

## CATALOG OF THE BIRD COLLECTION IN THE BELGRADE NATURAL HISTORY MUSEUM: THE ORDER PODICIPEDIFORMES

DALIBORKA BARJAKTAROV

*Belgrade Natural History Museum, 11000 Belgrade, Serbia and Montenegro*

*Abstract* - The fund of the Belgrade Natural History Museum's ornithological collection has especially great scientific, museological, cultural, and historical importance. The order Podicipediformes was recently chosen for inventory work the results of which are reported here. A total of 57 specimens from three Museum collections and over 20 localities throughout Serbia was inventoried. The most inventory units were recorded in the collection of mounted bird specimens (38), the least in the historical collection (eight). The study collection of birds contains 11 specimens. It was determined that most specimens in the Museum are great crested grebes (*Podiceps cristatus*). The Museum has the fewest specimens of red-necked grebes (*Podiceps grisegena*) and no specimens of Slavonian grebe (*Podiceps auritus*) at all. *Podiceps nigricollis* and *Tachybaptus ruficollis* are represented by an approximately equal number of specimens. The paper shows that the collection of grebes in the Belgrade Natural History Museum represents an especially important source of information about the taxon Podicipediformes. It can also be considered a valuable part of our cultural and natural heritage.

Key words: Ornithological collection, inventory review, Podicipediformes

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### INTRODUCTION

Keeping in mind that the bird collection in the Natural History Museum in Belgrade is over 100 years old and includes specimens from a large number of localities in Serbia, our goal here is to present the collection of grebes as an important source of information for about taxon Podicipediformes (grebes), but also for various future studies. Altogether, 57 specimens from order Podicipediformes were inventoried. Depending on the date and locality of collecting and the collector or donor, they vary in their scientific, historical, and cultural value. The present review does not include the collection of eggs and nests, which also represents a part of the ornithological collection of the Museum.

The bird collection in the Belgrade Natural History Museum today contains about 5500 inventory units, including eggs and nests, so it is one of the richest ornithological collections in southeastern Europe. The collection belongs to the Department of Vertebrata of the Biological Division of the Natural History Museum. Most specimens within the ornithological collection are from Serbia and Montenegro, a somewhat smaller number are from

other countries of the Balkan Peninsula, and only a few originate from distant parts of Europe and other regions.

As the material in the ornithological collection has such great scientific, museological, cultural, and historical importance, the activities of curators in the last several years have been focussed on more adequate protection of existing ornithological material. Active collecting of specimens in the field have been reduced to the smallest possible intensity, as most bird species in our country are more or less threatened. However, the ornithological collection of the Natural History Museum is an important document on birds from this region.

*The bird collection of Natural History Museum includes four parts:* 1. The historical collection, composed exclusively of specimens from the former "Jestastvenica" Cabinet of the Great School. In the first list of birds in the Museum of Serbian Lands, by Dušan Spasojević, which was printed in Prosvetni Glasnik in 1904, it is stated that the collection of birds then included 539 specimens from 210 different species (Stojićević, 1904). Unfortunately, a number of these specimens are not present in the collection anymore. It is not known for certain what

happened to them, but it is most probable that they were damaged beyond repair, so they were removed from the collection.

2. The study collection of skins, consisting of reference material for scientific use, that is, birds prepared in such a way that permits checking of morphometric char-

acteristics. Accordingly, this collection has been used for scientific purposes.

3. The collection of mounted birds - taxidermic specimens, which are primarily used for exhibition purposes. However, they also have scientific and historical value, as some of the specimens are up to 100 years old.

4. The collection of eggs and nests. It is composed of preserved eggs and nests and has primarily scientific value.

## MATERIAL AND METHODS

Documentation (from inventory and collectors' books) of the ornithological collection of the Natural History Museum was used to prepare the present paper. The data were checked and compared with specimens from the Museum's collections (the historical collection, study collection, and collection of mounted specimens) belonging to the order Podicipediformes as of 2004-04-30.

Each inventory unit of this order contains, besides the name of the species, the inventory number (number under which the specimen is entered in the Museum's documentation), date and locality of collecting, name of the collector, and sex of the collected bird, if known. The

Table 1.

Specimens of *Podiceps cristatus* Linnaeus, 1758 in the historical collection of birds.

