Conete, D., Mestecăneanu, A., Gava, R. - Ecological Researches About The Avifauna Of The Budeasa Basin (Argeș River, Romania) In The Hiemal And Prevernal Aspects (2008-2009)

ECOLOGICAL RESEARCHES ABOUT THE AVIFAUNA OF THE BUDEASA BASIN (ARGEŞ RIVER, ROMANIA) IN THE HIEMAL AND PREVERNAL ASPECTS (2008-2009)

Denisa CONETE^{*}, Adrian MESTECĂNEANU^{**}, Radu GAVA^{*}

^{*} University of Pitești, Faculty of Science, Department of Biology, Pitești, Romania

Corresponding author: Denisa Conete, University of Pitești, Faculty of Science, Department of Biology, 1 Târgu din Vale, 110040 Pitești, Romania, tel. & fax.: 0040348453260, e-mail: denisa_conete@yahoo.com

Abstract. The authors present a list of 77 species of birds identified in the hiemal and prevernal aspects (2008-2009) in the area of the Budeasa Lake, situated in the middle hydrographical basin of the Argeş River. Their main habitat, phenology, biogeographic origin, presence in the hiemal and prevernal seasons, constancy and their status of conservation are analysed in the paper. There are two overdominant species among those studied in the hiemal aspect: *Anas platyrhynchos* and *Aythya ferina* (both of them found favourable condition for food and shelter here), *Anas crecca* and *Aythya fuligula* are in the zone of dominance and the others species are in the zone of complementary species. *Anas platyrhynchos* remains the overdominant species every month. Many exemplars come here from the North because of the favourable weather conditions, such as freezing and low temperatures.

Keywords: bird species, ecological researches, Budeasa Basin, Argeş River, Romania.

INTRODUCTION

Romania is the only country in Europe that has 5 biogeographical regions (there are 2544 m from the sea level to the top of the Făgăraş Mountains [1]) and this fact leads to a high level of biodiversity [21]. Many of these habitats could also be found in the hydrographical basin of the Argeş River, one of the main tributary of the Danube, which has its springs in the highest peak of the Romanian Carpathians, i.e. the Moldoveanu Peak; its mountain and submountain areas are zone of a great faunistic importance, because many protected species in Romania could be found here, e.g. glacial relict species: *Romanychthys valsanicola* [7] and *Lissotriton montandoni* [6].

The Budeasa Basin belongs to a series of dam lakes built some decades ago on the upper and middle course of this river. Besides their important hydroenergetic role, the impact of these basins upon the landscape is significant by influencing the composition and the spatial and temporal dynamics of the bird species of the area [9, 10, 11, 15, and 16].

The lakes are part of the "Argeş River Basins", a sit included in the Important Bird Area Program and in the Nature 2000 Network.

The Important Birds Area Program is a worldwide effort meant to identify the most important areas that must be protected as well as the species of birds live here. Natura 2000 network is the European Union's main instrument for the conservation of the nature [21].

Data concerning the biodiversity from Romania are still missing at European level [13].

Efforts were made for gathering more accurate data about the biodiversity [9, 20, and 24] and to adopt efficient measures of protection [19].

MATERIALS AND METHODS

The Budeasa Basin is situated upstream of Pitești and the Bascov Basin (Fig. 1). It is 5.5 km long and it has a surface of 412 ha. It is surrounded by a road.

It is placed in the hilly area, mainly covered by deciduous forests and orchards. Its vegetation is

characteristic for the water areas: *Ceratophyllum*, *Myriophyllum*, *Carex*, *Juncus*, *Phragmites*, *Typha*, *Salix*, *Alnus*, *Populus*, *Rosa*, *Rubus*, etc. The fauna is rich, too. There are fish species (*Esox lucius*, *Abramis brama*, *Cyprinus carpio*, *Perca fluviatilis*, *Leuciscus cephalus*, *Chondrostoma nasus*), amphibians (*Hyla arborea*, *Bombina variegata*, *Bombina bombina*, *Rana ridibunda*, *Rana esculenta*, *Salamandra salamandra*), reptiles (*Emys orbicularis*, *Natrix natrix*, *Natrix tessellata*, *Lacerta viridis*, *Anguis fragilis*) and mammals (*Neomys fodiens*, *Apodemus agrarius*, *Arvicola terrestris*, *Lutra lutra*, *Ondatra zibethica*, etc.) [14]. The birds are present all the year.



Figure 1. The upper and middle hydrographic basin of the Argeş River (modified [1]).

Physically and chemically the water is of the first class quality.

The climate is temperate-continental [1].

The ecological study was effectuated between November 2008 and May 2009. For the birds identification the itinerary and the fix point observations methods were used [2, 12]. Two

^{*}Argeş County Museum, Piteşti, Romania

observations were effectuated every month, mainly in the morning. Binoculars 10×50 and field guides were used [18, 22].

RESULTS

There were recorded 77 bird species (Table 1) belonging to 11 orders, 28 families and 50 genera; 42 of them are aquatic or amphibious species (Fig. 2). The best represented are the following orders: **Passeriformes** (with 37 species), **Anseriformes** (with 12 species) and **Charadriiformes** (with 11 species). These are followed by: **Ciconiiformes** (with 5 species) and **Podicipediformes**, **Falconiformes**, **Pelecaniformes**, **Cuculiformes**, **Gruiformes**, **Piciformes** and **Coraciiformes**.

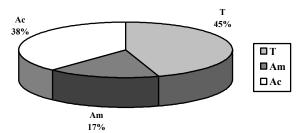


Figure 2. The bird species distribution according to habitat (T – terrestrial species; Am – amphibious species; Ac – aquatic species).

According to the biogeographic origin (Table 1 & Fig. 3), the bird species from the Budeasa Basin are grouped as it follows: 31 species (41 % -Podiceps nigricollis, Ixobrychus minutus, Gallinula chloropus, Alcedo atthis, etc.) European origin (E), 25 species (33 % - Buteo buteo, Falco tinnunculus, Fulica atra, Riparia riparia, etc.) Transpalearctic origin (Tp), 9 species (12 % - Cygnus cygnus, Tringa erythropus, Larus canus, etc.) Siberian origin (S), 5 species (6 % - Netta rufina, Phalacrocorax pygmeus, Egretta garzetta, etc.) Mediterranean origin (M), 5 species (6 % - Vanellus vanellus, Charadrius dubius, etc.) Mongol origin (Mo), 1 species (1 % - Casmerodius albus) Chinese origin (Ch) and 1 species (1 % - Aythya marila) Arctic origin (A).

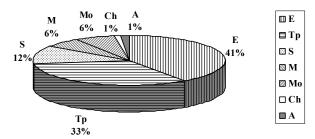


Figure 3. The bird species distribution by the biogeographic origin (E – European species; Tp – Transpalearctic species; S – Siberian species; M – Mediterranean species; Mo – Mongol species; Ch – Chinese species; A – Arctic species).

The occupied habitat is thus represented (Table 1 & Fig. 2): 35 species (45 % - *Buteo buteo, Dendrocopos major, Galerida cristata, Lanius excubitor*, etc.) in terrestrial habitat (T), 13 species (17 % - *Gallinula*

chloropus, Vanellus vanellus, Tringa ochropus, Motacilla cinerea, etc.) in amphibious habitat (Am) and 29 species (38 % - Podiceps cristatus, Nycticorax nycticorax, Ardea cinerea, Cygnus cygnus, Aythya marila, etc.) in aquatic habitat (Ac).

The constancy (Table 1 & Fig. 4): 11 species (14% - *Podiceps cristatus, Phalacrocorax carbo*, etc.) are euconstant species (Euc), and 10 species (13 % - *Casmerodius albus, Fringilla coelebs*, etc.) are constant species (C). The most numerous are the accessory species (Ac) - 28 species (37 % - *Emberiza citrinella, Mergellus albellus*, etc.) and the accidental species (Acc) - 28 species (36 %: *Riparia riparia, Lanius excubitor*, etc.).

