

Report monitoring process of revitalization 2014

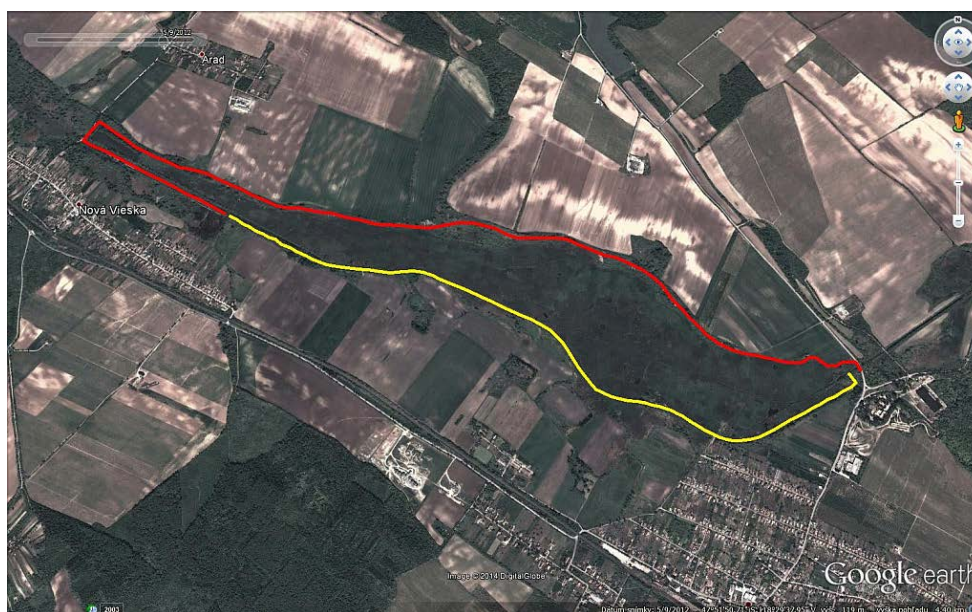
The initial monitoring of the birds population, water level and aerial monitoring of the habitats were released in project SPA areas during year 2014. Main focus was on detailed monitoring of the bird species and actual state of the population of the trigger species in SPAs.

1. Monitoring of the birds

1.1 Methodology

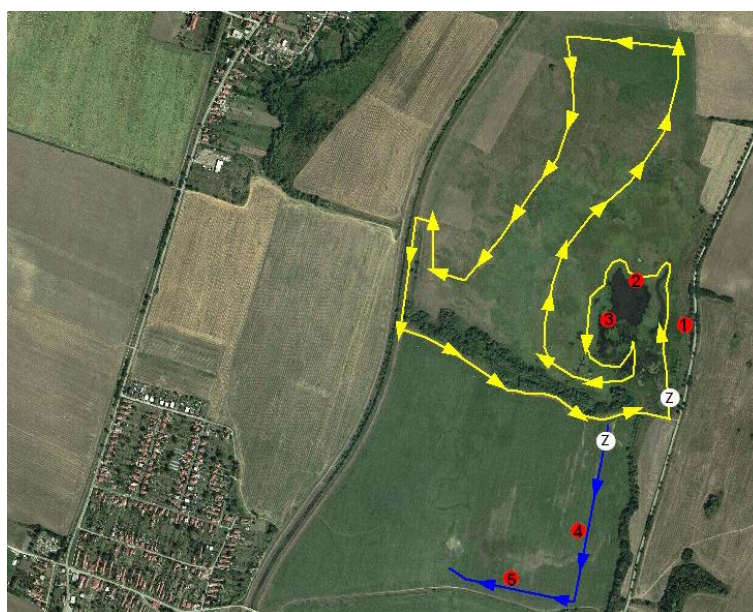
Detailed monitoring of the birds was released in all SPA areas Parížske močiare, Žitavský luh and Dolné Pohronie with aim to collect data about populations of the trigger species during migration and breeding season in connection with actual state of the habitats before revitalization activities and management activities. Birds were monitored on the basis of standard methodology within the designed transects and observation points in area. There was monitored territorial behaviour (*Porzana porzana*, *Porzana parva*, *Ixobrychus minutus*, *Circus aeruginosus*), singing males (*Acrocephalus melanopogon*) and females with juveniles (*Anas querquedula*, *Anser anser*). In the case of the rails was released also the post breeding monitoring of the juvenile birds in marsh habitats if it was possible (especially *Porzana porzana* in SPA Žitavský luh). The direct control of the nests was released on the breeding colonies of European Bee-eaters (*Merops apiaster*). During the monitoring were recorded all of the birds species and their numbers in SPAs.

