

JE POMEMBNO!

It certainly is important!



Leta 1994 sem v uvodniku ene izmed številkk Acrocephalusa nekoliko potožil glede organiziranosti zbiranja podatkov pri nas. Predvsem me je motilo, da ne spremljamo letne dinamike ptičjih populacij. Danes, po več kot desetih letih, je napredek opazen. IWC, štetje bele štoklje, čigre, kosca, če omenim le nekatera odmevnejša. Če sem prav razumel siničke in ščinkavce, ki prihajajo na mojo okensko polico, se šušlja tudi o širše zastavljenem »monitoringu« pogostih ptic. Iz njihovih kljunov v božja ušesa, kakor se reče, kadar pričakujemo nekaj res dobrega. Ali imamo v Sloveniji en ali dva para zlatovrank, pet ali deset parov črnočelih srakoperjev, je z vidika varovanja vrst sicer pomembno, o stanju narave kot vrednote, od katere smo odvisni tudi ljudje, pa nam podatki ne povedo prav nič. O tem izvemo, če spremljamo populacije tistih ptic, ki živijo povsod.

In potem je tu še bistveni del vztrajnih, večletnih štetij ptic – razlaga dobljenih podatkov. Na tej točki smo še vedno tam, kjer smo bili leta 1994. Če želimo populacijske trende pravilno razjasniti, moramo vedeti, kaj jih oblikuje. Ali je ptic manj, ker ne najdejo gnezdišč, ker nimajo hrane, imajo težave v prezimovališčih, zmanjšano plodnost, so se zapletle v konflikt z drugo vrsto...? Golo preštevanje pojočih samcev ima dokumentacijsko vrednost, razloge za spremembe moramo iskati z drugačnimi raziskavami.

S precejšnjo mero nerazumevanja gledam na orjaške »naravovarstvene« projekte, ki zbiranje bioloških podatkov (razen velikosti populacij) povsem marginalizirajo. Če grem še korak dlje, imam včasih občutek, da nekatere celo kriminalizirajo. In to ob tem, da so podatki o prehrani, začetku gnezdenja, velikosti legla, deležu uspešnih gnezd, vzrokih propada gnezd ipd. edini, na katerih lahko temeljijo razlage populacijskih sprememb ptic in posledično morebitni ukrepi. O teh podatkih sicer izvemo tudi iz tujih priročnikov, a prav nihče nam ne zagotavlja, da je pri nas enako. V resnici se pogosto izkaže, da ni – pač posledica pojava, ki ga imenujemo biodiverziteteta. Kako lahko potem določimo datum koscu prijazne košnje, če ne vemo, kdaj pri nas kosce začne in konča z gnezdenjem? Kako lahko ocenimo možnosti preživetja črnočelih srakoperjev, če ne vemo, ali se na naše gnezdišče vsako leto vračajo iste ali druge ptice, in tudi tega ne, kakšna je njihova starostna struktura? Kako bomo morda nekoč pojasnjevali spremembe v populaciji črnoglavk, če ne bomo vedeli, kakšne gnezditvene uspehe so imele v nekaj preteklih sezonah? Zbiranje bioloških podatkov vseh vrst je pomembno, pa če si še tako zagrizen naravovarstvenik. Itak!

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RAST MLADIČEV REPALJŠČICE *Saxicola rubetra* NA LJUBLJANSKEM BARJU (OSREDNJA SLOVENIJA)

Growth of young Whinchats *Saxicola rubetra* on Ljubljansko barje (central Slovenia)

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Na Ljubljanskem barju sem ugotavljal parametre rasti mase in peruti pri mladičih repaljščice *Saxicola rubetra*. Ob izvalitvi so imeli maso med 1.5 in 2.0 g, perut je merila med 6 in 7 mm. Največji prirastki mase, v povprečju 2.5 g na dan, so bili petega dne, največji prirastki peruti, v povprečju 7 mm na dan, so bili sedmega dne. Polovico končne mase so dosegli v starosti 4.5 dni, polovično dolžino peruti v starosti 10.2 dni.

Ključne besede: repaljščica, *Saxicola rubetra*, rast, Ljubljansko barje

Key words: Whinchat, *Saxicola rubetra*, growth, Ljubljansko barje

1. Uvod

Repaljščica *Saxicola rubetra* je v gnezditvenem obdobju značilna vrsta ekstenzivnih travnikov (GLUTZ VON BLOTZHEIM & BAUER 1988, BASTIAN & BASTIAN 1996). Danes jo pestijo številne težave, ki izhajajo iz človekovih posegov v naravo; od spreminjanja travnikov v njive ali pašnike, spreminjanja ekstenzivnih travnikov / pašnikov v intenzivne, do zgodnje košnje (LABHARDT 1988, PFEIFER & BRANDL 1991, BALDI *et al.* 2005, MÜLLER *et al.* 2005, BRITSCHGI *et al.* 2006). Številčnost repaljščice se je v zadnjih 30 letih zmanjšala v 19 od 35 evropskih držav (BASTIAN & BASTIAN 1994, HAGEMEIJER & BLAIR 1997, URQUHART 2002), v nekaterih je postala ogrožena (BIRDLIFE INTERNATIONAL 2004). V Sloveniji njena populacija upada (DENAC & TOME *v tisku*). Vrsto najdemo na rdečem seznamu ogroženih gnezdičk (URADNI LIST 2002).

Repaljščica gnezdi na tleh sredi odprtih travnikov (GLUTZ VON BLOTZHEIM & BAUER 1988) in je precej občutljiva za košnjo. Zgodnejša košnja pomeni manj preživelih gnezd (MÜLLER *et al.* 2005). Prestavljanje košnje na kasnejši datum, z namenom npr. varovanja gnezd travniških gnezdičk, pa po drugi strani zmanjšuje hranilno vrednost pokošene trave (TOME 2000), kar je neugodno z vidika sovzdrževalcev kulturne krajine – kmetov. Ena izmed možnih rešitev konflikta med

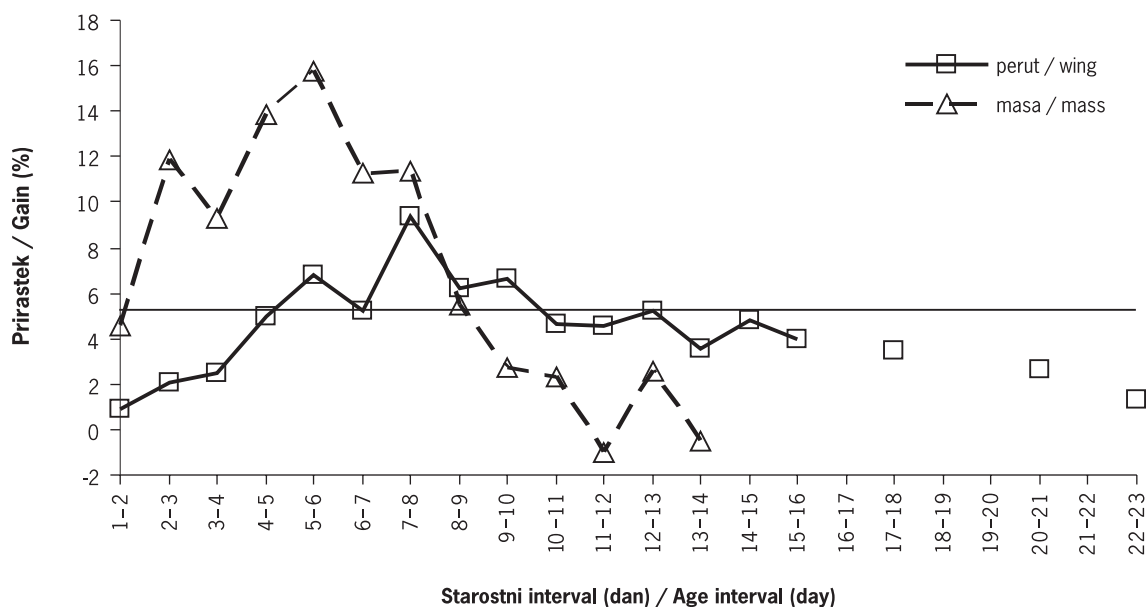
naravo in kmetovanjem je subvencija pozne košnje, s katero kmetom nadomestimo izpad dohodka zaradi slabše kakovosti pozno košene trave. Zato je zelo pomembno določiti natančen datum, kdaj košnja, gledano dolgoročno, ne ogroža več travniških gnezdičk. Eden izmed ključnih podatkov za to je datum speljave mladičev.

Preračunavanje je uveljavljena metoda ugotavljanja dneva speljave mladičev. Ti vsak dan življenja v gnezdu povečujejo telesno maso in dolžino svojih okončin. Če poznamo časovni potek povečevanja, lahko ocenimo njihovo starost iz mase ali dolžine, kadarkoli jih najdemo, in s tem podatkom preračunamo dan začetka in / ali konca gnezdenja, kar je podatek, ki nas v tem primeru zanima.

Namen dela je bil izdelati časovno tabelo, ki bo opisovala rast mladičev repaljščice na podlagi meritev mase in dolžine peruti, s katero bo mogoče natančno ugotoviti starost mladičev v gnezdu.

2. Material in metode

Raziskava je potekala na Ljubljanskem barju. Za raziskovalno območje sem izbral travnike med Bevkami in Ljubljano, ki so eni zadnjih optimalnih gnezditvenih površin za repaljščico (TOME *et al.* 2005).



Slika 1: Prirastki mase in peruti mladičev repaljščice *Saxicola rubetra* na dan kot odstotek končne vrednosti. Več kakor 5% povečanje na dan jemljem za hitro rast.

Figure 1: Mass and wing length gains in young Whinchats *Saxicola rubetra* per day as a percent of their final measurement. Over 5% gain per day is considered as rapid growth.

V letu 2002 sem vsak drugi dan (v primeru slabega vremena tudi z daljšim intervalom) meril dolžino peruti in maso mladih repaljščic. Celotno delo ob posameznem gnezdu je trajalo 15 do 20 minut. Z meritvami na gnezdu sem prenehal, ko je prvi mladič zaradi prisotnosti človeka gnezdo skušal zapustiti. To se je zgodilo v starosti okoli 10 dni. Po izkušnjah se pobegli mladiči v tej starosti kasneje večinoma vrnejo nazaj v gnezdo. Dolžino sem meril na mm natančno z merilom, prirejenim za merjenje peruti, maso z vzmetno tehtnico Pesola z natančnostjo skale 0.5 g. Mladiče sem vsakič meril v pozno popoldanskem času. Ob prvem obisku sem mladiče individualno označil s papirnati obročki, ki pa sem jih kasneje zamenjal s standardnimi aluminijastimi.

V letu 2007 sem mladiče v starosti okoli 10 dni opremil z radijskimi oddajniki, tako da sem njihovo telesno rast nadzoroval tudi tedaj, ko so gnezdo zapustili, vse do prvih poletov. Meril sem le dolžino peruti.

V tem delu sem za povprečno maso odraslih osebkov vzel vrednost 16 g, za povprečno dolžino peruti vrednost 76 mm, kar so zaokrožene vrednosti meritev, narejenih na odraslih osebkih v gnezditvenem obdobju (*neobj.*). Za obdobje hitre rasti mase in peruti jemljem dni, v katerih so mladiči pridobili več kot 5% končne vrednosti.

Iz povprečnih vrednosti meritev mase in dolžine peruti sem izračunal tri parametre logistične krivulje, ki opisuje rast organizmov (RICKLEFS 1967). Parametri se navadno uporabljajo za primerjavo rasti med organizmi: (1) polovični čas rasti (točka prevoja na sigmoidni krivulji, označena s simbolom T_{50}); (2) čas, ki ga organizem potrebuje, da zraste od 10 do 90% končne vrednosti (osrednjih 80% krivulje, označenih s simbolom T_{10-90}); (3) indeks hitrosti rasti (naklon rastne krivulje v točki prevoja, označen s simbolom K).

3. Rezultati in diskusija

V letu 2002 sem meril mladiče iz šestih gnezd, ki so vsa imela po šest mladičev. Mladiči so se uspešno speljali iz vseh gnezd. V dveh gnezdih sem z meritvami začel prvi dan njihovega življenja, v preostalih drugi ali tretji dan. V letu 2007 sem meril mladiče iz dveh gnezd. V enem jih je bilo šest, v drugem pet. Zaradi slabo nameščenih oddajnikov ali zaradi napake v delovanju oddajnikov štirih mladičev nisem meril v celotnem raziskovalnem obdobju.

Mladiči repaljščice so goliči. Ob izvalitvi so imeli maso med 1.5 in 2.0 g, perut je merila med 6 in 7 mm (tabela 1). Prvih osem dni življenja so hitro pridobivali na masi, največji prirastki so bili petega dne, ko so v

povprečju pridobili v enem dnevu 2.5 g. Hitra rast peruti je bila med petim in trinajstim dnev življenja, največji prirastek sem zabeležil sedmega dne, ko se je v povprečju perut podaljšala za skoraj 7 mm na dan (slika 1).

Čas, ki so ga mladiči potrebovali, da so pridobili polovico končne mase (T_{50}), je bil 4.5 dneva, za osrednjih 80% rasti (T_{10-90}) so potrebovali 6.6 dneva, indeks hitrosti rasti mase (K) je bil 0.66. Čas, ki so ga mladiči potrebovali, da jim je perut zrasla do polovice končne dolžine (T_{50}), je bil 10.2 dneva, za osrednjih 80% rasti (T_{10-90}) 16.7 dneva, indeks hitrosti rasti peruti (K) je bil 0.26 (slika 2). Do podobnih ugotovitev sta prišla tudi BASTIAN & BASTIAN (1993 & 1996), ki sta merila telesno maso in dolžino peruti mladičev v Nemčiji.

Do starosti osmih dni so bili najtežji mladiči vedno lažji (ali vsaj enako težki) od najlažjih dan starejših mladičev (tabela 1). Zato ocenjujem napako pri ocenjevanju starosti na podlagi mase do osem dni

starih mladičev na največ 1 dan, pri starejših pa na največ 2 dni. Po enajstem dnevu starosti, ko se teža mladičev praktično ne povečuje več, ocenjevanje starosti ni več zanesljivo.

Največja dolžina peruti mladičev določenega dne je bila le izjemoma daljša od najmanjše dolžine peruti dan starejših mladičev. Zato ocenjujem napako pri ocenjevanju starosti na podlagi dolžine peruti do 14 dni starih mladičev na največ 1 dan. Na starejših mladičih je bilo napravljenih premalo meritev za oceno napake.

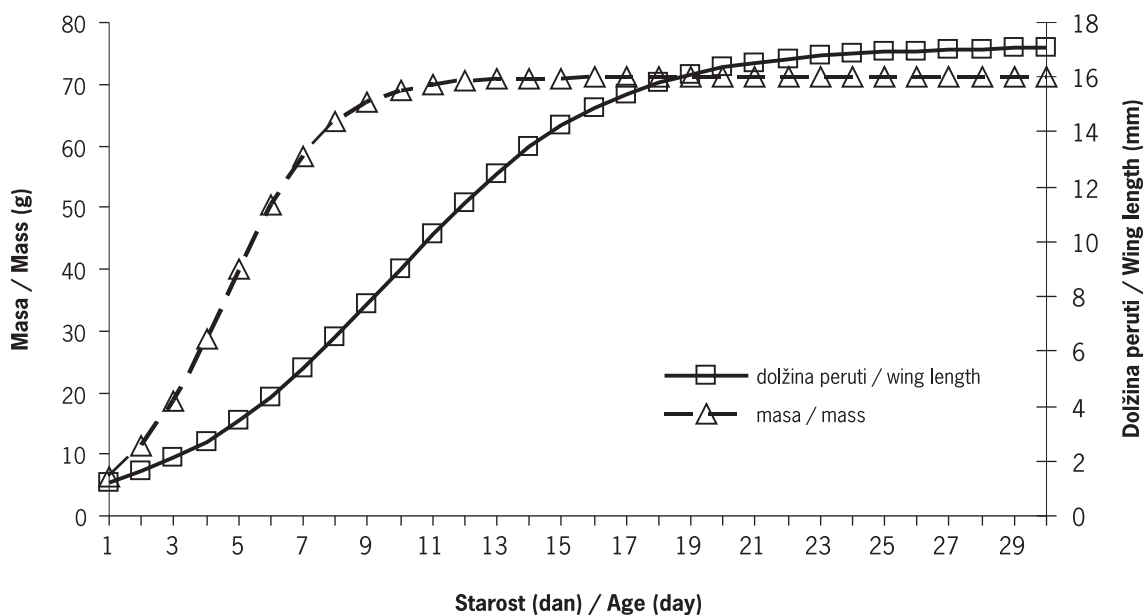
Na podlagi izkušenj na terenu ocenjujem, da je optimalna starost mladičev repaljščice za obročkanje med šestim in devetim dnev starosti. Po devetem dnevu se poveča verjetnost, da mladiči gnezdo zapustijo predčasno, pred šestim dnevom je noga mladičev še slabo razvita, manjši osebk lahko obroček izgubijo.

