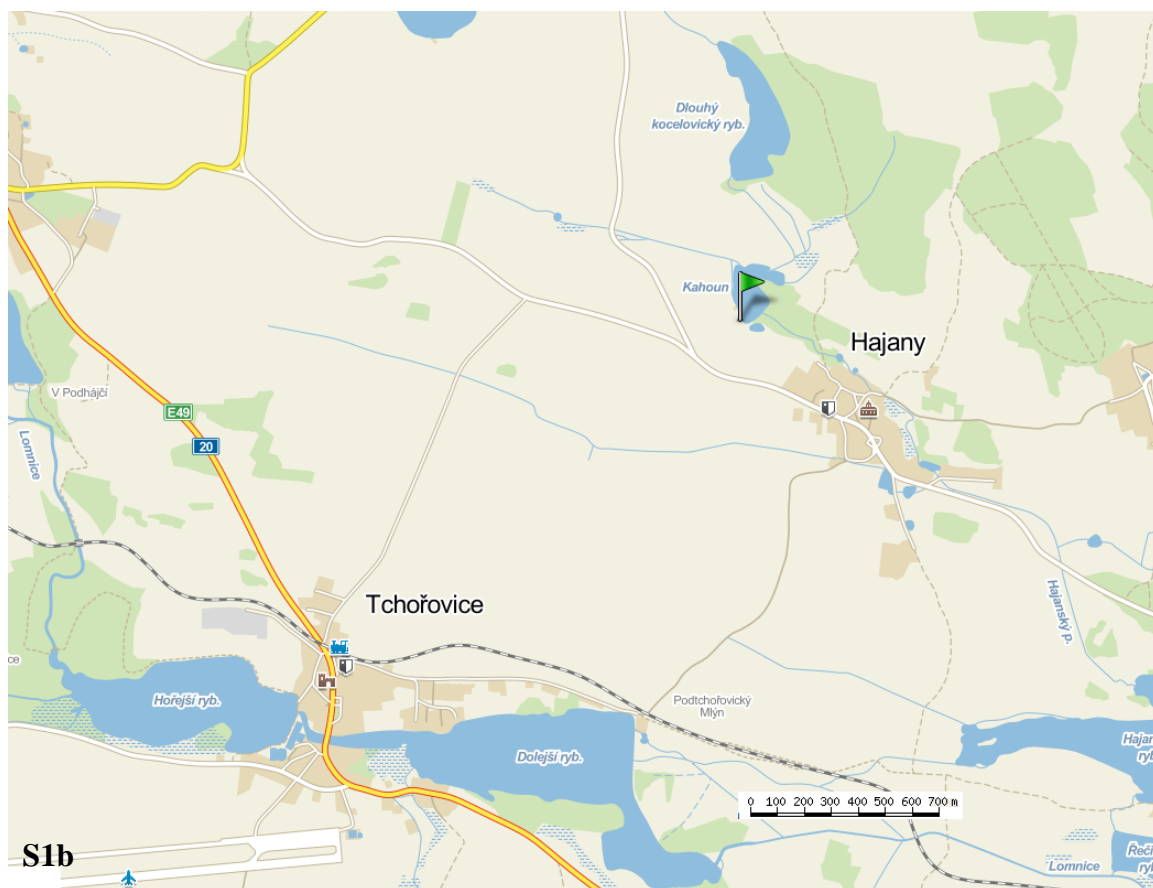




**Figure S1: Locality P.** The samples in 2009 were collected from mallards inhabiting the pond called Putim (GPS coordinates 49°16'42.629"N, 14°8'9.881"E). The green flag on the map S1c represents the position of the S1a view. Figure S1b shows wooden huts distributed along the shore. The map was generated by the [www.mapy.cz](http://www.mapy.cz).



**Figure S2: Locality H.** The samples in 2010 were collected from mallards resided the pond called Kahoun which is situated near the Hajany village (GPS coordinates 49°26'59.547"N, 13°49'52.568"E). The green flag on the map S2b represents the position of the panoramic view S2a. The map was generated by the [www.mapy.cz](http://www.mapy.cz).

