



International Civil Aviation Organization

ELECTRONIC BULLETIN

For information only

EB 2009/37

11 December 2009

2001- 2007 BIRD STRIKE ANALYSES (IBIS)

The analyses of bird strike reports for the years 2001 to 2007 are based on 42 508 reports, received from fifty-one States on strikes occurring in 145 States and territories as shown at Attachment A. A summary of bird strikes reported to the ICAO Bird Strike Information System (IBIS) for the years 2001 to 2007 is included at Attachment B, a chart of Significant Bird Strikes at Attachment C, IBIS World Bird Strike Statistics at Attachment D and a list of bird types at Attachment E.

Amendment 10 to Annex 14 — *Aerodromes, Volume I — Aerodrome Design and Operations*, which was adopted by the Council on 4 March 2009, became applicable on 19 November 2009. This amendment introduces new provisions, including replacing “bird strike” with “wildlife strike” to cover both strikes by birds and other animals; ongoing evaluation of the wildlife hazard on or in the vicinity of aerodromes by competent personnel; and a Recommendation on the responsibility of States to give consideration to aviation safety concerns related to land developments in the vicinity of an aerodrome that may attract wildlife.

The IBIS programme is an important element in accident prevention and is highly supported by airlines and experts working to reduce the threat of bird strikes to aircraft. It has contributed significantly to the development of international Standards and Recommended Practices (SARPs) on bird strike hazard reduction. It should be noted that with the applicability of Amendment 10 to Annex 14, Volume I, information on strikes by animals other than birds shall also be included in IBIS. Future analyses will cover both strikes by birds and other animals provided that sufficient information is available.

Enclosures:

- A — List of States and Territories for the years 2001- 2007
- B — Summary of Bird Strikes reported to ICAO Bird Strike Information System (IBIS) for the years 2001- 2007
- C — Chart of Significant Bird Strikes for the years 2001- 2007
- D — IBIS World Bird Strike Statistics 2001- 2007
- E — List of bird types for the years 2001- 2007

Issued under the authority of the Secretary General

ATTACHMENT A to EB 2009/37

LIST OF STATES AND TERRITORIES FOR THE YEARS 2001- 2007

States Reporting (51 States)

Angola	Germany	Oman
Australia	Greece	Republic of Korea
Austria	Hong Kong	Russian Federation
Bahamas	Iceland	Saudi Arabia
Bahrain	India	Singapore
Barbados	Iran (Islamic Republic of)	South Africa
Benin	Ireland	Switzerland
Brunei Darussalam	Italy	Thailand
Bulgaria	Kenya	Togo
Cameroon	Macao	Trinidad and Tobago
Canada	Maldives	United Arab Emirates
Central African Republic	Malta	United Kingdom
Côte d'Ivoire	Mauritania	United States
Chile	Mauritius	Uruguay
China	Mexico	Uzbekistan
Cuba	Niger	
Finland	Nigeria	
France	Norway	

States/Territories of Occurrence (145 States)

Afghanistan	France	Netherlands Antilles
Albania	French Ghana	New Caledonia
Antigua and Barbuda	Georgia	New Zealand
Argentina	Germany	Nicaragua
Armenia	Greece	Niger
Aruba	Guatemala	Nigeria
Australia	Guinea	Norway
Austria	Guinea-Bissau	Oman
Azerbaijan	Guyana	Pakistan
Bahamas	Haiti	Palau
Bahrain	Hong Kong	Panama
Bangladesh	Hungary	Paraguay
Barbados	Iceland	Peru
Belgium	India	Philippines

Belize	Indonesia	Poland
Benin	Iran (Islamic Republic of)	Portugal
Bermuda	Ireland	Puerto Rico
Bosnia and Herzegovina	Israel	Republic of Korea
Brazil	Italy	Republic of Moldova
Brunei Darussalam	Jamaica	Romania
Bulgaria	Japan	Russian Federation
Burkina Faso	Johnston Island	Saint Lucia
Cambodia	Jordan	San Marino
Cameroon	Kazakhstan	Saudi Arabia
Canada	Kenya	Senegal
Canary Islands	Kosovo	Singapore
Cayman Islands	Kuwait	Slovakia
Central African Republic	Latvia	Slovenia
Chad	Lebanon	Somalia
Chile	Libyan Arab Jamahiriya	South Africa
China	Lithuania	Spain
Colombia	Luxembourg	Sweden
Costa Rica	Madagascar	Switzerland
Croatia	Malawi	Syrian Arab Republic
Cuba	Malaysia	Thailand
Cyprus	Maldives	Togo
Czech Republic	Mali	Trinidad and Tobago
Democratic Republic of the Congo	Malta	Tunisia
Denmark	Mariana Islands	Turkey
Dominican Republic	Marshall Islands	Turkmenistan
Dominican Republic	Mauritius	Uganda
Ecuador	Mexico	Ukraine
Egypt	Midway Islands	United Kingdom
El Salvador	Montenegro	United States
Equatorial Guinea	Morocco	Uzbekistan
Eritrea	Mozambique	
Estonia	Myanmar	
Ethiopia	Namibia	
Fiji	Nepal	
Finland	Netherlands	

Bird strikes Reporting and Occurrences Reported by ICAO Regions & States/Territories

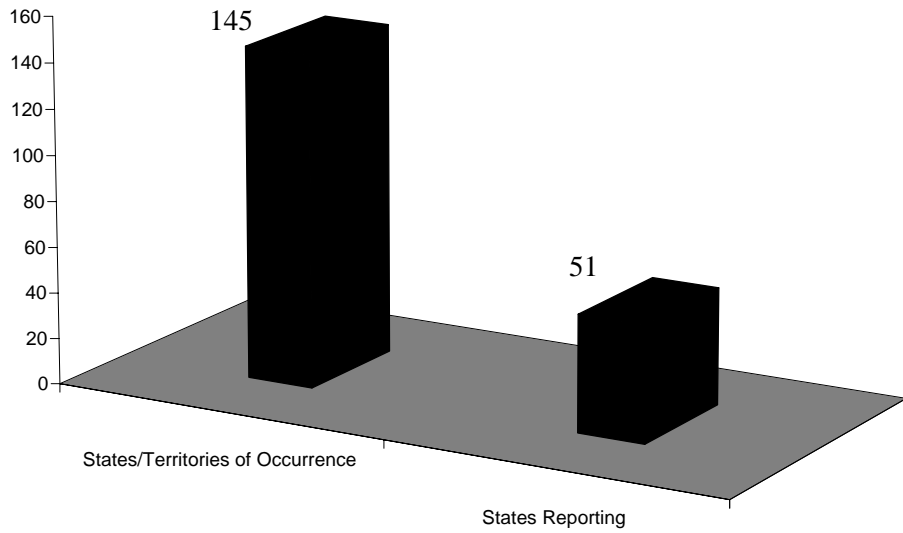


Chart 1: Comparison between the number of States/Territories of Occurrence and States Reporting