Še tako dobro sprejeti naravovarstveni ukrepi pozne košnje pri upravljalcih travnikov se lahko izkažejo za neučinkovite ali po nepotrebnem potratne, če ne

Tabela 1: Rast mase in dolžine peruti pri mladičih repaljščice *Saxicola rubetra* na Ljubljanskem barju. Podatki so iz 8 gnezd, 6 v letu 2002 in 2 v letu 2007. SD označuje standardno deviacijo.

Table 1: Mass and wing length growth in young Whinchats *Saxicola rubetra* at Ljubljansko barje. The data are from 8 nests, 6 from 2002, 2 from 2007. SD denotes standard deviation.

Starost / Age (dan / day)	Masa / Mass (g)					Perut / Wing (mm)				
	Povp./ Avg.	SD	Min.	Max.	N	Povp./ Avg.	SD	Min.	Max.	N
1	1.8	0.25	1.5	2	9	6.5	0.50	6	7	7
2	2.6	0.32	2	3	15	7.1	0.30	7	8	11
3	4.5	0.49	3.5	5	24	8.7	0.54	8	9.5	21
4	5.9	0.72	5	7	29	10.6	0.77	9	12.5	27
5	8.2	0.41	8	9	6	14.4	1.51	13	17	7
6	10.7	0.89	9	12	21	19.6	1.60	17	22	20
7	12.5	0.50	12	13	7	23.6	2.15	21	27	7
8	14.3	0.53	13.5	15	8	30.7	1.87	28	33	9
9	15.2	0.80	14	16.5	13	35.4	2.02	32	38	12
10	15.6	0.77	14.5	17	12	40.5	0.82	39	41	11
11	16	–	–	–	1	44	–	–	–	1
12	15.8	1.10	14	18	15	47.3	1.51	45	49	6
13	16.3	0.35	16	16.5	2	51.3	1.11	49	53	13
14	16.2	0.29	16	16.5	3	54	–	–	–	1
15						57.7	1.53	56	59	3
16						60.7	0.58	60	61	3
17						–	–	–	–	0
18						66	–	–	–	1
19						–	–	–	–	0
20						–	–	–	–	0
21						72	–	–	–	1
22						–	–	–	–	0
23						74	–	–	–	1



Slika 2: Logistični krivulji rasti mase in peruti mladičev repaljščice *Saxicola rubetra* na Ljubljanskem barju

Figure 2: Logistic growth curves of mass and wing in young Whinchats *Saxicola rubetra* at Ljubljansko barje

temeljijo na konkretnih ugotovitvah s terena. Zato menim, da je orodje, ki ga predstavljam v tem delu in s katerim je mogoče natančno določiti dan začetka gnezdenja ali speljave mladičev, pomemben prispevek k varstvu repaljščice. Enako velja tudi za druge travniške gnezdilce, za katere je podobne tabele treba še izdelati.

Poseben problem, ki se ga ta prispevek ne dotika, a prav tako bistveno vpliva na gnezditveni uspeh travniških ptic, je datum, kdaj so se mladiči sposobni umakniti pred koso. Nekatera opazovanja, ki smo jih zabeležili na Nacionalnem inštitutu za biologijo, kažejo, da je pri repaljščici to bistveno kasneje od dneva speljave mladičev. V kateri starosti so se mladiči sposobni izogniti prihajajoči kosi, lahko dokaj natančno ocenimo s pomočjo podatkov iz raziskav, narejenih v drugih delih Evrope (čeprav jih je zelo malo), medtem ko nam natančno gnezditveno fenologijo pri nas gnezdečih ptic opišejo le domači podatki.

Zahvala: Sodelavcema Damijanu Denacu in Urši Koce se zahvaljujem za kritične pripombe.

4. Summary

I investigated body mass and wing length growth in young Whinchats *Saxicola rubetra* at Ljubljansko barje (central Slovenia). At hatching time, their weight oscillated between 1.5 and 2.0 g, wing length between 6 and 7 mm. The greatest weight (2.5 g per

day on average) and length gains (7 mm per day on average) were reached at the age of five and seven days, respectively. At the age of 4.5 days, they acquired half of their final weight. At the age of 10.2 days, they had half of their final wing length.

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DELEŽ LEVCISTIČNE OBLIKE '*immutabilis*' LABODA GRBCA *Cygnus olor* v PREZIMUJOČI SUBPOPULACIJI NA ZBILJSKEM JEZERU (OSREDNJA SLOVENIJA)

Proportion of leucistic Polish morph '*immutabilis*' in the wintering subpopulation of Mute Swan *Cygnus olor* at Lake Zbilje (central Slovenia)

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Na Zbiljskem jezeru smo v zimah 2006 in 2007 ugotavljali delež svetle barvne oblike *immutabilis* labodov grbcov *Cygnus olor* na vzorcu, ki je predstavljal 5.2 do 7.8% celotne prezimujoče populacije vrste v Sloveniji. Delež svetle oblike *immutabilis* je v letu 2006 dosegal 11.3% ptic, v letu 2007 pa 14.3%, pri čemer razlika med letoma ni bila statistično značilna. V letu 2007 smo ugotavljali tudi delež levčističnih labodov pri mladostnih in odraslih pticah. Pri tem je bil delež levčistične oblike *immutabilis* med mladimi (10.0%, N = 20) in odraslimi labodi (15.8%, N = 57) podoben. Pričujoča opazovanja z Zbiljskega jezera kažejo, da je delež svetle oblike v prezimujoči populaciji laboda grbca pri nas višji kot v prezimujočih populacijah laboda grbca drugod po Evropi, zlasti v severneje ležečih državah. V prihodnje bi bilo treba ugotoviti, kakšni so deleži osebkov *immutabilis* na vseh pomembnejših prezimovališčih laboda grbca v Sloveniji, na Dravi, Savi in Krki, ter v gnezdeči populaciji. Bolj poglobljene raziskave bi odgovorile tudi na druga vprašanja, ki se postavljajo ob raziskovanju barvnega deleža ene in druge barvne oblike laboda grbca pri nas.

Ključne besede: labod grbec, *Cygnus olor*, *immutabilis*, Slovenija

Key words: Mute Swan, *Cygnus olor*, *immutabilis*, Slovenia

1. Uvod

Labod grbec *Cygnus olor* je sicer monotipična vrsta, pojavlja pa se v dveh oblikah, običajni in svetli oziroma levčistični obliki, t.i. *immutabilis* (MADGE & BURN 1988). Sprva je bila svetla oblika obravnavana kot ločena vrsta (YARELL 1838 v HARTERT 1921), pozneje kot domestificirana oblika laboda grbca (HARTERT 1921), danes pa vemo, da gre zgolj za spolno vezani polimorfizem (MUNRO *et al.* 1968). Svetlo obliko namreč določa recesivni alel na spolnem kromosomu, zato so levčistični samci homozigotni, levčistične samice pa heterozigotne, kar je razlog, da so levčistične samice v populaciji pogostejše. To so dokazali tudi v naravnih populacijah v Severni Ameriki, kjer je bilo levčističnih osebkov med samci 10%, med samicami pa 26% (MUNRO *et al.* 1968). Delež levčističnih osebkov med različnimi populacijami zelo variira

glede na mladiče v leglu, od 0 do 100%, medtem ko se deleži levčističnih osebkov na prezimovališčih manj razlikujejo (WEILOCH & CZAPULAK 1991). Razlog je verjetno v večji smrtnosti mladih levčističnih ptic, katere del gre tudi na račun infanticidnosti, saj odrasli labodi včasih ne prepoznajo svojih belo, kot odraslo, obarvanih mladičev in jih preganjajo kot vsiljivce na teritoriju (REESE 1980). Na evropskih prezimovališčih zato levčistični osebki navadno sestavljajo 0.5 do 6.0% populacije, redkeje več (WEILOCH & CZAPULAK 1991).

V Sloveniji je bilo gnezdenje svetle oblike laboda grbca *immutabilis* doslej zabeleženo le na Hodoškem jezeru na Goričkem, kjer je par med šestimi mladiči vzgojil tudi dva levčistična (VREZEC & HÖNIGSFELD ADAMČ 2003). Na prezimovališčih število svetlih osebkov do sedaj še ni bilo sistematično prešteto, čeprav je bila že podana groba ocena, da osebki oblike *immutabilis* sestavljajo med 20 in 30% prezimujoče

populacije labodov grbcev v Sloveniji (VOGRIN & VOGRIN 2000), kar je glede na ugotovitve s Poljske in iz nekaterih drugih evropskih držav veliko (WEILOCH & CZAPULAK 1991). V pričujoči raziskavi sva se zato namenila ugotoviti delež levčističnih osebkov na primeru subpopulacije, ki prezimuje na savski akumulaciji Zbiljsko jezero, kjer je labod grbec številan in reden prezimovalec, jezero pa je eno pomembnejših prezimovališč vrste v Sloveniji (npr. TRONTELJ 1992, ŠTUMBERGER 1997). Poleg tega sva skušala preveriti, ali se ta delež med leti spreminja glede na štetje v dveh zaporednih zimah. Gre za preliminarno študijo, ki bi jo kazalo v bodoče razširiti še na druga večja prezimovališča labodov grbcev po Sloveniji.

2. Območje raziskave in metode

Zbiljsko jezero je akumulacijsko jezero na reki Savi v osrednji Sloveniji blizu naselja Medvode severno od Ljubljane na nadmorski višini 327 m (Gauss-Krügerjeve koordinate: x 5112543, y 5455551). Nastalo je z zajetvijo reke v začetku 50-tih let 20. stoletja in obsega 47 ha vodne površine. Obala jezera je strma in večinoma porasla z mešanim gozdom, na desnem bregu pri vasi Zbilje pa so večje rekreativne površine, gostišče in čolnarna z utrjenim bregom. Na tem mestu je najlažji dostop do jezera in obiskovalci pogosto hranijo vodne ptice, te pa se zato v bližnji okolici čolnarne združujejo v posebno zgoščene skupine. Velike količine mulja in drugih rečnih naplavin, ki so se z leti nakopičile v jezeru, oblikujejo obsežne plitvine, ki so ob manjši vodnatosti vidne kot otoki mulja in vodnih rastlin. Kopičenje hranilnih snovi in zasipanje jezera prispevata k evtrofizaciji. Jezero pozimi ne zamrzne, zato je postalo eno pomembnejših prezimovališč vodnih ptic na Gorenjskem. (TRONTELJ 1992)

Labode sva štela v dveh letih, 2006 in 2007, v okolici čolnarne na desnem bregu Zbiljskega jezera. Beležila sva število običajno obarvanih in levčističnih labodov, v letu 2007 pa tudi število mladostnih in odraslih osebkov glede na barvno obliko. Štela sva le osebkke, ki so se dovolj približali obali, da sva lahko nedvoumno določila barvno obliko. Razlike v deležih svetle oblike *immutabilis* v prezimujoči populaciji labodov grbcev med letoma in med starostnima skupinama sva preverjala s χ^2 -testom.

3. Rezultati in razprava

Na Zbiljskem jezeru sva v letu 2006 (11.2.2006) določila barvno obliko pri 71 osebkih, v letu 2007 (2.1.2007) pa pri 77 osebkih. Glede na vzporedna

štetja IWC sva v letu 2006 tako pregledala 5.2% (n = 1376), v letu 2007 pa 7.8% (n = 991) prezimujoče populacije laboda grbca v Sloveniji (Božič 2006 & 2007). Osebkke svetle oblike *immutabilis* so v letu 2006 zajemali 11.3% ptic, v letu 2007 pa 14.3% ptic, pri čemer razlika med letoma ni bila statistično značilna ($\chi^2 = 0.3$, ns). V letu 2007 sva določila tudi delež levčističnih labodov pri mladostnih in odraslih pticah. Ugotovila sva, da je delež *immutabilis* oblike med mladimi (10.0%, N = 20) in odraslimi labodi (15.8%, N = 57) podoben ($\chi^2 = 0.07$, ns). Podobno kot VOGRIN & VOGRIN (2000) sva ugotovila, da je delež svetle oblike v prezimujoči populaciji laboda grbca pri nas višji kot pa v nekaterih severneje ležečih evropskih državah, denimo na Poljskem, čeprav je lahko lokalno delež *immutabilis* oblike tudi izjemno visok, na primer 50% na Nizozemskem (WEILOCH & CZAPULAK 1991). Kolikšen je dejanski delež svetle oblike laboda grbca v populaciji, ki prezimuje v Sloveniji, bi morali ugotoviti s sistematičnim preštevanjem na večjih slovenskih prezimovališčih na akumulacijah reke Drave (Melje, Ptujsko in Ormoško jezero), na reki Savi (Zbiljsko jezero) in na reki Krki (HUDOKLIN 1996, GEISTER 1997, ŠTUMBERGER 1997). Šele tako bi lahko ugotovili, ali je delež oblike *immutabilis* pozimi v Sloveniji dejansko višji kot v severnoevropskih deželah. Poleg tega se najina ocena deleža na Zbiljskem jezeru (do 15%) kljub vsemu precej razlikuje od ocene za celotno Slovenijo (do 30%; VOGRIN & VOGRIN 2000).

Ob tem se odpira vrsta vprašanj. Ali je mogoče, da so osebkke oblike *immutabilis* bolj migratorni in se s severnih gnezdišč selijo dlje na jug ter tako oblikujejo večji delež na južnih prezimovališčih, ali gre pri tem zgolj za značilnost južnih gnezdečih populacij, kjer je delež svetle oblike sicer večji? Slednje se denimo izključuje z ugotovitvami iz Srbije, kjer je bil delež mladičev oblike *immutabilis* pri gnezdečih labodih grbcih zelo nizek, manj kot 4%, vendar so bili ti podatki zbrani le na enem jezeru z zgolj dva do tremi gnezdečimi pari (TUČAKOV 2005). V Sloveniji izvira večina najdenih obročkanih labodov iz bližnjih severno ležečih dežel, kot sta Madžarska in Avstrija, manj pa je osebkov od drugod, denimo s Poljske in Slovaške (ŠERE 1996). Žal podatkov o tem, ali je šlo pri najdbah za svetle ali običajno obarvane osebkke, ni, del odgovora na zgornje vprašanje pa bi verjetno dobili že z analizo strukture slovenske gnezdeče populacije. Ali je bilo uspešno gnezdenje oblike *immutabilis* na Hodoškem jezeru (VREZEC & HÖNIGSFELD ADAMIČ 2003) bolj izjema ali ne? Pri tem je pomembno tudi časovno spreminjanje strukture populacije tako pri gnezdenju kot na prezimovanju, čeprav medletnih sprememb na prezimovanju v okviru te študije na

Zbiljskem jezeru nisva dokazala. Ob upoštevanju gnezdeče populacije je pomembno slediti tem spremembam tudi na lokalni ravni, saj povečevanje deleža svetlih oblik, torej recesivnih homozigotov (zlasti pri samcih), kaže na relativno zaprtost populacij in na visoko stopnjo parjenja v sorodstvu. Vprašanj na temo oblike *immutabilis* v Sloveniji je torej veliko, s povečano pozornostjo tej problematiki pa bi lahko prišli v prihodnosti tudi do dobrih rezultatov.