## S3a: PB2

PB2 1038nt	P/9K	P/14K	P/17K	P/18K H6	P/18K H11	P/23K	P/25K	P/18T	H/1T	H/4T
P/9K	ID	28	28	28	78	40	78	40	28	28
P/14K	28	ID	0	0	66	16	66	16	0	0
P/17K	28	0	ID	0	66	16	66	16	0	0
P/18K_H6	28	0	0	ID	66	16	66	16	0	0
P/18K_H11	78	66	66	66	ID	74	0	74	66	66
P/23K	40	16	16	16	74	ID	74	0	16	16
P/25K	78	66	66	66	0	74	ID	74	66	66
P/18T	40	16	16	16	74	0	74	ID	16	16
H/1T	28	0	0	0	66	16	66	16	ID	0
H/4T	28	0	0	0	66	16	66	16	0	ID

## S3b: PB1

PB1 825nt	P/4K	P/9K	P/12K	P/14K	P/17K	P/18K H6	P/18K H11	P/23K	P/25K	P/18T	H/1T	H/4T
P/4K	ID	56	57	58	58	58	60	0	60	0	58	58
P/9K	56	ID	26	40	40	40	36	56	36	56	40	40
P/12K	57	26	ID	40	40	40	36	57	36	57	40	40
P/14K	58	40	40	ID	0	0	42	58	42	58	0	0
P/17K	58	40	40	0	ID	0	42	58	42	58	0	0
P/18K_H6	58	40	40	0	0	ID	42	58	42	58	0	0
P/18K_H11	60	36	36	42	42	42	ID	60	0	60	42	42
P/23K	0	56	57	58	58	58	60	ID	60	0	58	58
P/25K	60	36	36	42	42	42	0	60	ID	60	42	42
P/18T	0	56	57	58	58	58	60	0	60	ID	58	58
H/1T	58	40	40	0	0	0	42	58	42	58	ID	0
H/4T	58	40	40	0	0	0	42	58	42	58	0	ID

## S3c: PA

PA 649nt	P/9K	P/12K	P/14K	P/17K	P/18K H6	P/18K H11	P/23K	P/25K	P/18T	H/1T	H/4T
P/9K	ID	33	25	25	29	27	29	27	29	28	28
P/12K	33	ID	26	26	30	28	30	28	30	29	29
P/14K	25	26	ID	0	24	22	20	22	20	23	23
P/17K	25	26	0	ID	24	22	20	22	20	23	23
P/18K_H6	29	30	24	24	ID	2	16	2	16	1	1
P/18K_H11	27	28	22	22	2	ID	14	0	14	1	1
P/23K	29	30	20	20	16	14	ID	14	0	15	15
P/25K	27	28	22	22	2	0	14	ID	14	1	1
P/18T	29	30	20	20	16	14	0	14	ID	15	15
H/1T	28	29	23	23	1	1	15	1	15	ID	0
H/4T	28	29	23	23	1	1	15	1	15	0	ID

## S3d: H6

H6 909nt	P/4K	P/14K	P/17K	P/18K H6	P/23K	P/18T	H/1T	H/4T
P/4K	ID	60	61	61	0	0	61	61
P/14K	60	ID	1	1	60	60	1	1
P/17K	61	1	ID	0	61	61	0	0
P/18K_H6	61	1	0	ID	61	61	0	0
P/23K	0	60	61	61	ID	0	61	61
P/18T	0	60	61	61	0	ID	61	61
H/1T	61	1	0	0	61	61	ID	0
H/4T	61	1	0	0	61	61	0	ID