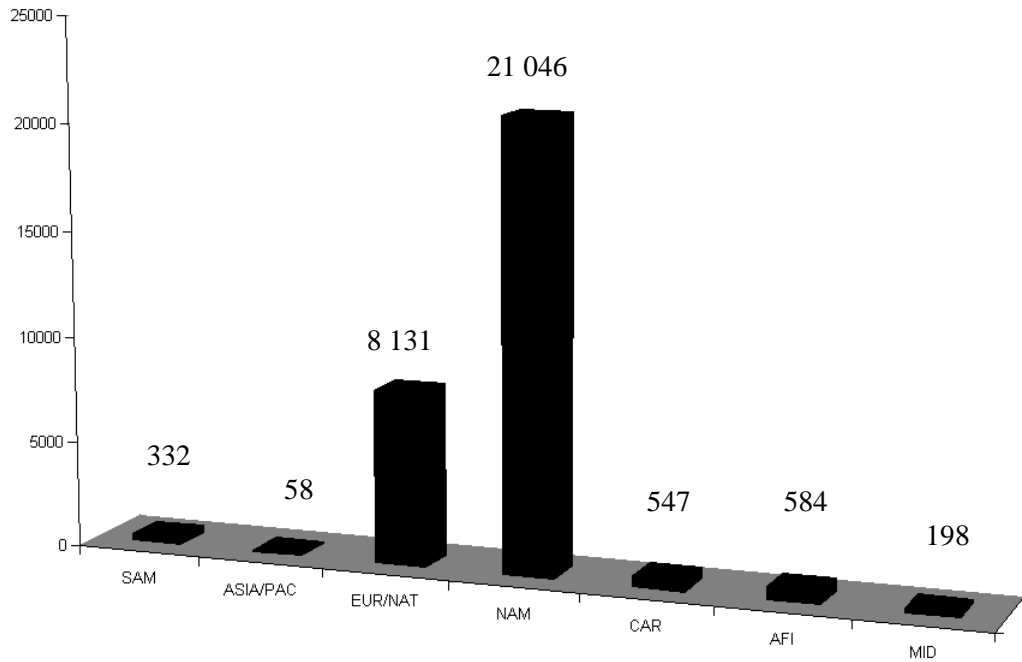


Chart 2: Strikes reported distributed by Region in which they occurred

SUMMARY OF BIRD STRIKES REPORTED TO THE ICAO BIRD STRIKE INFORMATION SYSTEM (IBIS) FOR THE YEARS 2001- 2007

1. INTRODUCTION

1.1 The ICAO Bird Strike Information System (IBIS) was created to collect and disseminate information on bird strikes to aircraft.

1.2 This statistical summary is intended to provide the reader with an overview of the global bird strike situation, as reported to ICAO for the years 2001 to 2007. It supplements the IBIS World Statistics in Attachment D to this State letter.

2. STATISTICAL ANALYSIS FOR THE YEARS 2001-2007

2.1 *Bird strikes by ICAO Region:* For the years 2001 to 2007, 42 508 bird strikes were reported to ICAO by 51 States. These occurred in 145 States and Territories throughout the world. Charts 1 and 2 in Attachment A illustrate a comparison between the number of States and Territories of occurrence and States reporting, and reported strikes distributed by the Region in which they occurred.

2.2 *When and where the bird strikes occurred:* 64 per cent of the bird strikes occurred during the day and 24 per cent occurred at night, as illustrated in Chart 3. Although bird strikes occurred throughout the year, the busiest months are July through October, as illustrated in Chart 4. The months with the least reported number of bird strikes were December and February. This monthly distribution also reflects the fact that the majority of the bird strikes were reported by States located in the Northern Hemisphere. Chart 5 illustrates that 96 per cent of the strikes for which location data was furnished occurred on or near the aerodrome. 39 per cent of these occurred during the take-off run or climb phases while 54 per cent occurred during the approach or landing roll phases.

When and where the bird strikes occurred

time of the strikes

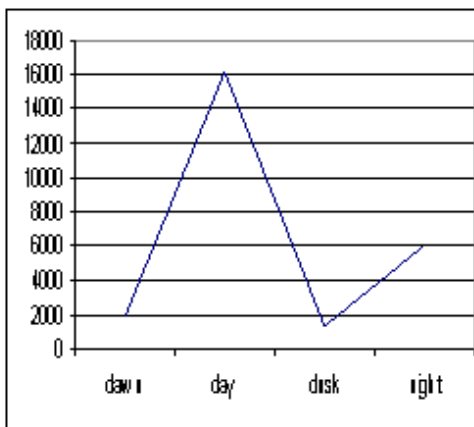


Chart 3: Strikes reported according to time

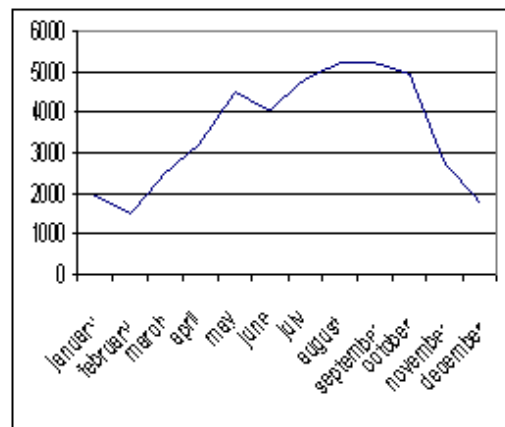


Chart 4: Strikes reported according to season

Flight phases

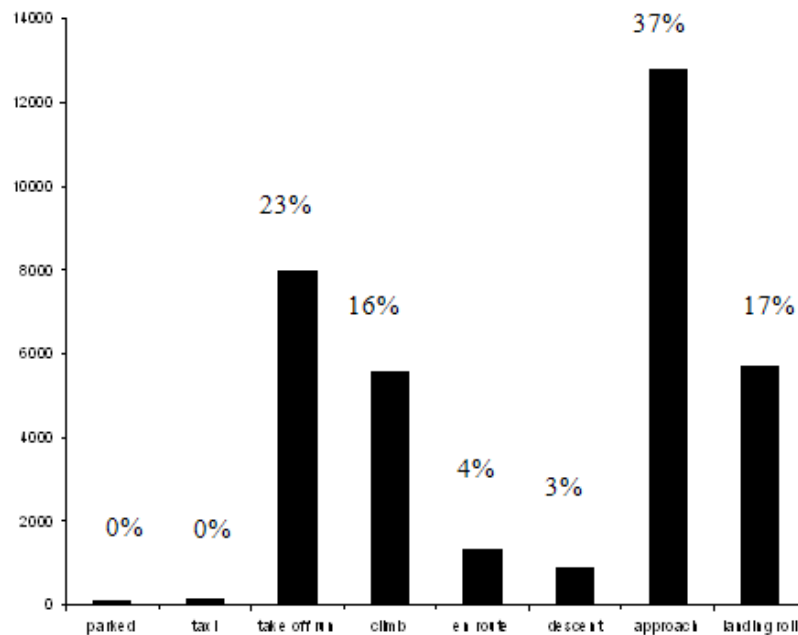


Chart 5: Bird strikes reported according to flight phase

2.3 *Damage to the aircraft:* The extent of damage to the aircraft was coded for 27 937 bird strikes, which is approximately 66 per cent of the total number of strikes reported. Of the bird strikes for which the damage was coded, three aircraft were destroyed, 753 or 3 per cent caused substantial damage to the aircraft, 2 120 or 8 per cent caused minor damage and 25 064 or approximately 89 per cent caused no appreciable damage.

2.4 *Bird types most frequently struck:* The bird type was unreported or unknown in 27 937 cases, approximately 65 per cent. For the other 14 571 known cases, the species was reported. Most frequently struck species were: passerines with 4 517 strikes which represents 31 per cent, then gulls with 2 623 or 18 per cent of the reported species, birds of prey with 2 185 strikes or 15 per cent, pigeons with 1 457 strikes or 10 per cent, and waterfowls with 875 bird strikes or 6 per cent.

2.4.1 When damage to the aircraft was known, passerines (mostly small perching birds) caused damage to the aircraft 139 times or 4 per cent of the cases and gulls caused damage to the aircraft in 303 or 15 per cent of the cases. 19 per cent of the occurrences involving birds of prey and 11 per cent of the occurrences involving pigeons resulted in damage to the aircraft. Waterfowl caused the highest incidence of damage for the number of strikes reported with 43 per cent of the cases. The damage by bird types is shown in Chart 6.