Species	Inv./ Col. No.	Date of collecting	Locality	Legator	Sex
<i>Podiceps cristatus</i>	1902002	1902-04-00	Central Serbia: Obrenovac	N. M. Gostić	♂
<i>Podiceps cristatus</i>	1904004	1904-01-06	Central Serbia: Belgrade: Ada Ciganlija	Herman Shulc	♂
<i>Podiceps cristatus</i>	1904005	1904-03-00	Lake Dojran	Spasoje Ilić	♀

date is presented as follows: first the year (four figures), then the month (two figures), and then the day (two figures). Years, months and days are separated by a hyphen. If only the approximate date is known, the earliest and latest possible dates are given, separated by an "equal" sign (=). If there was no way to determine the date, it is marked as "date unknown". The locality of collecting

contains several toponyms from general to individual separated by a colon, where the first toponym is regional and the other shows the closest town (on the level of the municipality center). A microtoponym is included in the locality in cases where it was noted on the label of the inventory unit (Marković, 1980). Localities that include a river or a mountain are recorded along with the toponym of appropriate level, separated by a comma. The name of collector, if known, is cited completely as is written on the label on the inventory unit. If the name was unknown, the "unknown" label is used.

## RESULTS AND DISCUSSION

Altogether, 57 inventory units from the order Podicipediformes were reviewed within the historical collection, study collection, and collection of mounted bird specimens of the Natural History Museum's ornithological collection. The results are presented in the tables, separate for each species and each collection. There are a number of specimens of Podicipediformes in the collection of eggs and nests, which are not included in this paper.

*Podiceps cristatus* is represented in all three collections. There are three specimens in the historical collection (Table 1), five specimens in the study collection (Table 2), and 15 specimens in the collection of mounted

Table 2. Specimens of *Podiceps cristatus* Linnaeus, 1758 in the study collection of birds.

Species	Inv./ Col. No.	Date of collecting	Locality	Legator	Sex
<i>Podiceps cristatus</i>	1905004	1905-07-27	Central Serbia: Šumadija: Kragujevac: Moravište	Vladimir Brzaković	♂
<i>Podiceps cristatus</i>	1904005	00.03.1904.	Macedonia: Dojransko Lake Dorjan	Spasoje Ilić	♀
<i>Podiceps cristatus</i>		0000-10-00	Southern Serbia: Vranje: Surdulica	unknown	♀
<i>Podiceps cristatus</i>	1957001	1957-13-01	Central Serbia: Belgrade: Višnjica	G. Arsekić	juv.
<i>Podiceps cristatus</i>	1966001	1966-06-14	Banat: Novi Kneževac	Stojan Dimitrijević	♂

Table 3. Specimens of *Podiceps cristatus* Linnaeus, 1758 in the collection of mounted birds. The historical collection of birds includes only one specimen of the species *Podiceps nigricollis* (Table 4), there are two specimens in the study collection (Table 5), and the collection of mounted birds contains altogether 11 specimens (Table 6).

Species	Inv./ Col. No.	Date of collecting	Locality	Legator	Sex
<i>Podiceps cristatus</i>		0000-00-00	unknown	unknown	
<i>Podiceps cristatus</i>		0000-00-00	unknown	unknown	
<i>Podiceps cristatus</i>	6	0000-00-00	Central Serbia: Belgrade	unknown	
<i>Podiceps cristatus</i>	1902002	1902-04-00	Central Serbia: Belgrade: Obrenovac	N. M. Gosić	♂
<i>Podiceps cristatus</i>	95	1962-03-27	Banat: Novi Kneževac	Stojan Dimitrijević	

Table 3. Continued

<i>Podiceps cristatus</i>	1926002	1926-10-03	Central Serbia: Belgrade: Makiš	Rudolphe Archibald Reiss	♂
<i>Podiceps cristatus</i>	1927002	1927-01-01	Central Serbia: Belgrade: Ada Ciganlija	Rudolphe Archibald Reiss	♀
<i>Podiceps cristatus</i>	1920002	1920-04-18	Central Serbia: Belgrade: Makiš	Lazar Kostić	
<i>Podiceps cristatus</i>	1926003	1926-10-04	Central Serbia: Belgrade: Makiš	Rudolphe Archibald Reiss	♀
<i>Podiceps cristatus</i>	1904004	1904-01-06	Central Serbia: Belgrade: Ada Ciganlija	Herman Shulc	♂
<i>Podiceps cristatus</i>	1914001	1914-03-00	Macedonia: Dojransko Lake Dorjan	unknown	♀
<i>Podiceps cristatus</i>	1973001	1973-01-14	Central Serbia: Belgrade: Ostružnica	D. Legerski	♀
<i>Podiceps cristatus</i>	5	0000-00-00	Croatia: Baranja: Belje	unknown	juv.
<i>Podiceps cristatus</i>	1905003	1905-07-31	Central Serbia: Kragujevac: Rogot	Vladimir Brzaković	juv.

