THE EXPEDITION OF HUMBERTO DOS PASSOS-FREITAS IN THE DANUBE DELTA (ROMANIA) - 1922 AND THE "GRIGORE ANTIPA" NATIONAL MUSEUM OF NATURAL HISTORY FROM BUCHAREST

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Abstract. Between April 19th and May 19th, 1922 Humberto dos Passos-Freitas, a businessman and sportsman from Madeira, made an expedition to the Danube Delta, Romania. Rudolph Pop, the taxidermist of the Museum of Natural History in Bucharest, accompanied him during the expedition,. The results of the observations and collections made in the Danube Delta are recorded in a 41 page paper, published in Bucharest in 1922, at Socec Publishing House. In this expedition, 127 species of birds belonging to 36 families and 16 orders were observed. At that time, the authors called this report as preliminary, that is, the first part; unfortunately, the second part never appeared.

Keywords: Expedition, Danube Delta, Romania, Birds, Madeira, Funchal, Rudolph Pop, Grigore Antipa.

Rezumat. Expediția lui Humberto dos Passos Freitas în Delta Dunării (România) - 1922 și Muzeul Național de Istorie Naturală "Grigore Antipa" din București. În perioada 19 aprilie-19 mai 1922 Humberto dos Passos Freitas, afacerist și sportiv din Madeira face o expediție în Delta Dunării, România. Pe tot parcursul expediției este însoțit de taxidermistul Muzeului de Istorie Naturală din București, Rudolph Pop. Rezultatele observațiilor si ale colectărilor din Delta Dunării sunt consemnate într-o lucrare de 41 de pagini, apărută în București, în 1922, la Editura Socec. În această expediție au fost observate 127 de specii de păsări din 36 de familii și 16 ordine. La vremea aceea autorii au numit acest raport ca preliminar, adică prima parte, din păcate cea de-a doua parte nu a mai apărut niciodată.

Cuvinte cheie: Expediție, Delta Dunării, România, păsări, Madeira, Funchal, Rudolph Pop, Grigore Antipa.

INTRODUCTION

Personal life. Humberto dos Passos-Freitas (1893-1926) was born in Funchal, Madeira, and he was the heir of a considerable fortune that allowed him to be a passionate practitioner of sports, travel and literature. Humberto dos Passos Freitas was an active character linked to Funchal, where he took part in all sports or social events. Patriot and convinced monarchist, he made himself remarked by the active life within the community of Madeira Island. His name is linked to the establishment of the first sports club in Madeira. On November 8th, 1909, he set up Madeira Sports Club (Club Sports da Madeira) (RODRIGUES, 2000), when he brought a football from England and the taste for the game. He wanted to set up a club to bring together a group of athletes to practice activities "against alcohol consumption and a good development of morality and hygiene" (NASCIMENTO, 2011). He even participated in an 18 km long cross, which became traditional, between Funchal and Câmara de Lobos, called "I Marathona a Câmara de Lobos – ida e volta", where he won the third place, representing Club Sports da Madeira (MOTA, 1945).

Humberto dos Passos Freitas was married to Maria Glafira Gomes de Freitas and had a daughter, Dalila Rohena, married Pereira. Dalila Rohena was born on November 16th, 1914 in Funchal. She graduated from primary studies in Sintra, Portugal. She lived in London where she studied piano and foreign languages. She collaborated with Madeira publications like "*Diário da Madeira*" and the magazine "*Os nossos filhos*". As a writer, she is known under the pseudonyms: Diana Passos Freitas, Teresa Maria or Dalila Rohena Diana (GUERRA ANDRADE, 1999). She published: "*Fogo entre cinzas*" (1946), "*Retalhos*" (1949), etc. (ASCENSÃO DE MACEDO, 2013).

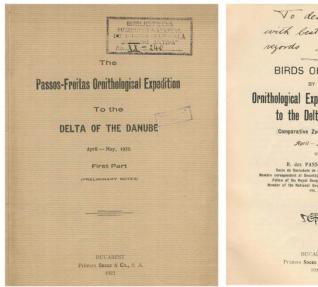
World War I. During the First World War, two bombardments of the German submarines hit the bay and the city of Funchal. The first one took place in the morning of December 3rd, 1916, and the target was the sinking of the "Dacia" ship under the English flag and its escorts, "Surprise" and "Kanguroo", under the French pavilion. "Dacia" had the task of supervising submarine cables. Although the damages to the buildings were insignificant, 34 sailors from the "Surprise" ship died and many were injured (RODRIGUES, 2017). The Red Cross of Madeira (Cruz Vermelha na Madeira) was directly involved in rescuing the wounded andmany civilians voluntarily participated in damage reduction. For the transport of the wounded, Humberto dos Passos Freitas made available to the Red Cross his yacht, his car and also a donation of a large sum of money for logistics. , his. These dramatic moments, as well as the involvement of the Funchal community, were mentioned in the press and noted in the reports of the Red Cross of Madeira (FREITAS GOMES, 2017): Diário Da Madeira (December 1916, 1917), A Capital (1916), Republica (1916), O Secolo (1916), Ilustração Portuguesa (1917).

The second bombardment began at 6.20 p.m., on December 12, 1917, when a German submarine targeted only land targets. The action lasted for 30 minutes and no targets were seriously damaged. There was a widespread panic. Five civilians died and others were injured. After the second bombardment, the U.S. consulate officer in Madeira, Humberto dos Passos Freitas, asked for help from the Americans. The request was honored and, two months later, a

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ship from the U.S. Naval Division of the Azores was sent to patrol around Madeira and raise the morale of the population (RODRIGUES, 2014).

"Glafiberta" and the exile. "Diario de Las Palmas", Gran Canaria (Spain), dated June 7th, 1919, informed the readers about the arrival of the "Glafiberta" ship after a five-day trip from the island of Madeira. On board, there were eight Portuguese politicians, who took part in the revolutionary movement attempting to reinstate the monarchy in Portugal, called "Revolta do Monsanto". There were 289 people arrested, exiled on the island of Madeira and locked in Lazareto Castle, in Funchal. During the night of June 1st,, eight of them succeeded to escape by descending on ropes from a height of 15 m, while Humberto dos Passos-Freitas waited for them on the beach with his "Glafiberta" ship (RUI CARITA, 2017). In September 1919, while he was in Las Palmas, Humberto dos Passos-Freitas was invited to participate in the sailing race organized by the Gran Canaria Royal Yacht Club.. He won this race with "Glafiberta" yacht, on September 15th, as it is mentioned by a comment in "Diario de Las Palmas" on the same day. The heroic act of Humberto Passos-Freitas was not without consequences, as he was sentenced to exile. "Porto Da Cruz" (1953) wrote that, during his exile, he visited all Europe, from the Middle East to England, and RODRIGUEZ (2016) said that, after traveling half of the world, H. dos Passos-Freitas returned to Madeira in 1923 and published a book, "Vinte e um Dias num Bote", about an expedition around the Madeira Archipelago, which he dedicated to his wife. But this book is not the only one, as in 1922, he published in Bucharest, at Socec Publishing House, a volume of 41 pages, "Birds observed by Passos - Freitas Ornithological Expedition to the Delta of the Danube April - May 1922", which helps us reconstitute the exile life of this untiring traveler, lover of nature and sports (Fig. 1).



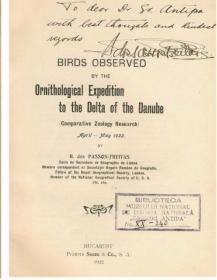


Figure 1. Cover of the book published by Humberto dos Passos-Freitas in Bucharest (Romania), at Socec Publishing House, 1922, about the Expedition in the Danube Delta (originals).

Geographical societies. He was a member of several geographical societies in the world, perhaps as a recognition of the expeditions he made in various areas of the globe, on his yachts, "*Glafiberta*" and then "*Physalia*". We find him as: Member of the Sócio da Sociedad de Geographia de Lisboa; Corresponding member of the Romanian Royal Society of Geography, Fellow of the Royal Geographic Society, London and Member of the Natural Geographic Society of U. S. A., etc. (PORTO DA CRUZ, 1953).

Our work renders different aspects of the 1922 one-month expedition in the Danube Delta. Here we present the routes, the people who accompanied him and the results of this expedition.

MATERIAL AND METHODS

Our study was based on the documents found in the Archive of the "Grigore Antipa" National Museum of Natural History (MNINGA Archive), where 15 files from 3 dossiers (1921, 1922 and 1923) were deposited and refer to Rudolph Pop, the taxidermist of the Museum; MNINGA collections; documents, books from the Museum's library, and articles on this subject from the press. The biographical references about Humberto Passos-Freitas have been obtained from several bibliographic sources, encyclopedias, works on the history of Madeira, or articles published in Madeira and Portugal.

The volume "Birds observed by Passos - Freitas Ornithological Expedition to the Delta of the Danube April - May 1922" from the collection of MNINGA Library, with dedication to Grigore Antipa (Fig. 1), helped us establish the route of this expedition in the Danube Delta and prepare a map of the trips (Fig. 2).