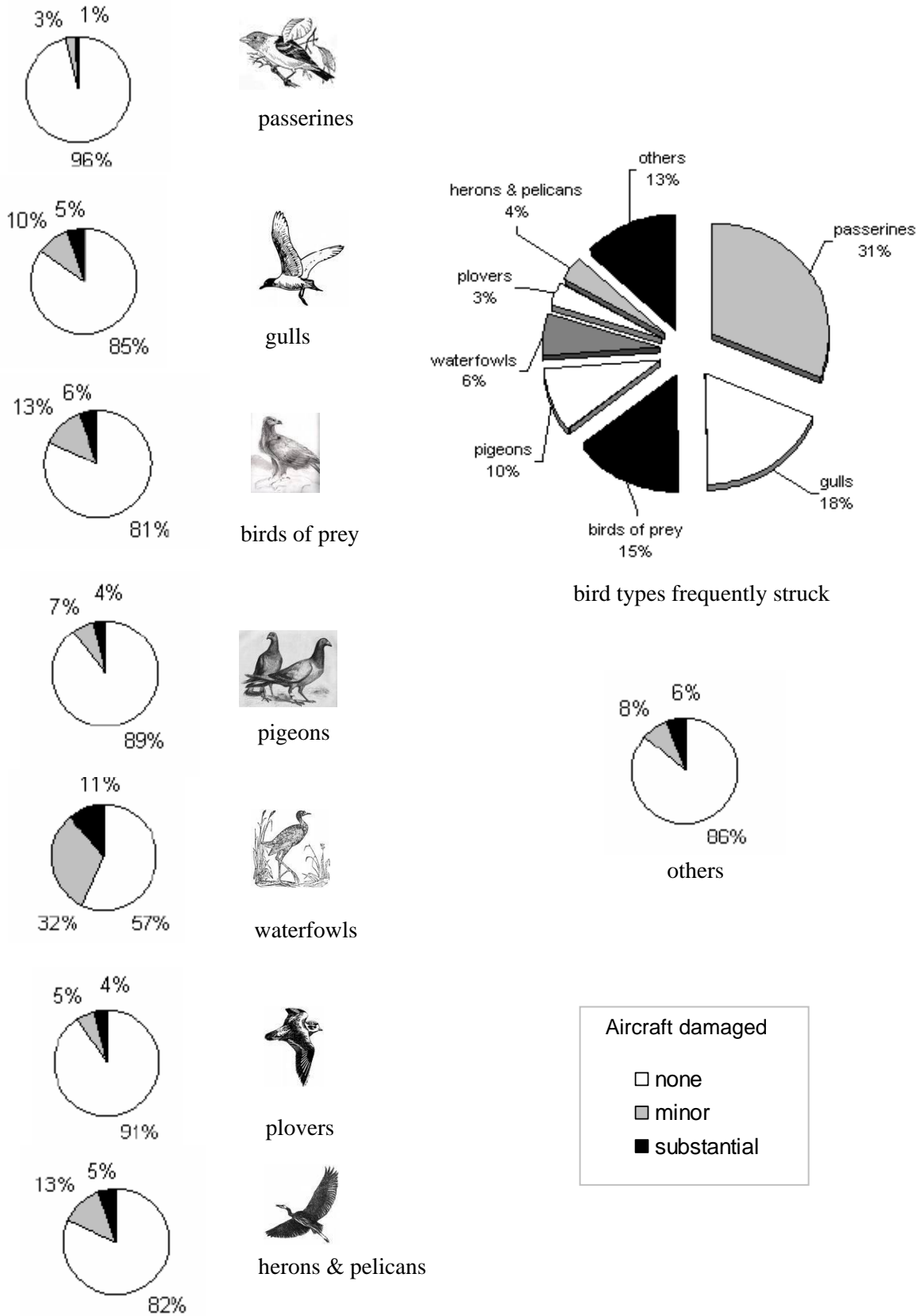


Chart 6: Damage to the aircraft and the bird types most frequently struck

2.5 *Effects of the bird strike on flight:* The effect the bird strike had on the flight of the aircraft was reported 31 767 times. In 28 576 cases, or 90 per cent of the time, such strikes had no effect on the flight. The other 3 191 bird strikes which had an effect on the flight represent 10 per cent. There were 2 351 aborted take-offs or precautionary landings, including five forced landings, due to bird strikes. These disruptions account for 74 per cent of the strikes for which the effect was reported. There were eighty-one cases of engines being shut down. The airframe was penetrated three times, the windshield four times and the vision was obscured one time. These effects are shown in Chart 7. Abnormal aircraft operations such as aborted take-offs and precautionary or forced landings cause interruptions in the normally scheduled operations of the airport. These interruptions cause a loss in consumer confidence in addition to costing both time and money to the airport and the airline.

Effects on flight

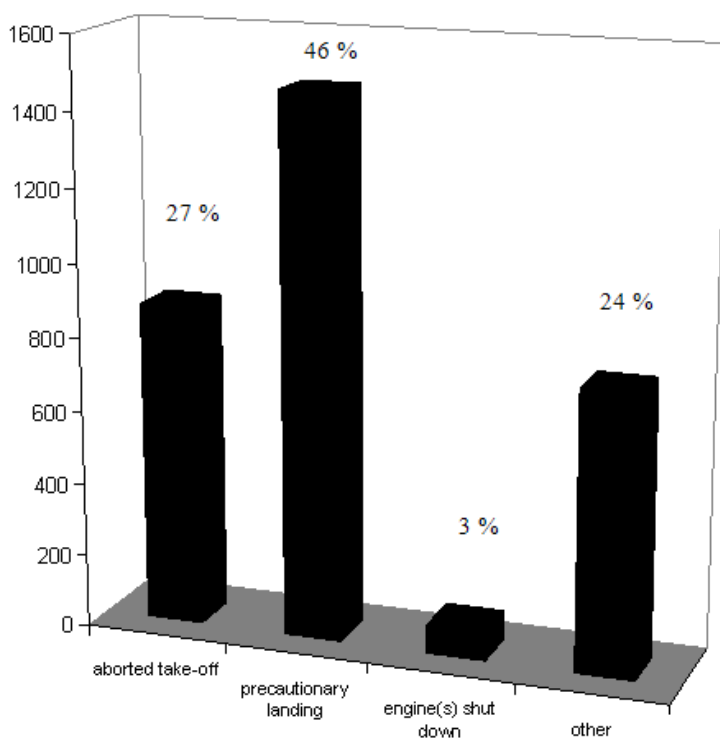


Chart 7: Effects on flight

2.6 *Parts of the aircraft struck and/or damaged:* Parts of the aircraft struck were reported 38 809 times. The parts most frequently reported as struck were the windshield, with 6 617 strikes followed by the engines with 5 100 strikes and then by the fuselage with 5 848 strikes. The parts most frequently reported as damaged were the engines with 1 688 damaging strikes. Charts 8 and 9 illustrate parts of aircraft struck and/or damaged and the frequency.

