THE DISTRIBUTION OF CHARADRIIFORMES ALONG THE BRĂILA SECTOR OF THE DANUBE RIVER AND IN THE SALT LAKES OF THE BRĂILA PLAIN (ROMÂNIA)

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Abstract: The Brăila Sector of the Danube River, together with the salt lakes of the Brăila Plain, represent aquatic habitats where Charadriiformes species find optimal conditions either for resting and feeding, or for reproduction. 36 Charadriiformes species were observed in the studied sectors, characterized by a specific distribution that depends both on the ecological preferences of each species, and on the features of the occupied habitats. The majority of the Charadriiformes are classified as species of medium and rare abundance, being summer visitors or passage migrants, and only a few are dominant.

Keywords: Brăila Plain, Charadriiformes, Danube River, salt lakes

Introduction:

The Charadriiformes is an order of birds characterized mainly by having long legs and by being adapted to live along the banks of rivers, ponds, lakes and marshes. In România, 82 species have been reported, with a large spread in numerous wetlands, as well as dry habitats.

Extensive studies on the biology and ecology of Charadriiformes in România were carried out by Papadopol (1966, 1967, 1968, 1970, 1992). Strictly targeted at the Brăila Sector of the Danube River, as well as the Brăila Plain, there are various studies that generally cover the local avifauna, but also reference the Charadriiformes species. Thus, Petre (1996) mentions the presence of two wader species, respectively Eurasian Oystercatcher (*Haematopus ostralegus*) and Eurasian Curlew (*Numenius arquata*), in the area of Vărsătura Island, the northernmost island in the Balta Mică Natural Park of Brăila. In the study carried out in different areas of the Brăila county, Papadopol (1974a, 1974b) reports at Tătaru Lake, Colțea Lake, Plașcu Lake, Chioibășești Lake, Roșiori Lake, Jirlău Lake and Movila Miresii Lake, the sighting of numerous species among Charadriiformes, of which predominantly are Pied Avocet (*Recurvirostra avosetta*), Northern Lapwing (*Vanellus vanellus*), Collared Pratincole (*Glareola pratincola*), Common Redshank (*Tringa totanus*), Little Gull (*Larus minutus*), Black-headed Gull (*Larus ridibundus*), Whiskered Tern

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(*Chlidonias hybridus*), Eurasian Golden Plover (*Pluvialis apricaria*) and Grey Plover (*Pluvialis squatarola*).

For Tătaru Lake, we also mention the studies conducted by Petrescu (2000) and Onea (2006), which add a few other species: Eurasian Curlew (*Numenius arquata*), Little Ringed Plover (*Charadrius dubius*), Kentish Plover (*Charadrius alexandrinus*), Common Snipe (*Gallinago gallinago*), Black Tern (*Chlidonias niger*).

The study led by Onea (2011) completes the list of Charadriiformes observed in the area of Movila Miresii Lake with some new species: Ruff (*Calidris pugnax*), Spotted Redshank (*Tringa erythropus*), Wood Sandpiper (*Tringa glareola*), Common Sandpiper (*Actitis hypoleucos*).

Albu (1993) and Onea (2012) take on the surroundings of Salt Lake of Brăila, specifying the viewing of the following wader species: Northern Lapwing (*Vanellus vanellus*), Ruff (*Calidris pugnax*), Little Ringed Plover (*Charadrius dubius*), Little Stint (*Calidris minuta*), Jack Snipe (*Lymnocryptes minimus*), Slender-billed Curlew (*Numenius tenuirostris*).

For other areas in Brăila county, no data was found in the specialized literature regarding neither the presence of Charadriiformes, nor of other groups of birds.

In this respect, our study makes a synthesis of the already existing data in close connection with our observations, but also brings new contributions regarding the ornithological fauna of some less studied areas.

Materials and methods:

Our study on the distribution of Charadriiformes in several areas of Brăila county was carried out between 2017 and 2022.

Six study sectors were chosen from Brăila Plain (Fig. 1). The selection criteria mainly focused on the existence of similar abiotic and biotic characteristics. Thus, we directed our attention to three sectors (1, 2 and 3) that are closely related to the particularities offered by the Danube River and its adjacent areas; the other three sectors (4, 5 and 6) are represented by salt or brackish lakes.

Brăila Sector of the Danube River (1)
On the territory of Brăila County, the Danube River flows downstream approximately 70 km in a straight line (Fig. 2, Annexes). From Giurgeni Vadu-Oii to the city of Brăila, the Danube River branches, forming a string of seven islands (Banu et al. 1967; Onea 2002), so that the total length of the banks reaches several hundred kilometers. The habitat represented by the banks of the river alternates from pebbled, sandy and even muddy, providing optimal feeding conditions for the many Charadriiformes species present in the area.

Gura Gârlușei Sector (2)
This sector extends from the pouring of the Călmățui River in the Danube River up to the forest canton, over a length of approximately 2 km, including the area between the Danube bank, the protection dike and the first agricultural lands beyond the dike (rice paddies) (Fig. 3, Annexes). The area between the protection dike and the Danube bank is prone to flooding, depending on the river's water level. The rice paddies are artificially flooded only in spring, being the most favorable time for the birds to stay.

Gura Călmățui Sector (3)
This sector was chosen to observe the distribution of Charadriiformes species on the area of the Călmățui River, from its discharge into the Danube River and up to the town of Berteștii de Jos (Fig. 4, Annexes). The tracked route totaled approximately 5 km in length following the course of the river. Between the dike and the bank of the Călmățui River, numerous temporary puddles are formed as a result of spring floods. On the other side of the dike, the rice paddies become swamp-type habitats once they are flooded.