*Map 1 – design of the monitoring transect in SPA Parížske močiare. Birds were monitored generally on yellow transect with length of 4 km in the most important parts of the SPA. Several times during breeding season was released also the longer transect (red one) which length is 10 km. Long version of transect was released at begin of the season during occupation of the breeding territories by *Circus aeruginosus* and during fledging of the juveniles for control of the breeding success.*



*Map 2 – design of monitoring transect in SPA Žitavský luh and placement of the observation points. Yellow transect in SPA was released with aim to collect data about territorial *Porzana porzana*, *Circus aeruginosus* and meadow bird species (*Motacilla flava*, *Crex crex*, *Locustella naevia*, *Tringa**

totanus and other.), blue one was focused on breeding waders for example *Tringa totanus*, *Vanellus vanellus* or *Gallinago gallinago*. Red observation points were statically points from which were released the monitoring of the waterfowl with using of the monocular. From these points were controlled ducks, geese and fledged rails. The character “Z” means begin of the transects.



1.2 Results

1.2.1 SPA Parížske močiare

In SPA Parížske močiare marshes was during first initial monitoring within the project recorded following birds species in described breeding population, density of numbers recorded during migration (bird species in alphabetical order):

Table 1 – The list of the bird species recorded within the SPA Parížske močiare in y. 2014. Altogether 87 of species were observed in the area of SPA.

Species	Recorded numbers during non-breeding season and migration y. 2014	Recorded number of breeding pairs or calling males during breeding season y. 2014	Character of occurrence of species in y. 2014
<i>Accipiter nisus</i>	1		M
<i>Acrocephalus arundinaceus</i>		56-88	B
<i>Acrocephalus palustris</i>		7-9	B
<i>Acrocephalus scirpaceus</i>		65-134	B
<i>Acrocephalus schoenobaenus</i>		4-12	B
<i>Acrocephalus melanopogon</i>		7	B
<i>Aegithalos caudatus</i>		5	B
<i>Alauda arvensis</i>		3	B
<i>Alcedo atthis</i>	2	1	W, M, B
<i>Anas crecca</i>	2	2	W, M, B
<i>Anas penelope</i>	1		W, M

<i>Anas platyrhynchos</i>	10-60		W, M, B
<i>Anas querquedula</i>	14	2	M, B
<i>Anser anser</i>	50-60	2-6	W, M, B
<i>Anthus pratensis</i>	1		M
<i>Ardea cinerea</i>		1-5	W, M, B
<i>Ardea purpurea</i>		1-2	M, B
<i>Aythya ferina</i>	1		M
<i>Botaurus stellaris</i>		1	B
<i>Buteo buteo</i>	4	2	W, M, B
<i>Carduelis cannabina</i>		3	B
<i>Carduelis carduelis</i>	6	3	W, M, B
<i>Carduelis chloris</i>	25	13	W, M, B
<i>Ciconia ciconia</i>		1	F
<i>Circus aeruginosus</i>	21	18-24	M, B
<i>Coccothraustes coccothraustes</i>	1		M
<i>Columba palumbus</i>		5	B
<i>Corvus corax</i>	3		M
<i>Corvus cornix</i>		3	B
<i>Cuculus canorus</i>		11-23	B
<i>Cygnus olor</i>		3	W, M, B
<i>Delichon urbicum</i>	2		F, M
<i>Dendrocopos major</i>		3	W, B
<i>Dendrocopos syriacus</i>	1		M
<i>Egretta alba</i>		65-80	W, M, B
<i>Emberiza citrinella</i>		2	W, M, B
<i>Emberiza schoeniclus</i>	5	16-32	W, M, B
<i>Erithacus rubecula</i>		3	M, B
<i>Fringilla coelebs</i>		5	B
<i>Fulica atra</i>		7-14	B
<i>Gallinago gallinago</i>	1		M
<i>Gallinula chloropus</i>		29-42	M, B
<i>Garrulus glandarius</i>	2	1	W, M, B
<i>Hippolais icterina</i>		2	B
<i>Hirundo rustica</i>	350		M, F
<i>Ixobrychus minutus</i>		2-4	B
<i>Jynx torquilla</i>		1	B
<i>Lanius collurio</i>		6	B
<i>Lanius excubitor</i>	1		W
<i>Locustella luscinioides</i>		70-118	B
<i>Locustella naevia</i>		1	B
<i>Luscinia megarhynchos</i>		10-19	B
<i>Merops apiaster</i>		10	B, F
<i>Motacilla alba</i>	11	1	M, B
<i>Motacilla flava</i>		1	B
<i>Muscicapa striata</i>		1	B
<i>Nycticorax nycticorax</i>	1		M, F