A percentage of 44%, i.e. 34 of the 77 bird species identified on the Budeasa Basin, are included in the annexes of the Birds Directive (Table 1); 9 of them are included in the Annex I (*Phalacrocorax pygmeus*, *Casmerodius albus*, *Cygnus cygnus*, *Sterna hirundo*, etc.). Special measures were provided in order to protect life and to offer the possibility of species reproduction in this area.

We calculated the index of relation (Table 2) for the estimation of the quantitative dynamics of the 11 Anseriformes species observed in the hiemal aspect. The statistic axis (As) is 9.09 and the dominancy axis (Ad) is 18.18 (Table 2 & Fig. 5). Two species are overdominant: *Anas platyrhynchos* and *Aythya ferina* (both have favourable condition for food and shelter here). *Anas crecca* and *Aythya fuligula* are dominant, their values being similar; *Cygnus olor, Bucephala clangula*, and *Anas penelope* and the group of the other species (*Netta rufina, Aythya marila, Cygnus cygnus* and *Mergellus albellus*) are complementary species.

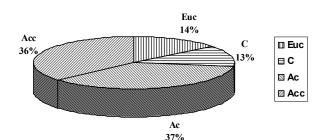


Figure 4. The bird species distribution by the constancy (Euc – euconstant species; C – constant species; Ac – accessory species; Acc – accidental species).

It is obvious that Anas platyrhynchos remains the overdominant species each month. Aythya ferina moves from the zone of overdominancy in November in the complementary zone in December, when it can be found even bellow the statistic axis. Then, it rises again in the zone of overdominancy in January. It becomes dominant species in February. Aythya fuligula moves from the upper limit of the complementary zone (where it is found almost during the whole period of time) only in January, when it becomes overdominant species. Anas crecca moves from the complementary zone (where it can be found in November) above of dominancy axis in November and February, while in January it is dominant species. The other species (Cygnus olor, Bucephala clangula, Anas penelope, etc.) are complementary every month (Table 2 & Fig. 6).