Table 4. Specimens of *Podiceps nigricollis* Brehm, 1831 in the historical collection of birds

Species	Inv./ Col. No.	Date of collecting	Locality	Legator	Sex
<i>Podiceps nigricollis</i>	1904007	1904-03-29	Jagodina	Jovan Vulić	

Table 5. Specimens of *Podiceps nigricollis* Brehm, 1831 in the study collection of birds

Species	Inv./ Col. No.	Date of collecting	Locality	Legator	Sex
<i>Podiceps nigricollis</i>	1905005	1905-08-09	Macedonia: Tetovska reka	Nikola Avramović	♂
<i>Podiceps nigricollis</i>	1907001	1907-09-05	Macedonia: Skopje	Jordan Petrović	♂ juv

Table 6. Specimens of *Podiceps nigricollis* Brehm, 1831 in the collection of mounted birds. *Podiceps grisegena* was recorded in only two bird collections: in the historical collection - one specimen (Table 7) and four specimens in the collection of mounted birds (Table 8).

Species	Inv./ Col. No.	Date of collecting	Locality	Legator	Sex
<i>Podiceps nigricollis</i>	1904007	1904-03-29	Central Serbia: Šumadija: Jagodina	Jovan Vulić	♂
<i>Podiceps nigricollis</i>	1920001	1920-04-18	Central Serbia: Belgrade: Makiš	Lazar Kostić	♂
<i>Podiceps nigricollis</i>	1927001	1927-12-25	Srem: Živača	Rudolphe Archibald Reiss	♀
<i>Podiceps nigricollis</i>	1927003	1927-12-25	Srem: Živača	Rudolphe Arčibald Rajs	♂
<i>Podiceps nigricollis</i>	1927004	1927-12-25	Srem: Živača	R. Archibald Reiss	♀

Table 6. Continued

<i>Podiceps nigricollis</i>	1927005	1927-12-25	Srem: Živača	R. Archibald Reiss	♀
<i>Podiceps nigricollis</i>	1927006	1927-12-25	Srem: Živača	Rudolphe Archibald Reiss	
<i>Podiceps nigricollis</i>	1906003	1906-09-26	Central Serbia: Kragujevac: Rogot	Vladimir Brzaković	♂
<i>Podiceps nigricollis</i>	1987006	1987-01-24	Macedonia: Lake Ohrid	Voislav Vasić	
<i>Podiceps nigricollis</i>	1987009	1987-01-24	Macedonia: Lake Ohrid	Voislav Vasić	
<i>Podiceps nigricollis</i>	1987016	1987-01-27	Macedonia: Lake Prespa	Voislav Vasić	

Table 7. Specimens of *Podiceps grisegena* Boddaert, 1783 in the historical collection of birds

Species	Inv./ Col. No.	Date of collecting	Locality	Legator	Sex
<i>Podiceps grisegena</i>	1900001	1900-00-00	Danube, Belgrade	Karlo Viš	

Table 8. Specimens of *Podiceps grisegena* Boddaert, 1783 in the collection of mounted birds. *Tachybaptus ruficollis* is represented in all three collections: the historical collection includes three specimens of this species (Table 9), in the study collection has four specimens (Table 10), and the collection of mounted birds contains a total of eight specimens (Table 11).