<i>Oriolus oriolus</i>		5	B
<i>Panurus biarmicus</i>		19-27	W, M, B
<i>Parus caeruleus</i>	4	2	W, M, B
<i>Parus major</i>	12	5	W, M, B
<i>Passer domesticus</i>	10		W, F
<i>Passer montanus</i>	100	3-7	W, B
<i>Phalacrocorax pygmeus</i>	5		M
<i>Phasianus colchicus</i>		6	W, B
<i>Phylloscopus collybita</i>	3	14	M, B
<i>Porzana parva</i>	28	6-11	M, B
<i>Rallus aquaticus</i>	11	40-56	W, M, B
<i>Remiz pendulinus</i>	1	10	M, B
<i>Riparia riparia</i>	20	255	M, B, F
<i>Saxicola torquata</i>		3	M, B
<i>Serinus serinus</i>		2	B
<i>Sitta europaea</i>	1	1	W, M, B
<i>Streptopelia decaocto</i>	10	4	W, M, B
<i>Streptopelia turtur</i>		6-8	M, B
<i>Sturnus vulgaris</i>	30 000	17	W, M, B
<i>Sylvia atricapilla</i>		47	B
<i>Sylvia communis</i>		2	B
<i>Sylvia curruca</i>		3	B
<i>Sylvia nisoria</i>		1	B
<i>Tachybaptus ruficollis</i>		6	B
<i>Tringa glareola</i>	1		M
<i>Troglodytes troglodytes</i>	2		W
<i>Turdus merula</i>		9	W, M, B
<i>Turdus philomelos</i>		4	B
<i>Turdus pilaris Linnaeus</i>	60		Z, M
<i>Vanellus vanellus</i>	3	1	M, B

Table 2 – Populations of the trigger bird species in SPA Parižske močiare marshes, calculating of the breeding density and estimation of the population in SPA Parižske močiare marshes.

Species	Density of the breeding pairs calculated on 10 ha	Estimation of the breeding population (pairs/calling males)	Notice
<i>Porzana parva</i>	0,9 – 1,4	17 - 26	28.4.2014 - 25 calling ♂♂
<i>Circus aeruginosus</i>	-	24 - 30	
<i>Acrocephalus melanopogon</i>	0,5 – 0,8	9 - 15	
<i>Ixobrychus minutus</i>	0,3 – 0,5	6 – 9	
<i>Anas querquedula</i>	-	0 – 1	19.4.2014 – 3 observed pairs
<i>Anser anser</i>	-	2 - 6	
<i>Merops apiaster</i>	-	3 – 10	

Table 3 – The list of the most abundant birds species breeding in reed beds in SPA Parížske močiare marshes, calculating of the breeding density and estimation of the population in SPA Parížske močiare marshes.

Species	Density of the breeding pairs calculated on 10 ha	Estimation of the breeding population (pairs/calling males)
<i>Acrocephalus arundinaceus</i>	7,0 – 11,0	130 - 204
<i>Acrocephalus scirpaceus</i>	6,80 – 8,10	126 - 150
<i>Emberiza schoeniclus</i>	2,00 – 4,00	37 - 74
<i>Locustella luscinioides</i>	5,00 – 8,00	93 - 148
<i>Panurus biarmicus</i>	2,40 – 3,40	44 - 63
<i>Gallinula chloropus</i>	3,60 – 5,50	67 - 102
<i>Rallus aquaticus</i>	4,80 – 5,10	89 - 94
<i>Tachybaptus ruficollis</i>	0,30 – 0,50	6 - 9

Summary

SPA Parížske močiare marshes is important breeding place for several species of the reed bed birds, especially for the reed bed passerines and rails. The season of the 2014 was specific because in the SPA were good condition with water level opposite of the other areas in Slovakia or in other countries. Probably due this was recorded high number of the Little Crackes in amount of 25 calling males on shorter transecting at the end of the April. In the area was recorded relatively big breeding colony of the Great White Egret in amount 65-80 breeding pairs, which is the biggest *E.alba* breeding colony in Slovakia for this time. Number of the breeding pairs was counted from pictures after aerial monitoring with plane. Also the Pygmy Cormorants were recorded during the breeding season flying to the breeding colony of the White Egrets, but it was only one observation.

