

Results of 1998 Research on Effects of Endocrine Disrupting Chemicals on Wildlife (Birds of prey – 1)

(Concentration per wet weight)

No.	Names of species	Specimen collection site	Gender (M: Male, F: Female)	Age	Specimen	Lipid	1												2	3										
							SPEED'98 No.						2												4	12				
							Polychlorinated biphenyls (PCBs)												Hexachlorobenzene (HCB)	Hexachlorocyclohexane										
							Chlorinated biphenyl	Dichloro biphenyl	Trichloro biphenyl	Tetrachloro biphenyl	Pentachloro biphenyl	Hexachloro biphenyl	Heptachloro biphenyl	Octachloro biphenyl	Nonachloro biphenyl	Decachloro biphenyl	PCB total*	α-HCH		β-HCH	γ-HCH	δ-HCH	HCH total*							
Unit						μg/kg-wet																								
1	Northern goshawk	Hokkaido	F	Jv	Liver	0.080	<4	<4	20	112	332	670	252	51	9	5	1,451	12	<2	57	<2	<2	57							
2	Northern goshawk	Ishikawa Pref.	M	Jv	Liver	0.30	<4	<4	<4	<4	7	7	<4	<4	<4	<4	14	<2	<2	4	<2	<2	4							
3	Northern goshawk	Fukui Pref.	M	A	Liver	1.4	<2	<2	7	32	85	190	72	16	3	3	408	15	<2	51	<2	<2	51							
4	Northern goshawk	Tochigi Pref.	M	Jv	Liver	2.0	<10	<10	<10	<10	40	170	70	10	<10	<10	290	6	<5	57	<5	<5	57							
5	Northern goshawk	Tochigi Pref.	M	Jv	Liver	0.90	<2	<2	<2	<2	<2	9	2	2	<2	<2	13	<4	<4	41	<4	<4	41							
6	Northern goshawk	Tochigi Pref.	M	Jv	Liver	1.5	<2.5	<2.5	3	14	177	445	166	60	16	8	889	10	<2	89	<2	<2	89							
7	Northern goshawk	Tochigi Pref.	M	Ck	Liver	0.10	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	0	<2	<2	4	<2	<2	4							
8	Northern goshawk	Tochigi Pref.	Unknown	Jv	Liver	1.1	<5	<5	64	96	265	695	362	89	17	<5	1,588	46	<2	96	<2	<2	96							
9	Northern goshawk	Tochigi Pref.	Unknown	Ck	Liver	0.20	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	0	<2	<2	5	<2	<2	5							
10	Northern goshawk	Tochigi Pref.	Unknown	Ck	Liver	—	<10	<10	<10	<10	40	150	40	<10	<10	<10	230	5	<4	51	<4	<4	51							
11	Northern goshawk	Saitama Pref.	Unknown	Jv	Liver	0.50	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	0	<2	<2	6	<2	<2	6							
12	Northern goshawk	Nagano Pref.	M	S	Liver	0.020	<5	<5	<5	17	168	541	301	90	17	6	1,140	33	<2	103	<2	<2	103							
13	Northern goshawk	Shizuoka Pref.	Unknown	Unknown	Liver	3.6	<10	<10	<10	<10	90	280	110	<10	<10	<10	480	13	<4	73	<4	<4	73							
14	Hodgson	Fukui Pref.	Unknown	Unknown	Liver	0.50	<1	<1	202	1,460	3,310	6,160	2,560	419	93	51	14,255	62	<2	297	<2	<2	297							
15	Hodgson	Fukui Pref.	Unknown	Unknown	Liver	0.20	<1	<1	14	120	683	1,650	416	235	76	35	3,229	6	<2	92	<2	<2	92							
16	Hodgson	Fukui Pref.	Unknown	Unknown	Liver	1.4	<4	<4	<4	<4	7	23	10	<4	<4	<4	40	<2	<2	<2	<2	<2	0							
17	Hodgson	Gunma Pref.	Unknown	Unknown	Liver	7.1	<2.5	<2.5	<2.5	<2.5	46	199	104	27	<2.5	3	379	3	<2	17	<2	<2	17							
18	Sparrow hawk	Fukui Pref.	F	Unknown	Liver	6.2	<4	<4	<4	<4	4	23	5	<4	<4	<4	32	9	<4	18	<4	<4	18							
19	Sparrow hawk	Tochigi Pref.	F	Unknown	Liver	8.8	<10	<10	<10	<10	50	200	110	30	<10	<10	390	<10	<10	70	<10	<10	70							
20	Peregrine falcon	Fukui Pref.	F	Jv	Liver	0.10	<2	<2	21	158	767	2,170	909	235	50	30	4,340	65	<2	181	<2	<2	181							
21	Peregrine falcon	Fukui Pref.	Unknown	Unknown	Liver	3.0	<5	<5	70	231	2,340	3,890	1,010	172	22	10	7,745	17	<4	104	<4	<4	104							
22	Marsh harrier	Ishikawa Pref.	F	Ck	Liver	1.9	<1	<1	<1	<1	3	8	3	<1	<1	<1	14	<2	<2	<2	<2	<2	0							
23	Marsh harrier	Ishikawa Pref.	Unknown	Ck	Liver	2.3	<1	<1	<1	<1	2	7	2	<1	<1	<1	11	<2	<2	<2	<2	<2	0							
24	Japanese lesser sparrow hawk	Tochigi Pref.	M	Jv	Liver	6.9	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	0	<10	<10	<10	<10	<10	0							
25	Japanese lesser sparrow hawk	Tochigi Pref.	F	A	Liver	4.5	<10	<10	<10	<10	<10	10	<10	<10	<10	<10	10	<5	<5	12	<5	<5	12							
26	Owl	Fukui Pref.	F	Jv	Liver	2.3	<5	<5	<5	<5	31	88	34	6	<5	<5	159	<4	<4	8	<4	<4	8							
27	Owl	Fukui Pref.	Unknown	Unknown	Liver	4.1	<10	<10	<10	30	150	540	260	80	10	<10	1,070	20	<10	110	<10	<10	110							
28	Ezo owl	Hokkaido	Unknown	Unknown	Liver	0.10	<20	<20	<20	<20	90	330	150	<20	<20	<20	570	43	<2	22	<2	<2	22							
29	Brown hawk owl	Fukui Pref.	Unknown	Unknown	Liver	3.4	<10	<10	<10	<10	10	<10	<10	<10	<10	<10	10	4	<4	17	<4	<4	17							
30	Brown hawk owl	Shiga Pref.	Unknown	Unknown	Liver	5.1	<10	<10	<10	20	70	160	30	<10	<10	<10	280	5	<4	45	<4	<4	45							