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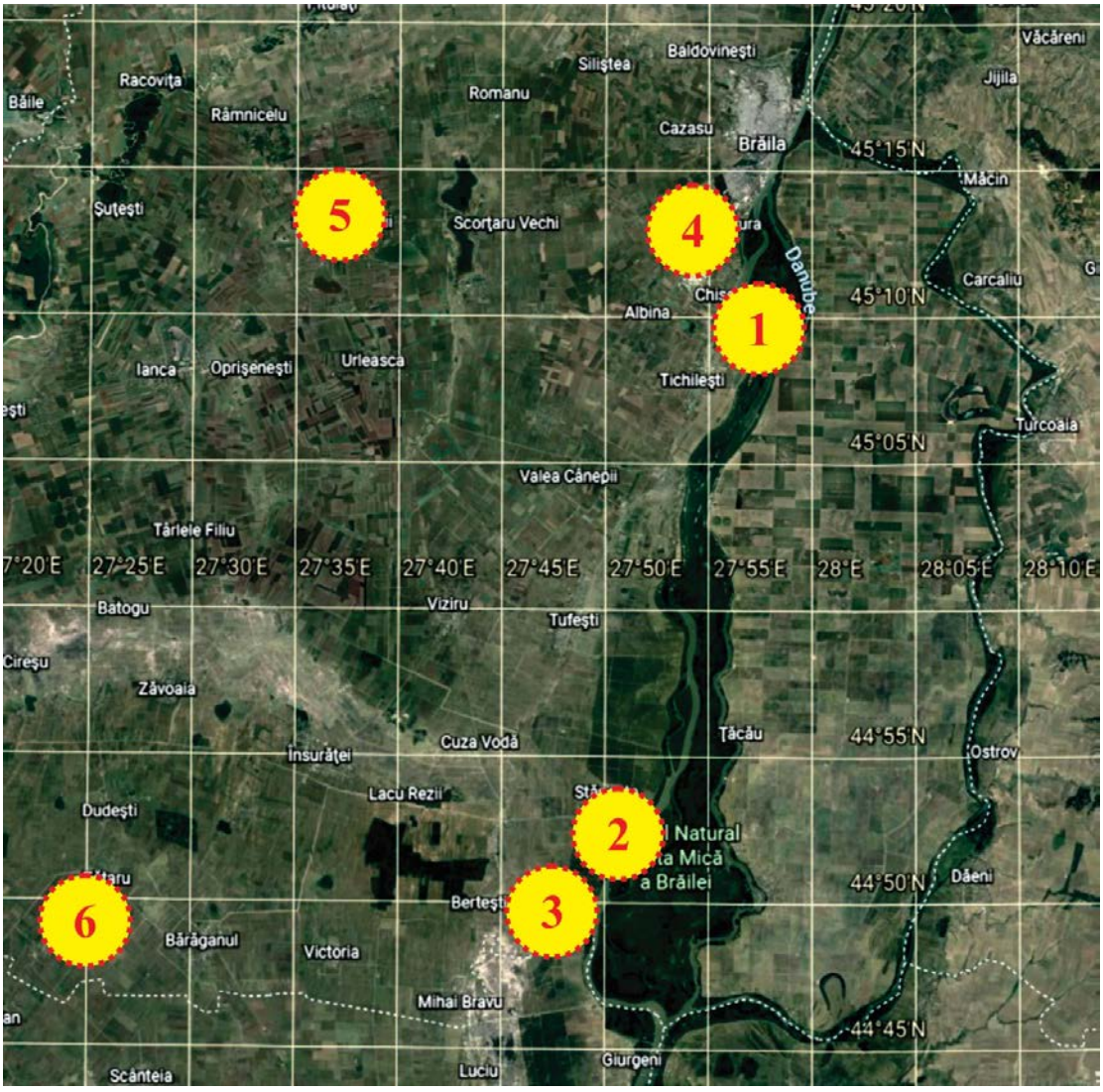
Figure no. 1 The map with the location of the studied sectors: 1-Brăila Sector of the Danube River; 2-Gura Gârluței Sector; 3-Gura Călmățui Sector; 4-Salt Lake of Brăila Sector; 5- Movila Miresii Lake Sector; 6- Tătaru Lake Sector



Salt Lake of Brăila Sector (4)

Salt Lake is known especially for the spa resort with the same name. A road separates the lake in two sections (Fig. 5, Annexes) – the northern part is home to the sea resort, while the southern part has no specific destination (Albu 1993; Onea 2012). The chemical composition differs between the two areas, being much saltier in the northern one and more brackish in the southern one. These different chemical characteristics do not have a major influence on the presence of bird species, the only disruptive element being represented by human activities, which are much more aggressive in the resort area

Movila Miresii Lake Sector (5)

Movila Miresii Lake is located near the village with the same name and has an area of approximately 120 ha (Fig. 6, Annexes). The lake is of particular scientific interest, from the point of view of both the habitats and the bird species that are present in the area (Papadopol 1974b; Onea 2011). Given the

chemical characteristics of the lake's water and mud, there have been several attempts to turn the area into a balneo-climatic resort, but without success. These attempts represent an economic failure, but for the continuity and conservation of local biodiversity this is favorable.

Tătaru Lake Sector (6)
Tătaru Lake is located in the immediate vicinity of the village with the same name. It has an area of approximately 110 ha (Fig. 7, Annexes). Tătaru Lake has benefited from several studies on the birdlife in the area (Papadopol 1974a, 1974b; Petrescu 2000; Onea 2006). The chemical characteristics of the water, with a more brackish than salty content, led to the appearance of abundant swamp vegetation along the existing drainage channels in the lake area. The banks are salty, which is much more obvious during periods when the water level in the lake drops.

The ornithological observations were carried out in two ways, depending on the conditions offered by each sector. Thus, for sector 1, the observations were made from a boat, following the course of the Danube river both upstream and downstream. For the other sectors (2-6), the observations were made on foot, along the banks of the lakes or on the dikes, always following the same routes. Considering that most species of Charadriiformes are summer visitors or passage migrants, and very few are sedentary, the field trips focused especially on the presence of these species during spring and autumn migrations. Field visits were also carried out in the cold season.

The average of the absolute values recorded was used to calculate the abundance for each individual species (Gomoiu and Skolka 2001).

Results and discussion:

From the Charadriiformes order, 82 species were reported in România. Of these, 36 species, belonging to 6 families, were observed in the sectors of the Danube River (Danube River, Gura Gârluței and Gura Călmățui) and in the salt lakes of the Brăila Plain (Salt Lake, Movila Miresii Lake and Tătaru Lake) (Tab. 1, Annexes).

Brăila Sector of the Danube River
Due to the rather large area of the banks, the spatial distribution of Charadriiformes species is generally random, rarely shaping compact groups. 32 species were reported in the Brăila sector of the Danube River (Tab. 1, Annexes). Most are species of medium (60%) and rare (31%) abundance, while dominant species have a much smaller share (9%) (Fig. 8). *Larus ridibundus* and *Larus cachinnans* are the species that categorically dominate by the large number of specimens, especially in the post-breeding season and in winter, when flocks of hundreds of specimens can be found. These two species are sedentary or partially migratory, in contrast to the other species that are either summer guests or in passage. In two previous studies (Onea 2002, 2015) *Charadrius morinellus* is mentioned as a species present in the area. The current study does not confirm the presence of this species, but taking into account the ecological requirements and the habitats it frequents in România, we consider that, for the Danube sector, *Charadrius morinellus* is an accidental species, with occurrences only at large time intervals.

Gura Gârluței Sector

The presence of water between the Danube bank and the protection dike contributed to the development of a vegetation and a habitat specific to wetlands. Beyond the dike, the agricultural lands represented by rice paddies, framed by numerous irrigation canals, form another wet, marshy habitat, especially during spring. The two habitats have many similar elements, particularly in periods when the water level between the Danube bank and the dike is very low. In these conditions, the area attracts numerous Charadriiformes species – no less than 19 species have been reported (Tab. 1, Annexes). In terms of abundance, 11 species have an average abundance (58%),

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three are rare species (16%), and the remaining 5 species are dominant (26%) (Fig. 9).

In this sector, due to the swampy habitat, the number of dominant species is higher. Along with the Laridae found in the Danube sector (*Larus ridibundus*, *Larus cachinnans* and *Chlidonias hybridus*), *Limosa limosa* and *Tringa erythropus* also appear in quite large numbers. The swamp-like habitat in the area of agricultural land represented by rice fields has more of a seasonal character, being a result of human activities with maximum development in the spring. Thus, only in this period can we signal an abundance of Charadriiformes species. Towards autumn, the number of species decreases significantly, with more gulls species being observed.