## S3e: H11

H11 596nt	P/12K	P/18K H11	P/25K
P/12K	ID	12	11
P/18K_H11	12	ID	1
P/25K	11	1	ID

## S3f: NP

NP 797nt	P/3K	P/12K	P/14K	P/17K	P/18K H6	P/18K H11	P/23K	P/25K	P/18T	H/1T	H/4T
P/3K	ID	55	53	53	0	0	55	0	55	0	0
P/12K	55	ID	21	21	55	55	18	55	18	55	55
P/14K	53	21	ID	0	53	53	11	53	11	53	53
P/17K	53	21	0	ID	53	53	11	53	11	53	53
P/18K_H6	0	55	53	53	ID	0	55	0	55	0	0
P/18K_H11	0	55	53	53	0	ID	55	0	55	0	0
P/23K	55	18	11	11	55	55	ID	55	0	55	55
P/25K	0	55	53	53	0	0	55	ID	55	0	0
P/18T	55	18	11	11	55	55	0	55	ID	55	55
H/1T	0	55	53	53	0	0	55	0	55	ID	0
H/4T	0	55	53	53	0	0	55	0	55	0	ID

## S3g: N2

N2 322nt	P/12K	P/17K	P/23K
P/12K	ID	1	21
P/17K	1	ID	20
P/23K	21	20	ID

## S3h: N9

N9 382nt	P/18K H6	P/18K H11	P/25K	H/1T	H/4T
P/18K_H6	ID	0	0	0	0
P/18K_H11	0	ID	0	0	0
P/25K	0	0	ID	0	0
H/1T	0	0	0	ID	0
H/4T	0	0	0	0	ID

## S3i: MP

MP 804nt	P/4K	P/9K	P/12K	P/14K	P/17K	P/18K H6	P/18K H11	P/23K	P/25K	P/18T	H/1T	H/4T
P/4K	ID	39	39	39	39	41	41	0	41	0	41	41
P/9K	39	ID	10	10	10	14	14	39	14	39	14	14
P/12K	39	10	ID	0	0	10	10	39	10	39	10	10
P/14K	39	10	0	ID	0	10	10	39	10	39	10	10
P/17K	39	10	0	0	ID	10	10	39	10	39	10	10
P/18K_H6	41	14	10	10	10	ID	0	41	0	41	0	0
P/18K_H11	41	14	10	10	10	0	ID	41	0	41	0	0
P/23K	0	39	39	39	39	41	41	ID	41	0	41	41
P/25K	41	14	10	10	10	0	0	41	ID	41	0	0
P/18T	0	39	39	39	39	41	41	0	41	ID	41	41
H/1T	41	14	10	10	10	0	0	41	0	41	ID	0
H/4T	41	14	10	10	10	0	0	41	0	41	0	ID

## S3j: NS

NS 331nt	P/4K	P/4K	P/9K	P/12K	P/14K	P/17K	P/18K H6	P/18K H11	P/23K	P/25K	P/18T	H/1T	H/4T
P/3K	ID	57	58	3	3	3	0	0	57	0	56	0	0
P/4K	57	ID	6	58	58	58	57	57	0	57	1	57	57
P/9K	58	6	ID	59	59	59	58	58	6	58	5	58	58
P/12K	3	58	59	ID	0	0	3	3	58	3	57	3	3
P/14K	3	58	59	0	ID	0	3	3	58	3	57	3	3
P/17K	3	58	59	0	0	ID	3	3	58	3	57	3	3
P/18K_H6	0	57	58	3	3	3	ID	0	57	0	56	0	0
P/18K_H11	0	57	58	3	3	3	0	ID	57	0	56	0	0
P/23K	57	0	6	58	58	58	57	57	ID	57	1	57	57
P/25K	0	57	58	3	3	3	0	0	57	ID	56	0	0
P/18T	56	1	5	57	57	57	56	56	1	56	ID	56	56
H/1T	0	57	58	3	3	3	0	0	57	0	56	ID	0
H/4T	0	57	58	3	3	3	0	0	57	0	56	0	ID

**Table S3: Nucleic acid sequence identity matrices of the locality P and H avian influenza virus segments.** The matrices were constructed using the BioEdit program on the basis of nucleotides 1251-2288 (1038) of PB2, 1465-2289 (825) of PB1, 783-1401 (649) of PA, 816-1724 (909) of H6, 679-1274 (596) of H11, 748-1544 (797) of NP, 568-889 (322) of N2, 1050-1431 (382) of N9, 203-1006 (804) of MP, and 540-870 (331) of NS. The tables were highlighted with a segment specific color which is corresponding to Figures 1 and 2 and the abbreviations with Table 1 respectively.