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1Padeeps ergenantAcOv, RiTppppEN3.Padeeps ergenantAcNV, RiEppCN4.Padeeps ergenantAcOv, RiTpppEacAc5.Padeersorear carbaAcOv, RiTpppEacAc6.Padeersorear carbaAcOv, RiMapAccAc7.Egreta garestaAcOv, RiTpppAcAc8.Concretable ablusAcOv, RiTpppAcAc9.Arbes cinereaAcOv, RiTpppCN10.Myccicorea spectorasAcOv, RiTpppacAc11.Czygnes oberAcMQ, PTpppacAcAll,12.Czygnes oberAcMQ, OvTpppacAcAll,13.Anax playrhynchosAcMQ, OvTpppacAcAll,14.Anax garegedulaAcOv, RTpppEacAll,15.Anax garegedulaAcOv, RSppEacAll,16.Anax playrhynchosAcMyc, Ov, RSppEacAll,17.Atyrko mariaAcOv, RSppEacAll,<	Birds Directive	Constancy	Presence in the prevernal season	Presence in the hiemal season	Bio- geographic origin	Phenology	Principal habitat	Species	No.
12 Tadybapus refacults Ac Ov, Ri F. p p p C N 4. Phalacrocoras carba Ac Ov, Ri Tp p p Face N 5. Phalacrocoras grapma Ac Ov, Ri M a p Acc N 6. Indersonas grapma Ac Ov, Ri M a p Acc N 7. Egretia gravita Ac Ov, Ri Ch p a C N 7. Egretia gravita Ac Ov, Ri Tp p p C N 10. Nycticoras nycticorax Ac Ov, Ri Tp p a Ac N 11. Cygnus cygnus Ac Ov, P Tp p p C All 12. Cygnus cygnus Ac Ov, P Tp p p C All 12. Anas gneripedia Ac Ov, S p p p C All 13. Anas gneripedia Ac Ov, S p p p C All 14. Anas gneripedia Ac Ov, S p	9	8	7	6	5	4	3	2	1
3. Policepringricollis Ac Mp E p a Acc N 5. Polacroorax corpus Ac Ov. Ri M a p Acc A 6. Polacroorax corpus Ac Ov. Ri M a p Acc A 7. Egrent garzetti Ac Ov. M a p Acc A 7. Egrent garzetti Ac Ov. Ri Tp p p Acc A 7. Egrent garzetti Ac Ov. Ri Tp p a C Acc A 10. Vectorizor grents Ac Ov. Ri Tp p a Acc A 11. Cygnus olor Ac Mo S p p C C Add 12. Argue cygnus Ac Oi S p p C Add 13. Andas cygnus Ac Oi <	N/A		р	р	Тр	Ov, Ri	Ac	Podiceps cristatus	1.
4. Phalacroorax curbo Ac Ov, Ri Tp p p Ace A 6. Phalacroorax pogness Ac Ov, Ri M a p Ace A 6. Experting corrects Ac Ov, Ri Ch p a Ace A 7. Egreting corrects Ac Ov, Ri Tp p p C A 9. Ardea correct Ac Ov, Ri Tp p a Ace A 10. Nycticorax expectorax Ac Ov M a p Ac All 11. Cygnus cognus Ac Ov, P Tp p a Ace All 13. Anse gueryacidu Ac Ov, P Tp p p C All 14. Anse gueryacidu Ac Ov, N S p p C All 15. Anse All Ace A	N/A	С	р	р		Ov, Ri	Ac		
5. Phalacrocara pygness Ac Ov, Ri M a p Ace A 7. Egretin garzetti Ac Ov, M a p Ac A 7. Egretin garzetti Ac Ov, Ri Tp p a C. A 9. Arlea cinerea Ac Ov, Ri Tp p p A C A 10. Nycicoras nyettorar Ac Ov, Ri Tp p p A C A 11. Cygno olor Ac Mp, Oi Tp p a Ace A 12. Cygue, cygnus Ac Oi, O Tp p p a Ace A 13. Anas playrhynchols Ac Mo, Oi, O Tp p p C All/1, 16. Anas percelope Ac No No S p p C All/1, 17. Aphrog folgal Ac Oi, Ov S p p a Ace All	N/A		a	р		1	Ac		
6. Lobychus minutus Am Ov E a p Ac Ac 7. Exercita garretta Ac Ov, Ri Ch p a Ac Ac 9. Ardaz ciarera Ac Ov, Ri Tp p p Ac N 10. Nyeticoras nyeticoras Ac Ov M a p Ac N 11. Cygnus ora Ac Ov M a p Ac All/1, 13. Aras guerguebula Ac Ov, P Tp p a Ac All/1, 14. Aras guerguebula Ac Ov S p p C All/1, 15. Aras creeca Ac P, Oi, Ov S p p C All/1, 16. Aras guerguebula Ac Oi S p a Ac All/2, 17. Aryby surfus Ac Oi S	AI		р	р					
7. Egrent garactu Ac Ov. M. a p Ac Ov. 8. Councolisa abas Ac Ov. Ri Tp p p Ac M 10. Vycicionar preticoras Ac Ov. M a p Ac M 11. Cygmas olar Ac Mp E p p Ac M 12. Cygmas olar Ac MD E p p Ac M 13. Anar gueropuchda Ac MO, Tp p p C Ad 13. Anar gueropuchda Ac No. P Tp p p C Add 14. Anar gueropuchda Ac No. P p C Add 15. Anar gueropuchda Ac No. S p p Ac Add 16. Anar gueropuchda Ac Ni M p a Ac Add 17. Aydya faligala Ac Oi.	AI					· · · · · · · · · · · · · · · · · · ·			
8. Camerodus albas Ac Ov, Ri Ch p a C d 9. Ardea cinerea Ac Ov, Ri Tp p p C N 10. Cygnus color Ac Ov M a p D C N 11. Cygnus cygnus Ac Or, S p a Acc All 13. Ans alperynchos Ac Or, P p a Acc All 14. Ans guerguedula Ac Or, P p p Acc All 15. Ans creacia Ac Or, Tp p p C All 16. Ans peuchys Ac Or, N p p a Acc All 17. Aryna marita Ac Or, N S p p a Ac All 18. Marynaperba Ac <td>AI</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	AI								
9. Ardea cinerea Ac Ov. Ri Tp p p p C N 10. Nycicionary vycicionary Ac Ov M a p Ac N 11. Cygnus olor Ac Ov M p p p Ac N 12. Cygnus olor Ac Ov Tp p a Ac N 13. Anas alayrhynchos Ac Ov Tp p a Ac N 14. Anas grappedula Ac Ov Tp p p a Ac NIII. 16. Anas newlepset Ac P.O S p p a Ac NIII. 16. Anas newlepset Ac Oi A p a Ac NIII. 16. Anas newlepset Ac Oi S p a Ac NIII. 17. Ayding faila Ac Oi A p Ac AI 20. Ayding forina <td>AI</td> <td></td> <td>÷.</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	AI		÷.						
10. Nyrcheorax systema Ac Ov M a p Ac f 11. Cygenus cygnu Ac Oh S p a Acc At 13. Inus playrhymchos Ac Oh S p a Acc At 13. Inus playrhymchos Ac Oh, O Tp p a Acc Att 14. Anus guarguedula Ac Oh, OV Tp p p a Acc Att 15. Anus creace Ac P, Oh S p p C Att 16. Anus precloge Ac P, Oh S p p C Att 17. Aythy anarlia Ac Oh A p a Acc Att 19. Aythy anarlia Ac Oh A p a Acc Att 11. Buceybide clangula Ac Oh S p a Acc Att 21. Margelas albelits	AI								
11.Cygnus olorAcMpEppCAll13.Auss playrlynchosAcMp, OiTpppaAccMI14.Auss querguedulaAcOv, PTpppaAcMII.15.Auss creaceAcP, Oi, OvTppppCAlli.16.Auss pencippeAcP, OiSppCAlli.16.Auss pencippeAcO, OvSppEucAlli.17.Avity mariaAcO, OvSppEucAlli.18.Avity figulaAcO, OvSppEucAlli.20.Aetta rafinaAcOi, SppaAccAll.21.Bucephale clangulaAcOiSpaAccAll.23.Buteo bateoTMpTpppAccAll.24.Falco timuncthasTMpTpppAcN.25.Gollmuk chloropusAmOvMoapAccN.26.Guta chloragusAmOvMoapAccN.27.Varelbus vanchusAmOvMoapAccN.26.Guta chloragusAmOvMoapAccN.27.Varelbus vanchusAm<	N/A	-	Â	÷	*				
12Cygnus cygnusAcOrSpaAccAc13Anss appergnethinAcOv, PTpppaAcAll(),14Anss guergnethinAcOv, PTppppCAll(),15Anss creaceaAcP, OiOTpppCAll(),16Anss penelopeAcP, OiSpppCAll(),17Aphyn anrafaAcOiApaAceAll(),18Aphyn anrafaAcOiApaAceAll(),19Aphyn anrafaAcOiSppEucAll(),10Aphyn anrafaAcOiSpaAceAll(),20Netta rufnatAcOiSpaAceAll(),21Mergelata clangulaAcOiSpaAceAll(),22Mergelata clangulaAcOiSpaAceAll(),23Intree buteeTMpTppppCNAll(),24Falce intranentusTMpTppppCNAll(),25Gallinuka chloropusAmOvMoapAceAll(),26Gallinuka chloropusAmOvTpapAceN <td>AI AII/2</td> <td></td> <td>î.</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	AI AII/2		î.						
13. Area gueryhyncho Ac MIP, Oi Tp p p a Ac MIII, 14. Aras queryhenkia Ac Ov, P Tp p p Eex AIII, 15. Aras creecia Ac Ov, Ov Tp p p C AIII, 16. Aras penelope Ac Ac Ov, Ov S p p C AIII, 17. Anyhon fulgula Ac Ov, Ov S p p a Acc AIII, 20. Netta refina Ac Ov, Ov S p p a Acc AIII, 20. Netta refina Ac Ov, Ri M p a Acc AIII, 20. Netta refina Ac Ov, Ri M p a Acc AIII, 21. Breechal cleangula Ac Ov, Ri M p a Acc AIII 22. Mettin choropus Am Ov E a p Acc <t< td=""><td>AII/2</td><td></td><td>1</td><td>1</td><td></td><td>1</td><td></td><td></td><td></td></t<>	AII/2		1	1		1			
14.Anas guerquedulaAc Ov, P Tp p p p_{c} $All fl.15.Anas creecaAcP.Oi, OvTpppCAll fl.17.Aydrya marilaAcOiApaAccAll fl.18.Aydrya ferinaAcOiApaAccAll fl.19.Aydrya ferinaAcOiSppEuceAll fl.19.Aydrya ferinaAcOi, SppaAccNall fl.10.Netta rofinaAcOi, SpaAccNall fl.21.Mergelina is alleliusAcOiSpaAccNall fl.22.Mergelina is allelius is alleliusAcOiSpaAccNall fl.23.Bateo bateoTMpTppppAcNall fl.24.Falco tummeulusAmOvMoppAccNall fl.25.Gallinula chloropusAmOvMoapAccNall fl.26.Fulicia avaAmOvMoapAccNall fl.27.Fanelius vanellusAmOvMoapAccNall fl.28.Gallinula chloropusAmOvMoapAccNall fl.29.Acttis hypolaco$	AII/1, AIII/1					-			
15. Ams crecca Ac P, Oi, Ov Tp p p C All1, 16. Ams penelope Ac P, Oi, Ov S p p a Acc All1, 17. Aythya fulgula Ac Oi, Ov S p p Eac All1, 19. Aythya fulgula Ac Oi, Ov S p p Eac All1, 20. Netta rufina Ac Oi, Ov S p p a Acc All 21. Bucco hardin computa Ac Oi, S p p a Acc All 23. Buteo bueo T Mp Tp p p Ac All 23. Buteo bueo T Mp Tp p p Ac NI 24. Falco timuneculus Ac Mp Tp p p Ac All 25. Gellinua chloropus Am Ov Mo a p Acc NI 27. I	AII/1, AIII/1					17		1	