On the contrary, the wet habitat between the Danube bank and the dike generally spans throughout the year and only in very dry periods does the water disappear completely. In this area Charadriiformes species are present all the time between May and September, their numbers peaking during spring and autumn migrations. It should be noted that most of the waders species (*Tringa erythropus*, *Tringa totanus*, *Tringa stagnatilis*, *Tringa nebularia*, *Tringa ochropus*, *Tringa glareola*, *Actitis hypoleucos*) were observed especially in the area between the Danube bank and the dike.

Figure no. 8 The abundance of Charadriiformes species in the Brăila Sector of the Danube River

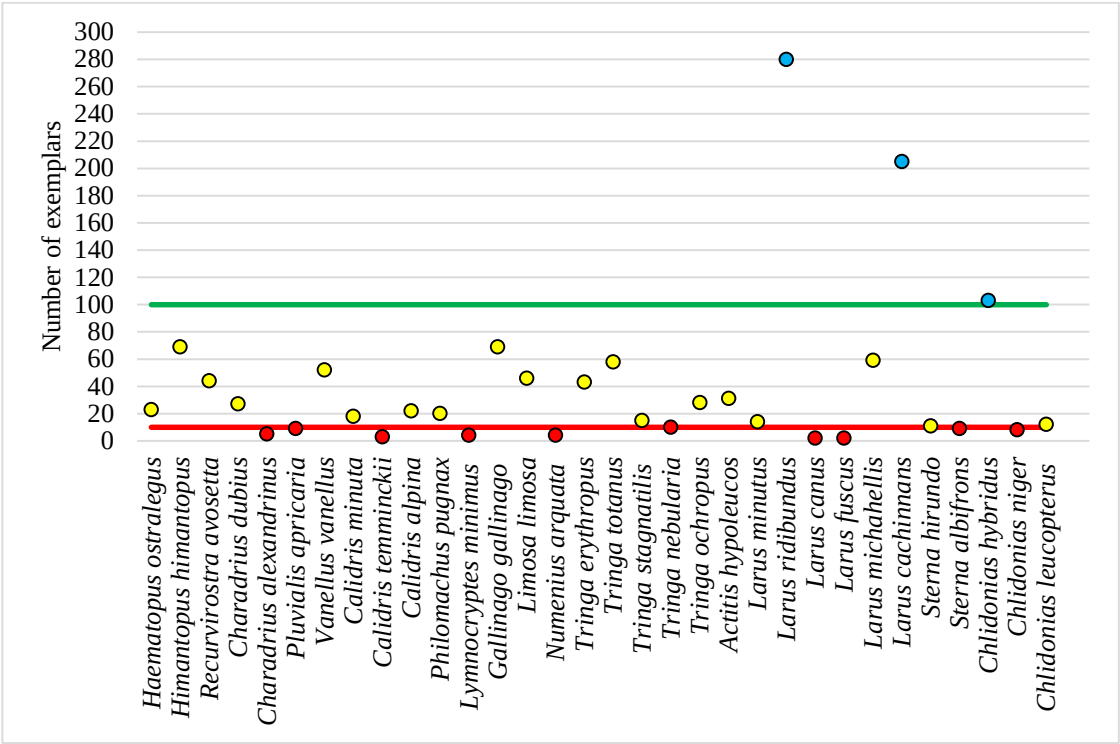
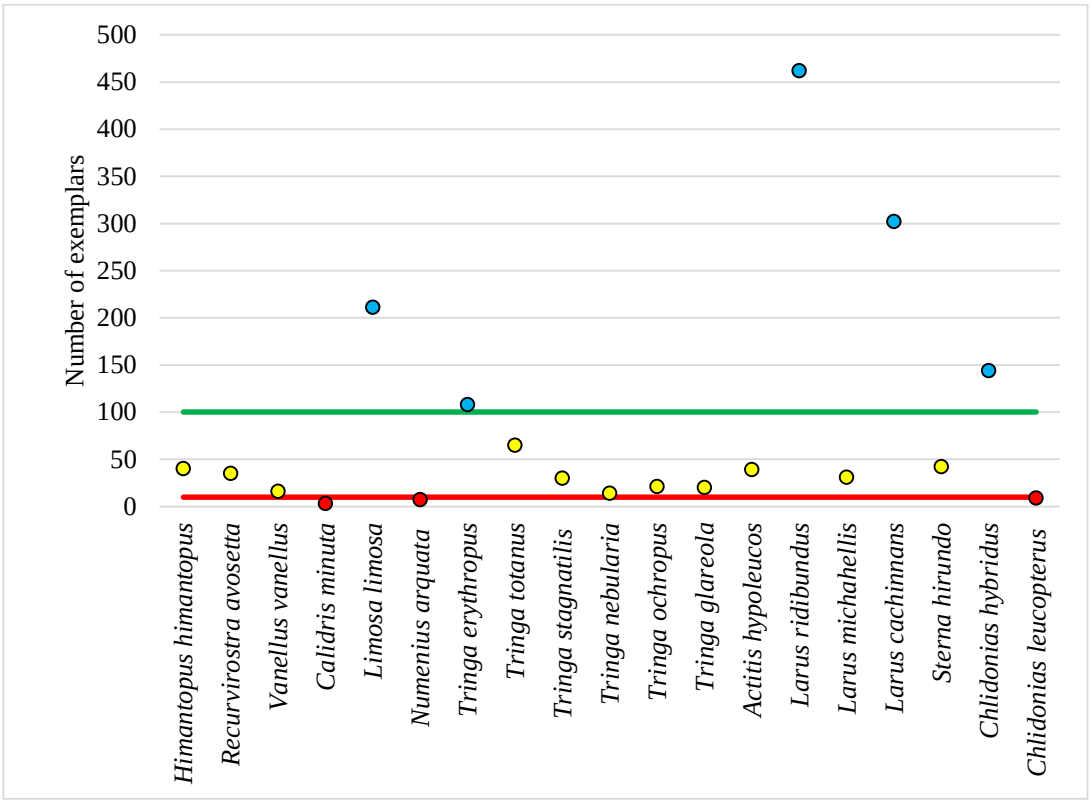


Figure no. 9 The abundance of Charadriiformes species in the Gura Gârlușei Sector