4. Summary

In the winters of 2006 and 2007 the proportion of Polish morph *immutabilis* of Mute Swan *Cygnus olor* at the Zbiljsko jezero lake was established on 5.2 to 7.8% of the total wintering population of the species in Slovenia. In 2006, 11.3% of the birds belonged to the Polish morph, while in 2007 the figure indeed rose to 14.3%, but the difference between the two years was not significant. The proportion of *immutabilis* individuals in juvenile and adult birds, determined in 2007, was similar. In juvenile birds (N = 20), 10.0% were of Polish morph *immutabilis*, and 15.8% in adult Mute Swans (N = 57). Comparing these findings to the situation established in other European countries north of Slovenia, it has been shown that the *immutabilis* Mute Swans are much more abundant in Slovenian wintering population. However, it would be necessary to establish the proportion of the *immutabilis* morph in all important wintering areas of Mute Swans in Slovenia, i.e. on the Drava, Sava and Krka rivers, as well as in the breeding population. It was proposed that long-term monitoring of *immutabilis* occurrence in Slovenia should be conducted in the future, which of course opens up a series of new research questions.

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HABITAT, VEGETATION AND LAND MANAGEMENT OF CORNCRAKE *Crex crex* BREEDING SITES IN CARNIA (FRIULI-VENEZIA GIULIA, NE ITALY)

Habitat, vegetacija in kmetijska raba na gnezdiščih kosca *Crex crex* v Karnijskih Alpah (Furlanija Julijska krajina, SV Italija)

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During the study, the scope of which was to provide some information on breeding habitat choice of Corncrakes *Crex crex* at one of the most important Italian sites for the species, 21 sites were chosen ranging in altitude from 201–1400 m a.s.l. where the species was present annually from 1991 to 2000. The study was carried out in Carnia (NE Italy). The sites were compared with the same number where the species was not recorded in the same period. In the meadows, some physical factors were measured (slope, aspect, pH, carbonate content, humidity and soil structure), management (number of cuts, timing of first cut, type, frequency and level of fertiliser application, reseeding, grazing animal species present, cutting equipment used, the use of herbicides or pesticides) as well as the type of meadow and complexity of vegetational structure. From the results it was possible to conclude that in Carnia Corncrakes prefer meadows with slight slopes and damp soils with late cuts where spring grazing does not take place. The type of meadow most favoured is that dominated by False Oat-grass *Arrhenatherum elatius* because of its structure (high grass with plenty of space at ground level) that guarantees a great deal of cover and is favourite by good local fertility and a limited number of annual cuts.

Key words: Corncrake, *Crex crex*, habitat choice, vegetation, management, site characteristics, Carnia, Friuli-Venezia Giulia, Italy

Ključne besede: kosca, *Crex crex*, izbor habitata, vegetacija, kmetijska raba, značilnosti zemljišča, Karnijske Alpe, Furlanija Julijska krajina, Italija

1. Introduction

The sites at which a species establishes itself during the breeding season are very important for a species' survival. So it is important to study these for the most threatened species. The Corncrake *Crex crex* is listed as vulnerable in the IUCN Red List of Threatened Animals (BAILLIE & GOOMBRIDGE 2000), and considered as "depleted" in Europe (BIRDLIFE INTERNATIONAL 2004), whilst in Italy the species is considered "endangered" (CALVARIO *et al.* 1999).

The aim of the study is to provide information on breeding habitat choice in one of the most important

areas in Italy for the species. A partial summary of data has already been published (RASSATI & RODARO 2003).

2. Methods

2.1. Study area

The study area was in Carnia, in the central-western part of northern Friuli-Venezia Giulia (Figure 1), dominated by mountains (altitude range: 195–2780 m a.s.l.) and characterised by a broad valley (Val Tagliamento) running west-east occupying the

southern part and joining with secondary valleys (Val Lumiei, Val Degano and Val But), which run largely north-south and occupy the central and northern parts. As in other mountain areas, there are a wide variety of geological substrates, soils, aspects and slopes. The climate overall can be considered temperate but with high rainfall (1400–2400 mm/year).

The grassland plant communities, once widely distributed, have been greatly reduced following the depopulation of the mountain areas and the subsequent abandonment of agricultural activities, particularly grazing and haymaking that has allowed scrub and secondary woodland, particularly of Hazel *Corylus avellana*, Maple *Acer* sp., Ash *Fraxinus* sp. and Pines *Pinus* sp. at low and medium altitudes and Spruce *Picea abies* and Larch *Larix decidua* to grow on medium and higher ground. At present, grassland communities are represented by hay-meadows that are widespread in the valley bottoms, in flat areas and near settlements and open grazing lands at higher altitude where summer grazing is still practiced or has only recently been abandoned.



Figure 1: Study area of the Corncrake *Crex crex* habitat choice in NE Italy

Slika 1: Območje raziskave izbora habitata kosca *Crex crex* v SV Italiji

2.2. Data collection

In an initial phase, based on data collected between 1991 and 2000 by one of the authors (G. RASSATI), between 201 metres and 1100 m a.s.l. two areas where the species was present annually and two areas where the species was never recorded were identified. Single

areas with birds present every year between 1991 and 2000 and areas with birds never recorded were identified for the altitudinal range of 1101 through to 1400 m a.s.l. These subdivisions were made following the percentage presence of Corncrakes at different altitudes in Carnia (RASSATI & TOUT 2002). The areas not holding Corncrakes were identified from those adjacent to areas holding calling birds (RASSATI & TOUT 2002) and apparently similar to the human eye. In this way the 42 (21+21) sites examined were believed to be a representative cross sample of the grassland in the study area.

A long time period (10 years) was chosen to identify and distinguish between the 'best' (and 'worst') areas where the Corncrake was present (or absent) since the species can be present at a site for a year or two with many individuals but rare or even absent before and after this (RASSATI & TOUT 2002). The average number (calculated from 10 years: 1991–2000) of Corncrakes for the sites with annual presence is 1.82, while the average number (calculated from 10 years: 1991–2000) of Corncrakes for the whole Carnia is 85.

Following this, standardised data was entered on printed forms covering physical aspects (altitude, slope, aspect, pH, carbonate content, soil classification, soil moisture) and management (number of cuts, timing of the first cut, type of fertiliser application, frequency of fertiliser application, level of fertiliser applied, reseeding, grazing animal used, grazing pressure if any, use of herbicides and pesticides in the fields). The timing of the first cut was classified as 'normal', 'slightly late' or 'late', reflecting the qualitative characteristics of the meadow and its altitude. To each meadow, a probable level of fertilizer application was assigned according to the floristic and physical characteristics observed. Samples of soil were collected so that their characteristics could be examined. The reaction of the first 10 cm of soil using the colorimetric method was measured, as well as carbonate content (SANESI 1977), the structure following the indications of McRAE (1991) and soil humidity, estimated by touch was assessed several times during the course of the season. Any use of herbicides and pesticides in the fields was also assessed, as well as the frequency of fertiliser application by interviewing the farmers.

Shortly before first cut, an overview of the vegetation was made by censusing the most representative species on the basis of their presence and their abundance. To establish the sites to be surveyed, the points where calling males were censused during the study period (1991–2000) (RASSATI & TOUT 2002, RASSATI unpubl.), were georeferenced. In this way, clusters of singing males were identified and the sampling carried

Table 1: Site characteristics of the two groups of sites in Carnia studied (21 each); Corncrakes *Crex crex* were either present or absent. Averages of slope, soil pH and carbonate content are given with one standard deviation.

Tabela 1: Značilnosti lokacije za dva tipa lokacij v Karnijskih Alpah, s kosci *Crex crex* in brez (21 enih in drugih). Naklon, vsebnost karbonatov in pH prsti so podani z eno standardno deviacijo.

Group / Skupina	1	2
Presence of Corncrakes / Prisotnost koscev	present / prisotni	absent / odsotni
Average slope / Povprečen naklon (%)	6.28 ± 6.7	16.28 ± 23.7
minimum slope / minimalni naklon (%)	0	0
maximum slope / maksimalni naklon (%)	20	100
Main aspect / Prevladujoča ekspozicija	SW / SE	SW / SE
Average pH / Povprečni pH	5.96 ± 0.63	5.98 ± 0.57
min.	4.5	5
max.	6.5	6.5
Average carbonate content / Povprečna vsebnost karbonatov	2.24 ± 1.70	1.99 ± 1.84
min.	0	0
max.	4	4
Main soil classification / Glavni tip prsti	L–S	L–S
L–S	11	10
S–L	7	7
L–C	2	2
S	1	0
L	0	2
Main soil moisture classification / Glavni tip vlažnosti prsti	D	RD–D
RD	2	8
D	16	11
DW	3	2

Remarks / Opombe:

Carbonate content / Vsebnost karbonatov:

0 = non-calcareous / ni (< 0.5–1%)

1 = very low carbonate content / zelo nizka (0.5–1%)

2 = low carbonate content / nizka (1–5%)

3 = calcareous / karbonatna (5–10%)

4 = very calcareous / zelo karbonatna (> 10%)

Soil classification / Tip prsti:

S = sand / pesek

L = loam / ilovica

C = clay / glina

Soil moisture / vlažnost prsti:

RD = rather dry / pretežno suho

D = damp / vlažno

DW = damp with waterlogging / vlažno, prepojeno z vodo

out from the central point of the cluster with the most contacts and identifying a sufficient homogenous square of c. 100 m² (10 x 10 m) considered sufficiently large to establish the nature of the plant communities present (WESTHOFF & VAN DER MAAREL 1978). In the sites where the Corncrake was not found the survey was made from the central point of the site under examination. On the basis of the data collected, the plant communities were assigned to those proposed in the most up-to-date studies (ROUMET *et al.* 1999, SCOTTON *et al.* 2000, SCOTTON & RODARO 2001).

The vegetational structure's complexity – that is to say in terms of the stratification of the above ground

plant biomass and the effect of this on visibility was estimated by eye and classified as “low”, “medium” or “high”. “Low” was deemed to be the height of the vegetation reduced almost to ground level with ground cover almost complete and a high level of visibility of the ground from above (the animal being easily visible in the meadow). “High” was represented by tall vegetation with limited cover present at ground level and little visibility of the ground from above (the animal being hidden in the meadow). The value “medium” indicates a state of affairs intermediate between the two indicated above.

3. Results

3.1. Site characteristics

The results of the site characteristics assessment are presented in Table 1. The sites at which the species was found were flat (9 sites out of 21) or gently sloping, ranging from 0 to 20% with an average slope of 6.28% and main aspect lying between south-west and south-east. Where, on the other hand, the species was not found, the slopes were steeper varying between 0% and 100%, with an average slope of 16.28% and main

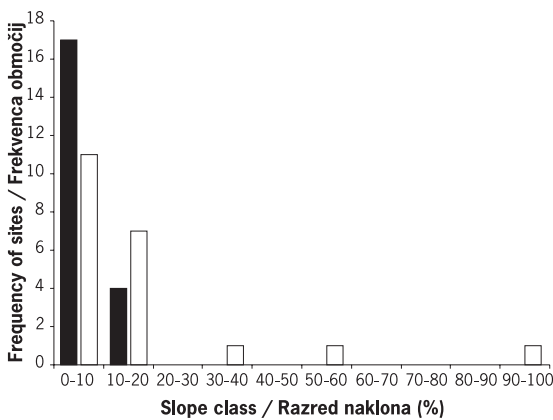


Figure 2: Slope (%) of the two groups of sites in Carnia studied (21 each); Corncrakes *Crex crex* were either present (black) or absent (white)

Slika 2: Naklon (%) za dva tipa območij v Karnijskih Alpah, s kosci *Crex crex* (črni stolpci) in brez (beli stolpci; 21 enih in drugih)

aspect lying between south-west and south-east. In addition, only 2 out of 21 of the sites could be termed 'flat' (Figure 2). The pH in the first 10 cm ranged from 4.5 to 6.5 in all the sites examined. Carbonate levels ranged from very low carbonate content through to calcareous, whilst the soil types ranged from sandy loam to loamy sand. The sites holding Corncrakes tended overall to be more humid compared to those where the species was absent (Figure 3).

3.2. Management characteristics

The results of the management characteristics assessment are presented in Table 2. On average, the fields are cut twice a year. The timing of the first cut at the sites where Corncrake is present is slightly later than those sites in which the species is absent. Fertiliser applications take place, on average, once a year using organic material (manure and slurry); the

level of fertiliser application overall appears to be medium. None of the fields used by the birds appear ever to have been re-seeded and even in the control group (Corncrakes absent) the practice appears rare. Autumn grazing is rarely practised and where it occurs the principle grazing animals used are cattle. To complete the study, other factors were assessed, such as the equipment employed to do the cut and any use of herbicides and pesticides in the fields. As far as the first element is concerned, cuts are made using rotary cutters where the lay of the land allows, whereas in steeper areas, the cuts are made with slower machines, such as Allen Scythes (motor scythes with horizontal knife) or even hand-held scythes. Finally, no use of herbicides or pesticides was noted.

3.3. Vegetational characteristics

The results of the vegetational characteristics assessment are presented in Table 3. Five types of vegetation were identified:

- 1) Upright Brome *Bromus erectus* dominated,
- 2) False Oat-grass *Arrhenatherum elatius* dominated – sparse,
- 3) False Oat-grass dominated – typical,
- 4) False Oat-grass with umbellifers,
- 5) Yellow Oat-grass *Trisetum flavescens* dominated.

Corncrakes were found at the sites dominated by False Oat-grass (containing mostly *Arrhenatherum elatius*, particularly in those classified as 'typical' together with

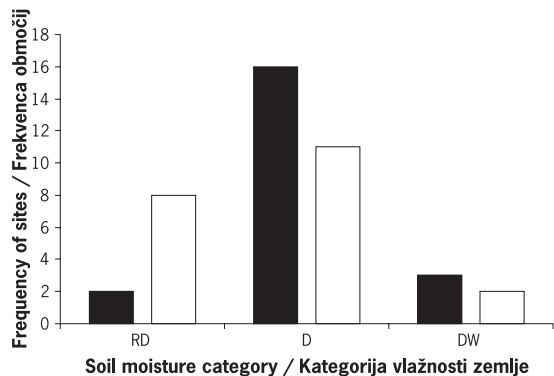


Figure 3: Soil moisture of the two groups of sites in Carnia studied (21 each); Corncrakes *Crex crex* were either present (black) or absent (white). RD = rather dry, D = damp, DW = damp with waterlogging

Slika 3: Vlažnost prsti za dva tipa območij v Karnijskih Alpah, s kosci *Crex crex* (črni stolpci) in brez (beli stolpci; 21 enih in drugih). RD = pretežno suho, D = vlažno, DW = vlažno, prepojeno z vodo

Table 2: Management characteristics of the two groups of sites in Carnia studied (21 each); Corncrakes *Crex crex* were either present or absent**Tabela 2:** Značilnosti kmetijske rabe za dva tipa lokacij v Karnijskih Alpah, s kosci *Crex crex* in brez (21 enih in drugih)

Group / Skupina	1	2
Presence of Corncrakes / Prisotnost koscev	present / prisotni	absent / odsotni
Average number of cuts / Povprečno število košenj	2	2
min.	0	0
max.	3	3
Timing of first cut / Čas prve košnje	sl. late – late/ rahlo kasnejši – pozen	sl. late (late)/ rahlo kasnejši (pozen)
normal / običajen	3	6
slightly late / rahlo kasnejši	5	4
late / pozen	13	11
Fertilisation regime / Režim gnojenja	manure	manure – slurry/ gnoj – gnojnica
manure / gnoj	10	5
slurry / gnojnica	4	4
manure and slurry / gnoj in gnojnica	3	8
no fertiliser / brez gnojila	4	4
Frequency of fertiliser application / Pogostost gnojenja	annual / letno	annual / letno
no fertiliser / ni gnojenja	4	4
annual fertiliser application / letno	16	17
biennial fertiliser application / na dve leti	1	0
Prevalent level of fertiliser applied / Intenzivnost gnojenja	medium / srednja	medium / srednja
low / nizka	3	5
medium / srednja	13	11
high / visoka	5	5
Reseeding / Vnovično sejanje	no / ne	rare / redko
no / ne	21	18
yes / da	0	3
Most frequent grazing animal used / Pretežni tip živine	cattle / govedo	cattle / govedo
cattle / govedo	3	4
sheep and goats / ovce in koze	0	2
horses / konji	0	0
horses and cattle / konji in govedo	1	1
sheep and cattle / ovce in govedo	1	1
sheep and horses / ovce in konji	0	0
ungrazed meadows / ni paše	16	13
Use of herbicides or pesticides / Uporaba herbicidov in pesticidov	no / ne	no / ne

Cocksfoot *Dactylis glomerata*, Meadow Fescue *Festuca pratensis* and White Bedstraw *Galium album*, whilst in those with umbellifers the latter largely consisted of Cow Parsley *Anthriscus sylvestris* and Hogweed *Heracleum sphondylium*) as well as in the *Trisetum flavescens* meadows, whilst it was absent from the sparse fields of *Bromus erectus*. The complexity of the vegetation structure shows a slight difference between the two groups of sites: that in which Corncrakes are found was shown to be slightly more complex.