16 Anas penelope Ac P. Oi S p p p C All1, 17 Aythya fuligula Ac Oi, Ov S p p p Eac All1, 19. Aythya fuligula Ac Oi, Ov S p p P Eac All1, 19. Aythya fuligula Ac Oi, Ov S p p P Eac All1, 10. Netta rufna Ac OX, IM M p a Acc All1, 21. Mergelines idlellas Ac Oi S p a Acc All1, 22. Mergelines idlellas Ac Oi S p a Ac N 23. Bateo bateo T Mp Tp p p Ac All 24. Failot inmunculus Am Ov Mo a p Acc N 23. Gadinuid chioropus Am Ov Mo a p Acc N	AII/1 AII/1, AIII/2		1		1			1 1	
17Avthya marilaAcOiApaAccMI2,18Avthya firinaAcOi, OvSppEucAll1,19Avthya firinaAcMpEppEucAll1,20.Netta rifinaAcOv, RiMpaAccAll1,21.Bucephalo clangulaAcOiSpaAccNI23.Buteo buteoTMpTpppAccNI23.Buteo buteoTMpTpppAccNI24.Falco tinnunculusTMpTpppAccNI25.Gallinula chloropusAmOvEapAccNI26.Gharadrus dubiaAmOvMoapAccNI27.VanellusAmOvMoapAccNI28.Charadrus dubiaAmOvMoapAccNI29.Actitis hypoleucosAmPSapAccNI31.Tringa orlvropusAmPSapAccNI32.Larus canusAcNiNiTringa orlvropusAmPSapAcc33.Tringa orlvropusAmPSapAccNINI34.Chricincorphalus rinbichhellis <td< td=""><td>AII/1, AIII/2</td><td></td><td>Â</td><td>-</td><td></td><td>, ,</td><td></td><td></td><td></td></td<>	AII/1, AIII/2		Â	-		, ,			
18Asthya futgulaAcOi, OvSppEucAllT,19Aythya ferinaAcMpEpppEucAllT,10Asta rafinaAcOv, RiMpaAccAll21.Bucephala clangulaAcOvSpaAccAll22.Mergeliku sabeliusAcOiSpaAccNI23.Buce bateoTMpTpppAccNI24.Falco tinnunculusTMpTpppAccNI25.Gallinula chioropusAmOvEapAccAll26.Fulica atraAcMpTpppAccAll27.Vanellus vanellusAmOvMoppAccNI28.Charadrus dubiusAmOvMoapAccNI30.Tringa ochropusAmPSapAccNI31.Larus cachinans/michabellisAcSTpppEucAll33.Larus cachinans/michabellisAcSTpppAccNI34.Chroicoophalus ridibundusAcOiSppAccNI35.Childonius hyprindusAcNiTinga pAccNiAccNi36.Childonius hyprindus </td <td>AII/2, AIII/2</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	AII/2, AIII/2								
19Arthou FerinaAcMpEppFeppEucAII/1,20.Netta rufinaAcOv, RiMpaAccAlt21.Bucephala clangulaAcOiSpaAccAlt22.Mergellus albellusAcOiSpaAccAlt23.Buteo buteoTMpTpppAccN24.Falco immunculusTMpTpppAccN25.Gallinula chloropusAmOvEapAccN26.Gutania chloropusAmOvMoppAccN27.Vancilus vanellusAmOvMoapAccN29.Actitis hypoleucosAmOvMoapAccN31.Tringa culvopusAmPSapAccN31.Larus canusAcNpTpppEucAlt32.Larus canusAcNpTpppAccN33.Larus canusAcOvFapAccN34.Chricocophalus ridhundusAcMpTpppEucAlt35.Chlidonias hybridusAcOvEapAccN36.Chlidonias hybridusAcOv <td< td=""><td>AII/2, AIII/2</td><td></td><td></td><td>1</td><td></td><td></td><td></td><td></td><td></td></td<>	AII/2, AIII/2			1					
20.Netta rufinaAcOv, RiMpaAccAll21.Bucephala clangulaAcOiSpaAcAll22.Mergellus albellusAcOiSpaAcN23.Buteo buteoTMpTppppAcN23.Buteo buteoTMpTppppAcN24.Falco tinumuculusTMpTppppCN25.Gallinula chloropusAmOvEapAccAUI/1,27.Vanellus vanellusAmOvMoapAccN28.Charadrius dubiusAmOvMoapAccN29.Actiis hypoleucosAmOvMoapAccN30.Tringg orbropusAmPSapAccN31.Trinsg arythropusAcSppAccN34.Larus cachinanz/michahellisAcSTpppAccN35.Chlidonias ingerAcOvMapAccN36.Chlidonias ingerAcOvFapAccN37.Sterna hirundoAcOvTpapAccN38.Cuculus canorusTOvTpa	AII/1, AIII/2		-			-)			
1Bucephala clangulaAcOiSpaAcAl21Mergellus albélusAcOiSpaAcN23Buteo buteoTMpTpppAcN24Falco timunculusTMpTpppAcN25Gallmula chloropusAmOvEapAcAl26Gallmula chloropusAmOvMoppAcAl27Vanellus vanellusAmOvMoapAccN28Charadrius dubiusAmOvMoapAccN29Actitis hypoleucosAmOvTpapAccN31Tringa orwhopusAmPSapAccN31Larus canusAcOiSppAcAl32Larus canusAcOiSppAccAl33Larus canusAcOiSppAccAl34Chroicocephalus ridibandusAcOvMapAccN35Childonias higerAcOvEapAccN36Chlidonias higerAcMpTpapAccN37Sterna hirundoAcMpTpapAccN38 <td>AII/2</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	AII/2								
22.Mergelus albellusAcOiSpaAcN23.Buteo butunculusTMpTpppAcN24.Falco immunulusTMpTpppCN25.Gallinula chloropusAmOvEapAccAU26.Fullica atraAcMpTpppEAUI/1,27.Vanilis hypoleucosAmOvMoapAccAU28.Charadrius dubiusAmOvMoapAccN30.Tringa ochropusAmPSapAccN31.Tringa ochropusAmPSapAccN33.Larus canusAcOvTpppEucAI34.Chroicoephalus ridibundusAcMpTpppEucAI35.Chlidonias hybridusAcOvEapAccN36.Chlidonias hybridusAcOvEapAccN37.Sterna hirundoAcOvFapAccN38.Cuculus canousTOvTpapAccN39.Alecdo athisAcMpEapAccN38.Cuculus canousTOvTpapAccN<	AII/2			<u>,</u>		,		6	
23.Buteo buteoTMpTpppAcN24.Falco immunculusTMpTpppCN25.Galimula chloropusAmOvEapAccAll26.Fulica atraAcMpTpppEucAll/27.Vranellus vanellusAmOvMoappAccAll28.Charadrus dubiusAmOvMoapAccN29.Actitis hypoleucosAmOvTpapAccN30.Tringa othropusAmPSapAccN31.Tringa othropusAmPSapAccN32.Larus canusAcOiSppEucAll33.Chroicocephalus ridhundusAcOvMapAccN34.Chroicocephalus ridhundusAcOvEapAccN35.Childonias hybridusAcOvEapAccN36.Childonias nigerAcOvEapAccN37.Sterna hrundoAcOvEapAccN36.Childonias nigerTSTpapAccN37.Sterna hrundoAcNTSTp <td< td=""><td>N/A</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<>	N/A								
24.Falco immuculusTMpTpppCN25.Gallinula chloropusAmOvEapAccAI26.Fullica araAcMpTpppEucAII27.Vanellus vanellusAmOvMoppAccAII28.Charadrus dubiusAmOvMoapAccN30.Tringg ochropusAmPSapAccN31.Tringg ochropusAmPSapAccN32.Larus cachimans/michahellisAcSTpppEucAII33.Larus cachimans/michahellisAcNNapAccN34.Chroicocephalus ridibundusAcMpTpppEucAII35.Childonias nigerAcOvEapAccN36.Childonias nigerAcMpTpapAccN39.Alcedo atthisAcMpTpapAccN39.Alcedo atthisAcMpTpapAccN39.Alcedo atthisAcMpTpapAccN39.Alcedo atthisAcMpTpapAccN39.Alcedo atthisAcMpTpap </td <td>N/A</td> <td></td> <td></td> <td></td> <td>Тр</td> <td>Мр</td> <td></td> <td>0</td> <td>23.</td>	N/A				Тр	Мр		0	23.
25.Gallinula chloropusAmOvEapAccAll/l,26.Fulica arraAcMpTpppEucAll/l,27.Vanellus vanellusAmOvMoappAccAll/l,28.Charadrius dubiusAmOvMoapAccAll/l,29.Actifi hypoleucosAmOvMoapAccN30.Tringo ochropusAmPSapAccAll31.Tringo achropusAmPSapAccAll32.Larus canisAcSTpppEucAll33.Childonias nigerAcOvMapAccN34.Chroicocephalus ridiundusAcOvEapAccN35.Childonias nigerAcOvEapAccN36.Clubonias nigerTOvTpapAccN37.Sterna hirundoAcOvTpapAccN38.Cuculus canorusTSTpapAccN39.Alceda athisAcMpTpapAccN44.Galerida cristataTSTpapAccN45.Alhus spinolettaTOvTpa<	N/A	С	p	p	-	Мр	Т	Falco tinnunculus	24.
26.Fulca araAcMpTpppEucAII/1,27.Vanellus vanelluisAmOvMoppAcAI28.Charadrus dubiusAmOvMoapAccN29.Actuits hypoleucosAmOvTpapAccN30.Tringa erythropusAmPSapAccAN31.Tringa erythropusAmPSapAccAI32.Larus cachinans/nichahellisAcSTpppAccAI33.Larus canusAcOiSppAccAI34.Chroicocephalus ridibundusAcMpTpppEucAI35.Childonias hypridusAcOvEapAccN36.Childonias higerAcOvEapAccN37.Sterna hirundoAcOvEapAccN38.Cuculus canorusTOvTpapAccN39.Alcedo athisAcMpTpapAccN40.Dendrocopos majorTSTpapAccN41.Galerida cristataTOvTpapAccN43.Hirundo rusticaTOvTpap	AII/2	Acc			Ē	Ov	Am	Gallinula chloropus	
28.Charadrius dubiusAmOvMoapAccN29.Actitis hypoleucosAmOvTpapAccN30.Tringa exhropusAmPSapAccN31.Tringa exhropusAmPSapAccN32.Larus cachimans/nichahellisAcSTpppAccAd33.Larus canusAcOiSppAcAd34.Chroicocephalus ridibundusAcMpTpppEucAd35.Childonias hybridusAcOvMapAccN36.Childonias nigerAcOvEapAccN37.Sterna hirundoAcOvEapAccN38.Cucukus canorusTOvTpapAccN39.Alcedo atthisAcMpEapAccN41.Galerida cristataTSMopaAccN42.Alauda arvensisTMpMoppAcAd43.Hirundo rusticaTOvTpapAccN44.Riparia ripariaTOvTpapAccN44.Riparia ripariaTOvTpapAcc <td>AII/1, AIII/2</td> <td>Euc</td> <td>р</td> <td>р</td> <td>Тр</td> <td>Мр</td> <td>Ac</td> <td>Fulica atra</td> <td></td>	AII/1, AIII/2	Euc	р	р	Тр	Мр	Ac	Fulica atra	
29.Actilis hypoleucosAmOvTpapAccN30.Tringa ochropusAmPSapAccN31.Tringa crythropusAmPSapAccN33.Larus cachinnans/nichahellisAcSTpppEucAI33.Larus cachinnans/nichahellisAcOiSppAccAI34.Chroicocephalus ridibundusAcOvMapAccN35.Childonias hybridusAcOvMapAccN36.Childonias hybridusAcOvEapAccN37.Sterna hirundoAcOvEapAccN39.Alcedo atthisAcMpEapAccN40.Dendrocopos majorTSTpapAccN42.Aluda arvensisTMpMopaAccN44.Riparia ripariaTOvTpapAccN45.Anthus spinolettaTOvTpapAccN44.Riparia ripariaTOvTpaaAccN45.Anthus spinolettaTOvTpaaAccN46.Motacilla clavaTOvTpa <td>AII/2</td> <td>Ac</td> <td>р</td> <td>р</td> <td>Mo</td> <td>Ov</td> <td>Am</td> <td>Vanellus vanellus</td> <td>27.</td>	AII/2	Ac	р	р	Mo	Ov	Am	Vanellus vanellus	27.