Gura Călmățui Sector

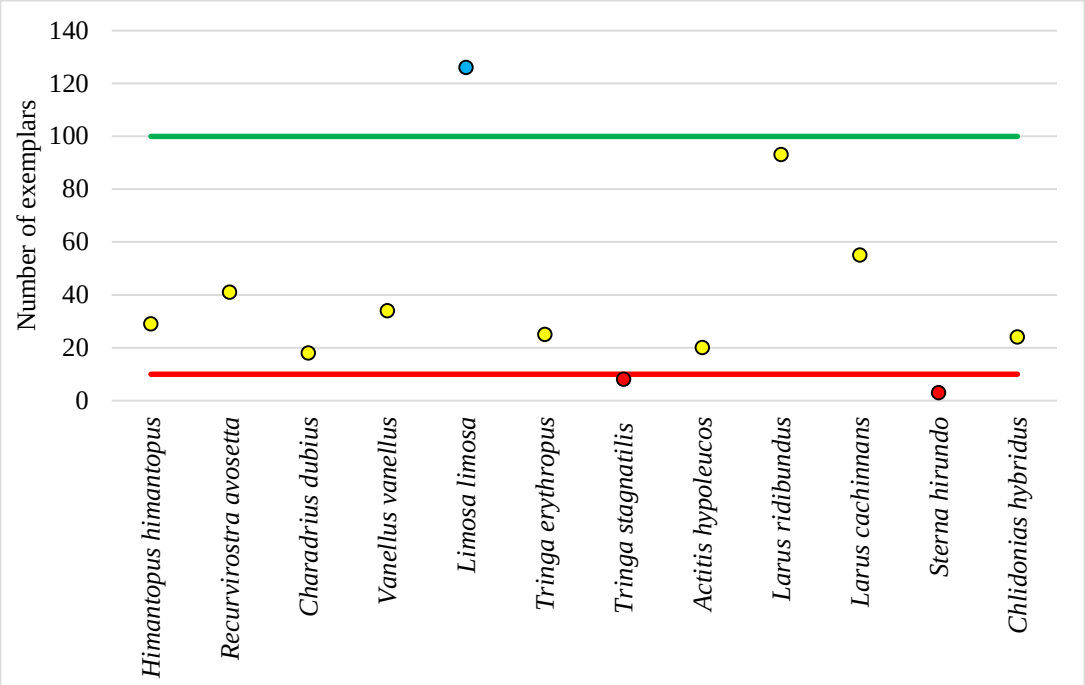
The dike present on the left side of the Călămățui river allows the formation of small marshy habitats between it and the river bank. On the other side of the dike there are agricultural lands represented by rice fields, which at the time of flooding lead to the formation of a marshy habitat. In these two habitats, one natural and the other artificial, delimited by the dike, 12 Charadriiformes species were reported (Tab. 1, Annexes). Although this area borders the Gura Gârlușei Sector, and has quite a few similarities with it, especially in terms of agricultural land, the Gura Călmățui Sector has the lowest number of observed species. Among the dominant species reported in the Gura Gârlușei Sector, only *Limosa limosa* is present in this sector (0.8%). Among the other 11 Charadriiformes species, 9 are classified as medium abundance species (75%) and only 2 species are rare (17%) (Fig. 10).

Salt Lake of Brăila Sector

23 Charadriiformes species were observed in the Salt Lake of Brăila Sector (Tab. 1, Annexes), with a much higher concentration in its southern part. In terms of species abundance, most are classified as having medium (53%) and rare (30%) abundance, while the dominant ones are much less abundant (17%) (Fig. 11). Along with the two species of gulls - *Larus ridibundus* and *Larus cachinnans* - which in autumn and winter can gather on the surface of the water in flocks of several hundred individuals, large groups of *Philomachus pugnax* and *Limosa limosa* can be observed during the spring and autumn migrations. We can say that for the southern area of Salt Lake of Brăila Sector there is a uniform distribution of Charadriiformes

species along the shores, while for the northern area a greater concentration of birds was observed in the area of the shore by the connecting road. This preference of the birds is normal, considering that this sector of the lake is less influenced by human activities. Our data confirm previous studies (Albu 1993; Onea 2012), but without reaffirming the presence of *Numenius tenuirostris* in the area. The species itself is very rare and present in România with accidental occurrences, which can be recorded for Salt Lake as well.

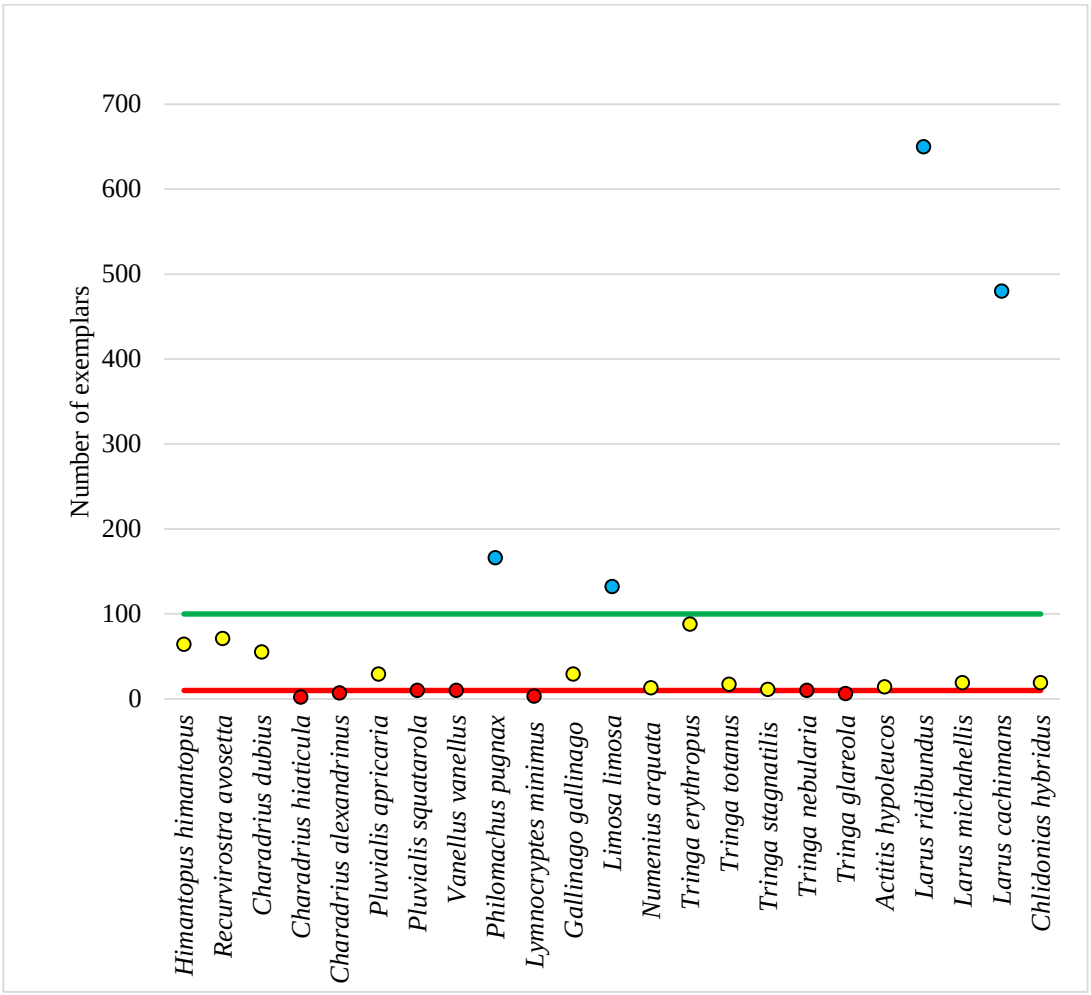
Figura no. 10 The abundance of Charadriiformes species in Gura Călmățui Sector



Movila Miresii Lake Sector

19 Charadriiformes species were reported in the Movila Miresii Lake Sector (Tab. 1, Annexes). Only one is dominant (0.5%), respectively *Larus ridibundus*, of which groups of over 100 specimens can be found, especially in autumn and winter. Most species belong to the category of rare species (58%) and medium abundance (37%) (Fig. 12). The distribution of species is uneven, but a higher concentration of them was noted in the southern part of the lake. The least frequented is the eastern side of the lake, which is right on the edge of the village Movila Miresii. Most species are summer visitors in the passage or just passing through (Papadopol 1974a, 1974b; Onea 2011), and for those that reproduce in the area (*Himantopus himantopus* and *Recurvirostra avosetta*) there is a large variation from one year to the next.

