2
15242/29	*Emberiza citrinella* Linnaeus, 1758	Afumați, Ilfov	44.513134, 26.247308	19.03.1962	AP	2
15242/35	*Emberiza citrinella* Linnaeus, 1758	Știoborani Vaslui	46.748365, 27.843846	4.12.1958	AP	2
15242/54	*Emberiza citrinella* Linnaeus, 1758	Hanul Conachi, Vaslui	45.592375, 27.573912	1.07.1958	AP	2
15242/236	*Emberiza citrinella* Linnaeus, 1758	Pipera, Bucureşti	44.496186, 26.116268	27.12.1960	ȘtN	2
15242/238	*Emberiza citrinella* Linnaeus, 1758	Comana, Giurgiu	44.147189, 26.120447	15.04.1959	ȘtN	2
15242/244	*Emberiza citrinella* Linnaeus, 1758	Pipera, Bucureşti	44.506261, 26.126747	27.12.1960	ȘtN	2
15242/248	*Emberiza citrinella* Linnaeus, 1758	Piatra Arsă Bucegi	45.379287, 25.489932	18.08.1959	ȘtN	2
15242/251	*Emberiza citrinella* Linnaeus, 1758	Valea lui Bogdan M-ții Bucegi	45.473475, 25.320362	21.07.1962	ȘtN	2
15242/347	*Emberiza citrinella* Linnaeus, 1758	Pădurea Brănești, Ilfov	44.490315, 26.352638	17.04.1959	ȘtN	2
15242/322	*Emberiza citrinella* Linnaeus, 1758	Tunari, Ilfov	44.541766, 26.122568	22.12.1960	ȘtN	2
15242/249	*Emberiza hortulana* Linnaeus, 1758	Grădiștea, Ilfov	44.230249, 26.158861	28.04.1959	ȘtN	2

Abbreviations: w. d. = without data; RD - Robert Ritter von Dombrowski; ȘtN - Ștefan Negru; AP - Aurel Papadopol; MVT - Matei Vlad Tălpeanu; DM - Dumitru Murariu; MPB - Matei Petre Bogdan; NS - Nicolae Semen; ȘT - Ștefan Torcea; ID - Ion Dăianu.

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Received: April 15, 2024
Accepted: August 19, 2024

Figure 1: A- *Microcarbo pygmaeus* (Pallas, 1773); B- *Ichthyaetus melanocephalus* (Temminck, 1820);C- *Podiceps grisegena* (Boddaert, 1783); D- *Chlidonias niger* (Linnaeus, 1758); E- *Buteo lagopus* (Pontoppidan, 1763); F- *Asio flammeus* (Pontoppidan, 1763); G- *Accipiter brevipes* (Severtzov, 1850); H- *Streptopelia turtur* (Linnaeus, 1758);I- *Picoides tridactylus alpinus* C. L. Brehm, 1831; J- *Luscinia luscinia* (Linnaeus, 1758) (Foto by Alexandru Mihai).