30.Tringa ochropusAmPSapAccN31.Tringa erythropusAmPSapAccAll32.Larus cachinans/nichahellisAcSTpppEucAll33.Larus canusAcOiSppAccAll34.Chroicocephalus ridibundusAcMpTpppEucAll35.Chitanias hybridusAcOvEapAccN36.Chitanias hybridusAcOvEapAccN37.Sterna hirundoAcOvEapAccN38.Cuculus canorusTOvTpapAccN39.Alcedo athisAcMpEapAccN40.Dendrocopos majorTSTpapAccN41.Galerida cristataTSMopaAccN43.Hirundo rusticaTOvTpapAccN44.Riparia ripariaTOvTppaaccN45.Anthus spinolettaTOvTppaaccN46.Motacilla claretaAmOv, RiEppAccN47.Motacilla flavaTOvTppa<	N/A	Acc	р	а	Mo	Ov	Am	Charadrius dubius	28.
31.Tringa erythropusAmPSapAccAll32.Larus cachinans/nichahellisAcSTpppEucAll33.Larus canusAcOiSppAccAll34.Chroicocephalus ridibundusAcMpTpppEucAll35.Chridonias higerAcOvMapAccN36.Childonias higerAcOvEapAccN37.Sterna hirundoAcOvEapAccN38.Cuculus canorusTOvTpapAccN39.Alcedo atthisAcMMpEapAccN40.Dendrocopos majorTSTpapAccN41.Galerida cristataTSMopaAccN42.Aluda arvensisTMpMoppAccN43.Hirundo rusticaTOvTpapAccN44.Riparia ripariaTOvTpapAccN45.Anthus spinolettaTOvTpapAccN46.Motacilla flavaTOvTppaAccN47.Motacilla flavaTMp,OiTppa </td <td>N/A</td> <td>Acc</td> <td>р</td> <td>а</td> <td>Тр</td> <td>Ov</td> <td>Am</td> <td>Actitis hypoleucos</td> <td>29.</td>	N/A	Acc	р	а	Тр	Ov	Am	Actitis hypoleucos	29.
32.Larus cachimans/michahellisAcSTppppEucAI33.Larus canusAcOiSpppAcAI34.Chriocephalus ridibundusAcMpTpppEucAI35.Chlidonias hybridusAcOvEapAccN36.Chlidonias ingerAcOvEapAccN37.Sterna hirundoAcOvEapAccN38.Cuculus canorusTOvTpapAccN39.Alcedo athisAcMpEapAccN40.Dendrocopos majorTSTpapAccN41.Galerida cristataTOvTpapAccN43.Hirundo rusticaTOvTpapAccN44.Riparia ripariaTOvTpapAcN45.Anthus spinolettaTOvTpapAcN46.Motacilla flavaTOvEapAcN47.Motacilla flavaTOvTpapAcN48.Mirando rusticaTOvEapAcN49.Antins spinolettaTOvEpa<	N/A	Acc	р	а			Am	0 1	
33.Larus canusAcOiSppAcAI34.Chroicocephalus ridibundusAcMpTpppEucAI35.Childonias hybridusAcOvMapAccN36.Childonias hybridusAcOvEapAccN37.Sterna hirundoAcOvEapAccN38.Cuculus canorusTOvTpapAccN39.Alcedo atthisAcMpEapAccN40.Dendrocopos majorTSTpapAccN41.Galerida cristataTSMopaAccN42.Alcuda arvensisTMpMoppAcAL44.Riparia ripariaTOvTpapAccN45.Anthus spinolettaTOvTppaAccN46.Motacilla flavaTOvTppaAccN47.Motacilla albaTOvFpppCAI50.Starmus vulgarisTMpEppAccN48.Motacilla albaTOvKEapAccN49.Lanius exclutorTMp,OiTppaAcc <t< td=""><td>AII/2</td><td></td><td>р</td><td>а</td><td></td><td></td><td></td><td></td><td></td></t<>	AII/2		р	а					
34.Chriococephalus ridibundusAcMpTpppEucAI35.Chlidonias hybridusAcOvMapAccN36.Chlidonias nigerAcOvEapAccN37.Sterna hirundoAcOvEapAccN38.Cuculus canorusTOvTpapAccN39.Alcedo authisAcMpEapAccN40.Dendrocopos majorTSTpapAccN41.Galerida cristataTSMopaAccN41.Galerida cristataTOvTpapAccN41.Galerida cristataTOvTpapAccN42.Altando aversicaTOvTpapAccN43.Hirundo rusticaTOvTpapAccN44.Riparia ripariaTOvTpapAccN45.Anthus spinolettaTOvTpapAccN46.Motacilla libaTOvTppaAccN47.Motacilla giarisTMp,OiTppaAccN48.Motacilla albaTSEppCAI<	AII/2		р	р					
35.Childonias hybridusAcOvMapAccN36.Childonias nigerAcOvEapAccN37.Sterna hirundoAcOvEapAccN38.Cuculus canorusTOvTpapAccN39.Alcedo athisAcMpEapAccN40.Dendrocopos majorTSTpapAccN41.Galerida cristataTSMopaAccN42.Alauda arvensisTMpMoppAccN43.Hirundo rusticaTOvTpapAccN44.Riparia ripariaTOvTpapAccN45.Anthus spinolettaTOvTpapAccN46.Motacilla flavaTOvTpapAccN47.Motacilla albaTOvEapAccN48.Motacilla albaTSEppaAccN49.Lanius excubitorTMp,OiTppaAccN50.Surmus vulgarisTMpEppCAll51.Pica picaTSEppAccN5	AII/2		р	р					
36.Chlidonias nigerAcOvEapAccN37.Sterna hirundoAcOvEapAccM38.Cuculus canorusTOvTpapAccM39.Alcedo atthisAcMpEapAccM40.Dendrocopos majorTSTpapAccN41.Galerida cristataTSMopaAccN42.Alauda arvensisTMpMoppAccN43.Hirundo rusticaTOvTpapAccN44.Riparia ripariaTOvTpapAccN45.Anthus spinolettaTOvTpapAccN46.Motacilla flavaTOvTpapAccN47.Motacilla albaTOvTpapAccN48.Motacilla albaTOvEpaAccN50.Sturnus vulgarisTMpEppaAccN51.Pica picaTSEppaAccN52.Corvus corone cornixTSEppAccN53.Locustella luscinioidesAmOvEapAccN </td <td>AII/2</td> <td></td> <td></td> <td></td> <td></td> <td>-</td> <td></td> <td></td> <td></td>	AII/2					-			
37.Sterna hirundoAcOvEapAccA38.Cuculus canorusTOvTpapAccN39.Alcedo atthisAcMpEapAccN39.Alcedo atthisAcMpEapAccN40.Dendrocopos majorTSTpapAccN41.Galerida cristataTSMopaAccN42.Alauda arvensisTMpMoppAccAl43.Hirundo rusticaTOvTpapAccN45.Anthus spinolettaTOvTpapAccN45.Anthus spinolettaTOvTpapAcN46.Motacilla flavaTOvEapAcN47.Motacilla albaTOvEapAcN48.Motacilla albaTOvEapAcN50.Sturmus vulgarisTMpEpaAccN51.Pica picaTSEppaAccAl52.Corvus monedulaTSEppAcN53.Locustella luscinioidesAmOvEapAccN54. </td <td>N/A</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>· ·</td> <td></td>	N/A							· ·	
38.Cuculus canorusTOvTpapAccN39.Alcedo athisAcMpEapAccN40.Dendrocopos majorTSTpapAccN41.Galerida cristataTSMopaAccN42.Alauda arvensisTMpMoppAccN43.Hirundo rusticaTOvTpapAccN44.Riparia ripariaTOvTpapAccN45.Anthus spinolettaTOvTpapAccN46.Motacilla flavaTOvTpapAccN47.Motacilla cinereaAmOv, RiEpaAccN48.Motacilla flavaTOvEapAccN49.Lanius excubitorTMp,OiTppaAccN50.Sturnus vulgarisTMpEppAccAlt51.Corvus corone cornixTSEppAccN55.Locustella luscinioidesAmOvEapAccN56.Acrocephalus schoenobaenusAmOvEapAccN57.Acrocephalus schoenobaenusAmOvEap<	N/A		Â					0	
39.Alcedo atthisAcMpEapAcAc40.Dendrocopos majorTSTpapAccN41.Galerida cristataTSMopaAccN42.Alauda arvensisTMpMoppAcAI43.Hirundo rusticaTOvTpapAccN44.Riparia ripariaTOvTpapAccN44.Riparia ripariaTOvTpapAccN45.Anthus spinolettaTOvTpapAccN46.Motacilla flavaTOvTpaAccN47.Motacilla clareeaAmOv, RiEpaAccN48.Motacilla clabaTOvEapAcN50.Sturnus vulgarisTMp, OiTppaAccN51.Pica picaTSEppCAI52.Corvus coraxTSTSTppAcN54.Corvus coraxTSTSTppAcN55.Locustella luscinioidesAmOvEapAccN56.Acrocephalus sciepaceusAmOvEapAccN<	AI		î.						
40.Dendrocopos majorTSTpapAccN41.Galerida cristataTSMopaAccN42.Alauda arvensisTMpMoppAcAI43.Hirundo rusticaTOvTpapAccN44.Riparia ripariaTOvTpapAccN45.Anthus spinolettaTOvTpapAcN46.Motacilla flavaTOvTpapAcN47.Motacilla cinereaAmOv, RiEpaAccN48.Motacilla albaTOvEapAcN49.Lanius excubitorTMp, OiTppaAccN50.Sturnus vulgarisTMpEppCAI51.Pica picaTSEppAccAI52.Corvus monedulaTSEppAccN53.Corvus coraxTSTSpAccN54.Acrocephalus schoenobaenusAmOvEapAccN55.Locustella luscinioidesAmOvEapAccN56.Acrocephalus schoenobaenusAmOvEapAcc	N/A								
41.Galerida cristataTSMopaAccN42.Alauda arvensisTMpMoppAcAII43.Hirundo rusticaTOvTpapAccN44.Riparia ripariaTOvTpapAccN44.Riparia ripariaTOvTpapAcN45.Anthus spinolettaTOvTppaAcN46.Motacilla flavaTOvTpapAcN47.Motacilla cinereaAmOv, RiEpaAccN48.Motacilla albaTOvEapAccN49.Lanius excubitorTMp, OiTppaAccN50.Sturnus vulgarisTMpEppcAII51.Pica picaTSEppCAII53.Corvus coraxTSTppAccN55.Locustella luscinioidesAmOvEapAccN58.Acrocephalus schoenobaenusAmOvEapAccN59.Sylvia atricapillaTOvEapAccN59.Sylvia taricapillaTOvEapAccN <td>AI N/A</td> <td></td> <td></td> <td></td> <td></td> <td>a</td> <td>T</td> <td>-</td> <td></td>	AI N/A					a	T	-	
42.Alauda arvensisTMpMopppAcAI43.Hirundo rusticaTOvTpapAccN44.Riparia ripariaTOvTpapAccN44.Riparia ripariaTOvTpapAccN45.Anthus spinolettaTOvTppaAcN46.Motacilla flavaTOvTpapAcN47.Motacilla cinereaAmOv, RiEpaAccN48.Motacilla albaTOvEapAcN49.Lanius excubitorTMp,OiTppaAccN50.Sturnus vulgarisTMpEppCAI51.Pica picaTSEppAcAI53.Corvus corone cornixTSEppAcN54.Corvus coraxTSTSPpAcN55.Locustella luscinioidesAmOvEapAccN56.Acrocephalus schoenobaenusAmOvEapAccN57.Acrocephalus schoenobaenusAmOvEapAccN58.Acrocephalus schoenobaenusAmOvEa </td <td>N/A N/A</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>1 5</td> <td></td>	N/A N/A							1 5	