For a better understanding of the results of this expedition, we divided the trip on four routes marked from A to D, and the reference localities were numbered. To simplify the explanation in the table, the observation and collection places were marked with the following numbers: A: Brăila Şerbanu Lake: •1. Brăila, April 19, 1922; • 2. Şerbanu Lake, April 20; • 3. Aurelu Canal, Turcoaia, Dunărea Veche Lake, April 21; • 4. Şerbanu Lake, April 21; • 5. Brăila, April 23; B: Brăila – Sulina • 6.Brăila, April 24 & 25; • 7. Chilia Nouă, April 26; • 8. Chilia Veche, April 27; • 9. Matița Lake, April 28; • 10. Lunga and Bogdaproste Lakes, April 29; • 11. Letea, Merheiu Mare, Merheiu Mic and Gârla Sulimanca, April 30; • 12. Letea Forest, May 1; • 13. Periprava Forest, departure, May 2; • 14. Vâlcov, May 3; • 15. Departure to Sulina, Stambul Island and entry into the Black Sea, May 4, 1922; C: Sulina – Tulcea • 16. Sulina, April 5-13, 1922; • 17. Tulcea, May 13, arrival in Tulcea; D: Tulcea – Razelm Lake • 18. May 14, 1922, they left Tulcea to reach Jurilovca, crossing the Queen Elizabeth channel, which connects with Babadag Lake and Razelm Lake. At 5 p.m., they arrived at Jurilovca; • 19. Razelm, May15, they arrived at Golovița Island and Bisericuța Island; • 20. Popina Island, May16, they spent the night at Sarichioi, because Popina did not offer a good camping spot; • 21. May 17, they left Sarichioi and overnighted at Jurilovca; • 22. Sinoe Lake, May18; 23. Return to Tulcea, May 19; • 24. Brăila, by ship, May 20, 1922.

Abbreviations: MNINGA ("Grigore Antipa" National Museum of Natural History); St. Obs. b. (Stations of observed birds); St. n./e. (Stations of nest/eggs); St. Coll. b. (Stations of collected bird specimens) (Fig. 2).

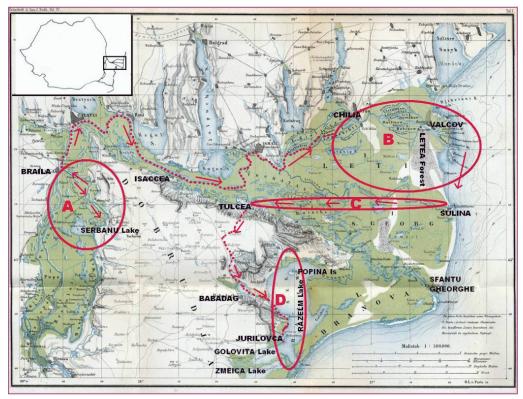


Figure 2. Map of the routes followed by Humberto dos Passos Freitas in the 1922 expedition in the Danube Delta. (modified after SPRATT & KIEPERT, 1867).

RESULTS AND DISCUSSION

The expedition from the Danube Delta (Romania, April 19th-May 20th, 1922) was possible with the help of some important people, whom Humberto dos Passos-Freitas thanked in his book. Among them, we mention: Constantin Gheorghe Banu (1873-1940), Minister of Domains at that time, Romanian lawyer, politician and minister, Romanian writer, journalist and politician who served as the Arts and Religious Affairs Minister (1922 -1923); Alexandru C. Constantinescu (1859-1926), law PhD, who attended his studies in Paris, later on deputy (since 1901) and then liberal senator, with a successful political career, Minister of the Interior for several times, Minister of Agriculture and Domains and of Industry and Commerce; Martinho de Brederode (Martinho Maria Teixeira Homem de Brederode de Cunha) (1866-1952), Portuguese Minister, Foreign Office; he entered diplomacy at the age of 23 and carried out various diplomatic missions at the request of the Ministry of Foreign Affairs of Lisbon, in Tangier, Canton, Peking, Paris, Rome and finally, in 1919, in the Balkans (Romania, the Kingdom of Serbia-Croatia-Slovenia and Greece) (STOICA, 2011; MOCANU, 2009); in 1934 he retired and died in Braşov (Romania) in 1952, without seeing Lisbon again in the last 25 years of his life. In addition to his diplomatic skills, demonstrated on the occasion of his assigned missions, Martinho de Brederode was passionate about literature and poetry. He published under the pseudonym Marco Sponti, probably due to

diplomatic discretion. His other passion was bullfighting (tauromaquia). He was one of the founders of the Portuguese Bullfighting Royal Club (Real Clube Tauromáquico Português) (STOICA, 2010).

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Grigore Antipa (1867-1944), the director of the Museum of Natural History in Bucharest and of the State Fisheries, helped Humberto dos Passos-Freitas to obtain the necessary permits for the expedition in the Danube Delta. Fascinated by the distinction and erudition of this educated foreigner, Grigore Antipa gives him access to the collection and the specialized staff to help him, guide him and, eventually, defend him from various unforeseen dangers. Those who accompanied him in the expedition and helped him with the logistics during the Danube Delta trip were Rudolph Pop, the taxidermist of the museum, Dr. D. G. Ionescu, Administrator of Fisheries at Braila and Mr. Polihroniadi. It is possible that Grigore Antipa and Ludovic Mrazec (1867-1944), the director of the Geology Institute, a specialist in geology and petroleum exploitation, to have recommended him as a correspondent member of the Romanian Royal Society of Geography and the Bene Merenti Order, the first class gold medal for scientific merits.

Initially, we thought that Humberto dos Passos-Freitas spent only a month in Romania, but STOICA (2010), in a study on the life and work of Martinho de Brederode, reminds of a Romanian businessman's complaint against Martinho de Brederode to the Portuguese Masonry, quoting dos Passos-Freitas as a witness, who would have spent a year in Romania and knew Brederode. Knowing that he had the status of exile, thus the extension of his stay in Romania could be explained, during which we suppose he visited Transylvania and Bessarabia. There are no documents in this respect, but in the collections of the Museum in Bucharest there is a bird collected from Transylvania in December 1922, donated by Rudolph Pop, and in the preface of his book about the expedition in the Danube Delta, published in Bucharest, Humberto Passos-Freitas thanks Rudolph Pop for the letters sent to Tulcea and Bessarabia. During the expedition in the Danube Delta, he wanted to visit Odessa, but was prevented by the Russian Bolshevik officials, who stopped him at the border.

The itinerary included **four areas** in Dobrogea and the Danube Delta: **Brăila - Şerbanu Lake (A), Brăila - Chilia Nouă and Chilia Veche - Sulina (B), Sulina - Tulcea (C)** and **Tulcea - Razelm Lake (D)** (Fig. 2). The route of the expedition and the main stations per day are found in Table 1.

The first visited itinerary was the wetlands around Brăila, Şerbanu Lake and the Old Danube, connected by Filipoiu and Aurelu Canals (A: Brăila - Şerbanu Lake) (Fig. 2). The information noted by Humberto dos Passos Freitas for this wetland, which disappeared since then, is very important. Today, about 100 years after this expedition, the wetland is completely transformed and, the area has become a productive agroecosystem. The rich biodiversity of this ecosystem was researched between 1896 and 1916 by Robert Ritter von Dombrowski, the ornithologist of the Museum of Natural History in Bucharest, who collected several species of birds from this area and published data on them in the volume "Ornis Romaniae". These preparations were exhibited in the museum, in dioramas, at the official opening in 1908, in the new building, on Kiseleff Road, no. 1, today's headquarters. Since his departure from Romania, during the First World War, in 1916, no observations and other ornithological studies had been published from this area.

Filipoiu Canal, with a length of 27 kilometers, impressed Passos-Freitas through the richness of the avifauna, its wildness, beauty and the trees that come out of the water. He visited an island where he discovered the ruins of a house, called by the locals "Şerban Palace". These were the ruins of the Royal Family vacation home, where King Carol I of Romania spent one month of vacation each summer, until his death in 1914. Every summer, the Royal Family left from Bucharest on a cruise from Giurgiu to the Old Danube Branch. "Şerban Palace" was abandoned after the King's death, destroyed by time and vandalized during the war.

On Filipoiu Canal, Aurelu Canal and Dunărea Veche, there were large colonies of hundreds of birds – Gray Herons (*Ardea cinerea*), Great Cormorants (*Phalacrocorax carbo*) and rooks (*Corvus frugilegus*). He observed 50 species of birds and collected over 20 species. We do not know whether they were prepared or not by Rudolph Pop or whether Humberto Passos shot them only for pleasure or he was a collector. In the ornithological collection of the "Grigore Antipa" National Museum of Natural History in Bucharest, there is a single piece, a Common Buzzard (*Buteo buteo*) collected from this expedition as a naturalized-mounted piece and a chiropter, a bat that has a label with the name of Humberto Passos-Freitas (Fig. 3). Among the observed species, we mention the White-tailed Eagle (*Haliaeetus albicilla*), nowadays very rare in Romania, whith only 3-4 nesting pairs being present; *Neophron percnopterus*, the Egyptian vulture, nested in Dobruja, but always in a small number of pairs, while presently it disappeared from Romania's avifauna. For Humberto Passos-Freitas the four nights spent here were not very comfortable because it rained and there were floods, thousands of insects, mosquitoes and orthopters, but also mice. In fact, he even caught a mouse that had hidden from the wetness in his clothes and kept it as a memory.