4. Discussion

The results obtained allow the identification of certain physical, management and vegetational aspects of sites where Corncrakes were recorded annually when compared with the sites where the species was never recorded. We refer to the comparisons obtained with descriptive statistics presented in Tables 1, 2 & 3.

Table 3: Vegetational characteristics of the two groups of sites in Carnia studied (21 each); Corncrakes *Crex crex* were either present or absent

Tabela 3: Značilnosti vegetacije za dva tipa lokacij v Karnijskih Alpah, s kosci *Crex crex* in brez (21 enih in drugih)

Group / Skupina	1	2
Presence of Corncrakes / Prisotnost koscev	present / prisotni	absent / odsotni
Types of vegetation / Tipi vegetacije	3 (4)	3-4
<i>Bromus erectus</i> dominated / dominira	0	1
<i>Arrhenatherum elatius</i> dominated – sparse / ponekod dominira	3	5
<i>Arrhenatherum elatius</i> dominated – typical / večinoma dominira	9	7
<i>Arrhenatherum elatius</i> with Umbellifers	7	7
<i>Trisetum flavescens</i> dominated / dominira	2	1
Complexity of vegetational structure / Kompleksnost vegetacijske strukture	high / visoka	high (medium)/visoka (srednja)
low / nizka	3	4
medium / srednja	3	5
high / visoka	15	12

The difference between grasslands occurring on the two groups of sites are not very evident for various parameters, as already noted, but the sites without Corncrakes chosen tended to be in marginal areas but close to the main sites holding birds with a view to establishing the parameters used by the birds in choosing breeding sites. As far as site characteristics are concerned, the species appears to be influenced in its choice of reproductive habitat principally by slope and humidity that, at the sites that consistently held birds, were respectively lower and higher than in those without. Slope was the parameter that showed the greatest difference. To further confirm this, in sites with variable slope the singing males tend to position themselves in the flatter areas and these are also chosen for nesting (RASSATI *unpubl.*). It was also noted that where Corncrakes do occupy slopes they tend to choose those where flat areas tend to alternate with (usually small) steeply sloping areas where hand- or Allen scythes (motor scythes with horizontal knife) are used and rotary cutters cannot be employed. In many cases, these sites remain uncut or are cut only occasionally allowing adults and young to find refuge during mowing operations, given the lower speed of the tools employed (RASSATI *unpubl.*). CADBURY (1980), GREEN (1995), NIEMANN (1995), SCHÄFFER & WEISSER (1996), GREEN *et al.* (1997A), TYLER *et al.* (1998) all indicated that slower mowing gave greater chances of a successful outcome of breeding and the presence of unmowed or mowed in different times areas close by was generally considered important for the survival of broods and adults (GREEN & STOWE 1993, SCHÄFFER & MÜNCH 1993, NIEMANN 1995,

BROYER 1996, SCHÄFFER & WEISSER 1996, GREEN *et al.* 1997A, GREEN *et al.* 1997B, BROYER & RENAUD 1998, TYLER *et al.* 1998, BROYER 2003, RASSATI 2004). The new element met with in Carnia is represented by the fact that the use in different times (or non-use) of sites seems dependent upon the lay of the land and not a choice in favour of "Corncrake-friendly mowing".

Slope and humidity are also connected inasmuch as where the slope is greater, waterlogging is usually less. In addition, where humidity is linked to a favourable type of soil (deep and moisture-retaining) it favours the development of the sort of vegetation (False Oat-grass or False Oat-grass with umbellifers), which seem best suited to the species' requirements. Humidity has been found to be important in other studies on the choice of breeding habitat (CADBURY 1980, BROYER 1987, GREEN *et al.* 1997A, GREEN *et al.* 1997B, TRONTELJ 1997, BROYER & RENAUD 1998).

As far as agricultural management and vegetational characteristics is concerned, one parameter that certainly affects the presence of Corncrakes is the timing of the first cut, which, if it occurs early and intensively, certainly compromises the chances of birds choosing a site and breeding successfully (CADBURY 1980, BROYER 1987 & 1994, GREEN & STOWE 1993, GREEN 1995, NIEMANN 1995, GREEN *et al.* 1997A, GREEN *et al.* 1997B, BROYER & RENAUD 1998, RASSATI 2001 & 2004). Early or frequent cutting was not recorded in the meadows studied. Overall in the sites where the animals were located the date of the first cut was slightly later than in those meadows in which animals were not recorded. As far as fertiliser application is concerned, the amount of nitrogen distributed during the process

seems important regardless of its source (organic or inorganic) as it tends to influence the species present in the meadow and therefore the type of vegetational community found there. On average, the level of fertiliser applied was slightly higher in the meadows where birds were recorded. Grazing does not take place during the breeding season of Corncrakes and this is a positive element in that intensive grazing can cause the death of individuals or the abandonment of a site (STOWE & HUDSON 1991, TRONTEJ 1997). It has been shown on more than one occasion in montane areas of the region when the passage of large herds of sheep has caused the (at least temporary) abandonment of important Corncrake breeding sites as well as those of Rock Partridge *Alectoris graeca* and Black Grouse *Tetrao tetrix* (RASSATI *unpubl.*). Only a single example is known, late on in the breeding season, of a calling male at a site a few days before a flock of sheep had arrived (RASSATI *unpubl.*).

The reason that Corncrakes prefer meadows of False Oat-grass (especially the 'typical' variety and those containing umbellifers) as well as those of Yellow Oat-grass when compared to those of Upright Brome can be put down to their structure. The former are usually tall but with a low density of vegetation at ground level that permits free movement. These are characteristic of good local fertility but nevertheless with just a small number of annual cuts (RASSATI & RODARO 2003). In the meadows of False Oat-grass, in addition, the ground is hardly visible from above.

The fields dominated by Upright Brome, on the other hand, although extensively managed and therefore less disturbed, do not offer good habitat because they are usually low, denser at soil level and, therefore, with a structure not much liked by the Corncrakes.

To add weight to the above, the height of the vegetation is a parameter held to be important by other authors together with an overall favourable structure (CADBURY 1980, BROYER 1987, SCHÄFFER & MÜNCH 1993, NIEMANN 1995, GREEN *et al.* 1997A, GREEN *et al.* 1997B, TRONTEJ 1997).

To end with, it is hoped that the information obtained in this study might be used to direct appropriate safeguard measures for the species at a regional level that foresee the modification of management of areas suitable for Corncrakes and compensatory measures should these changes lead to lower or inexistent revenues as a result of these changes, already recommended in RASSATI & TOUT (2002) and in RASSATI (2004) but currently still lacking in Friuli-Venezia Giulia.

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5. Povzetek

Raziskava primerja območja, stalno naseljena s kosci v obdobju 10 let (1991–2000), z območji brez koscev v Karnijskih Alpah, SV Italija. V primerjavi je bilo zajetih 21 območij s kosci in 21 območij brez njih, območja pa so bila v razponu nadmorske višine 201–1400 m. Avtorja sta primerjala naslednje spremenljivke: naklon, ekspozicija, pH prsti, vsebnost karbonatov v prsti, vlažnost in strukturo prsti, število košenj, čas prve košnje, način gnojenja, vrsto živali na paši in še nekatere druge spremenljivke. Primerjala sta tudi vegetacijo. Iz rezultatov sta zaključila, da imajo kosci v Karnijskih Alpah raje travnike z manjšim naklonom in vlažno zemljo, raje pa imajo tudi kasnejšo košnjo in območja brez pomladanske paše. Najraje imajo travnike z dominantno travo visoko pahovko *Arrhenatherum elatius*, ker ima primerno strukturo; zaradi višine pticam zagotavlja primerno skrivališče, a tudi dovolj prostora za premikanje po tleh.

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YELLOW-LEGGED GULL *Larus michahellis* IN THE SEČOVLJE SALTPANS (SW SLOVENIA) – ABUNDANCE, AGE DISTRIBUTION AND HABITAT PREFERENCE IN POST-BREEDING PERIOD IN JULY 2003

Rumenonogi galeb *Larus michahellis* v Sečoveljskih solinah (JZ Slovenija) – številčnost, starostna sestava in izbor habitata v pognezditvenem obdobju v juliju 2003

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A large number of Yellow-legged Gulls, *Larus michahellis*, gather annually after the breeding season in the Sečovlje salt pans, Slovenia. The abundance, habitat choice and age distribution were registered on several occasions by counting the gulls and marking their position on maps. The population reached a maximum of nearly 13,700 individuals on July 19, making it one of the largest in the Mediterranean, after which it decreased to approx. 10,000 on July 30. The majority of the gulls in the area were non-juveniles, i.e. birds in their second calendar year or older, which probably came there to moult. The percentage of juveniles was quite high at the end of the month. Most of the gulls spent the days outside the area, gathering a few hours before sunset to roost in the salt pans. The gulls roosted mainly on firm and dry ground providing clear views.

Key words: Yellow-legged Gull, *Larus michahellis*, Sečovlje salt pans, abundance, age distribution, habitat preference

Ključne besede: rumenonogi galeb, *Larus michahellis*, Sečoveljske soline, številčnost, starostna sestava, izbor habitata

1. Introduction

The population of Yellow-legged Gull, *Larus michahellis*, is distributed throughout the Mediterranean, parts of the Aegean Sea, the Black Sea and in central Europe to about 52°N. It increased substantially during the last century, now numbering 150,000–200,000 pairs (BLOMDAHL *et al.* 2003, CRAMP & SIMMONS 1983, DEL HOYO *et al.* 1996, MALLING OLSEN & LARSSON 2003, MULLARNEY *et al.* 1999, BIRDLIFE INTERNATIONAL 2004). A considerable proportion of the Yellow-legged Gulls stay close to the breeding sites year-round, but the populations in south-western Europe, the Adriatic Sea and the eastern Mediterranean migrate northwards to an increasing extent after the breeding season (BLOMDAHL *et al.* 2003, CRAMP & SIMMONS 1983, DEL HOYO *et al.* 1996, MALLING OLSEN & LARSSON 2003).

Large numbers of Yellow-legged Gulls gather every summer in the Sečovlje salt pans in coastal Slovenia. The few previous studies include counts of the population made every summer from 1983 to 1997 (ŠKORNIK *et al.* 1998). A maximum of 4,000 individuals were counted in August 1996 and 1997 (MAKOVEC *et al.* 1998). RUBINIČ (in POLAK (ed.) 2000) states that the largest number of Yellow-legged Gulls recorded in the entire salt pans area was 15,000, registered in August.

2. Methods

The Sečovlje salt pans are situated by the Slovenian coast in the Bay of Piran in the northernmost part of the Adriatic Sea and cover an area of 738 ha. They consist of two parts: Fontanigge, where commercial salt production was abandoned in the 1960s, and Lera

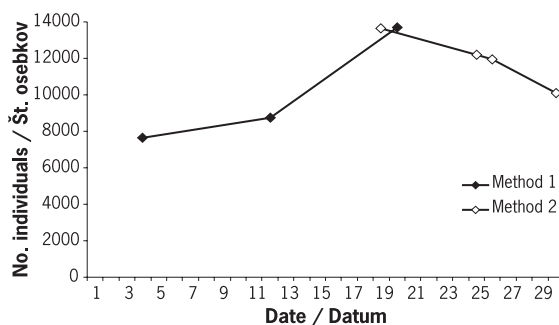


Figure 1: Total abundance of Yellow-legged Gulls *Larus michahellis* on Sečovlje salt pans in July 2003, using methods 1 and 2. Method 1 involved successive sub-area counts (5–7 days) with the median date shown, and method 2 involved counting all sub-areas on one day.

Slika 1: Skupna številčnost rumenonogih galebov *Larus michahellis* v Sečoveljskih solinah, z uporabo metode 1 in 2. Metoda 1 pomeni zaporedno štetje na podobmočjih (v razmiku 5–7 dni), prikazana je mediana datum. Metoda 2 pomeni štetje na vseh podobmočjih naenkrat. Prikazani so dnevi v juliju 2003.

(263.5 ha), where salt is still being produced (BELTRAM 1996). This study focuses on Lera, which consists of shallow basins intersected by channels and dikes. The following roosting habitats have been defined: water-filled basins, wet mud in basins, dry mud in basins, low dikes, high dikes without vegetation and high dikes covered with vegetation.

The population was monitored using two methods, both carried out in evenings from 1–30 Jul 2003, using telescope and binoculars. The total number of field days was 20. The area was divided into ten sub-areas and in each one of these the population was monitored on three occasions with a method involving marking the position and activity of the gulls on a made-to-scale map. Water and weather conditions were also recorded. To calculate the abundance of Yellow-legged Gulls in the whole area from this data, the numbers of gulls in the sub areas in one monitoring round (when all areas were monitored over a 5 to 7 day period) were added (referred to as “Total A”). The median date was then chosen as the date for the total number.

On four occasions, the number of individuals in all sub areas was counted during one evening (referred to as “Total B”) and, on 19 Jul all individuals in all sub areas were counted on four occasions during the day. Here, a second monitoring method was used, involving counting the gulls in groups of ten, recording only total numbers in the different sub-areas and thus not their exact position or activity.

The numbers of juvenile individuals (i.e. birds in their first calendar year) in groups of Yellow-legged

Gulls ranging from 48–356 individuals (mean 136) were counted regularly, allowing calculation of the proportion of juveniles, as defined above, and non-juveniles, i.e. birds in their second calendar year or older, in the population.

3. Results and discussion

3.1. Abundance

The number of Yellow-legged Gulls roosting in the Sečovlje salt pans increased from about 8,000 in early July to a maximum of nearly 13,700 on 19 Jul (Figure 1). The main cause for the increase was probably the increasing numbers of gulls leaving their breeding grounds after the breeding season, which normally ends in late June or early July (CRAMP & SIMMONS 1983). The number thereafter decreased to about 10,000 on 30 Jul (Figure 1). Access to suitable roosting habitat can probably be excluded as a possible limiting factor to the total abundance. The sum of the highest recorded numbers in the different sub-areas was more than 18,000, i.e. much higher than that recorded in the whole area on 19 Jul. This shows that, even on that occasion, not all possible roosting areas were occupied.