Figure no. 11 The abundance of Charadriiformes species in Salt Lake of Brăila Sector



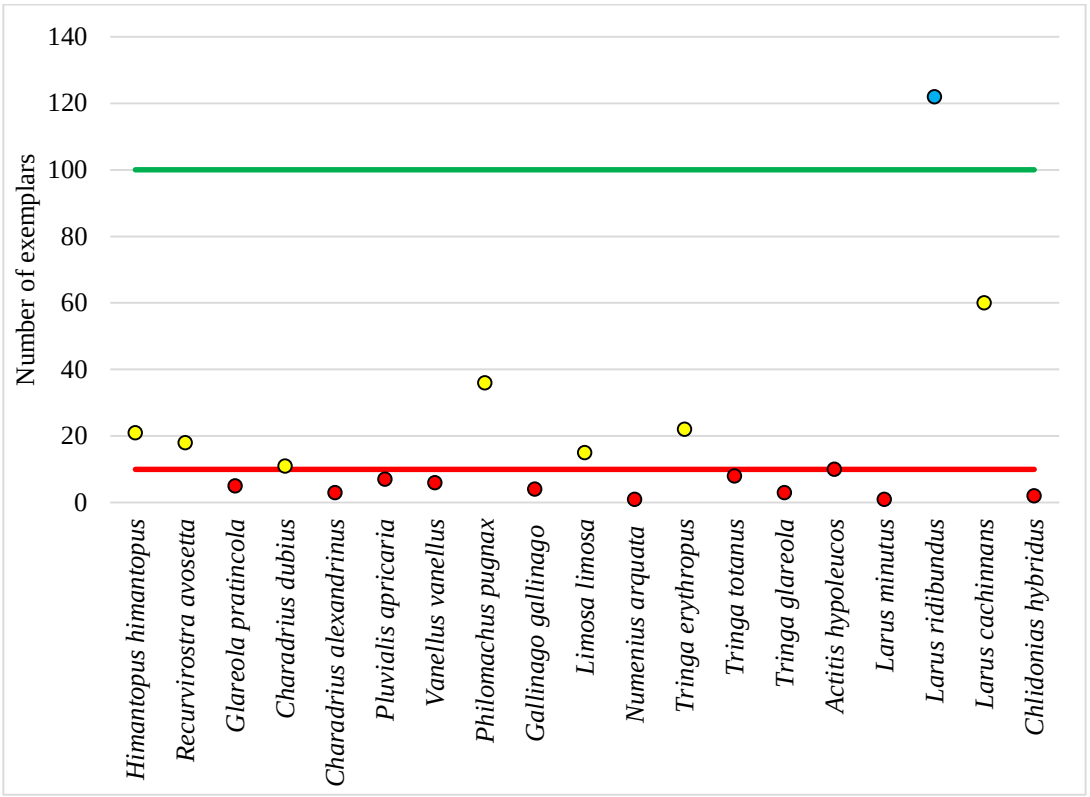
Tătaru Lake Sector

The physico-chemical characteristics of the area attract numerous species of birds, of which Charadriiformes represent a significant segment. Thus, 28 Charadriiformes species were observed in the Tătaru Lake Sector, being the most populated sector after the Danube River (Tab. 1, Annexes). The spring and autumn migration periods gather the highest amount of species and numbers of exemplars in the area. Characteristic for the Tătaru Lake Sector is the presence of a large number of species with an average abundance (57%), followed by rare (25%) and dominant (18%) (Fig. 13).

Among the dominant species, the most numerous are *Limosa limosa*, *Tringa erythropus* and *Larus ridibundus*, while the *Himantopus himantopus* and *Philomachus pugnax* species were observed with smaller flocks. These data agree with those reported in some previous studies (Papadopol 1974a, 1974b; Petrescu 2000; Onea 2006). A somewhat even distribution of Charadriiformes species along the shore was noted, with more obvious groupings on the northern side of the lake. The large temperature variations in recent years, with very dry summers and milder winters, have produced profound changes in the structure of the lake, reaching the situation where in 2022

the lake has completely dried up, and birds can only be observed until mid-June.

Figure no. 12 The abundance of Charadriiformes species in Movila Miresii Lake Sector



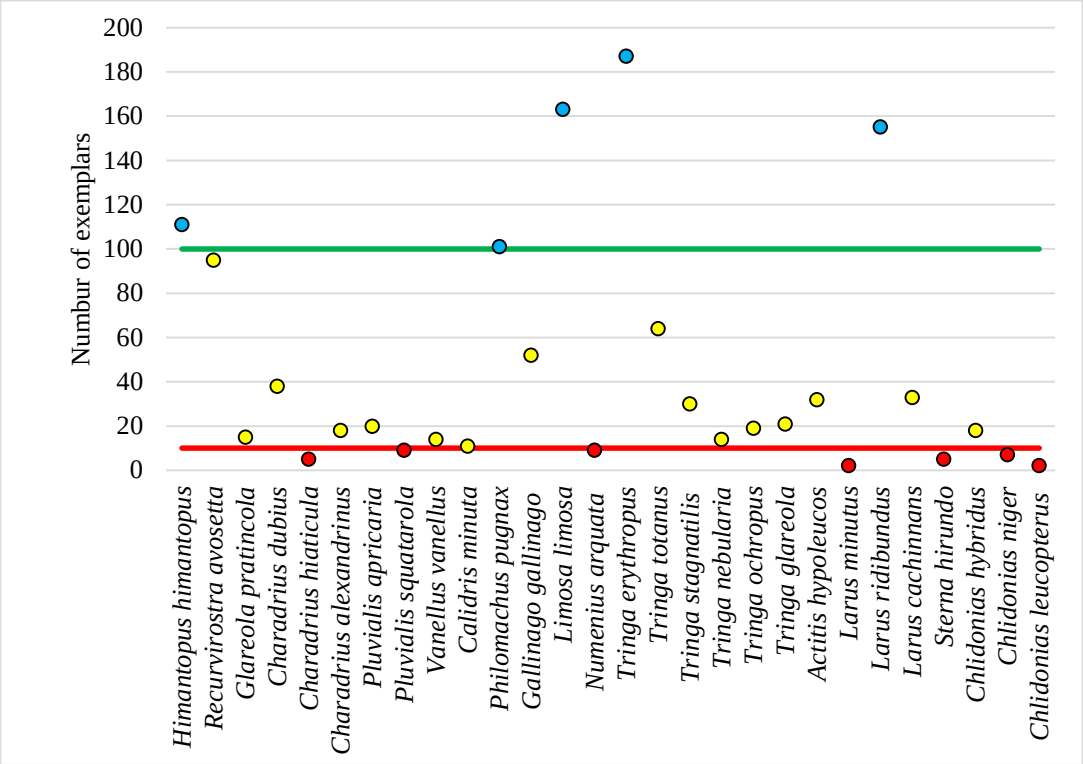
Regarding the Charadriiformes species reported in all six studied sectors we can make a few observations.