The second route Brăila-Chilia Nouă and Chilia Veche (B) (Fig. 2).

He spent two days in Brăila (April 24th-25th) for supplies. He made observations on the birds in the parks and gardens of the city. The avifauna was interesting, made up of small singing birds and many crows. We believe that these observations are also the first on the urban avifauna in Brăila. On April 26th, 1922, he crossed Chilia Branch of the Danube with the "Borcea" ship to the town of Chilia Nouă. On this route, he observed and was delighted with the stork nests (Ciconia ciconia), built on the reed roofs of the houses. He found out that, in Romania, people loved storks and protected them, and those who had stork nests on the house did not destroy them, because they believed they would bring good luck and protect the houses against fire. He was interested in storks and wanted to see such a nest nearly. As there was a delay of one day, because of the documents and permits, he paid a local guide who led him to a nest where the stork was nesting.



Figure 3. Mammals collected in the Danube Delta with the label Humberto Passos-Freitas (originals - MNINGA Collection).

He visited Gârla Pardina and Gârla Jidan and set up the camping site at the Fishing Station of the Government at Matita Lake. The rooms were very simple, just a bed put directly on the ground, however very hospitable (Fig. 4). In this area, he observed over 20 species of birds and shot 10 species of which: Black Kite (*Milvus migrans*), very rare today in Romania, the Smew (*Mergus albellus*) and Red-breasted Merganser (*M. serrator*). It is interesting to mention that at the beginning of the XXth century, the Smew nestled in the Danube Delta, while today, 100 years after these observations, it no longer nests there, it winters at the shore of the Black Sea, but in small numbers in recent years. At European level, the nesting population of this species counts only 1,500-2,000 pairs.





Figure 4. Images from the Danube Delta (1920-1930) (originals - MNINGA Archive).

On April 29, he continued the ornithological observations on Lake Lunga, Sahuna and Sfistofca. The next day, he continued on Gârla Sulimanca, Merheiul Mic and Merheiul Mare where he found nests of *Mergus merganser*, *Anas strepera* and a colony of hundreds of nests of *Ardea cinerea*. He collected *Phalacrocorax pygmaeus*, *Melanitta nigra* and *M. fusca*, northern species, very rare in Romania, probably still in migration. He left the ship and walked through Letea Forest, where he discovered an enormous nest of White-tailed Eagle, *Haliaeetus albicilla*, and after waiting for two hours, he shot the female, who died on the nest. He was amazed at the agility of a 50-year-old fisherman who climbed the tree, which seemed inaccessible, to recover the bird and the two chicks from the nest. The man reminded him of the monkeys he had seen in South America and who were not so agile. He was preoccupied to collect an *Eryx*

jaculus, for Dr. Ilchev in Sofia, but, unfortunately, he did not succeed. Delcho Ilchev (Ilcheff - in Passos-Freitas book), a Bulgarian zoologist, was the head of the Entomological Station at the Royal Institutes of Natural History. As a researcher, D. Ilchev had a significant contribution to the investigation of the butterfly fauna of Bulgaria. He published over 35 scientific and popular papers on Bulgarian fauna. On April 14th, 1925, he was killed in an assassination attempt against King Boris III, while trying to save the King's life (LAZAROV, 2011). We do not know the circumstances in which Humberto dos Passos Freitas met the Bulgarian scientist; he might also have visited Bulgaria. In Letea Forest, he observed and collected 10 bird species.

On May 2nd, 1922, he arrived at Periprava and visited the forest located a few kilometers away from the locality. He found a nest of *Aquila clanga*, but the birds left the nest and watched him from the distance. He did not have the patience to wait and gave up. He observed, but also shot some species of falcons: *Falco peregrinus*, *F. vespertinus*, *F. tinnunculus* and *Pernis apivorus*. The day was very hot and Passos-Freitas noted: "*The day was very hot and dry, the sand of which the soil of the Forest Letea was composed in its intense heat penetrated through the soles of our boots burning the feet, I can only compare it to the heat I experienced in the deserts of Morocco in 1915". After these experiences, he decided to go to Vâlcov, where he spent one night. He wanted to visit Odessa, but for this trip, there were necessary many formalities that would have taken a long time. It was possible to waste precious time, and the hostile Bolshevik authorities did not allow him to enter the country. He decided to go to Sulina. The route from Vâlcov to Sulina passed near Stambul Island, where he observed a large group of <i>Pelecanus onocrotalus*. He shot a few specimens, those that could not get up in the air because of the large ingested prey. They had swallowed 1-2 kg carps!

The third route Sulina-Tulcea (C) (Fig. 2) was supposed to begin on May 5th, 1922, but Passos-Freitas felt sick, as written in his diary, because of a snake bite from those collected at Periprava: "I was not able to go to Tulcea until May 13, 1922 as in changing one of the snakes caught at Periprava I was bitten by one of these, which gave me a bad time for several days". On May 13th, he arrived in Tulcea, with some bird blood samples collected on glass blades for Professor George Zotta, later used in .his studies of malaria. Zotta George (1886-1942) was a Professor at the Faculty of Medicine (University of Bucharest), Department of Medical Zoology and Parasitology; he was the one who published the first studies on paludism in Romania in the "Bulletin de la Société de Pathologie exotique"in 1927, 1932 and 1938

The fourth route Tulcea-Jurilovca (D) (Fig. 2) started on May 14th, when Passos-Freitas traveled on Elisabeth Canal, then on Babadag Lake and Razelm Lake to Jurilovca. He spent six days at Jurilovca and Razelm Lake. He visited Goloviţa Island, the island that rises a few inches above the water. He was impressed by the large number of birds and the fact that Romanians do not use this land for rice crops: "I often wondered why some Romanians do not try to grow rice in these wilder land - as the soil and climate seem to be the ideal for that crop". Here he observed Grus grus, Aythya fuligula, Plegadis falcinellus and Platalea leucorodia. On Bisericuţa Island, he observed 10 species of birds, of which we mention: Egretta garzetta, Recurvirostra avosetta, Podiceps nigricollis. At a great distance, but not sure, he also observed Phoenicopterus roseus, which was indeed observed and collected from that area in those years.

The trip to Popina Island, the largest island in Razelm Lake, did not offer any special remarks. Firstly, because of the strong wind, there were just a few birds, but they observed a lot of snakes (*Tropidonatus tesselata*) and found traces and feathers of the great bustard (*Otis tarda*), a large, rare bird, disappeared from the fauna of Romania, which appears accidentally during migrations. In the last days of the expedition, on May 17th-18th, he collected a few rare species at Sarichioi: *Tadorna tadorna*, *T. ferruginea*, *Bubo bubo* and a few eggs of *Riparia riparia*. On the North of Sinoe Lake, he found a very large colony of *Larus*, with flooded nests and hundreds of eggs floating above the water. This image is quite common in Laridae colonies from wetlands, when the weather is unfavorable and there are frequent rainfalls. On May 19th, the travelers returned to Tulcea, ending an adventure that lasted for a month.

Initially began as a hunting trip, although it was completed as a true ornithological expedition. The results are among the best, as over 120 species from 36 families and 16 orders were observed and collected (Table 1). The preliminary notes printed at the Socec Publishing House (Fig. 1) are now, a hundred years later, a precious document illustrating the rich biodiversity of this less-known area at that time. The text is clear, the explanations short and concise, as a true scientific work. The correct scientific names, precisely used, the correct determination of the species of birds, mammals, insects found on the ground prove that Rudolph Pop, who had the necessary knowledge of zoology, participated in the elaboration of the text.