3.2. Age distribution

In early July the Sečovlje salt pans were visited by a large number of non-juvenile Yellow-legged Gulls (Figure 2), probably immature birds or failed breeders (CRAMP & SIMMONS 1983). In mid July the numbers were even higher, probably due to the arrival of adults having finished breeding. The majority of the non-juveniles probably come to the Sečovlje salt pans mainly to moult intensively over a limited period of time. Moulting consumes a lot of energy and the gulls therefore need abundant food resources which they find on nearby refuse dumps. Furthermore, suitable loafing and roosting places are available in the salt pans, making the Sečovlje salt pans a suitable place for moulting. Large numbers of adults gather similarly after the breeding season for moulting in other places in the Mediterranean (e.g. the Ebro delta in Spain) (MALLING OLSEN & LARSSON 2003). At the end of July, approx. 70% of the Yellow-legged Gulls in the Sečovlje salt pans were juveniles.

3.3. Diurnal variation of numbers

On 19 Jul, the number of Yellow-legged Gulls was 2,810 at 8.00 h, decreasing to 1,660 at noon. The

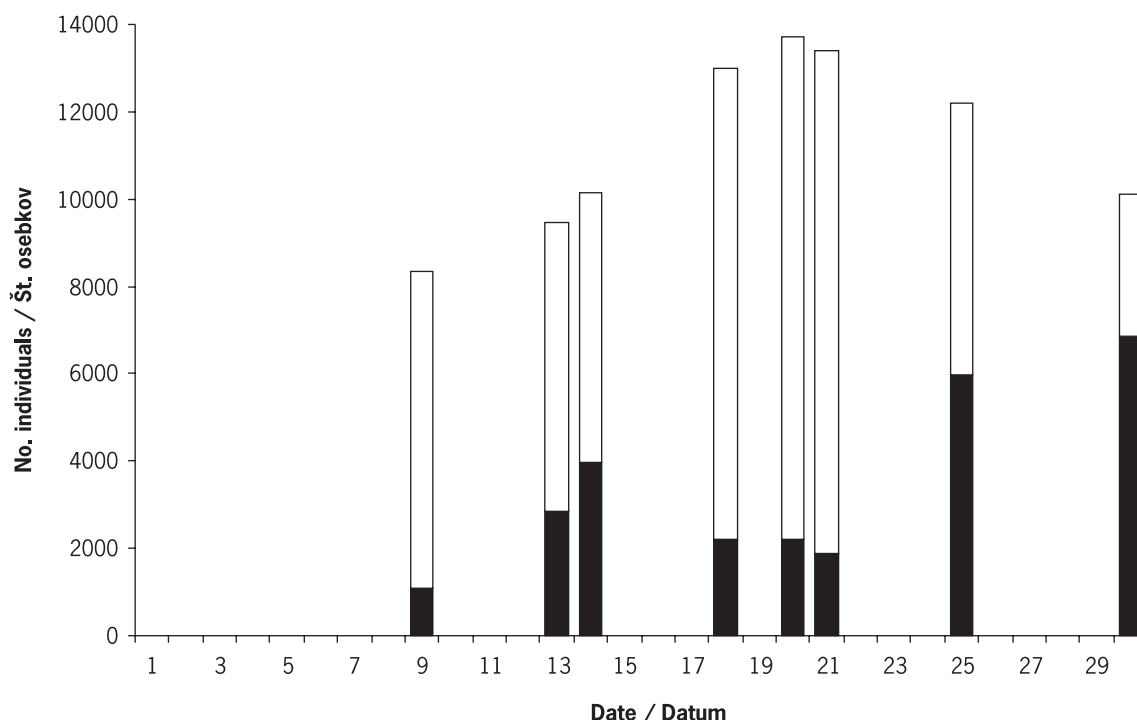


Figure 2: Age distribution of the Yellow-legged Gulls *Larus michahellis* on Sečovlje salt pans in July 2003. Black bars denote birds in juvenile plumage and white bars denote non-juvenile birds. Numbers are extrapolated from the count in smaller groups (48–356 individuals, mean 136).

Slika 2: Starostna struktura rumenonogih galebov *Larus michahellis* na Sečoveljskih solinah v juliju 2003. Črni stolpci označujejo število juvenilnih osebkov, beli število vseh ostalih starosti. Število je ekstrapolirano iz štetja manjših skupin (48–356 osebkov, povprečje 136).

number thereafter increased slowly until 16.00 h and very fast between 16.00 and 20.00 h, when it reached 13,673. The majority of the Yellow-legged Gulls thus spent the day outside the Sečovlje salt pans, leaving the area in the early morning and returning just before sunset.

3.4. Habitat preference

High dikes without vegetation constituted the preferred roosting habitat (occupied by an average 66% of the gulls), followed by dry mud in basins (26%), wet mud (5%), low dike (2.4%) and water-filled basin (0.75%) (Figure 3). No gulls roosted on high dikes covered with vegetation. The concentrations on the different habitats (Figure 4) support this distribution. The insignificant number of gulls occupying water-filled basins shows that this is not a frequently used roosting habitat, in keeping with the absence of records that Yellow-legged Gulls normally roost or loaf in water. The individuals that stood in water-filled basins were generally more active than those standing on dikes or

mud in basins and their activity can thus be considered foraging rather than roosting. The latter birds probably moved to another habitat at sunset.

Two factors, apart from disturbance, appear to be important for the Yellow-legged Gulls when choosing a roosting place – the view from the roosting place and its condition (consistency and dampness). The material on which the gulls appear to prefer to roost is dry, solid mud. Earlier studies have shown that the gulls want a good view in order to escape predators (CRAMP & SIMMONS 1983). This conclusion is supported by two observations. One is that the concentration of gull droppings on a broad dike with small hills about 4 dm high was considerably higher on the hilltops than on the surrounding dike. The second is that, in a ditch with dry mud in the bottom, gulls only occupied the sides of the ditch and not the bottom, where the view was very limited. On high dikes without vegetation, both criteria for the view from the roosting place and its condition are met. The fact that no gulls occupied high dikes covered with vegetation highlights the importance of the view. The

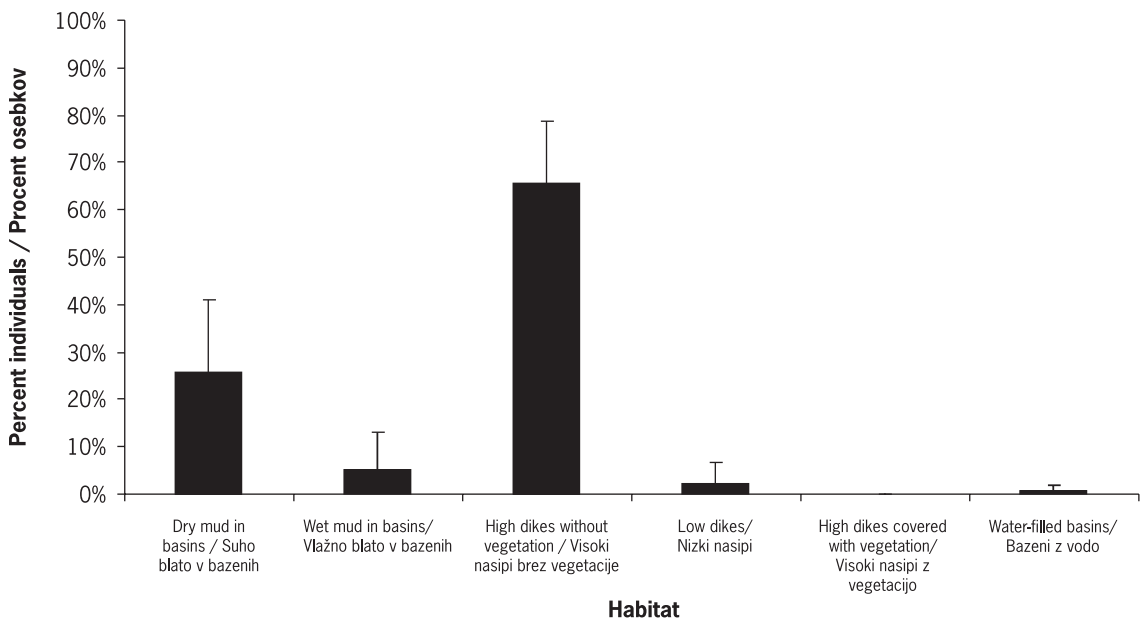


Figure 3: Average percentages of Yellow-legged Gulls *Larus michahellis* in different habitats in Sečovlje salt pans. Error bars denote standard deviations.

Slika 3: Povprečni procent rumenonogih galebov *Larus michahellis* v različnih habitatih v Sečoveljskih solinah. Označena je standardna deviacija.

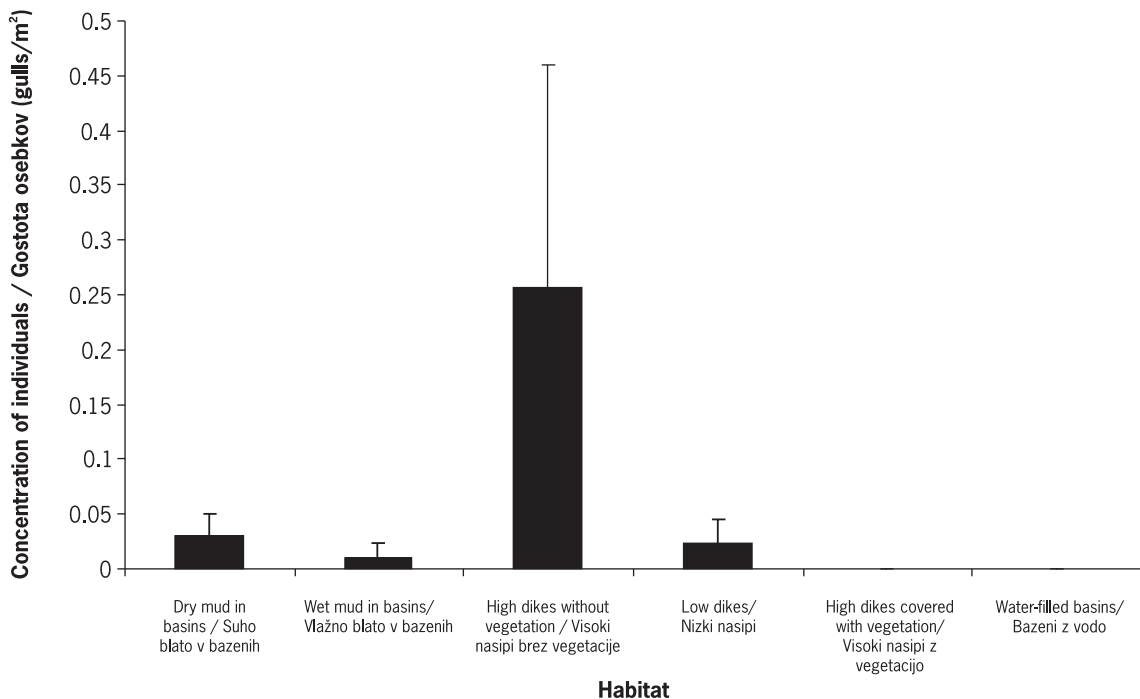


Figure 4: Average concentrations (gulls/m²) of Yellow-legged Gulls *Larus michahellis* in different habitats in Sečovlje salt pans. Error bars denote standard deviations.

Slika 4: Povprečna gostota (galebov/m²) rumenonogih galebov *Larus michahellis* v različnih habitatih v Sečoveljskih solinah. Označena je standardna deviacija.

assumptions can furthermore be corroborated by the fact that the main predation of the gulls in Sečovelje salt pans comes from two terrestrial predators – Red Fox *Vulpinus vulpinus* and Stone Marten *Martes foina*. Higher bare points offer good views to terrestrial predators but, at the same time, gulls' exposure to air predators is minimal, since air predators such as Goshawk *Accipiter gentilis* or Peregrine Falcon *Falco peregrinus* are rare at this site. This does not, however, account for the observation that the concentrations of Yellow-legged Gulls in several cases increased very drastically on low dikes and wet mud in basins, while the concentrations on dry mud in basins and high dikes without vegetation were more constant. This indicates that, when the preferred habitats are fully occupied, the gulls have to occupy less preferred habitats such as wet mud in basins and low dikes. There is some view over possible predators from the bottoms of the basins, where a considerable proportion of the individuals roosted. What differs between dry mud in basins, wet mud in basins and low dikes is the consistency and the dampness, and therefore dry mud, which is dry and solid, is preferred.

Acknowledgements: Many thanks to Andrej Sovinc and Iztok Škornik, Slovenia, and John Strand, Sweden, for invaluable help.

4. Povzetek

V pognezditvenem obdobju se v Sečoveljskih solinah zbere veliko število rumenonogih galebov *Larus michahellis*. Populacijo je avtor spremljal v juliju 2003 z namenom določiti njene parametre glede številčnosti, izbora habitata in starostne sestave. Število rumenonogih galebov je doseglo maksimum 19.7.2003, ko je naštel kar 13,700 osebkov, kar pomeni eno največjih pognezditvenih skupin v Sredozemlju. Po tem datumu je število upadlo na pribl. 10,000 dne 30.7.2003. Večina osebkov ni bila mladostnih, procent mladostnih osebkov je narasel le na koncu meseca. Večina galebov se je med dnevom zadrževala izven solin, kjer so se zbrali pred sončnim zahodom z namenom prenočevanja. Galebi so prenočevali v glavnem na trdnih in suhih tleh z jasnim razgledom.

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A REVIEW OF THE OBSERVATIONS OF GREAT SPOTTED CUCKOO *Clamator* *glandarius* IN BULGARIA IN 2006 AND 2007

Pregled opazovanj čopaste kukavice *Clamator glandarius* v Bolgariji v letih 2006 in 2007

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In Bulgaria, the Great Spotted Cuckoo is a rare and poorly studied species (NANKINOV *et al.* 1997) with a very small population consisting of 5 to 15 breeding pairs (KOSTADINOVA & GRAMATIKOV 2007). Presented below are several findings of the species during the breeding season in the last two years (Figure 1).

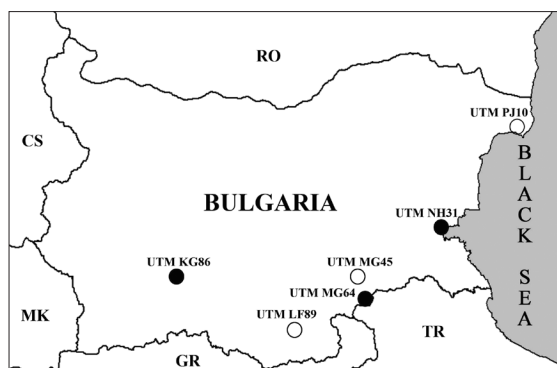


Figure 1: Observation sites of the Great Spotted Cuckoo *Clamator glandarius* in Bulgaria in 2006 and 2007. Open circles (○) represent observations in 2006, full circles (●) in 2007.

Slika 1: Lokacije opazovanj čopaste kukavice *Clamator glandarius* v Bolgariji v letih 2006 in 2007. Beli krožci ponazarjajo opazovanja v letu 2006, črni v letu 2007.