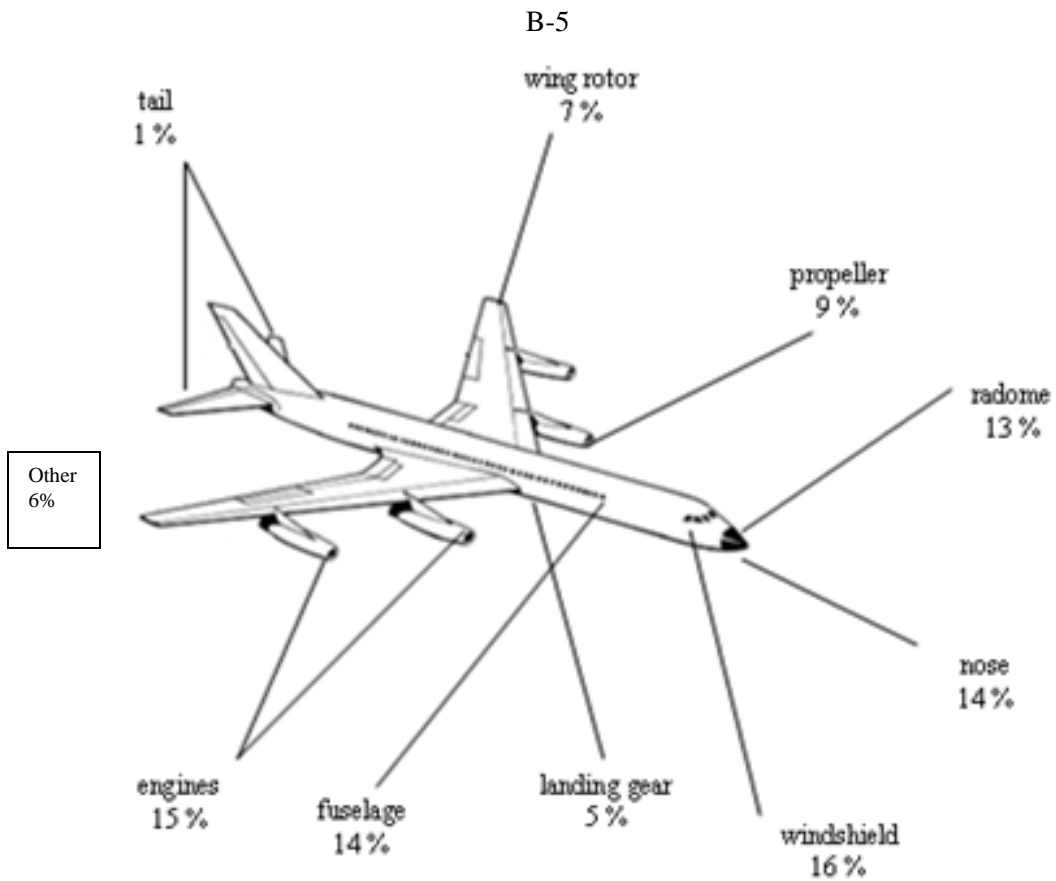


Chart 8: Parts of aircraft struck or damaged

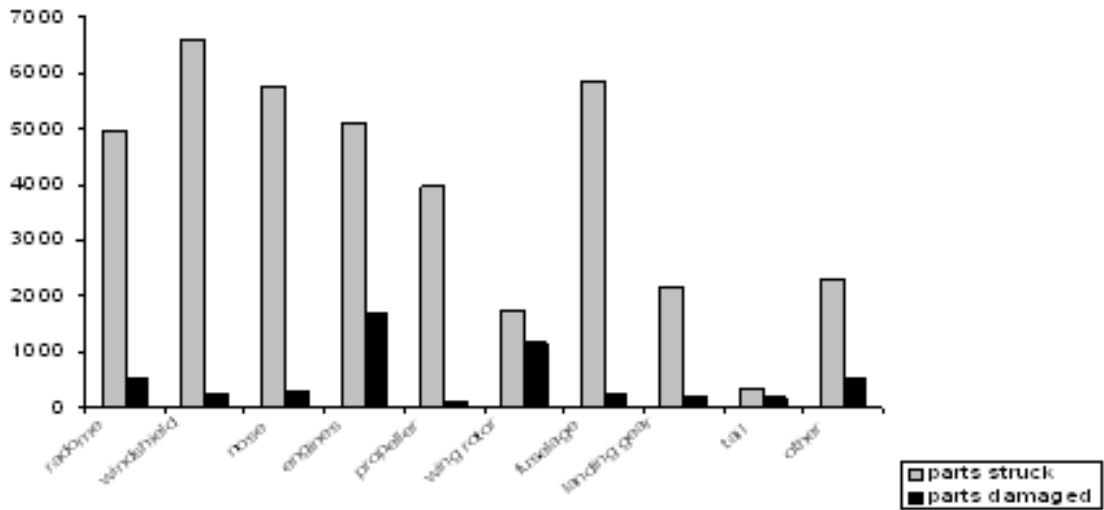


Chart 9: Parts of aircraft struck and damaged

ATTACHMENT C to EB 2009/37

SIGNIFICANT¹ BIRD STRIKES FOR THE YEARS 2001-2007

years 2001-2007		flight phases ²		parts struck/damaged ³		effects on flight ⁴		bird types
total	587	parked	0	radome	64	none	0	passerines
		taxi	2	windshield	43	aborted take-off	171	gulls
		take off run	238	nose	43	precautionary landing	344	birds of prey
		climb	234	engine 1	262	engine(s) shut down	53	plovers
		en route	8	engine 2	213	forced landing	4	waterfowls
								herons and
		descent	4	engine 3	22	fire	0	pelicans
		approach	11	engine 4	9	vision obscured	0	curlews
		landing roll	13	propeller	36	penetrated windshield	2	Herons and pelicans
		total	510	wing rotor	50	penetrated air frame	2	owls
				fuselage	35	people injured	1	total
				landing gear	33	uncontrolled failure	7	
				tail	16	other	5	
				lights	9	total	589	
				pilot/static head	0			
				antenna	0			
				tail rotor	0			
				other	24			
				total	859			

1. *Significant bird strike: A significant bird strike is when it has caused significant damage to the aircraft or effected the flight.*
2. *The information on flight phase is not provided in some reports.*
3. *One strike may effect more than one part of an aircraft.*
4. *One strike may have more than one effect on flight.*

ATTACHMENT D to EB 2009/37

IBIS WORLD BIRD STRIKE STATISTICS 2001- 2007

	total	S-Z	NE	K	O	J	N5	1	A-I	N	R	L	M	P	unknown
TOTAL	42508	4782	2764	2269	1456	934	480	561	459	805	273	104	57	292	27272
month of occurrence															
january	1940	171	155	152	58	94	31	33	32	76	28	5	5	26	1074
february	1520	145	122	141	28	60	22	28	29	40	20	6	3	26	850
march	2507	204	210	182	45	96	26	62	30	56	24	7	2	24	1539
april	3222	275	251	158	75	91	31	47	57	76	17	10	7	17	2110
may	4483	520	280	192	100	102	19	49	40	90	15	16	4	29	3027
june	4052	719	259	167	180	46	29	42	34	45	19	6	4	13	2489
july	4851	781	269	274	223	32	60	54	41	62	21	4	6	11	3013
august	5244	742	325	272	285	55	70	66	36	80	28	8	7	21	3249
september	5202	512	255	241	188	92	60	49	36	76	27	13	5	51	3597
october	4948	372	265	199	148	90	64	59	44	82	26	12	5	35	3547
november	2771	204	224	152	74	90	40	43	39	56	20	7	6	16	1800
december	1765	137	148	139	52	86	28	29	41	66	28	10	3	23	975
light conditions															
dawn	1887	286	326	96	67	61	41	16	21	19	14	10	0	0	930
day	16175	2882	1641	1262	931	270	273	47	205	114	20	54	19	1	8456
dusk	1362	163	117	65	81	70	38	23	18	11	11	5	4	0	756
night	6085	171	255	58	53	243	76	159	39	37	155	13	11	1	4814
aircraft classification															
piston over 5 700 kg	16	0	4	1	1	0	0	0	2	0	0	0	1	0	7
piston under 5 700 kg	2597	336	233	261	194	115	36	95	57	105	18	17	5	82	1043
turbo jet over 27 000 kg	10	1	4	0	1	0	0	0	0	0	0	0	1	0	3
turbo jet under 27 000 kg	731	92	81	63	41	31	17	19	13	22	2	4	2	19	325
turbo prop over 27 000 kg	79	7	14	6	0	1	1	0	8	0	2	0	0	0	40
turbo prop under 27 000 kg	4268	528	474	377	192	127	70	96	64	138	42	25	7	87	2041
turbo fan over 27 000 kg	28940	2846	1476	1160	779	492	269	245	243	401	181	36	27	67	20718
turbo fan under 27 000 kg	3950	643	362	232	186	114	63	47	29	25	14	13	6	4	2212
helicopter	263	31	28	24	8	17	4	3	6	15	1	0	3	1	122
other, unknown and glider	1584	285	84	138	46	31	18	54	35	99	13	7	5	32	737
flight phase															
parked	106	11	0	2	5	1	2	0	2	2	1	0	0	0	80
taxi	132	25	15	7	15	3	4	2	3	2	3	3	0	0	50
take off run	7986	1221	774	640	393	106	147	134	118	251	47	42	12	107	3994
climb	5544	554	374	239	176	160	41	27	59	49	17	5	3	19	3821
en route	1321	110	41	110	12	53	0	20	28	35	3	10	9	25	865
descent	883	23	21	12	5	34	4	4	1	3	2	0	0	0	774