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The closest person on this trip was Rudolph J. Pop, an employee of the Museum in Bucharest, since December 1921. From two documents in the form of a table with the employees of the museum, drafted for the Ministry, one by Grigore Antipa on July 11th, 1923 (MNINGA Archives, file 1923: 132) and another table compiled by Richard Canisius, Antipa's assistant and substitute when Antipa was not in the country (MNINGA Archives, file 1923: 182), we found some biographical data about this museum preparator. Rudolph J. Pop worked and trained as a taxidermist at Christiania (now Oslo), in Norway. At the request of Grigore Antipa to the Ministry of Public Instruction for a preparator position, from April 8th, 1921, the Ministry approved hiring Rudolph Pop (MNINGA Archives, file 1921: 16). He settled down in Bucharest in November 1921, with residence in Avedic Street, no. 9. He was not married. Rudolph J. Pop was hired at the museum in Bucharest on December 1st, 1921. He was born on December 18th, 1895, in Budapest, and his parents were from Răşinari (Sibiu), Transylvania, the historical region of Romania at that time in the Austro-Hungarian Empire. He was mobilized and participated in the First World War as a soldier in the 31st Regiment

in the former Austrian army, and was discharged as invalid according to Registry 32165/1923; the last visa on his military ID card dates back to 13 September 1923 (MNINGA Archives, file 1923: 156). He trained himself in some of the most important workshops in Europe. He had acquired a lot of oral knowledge as he travelled a lot and according to the models and photographs, he had sent to the director of the Bucharest Museum, it was clear that he possessed the art of dermatoplasty. Grigore Antipa was impressed and proposed to the Minister to give him a double salary and the preparator position to be called "dermoplast preparator" (MNINGA Archives, file 1921: 16). Antipa managed to raise money, amounting to 5,000 lei, through Decision no. 7268 of August 8th, 1921, to pay his way from Norway to Romania and his installation in Bucharest. He intervened with the Foreign Ministry to free him from customs payments for the equipments he brought, including a hunting gun. The support given by Grigore Antipa, before and after his arrival in Bucharest, was constant. He managed to obtain him a railway free pass, but also a special hunting permit, mentioning the exceptions from the "general prescriptions of hunting periods and hunting laws" (MNINGA Archives, file 1921). Initially, this request was not entirely accepted by the Ministry, and Grigore Antipa, dissatisfied, returned the permits."/To the Minister of Agriculture and Domains, Hunting Directorate / Dear Minister, / In my request no. 91 of April 24, c.y., I had the honor to kindly ask you to release me two hunting permits in the name of the undersigned and the preparator R. J. Pop, to be able to collect for scientific purposes, for both studies and collections from different years throughout the country. The permits you have issued, only for the state unrented forests and pools, allowing us "to hunt only 2 specimens of each species" and "only in the season allowed by law" and then the "bond" to address to the superior agent to note on the back of the permits" cannot be of any use to us and we restitute them. Taking into account the high scientific goals we pursue: the study of the fauna of the country, the biology of the animals in this fauna, reproductive biology studies, their migration, studies on the utility and damages brought to agriculture, forestry and pisciculture, etc., I have asked to be granted special permits that stand out from the general prescriptions of the hunting periods and hunting law measures. Such permits are granted in all countries for scientific studies and, moreover, they should be granted in our country where, there are no such studies./ To the Minister of Agriculture and Domains, the Department of Hunting/".

After this expedition in the Danube Delta, Rudolph Pop returned to the Museum in Bucharest. In the archives of the Museum, we found an application of Grigore Antipa to the Minister of Finance and the Customs Department asking for the exemption of customs taxes for R. Pop's hunting gun so that it could be repaired at a factory in Germany and the permission to introduce 200 bullets freely into the country:"/ Bucharest, / no. 37, August 21, 1922 / To the Minister of Finance, Customs Department. Locco / Mr. Minister, / Mr. Rudolf J. Pop, the dermoplast preparator of the Museum of Natural History, owns an English hunting gun, Rygly, caliber 12x8 mm with telescope, which is used to hunt various animals needed to enrich the museum collections. As his gun was damaged, he looked for a workshop that could fix it, but he did not find any in the country, so he has to send it to a factory in Germany. I would kindly ask you to allow the gun to be sent abroad and then reintroduced into the country without the payment of customs duties, since it is a necessary instrument for its work, as a preparator and the Museum absolutely needs it. At the same time, I would kindly ask you to allow the introduction of 200 bullets, 8 mm caliber, necessary for this gun, with the exemption of customs duties, which are also not available in the country./ Director / ss (MNINGAArchives, File 1922: 73).

In Bucharest, in the same year, at the end of October, Rudolph Pop asked the director of the Museum of Zoology in Bucharest, Grigore Antipa, to give him a few months leave to attend a scientific expedition in British Columbia and Alaska. _"Bucharest, October 26, 1923 / Mr. Director, / Presenting my opportunity to participate in a scientific expedition in British Columbia and Alaska from where I can bring valuable material to the Institution you preside, I would kindly ask you to give me a leave of months and Dr. Emil Wilke, Professor of Natural Sciences, will replace me. / Mr. Director, I assure you of my special esteem and considerations. / R.J. Pop, Preparator of the Museum of Natural History. / PS ... For the time being, I would kindly ask you to approve the request of Dr. Emil Wilke, who will replace me. / To the Director of the Museum of Natural History."(MNINGA Archives, file 1923: 45). We believe that Rudolph Pop remained in close contact with his companion in the Danube Delta and that this expedition he was about to take part in was organized by Humberto dos Passos-Freitas himself.

On the same application, Grigore Antipa wrote an approval resolution on October 27th, 1923, document that is in copy (MNINGA Archives, file 1923: 155): "A three-month leave is granted on the condition that he would be replaced by Dr. Wilke and bring collections from the expedition he is undertaking to the Museum. Permission begins on Nov. 1, 1923. / Director, Grigore Antipa". We do not know why Rudolph Pop postponed his departure in January 1924, as evidenced by MNINGA Archives document of October 1923, where Grigore Antipa, the director of the museum gave an official decision with the following content: / October 27, 1923 / Mr. Preparator/ with regard to your request dated October 26, current year, I inform you that you are granted the 3-month leave starting with January 1924 to go and take part in the scientific expedition in British Columbia and Alaska. According to your wish, we have approved that during your absence, to be replaced by Dr. Emil Wilke who will receive your honorarium. The Management of the Museum has taken note of your commitment that you will bring to the Museum some of the collections you will gather in this expedition. / Director, Gr. Antipa. / To Mr. R. Pop, the preparator of the Museum of Natural History in Bucharest /"(MNINGAArchives, file 1923: 158) (Fig. 5). Since January 1924, there have no longer been any mentions about Rudolph Pop in MNINGA Archives, so he has never returned to the museum in Bucharest. Starting with 1924, the preparator position was temporarily occupied by Emil Wilke, professor of natural sciences at the Evangelical School in Bucharest, until 1926.



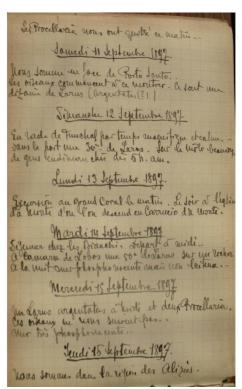


Figure 5. Rudolph Pop's request to Antipa for leaving in the Pacific-Alaska Expedition, left side (original: MNINGA Archive); The page from Emil Racovita diary where the Belgica ship made a stopover in Madeira, docking in Funchal Bay, right side (original: MNINGA Archive).

OTHER EXPEDITIONS. In September 1923, Humberto dos Passos-Freitas made a one-month expedition around Madeira with his yacht, an expedition completed with the publication of a book "Vinte e um Dias num Bote", describing the journey through the Deserted Islands, Porto Santo Island and his returning to Madeira and rendering the details of his researches and the conclusions reached, always with the style that no one else possesses (PORTO DA CRUZ, 1953; ASCENSÃO SILVA, 2018). In 1925, on June 7th, Humberto dos Passos-Freitas launched in Macicho his new yacht, built by Antonio Pedro Gonsalves, one of Madeira's best builder. It was 19 m long, 5.6 m wide at the bow and 3.80 at the stern. It had been built respecting the demands of its owner, who intended to make a scientific expedition in the Pacific. That is why the yacht was equipped with the top technique for that time: diesel engine, electrical and refrigeration installations, wireless telegraph, etc. (CAIRES, 2005; LEMOS SILVA, 2007). On December 15th, 1926, Funchal port of Madeira was hit by a powerful hurricane, a storm of extreme violence, with waves of 15 m, and the "Physalia" yacht anchored in the port was crushed; unfortunately, four crew members, along with Humberto Passos-Freitas and a woman were killed in this natural disaster. Diário de Notícias, Funchal, 16th December 1926, announced the shipwreck of "Physalia da Expedição Portuguesa do Pacífico" and the death of Humberto Passos-Freitas (LEMOS SILVA, 2007). Their bodies have never been found. A year later, on the beach of Funchal port, Passos Freitas' wedding ring was found, identified by the inscription "Só Deus me vence". Indeed, only God defeated this tireless traveler! But there remains only one question, to which only God will answer, was Rudolph Pop, on that fateful day, aboard the "Physalia" and shared the same fate with the rest of the crew?

EMIL RACOVIȚĂ AND MADEIRA

This year marks the 150th anniversary of the birth of the Romanian scientist Emil Racoviță (1868-1947). He studied in France, where he first graduated the *Faculty of Law* in Paris, then the *Faculty of Sciences* from Sorbonne; he also participated in the courses of the *School of Anthropology*. In 1896, he defended his Ph.D. thesis, entitled "*Le lobe céphalique et l'encéphale des annélides polychètes*". In 1897, at the age of 29, he was elected a member of the Zoological Society in France; after that, he was recommended to participate as a naturalist, alongside other international scientific personalities, aboard the "*Belgica*" ship, in the Belgian Antarctic Expedition (1897-1899). Emil Racoviță entered the universal consciousness as the founder of biospeology and as the naturalist of the "*Belgica*" expedition. On his way to the South Pole, after leaving the port of Antwerp, the Belgica ship made a stopover in Madeira, docking in Funchal Bay (AUGUSTO da SIVA & AZEVEDO de MENESES, 1921). On September 11th, 1897, Racoviță wrote to his parents "*Right now we stopped in the port of Madeira ... Sunday and Monday we stay in Madeira. We cannot land this evening, as the authorities do not allow this after eight in the evening. Tomorrow, I will leave early to visit Funchal, the white city that rises as an amphitheater above us; small, white houses, hanging at the foot of the mountain. They look happy and welcoming; it is said that women are beautiful, let's see "... On September 13th, he made a trip to Coral Mountain, "a too beautiful old crater. Riding for eight hours delighted me from all the points of view. Our stay was only a dream, but a*

beautiful dream" (Fig. 5). In this short trip, Emil Racoviță collected a few plants. The list of plants collected is now in the Archives of the "Grigore Antipa" Museum in Bucharest (Romania) (MARINESCU et al, 1999).