Figure 2: Great Spotted Cuckoo *Clamator glandarius* in 1st summer plumage observed on 23 May 2007 in Besaparski Hills (UTM KG86), southern central Bulgaria (photo: D. Gradinarov)

Slika 2: Čopasta kukavica *Clamator glandarius* v prvem letnem perju, opazovana 23.5.2007 na Besaparskih gričih (UTM KG86), južna osrednja Bolgarija (foto: D. Gradinarov)

On 11 May 2006, a single bird was observed flying around a Poplar *Populus* sp. tree along the River Krumovitz near the village Dolna Kula (UTM LF89), Eastern Rhodopes. So far, the species was registered in this region occasionally in 1993 (K. Ruskov *unpubl.*) and 1994. On 13–15 May 2006, two birds were observed in the region of Kavarna town, between Cape Kaliakra and Bulgarevo village (UTM PJ10) (V. KATRANDEJIEV & P. SIMEONOV *unpubl.*). The observation was made in an Important Bird Area for Bulgaria (KOSTADINOVA & GRAMATIKOV 2007), and till now the species has not been reported for this north-eastern region of the country (SOLER & MILCHEV 1997). On 9 Jun 2006, an adult bird was observed south-west of Topolovgrad town (UTM MG45), Sakar Mountains (A. IGNATOV *unpubl.*). On 24 Apr of the ensuing year, a pair of Great Spotted Cuckoos was registered 1.5 km south-east of Filipovo village (UTM MG64), in the same region. At 19.00 h, the birds chased each other from tree to tree, displaying high rate of vocalization. The observation was made in comparatively open landscape with small groups of trees, shrubs and dispersed fields of tobacco and cereals. So far, the species has not been reported for the area (MILCHEV & KOVACHEV 1998). On 23 May 2007, three Great Spotted Cuckoos were observed in Besaparski Hills (UTM KG86), southern central Bulgaria. One among them was an adult individual, while the other two were 1st summer birds (SVENSSON *et al.* 1999; Figure 2). During the observation, the Great Spotted Cuckoos behaved vigorously and



Figure 3: A courtship display between the 1st summer Great Spotted Cuckoos *Clamator glandarius*, as one of them approached the other by offering it a caught caterpillar, observed on 23 May 2007 in Besaparski Hills (UTM KG86), southern central Bulgaria (photo: D. Gradinarov)

Slika 3: Dvorjenje med čopastimi kukavicami *Clamator glandarius* v prvem letnem perju – ena je ponudila drugi ujeto gosenico; opazovane 23.5.2007 na Besaparskih gričih (UTM KG86), južna osrednja Bolgarija (foto: D. Gradinarov)

displayed high rate of vocalisation. They kept close to the vineyards and their surroundings and often perched on the lower branches of the neighbouring scrubs. A courtship display was observed between the 1st summer birds, as one of them approached the other by offering it a caught caterpillar (CRAMP 1985; Figure 3). We confirmed this locality as a potential breeding site for the species, considering that it had been found in the same area during the breeding season 3 years earlier, but then a single individual was observed and breeding was not confirmed (NIKOLOV *et al.* 2004). Between 28 Apr and 10 Jun 2007, two Great Spotted Cuckoos were often registered in the south-western part of Lake Atanasovsko (UTM NH31), in the region of Bourgas city (K. BEDEV *unpubl.*). The birds were flying around several nests of Magpie *Pica pica*, but young individuals were not found. The breeding of Great Spotted Cuckoo was confirmed in the Bourgas region, UTM LH12, in 2003 (BEDEV 2003), but near Lake Atanasovsko the species was recorded only once – in May 1996 (MICHEV *et al.* 2004).

Povzetek

Avtorji podajajo kratek pregled opazovanj čopaste kukavice *Clamator glandarius* v gnezditvenem obdobju v letih 2006 in 2007 v Bolgariji. Lokacije opazovanj so bile: 11.5.2006, Dolna Kula, vzhodni Rodopi, UTM LF89, 1 os.; 13.–15.5.2006, mesto Kavarna, UTM PJ10, 2 os.; 9.6.2006, JZ od Topolovgrada, UTM MG45, 1 os.; 24.4.2007, JV od Filipova, UTM MG64,

2 os.; 23.5.2007, Besaparski griči, UTM KG86, 3 os. (1 ad. in 2 v prvem letnem perju), opazovano dvorjenje med čopastimi kukavicami v prvem letnem perju; ena je ponudila drugi ujeto gosenico; 28.4.–10.6.2007, Atanasovsko jezero, UTM NH31, 2 os.

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POVZETKI DIPLOMSKIH, MAGISTRSKIH IN DOKTORSKIH DEL

Thesis summaries

BEVK, D. (2007): Upadanje populacije divjega petelina v Škofjeloškem, Cerkljanskem in Polhograjskem hribovju [The decline of Capercaillie population in the mountains of Škofja Loka, Cerklno and Polhov Gradec (central Slovenia)]. – Graduation Thesis, University of Ljubljana, Biotechnical Faculty, Biology Department, Ljubljana.

Mentor / Supervisor:

prof. dr. Peter Trontelj

UDC 575.857:598.261.6(043.2)=163.6

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The Capercaillie *Tetrao urogallus*, the largest tetranoid species, inhabits climax coniferous and mixed forests with glades and well developed Blueberry *Vaccinium myrtillus* undergrowth. In the last few decades, the species has greatly decreased in its numbers. First of all, it retracted from disturbed and to a greater degree exploited forests. In Slovenia, it currently lives in the areas spreading predominantly above 1,000 m a.s.l. In former times, it was abundant in the lower-lying forests as well.

The present work is the result of a three-year research carried out into the Capercaillie in the mountains of Škofja Loka, Cerklno and Polhov Gradec. I wished to establish, which are the parameters influencing the Capercaillie's presence at leks in the areas under consideration. The purpose of the task was also to suggest appropriate conservation measures necessary for the survival of the species.

Forty leks were investigated. On the basis of my own observations and those by hunters I attempted to establish whether the Capercaillie was still present at them during the mating season. Within the radius of 1,000 m around the alleged lek centres I measured, using ArcMap programme, the average altitude above sea level and its gradient, forest cover, surface areas of the coniferous, deciduous and mixed forests, lengths of the forest edges and lengths of the forest roads. I also measured the distance to the nearest lek and estimated dietary conditions there as well as degree of disturbance. The correlation of parameters of the leks' surroundings with the bird's presence was being established with the aid of multivariate statistic analysis

with logistic regression. The leks were also compared on the basis of data provided by the surveys carried out in 1999 by the Slovene Forest Institute.

During the 2005–2007 period, the Capercaillie was observed at 11 leks, 10 of them situated in the Škofja Loka Mts and 1 in the mountains of Cerklno. In the mountains of Polhov Gradec, the Capercaillie was not recorded at any known lek during the breeding season. The parameters with characteristic correlation with the bird's presence in 1999 were disturbance degree, proportion between forest edge length and surface area of the forests, and proportion between coniferous forest area and area of the remaining forest. Significant apart from the above mentioned parameters were, in the 2005–2007 period, the altitude and forest cover. The leks were found to be better preserved at higher altitudes, in the areas not entirely covered by forest, with shorter forest edge and higher proportion of coniferous forest, as well as lower degree of disturbance.

I believe that the Capercaillie's survival is very uncertain in the area under consideration. I thus propose, largely on the basis of other investigations, forest management that considers habitat needs of the species, which means mainly preservation of sufficiently high proportion of old forests and well developed ground vegetation, primarily Blueberry. I also propose reduction of disturbance caused by logging, forest fruit gathering and tourism, particularly from January to July. It is significant that the measures are not implemented merely at leks but in their immediate and wider vicinity as well. Also essential is informing of all those influencing the Capercaillie's habitat, i.e. forest owners, foresters and hikers.

IZ ORNITOLOŠKE BELEŽNICE

From the ornithological notebook

SLOVENIJA / SLOVENIA

SREDOZEMSKI VIHARNIK *Puffinus yelkouan*
Yelkouan Shearwater – two flocks of 9 and 3 individuals respectively observed on 18 Nov 2006 from the coast of Piran (UTM UL84, SW Slovenia), a flock of 9 birds observed on 9 Dec 2006 from the same location; there are very few November and December records of this species in Slovenia

Dne 18.11.2006 sem z dvorišča piranske cerkve opazoval morske ptice. Tega dela sem se lotil ob 9.28 h, končal pa ob 11.50 h. V tem času sem opazil dve jati sredozemskih viharikov. Prva je štela devet (9) ptic in je letela proti jugu na razdalji dobrih sto metrov od Rta Madona. Opažena je bila ob 9.40 h. Drugo so sestavljali trije (3) viharniki, tako smer leta kot oddaljenost sta bili enaki kot pri prvi jati. To jato sem opazoval ob 10.49 h. Dne 9.12.2006 sem z istega mesta morske ptice opazoval od 10.00 do 12.15 h. Ob 11.00 h sem opazil jato devetih (9) viharikov, ki je letela proti jugovzhodu v Piranski zaliv. Obakrat je bilo vreme na las podobno: pihal je močan jugozahodni veter, nebo pa je bilo oblačno, kar je ptice verjetno prignalo bliže k obali. V literaturi sem za slovensko morje zasledil en novembrski podatek, a nobenega decembrskega [STIPČEVIČ, M. & LUKAČ, G. (2001): Status of tubenose seabirds Procellariiformes breeding in the eastern Adriatic. – *Acrocephalus* 22 (104/105): 9–21]. V letu 2002 so bili sredozemski viharniki opazovani 6.11.2002 (10 ptic pred Portorožem) in 5.12.2002 (24 ptic pred Izolo; I. ŠKORNIK, *osebno*). Na podlagi omenjenih opazovanj je moč domnevati, da je sredozemski viharnik v našem morju novembra in decembra pogostejši, kot se je zdelo doslej.

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ČAPLJICA *Ixobrychus minutus*

Little Bittern – one found on nest, with a ring on 16 Jun 2002 at Draga fish ponds (UTM VL68, central Slovenia); it had been ringed as juvenile on the same pond on 1 Aug 2000

Gnezdenje čapljice spremljam na ribnikih v Dragi pri Igu na Ljubljanskem barju vse od leta 1980. V tem času sem našel krepko prek 50 gnezd, redno obročkal mladiče, pa tudi veliko posnel dogajanja ob in na gnezdu. Vsako leto sem skrbno opazoval odrasle na gnezdih, kajtianimalo me

je, ali ima kateri morda obroček na nogi. Leta so minevala in obročkane čapljice ni in ni bilo. Tako je prišlo tudi leto 2002, ko sem 12.6.2002 v Malem ribniku na gnezdu z mladiči snemal stare in na samčevi levi nogi zagledal obroček, kar je bilo nedvomno prvovrstno presenečenje. Ob tem gnezdu sem snemal več dni in ob podrobnejšem pregledovanju posnetkov tudi ugotovil celotno številko obročka – LJUBLJANA E 317. Iz zapiskov sem razbral, da sem tega samca obročkal kot mladiča v gnezdu prav tako v Malem ribniku, in sicer 1.8.2000. Iz podatkov lahko tako razberemo, da se čapljica tudi vrača v svoj rojstni kraj in da ima mladiče že v drugem letu starosti.

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ČRNA ŠTORKLJA *Ciconia nigra*

Black Stork – at Žovneško jezero on 1 Aug 2007 (UTM WM02, central Slovenia)

V okviru Raziskovalnega tabora študentov biologije Vransko 2007 smo po uspešnem večernem lovu kmečkih lastovk *Hirundo rustica* (31) v ne preveč obetavnem trstišču na Žovneškem jezeru in po nočnem predvajanju posnetka dne 1.8.2007 dopoldan ujeli sivo pastirico *Motacilla cinerea* (1), belo pastirico *Motacilla alba* (1), šmarnico *Phoenicurus ochruros* (1), rakarja *Acrocephalus arundinaceus* (2), bičje trstnice *Acrocephalus schoenobaenus* (11), močvirske trstnice *Acrocephalus palustris* (5), srpične trstnice *Acrocephalus scirpaceus* (9), črnoglavke *Sylvia atricapilla* (5), vrtno penico *Sylvia borin* (1), vrbja kovačka *Phylloscopus collybita* (2) in poljske vrabce *Passer montanus* (5). Zaverovani v obročkanje ter v težavno prepoznavanje trstnic smo skoraj prezrli črno štokljo, ki je verjetno že nekaj časa krožila pred okoliškimi griči v zaledju žovneškega gradu. Hitro smo jo poiskali s teleskopom in uživali v njenem jadrnanju, ki ga je tu pa tam zmotil par kanj *Buteo buteo*, ki se je zaganjal vanjo. Kanji sta jo odgnali s pobočij z vzgornikom in prestavila se je nad jezero, kjer je nadaljevala s kroženjem. Po pripovedovanju domačinov se črna štoklja na Žovneškem jezeru redno pojavlja. Na jezeru smo opazovali še čopaste ponirke *Podiceps cristatus*, male ponirke *Tachybaptus ruficollis*, sive čaplje *Ardea cinerea*, velike bele čaplje *Egretta alba*, liske *Fulica atra*, malega martinca *Actitis hypoleucos* in mlakarice *Anas platyrhynchos*.

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ZVONEC *Bucephala clangula*

Goldeneye – one individual seen at Medvedce reservoir (UTM WM53, SE of Pragersko, NE Slovenia) on 23 Jul 2006; this is an unusual summer record and a rare record for Medvedce in general

Zvonec je na zadrževalniku Medvedce (UTM WM53, SV Slovenia) redke gost [KERČEK, M. (2005): Ptice akumulacije Medvedce. – Diplomsko delo, Univerza v Mariboru; *lastni podatki*]. Razlog je v tem, da v času, ko se ta vrsta najpogosteje pojavlja v Sloveniji, ponavadi ni vode v zadrževalniku, ali pa je le ta zamrznjena. Tako sem bil zelo presenečen, ko sem sredi poletja, dne 23.7.2006, med vsemi običajnimi vodnimi pticami zagledal dva zvonca. Eden je bil samec v eklipsnem perju, drugi pa samica. Oba sta se aktivno prehranjevala in plavala precej daleč drug od drugega. Zvonci se občasno pojavljajo ali celo letujejo na velikih akumulacijah SV Slovenije (L. Božič *osebno*).

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BELOGLAVI JASTREB *Gyps fulvus*

Griffon Vulture – on 23 Jul 2007, 18 Griffons Vultures seen gliding over Mt Krn (2244 m a.s.l., UTM UM92, NW Slovenia)

Dne 23.7.2007 smo se prijatelji odpravili z Drežniških raven pod grebenom Krnčice po plezalni poti Silva Korena na Krn (2244 m n.m.v.). Ko smo se okoli 13.30 h bližali vrhu, sem zagledal veliko ujedo, ki je jadrala nad nami, in ves vesel pomislil na planinskega orla *Aquila chrysaetos*, ki ga kljub veliko preživetega časa v hribih v živo še nisem imel sreče opazovati. Čez čas se je ptici pridružila še ena, in ko sem že ves vesel razmišljal, kakšno srečo imam, da lahko opazujem celo par planinskih orlov, se je od nikoder pojavil še tretji priči. Zadeva mi je postala malo sumljiva, a ob našem plezanju na vrh so se ptice izgubile in na poti do vrha sem kar malo pozabil nanje. Med malicanjem na vrhu pa so se nam začele z bohinjske strani približevati pike na nebu. V Gomiščkovem zavetišču sem si sposodil daljnogled in ves navdušen naštel 18 beloglavih jastreb. Ves čas malice so krožili nad nami, se v minuti, dveh izgubili proti Komni in Bohinjskemu jezeru in se v neverjetno kratkem času spet prikazali nad nami. Spustili so se celo tako nizko, da so bili prav razločno vidni s prostim očesom. Pot smo nadaljevali po grebenu, po neverjetno speljani mulatjeri nad 2000 m n.m.v., čez Krnčico, Srednji vrh in Lopatnik. Ves čas so nas spremljali tudi beloglavi jastrebi, ki so se prav brez strahu približali celo jadrlnim padalcem in jadrlnim letalom. Kakšen veličasten občutek je moral biti to šele zanje, ko pa sem bil že jaz tako navdušen, medtem ko sem lahko opazoval

enega od jastrebov, ki se je spustil pod greben, po katerem smo hodili, in sem ga lahko občudoval od zgoraj med njegovim drsenjem skozi zrak. Okoli 17 h smo prisopihali na Lopatnik, kjer so se med tropom ovac razposajeno oglašali krokarji *Corvus corax*. Ob našem prihodu so vzleteli in se v jadrnju nad nami močno razburjali. Na mestu, kjer so bili še pred nekaj minutami krokarji, smo našli dve poginuli ovci. Od ene ni ostalo nič drugega kot gole kosti, koža in značka v ušesu, na drugi pa je bilo še tudi nekaj malega mesa. Več kot očitno sta bili kosilo beloglavih jastrebov kak dan prej. Čakal nas je še dolgočasen spust mimo planine Zapleč do Drežniških raven, kjer nas je čakal avto. Na planini me je za trenutek prešinilo, da pastirjem povem za obrani poginuli ovci, pa sem si premislil, saj iz izkušenj vem, da za poginulo žival kaj hitro najdejo nepravlega krivca. Izlet za znoret, ki se najbrž v taki obliki ne bo kmalu ponovil.