Age A: Adult, S: Sub-adult, Jv: Juvenile, Ck: Chicks

* Calculated on the assumption that values below the level of detection are counted as 0.

Results of 1998 Research on Effects of Endocrine Disrupting Chemicals on Wildlife (Birds of prey-2)

(Concentration per wet weight)

No.	Names of species	Specimen collection site	Gender (M: Male, F: Female)	Age	Specimen	Lipid	SPEED'98 No.																		
							4		5	6		7		8				9	10	11	12	13	14	15	16
							14		15	16		18		19				23	25	26	43	33	34		
Chlordane		Oxychlordane	trans-Chlordane	trans-Nonachlor	cis-Nonachlor	DDT		DDE and DDD				Dieldrin	Heptachlor	Heptachlor epoxide	Benzo(a)pyrene	Tributyltin	Triphenyltin	Dibutyltin	Monobutyltin						
cis-Chlordane	trans-Chlordane					o,p'-DDT	p,p'-DDT	o,p'-DDE	p,p'-DDE	o,p'-DDD	p,p'-DDD														
Unit							μg/kg-wet																		
%																									
1	Northern goshawk	Hokkaido	F	Jv	Liver	0.080	14	<2	323	420	118	<2	<2	<2	5,940	<2	32	48	<2	34	<2	<200	<200	<1,000	<2,000
2	Northern goshawk	Ishikawa Pref.	M	Jv	Liver	0.30	<2	<2	<2	3	<2	<2	<2	<2	15	<2	<2	<2	<2	<2	<2	<200	<200	<1,000	<2,000
3	Northern goshawk	Fukui Pref.	M	A	Liver	1.4	3	<2	78	94	17	<2	3	<2	572	<2	8	39	<2	20	<2	<200	<200	<1,000	<2,000
4	Northern goshawk	Tochigi Pref.	M	Jv	Liver	2.0	<5	<5	72	73	15	<5	<5	<5	393	<5	9	22	<5	23	<5	<200	<200	<1,000	<2,000
5	Northern goshawk	Tochigi Pref.	M	Jv	Liver	0.90	<4	<4	9	8	<4	<4	<4	<4	136	<4	<4	<4	<4	5	<4	<200	<200	<1,000	<2,000
6	Northern goshawk	Tochigi Pref.	M	Jv	Liver	1.5	<2	<2	92	84	19	<2	<2	<2	2,250	<2	27	52	<2	34	<2	<200	<200	<1,000	<2,000
7	Northern goshawk	Tochigi Pref.	M	Ck	Liver	0.10	<2	<2	<2	<2	<2	<2	<2	<2	12	<2	<2	<2	<2	<2	<2	<200	<200	<1,000	<2,000
8	Northern goshawk	Tochigi Pref.	Unknown	Jv	Liver	1.1	16	<2	95	148	35	<2	<2	<2	2,090	<2	41	26	<2	43	<2	<200	<200	<1,000	<2,000
9	Northern goshawk	Tochigi Pref.	Unknown	Ck	Liver	0.20	<2	<2	3	<2	<2	<2	<2	<2	18	<2	<2	<2	<2	<2	<2	<200	<200	<1,000	<2,000
10	Northern goshawk	Tochigi Pref.	Unknown	Ck	Liver	—	3	<4	76	133	25	<4	<4	<4	228	<4	<4	18	<4	20	<4	<200	<200	<1,000	<2,000
11	Northern goshawk	Saitama Pref.	Unknown	Jv	Liver	0.50	<2	<2	11	14	3	<2	<2	<2	26	<2	<2	14	<2	4	<2	<200	<200	<1,000	<2,000
12	Northern goshawk	Nagano Pref.	M	S	Liver	0.020	<2	<2	151	105	18	<2	4	<2	4,820	<2	82	76	<2	34	<2	<200	<200	<1,000	<2,000