CONCLUSIONS

From April 19th to May 19th, 1922, Humberto dos Passos-Freitas, a businessman and sportsman from Madeira, made an expedition in the Danube Delta, Romania. During the expedition, he was accompanied by the taxidermist of the Museum of Natural History in Bucharest, Rudolph Pop. The expedition lasted for a month and wetlands with a wide variety of bird species were visited: Şerbanu Lake, Chilia Branch, Letea Forest, Periprava and the surrounding wetlands, the Black Sea shore between Vâlcov and Sulina, Sulina Branch and Razelm Lake.

The results of the observations and collections made in the Danube Delta are rendered in a 41-page paper, published in Bucharest in 1922, at Socec Publishing House. At that time, the authors called this report as preliminary, that is, the first part; unfortunately the second part never appeared.

Originally begun as a hunting trip, it was completed as a true ornithological expedition. The results are among the best, as over 120 species belonging to 36 families and 16 orders were observed and collected. The preliminary notes, published in 1922, are now, a hundred years later, a precious document illustrating the rich biodiversity of this less-known area at that time. The text is clear, the explanations concise, as a real scientific work. The correct scientific names, precisely used, the correct determination of the species of birds, mammals, insects found in the field prove that Rudolph Pop, who had the necessary knowledge of zoology, participated in the elaboration of the text.

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Table 1. List of birds observed in 1922 by Humberto Passos Freitas and Rudolph Popin the Delta Danube (Romania).

No.	Species	Vernacular name	Synonym*	St. Obs. b.	St. n./e.	St. coll. B.
1.	Corvus frugilegus	Rook		1	1	
2.	Corvus cornix	Hooded crow		10, 11	10,11	
3.	Corvus corone	Carrion crow		2, 3		
4.	Corvus monedula	Jackdaw	n: 1 :	1	1	
5.	Pica pica	Magpie	Pica caudata	2		
6.	Pica pica	Magpie	Pica rustica			
7. 8.	Garrulus glandarius	Eurasian jay Eurasian golden oriole	Onis Ivas a alberta	12		12
8. 9.	Oriolus oriolus Sturnus vulgaris	Common starling	Oriolus galbula	1, 2		12
10.	Passer montanus	Eurasian tree sparrow		1, 2		
11.	Passer domesticus	House sparrow		1		
12.	Carduelis carduelis	European goldfinch	Carduelis elegans	6		
13.	Carduelis chloris	European greenfinch	Chloris ligurinus	6		
14.	Fringilla coelebs	Common chaffinch	Chioris tigurinus	1		
15.	Fringilla montifringilla	Brambling		18		
16.	Emberiza citrinella	Yellowhammer		18		<u> </u>
17.	Emberiza calandra	Corn bunting	Emberiza miliaria	18		
18.	Alauda arvensis	Eurasian skylark	Embertza mitarta	18		
19.	Alauda arborea	Woodlark	Lullula arborea	12		12
20.	Galerida cristata	Crested lark	Alauda cristata	18		12
21.	Anthus spinoletta	Water pipit		2		
22.	Anthus spinoletta petrosus	Rock pipit	Anthus aquaticus	18		
23.	Motacilla raii	Yellow wagtail		1		
24.	Motacilla alba	White wagtail		2		
25.	Motacilla flava	Yellow wagtail		2		
26.	Sylvia cinerea	Lesser whitethroat	Sylvia curucca	6		
27.	Sylvia atricapilla	Orphean warbler	Wrong Sylvia hortensis	6		
28.	Philloscopussibilatrix	Wood warbler	Phylloscopus sibilatrix	12		12
29.	Philloscopus trochilus	Willow warbler	Phylloscopus trochilus	2		
30.	Phylloscopuscollybita	Chiffchaff	Philloscopus rufus	3, 12		12
31.	Erithacus rubecula	Robin		6		
32.	Turdus merula	Common Blackbird		2		
33.	Turdus torquatus	Ring Ouzel		2		
34.	Oenanthe oenanthe	Wheatear	Saxicola oenanthe	6		
35.	Remiz pendulinus	Eurasian penduline tit	Parus pendulinus	2, 3		
36.	Parus major	Great tit		2		
37.	Parus caeruleus	Eurasian blue tit	Cyanistes caeruleus	2, 6		
38.	Lanius collurio	Red-backed shrike		18		
39.	Hirundo rustica	Barn swallow		1	1	
40.	Hirundo riparia	European sand martin				
41.	Delichon urbica	House Martin	Chelidon urbica	2		
42.	Upupa epops	Eurasian hoopoe		2		
43.	Merops apiaster	Bee-eater		18		
44.	Coracias garrulus	European roller	Coracias garrula	12		12
45.	Alcedoatthis	Common kingfisher	Alcedo ispida	2		
46.	Apus apus	Common swift	Cypselus apus	6		
47.	Cuculus canorus	Common cuckoo		2, 12		12
48.	Cuculus canorus	Common cuckoo	Cuculus romanicus	_		
49.	Picus viridis	European green woodpecker	Gecinus viridis	2		10
50.	Dendrocopos medius	Middle Spotted		12		12
F-1	Day Ive as	Woodpecker		1		
51.	Dendrocopos minor	Lesser Spotted Woodpecker	C	2	1.1	
52.	Strix aluco	Tawny Owl	Syrnium aluco	11	11	
53.	Bubo bubo	Eurasian eagle-owl Eurasian griffon	Bubo maximus	2 22	1	
54.	Syps fulvus	- E		22		
55. 56.	Neophron percnopterus	Egyptian vulture Peregrine falcon		2 12	-	13
56. 57.	Falco peregrinus Falco subbuteo	Eurasian hobby		2, 13		13
58.	Falco subbuteo Falco vespertinus	Red-footed falcon	Tinnunculus vespertinus	13	-	
58. 59.	Falco vesperanus Falco tinnunculus	Common kestrel	Tinnunculus vespertinus Tinnunculus alaudarius	13		13
60.	Aquila clanga	Greater spotted eagle	Aquila imperialis	11,13		13
61.	Aquila clanga Aquila clanga fulvescens	Greater spotted eagle Greater spotted eagle	Aquila imperiatis Aquila fulvescens	11,13		
62.	Haliaeetus albicilla	White-tailed Sea-eagle	Haliaëthus albicilla	2, 4, 12	12	
63.	Milvus milvus	Red kite	Milvus ictinus	9	12	
64.	Milvus migrans	Black kite	mus cinus	9	-	9
65.	Pernis apivorus	European honey buzzard		13		13
66.	Buteo buteo	Common buzzard	Buteo vulgaris	3	-	13
67.	Buteo buteo vulpinus	Common buzzard	Buteo desertorum	,		
68.	Circus aeruginosus	Western marsh harrier	Date description			
00.	C. Cus aci aginosus	Journ maron number	I.	ı	1	1