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VELIKI KLINKAČ *Aquila clanga* & ZLATA PROSENKA *Pluvialis apricaria*

Greater Spotted Eagle & Golden Plover – on 18 Mar 2006, we observed the largest number so far of Lapwings *Vanellus vanellus* for Medvedce reservoir (UTM WM53, SE of Pragersko, NE Slovenia) and one of the largest for the country; we counted 993 individuals in total and 549 individuals in the biggest flock; Lapwings were flying in southwest-east direction, with many feeding in partly flooded fields and meadows; among Lapwings and fewer Ruffs *Philomachus pugnax* (36) we noticed a flock of 26 Golden Plovers, which is also the highest number for Medvedce reservoir; Golden Plover is a rare spring migrant in northeastern Slovenia; we also observed one Spotted Eagle; probably the same individual was observed on 11 Mar 2006 and it is the first record of spring stopover for this species for Medvedce reservoir; also seen on that day were a pair of Ferruginous Ducks *Aythya nyroca* and a pair of Red-crested Pochards *Netta rufina*; both species are less common on this water reservoir during the spring months

Med začetkom in sredino marca je na zadrževalniku Medvedce (UTM WM53, JV od Pragerskega, SV Slovenija) vrhunec preleta prib *Vanellus vanellus*, v nasprotju z Ljubljanskim barjem, kjer je vrhunec konec marca [TOME, D., SOVINČ, A. & TRONTELJ, P. (2005): Ptice Ljubljanskega barja. – DOPPS, Ljubljana]. Zaradi mrzle in dolge zime v letu 2006 je bil ta vrhunec odložen za dva tedna. Tako sva lahko bila priči tega vrhunca 18.3.2006, ko sva v dopoldanskih urah preštela 993 osebkov, kar je največje

zabeleženo število prib na zadrževalniku doslej [KERČEK, M. (2005): Ptice akumulacije Medvedce. – Diplomsko delo, Univerza v Mariboru; *lastni podatki*]. Nekoliko večje število osebkov je bilo opazovanih na Ljubljanskem barju med spomladansko selitvijo [TOME, D., SOVINC, A. & TRONTELJ, P. (2005): Ptice Ljubljanskega barja. – DOPPS, Ljubljana], in sicer 1500 osebkov dne 24.3.92. Več jih je bilo opazovanih tudi na akciji celodnevne spremljanja selitvene dinamike vodnih ptic na nižinskem območju reke Drave [Božič, L. (1996): Navadna prosenka *Pluvialis apricaria*. – *Acrocephalus* 17 (78/79): 163]. Največja jata na Medvedcah je štela 549 osebkov. Pribi so priletele z jugozahoda in povečini pristajale na delno poplavljenе travnike in njive vzhodno od zadrževalnika. Pribi so se nekaj časa zadrževale na teh poplavljenih površinah, nato pa so v manjših jatah odletele proti severovzhodu in vzhodu. Med pribami in 36 togotniki *Philomachus pugnax*, ki se tudi selijo v tem obdobju čez Medvedce, vendar v precej manjšem številu, sva opazovala jato 26 zlatih prosenk. Spet gre za največje zabeleženo število osebkov te vrste na zadrževalniku. Prav tako gre za šele drugi podatek te vrste v spomladanskem času za zadrževalnik [KERČEK, M. (2005): Ptice akumulacije Medvedce. – Diplomsko delo, Univerza v Mariboru; *lastni podatki*]. V spomladanskem času so na splošno zlate prosenke redkeje v SV Sloveniji in navadno ne oblikujejo večjih jat (L. Božič *osebno*), kar je na primer značilno na Ljubljanskem barju, kjer največje jate dosežejo celo do 300 osebkov [TOME, D., SOVINC, A. & TRONTELJ, P. (2005): Ptice Ljubljanskega barja. – DOPPS, Ljubljana]. Tega dne naju je razveselil tudi veliki klinkač, ki je bil v spomladanskem času opazovan le štirikrat pred tem letom [KERČEK, M. (2005): Ptice akumulacije Medvedce. – Diplomsko delo, Univerza v Mariboru; *lastni podatki*]. V tem letu pa je bil opazovan trikrat med 11.3. in 18.3.2006. Zanimivejši vrsti sta bili tudi kostanjevka *Aythya nyroca* in tatarska žvižgavka *Netta rufina*. Pri obeh vrstah je bil opazovan par. Obe vrsti sta v tem obdobju redkejši obiskovalki zadrževalnika.

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KOSEC *Crex crex*

Corncrake – on 25 Sep 2006, the author observed a late Corncrake at Retje bird ringing station on Lake Cerknica (UTM VL57, C Slovenia); this is a rare autumn observation for this particular area

Dne 25.9.2006 sem sodeloval pri obročkanju ptic v Retju na Cerkniškem jezeru pod mentorstvom dr. Tomija Trilarja. V popoldanskem času, ko se manj lovi, smo sedeli na stoli s pogledom na mreže. Čez čas mi je postala sumljiva

korenina pri zadnji mreži. Skozi daljnogled sem ugotovil, da gre pravzaprav za kosca, ki se je sprehajal ob mreži in mirno izginil v visoki travi in grmovju ob mreži. Jesenska opazovanja so redka zaradi skrivnostnega življenja kosca v tem delu leta. Cerkniško jezero naj bi kosci zapustili v začetku septembra (L. KEBE *osebno*). Glavnina koscev se sicer seli iz Evrope v septembru, vendar se lahko posamezni osebki zadržijo do novembra. Posamezni kosci lahko celo prezimijo, vendar je to značilno predvsem za Veliko Britanijo in Sredozemlje [CRAMP, S. (ur.) (1998): Handbook of the Birds of Europe, the Middle East, and North Africa, Vol. I: Ostrich to Ducks. – Oxford University Press, Oxford]. Kakšno uro za koscem se je na mrežo usedel še rahlo zgoden veliki srakoper *Lanius excubitor*, čez mrežo so leteli še veliki škurh *Numenius arquata*, ki je vneto iskal svoje družabnike, škrančar *Falco subbuteo* in štirje mladostni rjavi lunji *Circus aeruginosus* na lovu.

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VELIKI ŠKURH *Numenius arquata*

Curlew – a nest found on Lake Cerknica (UTM VL57, C Slovenia) on 1 Jun 1996; first documented nesting for Lake Cerknica

Daljnega leta 1996, natančneje 1.6.96, sem se potikal po Cerkniškem jezeru. Pot me je vodila od Žerovnice proti Osredku, kjer gnezdi veliko rumenih pastiric *Motacilla flava* in trstnih strnadov *Emberiza schoeniclus*. Kmalu zatem, ko se više ležeči travniki prevesijo v nižje mokrotne, je nekje iz tal zletel veliki škurh. Začel me je obletavati in se svarilno oglašati. Krožil je okoli mene in njegovi krogi so postajali vedno večji. Odletel je prek Osredka vse do Otoka in se vrnil, in to za toliko časa, dokler se nisem dovolj oddaljil od mesta, kjer sem ga splašil. Ker nisem videl natančnega mesta, s katerega je zletel, sem šel naprej po svojih opravkih. Ko sem se vračal, sem bil bolj pozoren na to, od kod bo zletel. In res je zletel, le da jaz nisem gledal škurha, ampak rastline, s katerih je zletel. Tam sem našel gnezdo v katerem sta bili dve jajci. Nato sem iz avta opazoval, kako se je škurh vrnil in usedel na jajca. Pozni datum si razlagam tako, da je bilo to nadomestno leglo. Lahko pa škurh na Cerkniškem jezeru gnezdi pozneje zaradi visoke vode. Kasnejši obisk je pokazal, da je bilo gnezdo uplenjeno. Škoda! To je prva potrjena gnezditve velikega škurha na Cerkniškem jezeru.

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MALI SKOVIK *Glaucidium passerinum*

Pygmy Owl – one calling male responded to playback on 21 Sep 2007 at Smrečje, Trnovski gozd (UTM VL19, W Slovenia)

Dne 21.9.2007 sem se odpravil na popis gozdnega jereba *Bonasa bonasia* v Trnovski gozd. Dan je bil sicer sončen, vendar je popis motil občasno premočan severni veter. Popis je potekal na popisnih točkah z metodo predvajanja posnetka oglašanja. Po končanem postopku popisa gozdnega jereba sem na več točkah poskusil še s predvajanjem posnetka oglašanja malega skovika. V Smrečju, približno 1 km² veliki mrzasični dolinici, ki je bila pred dobrimi dvajsetimi leti razglašena za naravni spomenik in prepuščena naravnemu razvoju, sem na treh popisnih točkah ob predvajanju posnetka oglašanja malega skovika doživel buren odziv malih vrst ptic (sinice *Parus* sp., taščica *Erethacus rubecula*, rumenoglav kraljiček *Regulus regulus* ter dolgoprsti plezalček *Certhia familiaris*). Toda malega skovika ni bilo na spregled. Ker sem dokaj pozno zaključil popis gozdnega jereba, sem sklenil, da v Smrečju počakam na večerni mrak in spet poskusim srečo. Tako sem ob 17.50 h v neposredni bližini ene od prejšnjih popisnih točk in kar iz avtomobila ponovil predvajanje posnetka oglašanja malega skovika. Spet se je ponovil koncert malih ptic pevk. Po približno dveh minutah predvajanja pa se mi je zazdelo, da slišim nekakšen odmev predvajane posnetka. Izključil sem predvajalnik in zaslišal značilno oglašanje samca malega skovika v krošnjah odraslih smrek kakšnih 50 metrov proč. Ker sem želel, da se skovik toliko približa, da bi si ga lahko ogledal, sem ponovno vključil posnetek. Skovik se je spreletel na drugo stran in nadaljeval z oglašanjem. Takrat pa sem v zraku nad seboj opazil skobca *Accipiter nisus*, ki ga je očitno privabilo oglašanje malega skovika. Zato sem na hitro pospravil opremo in se odpeljal dalje, da ne bi ravno odkriti mali skovik končal v skobčevih krempljih. Kolikor mi je znano, gre za prvo najdbo malega skovika v Trnovskem gozdu po letu 1983, ko je bila potrjena tudi gnezditve [GEISTER, I. (1995): Ornitološki atlas Slovenije. – DZS, Ljubljana]. Predvidevam, da se mali skovik v Trnovskem gozdu pojavlja predvsem v mrzasičih, kjer najdemo več smrekovega gozda *Piceetum*, ki mu mali skovik daje prednost pred mešanim jelovo–bukovim gozdom *Abieti–Fagetum dinaricum*, ki sicer prevladuje v Trnovskem gozdu. Poleg Smrečja so večja mrzasišča še Smrekova draga, Velika lazna ter Mala lazna. Naj dodam še naslednji podatek: 24.9.2007 popoldne sem se odpravil na Nanos (zahodni del), kjer sem vnovič poskušal najti malega skovika s pomočjo predvajanja posnetka oglašanja. Na sedmih popisnih točkah nisem zasledil nobenega malega skovika, pa tudi kake druge ptice se niso odzivale na predvajani posnetek.

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ALPINE SWIFT *Tachymarptis melba*

Planinski hudournik – opazovan 1 osebek dne 1.8.2007 pri Hruškem vrhu v Karavankah (UTM VM25, S Slovenija)

On 1 Aug 2007, when butterfly monitoring on Hruški vrh in the Karavanke Mts (UTM VM25, N Slovenia), we noticed a hunting Alpine Swift. It was flying with a large flock of House Martins *Delichon urbica*. Alpine Swift is known to have two colonies in the Karavanke Mts on the Austrian side [JANČAR, T. (2006): New breeding colony of Alpine Swift *Tachymarptis melba* in Karavanke / Karawanken mountains (S Austria). – *Acrocephalus* 27 (130/131): 168]. It is highly likely that this individual was coming from nearby Rosenbach or Tržič colony. Nevertheless, there are also other suitable places for the Alpine Swift's colonies in the Karavanke Mts.

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ČEBELAR *Merops apiaster*

Bee-eater – observed attempted nesting at Ljubljansko barje (UTM VL69, C Slovenia) on 8 Jun 2007; on 16 Jun 2007, the nest was found destroyed



Dne 7.6.2007 sem raziskoval na Ljubljanskem barju zahodno od Lavrice. Slikal sem družinico zelenonoge tukalice *Gallinula chloropus*, ki v »kanalu« Škofeljščica gnezdi. Zanimivo je bilo to, da je kljub majhnim mladičem delala gnezdo. Po triurnem sedenju v avtu sem skozi okno zaslišal oglašanje čebelarja, ki pa je po mojem prepričanju pripadalo petju močvirske trstnice *Acrocephalus palustris*. Ker pa se je oglašanje nadaljevalo, sem se odločil, da vse skupaj raziščem. Kakih 50 m od avta je na vrbi sedel čebelar. Kmalu zatem sta iz vrbe proti Ižici zletela dva. Dne 8.6.07 sem bil spet na istem mestu, vendar čebelarjev ni bilo. V upanju, da jih bom vendarle našel, sem se odpravil proti Ižici. Med potjo sem slišal peti vrtno penico *Sylvia borin*. Naredil sem krožni obhod, in ko sem se vrnil na začetek, sta bila čebelarja spet tam. Na tem mestu je ena izmed parcel nasuta z gramožom, za občasno odlaganje gradbenega materiala in zemlje. Na njej je večji kup zemlje, ob njenem robu pa manjši nasip. V tem manjšem sem našel gnezdilni rov. Čebelarja sta bila opazovana še 13.6.07 na sosednji njivi na fižolovkah. Obisk 16.6.07 pa je prinesel razočaranje, kajti nekdo je v rov natlačil zemljo in travo. Po klepetu s kmetom s sosednje njive sem izvedel, da so bili 4 čebelarji na tej lokaciji že lansko leto. Zadrževali so se 14 dni, potem pa izginili. (foto: D. Fekonja)

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SREDNJI DETEL *Dendrocopos medius*

Middle Spotted Woodpecker – on 12 Apr 2006, during the census for the new atlas of breeding birds of Slovenia, I heard a Middle Spotted Woodpecker in a small patch of oak forest in the village of Kamna gora on Konjiška gora (UTM WM33, E Slovenia)

Dne 12.4.2006 sem se mudil pri kraju Kamna gora pri naselju Frankolovo na Konjiški gori. Tam sem opravljal tetradni popis za novi ornitološki atlas gnezdil. Nekje na polovici popisa sem prisopihal do majhnega gradnovega *Quercus petraea* sestoja, ki je bil še nedavno verjetno večji, saj je bilo na njegovem robu še vedno opaziti znamenja sečnje in odstranjevanja korenin. Takoj ko sem stopil v ta gozdiček, sem zaslišal neutrudno oglašanje srednjega detla. Ker ga nisem pričakoval v teh krajih, sem ga začel zasledovati. Našel sem ga, ko se je oglašal z gradnove veje.

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SKALNA LASTOVKA *Ptyonoprogne rupestris*

Eurasian Crag Martin – six individuals observed on 18 Mar 2006 in the very centre of Ljubljana (UTM VM60, central Slovenia).