Haematopus ostralegus was only found in three places along the Brăila Sector of the Danube River: upstream of Vărsătura Island, next to the Chirchinețu channel (Insula Mică of Brăila) and next to the Hogioaia channel (Fundu Mare Island). All these locations are actually small islands formed as a consequence of the decrease in the water level of the Danube river, the banks being sandy-pebble. It is very possible that this species frequents many more areas, and the number of exemplars reported by us is actually much higher. According to our observations, *Haematopus ostralegus* is a species with an average abundance, being present only during migration periods (spring and autumn).

Himantopus himantopus is a species present in all studied sectors. We find the greatest abundance in the area of Tătaru Lake Sector, where it is a dominant species, while in the other sectors it is a species with an average abundance. For the Danube River, Gura Gârlușei and Gura Călmățui sectors, *Himantopus himantopus* is present only as a species in passage or in feeding movements, but for the other sectors, Salt Lake, Movila Miresii Lake and Tătaru Lake, the species is nesting. In the Salt Lake and Movila Miresii Lake areas, nesting was reported sporadically, in a fairly small number of pairs (2-4). The number of nesting pairs observed is much

higher and constant year after year at Tătaru Lake, respectively between 8-10 pairs.

Figura no. 13 The abundance of Charadriiformes species in Tătaru Lake Sector



Recurvirostra avosetta is also a reported species in all studied sectors. The number of exemplars observed is approximately the same as in the case of *Himantopus himantopus*, being a dominant species for Tătaru Lake, and with an average abundance for the other sectors. *Recurvirostra avosetta* is found mainly as a migratory species in passage or in feeding movements, and in small numbers of pairs as a nesting bird at Salt Lake, Movila Miresii Lake and Tătaru Lake.

Glareola pratincola was observed only in two of the six sectors studied, respectively at Tătaru Lake and Movila Miresii Lake. If for Tătaru Lake it is a constant presence, being also a nesting species, probably 8-10 pairs, in the Movila Miresii Lake area it was present only once, during the spring migration, in a small number of specimens. It is quite possible that this species has a wider distribution and nests in areas not yet studied.

Charadrius dubius is a species frequently found in the area of salt lakes, but it was also observed in the other studied areas, with the exception of the Gura Gârlușei Sector. From the point of view of abundance, the largest number of exemplars was recorded in the area of Salt Lake and Tataru Lake. Its presence is linked to the spring and autumn migration periods, and the number of specimens varies from year to year for each sector in particular.

Charadrius hiaticula is part of the group of species with accidental occurrences, being reported only at Salt Lake and Tătaru Lake, in a single year during the spring migration. The

number of specimens observed is not very high either, varying between two (Salt Lake Brăila) and five (Tătaru Lake).

Charadrius alexandrinus is another species especially found of salt lakes, but it has also been observed in the area of the Brăila Sector of the Danube River. The greatest abundance was recorded in the Tătaru Lake area, where it is a medium-sized species, being reported year after year, even if the number of specimens varies quite a lot. At Salt Lake and Movila Miresii Lake is present as a rare species and without having a constancy from one year to another.

Pluvialis apricaria is a fairly common species for Salt Lake and Tătaru Lake, where it appears in quite large numbers, especially during spring migrations, being a passage species. It was reported very rarely at Movila Miresii Lake, as well as in the Danube Sector.

Pluvialis squatarola is a passage species, with accidental occurrences in the area of Salt Lake Brăila and Tătaru Lake.

Vanellus vanellus was observed in all study areas, with an average abundance in the Danube Sector, Gura Gârluței, Gura Călmățui and Tătaru Lake, and rare for Brăila Salt Lake and Movila Miresii. It is a nesting species in all areas.

Calidris minuta has been observed so far in three sectors out of the six studied, respectively the Danube Sector, Tătaru Lake and Gura Gârluței. It is a passage species, present especially in the spring migration, in groups of 10 - 18 exemplars.

Calidris temminckii is a passage species with accidental occurrences, being observed only once in a number of 3 exemplars near the Chiscani Water Station.

Calidris alpina it is also a passage species, with constant appearances along the Danube River, in groups of 10-25 exemplars.

Philomachus pugnax was reported constantly and in very large numbers in the area of Salt Lake and Tătaru Lake, where it is a dominant species, both in the spring and in the autumn passage. It was also observed in the Movila Miresii Lake area and in the Danube Sector, but in a smaller number of specimens, still having an average abundance.

Lymnocryptes minimus is a rare species, being observed in the Salt Lake area and in the Danube Sector, having accidental occurrences. If in the Danube sector it was signaled during the spring passage, at Salt Lake Brăila it appeared both during the spring and the autumn migration.

Gallinago gallinago is a summer guest in the passage for four sectors, respectively Danube River Sector, Salt Lake, Tătaru Lake and Movila Miresii. If for the first three sectors it is a common species with an average abundance, for Movila Miresii Lake it is a rare and accidental species.

Limosa limosa was observed in all sectors, in large and constant flocks year after year. The highest abundance is recorded in the fall, when it is a dominant species in most of the studied sectors.

Numenius arquata was the most common in the Salt Lake area, being reported as a species with an average abundance. However, it does not have constant occurrences year after year, and for the other studied sectors it is a rare and accidental species. The most frequent records were in the autumn passage.

Tringa erythropus is a passage species found in all studied sectors. Of all the wader species reported, *Tringa erythropus* is the most common, being a dominant species for Salt Lake, Tătaru Lake and Gura Gârluței, and with an average abundance for the other studied sectors.

Tringa totanus was reported in most of the sectors studied, except for the one at Gura Călmățui. It is a passage species, with

significant numbers in both the spring and autumn passages.

Tringa stagnatilis is also a passage species, with an average abundance in most of the sectors studied, with the exception of Movila Miresii Lake where it was not observed. It was observed during migrations, but with a numerical increase in the autumn passage. In the Gura Călmățui sector it was recorded only once and in a small number of specimens.

Tringa nebularia is a passage species with fairly large annual variations in numbers. An average abundance was reported in the sector of Tătaru Lake and Gura Gârluței, while for Salt Lake and the Danube sector it is a rare species.

Tringa ochropus was observed in the Danube Sector, Gura Gârluței and Tătaru Lake, being a species with an average abundance. Present in both the spring and autumn passage, it has not been reported consistently from year to year.

Tringa glareola appears more often in the spring passage, being observed in the area of Tătaru Lake and the Gura Gârluței Sector, where it is a species with an average abundance, and in the area of Salt Lake Brăila and Movila Miresii Lake it is a rare and accidental species.

Actitis hypoleucos is a constant presence along the banks of the Danube river in July and August. In the other sectors, it was observed especially during the autumn migration period, being a species with an average abundance. Rare and accidental occurrences have been recorded in the Movila Miresii Lake area.

Larus minutus is a common passage species along the Brăila Sector of the Danube, being observed in groups of 6-20 specimens, and much less often solitary. An accident was also reported in the area of Movila Miresii Lake and Tătaru Lake.

Larus ridibundus is the most common and constant species for all studied sectors. The largest flocks were recorded in the Salt Lake Brăila area, where over 600 specimens can be gathered in the cold season. It is a dominant species in most of the sectors studied, with the exception of Gura Călmățui.

Larus canus was reported rarely, accidentally, in the months of February - March and only in the Danube Sector near the city of Brăila.

Larus fuscus, like *Larus canus*, is an accidental species, reported only once, a single specimen in January, near Fundu Mare Island in the Danube Sector.