13	Northern goshawk	Shizuoka Pref.	Unknown	Unknown	Liver	3.6	<4	<4	153	212	43	<4	<4	<4	1,330	<4	20	189	<4	38	<4	<200	<200	<1,000	<2,000
14	Hodgson	Fukui Pref.	Unknown	Unknown	Liver	0.50	74	5	510	761	224	<2	<2	<2	3,990	<2	28	506	<2	170	<2	<200	<200	<1,000	<2,000
15	Hodgson	Fukui Pref.	Unknown	Unknown	Liver	0.20	22	<2	261	365	103	<2	<2	<2	1,350	<2	2	55	<2	93	<2	<200	<200	<1,000	<2,000
16	Hodgson	Fukui Pref.	Unknown	Unknown	Liver	1.4	<2	<2	6	4	<2	<2	<2	<2	12	<2	<2	<2	<2	<2	<2	<200	<200	<1,000	<2,000
17	Hodgson	Gunma Pref.	Unknown	Unknown	Liver	7.1	2	<2	122	77	14	<2	<2	<2	233	<2	3	19	<2	51	<2	<200	<200	<1,000	<2,000
18	Sparrow hawk	Fukui Pref.	F	Unknown	Liver	6.2	<4	<4	10	<4	<4	<4	<4	<4	284	<4	5	7	<4	6	<4	<200	<200	<1,000	<2,000
19	Sparrow hawk	Tochigi Pref.	F	Unknown	Liver	8.8	<10	<10	80	40	<10	<10	<10	<10	1,070	<10	10	<10	<10	50	<10	<200	<200	<1,000	<2,000
20	Peregrine falcon	Fukui Pref.	F	Jv	Liver	0.10	<2	<2	271	55	3	<2	3	<2	3,650	<2	6	26	<2	66	<2	<200	<200	<1,000	<2,000
21	Peregrine falcon	Fukui Pref.	Unknown	Unknown	Liver	3.0	<4	<4	255	10	<4	<4	<4	<4	1,490	<4	<4	25	<4	103	<4	<200	<200	<1,000	<2,000
22	Marsh harrier	Ishikawa Pref.	F	Ck	Liver	1.9	<2	<2	<2	4	<2	<2	<2	<2	12	<2	<2	<2	<2	2	<2	<200	<200	<1,000	<2,000
23	Marsh harrier	Ishikawa Pref.	Unknown	Ck	Liver	2.3	<2	<2	2	4	<2	<2	<2	<2	14	<2	<2	<2	<2	3	<2	<200	<200	<1,000	<2,000
24	Japanese lesser sparrow hawk	Tochigi Pref.	M	Jv	Liver	6.9	<10	<10	20	30	<10	<10	<10	<10	200	<10	<10	10	<10	10	<10	<200	<200	<1,000	<2,000
25	Japanese lesser sparrow hawk	Tochigi Pref.	F	A	Liver	4.5	<5	<5	15	13	5	<5	<5	<5	59	<5	<5	<5	<5	9	<5	<200	<200	<1,000	<2,000
26	Owl	Fukui Pref.	F	Jv	Liver	2.3	<4	<4	23	<4	<4	<4	<4	<4	125	<4	<4	<4	<4	18	<4	<200	<200	<1,000	<2,000
27	Owl	Fukui Pref.	Unknown	Unknown	Liver	4.1	<10	<10	320	90	20	<10	<10	<10	1,510	<10	<10	30	<10	100	<10	<200	<200	<1,000	<2,000
28	Ezo owl	Hokkaido	Unknown	Unknown	Liver	0.10	<2	<2	85	6	<2	<2	<2	<2	1,030	<2	<2	10	<2	75	<2	<200	<200	<1,000	<2,000
29	Brown hawk owl	Fukui Pref.	Unknown	Unknown	Liver	3.4	<4	<4	29	8	<4	<4	<4	<4	679	<4	20	11	<4	6	<4	<200	<200	<1,000	<2,000
30	Brown hawk owl	Shiga Pref.	Unknown	Unknown	Liver	5.1	<4	<4	235	30	8	<4	<4	<4	466	<4	19	25	<4	21	<4	<200	<200	<1,000	<2,000