Dne 18.3.2006 sem pri sotočju Ljubljanice in Gradaščice okoli 16 h opazil jato šestih (6) skalnih lastovk, ki so krožile nad reko. Ptice sem si natančno ogledal z daljnogledom in tako izključil možnost zamenjave z drugimi vrstami lastovk. Predvsem velja izpostaviti bele repne pege, ki so bile vidne, kadar je katera izmed ptic razširila rep. Skalne lastovke so se postopoma premikale proti Tromostovju. Opazoval sem jih še približno eno uro, nato pa odšel domov. Skozi svoje okno, ki gleda proti Ljubljani približno v višini Čevljarskega mostu, sem posamezne skalne lastovke, nikoli pa celotne jate, lahko opazoval še vse do večera. Skalna lastovka na Ljubljanskem barju, na robu katerega leži kraj opazovanja, še ni bila opazovana [TOME, D., SOVINČ, A. & TRONTELJ, P. (2005): Ptice Ljubljanskega barja. – Monografija DOPPS št. 3. – DOPPS, Ljubljana]. Zanimiv je tudi čas pojavljanja, saj marčevskih opazovanj skalne lastovke zunaj primerne gnezditvenega habitata v slovenski ornitološki literaturi nisem zasledil.

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SKALNA LASTOVKA *Ptyonoprogne rupestris*

Eurasian Crag Martin – one observed on 18 Mar 2006 in the very centre of Ljubljana (UTM VM60, central Slovenia).



Dne 18. marca 2006 sem se v Ljubljani peljal po Zoisovi cesti proti Ljubljani. Iz avtomobila sem v zraku zagledal tri ali štiri rumenonoge galebe *Larus cachinnans*, ki so se spuščali na vodo. Zanimalo me je, le kaj so galebi opazili na vodi, da se tako odločno spuščajo k tlom. Ko sem parkirali in se takoj z daljnogledom napotil k Ljubljani, sem v zraku nad seboj zagledal lastovko, ki pa je hitro izginila za prvimi vrbami. Moram priznati, da nisem bil popolnoma prepričan,

za katero vrsto gre, vedel sem le, da ni kmečka lastovka. Kar oddahnil sem si po prvem presenečenju, ko je ta lastovka priletela nazaj, se v krogih pomikala proti Tromostovju in se nato spet vrnila nazaj proti meni. V zraku na blizu ni bilo težko ugotoviti, da gre za skalno lastovko. Zelo dobro so bila videti črna (temna) podperutna peresa, ravni odsekani rep ter značilna oblika peruti. Dalj časa sem jo opazoval, kako v letu lovi hrano, in uspelo mi je narediti kar nekaj dobrih digitalnih dokumentacijskih posnetkov v zraku. Glede na čas opazovanja domnevam, da je bila ta skalna lastovka še na spomladanskem preletu. Moje, Ljubljani najbližje opazovanje te vrste je iz leta 2003, ko sem prav tako sredi marca nad Savo v Tacnu pri Ljubljani opazoval 3 skalne lastovke. (foto: D. Šere)

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HRIBSKA LISTNICA *Phylloscopus bonelli*

Bonelli's Warbler – on 2 and 3 May 2006, the authors of this notice heard Bonelli's Warbler's song on scree below Otlica in Trnovski gozd (UTM VL18, SW Slovenia); the species has not been known to breed in Trnovski gozd; they also heard and observed, during areal song display, a male Rock Thrush *Monticola saxatilis*; on migration they observed a male Montagu's Harrier *Circus pygargus*, a female Marsh Harrier *Circus aeruginosus* and Honey Buzzard *Pernis apivorus* (all on 2 May 2006); on that day, they also observed two Golden Eagles *Aquila chrysaetos* and a Goshawk *Accipiter gentilis*; on 3 May they watched four Honey Buzzards, three Hobbies *Falco subbuteo*, a male and female Red-legged Falcon *Falco vespertinus* and a female Montagu's Harrier

Med 2. in 3.5.2006 smo se avtorji te notice odločili za počitek pri prijateljih v naselju Predmeja v Trnovskem gozdu. Oba dneva smo izkoristili za sprehod po robu Trnovskega gozda med Predmejo in Otlico. Na meliščih pod robom pri Otlici smo zaslišali preprost napev hribske listnice, ki je neutrudno razglašala svoj teritorij. Hribska listnica ni omenjena kot gnezdilka Trnovskega gozda [GEISTER, I. (1995): Ornitološki atlas Slovenije. – DZS, Ljubljana], prav tako ni podatkov za novi atlas gnezdilke (T. MIHELČIČ *osebno*). Pri Otlici nas je s svojo pesmijo navduševal tudi sramežljivi slegur *Monticola saxatilis*. Spreletaval se je s skale na skalo in pel svojo pesem. Oba dneva smo imeli priložnost opazovati selitev ujed, ki so se mešale s tamkajšnjimi gnezdkami. Dne 2.5.2006 smo nad Predmejo opazovali dva planinska orla *Aquila chrysaetos*, ki gnezdita nekje v bližini. Pod robom smo opazovali let kragulja *Accipiter gentilis*, preletnike pa so ta dan zastopali samec močvirskega lunja *Circus pygargus*, samica rjavega lunja *Circus aeruginosus* in sršenar *Pernis apivorus*. Naslednjega dne

smo med preletniki opazovali štiri sršenarje, tri škrančarje *Falco subbuteo*, samca in samico rdečenoge postovke *Falco vespertinus* ter samico močvirskega lunja. So pa nam tega dne pravo predstavo prikazali "domačini". Med sledenjem kanji *Buteo buteo* smo opazili, da se je njen let iz kroženja spremenil v hiter raven let. Razlog za to je bil planinski orel, ki jo je napadel z vso silo. Kanja je pobegnila, orla pa je napadel sokol selec *Falco peregrinus*, pri čemer se je vztrajno zaletaval vanj. Po umiku orla se je selca lotil krokar *Corvus corax* in ga kratko malo pregnal iz naših pogledov. Tako smo zaključili, da je krokar kralj neba.

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PLAVČEK *Parus caeruleus*

Blue Tit – on 12 Apr 2006, I observed an unusual Blue Tit's nesting site; it was in a fifteen centimetre deep hole in the ground along a cart track near Kamna gora on Konjiška gora (UTM WM33, E Slovenia); on 27 May 2006, I found another unusual Blue Tit's nesting site; it was in a crevice in the rock wall of the Žamerk quarry south of Šempeter

V tej beležnici podajam opis opazovanja dveh manj običajnih mest plavčkove gnezditve. Prvo gnezdo je bilo najdeno pri Kamni gori na Konjiški gori ob blatnem kolovozu dne 12.4.2006. Na obeh straneh kolovoza so bile v hrib vrezane stene iz sprijete zemlje in kamnov. Ob urejanju stene na eni strani kolovoza je bil odstranjen kamen in za njim je ostala jamica, ki je bila deloma zaprta s prstjo. V tej luknji, kakšnih dvajset centimetrov nad kolovozom, sem zaslišal čebljanje in iz luknje je poletel plavček. Ob pogledu v luknjo sem zagledal mladiče, natlačene v njej. Jamica je bila globoka vsega petnajst centimetrov. Odprtina se je od zunaj zdela kot rov voluharice, in gnezda verjetno ne bi opazil, ko ne bi bil slišal tistega čebljanja. Drugo gnezdo je bilo najdeno v steni opuščenega kamnoloma pri Žamerku južno od Šentjurja dne 27.5.2006. Tam smo sicer iskali gnezdo sokola selca *Falco peregrinus* (ki smo ga kasneje našli na drugi strani v naravni steni). Plavček je bil opažen, ko je priletel in smuknil v špranjico približno dva metra nad tlemi kamnoloma.

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HRVAŠKA / CROATIA

WHITE STORK *Ciconia ciconia*

Bela štoklja – boj med dvema osebkoma za gnezdišče v Osijeku (UTM CR14, V Slavonija, Hrvaška) na 15 m visokem betonskem dimniku, dne 1.5.2007

On a sunny and warm 1 May 2007 morning, I observed 4 White Storks circling above my backyard in the city of Osijek (UTM CR14, E Slavonia, Croatia). This was not unusual at all, considering that a pair or two of White Storks have for years been regularly nesting in this (western) part of the city (on the chimney of the “Jelenko” Kindergarten and on the platform in the backyard of the house standing in Kolodvorska street No. 16). Sometime later, at around noon, I observed 5 White Storks while circling above my street. I saw them again at 16.00 h and I went with my son to check what was happening. At a distance of about 200 m down the street, there is a chimney approximately 15 meters high on the office building belonging to the Croatian Post. Above this place, a struggle for the potential nesting place was taking place in the air. Of the 6 White Storks, which circled in the air, with their eyes glued on the high concrete chimney as their potential nesting place, 2 landed on the chimney and started a fight that included physical contacts with their beaks and legs. As a result, 1 White Stork was thrown down to the iron ladder, which leads from the ground to the top of the chimney. Apart from the worried partner that landed on the chimney's margin, all other White Storks watched the struggle from the air, as well as the dark eyes of my son, who was very excited by the closeness of these large beautiful birds. Walking down the street on the following days, I noticed that the chimney was unoccupied. The storks abandoned this place, but were nesting at five other localities in the city of Osijek (a pair in Retfala on the chimney of the kindergarten, a pair on the platform in the backyard of the house in Kolodvorska street, a pair on the inactive industrial chimney in the city centre, a pair on the house chimney in Trvrda, and one pair on the concrete chimney downtown).

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RIBJI OREL *Pandion haliaetus*

Osprey – one individual seen flying on 15 Sep 2003 above the road north of Karin village near Zadar (UTM WJ58, Dalmatia, Croatia)

Septembra 2003 sva se avtorja mudila na počitnicah v naselju Karin pri Zadru. Dne 15.9. sva med vožnjo s severa proti Karinu v zraku opazila ujedo v letu. Bil je ribji orel, ki je v ravni črti letel proti jugu in je sicer znan kot redek

obiskovalec Dalmacije [RUCNER, D. (1998): Ptice hrvatske obale Jadrana. – Hrvatski prirodoslovni muzej, Ministrstvo razvitka i obnove, Zagreb].

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ČRNA ČIGRA *Chidonias niger*

Black Tern – on 30 Apr 2006, we observed intensely migrating Black Terns in the Neretva delta (UTM YH16, S Dalmatia, Croatia); it was estimated that at least 5,000 of them passed through delta within three hours; among them were also Yellow Wagtails *Motacilla flava*, Sand Martins *Riparia riparia*, Barn Swallows *Hirundo rustica* and a few Red-rumped Swallows *Hirundo daurica*

Na poti s študentskega biološkega tabora Ekosistemi Jadrana 2006 na Pelješcu smo se 30.4. 2006 Ana Vidmar, Miha Krofel, Nastja Pajk in jaz kljub nenehnemu dežju odločili za postanek na delti Neretve (UTM YH16, J Dalmacija, Hrvaška). Na blatnih poljih smo opazovali dva velika škurha *Numenius arquata*, pet črnih prosenk *Pluvialis squatarola*, pet spremenljivih prodnikov *Calidris alpina*, petnajst zelenonogih martinov *Tringa nebularia*, sedem školjkaric *Haemantopus ostralegus* in štiri polojnike *Himantopus himantopus*. Med njimi so se sprehajale sive *Ardea cinerea* in velike bele čaplje *Egretta alba* ter štiri žličarke *Platalea leucorodia*. Dvajset kričavih čiger *Sterna sandvicensis* pa je letalo s polojev proti morju loviti hrano. Zanimivo je bilo tudi proti odprtemu morju, kjer smo videli nekaj zimskih zamudnikov: pet belolisk *Melanitta fusca*, rdečegrelega slapnika *Gavia stellata* in sedemnajst črnovratih ponirkov *Podiceps nigricollis*. Ves čas opazovanja smo opazovali črne čigre. Šele čez čas smo opazili, da je črnih čiger zares veliko in da iz megle na morju znova in znova prihajajo nove jate, velike od nekaj deset do nekaj sto osebkov. Jate, ki so bile že tam, pa so se počasi odpravljale po toku Neretve navzgor. Ocenjujem, da je v času treh ur delto preletelo vsaj pet tisoč črnih čiger. Sliko množične selitve je dopolnilo več sto rumenih pastiric *Motacilla flava* in kakih tisoč lastovk. Med temi so prevladovali kmečke lastovke *Hirundo rustica* in breguljke *Riparia riparia*, mednje se je primešalo tudi nekaj rdečih lastovk *Hirundo daurica*.

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PHEASANT *Phasianus colchicus*

Fazan – na otoku Šolti (UTM XJ00, Dalmacija, Hrvatska) opaženo 6–7 osebkov, omamljenih zaradi prehranjevanja s fermentiranimi figami, dne 27.10.2007

The Pheasant is an introduced, permanent, quite frequent species on the island of Šolta, nesting in the fields and in the maquis [SUŠIĆ, G., PALLAORO, A., RADOVIĆ, D. & STIPČEVIĆ, M. (1990): Ptice otoka Šolte. Pp. 107–111. In: MIHOVILOVIĆ, M.A. *et al.* (eds): Otok Šolta: monografija. – Mladost, Zagreb]. During the days we spent on the island between 24 and 27 Oct 2007, a couple of specimens often appeared, mostly cocks, and their calls could be heard almost everywhere. In the “Šoltansko polje” field, we observed Pheasants pecking at grapes several times. On the road section between Grohote and Donje Selo (XJ00), we observed, each day, flocks of Serins *Serinus serinus* and one or two Pheasants flushing from below the Fig trees *Ficus carica* along the road. We noted that a large amount of rotting figs accumulated under the trees, and this is what the birds were feeding on. In the afternoon of 27 October, it was on the same road section that a couple of Pheasant cocks tottered in front of our slowly moving car from below the roadside figs. They were completely confused, not even wanting to turn off the road. An hour later we returned and found another 6–7 Pheasant cocks on the road. They made a staggering attempt to run a few metres in front of the approaching car, then stood aside and waited for us to pass. Most probably, the Pheasants had eaten the fermenting figs, which in fact caused their strange behaviour.

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SPANISH SPARROW *Passer hispaniolensis*

Travniški vrbec – dne 24.10.2007 opažen 1 osebek v družbi z dvema domačima vrbcema na otoku Šolti (UTM XJ00, Dalmacija, Hrvatska)

The plumage of Spanish Sparrows changes in autumn, making it easy for the observer to confuse them with House Sparrows *Passer domesticus*. In the central and southern areas of Dalmatia, they can join House Sparrow flocks and overwinter together [LUKAČ, G. (2004): About the widening of the range and the status of the Spanish Sparrow (*Passer hispaniolensis*) in Croatia at the beginning of the 21st century. – Paklenički zbornik 2: 113–122]. We observed House Sparrows in varying numbers in all human settlement on the island of Šolta, between 24 and 27 Oct 2007. They were present in higher numbers especially at Gornje Selo and

Grohote, Srednje Selo and near Donje Selo, on the edge of “Šoltansko polje” field. On 24 Oct 2007, we approached the cistern in the “Šoltansko polje” field from the graveyard of Donje Selo (XJ00), and saw a male Spanish Sparrow in the roadside thicket, in the company of two House Sparrows. This individual was not seen during the subsequent days. There had been no earlier data on the occurrence of Spanish Sparrow on the island of Šolta [SUŠIĆ, G., PALLAORO, A., RADOVIĆ, D. & STIPČEVIĆ, M. (1990): Ptice otoka Šolte. Pp. 107–111. In: MIHOVILOVIĆ, M.A. *et al.* (eds): Otok Šolta: monografija. – Mladost, Zagreb]. Moreover, an observation in October is important in that the recorded bird could be an overwintering individual.

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Moj Mobi. Moje darilo.



Včasih se želje uresničijo! Ne, ne šalim se, včasih se želje res uresničijo. Hm, že nekaj časa sem si želela nov Mobipaket. Saj veste, po dveh letih se toliko stvari spremeni ... Hm ... In potem sem na božično jutro ostrmela. Ne vem, ali sem svoje želje govorila na glas ali pa morda oči in mami bereta moje misli ... eeeee ... raje ne :) ... kakorkoli že, pod jelko me je čakal ličen novoletni Mobipaket s povsem novim mobitelom! Točno takšnim, kot sem si ga želela, pa še kakšno funkcijo več ima. No, zdaj sem glavna, pa še torbico imam vedno preko rame!

Hvala, mami in oči!

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