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(0)	C:	D 11:11 '	C: 11: 1			
69. 70.	Circusmacrourus	Pallid harrier Great white pelican	Circus pallidus	11, 15		15
70.	Pelecanus onocrotalus Pelecanus crispus	Dalmatian pelican		11, 13		13
72.	Phalacrocorax carbo	Great cormorant		2, 11, 22	2	
73.	Microcarbo pygmaeus	Pygmy cormorant	Phalacrocorax graculus	11. 22		11
74.	Mergus albellus	Smew	F natacrocorax gracutus	9	9	11
75.	Mergus aiveitus Mergus serrator	Red-breasted Merganser		9	9	
76.	Mergus merganser	Goosander		11	11	
77.	Melanitta nigra	Common scoter	Oedemia nigra	11	11	
78.	Melanitta fusca	Velvet scoter	Oedemia fusca	11	11	
79.	Aythya marila	Greater scaup	Fuligula marila	19	11	
80.	Aythya martia Aythya nyroca	Ferruginous duck	Fuligula marna Fuligula nyroca	19		
81.	Netta rufina	Red-crested pochard	Fuligula nyroca Fuligula rufina			
82.	Aythya fuligula	Tufted duck	Fuligula rujina Fuligula cristata	4		
				2, 9	9	
83.	Anas platyrhynchos	Mallard	Anas boscas		9	
84. 85.	Anas penelope	Eurasian wigeon Gadwall	Mareca penelope	3 11	11	
86.	Mareca strepera	Eurasian teal	Chaulelasnus streperus	9	11	
	Anas crecca		Querquedula crecca			21
87.	Tadorna tadorna	Common shelduck	Tadoma ogg	21		21
88.	Tadorna ferruginea	Ruddy shelduck	Tadorna casarca	21		21
89.	Anser anser	Greylag goose	Anser cinereus x	2, 7		
90.	Anser albifrons	Greater white-fronted goose	Communication	7		
91.	Cygnus cygnus	Whooperswan	Cygnus musicus	3, 18		
92.	Cygnuscolumbianusbewickii	Tundra swan	Cygnus bewicki	2 11	2 11	
93.	Ardea cinerea	Grey heron		2, 11	2, 11	
94.	Ardea purpurea	Purple heron		2		
95.	Ardea alba	Great egret	4 7	4, 9		10
96.	Egretta garzetta	Little egret	Ardea garzetta	9, 19		19
97.	Ardea ralloides	Squacco heron	Ardeola ralloides	12		12
98.	Nycticorax nycticorax	Black-crowned Night-heron	Nycticorax griseus	2		
99.	Botaurus stellaris	Great Bittern		10		
				10		
100.	Ixobrychus minutus	Little bittern	Ardetta minuta	·		
100. 101.	Ixobrychus minutus Ciconia alba	White stork		4, 6, 7, 8	8	10
100. 101. 102.	Ixobrychus minutus Ciconia alba Plegadis falcinellus	White stork Glossy ibis	Ardetta minuta Ibis falcinellus	4, 6, 7, 8 19, 20	8	19
100. 101. 102. 103.	Ixobrychus minutus Ciconia alba Plegadis falcinellus Platalea leucorodia	White stork Glossy ibis Eurasian Spoonbill	Ibis falcinellus	4, 6, 7, 8 19, 20 19	8	-
100. 101. 102. 103. 104.	Ixobrychus minutus Ciconia alba Plegadis falcinellus Platalea leucorodia Grus grus	White stork Glossy ibis Eurasian Spoonbill Common Crane, Crane		4, 6, 7, 8 19, 20 19 12, 19	8	19
100. 101. 102. 103. 104. 105.	Ixobrychus minutus Ciconia alba Plegadis falcinellus Platalea leucorodia Grus grus Graleola pratincola	White stork Glossy ibis Eurasian Spoonbill Common Crane, Crane Collared pratincole	Ibis falcinellus Grus communis	4, 6, 7, 8 19, 20 19 12, 19 22	8	12
100. 101. 102. 103. 104. 105.	Ixobrychus minutus Ciconia alba Plegadis falcinellus Platalea leucorodia Grus grus Graleola pratincola Vanellus vanellus	White stork Glossy ibis Eurasian Spoonbill Common Crane, Crane Collared pratincole Northern lapwings	Ibis falcinellus Grus communis Vanellus cristatus	4, 6, 7, 8 19, 20 19 12, 19 22 19	8	12
100. 101. 102. 103. 104. 105. 106.	Ixobrychus minutus Ciconia alba Plegadis falcinellus Platalea leucorodia Grus grus Graleola pratincola Vanellus vanellus Pluvialis squatarola	White stork Glossy ibis Eurasian Spoonbill Common Crane, Crane Collared pratincole Northern lapwings Grey plover	Ibis falcinellus Grus communis	4, 6, 7, 8 19, 20 19 12, 19 22 19	8	12
100. 101. 102. 103. 104. 105. 106. 107.	Ixobrychus minutus Ciconia alba Plegadis falcinellus Platalea leucorodia Grus grus Graleola pratincola Vanellus vanellus Pluvialis squatarola Recurvirostra avocetta	White stork Glossy ibis Eurasian Spoonbill Common Crane, Crane Collared pratincole Northern lapwings Grey plover Pied avocet, Avocet	Ibis falcinellus Grus communis Vanellus cristatus Squatarola helvetica	4, 6, 7, 8 19, 20 19 12, 19 22 19	8	12
100. 101. 102. 103. 104. 105. 106. 107. 108. 109.	Ixobrychus minutus Ciconia alba Plegadis falcinellus Platalea leucorodia Grus grus Graleola pratincola Vanellus vanellus Pluvialis squatarola Recurvirostra avocetta Tringa totanus	White stork Glossy ibis Eurasian Spoonbill Common Crane, Crane Collared pratincole Northern lapwings Grey plover Pied avocet, Avocet Common redshank	Ibis falcinellus Grus communis Vanellus cristatus Squatarola helvetica Totanus calidris	4, 6, 7, 8 19, 20 19 12, 19 22 19 19	8	12 19 19
100. 101. 102. 103. 104. 105. 106. 107. 108. 109.	Ixobrychus minutus Ciconia alba Plegadis falcinellus Platalea leucorodia Grus grus Graleola pratincola Vanellus vanellus Pluvialis squatarola Recurvirostra avocetta Tringa totanus Calidris alba	White stork Glossy ibis Eurasian Spoonbill Common Crane, Crane Collared pratincole Northern lapwings Grey plover Pied avocet, Avocet Common redshank Sanderling	Ibis falcinellus Grus communis Vanellus cristatus Squatarola helvetica Totanus calidris Calidris arenaria	4, 6, 7, 8 19, 20 19 12, 19 22 19 19 19	8	12
100. 101. 102. 103. 104. 105. 106. 107. 108. 109. 110.	Ixobrychus minutus Ciconia alba Plegadis falcinellus Platalea leucorodia Grus grus Graleola pratincola Vanellus vanellus Pluvialis squatarola Recurvirostra avocetta Tringa totanus Calidris alba Calidris alpina	White stork Glossy ibis Eurasian Spoonbill Common Crane, Crane Collared pratincole Northern lapwings Grey plover Pied avocet, Avocet Common redshank Sanderling Dunlin	Ibis falcinellus Grus communis Vanellus cristatus Squatarola helvetica Totanus calidris Calidris arenaria Tringa alpina	4, 6, 7, 8 19, 20 19 12, 19 22 19 19 19 19	8	12 19 19
100. 101. 102. 103. 104. 105. 106. 107. 108. 109. 110. 111.	Ixobrychus minutus Ciconia alba Plegadis falcinellus Platalea leucorodia Grus grus Graleola pratincola Vanellus vanellus Pluvialis squatarola Recurvirostra avocetta Tringa totanus Calidris alba Calidris alpina Calidris minuta	White stork Glossy ibis Eurasian Spoonbill Common Crane, Crane Collared pratincole Northern lapwings Grey plover Pied avocet, Avocet Common redshank Sanderling Dunlin Little stint	Ibis falcinellus Grus communis Vanellus cristatus Squatarola helvetica Totanus calidris Calidris arenaria Tringa alpina Tringa minuta	4, 6, 7, 8 19, 20 19 12, 19 22 19 19 19	8	12 19 19
100. 101. 102. 103. 104. 105. 106. 107. 108. 109. 110. 111. 112.	Ixobrychus minutus Ciconia alba Plegadis falcinellus Platalea leucorodia Grus grus Graleola pratincola Vanellus vanellus Pluvialis squatarola Recurvirostra avocetta Tringa totanus Calidris alba Calidris alpina Calidris minuta Lymnocryptes minimus	White stork Glossy ibis Eurasian Spoonbill Common Crane, Crane Collared pratincole Northern lapwings Grey plover Pied avocet, Avocet Common redshank Sanderling Dunlin	Ibis falcinellus Grus communis Vanellus cristatus Squatarola helvetica Totanus calidris Calidris arenaria Tringa alpina	4, 6, 7, 8 19, 20 19 12, 19 22 19 19 19 19 19	8	12 19 19 19
100. 101. 102. 103. 104. 105. 106. 107. 108. 109. 110. 111. 112. 113.	Ixobrychus minutus Ciconia alba Plegadis falcinellus Platalea leucorodia Grus grus Graleola pratincola Vanellus vanellus Pluvialis squatarola Recurvirostra avocetta Tringa totanus Calidris alba Calidris alpina Calidris minuta Lymnocryptes minimus Gallinago caelestis	White stork Glossy ibis Eurasian Spoonbill Common Crane, Crane Collared pratincole Northern lapwings Grey plover Pied avocet, Avocet Common redshank Sanderling Dunlin Little stint Jack snipe	Ibis falcinellus Grus communis Vanellus cristatus Squatarola helvetica Totanus calidris Calidris arenaria Tringa alpina Tringa minuta Gallinago gallinula	4, 6, 7, 8 19, 20 19 12, 19 22 19 19 19 19 19 19	8	12 19 19