43.Hirundo rusticaTOvTpapAccN44.Riparia ripariaTOvTpapAcN45.Anthus spinolettaTOvTppapAcN46.Motacilla flavaTOvTpapAcN47.Motacilla cinereaAmOv, RiEpaAccN48.Motacilla albaTOvEapAcN49.Lanius excubitorTMp, OiTppaAccN50.Sturnus vulgarisTMpEppCAll51.Pica picaTSEppCAll52.Corvus corone cornixTSEppAccN53.Corvus corone cornixTSEppAcN54.Corvus corone cornixTSTNPPAcN55.Locustella luscinioidesAmOvEapAccNN56.Acrocephalus schoenobaenusAmOvEapAccNN58.Acrocephalus arundinaceusAmOvEapAccNN59.Sylvia articapillaTOvEapAccNN60.Sylvia communis </td <td>AII/2</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	AII/2								
44.Riparia ripariaTOvTpapAcN45.Anthus spinolettaTOvTppaAcN46.Motacilla flavaTOvTpapAcN47.Motacilla cinereaAmOv, RiEpaAccN48.Motacilla albaTOvEapAcN49.Lanius excubitorTMp, OiTppaAccN50.Sturnus vulgarisTMpEppCAII51.Pica picaTSEppCAII52.Corvus monedulaTSEppAccN53.Corvus corone cornixTSEppAcN54.Corvus corona xTSTNpPaAccN55.Locustella luscinioidesAmOvEapAccN56.Acrocephalus schoenobaenusAmOvEapAccN58.Acrocephalus arundinaceusAmOvEapAccN59.Sylvia atricapillaTOvEapAccN60.Sylvia communisTOvEapAccN61.Phylloscopus collybitaTOvEap </td <td>N/A</td> <td></td> <td>-</td> <td>÷</td> <td></td> <td></td> <td></td> <td></td> <td></td>	N/A		-	÷					
45.Anthus spinolettaTOvTppaAcN46.Motacilla flavaTOvTpapAcN47.Motacilla cinereaAmOv, RiEpaAccN48.Motacilla albaTOvEapAcN49.Lanius excubitorTMp,OiTppaAccN50.Sturnus vulgarisTMpEppCAl51.Pica picaTSEppEucAl52.Corvus monedulaTSEppAccN53.Corvus coraxTSEppAcN54.Corvus coraxTSTNovEapAccN55.Locustella luscinioidesAmOvEapAccN56.Acrocephalus schoenobaenusAmOvEapAccN57.Acrocephalus arundinaceusAmOvEapAccN59.Sylvia atricapillaTOvTpapAccN60.Sylvia communisTOvEapAccN61.Phylloscopus collybitaTOvTpapAccN63.Turdus menulaTMpEap <td>N/A</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	N/A								
46.Motacilla flavaTOvTpapAcN47.Motacilla cinereaAmOv, RiEpaAccN48.Motacilla albaTOvEapAcN49.Lanius excubitorTMp, OiTppaAccN50.Sturnus vulgarisTMpEppCAl51.Pica picaTSEppEucAl52.Corvus monedulaTSEppCAl53.Corvus cornaxTSTSEpAccN54.Corvus coraxTSTNPAccN55.Locustella luscinioidesAmOvEapAccN56.Acrocephalus schoenobaenusAmOvEapAccN58.Acrocephalus arundinaceusAmOvEapAccN59.Sylvia atricapillaTOvEapAccN60.Sylvia communisTOvEapAccN61.Phylloscopus collybitaTOvTapAccN63.Turdus merulaTOvMopaAccN64.Turdus pilarisTMpEapAcc<	N/A				1			1 1	
47.Motacilla cinereaAmOv, RiEpaAccN48.Motacilla albaTOvEapAcN49.Lanius excubitorTMp, OiTppaAccN50.Sturnus vulgarisTMpEppCAll51.Pica picaTSEppEucAll52.Corvus monedulaTSEppCAll53.Corvus corone cornixTSEppCAll54.Corvus coraxTSTPpAccN55.Locustella luscinioidesAmOvEapAccN56.Acrocephalus schoenobaenusAmOvEapAccN57.Acrocephalus scipaceusAmOvEapAccN58.Acrocephalus arundinaceusAmOvEapAccN59.Sylvia atricapillaTOvEapAccN60.Sylvia communisTOvEapAccN62.Saxicola torquatusTOvTapAccN63.Turdus merulaTMpEapAccN64.Turdus pilarisTMpSpaAcc <td>N/A</td> <td></td> <td></td> <td>-</td> <td></td> <td></td> <td></td> <td></td> <td></td>	N/A			-					
48.Motacilla albaTOvEapAcN49.Lanius excubitorTMp, OiTppaAccN50.Sturnus vulgarisTMpEppCAll51.Pica picaTSEppEucAll52.Corvus monedulaTSEpaAccAll53.Corvus corae cornixTSEppCAll54.Corvus coraxTSTpppAcN55.Locustella luscinioidesAmOvEapAccN56.Acrocephalus schoenobaenusAmOvEapAccN57.Acrocephalus arundinaceusAmOvEapAccN59.Sylvia atricapillaTOvEapAccN60.Sylvia conmunisTOvEapAccN61.Phylloscopus collybitaTOvTpapAccN62.Saxicola torquatusTMpEapAccN63.Turdus merulaTMpEapAccN64.Turdus pilarisTMpSpaAccAll	N/A						Am		
49.Lanius excubitorTMp, OiTppaAccN50.Sturnus vulgarisTMpEpppCAI51.Pica picaTSEppEuceAI52.Corvus monedulaTSEpaAccAI53.Corvus corone cornixTSEppCAI54.Corvus coraxTSTppppAccN55.Locustella luscinioidesAmOvEapAccN56.Acrocephalus schoenobaenusAmOvEapAccN57.Acrocephalus schoenobaenusAmOvEapAccN58.Acrocephalus arundinaceusAmOvEapAccN59.Sylvia atricapillaTOvEapAccN60.Sylvia communisTOvEapAccN61.Phylloscopus collybitaTOvTpapAccN62.Saxicola torquatusTOvMopaAccN63.Turdus merulaTMpEapAcN64.Turdus pilarisTMp, OiSpaAccAI	N/A	Ac	р	÷	Е		Т		48.
50.Sturnus vulgarisTMpEppCAI51.Pica picaTSEppEucAI52.Corvus monedulaTSEpaAccAI53.Corvus corone cornixTSEppCAI54.Corvus coraxTSTpppAccN55.Locustella luscinioidesAmOvEapAccN56.Acrocephalus schoenobaenusAmOvEapAccN57.Acrocephalus scirpaceusAmOvEapAccN58.Acrocephalus arundinaceusAmOvEapAccN59.Sylvia atricapillaTOvEapAccN60.Sylvia communisTOvEapAccN61.Phylloscopus collybitaTOvMopaAccN62.Saxicola torquatusTOvMopaAccN63.Turdus merulaTMpEapAcAI64.Turdus pilarisTMp, OiSpaAccAI	N/A			р	Тр	Mp, Oi			49.
51.Pica picaTSEppEucAI52.Corvus monedulaTSEpaAccAI53.Corvus corone cornixTSEppCAI54.Corvus coraxTSTpppAcN55.Locustella luscinioidesAmOvEapAccN56.Acrocephalus schoenobaenusAmOvEapAccN57.Acrocephalus scirpaceusAmOvEapAccN58.Acrocephalus arundinaceusAmOvEapAccN59.Sylvia atricapillaTOvEapAccN60.Sylvia communisTOvEapAccN61.Phylloscopus collybitaTOvTpapAccN62.Saxicola torquatusTOvMopaAccN63.Turdus merulaTMpEapAcAI64.Turdus pilarisTMp, OiSpaAccAI	AII/2	С	р	р			Т		50.
53.Corvus corone cornixTSEppCAI54.Corvus coraxTSTpppAcN55.Locustella luscinioidesAmOvEapAcN56.Acrocephalus schoenobaenusAmOvEapAccN57.Acrocephalus scirpaceusAmOvEapAccN58.Acrocephalus arundinaceusAmOvEapAccN59.Sylvia atricapillaTOvEapAccN60.Sylvia communisTOvEapAccN61.Phylloscopus collybitaTOvTpapAccN62.Saxicola torquatusTOvMopaAccN63.Turdus merulaTMpEapAccAI64.Turdus pilarisTMp, OiSpaAccAI	AII/2	Euc	р						51.
54.Corvus coraxTSTpppAcN55.Locustella luscinioidesAmOvEapAcN56.Acrocephalus schoenobaenusAmOvEapAccN57.Acrocephalus scirpaceusAmOvEapAccN58.Acrocephalus arundinaceusAmOvEapAccN59.Sylvia atricapillaTOvEapAccN60.Sylvia communisTOvEapAccN61.Phylloscopus collybitaTOvTpapAccN62.Saxicola torquatusTOvMopaAccN63.Turdus merulaTMpEapAcAl64.Turdus pilarisTMp, OiSpaAccAl	AII/2		а						
55.Locustella luscinioidesAmOvEapAccN56.Acrocephalus schoenobaenusAmOvEapAccN57.Acrocephalus scirpaceusAmOvEapAccN58.Acrocephalus arundinaceusAmOvEapAccN59.Sylvia atricapillaTOvEapAccN60.Sylvia communisTOvEapAccN61.Phylloscopus collybitaTOvTpapAccN62.Saxicola torquatusTOvMopaAccN63.Turdus merulaTMpEapAccAl64.Turdus pilarisTMp, OiSpaAccAl	AII/2		р						
56.Acrocephalus schoenobaenusAmOvEapAccN57.Acrocephalus scirpaceusAmOvEapAccN58.Acrocephalus arundinaceusAmOvEapAccN59.Sylvia atricapillaTOvEapAccN60.Sylvia communisTOvEapAccN61.Phylloscopus collybitaTOvTpapAccN62.Saxicola torquatusTOvMopaAccN63.Turdus merulaTMpEapAcAl64.Turdus pilarisTMp, OiSpaAccAl	N/A		р	-					
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58.Acrocephalus arundinaceusAmOvEapAcN59.Sylvia atricapillaTOvEapAccN60.Sylvia communisTOvEapAccN61.Phylloscopus collybitaTOvTpapAccN62.Saxicola torquatusTOvMopaAccN63.Turdus merulaTMpEapAcAl64.Turdus pilarisTMp, OiSpaAccAl	N/A		-						
59.Sylvia atricapillaTOvEapAccN60.Sylvia communisTOvEapAcN61.Phylloscopus collybitaTOvTpapAcN62.Saxicola torquatusTOvMopaAccN63.Turdus merulaTMpEapAcAl64.Turdus pilarisTMp, OiSpaAccAl	N/A							1 1	
60.Sylvia communisTOvEapAcN61.Phylloscopus collybitaTOvTpapAcN62.Saxicola torquatusTOvMopaAccN63.Turdus merulaTMpEapAcAI64.Turdus pilarisTMp, OiSpaAccAI	N/A		<u>^</u>						
61.Phylloscopus collybitaTOvTpapAcN62.Saxicola torquatusTOvMopaAccN63.Turdus merulaTMpEapAcAI64.Turdus pilarisTMp, OiSpaAccAI	N/A		î.						
62.Saxicola torquatusTOvMopaAccN63.Turdus merulaTMpEapAcAI64.Turdus pilarisTMp, OiSpaAccAI	N/A								
63.Turdus merulaTMpEapAcAI64.Turdus pilarisTMp, OiSpaAccAI	N/A		<u>^</u>						
64. Turdus pilaris T Mp, Oi S p a Acc Al	N/A								
Final Control	AII/2								
US. Initians viscivorus I Mp E a p Acc Al	AII/2 AII/2								
66. Cyanistes caeruleus T S E p p Euc N	AII/2 N/A		-						