Homogenization of the area due the infilling processes and overgrowing the marshes by reed bed causes also decreasing of the species richness and decreasing of such birds population which are depend on open water surface. High numbers of the reed bed passerines are represented especially by species: Savi's Warbler, Great Reed-Warbler or Eurasian Reed-Warbler. To the most common birds belong also Common Rail and Common Moorhen.

Population of the Wester Marsh Harrier is in good and stable quantity in area. That is not possible to say about other trigger birds' species which are decreasing due the habitat loos and succession. The Little Bittern, Garganey, Greylag Goose, Moustached Warbler, Little Cracke and European Bee-eater populations are in not suitable state in SPA. Similar is the situation with other priority bird species like Great Bittern or Purple Heron which are represented in areas only by 1 o 2 breeding pairs.

1.2.2 SPA Žitavský luh

In SPA Žitavský luh was during first initial monitoring within the project recorded following birds species in described breeding population, density of numbers recorded during migration (bird species in alphabetical order):

Table 4 – The list of the bird species recorded within the SPA Žitavský luh in y. 2014. Altogether 134 of species were observed in the area of SPA.

Species	Recorded numbers during non-breeding season and migration y. 2014	Recorded number of breeding pairs or calling males during breeding season y. 2014	Character of occurrence of species in y. 2014
Accipiter gentilis	1		W, M
Accipiter nisus	2		W, M
Acrocephalus arundinaceus		1	B
Acrocephalus scirpaceus		1	B
Acrocephalus schoenobaenus		16	B
Actitis hypoleucos	2		M
Aegithalos caudatus	8	1	W, M, B
Alauda arvensis		10-20	W, M, B
Alcedo atthis	2	1	W, M, B
Anas acuta	7		W, M
Anas clypeata	7		M
Anas crecca	50-180		W, M
Anas penelope	3		W, M
Anas platyrhynchos	400-1450	12-20	W, M, B
Anas querquedula	15-50	1	M, B
Anas strepera	2	1	W, M, B
Anser anser	5-16		W, M
Anser fabalis	0-50		W, M
Anthus pratensis	1-5		W, M
Apus apus	3		M
Aquila heliaca	1		W, M
Ardea cinerea	1-24		W, M
Ardea purpurea	1		M
Asio flammeus	2		W, M
Aythya ferina	1-11		W, M
Botaurus stellaris	1		M
Buteo buteo	1-25	1	W, M, B
Buteo lagopus	1		W, M
Calidris alpina	1-4		M
Calidris temminckii	2		M
Carduelis carduelis	40-120	1	W, M, B
Carduelis chloris	1-20	1	W, M, B
Carduelis spinus	2-15		W, M
Ciconia ciconia	1-8		M, F
Ciconia nigra	1-2		M, F
Circus aeruginosus	4-56	3-4	M, B