100. 101. 102. 103. 104. 105. 106. 107. 108. 109. 110. 111. 112. 113. 114.	Ixobrychus minutus Ciconia alba Plegadis falcinellus Platalea leucorodia Grus grus Graleola pratincola Vanellus vanellus Pluvialis squatarola Recurvirostra avocetta Tringa totanus Calidris alba Calidris alpina Calidris minuta Lymnocryptes minimus Gallinago caelestis Hydroprogne caspia	White stork Glossy ibis Eurasian Spoonbill Common Crane, Crane Collared pratincole Northern lapwings Grey plover Pied avocet, Avocet Common redshank Sanderling Dunlin Little stint Jack snipe Caspian tern	Ibis falcinellus Grus communis Vanellus cristatus Squatarola helvetica Totanus calidris Calidris arenaria Tringa alpina Tringa minuta Gallinago gallinula Sterna caspia	4, 6, 7, 8 19, 20 19 12, 19 22 19 19 19 19 19 19 9	8	12 19 19 19
100. 101. 102. 103. 104. 105. 106. 107. 108. 109. 110. 111. 112. 113. 114. 115.	Ixobrychus minutus Ciconia alba Plegadis falcinellus Platalea leucorodia Grus grus Graleola pratincola Vanellus vanellus Pluvialis squatarola Recurvirostra avocetta Tringa totanus Calidris alba Calidris alpina Calidris minuta Lymnocryptes minimus Gallinago caelestis Hydroprogne caspia Sterna hirundo	White stork Glossy ibis Eurasian Spoonbill Common Crane, Crane Collared pratincole Northern lapwings Grey plover Pied avocet, Avocet Common redshank Sanderling Dunlin Little stint Jack snipe Caspian tern Common tern	Ibis falcinellus Grus communis Vanellus cristatus Squatarola helvetica Totanus calidris Calidris arenaria Tringa alpina Tringa pinuta Gallinago gallinula Sterna caspia Sterna fluvitallis	4, 6, 7, 8 19, 20 19 12, 19 22 19 19 19 19 19 19 9 9	8	12 19 19 19
100. 101. 102. 103. 104. 105. 106. 107. 108. 109. 110. 111. 112. 113. 114. 115. 116.	Ixobrychus minutus Ciconia alba Plegadis falcinellus Platalea leucorodia Grus grus Graleola pratincola Vanellus vanellus Pluvialis squatarola Recurvirostra avocetta Tringa totanus Calidris alba Calidris alpina Calidris minuta Lymnocryptes minimus Gallinago caelestis Hydroprogne caspia Sterna hirundo Chlidonias niger	White stork Glossy ibis Eurasian Spoonbill Common Crane, Crane Collared pratincole Northern lapwings Grey plover Pied avocet, Avocet Common redshank Sanderling Dunlin Little stint Jack snipe Caspian tern Common tern Black tern	Ibis falcinellus Grus communis Vanellus cristatus Squatarola helvetica Totanus calidris Calidris arenaria Tringa alpina Tringa alpina Gallinago gallinula Sterna caspia Sterna fluvitallis Hydrochelidon nigra	4, 6, 7, 8 19, 20 19 12, 19 22 19 19 19 19 19 19 9 9 9	8	12 19 19 19
100. 101. 102. 103. 104. 105. 106. 107. 108. 109. 110. 111. 112. 113. 114. 115. 116. 117.	Ixobrychus minutus Ciconia alba Plegadis falcinellus Platalea leucorodia Grus grus Graleola pratincola Vanellus vanellus Pluvialis squatarola Recurvirostra avocetta Tringa totanus Calidris alba Calidris alpina Calidris minuta Lymnocryptes minimus Gallinago caelestis Hydroprogne caspia Sterna hirundo Chlidonias niger Chlidonias hybrida	White stork Glossy ibis Eurasian Spoonbill Common Crane, Crane Collared pratincole Northern lapwings Grey plover Pied avocet, Avocet Common redshank Sanderling Dunlin Little stint Jack snipe Caspian tern Common tern Black tern Whiskered tern	Ibis falcinellus Grus communis Vanellus cristatus Squatarola helvetica Totanus calidris Calidris arenaria Tringa alpina Tringa alpina Gallinago gallinula Sterna caspia Sterna fluvitallis Hydrochelidon nigra Hydrochelidon hybrida	4, 6, 7, 8 19, 20 19 12, 19 22 19 19 19 19 19 9 9 9 9 22 22 22	8	12 19 19 19
100. 101. 102. 103. 104. 105. 106. 107. 108. 109. 110. 111. 112. 113. 114. 115. 116. 117.	Ixobrychus minutus Ciconia alba Plegadis falcinellus Platalea leucorodia Grus grus Graleola pratincola Vanellus vanellus Pluvialis squatarola Recurvirostra avocetta Tringa totanus Calidris alba Calidris alpina Calidris minuta Lymnocryptes minimus Gallinago caelestis Hydroprogne caspia Sterna hirundo Chlidonias niger Chlidonias hybrida Chroicocephalus ridibundus	White stork Glossy ibis Eurasian Spoonbill Common Crane, Crane Collared pratincole Northern lapwings Grey plover Pied avocet, Avocet Common redshank Sanderling Dunlin Little stint Jack snipe Caspian tern Common tern Black tern Whiskered tern Black-headed gull	Ibis falcinellus Grus communis Vanellus cristatus Squatarola helvetica Totanus calidris Calidris arenaria Tringa alpina Tringa alpina Gallinago gallinula Sterna caspia Sterna fluvitallis Hydrochelidon nigra Hydrochelidon hybrida Larus ridibundus	4, 6, 7, 8 19, 20 19 12, 19 22 19 19 19 19 19 9 9 9 22 22		12 19 19 19
100. 101. 102. 103. 104. 105. 106. 107. 108. 109. 110. 111. 112. 113. 114. 115. 116. 117. 118.	Ixobrychus minutus Ciconia alba Plegadis falcinellus Platalea leucorodia Grus grus Graleola pratincola Vanellus vanellus Pluvialis squatarola Recurvirostra avocetta Tringa totanus Calidris albia Calidris alpina Calidris minuta Lymnocryptes minimus Gallinago caelestis Hydroprogne caspia Sterna hirundo Chlidonias niger Chlidonias hybrida Chroicocephalus ridibundus Hydrocoloeus minutus	White stork Glossy ibis Eurasian Spoonbill Common Crane, Crane Collared pratincole Northern lapwings Grey plover Pied avocet, Avocet Common redshank Sanderling Dunlin Little stint Jack snipe Caspian tern Common tern Black tern Whiskered tern Black-headed gull Little gull	Ibis falcinellus Grus communis Vanellus cristatus Squatarola helvetica Totanus calidris Calidris arenaria Tringa alpina Tringa alpina Gallinago gallinula Sterna caspia Sterna fluvitallis Hydrochelidon nigra Hydrochelidon hybrida	4, 6, 7, 8 19, 20 19 12, 19 22 19 19 19 19 19 9 9 22 22	9	12 19 19 19
100. 101. 102. 103. 104. 105. 106. 107. 108. 109. 110. 111. 112. 113. 114. 115. 116. 117. 118. 119. 120.	Ixobrychus minutus Ciconia alba Plegadis falcinellus Platalea leucorodia Grus grus Graleola pratincola Vanellus vanellus Pluvialis squatarola Recurvirostra avocetta Tringa totanus Calidris albia Calidris alpina Calidris minuta Lymnocryptes minimus Gallinago caelestis Hydroprogne caspia Sterna hirundo Chlidonias niger Chlidonias hybrida Chroicocephalus ridibundus Hydrocoloeus minutus Larus canus	White stork Glossy ibis Eurasian Spoonbill Common Crane, Crane Collared pratincole Northern lapwings Grey plover Pied avocet, Avocet Common redshank Sanderling Dunlin Little stint Jack snipe Caspian tern Common tern Black tern Whiskered tern Black-headed gull Little gull Common gull	Ibis falcinellus Grus communis Vanellus cristatus Squatarola helvetica Totanus calidris Calidris arenaria Tringa alpina Tringa alpina Gallinago gallinula Sterna caspia Sterna fluvitallis Hydrochelidon nigra Hydrochelidon hybrida Larus ridibundus	4, 6, 7, 8 19, 20 19 12, 19 22 19 19 19 19 19 19 19 9 9 9 22 22 9 9 9 5	9	12 19 19 19
100. 101. 102. 103. 104. 105. 106. 107. 108. 109. 110. 111. 112. 113. 114. 115. 116. 117. 118. 119. 120.	Ixobrychus minutus Ciconia alba Plegadis falcinellus Platalea leucorodia Grus grus Graleola pratincola Vanellus vanellus Pluvialis squatarola Recurvirostra avocetta Tringa totanus Calidris alba Calidris alpina Calidris minuta Lymnocryptes minimus Gallinago caelestis Hydroprogne caspia Sterna hirundo Chlidonias niger Chlidonias hybrida Chroicocephalus ridibundus Hydrocoloeus minutus Larus canus Larus fuscus	White stork Glossy ibis Eurasian Spoonbill Common Crane, Crane Collared pratincole Northern lapwings Grey plover Pied avocet, Avocet Common redshank Sanderling Dunlin Little stint Jack snipe Caspian tern Common tern Black tern Whiskered tern Black-headed gull Little gull Common gull Lesser black-backed Gull	Ibis falcinellus Grus communis Vanellus cristatus Squatarola helvetica Totanus calidris Calidris arenaria Tringa alpina Tringa minuta Gallinago gallinula Sterna caspia Sterna fluvitallis Hydrochelidon nigra Hydrochelidon hybrida Larus ridibundus Larus minutus	4, 6, 7, 8 19, 20 19 12, 19 22 19 19 19 19 19 9 9 9 22 22	9	12 19 19 19