Larus michahellis is a common species for the Danube Sector, Gura Gârluței and Salt Lake, where it is a species with average abundance throughout the year, obviously with numerous seasonal numerical variations. Sometimes it is quite difficult to separate this species from *Larus cachinnans*, with which it coexists.

Larus cachinnans is very similar in morphological characters to *Larus michahellis*. *Larus cachinnans* is a dominant species for the Brăila Sector of the Danube, Salt Lake and Gura Gârluței, where flocks of several hundred specimens can be found during the cold season. In the other sectors, Tătaru Lake, Movila Miresii Lake and Gura Călmățui, it is a species with an average abundance, but it is not excluded that in certain periods of the year the numbers are higher.

Sterna hirundo is a summer guest species, nesting in the marshes of the Insula Mică a Brăilei and probably nesting in some of the studied sectors, but this has not been confirmed so far. It was reported in the Danube Sector, Gura Gârluței and Tătaru Lake, where it is a species with an average abundance, and in the area of the Gura Călmățui Sector where it is a rare species and with accidental occurrences.

Sterna albifrons is a summer guest species and was observed only in the Danube Sector, being a rare species in terms of abundance.

Chlidonias hybridus is a common species, present in all the sectors studied. In terms of abundance, it is dominant in the Danube Sector and Gura Gârluței, with an average abundance in the area of Gura Călmățui, Salt Lake and Tătaru Lake, and a rare and accidental species for Movila Miresii Lake.

Chlidonias niger is a rare and occasional summer guest species. It was reported only in the Danube Sector and in the Tătaru Lake area.

Chlidonias leucopterus is also a summer guest species and has been reported frequently in the Brăila Sector of the Danube. It was also accidentally observed in a small number of specimens in the area of Gura Gârluței and Tătaru Lake.

Conclusion:

The distribution of Charadriiformes species observed in the six studied sectors is closely related to the physico-chemical structure of each area, as well as to the biotic structure. Most species are present in the Danube Sector (32 species), Tătaru Lake (28 species) and Salt Lake (23 species), and the lowest number of species was recorded in the Gura Călmățui Sector (12 species).

In the Brăila Sector of the Danube, due to the large extent, complete observations could not be carried out. At the same time, even the Charadriiformes species reported in this sector do not form large groups of specimens, with the only exceptions being the gull species *Larus ridibundus*, *Larus michahellis*, *Larus cachinnans*, and the tern species *Chlidonias hybridus*.

A totally different situation occurs in the case of salt lakes, respectively Salt Lake and Tătaru Lake, where thanks to the optimal habitats for nesting and especially for feeding, they become areas of concentration for numerous Charadriiformes species (*Himantopus himantopus*, *Recurvirostra avosetta*, *Glareola pratincola*, *Charadrius dubius*, *Pluvialis apricaria*, *Philomachus pugnax*, *Gallinago gallinago*, *Limosa limosa*, *Tringa erythropus*, *Tringa totanus* etc.). It should be noted that *Philomachus pugnax*, *Limosa limosa* and *Tringa erythropus* are dominant species in these two sectors, as during peak periods of migration several hundred specimens can easily be observed.

Rezumat:

DISTRIBUȚIA CHARADRIIFORMELOR DE-A LUNGUL SECTORULUI BRĂILEAN AL DUNĂRII ȘI ÎN LACURILE SĂRATE DIN CÂMPIA BRĂILEI (ROMÂNIA)

Sectorul brăilean al Dunării, alături de lacurile sărate din Câmpia Brăilei, reprezintă habitate acvatice în care speciile de charadriiforme găsesc condiții optime fie pentru popas și hrănire, fie pentru reproducere. În sectoarele studiate au fost observate un număr de 36 de specii de charadriiforme, cu o distribuție specifică care ține atât de preferințele ecologice ale fiecărei specii în parte, cât și de habitatele ocupate. Majoritatea speciilor sunt specii cu o abundență medie și rară, fiind oaspeți de vară sau doar în migrație, și doar câteva sunt dominante.

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Annexes:

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Table no. 1 Taxonomic classification of recorded Charadriiformes species in the studied sectors

Order	Family	Species	1	2	3	4	5	6
Charadriiformes	Haematopodidae	*Haematopus ostralegus*	■					
	Recurvirostridae	*Himantopus himantopus*	■	■	■	■	■	■
		Recurvirostra avosetta	■	■	■	■	■	■
	Glareolidae	*Glareola pratincola*					■	■
	Charadriidae	*Charadrius dubius*	■		■	■	■	■
		Charadrius hiaticula				■		■
		Charadrius alexandrinus	■			■	■	■
		Pluvialis apricaria	■			■	■	■
		Pluvialis squatarola				■		■
		Vanellus vanellus	■	■	■	■	■	■
	Scolopacidae	*Calidris minuta*	■	■				■
		Calidris temminckii	■					
		Calidris alpina	■					
		Philomachus pugnax	■			■	■	■
		Lymnocryptes minimus	■			■		
		Gallinago gallinago	■			■	■	■
		Limosa limosa	■	■	■	■	■	■
		Numenius arquata	■	■		■	■	■
		Tringa erythropus	■	■	■	■	■	■
		Tringa totanus	■	■		■	■	■
		Tringa stagnatilis	■	■	■	■		■
		Tringa nebularia	■	■		■		■
		Tringa ochropus	■	■				■
		Tringa glareola		■		■	■	■
		Actitis hypoleucos	■	■	■	■	■	■
	Laridae	*Larus minutus*	■				■	■
		Larus ridibundus	■	■	■	■	■	■
		Larus canus	■					
		Larus fuscus	■					
		Larus michahellis	■	■		■		
		Larus cachinnans	■	■	■	■	■	■
		Sterna hirundo	■	■	■			■
		Sterna albifrons	■					
		Chlidonias hybridus	■	■	■	■	■	■
		Chlidonias niger	■					■
		Chlidonias leucopterus	■	■				■
TOTAL:	6	36	32	19	12	23	19	28

Figure no. 2 The Brăila Sector of the Danube River

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Figure no. 3 The Gura Gârluței Sector