<i>Circus cyaneus</i>	1-6		W, M
<i>Circus pygargus</i>	1		M
<i>Coccothraustes coccothraustes</i>		1	B, M
<i>Columba palumbus</i>	1-13	4	M, B
<i>Corvus corax</i>	1		W, M, F
<i>Coturnix coturnix</i>		1-3	M, B
<i>Crex crex</i>		1	M, B
<i>Cuculus canorus</i>		2	M, B
<i>Cygnus cygnus</i>	4		M, W
<i>Cygnus olor</i>	1-15	0-2	W, M, B
<i>Delichon urbicum</i>	2-450		M, F
<i>Dendrocopos major</i>	2	4	W, M, B
<i>Dendrocopos syriacus</i>		1	W, M, B
<i>Dryocopus martius</i>	1	1	W, M, B
<i>Egretta alba</i>	1-19		W, M
<i>Egretta garzetta</i>	1		M
<i>Emberiza citrinella</i>	5	1	W, M, B
<i>Emberiza schoeniclus</i>	2	7	W, M, B
<i>Erithacus rubecula</i>	1-3		W, M
<i>Falco peregrinus</i>	1		M, W
<i>Falco subbuteo</i>	1		M, F
<i>Falco tinnunculus</i>	1-2	1	W, M, B, F
<i>Ficedula albicollis</i>	1		M
<i>Fringilla coelebs</i>	10-20	10	M, B
<i>Fringilla montifringilla</i>	2		W, M
<i>Fulica atra</i>	1-20		M
<i>Gallinago gallinago</i>	1-6		M
<i>Gallinula chloropus</i>		2	B, M
<i>Garrulus glandarius</i>	1-14		W, M
<i>Grus grus</i>	2		M
<i>Himantopus himantopus</i>	1-4		M
<i>Hippolais icterina</i>		1	M, B
<i>Hirundo rustica</i>	10-600		M, F
<i>Charadrius dubius</i>	5	1-5	M, B
<i>Charadrius hiaticula</i>	1		M
<i>Chlidonias hybrida</i>	3-4		M
<i>Chlidonias leucopterus</i>	2		M
<i>Chlidonias niger</i>	1-5		M
<i>Jynx torquilla</i>		1	B, M
<i>Lanius collurio</i>		1-2	B, M
<i>Lanius excubitor</i>	1		W, M
<i>Larus arg./cach./mich.</i>	2		M
<i>Larus ridibundus</i>	1		M
<i>Locustella fluviatilis</i>		1	B, M
<i>Locustella luscinioides</i>		2-8	B, M
<i>Locustella naevia</i>		2-3	B, M

<i>Luscinia megarhynchos</i>		16	B, M
<i>Lymnocyptes minimus</i>	1		W, M
<i>Merops apiaster</i>	2-17		M, F
<i>Miliaria calandra</i>	5-20	5-11	W, M, B
<i>Motacilla alba</i>	1-50		M
<i>Motacilla flava</i>	60-80	20-23	M, B
<i>Muscicapa striata</i>		1	B, M
<i>Nycticorax nycticorax</i>	4		M, F
<i>Oriolus oriolus</i>		10	M, B
<i>Panurus biarmicus</i>	2-4		W, M
<i>Parus caeruleus</i>	4	5	W, M, B
<i>Parus major</i>	15	10	W, M, B
<i>Parus palustris</i>	1		W, M
<i>Passer domesticus</i>	20-40		W, M
<i>Pernis apivorus</i>	1		M
<i>Phalacrocorax carbo</i>	2-15		W, M
<i>Phalaropus lobatus</i>	1		M
<i>Phasianus colchicus</i>	2-24	5	W, B
<i>Philomachus pugnax</i>	1-110		M
<i>Phylloscopus collybita</i>	2	5	M, B
<i>Phylloscopus sibilatrix</i>	1-2		M
<i>Pica pica</i>	1-2		W
<i>Picus viridis</i>	1	1	W, M, B
<i>Platalea leucorodia</i>	1		M
<i>Podiceps cristatus</i>	2	1	W, M, B
<i>Porzana parva</i>	1-4	1-2	M, B
<i>Porzana porzana</i>	1-5	1-3	M, B
<i>Pyrrhula pyrrhula</i>	2-6		W, M
<i>Rallus aquaticus</i>		5-8	M, B
<i>Riparia riparia</i>	10-20		M, F
<i>Saxicola rubetra</i>	8		M
<i>Saxicola torquata</i>		3	M, B
<i>Sitta europaea</i>	1-4	2	W, M, B
<i>Streptopelia decaocto</i>	4-20		W, M
<i>Streptopelia turtur</i>		2-4	B, M
<i>Sturnus vulgaris</i>	4-800	25	W, M, B
<i>Sylvia atricapilla</i>		15	M, B
<i>Sylvia communis</i>		2-4	M, B
<i>Sylvia curruca</i>		1	M, B
<i>Sylvia nisoria</i>		2-3	M, B
<i>Tachybaptus ruficollis</i>	3-6		W, M
<i>Tringa erythropus</i>	1-19		M
<i>Tringa glareola</i>	2-40		M
<i>Tringa nebularia</i>	1-6		M
<i>Tringa ochropus</i>	1-2		M
<i>Tringa totanus</i>	1-13	2-3	M, B

<i>Troglodytes troglodytes</i>	10		W, M
<i>Turdus iliacus</i>	3		W, M
<i>Turdus merula</i>	1-2	1-3	W, M, B
<i>Turdus philomelos</i>		8	M, B
<i>Turdus pilaris</i>	1-40		W, M
<i>Vanellus vanellus</i>	2-86	1-2	

Table 5 – Populations of the trigger bird species in SPA Žitavský luh.