D-2

WORLD BIRD STRIKE STATISTICS 2001-2007

	total	S-Z	NE	K	O	J	N5	1	A-I	N	R	L	M	P	unknown
approach	12797	1358	819	448	368	419	100	113	99	153	65	7	12	45	8791
landing roll	5703	958	452	597	289	92	107	156	87	286	87	25	12	93	2462
height AGL (FT)															
0-100	19183	3048	1824	1519	1031	332	353	347	278	623	183	90	31	229	9295
101-200	1447	178	127	50	47	61	8	10	11	8	7	0	1	2	937
201-500	2626	349	181	85	63	64	9	24	18	12	8	1	7	1	1804
501-1000	2021	178	127	104	22	64	2	10	18	7	7	0	3	0	1479
1001-2500	2527	145	89	112	21	139	5	5	19	3	2	0	3	0	1984
over 2500	2956	81	43	42	14	118	4	4	7	4	4	0	1	1	2633
speed IAS (KT)															
0-80	2379	352	182	248	189	64	39	91	51	114	19	18	9	65	938
81-100	1950	319	261	173	111	51	50	23	34	18	15	16	3	3	873
101-150	11021	1679	1038	628	507	267	156	50	94	86	73	23	16	8	6396
151-200	3314	267	168	115	61	100	15	8	27	7	4	2	3	1	2536
201-250	1785	40	37	26	5	78	5	2	5	5	4	0	0	0	1578
over 250	244	9	6	6	3	8	1	0	0	1	0	0	0	0	210
pilot warned															
no	16746	2416	1676	934	749	378	321	93	152	127	124	69	21	2	9684
yes	5670	904	595	384	349	224	79	30	137	32	48	9	11	1	2867
number of birds seen															
1-000	15155	1941	894	1456	460	203	140	290	229	552	148	49	28	183	8582
2-010	6593	1096	790	283	401	360	122	71	84	171	12	30	12	108	3053
11-100	1332	307	263	13	158	95	44	2	20	17	0	3	1	0	409
over 100	153	64	32	1	8	1	5	0	3	3	0	0	0	0	36
number of birds struck															
1-000	32993	3365	1963	1979	913	573	313	478	362	618	248	74	42	185	21880
2-010	5161	868	541	77	410	336	99	48	69	152	6	22	15	107	2411
11-100	268	98	30	0	42	9	11	0	1	8	0	0	0	0	69
over 100	11	5	1	0	1	0	0	0	0	0	0	0	0	0	4
parts damaged															
radome	540	23	51	31	21	67	6	2	5	8	5	1	1	0	319
windshield	236	11	22	34	4	25	0	5	11	1	0	2	4	0	117
nose	304	17	31	31	7	61	4	11	4	5	3	2	3	1	124
engine 1	899	39	76	66	44	61	16	15	27	26	13	1	2	11	502
engine 2	674	35	81	56	32	53	6	9	16	6	7	3	0	4	366
engine 3	77	2	5	7	2	2	3	0	2	0	0	1	0	0	53
engine 4	38	2	6	4	1	1	0	0	1	1	0	0	0	1	21
propeller	111	3	11	9	6	18	0	32	5	2	1	1	2	0	21
wing rotor	1164	41	86	125	34	167	5	42	26	10	2	7	6	10	603
fuselage	219	9	7	13	8	35	0	15	6	5	1	2	2	0	116
landing gear	183	3	11	24	6	22	0	51	2	5	3	2	2	0	52
tail	179	1	10	16	2	32	0	2	1	0	0	1	0	0	114

D-3
WORLD BIRD STRIKE STATISTICS 2001-2007

	total	S-Z	NE	K	O	J	N5	I	A-I	N	R	L	M	P	unknown
lights	199	10	22	18	8	21	3	9	7	0	2	1	0	0	98
pilot/static head	2	0	0	0	0	1	0	0	0	0	0	0	0	0	1
antenna	13	2	0	4	0	0	0	1	1	2	0	0	0	1	2
tail rotor	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0
other	312	18	31	34	7	39	3	20	10	1	3	1	3	1	141
parts struck															
radome	4963	598	205	110	167	58	55	17	24	26	19	2	0	4	3678
windshield	6617	906	304	150	234	98	62	37	34	44	27	2	5	10	4704
nose	5768	811	322	218	231	90	66	15	39	54	23	9	3	7	3880
engine 1	2667	252	208	132	165	63	33	16	39	58	15	12	5	29	1640
engine 2	2240	211	188	125	104	51	25	7	29	32	7	5	1	12	1443
engine 3	117	11	8	6	8	2	0	1	2	1	1	0	1	0	76
engine 4	76	10	2	3	0	2	2	1	2	1	1	0	0	0	52
propeller	3962	417	354	204	246	136	51	23	75	63	20	18	15	32	2308
wing rotor	1738	193	200	117	82	18	45	26	27	65	10	12	1	41	901
fuselage	5848	604	313	217	176	108	66	25	49	64	39	11	9	15	4152
landing gear	2170	222	235	170	121	98	37	152	36	59	24	22	7	18	969
tail	325	45	51	14	11	29	3	0	0	1	3	1	2	0	165
lights	95	12	11	5	5	4	0	1	0	0	0	1	0	0	56
pilot/static head	7	1	0	1	0	0	0	0	0	0	0	0	0	1	4
antenna	6	0	0	2	1	0	0	1	0	0	0	0	0	1	1
tail rotor	4	0	1	1	0	1	0	0	0	0	0	0	0	0	1
other	2206	322	171	140	99	40	39	18	24	21	17	2	3	4	1306
aircraft damage															
none	25064	3545	1665	1348	1006	363	349	301	258	511	170	55	31	163	15299
minor	2120	110	202	208	78	207	20	49	40	24	20	11	8	12	1131
substantial	753	29	101	96	41	72	15	18	37	16	8	5	6	4	305
destroyed	3	0	0	1	1	0	0	1	0	0	0	0	0	0	0
injury index															
serious	8	0	1	2	1	0	0	0	0	0	0	0	0	0	4
minor	4	0	0	0	0	0	0	0	0	0	0	0	0	0	4
none	4912	581	328	327	89	32	103	35	68	41	44	24	3	2	3235
effects															
none	28576	3910	1995	1675	1099	610	365	385	306	632	199	66	43	228	17063
aborted take-off	877	74	148	90	81	37	21	34	32	23	8	15	3	25	286
precautionary landing	1469	132	149	144	82	107	17	18	45	37	7	3	7	13	708
engine(s) shut down	81	3	5	10	6	8	2	4	5	4	0	1	1	2	30
forced landing	5	0	0	0	1	0	0	0	1	0	0	0	0	0	3
fire	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
vision obscured	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
penetrated windshield	4	1	0	1	0	0	0	0	1	0	0	0	0	0	1
penetrated air frame	3	0	0	0	1	0	0	0	1	0	0	0	0	0	1
other effect	751	55	70	56	18	46	12	35	16	15	11	4	0	8	405

D-4

	total	S-Z	NE	K	O	J	N5	1	A-I	N	R	L	M	P	unknown
TOTAL	42508	4782	2764	2269	1456	934	480	561	459	805	273	104	57	292	27272
month of occurrence															
january	1940	171	155	152	58	94	31	33	32	76	28	5	5	26	1074
february	1520	145	122	141	28	60	22	28	29	40	20	6	3	26	850
march	2507	204	210	182	45	96	26	62	30	56	24	7	2	24	1539
april	3222	275	251	158	75	91	31	47	57	76	17	10	7	17	2110
may	4483	520	280	192	100	102	19	49	40	90	15	16	4	29	3027
june	4052	719	259	167	180	46	29	42	34	45	19	6	4	13	2489
july	4851	781	269	274	223	32	60	54	41	62	21	4	6	11	3013
august	5244	742	325	272	285	55	70	66	36	80	28	8	7	21	3249
september	5202	512	255	241	188	92	60	49	36	76	27	13	5	51	3597
october	4948	372	265	199	148	90	64	59	44	82	26	12	5	35	3547
november	2771	204	224	152	74	90	40	43	39	56	20	7	6	16	1800
december	1765	137	148	139	52	86	28	29	41	66	28	10	3	23	975
light conditions															
dawn	1887	286	326	96	67	61	41	16	21	19	14	10	0	0	930
day	16175	2882	1641	1262	931	270	273	47	205	114	20	54	19	1	8456
dusk	1362	163	117	65	81	70	38	23	18	11	11	5	4	0	756
night	6085	171	255	58	53	243	76	159	39	37	155	13	11	1	4814
aircraft classification															
piston over 5 700 kg	16	0	4	1	1	0	0	0	2	0	0	0	1	0	7
piston under 5 700 kg	2597	336	233	261	194	115	36	95	57	105	18	17	5	82	1043
turbo jet over 27 000 kg	10	1	4	0	1	0	0	0	0	0	0	0	1	0	3
turbo jet under 27 000 kg	731	92	81	63	41	31	17	19	13	22	2	4	2	19	325
turbo prop over 27 000 kg	79	7	14	6	0	1	1	0	8	0	2	0	0	0	40
turbo prop under 27 000 kg	4268	528	474	377	192	127	70	96	64	138	42	25	7	87	2041
turbo fan over 27 000 kg	28940	2846	1476	1160	779	492	269	245	243	401	181	36	27	67	20718
turbo fan under 27 000 kg	3950	643	362	232	186	114	63	47	29	25	14	13	6	4	2212
helicopter	263	31	28	24	8	17	4	3	6	15	1	0	3	1	122
other, unknown and glider	1584	285	84	138	46	31	18	54	35	99	13	7	5	32	737
flight phase															
parked	106	11	0	2	5	1	2	0	2	2	1	0	0	0	80
taxi	132	25	15	7	15	3	4	2	3	2	3	3	0	0	50
take off run	7986	1221	774	640	393	106	147	134	118	251	47	42	12	107	3994
climb	5544	554	374	239	176	160	41	27	59	49	17	5	3	19	3821
en route	1321	110	41	110	12	53	0	20	28	35	3	10	9	25	865
descent	883	23	21	12	5	34	4	4	1	3	2	0	0	0	774