100. 101. 102. 103. 104. 105. 106. 107. 108. 109. 110. 111. 112. 113. 114. 115. 116. 117. 118. 119. 120. 121.	Ixobrychus minutus Ciconia alba Plegadis falcinellus Platalea leucorodia Grus grus Graleola pratincola Vanellus vanellus Pluvialis squatarola Recurvirostra avocetta Tringa totanus Calidris alba Calidris alpina Calidris minuta Lymnocryptes minimus Gallinago caelestis Hydroprogne caspia Sterna hirundo Chlidonias niger Chlidonias hybrida Chroicocephalus ridibundus Hydrocoloeus minutus Larus canus Larus fuscus Larus fuscus Larus cachinnans	White stork Glossy ibis Eurasian Spoonbill Common Crane, Crane Collared pratincole Northern lapwings Grey plover Pied avocet, Avocet Common redshank Sanderling Dunlin Little stint Jack snipe Caspian tern Common tern Black tern Whiskered tern Black-headed gull Little gull Common gull Lesser black-backed Gull Caspian gull	Ibis falcinellus Grus communis Vanellus cristatus Squatarola helvetica Totanus calidris Calidris arenaria Tringa alpina Tringa alpina Gallinago gallinula Sterna caspia Sterna fluvitallis Hydrochelidon nigra Hydrochelidon hybrida Larus ridibundus	4, 6, 7, 8 19, 20 19 12, 19 22 19 19 19 19 19 19 19 9 9 9 22 22 9 9 5 22 5, 9	9	12 19 19 19 19 9
100. 101. 102. 103. 104. 105. 106. 107. 108. 109. 110. 111. 112. 113. 114. 115. 116. 117. 118. 119. 120. 121. 122.	Ixobrychus minutus Ciconia alba Plegadis falcinellus Platalea leucorodia Grus grus Graleola pratincola Vanellus vanellus Pluvialis squatarola Recurvirostra avocetta Tringa totanus Calidris alba Calidris alpina Calidris minuta Lymnocryptes minimus Gallinago caelestis Hydroprogne caspia Sterna hirundo Chlidonias niger Chlidonias hybrida Chroicocephalus ridibundus Hydrocoloeus minutus Larus canus Larus fuscus Larus fuscus Larus cachinnans Podiceps nigricollis	White stork Glossy ibis Eurasian Spoonbill Common Crane, Crane Collared pratincole Northern lapwings Grey plover Pied avocet, Avocet Common redshank Sanderling Dunlin Little stint Jack snipe Caspian tern Common tern Black tern Whiskered tern Black-headed gull Little gull Common gull Lesser black-backed Gull Caspian gull Black-necked grebe	Ibis falcinellus Grus communis Vanellus cristatus Squatarola helvetica Totanus calidris Calidris arenaria Tringa alpina Tringa minuta Gallinago gallinula Sterna caspia Sterna fluvitallis Hydrochelidon nigra Hydrochelidon hybrida Larus ridibundus Larus minutus Larus argentatus	4, 6, 7, 8 19, 20 19 12, 19 22 19 19 19 19 19 9 9 9 22 22	9	12 19 19 19
100. 101. 102. 103. 104. 105. 106. 107. 108. 109. 110. 111. 112. 113. 114. 115. 116. 117. 118. 119. 120. 121. 122. 123.	Ixobrychus minutus Ciconia alba Plegadis falcinellus Platalea leucorodia Grus grus Graleola pratincola Vanellus vanellus Pluvialis squatarola Recurvirostra avocetta Tringa totanus Calidris alba Calidris alpina Calidris minuta Lymnocryptes minimus Gallinago caelestis Hydroprogne caspia Sterna hirundo Chlidonias niger Chlidonias hybrida Chroicocephalus ridibundus Hydrocoloeus minutus Larus canus Larus fuscus Larus cachinnans Podiceps nigricollis Podiceps grisegena	White stork Glossy ibis Eurasian Spoonbill Common Crane, Crane Collared pratincole Northern lapwings Grey plover Pied avocet, Avocet Common redshank Sanderling Dunlin Little stint Jack snipe Caspian tern Common tern Black tern Whiskered tern Black-headed gull Little gull Common gull Lesser black-backed Gull Caspian gull Black-necked grebe Red-necked grebe	Ibis falcinellus Grus communis Vanellus cristatus Squatarola helvetica Totanus calidris Calidris arenaria Tringa alpina Tringa minuta Gallinago gallinula Sterna caspia Sterna fluvitallis Hydrochelidon nigra Hydrochelidon hybrida Larus ridibundus Larus minutus	4, 6, 7, 8 19, 20 19 12, 19 22 19 19 19 19 19 9 9 9 22 22	9	12 19 19 19 19 9
100. 101. 102. 103. 104. 105. 106. 107. 108. 109. 110. 111. 112. 113. 114. 115. 116. 117. 118. 119. 120. 121. 122. 123. 124. 125.	Ixobrychus minutus Ciconia alba Plegadis falcinellus Platalea leucorodia Grus grus Graleola pratincola Vanellus vanellus Pluvialis squatarola Recurvirostra avocetta Tringa totanus Calidris alba Calidris alpina Calidris minuta Lynnocryptes minimus Gallinago caelestis Hydroprogne caspia Sterna hirundo Chidonias niger Chidonias hybrida Chroicocephalus ridibundus Hydrocoloeus minutus Larus canus Larus canus Larus cachinnans Podiceps nigricollis Podiceps grisegena Fulica atra	White stork Glossy ibis Eurasian Spoonbill Common Crane, Crane Collared pratincole Northern lapwings Grey plover Pied avocet, Avocet Common redshank Sanderling Dunlin Little stint Jack snipe Caspian tern Common tern Black tern Whiskered tern Black-headed gull Little gull Common gull Lesser black-backed Gull Caspian gull Black-necked grebe Red-necked grebe Eurasian coot	Ibis falcinellus Grus communis Vanellus cristatus Squatarola helvetica Totanus calidris Calidris arenaria Tringa alpina Tringa minuta Gallinago gallinula Sterna caspia Sterna fluvitallis Hydrochelidon nigra Hydrochelidon hybrida Larus ridibundus Larus minutus Larus argentatus	9 9 9 122 19 19 19 19 19 19 19 19 19 22 22 22 9 9 9 5 22 22 5,9 3,19 4 2,3	9	12 19 19 19 19 9
100. 101. 102. 103. 104. 105. 106. 107. 108. 110. 111. 112. 113. 114. 115. 116. 117. 118. 119. 120. 121. 122. 123. 124. 125.	Ixobrychus minutus Ciconia alba Plegadis falcinellus Platalea leucorodia Grus grus Graleola pratincola Vanellus vanellus Pluvialis squatarola Recurvirostra avocetta Tringa totanus Calidris alba Calidris alpina Calidris minuta Lynnocryptes minimus Gallinago caelestis Hydroprogne caspia Sterna hirundo Chlidonias niger Chlidonias hybrida Chroicocephalus ridibundus Hydrocoloeus minutus Larus canus Larus fuscus Larus cachinnans Podiceps nigricollis Podiceps grisegena Fulica atra Gallinula chloropus	White stork Glossy ibis Eurasian Spoonbill Common Crane, Crane Collared pratincole Northern lapwings Grey plover Pied avocet, Avocet Common redshank Sanderling Dunlin Little stint Jack snipe Caspian tern Common tern Black tern Whiskered tern Black-headed gull Little gull Common gull Lesser black-backed Gull Caspian gull Black-necked grebe Red-necked grebe Eurasian coot Common moorhen	Ibis falcinellus Grus communis Vanellus cristatus Squatarola helvetica Totanus calidris Calidris arenaria Tringa alpina Tringa minuta Gallinago gallinula Sterna caspia Sterna fluvitallis Hydrochelidon nigra Hydrochelidon hybrida Larus ridibundus Larus minutus Larus argentatus	9 9 9 9 9 9 9 9 9 22 22 19 19 19 19 19 19 19 20 21 20 20 20 21 20 20 20 20 20 20 20 20 20 20 20 20 20	9	12 19 19 19 19 9
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Abbreviations: St. Obs. b. (Stations of observed birds); St. N./e. (Stations of observed /collected Nest/eggs); St. Coll. b. (Stations of collected bird specimens). * synonyms used by Passos Freitas in his book.

Stations 1-24: 1, 5, 6, 24 - Brála; 2 - Şerbanu Lake; 3 - Aurelu Canal, Turcoaia, Dunărea Veche Lake; 4 - Şerbanu Lake; 7 - Chilia Nouă; 8 - Chilia Veche; 9 - Matița Lake; 10 - Lunga Lake and Bogdaproste Lake; 11 - Letea, Merheiul Mare, Merheiul Mic and Gârla Sulimanca; 12 - Letea Forest; 13 - Periprava forest; 14 - Vâlcov; 15 - Sulina, Stambulul Island and the entrance to the Black Sea; 16 - Sulina; 17 - Tulcea; 18 - Jurilovca, Canal Regina Elisabeta; 19 - Razelm, Golovița Island and Bisericuța Island; 20 - Popina Sarichioi Island; 21 - Jurilovca; 22 - Sinoe Lake; 23 - Tulcea.