1	2	3	4	5	6	7	8	9
67.	Parus major	Т	S	E	р	р	Ac	N/A
68.	Aegithalos caudatus	Т	S	Тр	р	р	Ac	N/A
69.	Passer domesticus	Т	S	Тр	р	р	Ac	N/A
70.	Passer montanus	Т	S	Тр	а	р	Acc	N/A
71.	Fringilla coelebs	Т	Мр	E	р	р	С	N/A
72.	Carduelis chloris	Т	S	E	а	р	Ac	N/A
73.	Carduelis spinus	Т	Mp, Oi	E	р	а	Acc	N/A
74.	Carduelis carduelis	Т	S, Oi	E	р	р	Euc	N/A
75.	Miliaria calandra	Т	Мр	E	р	р	Ac	N/A
76.	Emberiza schoeniclus	Am	Мр	Тр	а	р	Ac	N/A
77.	Emberiza citrinella	Т	S	E	а	р	Ac	N/A

Note: Habitat: Ac – aquatic habitat; Am – amphibious habitat; T – terrestrial habitat; Phenology: Oi – winter visitor; Ov – summer visitor; Ri – scarce in winter; Mp – partial migrant; P - passage migrant; S – resident; Biogeographic origin: S - Siberian; A – Arctic; Tp – Transpalearctic; E – European; M – Mediterranean; Mo – Mongol; Ch – Chinese; Presence in the hiemal and prevernal seasons: p - presence; a - absence; Constancy: Euc – Euconstant species; C – Constant species; Ac – Accesory species; Acc – Accidental species; Birds Directive: AI – Annex I; AII/1 – annex II, part 1; AII/2 – annex II, part 2; AIII/1 – annex III, part 2; AIII/2 – annex III, part 2; AIII/2 – annex III, part 2; N/A - . not available.