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WORLD BIRD STRIKE STATISTICS 2001-2007

	total	S-Z	NE	K	O	J	N5	1	A-I	N	R	L	M	P	unknown
approach	12797	1358	819	448	368	419	100	113	99	153	65	7	12	45	8791
landing roll	5703	958	452	597	289	92	107	156	87	286	87	25	12	93	2462
height AGL (FT)															
0-100	19183	3048	1824	1519	1031	332	353	347	278	623	183	90	31	229	9295
101-200	1447	178	127	50	47	61	8	10	11	8	7	0	1	2	937
201-500	2626	349	181	85	63	64	9	24	18	12	8	1	7	1	1804
501-1000	2021	178	127	104	22	64	2	10	18	7	7	0	3	0	1479
1001-2500	2527	145	89	112	21	139	5	5	19	3	2	0	3	0	1984
over 2500	2956	81	43	42	14	118	4	4	7	4	4	0	1	1	2633
speed IAS (KT)															
0-80	2379	352	182	248	189	64	39	91	51	114	19	18	9	65	938
81-100	1950	319	261	173	111	51	50	23	34	18	15	16	3	3	873
101-150	11021	1679	1038	628	507	267	156	50	94	86	73	23	16	8	6396
151-200	3314	267	168	115	61	100	15	8	27	7	4	2	3	1	2536
201-250	1785	40	37	26	5	78	5	2	5	5	4	0	0	0	1578
over 250	244	9	6	6	3	8	1	0	0	1	0	0	0	0	210
pilot warned															
no	16746	2416	1676	934	749	378	321	93	152	127	124	69	21	2	9684
yes	5670	904	595	384	349	224	79	30	137	32	48	9	11	1	2867
number of birds seen															
1-000	15155	1941	894	1456	460	203	140	290	229	552	148	49	28	183	8582
2-010	6593	1096	790	283	401	360	122	71	84	171	12	30	12	108	3053
11-100	1332	307	263	13	158	95	44	2	20	17	0	3	1	0	409
over 100	153	64	32	1	8	1	5	0	3	3	0	0	0	0	36
number of birds struck															
1-000	32993	3365	1963	1979	913	573	313	478	362	618	248	74	42	185	21880
2-010	5161	868	541	77	410	336	99	48	69	152	6	22	15	107	2411
11-100	268	98	30	0	42	9	11	0	1	8	0	0	0	0	69
over 100	11	5	1	0	1	0	0	0	0	0	0	0	0	0	4
parts damaged															
radome	540	23	51	31	21	67	6	2	5	8	5	1	1	0	319
windshield	236	11	22	34	4	25	0	5	11	1	0	2	4	0	117
nose	304	17	31	31	7	61	4	11	4	5	3	2	3	1	124
engine 1	899	39	76	66	44	61	16	15	27	26	13	1	2	11	502
engine 2	674	35	81	56	32	53	6	9	16	6	7	3	0	4	366
engine 3	77	2	5	7	2	2	3	0	2	0	0	1	0	0	53
engine 4	38	2	6	4	1	1	0	0	1	1	0	0	0	1	21
propeller	111	3	11	9	6	18	0	32	5	2	1	1	2	0	21
wing rotor	1164	41	86	125	34	167	5	42	26	10	2	7	6	10	603
fuselage	219	9	7	13	8	35	0	15	6	5	1	2	2	0	116
landing gear	183	3	11	24	6	22	0	51	2	5	3	2	2	0	52
tail	179	1	10	16	2	32	0	2	1	0	0	1	0	0	114

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WORLD BIRD STRIKE STATISTICS 2001-2007

	total	S-Z	NE	K	O	J	N5	1	A-I	N	R	L	M	P	unknown
lights	199	10	22	18	8	21	3	9	7	0	2	1	0	0	98
pilot/static head	2	0	0	0	0	1	0	0	0	0	0	0	0	0	1
antenna	13	2	0	4	0	0	0	1	1	2	0	0	0	1	2
tail rotor	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0
other	312	18	31	34	7	39	3	20	10	1	3	1	3	1	141
parts struck															
radome	4963	598	205	110	167	58	55	17	24	26	19	2	0	4	3678
windshield	6617	906	304	150	234	98	62	37	34	44	27	2	5	10	4704
nose	5768	811	322	218	231	90	66	15	39	54	23	9	3	7	3880
engine 1	2667	252	208	132	165	63	33	16	39	58	15	12	5	29	1640
engine 2	2240	211	188	125	104	51	25	7	29	32	7	5	1	12	1443
engine 3	117	11	8	6	8	2	0	1	2	1	1	0	1	0	76
engine 4	76	10	2	3	0	2	2	1	2	1	1	0	0	0	52
propeller	3962	417	354	204	246	136	51	23	75	63	20	18	15	32	2308
wing rotor	1738	193	200	117	82	18	45	26	27	65	10	12	1	41	901
fuselage	5848	604	313	217	176	108	66	25	49	64	39	11	9	15	4152
landing gear	2170	222	235	170	121	98	37	152	36	59	24	22	7	18	969
tail	325	45	51	14	11	29	3	0	0	1	3	1	2	0	165
lights	95	12	11	5	5	4	0	1	0	0	0	1	0	0	56
pilot/static head	7	1	0	1	0	0	0	0	0	0	0	0	0	1	4
antenna	6	0	0	2	1	0	0	1	0	0	0	0	0	1	1
tail rotor	4	0	1	1	0	1	0	0	0	0	0	0	0	0	1
other	2206	322	171	140	99	40	39	18	24	21	17	2	3	4	1306
aircraft damage															
none	25064	3545	1665	1348	1006	363	349	301	258	511	170	55	31	163	15299
minor	2120	110	202	208	78	207	20	49	40	24	20	11	8	12	1131
substantial	753	29	101	96	41	72	15	18	37	16	8	5	6	4	305
destroyed	3	0	0	1	1	0	0	1	0	0	0	0	0	0	0
injury index															
serious	8	0	1	2	1	0	0	0	0	0	0	0	0	0	4
minor	4	0	0	0	0	0	0	0	0	0	0	0	0	0	4
none	4912	581	328	327	89	32	103	35	68	41	44	24	3	2	3235
effects															
none	28576	3910	1995	1675	1099	610	365	385	306	632	199	66	43	228	17063
aborted take-off	877	74	148	90	81	37	21	34	32	23	8	15	3	25	286
precautionary landing	1469	132	149	144	82	107	17	18	45	37	7	3	7	13	708
engine(s) shut down	81	3	5	10	6	8	2	4	5	4	0	1	1	2	30
forced landing	5	0	0	0	1	0	0	0	1	0	0	0	0	0	3
fire	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
vision obscured	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
penetrated windshield	4	1	0	1	0	0	0	0	1	0	0	0	0	0	1
penetrated air frame	3	0	0	0	1	0	0	0	1	0	0	0	0	0	1
other effect	751	55	70	56	18	46	12	35	16	15	11	4	0	8	405