Species	Inv./ Col. No.	Date of collecting	Locality	Legator	Sex
<i>Podiceps grisegena</i>	1900001	1900-00-00	Central Serbia: Belgrade: Danube	Karlo Viš	
<i>Podiceps grisegena</i>	21	1945-00-00	unknown	unknown	

Table 8. Continued

<i>Podiceps grisegena</i>	2002002	2002-06-27	Southern Serbia: Vlasotince	Zvonimir Popović	
<i>Podiceps grisegena</i>	1937005	1937-09-28	Banat: Bela Crkva	unknown	

Table 9. Specimens of *Tachybaptus ruficollis* Pallas, 1764 in the historical collection of birds

Species	Inv./ Col. No.	Date of collecting	Locality	Legator	Sex
<i>Tachybaptus ruficollis</i>	1904003	1904-08-16	Southern Serbia: Aleksinac: Davidovac	Božidar Dragičević	♂
<i>Tachybaptus ruficollis</i>	1902001	1902-10-00	Southern Serbia: Niš	Božidar Dragičević	
<i>Tachybaptus ruficollis</i>	1904002	1904-08-28	Macedonia: Tetovo	Nikola Avramović	♀

Table 10. Specimens of *Tachybaptus ruficollis* Pallas, 1764 in the study collection of birds

Species	Inv./ Col. No.	Date of collecting	Locality	Legator	Sex
<i>Tachybaptus ruficollis</i>	1904003	1904-08-16	Southern Serbia: Vranje	Božidar Dragičević	♂
<i>Tachybaptus ruficollis</i>	1940002	1940-01-07	Southern Serbia: Prokuplje	unknown	♀
<i>Tachybaptus ruficollis</i>	1939003	1939-09-29	Central Serbia: Kragujevac	Sergije Matvejev	♀
<i>Tachybaptus ruficollis</i>	1939004	1939-12-27	Central Serbia: Kragujevac	S. Matvejev	♂

Table 11. Specimens of *Tachybaptus ruficollis* Pallas, 1764 in the collection of mounted birds. Table 12 presents the data on specimens that are, except in the inventory books, absent in the ornithological collection (and whose fate is not precisely known) as well as data on specimens present in the collection, but lacking labels or any other note (and which are not recorded in the inventory and collectors' books). A total of 11 such specimens from was the order Podicipediformes was inventoried: *P. cristatus* - three; *P. nigricollis* - one; and *T. ruficollis* - seven specimens.

Species	Inv./ Col. No.	Date of collecting	Locality	Legator	Sex
<i>Tachybaptus ruficollis</i>	4	0000-00-00	unknown	unknown	
<i>Tachybaptus ruficollis</i>	55	1974-08-18	unknown	unknown	
<i>Tachybaptus ruficollis</i>	1905002	1905-03-21	Eastern Serbia: Vlaško Polje	unknown	♂
<i>Tachybaptus ruficollis</i>	1906002	1906-09-26	Central Serbia: Kragujevac:	Vladimir	♀
<i>Tachybaptus ruficollis</i>	1951001	1951-12-15	Banat: Novi Kneževac	Stojan Dimitrijević	
<i>Tachybaptus ruficollis</i>	1926001	1926-12-20	Srem: Kupinovo	Mihajlo Palavičenko	♀
<i>Tachybaptus ruficollis</i>	1904002	1904-08-28	Macedonia: Tetovo	Nikola Avramović	♀

Table 12. Podicipediformes found either only in the inventory books or as specimens without any labels or notes

Species	Inv./ Col. No.	Date of collecting	Locality	Legator	Sex
<i>Podiceps cristatus</i>	12	0000-00-00	unknown	unknown	
<i>Podiceps cristatus</i>	3376	1963-03-27	Banat: Novi Kneževac	Stojan Dimitrijević	♀
<i>Podiceps cristatus</i>	3430	1964-02-02	Banat: Novi Kneževac	Stojan Dimitrijević	
<i>Podiceps nigricollis</i>	1057	1904-03-31	Central Serbia: Jagodina: Laništanska bara	Jovan Vulić	♂
<i>Tachybaptus ruficollis</i>		1894-08-30	Southern Serbia: Niš	J. Kohan	



Table 12. Continued

<i>Tachybaptus ruficollis</i>	2454	1950-01-29	Central Serbia: Belgrade: Obrenovac	Stojan Delić	
<i>Tachybaptus ruficollis</i>	3572	1965-00-00	Banat: Ečka	Stojan Delić	
<i>Tachybaptus ruficollis</i>	3332	1961-04-05	Banat: Novi Kneževac	Stojan Dimitrijević	
<i>Tachybaptus ruficollis</i>	3333	1961-04-05	Banat: Novi Kneževac	Stojan Dimitrijević	
<i>Tachybaptus ruficollis</i>	3334	1961-04-05	Banat: Novi Kneževac	Stojan Dimitrijević	
<i>Tachybaptus ruficollis</i>	3573	1965-00-00	Banat: Ečka	Stojan Delić	

birds (Table 3).