<i>Species</i>	<i>Estimation of the breeding population (pairs/calling males)</i>	<i>Notice</i>
<i>Porzana porzana</i>	1-3	- 5 ♂♂ recorded on 19.4.2014, - observed 3 pull. individuals
<i>Anas querquedula</i>	1	- recorded ♀ with 8 pull. ind.
<i>Circus aeruginosus</i>	3 - 4	

Summary

There were recorded 134 bird species in SPA Žitavský luh during y. 2014. SPA is an important area for the migrating and breeding of the waders, ducks and rails in western part of the Slovakia. The area was the only one known place in southwest part of Slovakia for the breeding of the *P.porzana* and *A.querquedula*. SPA is also important for the breeding of the *Tringa totanus*.

1.2.3 SPA Dolné Pohronie

In SPA Dolné Pohronie was during first initial monitoring within the project recorded following birds species in described breeding population, density of numbers recorded during migration (bird species in alphabetical order):

Table 6 – The list of the bird species recorded within the SPA Dolné Pohronie in y. 2014.

Species	Recorded numbers during non-breeding season and migration y. 2014	Recorded number of breeding pairs or calling males during breeding season y. 2014	Character of occurrence of species in y. 2014
<i>Anthus pratensis</i>	5		M
<i>Ardea cinerea</i>	1		W, M
<i>Buteo buteo</i>	1	1	W, M, B
<i>Carduelis carduelis</i>	4		W, M
<i>Carduelis chloris</i>		1	B
<i>Circus aeruginosus</i>	1		M, F
<i>Columba oenas</i>	28		M, F
<i>Corvus cornix</i>	1		M, F
<i>Coturnix coturnix</i>		2	B, M
<i>Dendrocopos major</i>	1		M
<i>Dendrocopos syriacus</i>		1	B
<i>Emberiza citrinella</i>	2	1	W, M, B
<i>Falco tinnunculus</i>		1	B, F
<i>Galerida cristata</i>	1	1	W, M, B
<i>Garrulus glandarius</i>	2		M
<i>Hirundo rustica</i>	10-20		M, F
<i>Lanius collurio</i>		1-4	B
<i>Lanius excubitor</i>	1		W, M
<i>Luscinia megarhynchos</i>		1	B, M
<i>Merops apiaster</i>		100-135	B
<i>Motacilla alba</i>	1-6		M
<i>Oriolus oriolus</i>		2	B
<i>Passer montanus</i>		50-60	W, B, M
<i>Phasianus colchicus</i>	1		W, M
<i>Riparia riparia</i>		135-160	B
<i>Saxicola torquata</i>		1	B
<i>Streptopelia turtur</i>		1-8	B
<i>Sturnus vulgaris</i>	30-120	10-30	B, M
<i>Troglodytes troglodytes</i>	1		M, W
<i>Upupa epops</i>	3	1	M, B

Summary

European Bee-eater is the only one trigger bird species in SPA Dolné Pohronie. Population of the *M.apiaster* was counted and estimated on 100-135 breeding pairs. Breeding sand walls are also important for Sand Martins which breed in SPA in amount 135-160 pairs. Between

interesting and rare species recorded in SPA belongs Hoopoe. Habitats are in the SPA in bad condition and the urgent revitalization in SPA is needed for maintaining of the population of European Bee-eaters.

2. Aerial Monitoring of the habitats

The aerial monitoring was released in SPAs Parižske močiare and Žitavský luh with main aim to record actual state of the habitats and extent of the plant communities, open water surface and infilling processes in wetlands. For next evaluating of the habitats extent we will contract subject which is offering also the georeferencing of the images/pictures.

Picture 1 – Aerial monitoring in SPA Parižske močiare – from plane is possible to see the extent of the reed beds in SPA and small representation of the open water habitats.



Picture 2 – Aerial monitoring in SPA Žitavský luh – from plane is possible to see the spring flooding and the negative effect of the regulation of river ecosystem and isolation of the alluvium from river.



3. Monitoring of the water level

The water level changes during the y. 2014 were controlled in detail in SPA Žitavský luh on the installed hydrometric slats. Year 2014 was average and there was balanced water regime during breeding season. During the spring time and also during late summer was released simulation of the flooding. In SPA Parížske močiare was quite high water level what was supported by intensive rains during 2014. Water level was measured also on hydrometric slats on 2 places in SPA.