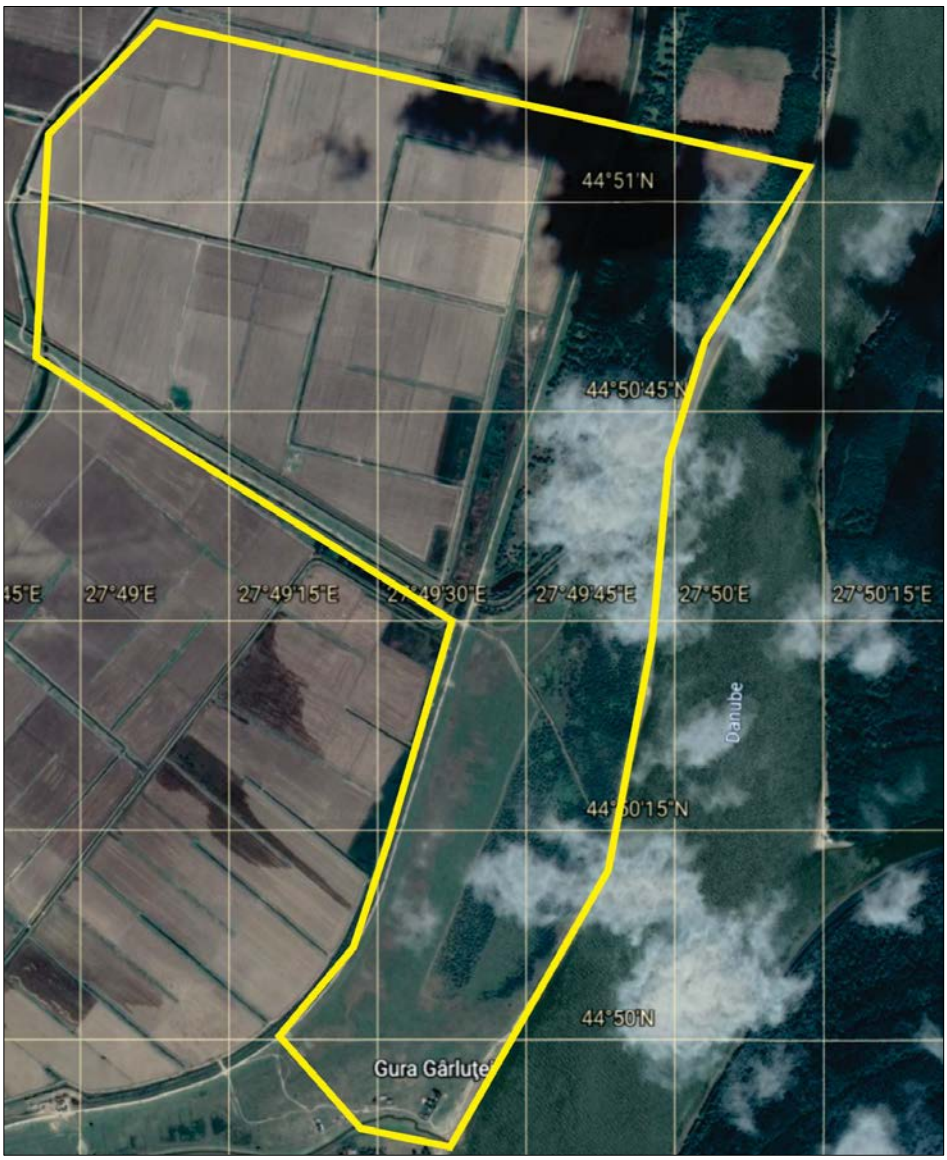

Figure no. 4 The Gura Călmățui Sector

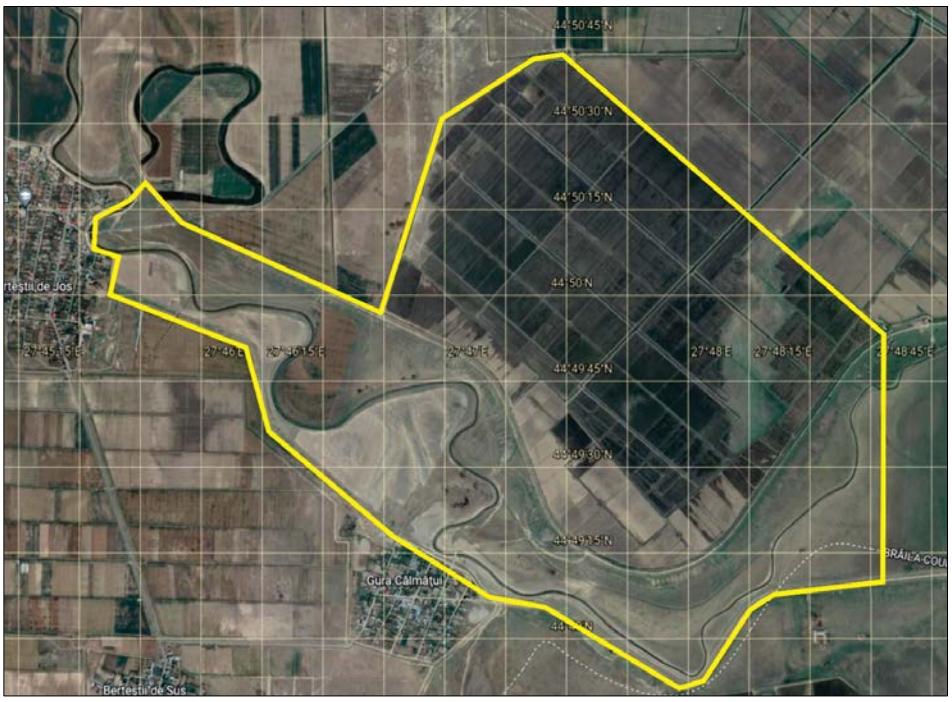

Figure no. 5 The Salt Lake of Brăila Sector

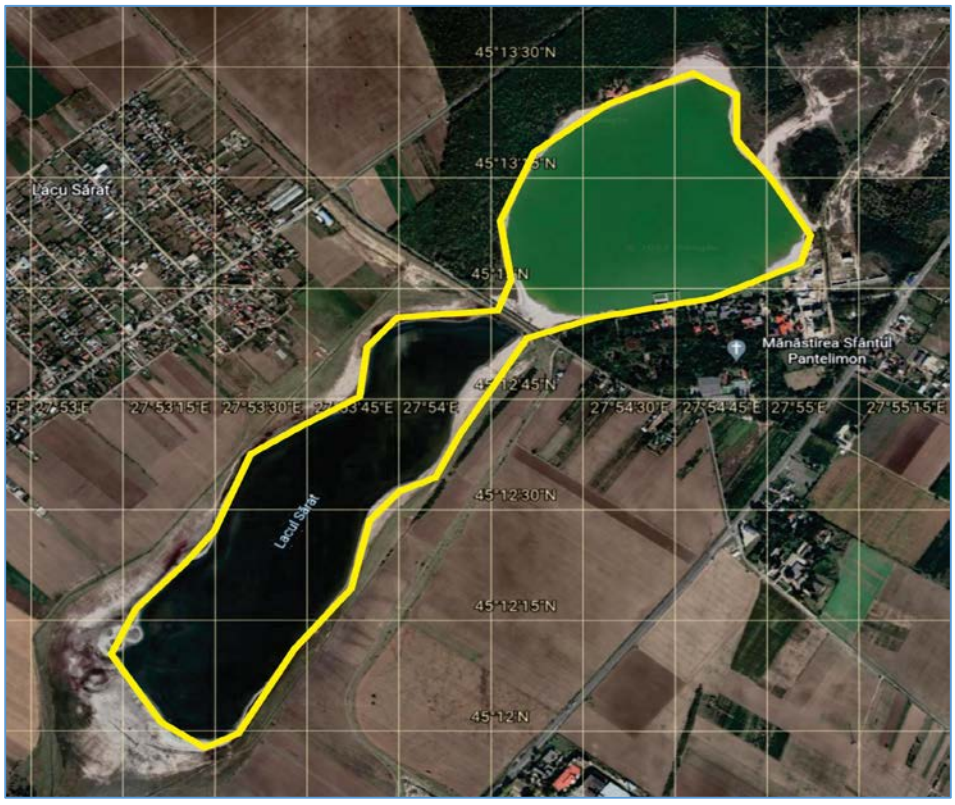

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Figure no. 6 The Movila Miresii Lake Sector

Figure no. 7 The Tătaru Lake Sector