### CONCLUSION

In the inventory review of the order Podicipediformes in the ornithological collection of the Belgrade Natural History Museum, a total of 57 specimens from over 20 localities was recorded, mostly from Central and Southern Serbia. Most specimens belong to the species *Podiceps cristatus* (23), which in our country also has the widest distribution of all representatives of Podicipediformes. *Podiceps nigricollis* and *Tachybaptus ruficollis* are represented with almost the same number of specimens: 14 and 15, respectively, while the species *Podiceps grisegena* has the fewest specimens in the collections of Natural History Museum – only five.

The collection of mounted birds contains the greatest number of specimens (38), and the historical collection has the smallest number (only eight). The study collection has 11 specimens.

The ornithological collection of the Natural History Museum does not contain even one specimen of the species *Podiceps auritus*. Most probably, the cause for this lack is the fact that this species is very rarely seen at

localities in our country. Of course, that does not mean that it should be acquired by any means for some of the mentioned collections of the Museum.

According to recent data on bird abundance (Puzović *et al.* 2003), it is estimated that the trend of the breeding population of *Podiceps cristatus* is increasing, and that the greatest population numbers are in Vojvodina. However it also breeds in Central Serbia. For the species *Podiceps nigricollis*, it is estimated that the population numbers are variable, and that it is only present in marshy and flooded areas, while in other parts of Serbia it is completely missing. *Podiceps grisegena* shows a stable trend of the breeding population. Like the previous species, it can be observed only in Vojvodina. In addition to Vojvodina, where its abundance is certainly the greatest, *Tachybaptus ruficollis* also breeds in Central Serbia, and the population trend is stable. *Podiceps auritus* has not been recorded as a breeding species in the Republic of Serbia.

In view of the diversity and geographical distribution of the order Podicipediformes, their presence in nature, and the number of breeding pairs in Serbia, the collection of grebes in the Natural History Museum represents an especially important source of information. It can also be considered an important part of our cultural

and natural heritage.

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### КАТАЛОГ ЗБИРКЕ ПТИЦА ПРИРОДЊАЧКОГ МУЗЕЈА У БЕОГРАДУ: РЕД PODICIPEDIFORMES

ДАЛИБОРКА БАРЈАКТАРОВ

*Природњачки музеј, 11000 Београд, Србија и Црна Гора*

Фонд орнитолошке збирке има изузетан научни, музеолошки, културни и историјски значај, па је због тог разлога одабран за реинвентаризацију ред Podicipediformes. Укупно је реинвентарисано 57 примерака из три колекције Музеја, са преко 20 локалитета широм Србије. Највише инвентарских јединица је забележено у збирци експоната (38), а најмање у историјској збирци (8). Студијска збирка птица је заступљена са 11 примерака. Утврђено је да Музеј највише поседује највише примерака ђубастог гњураца (*Podiceps cristatus*), а најмање црвеноратог гњураца (*Podiceps grisegena*), док примерке златоухог гњураца (*Podiceps auritus*) уопште не поседује. *Podiceps nigricollis* и *Tachybaptus ruficollis* су заступљени са подједнаким бројем примерака. На основу овог рада, збирка гњураца Природњачког музеја представља изузетно значајан извор информација за таксон Podicipediformes, али се истовремено може сматрати драгоценим делом културне и природне баштине Србије.

Фонд орнитолошке збирке има изузетан научни, музеолошки, културни и историјски значај, па је због тог разлога одабран за реинвентаризацију ред Podicipediformes. Укупно је реинвентарисано 57 примерака из три колекције Музеја, са преко 20 локалитета широм Србије. Највише инвентарских јединица је забележено у збирци експоната (38), а најмање у историјској збирци (8). Студијска збирка птица је заступљена са 11 примерака. Утврђено је да Музеј највише поседује највише примерака ђубастог гњураца (*Podiceps cristatus*), а најмање црвеноратог гњураца (*Podiceps grisegena*), док примерке златоухог гњураца (*Podiceps auritus*) уопште не поседује. *Podiceps nigricollis* и *Tachybaptus ruficollis* су заступљени са подједнаким бројем примерака. На основу овог рада, збирка гњураца Природњачког музеја представља изузетно значајан извор информација за таксон Podicipediformes, али се истовремено може сматрати драгоценим делом културне и природне баштине Србије.