ATTACHMENT E to EB 2009/37

LIST OF BIRD TYPES FOR THE YEARS 2001- 2007

CODE	SCIENTIFIC NAME	ENGLISH NAME	NUMBER OF CASES*
A-I INCLUDES			
B	CASUARIIFORMES	CASSOWARIES, EMU	2
E	GAVIIFORMES	LOONS	2
E1001	GAVIA IMMER	COMMON LOON	6
F1002	AECHMO. OCCIDENTALIS	WESTERN GREBE	1
F1003	PODILYMBUS PODICEPS	PIED-BILLED GREBE	3
F1004	PODICEPS AURITUS	HORNED GREBE	1
G1001	PHOEB. IMMUTABILIS	LAYSAN ALBATROS	19
G2101	PTERODROMA HYPOLEUCA	BONIN PETREL	1
G2201	FULMARS GLACIALIS	NORTHERN FULMAR	4
H	PELECANIFORMES	PELICANS, CORMORANTS, BOOBIES	16
H1	PHAETHONTIDAE	TROPICBIRDS	1
H1002	PHAETHON RUBRICAUDA	RED-TAILED TROPICBIRD	1
H2	PELECANIDAE	PELICANS	4
H2002	PELE. OCCIDENTALIS	BROWN PELICAN	10
H3103	SULA SULA	RED-FOOTED BOOBY	1
H4	PHALACROCORACIDAE	CORMORANTS, SHAGS	1
H41	PHALACROCORACIDAE	CORMORANTS	4
H4101	PHALACROCORAX CARBO	GREAT CORMORANT	3
H4105	PHALA AURITUS	DOUBLE CRESTED CORMORANT	16
H51	ANHINGIDAE	ANHINGAS	3
H6	FREGATIDAE	FRIGATEBIRDS	1
H6003	FREGATA MINOR	GREAT FRIGATEBIRD	3
I	CICONIIFORMES	HERON, STORK, IBIS, FLAMINGO	75
I11	ARDEIDAE	HERONS	37
I1101	ARDEA CINEREA	GREY HERON	25
I1102	ARDEA HERODIAS	GREAT BLUE HERON	47
I1105	NYCTICORAX NYCTICORAX	BLACK-CROWNED NIGHT HERON	3
I1110	BUTORIDES VIRESCENS	GREEN HERON	2
I12	ARDEIDAE	BITTERNS	1
I1202	BOTAUR. LENTIGINOSUS	AMERICAN BITTERN	2
I13	CICONIIFORMES	EGRET	76
I1301	BUBULCUS IBIS	CATTLE EGRET	34
I1302	EGRETTA ALBA	GREAT EGRET	9
I1303	EGRETTA GARZETTA	LITTLE EGRET	1
I1306	EGRETTA THULA	SNOWY EGRET	4
I5	CICONIIDAE	STORKS	9
I5003	LEPT. CRUMENIFERUS	MARABOU STORK	5
I5006	MYCTERIA AMERICANA	WOOD STORK	2
I6	THRESKIORNITHIDAE	IBISES, SPOONBILLS	2
I61	THRESKIORNITHIDAE	IBISES	6
I6102	BOSTRYCHIA HAGEDASH	HADADA IBIS	11
I6106	EUDOCIMUS ALBUS	AMERICAN WHITE IBIS	1
I6107	PLEGADIS CHIH	WHITE-FACED IBIS	2

CODE	SCIENTIFIC NAME	ENGLISH NAME	NUMBER OF CASES*
A-I INCLUDES			
I6108	THERISTICUS CAUDATUS	WHITE-YHROATED IBIS	1
I6203	AJAIA AJAJA	ROSEATE SPOONBILL	1
I7001	PHOENICOPTERUS RUBER	COMMON FLAMINGO	1
J INCLUDES			
J	ANSERIFORMES	DUCKS, GEESE, SWANS	100
J2	ANATIDAE	DUCKS, GEESE, SWANS	3
J21	ANATIDAE	DUCKS	179
J2102	TADORNA TADORNA	COMMON SHELDUCK	1
J2103	ANAS AMERICANA	AMERICAN WIGEON	12
J2104	ANAS ACUTA	NORTHERN PINTAIL	28
J2106	ANAS CRECCA	GREEN-WINGED TEAL	3
J2107	ANAS DISCORS	BLUE-WINGED TEAL	6
J2108	ANAS PENELOPE	EUROPEAN WIGEON	1
J2109	ANAS PLATYRHYNCHOS	MALLARD	106
J2111	SOMATERIA MOLLISIMA	COMMON EIDER	1
J2112	AYTHYA COLLARIS	RING-NECKED DUCK	2
J2113	AYTHYA MARILA	GREATER SCAUP	2
J2114	AIX SPONSA	AMERICAN WOOD DUCK	3
J2115	CAIRINA MOSCHATA	MUSCOVY DUCK	1
J2117	MERGUS SERRATOR	R. BREAST. MERGANSER	1
J2130	MERGUS MERGANSER	COMMON MERGANSER	1
J2131	ANAS CLYPEATA	SHOVELLER	13
J2134	ANAS STREPERA	GADWELL	7
J2136	AYTHYA VALISINERIA	CANVASBACK DUCK	2
J2137	ANAS RUBRIPES	AMERICAN BLACK DUCK	5
J2138	ANAS FULVIGULA	MOTTLED DUCK	4
J2139	AYTHYA AFFINIS	LESSER SCAUP	7
J2140	OXYURA JAMAICENSIS	RUDDY DUCK	3
J2141	AYTHYA AMERICANA	REDHEAD	1
J2144	ANAS GEORGICA	BROWN PINTAIL	3
J22	ANATIDAE	GEESE	113
J2202	CHEN CAERULESCENS	SNOW GOOSE	24
J2204	BRANTA CANADENSIS	CANADA GOOSE	283
J2205	ANSERANAS SEMIPALMAT	MAGPIE GOOSE	1
J2209	BRANTA BERNICLA	BRENT GOOSE	3
J2210	ANSER ALBIFRONS	G. WHITE-FRONTED GOOSE	5
J2212	CHLOEPHAGA PICTA	UPLAND GOOSE	1
J23	ANATIDAE	SWANS	3
J2302	CYGNUS OLOR	MUTE SWAN	2
J2303	CYGNUS COLUMBIANUS	TUNDRA SWAN	1
J2305	CYGNUS BUCCINATOR	TRUMPETER SWAN	1
K INCLUDES			
K	FALCONIFORMES	HAWKS, EAGLES, VULTURES	596
K1	CATHARTIDAE	NEW WORLD VULTURES	67
K1001	CORAGYPS ATRATUS	AMERICAN BLACK VULTURE	33