Table 2. The values of the index of relation for some Anseriformes species (in the EURING code: Cygolo – Cygnus olor; Anapla – Anas platyrhynchos; Anacre – Anas crecca; Aytfer – Aythya ferina; Aytful – Aythya fuligula; Buccla – Bucephala clangula; Anapen – Anas penelope) from the hiemal aspect.

Species	November	December	January	February	Interval
Cygolo	1.51	4.61	2.12	2.49	2.69
Anapla	50.21	55.30	25.67	54.73	47.12
Anacre	1.93	18.43	16.05	19.90	12.29
Aytfer	27.04	9.22	22.46	14.93	19.12
Aytful	7.72	6.91	28.88	7.96	12.02
Buccla	0.77	0.92	4.49	0.00	1.50
Anapen	8.88	2.30	0.00	0.00	3.82
Other species	1.93	2.30	0.32	0.00	1.43

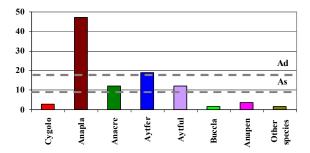


Figure 5. The global participation of the Anseriformes species to the formation of the avifauna in the hiemal period (Cygolo – Cygnus olor; Anapla – Anas platyrhynchos; Anacre – Anas crecca; Aytfer – Aythya ferina; Aytful – Aythya fuligula; Buccla – Bucephala clangula; Anapen – Anas penelope; As - statistic axis; Ad – dominancy axis).

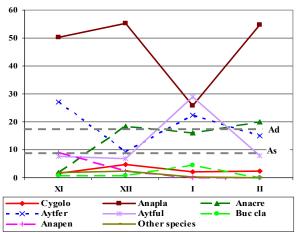


Figure 6. The dynamics of the Anseriformes species from the Budeasa Basin in the hiemal aspect (Cygolo – Cygnus olor; Anapla – Anas platyrhynchos; Anacre – Anas crecca; Aytfer – Aythya ferina; Aytful – Aythya fuligula; Buccla – Bucephala clangula; Anapen – Anas penelope; As - statistic axis; Ad – dominancy axis; XI – November; XII – December; I – January; II - February).

DISCUSSIONS

The results gathered after the research of the avifauna from the Budeasa Basin (hiemal and prevernal aspects, 2008 - 2009) lead to the conclusion that it is fairly rich and varied (77 species), by comparison to those of the other lakes from its vicinity. In the same period of time, there were seen 58 bird species on the Bascov Basin and 75 bird species on the Pitești Basin; but 84 bird species were recorded on the Goleşti Basin. The Passeriformes, Anseriformes and Charadriiformes orders had the biggest number of species in all these basins. There were no surprises regarding the biogeographic origin: the most numerous were the European and Transpalearctic species, a similar situation being recorded on the other basins from the upstream and downstream. Regarding habitat: the most of the species live in the terrestrial habitat, but there is an important number of species in the aquatic habitat, while less species were recorded in the amphibious habitat. This could be said regarding all the artificial lakes from the upper and middle hydrographical basin of the Arges River [3, 4, and 5]. Compared with the avifauna of the Danube Delta (a natural ecosystem) the percentage of the terrestrial species decreased from almost 59% to 45%, as well as that of the amphibious species from 25% to 17%, while the percentage of the aquatic species increased from 17% to 38% [23].

The constancy: the big number of the accidental and accessory species indicates that a huge fluctuation of the bird species is recorded on the Budeasa Basin, because the lake is placed on the Rucăr-Bran migratory route. This fact was remarked also by Matieş which concluded that the hydographic basin of the Argeş River is one of the main ways of passage for many Conete, D., Mestecăneanu, A., Gava, R. - Ecological Researches About The Avifauna Of The Budeasa Basin (Argeş River, Romania) In The Hiemal And Prevernal Aspects (2008-2009)

birds that cross the Carpathian Mountains [17]. The period of the migration, especially the moments of the start of the passage, are the richest for the diversity. The overlapping of the trophic resources, places of breeding, places of rest (favourable factors for the avifauna) provide a high level of biodiversity in the anthropic aquatic basins and it also establishes the premises for the periodic standing in this places (often in important effectives) for some of the aquatic species (in winter, *Anas platyrhynchos* find favourable condition for food and shelter here; even 1000 exemplars could be met, when the temperatures are low and many exemplars come here from the North).

Considering the global participation of the anseriformes species to the formation of the avifauna in the hiemal period, the presence of the mallard (*Anas platyrhynchos*) in the overdominant zone and the presence of the common teal (*Anas crecca*) in the dominance zone are both noticeable. This seems to be a general feature for the anseriforms' dynamics in this season in many water areas of Romania [8].

In the future it is necessary to continue the ornithological studies on the basins from the upper and middle course of the Argeş River, in order to adopt efficient measures for birds and their habitat preservation.

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