Age A:Adult, S:Sub-adult, Jv:Jevvenile, Ck:Chicks

Results of 1998 Research on Effects of Endocrine Disrupting Chemicals on Wildlife (Blakiston's fish owl-1)

(Concentration per wet weight)

No.	Specimen collection site	Gender (M: Male, F: Female)	Age (Years of age)	Specimen	Lipid	1											2	3				
						2											4	12				
						Polychlorinated biphenyls (PCBs)											Hexachlorobenzene (HCB)	Hexachlorocyclohexane				
Chlorinated biphenyl	Dichloro biphenyl	Trichloro biphenyl	Tetrachloro biphenyl	Pentachloro biphenyl	Hexachloro biphenyl	Heptachloro biphenyl	Octachloro biphenyl	Nonachloro biphenyl	Decichloro biphenyl	PCB total*	α -HCH	β -HCH	γ -HCH	δ -HCH	HCH total*							
Unit					%																	
					μ g/kg-wet																	
1	Hokkaido	M	0	Muscle	4.5	<1	<1	2	6	17	25	11	<1	<1	<1	61	2	<2	3	<2	<2	3
2	Hokkaido	F	1	Muscle	3.6	<1	<1	2	11	23	27	9	<1	<1	<1	72	3	<2	<2	<2	<2	0
3	Hokkaido	F	1	Muscle	3.2	<1	<1	2	4	9	13	4	<1	<1	<1	32	3	<2	<2	<2	<2	0
4	Hokkaido	F	0	Muscle	6.8	<1	<1	<1	<1	4	5	<1	<1	<1	<1	9	3	<2	<2	<2	<2	0
5	Hokkaido	Unknown	Unknown	Muscle	5.2	<1	<1	2	6	15	21	7	<1	<1	<1	51	<2	<2	<2	<2	<2	0

*Calculated on the assumption that values below the level of detection are counted as 0.

No.	Specimen collection site	Gender (M: Male, F: Female)	Age (Years of age)	Specimen	Lipid	4		5	6		7		8		9	10	11	12	13	14	15	16		
						14		15	16	18		19		23	25	26	43	33	34					
						Chlordane		Chlordane	Oxychlordane	trans-Nonachlor	cis-Nonachlor	DDT		DDE and DDD		Dieldrin	Heptachlor	Heptachlor epoxide	Benzo(a)pyrene	Tributyltin	Triphenyltin	Dibutyltin	Monobutyltin	
cis-Chlordane	trans-Chlordane	o,p'-DDT	p,p'-DDT	o,p'-DDE	p,p'-DDE	o,p'-DDD	p,p'-DDD																	
Unit					%																			
					μ g/kg-wet																			
1	Hokkaido	M	0	Muscle	4.5	<2	<2	4	<2	<2	<2	6	<2	17	<2	8	<2	<2	<2	<2	<2	3	<10	<20
2	Hokkaido	F	1	Muscle	3.6	<2	<2	<2	4	<2	<2	<2	<2	34	<2	4	<2	<2	<2	<2	<2	<2	<10	<20
3	Hokkaido	F	1	Muscle	3.2	<2	<2	3	3	<2	<2	<2	<2	34	<2	3	<2	<2	<2	<2	<2	<2	<10	<20
4	Hokkaido	F	0	Muscle	6.8	<2	<2	<2	5	<2	<2	3	<2	15	<2	4	<2	<2	<2	<2	<2	<2	<10	<20
5	Hokkaido	Unknown	Unknown	Muscle	5.2	<2	<2	<2	3	<2	<2	<2	<2	28	<2	4	<2	<2	<2	<2	<2	3	30	<20