E-3
ENGLISH NAME

CODE	SCIENTIFIC NAME	ENGLISH NAME	NUMBER OF CASES*
K INCLUDES			
K1002	CATHARTES AURA	TURKEY VULTURE	96
K2001	PANDION HALIAETUS	OSPREY	34
K3	ACCIPITRIDAE	KITES, EAGLES, HAWKS	14
K31	ACCIPITRIDAE	KITES	83
K3102	MILVUS MIGRANS	BLACK KITE	23
K3104	HALIASTUR INDUS	BRAHMINY KITE	9
K32	ACCIPITRIDAE	EAGLES	53
K3201	HAL. LEUCOCEPHALUS	BALD EAGLE	18
K3208	HIERAETUS MORPHNOIDE	LITTLE EAGLE	1
K33	ACCIPITRIDAE	HAWKS	351
K3301	ACCIPITER GENTILIS	NORTHERN GOSHAWK	1
K3302	BUTEO JAMAICENSIS	RED-TAILED HAWK	199
K3303	BUTEO LAGOPUS	ROUGH-LEGGED HAWK	1
K3304	BUTEO LINEATUS	RED-SHOULDERED HAWK	3
K3305	BUTEO SWAINSONI	SWAINSON'S HAWK	6
K3308	ACCIPITER NOVAEHOLLA	GREY GOSHAWK	2
K3309	ACCIPITER NISUS	EUROPEAN SPARROW-HAWK	5
K3311	ACCIPITER COOPERII	COOPER'S HAWK	3
K3313	BUTEO PLATYPTERUS	BROAD-WINGED HAWK	1
K34	ACCIPITRIDAE	BUZZARD	106
K3401	BUTEO BUTEO	COMMON BUZZARD	64
K35	ACCIPITRIDAE	HARRIER	1
K3502	CIRCUS CYANEUS	NORTHERN HARRIER	5
K3505	CIRCUS APPROXIMANS	SWAMP HARRIER	1
K36	ACCIPITRIDAE	OLD WORLD VULTURES	1
K3602	GYPS FULVUS	GRIFFON VULTURE	1
K3606	NECROSYRITES MONACHUS	HOODED VULTURE	1
K5	FALCONIDAE	FALCONS	128
K5002	FALCO PEREGRINUS	PEREGRINE FALCON	18
K5005	FALCO COLUMBARIUS	MERLIN	6
K5011	MILVAGO CHIMANGO	CHIMANGO	7
K5013	FALCO MEXICANUS	PRAIRIE FALCON	2
K5102	FALCO SPARVERIUS	AMERICAN KESTREL	198
K5103	FALCO TINNUNCULUS	EURASIAN KESTREL	131
L INCLUDES			
L	GALLIFORMES	CHICKEN-LIKE BIRDS	14
L31	TETRAONIDAE	GROUSE	11
L3102	CENTRO. UROPHASIANUS	SAGE GROUSE	4
L32	TETRAONIDAE	PTARMIGANS	2
L4001	FRANCO. FRANCOLINUS	BLACK FRANCOLIN	2
L41	PHASIANIDAE	QUAILS	6
L4102	COTURNIX COTURNIX	COMMON QUAIL	1
L42	PHASIANIDAE	PHEASANTS	9
L4201	PHASIANUS COLCHICUS	RING-NECKED PHEASANT	22
L43	PHASIANIDAE	PARTRIDGES	17
L4302	PERDIX PERDIX	GRAY PARTRIDGE	3
L5	NUMIDIDAE	GUINEAFOWLS	3

CODE	SCIENTIFIC NAME	ENGLISH NAME	NUMBER OF CASES*
L INCLUDES			
L5001	NUMIDA MELEAGRIDES	WHITE-BREASTED GUINEAFOWL	2
L6001	MELEAGRIS GALLOPAVO	WILD TURKEY	8
M INCLUDES			
M	GRUIFORMES	CRANES, RAILS	17
M4	GRUIDAE	CRANES	9
M4001	GRUS CANADENSIS	SANDHILL CRANE	17
M7003	GALLINULA CHLOROPUS	COMMON MOORHEN	1
M7005	FULICA AMERICANA	AMERICAN COOT	11
MC	OTIDIDAE	BUSTARDS	1
MC002	OTIS TETRAX	LITTLE BUSTARD	1
N INCLUDES			
N	CHARADRIIFORMES	SHORE BIRDS	594
N1	JACANIDAE	JACANAS	14
N2	ROSTRATULIDAE	PAINTED SNIPES	1
N4001	HAEMAT. OSTRALÉGUS	OYSTERCATCHER	14
N6	SCOLOPACIDAE	SANDPIPERS	39
N6001	BARTRAMIA LONGICAUDA	UPLAND SANDPIPER	9
N6002	ACTITIS MACULARIA	SPOTTED SANDPIPER	1
N6006	CATO. SEMIPALMATUS	WILLET	1
N6008	TRINGA TOTANUS	COMMON REDSHANK	3
N6009	GALLINAGO GALLINAGO	COMMON SNIPE	30
N6010	SCOLOPAX RUSTICOLA	EURAS. WOODCOCK	2
N6011	SCOLOPAX MINOR	AMERICAN WOODCOCK	4
N6012	CALIDRIS ACUMINATA	S.-TAILED SANDPIPER	3
N6013	CALIDRIS ALPINA	DUNLIN	10
N6014	CALIDRIS BAIRDII	BAIRD'S SANDPIPER	2
N6016	CALIDRIS MAURI	WESTERN SANDPIPER	6
N6019	CALIDRIS ALBA	SANDERLING	5
N6020	TRY. SUBRUFICOLLIS	BUFF-BR. SANDPIPER	1
N6021	PHILOMACHUS PUGNAX	RUFF	1
N6024	CALIDRIS MINUTILLA	LEAST SANDPIPER	4
N6025	NUMENIUS MADAGASCAR.	EASTERN CURLEW	1
N6028	CALIDRIS PUSILLA	SEMIPALMATED SANDPIPER	3
N6033	TRINGA MELANOLEUCA	GREATER YELLOWLEGS	1
N6034	TRINGA OCHROPUS	GREEN SANDPIPER	1
N6035	CALIDRIS CANUTUS	RED KNOT	1
N61	BURHINIDAE	CURLEW	10
N6101	NUMENIUS ARQUATA	EUROPEAN CURLEW	5
N6103	NUMENIUS PHAEOPUS	WHIMBREL	3
N6104	NUMENIUS AMERICANUS	LONG-BILLED CURLEW	5
N82	RECURVIROSTRIDAE	STILTS	1
N9	BURHINIDAE	STONE CURLEWS	1
NA2	GLAREOLIDAE	PRATINCOLES	26
NB1	THINOCURUS RUMICIVO	PATAGINIAN SEEDSNIPE	1
NC	CHIONIDIDAE	SHEATHBILLS	2

CODE	SCIENTIFIC NAME	ENGLISH NAME	NUMBER OF CASES*
N5 INCLUDES			
N51	CHARADRIIDAE	PLOVERS	52
N5102	VANELLUS TRICOLOR	BANDED PLOVER	5
N5103	PLUVIALIS APRICARIA	GREATER GOLD. PLOVER	11
N5104	PLUVIALIS DOMINICA	LESSER GOLDEN PLOVER	5
N5105	PLUVIALIS SQUATAROLA	BLACK-BELLIED PLOVER	4
N5106	CHARA. ALEXANDRINUS	SNOWY PLOVER	1
N5108	CHARADRIUS HIATICULA	COM. RINGED PLOVER	1
N5111	CHARA. VOCIFERUS	KILLDEER	157
N5119	CHARADRIUS ASIATICUS	CASPIAN PLOVER	2
N5122	PLUVIALIS FULVA	PACIFIC GOLDEN-PLOVER	41
N5123	CHARAD SEMIPALMATUS	SEMI-PALMATED PLOVER	1
N52	CHARADRIIDAE	LAPWINGS	61
N5201	VANELLUS VANELLUS	COMMON LAPWING	66
N5202	VANELLUS CINEREUS	GREY-HEADED LAPWING	1
N5204	VANELLUS INDICUS	RED-WATTLED LAPWING	3
N5205	VANELLUS CHILENSIS	SOUTHERN LAPWING	67
NE INCLUDES			
NE	LARIDAE	GULLS, TERNS	17
NE1	LARIDAE	GULLS	1968
NE101	LARUS ARGENTATUS	HERRING GULL	254
NE102	LARUS CANUS	MEW GULL	57
NE103	LARUS CRASSIROSTRIS	BLACK-TAILED GULL	1
NE104	LARUS DELAWARENSIS	RING-BILLED GULL	108
NE106	LARUS GLAUDESCENS	GLAUCOUS-WINGED GULL	8
NE108	LARUS MARINUS	G. BLACK-BACKED GULL	20
NE112	LARUS PIIXCAN	FRANKLIN'S GULL	9
NE114	LARUS ATRICILLA	LAUGHING GULL	32
NE115	LARUS PHILADELPHIA	BONAPARTE'S GULL	2
NE117	LARUS FUSCUS	LESS BL-BACKED GULL	24
NE118	LARUS DOMINICANUS	KELP GULL	7
NE120	LARUS OCCIDENTALIS	WESTERN GULL	13
NE121	LARUS CALIFORNICUS	CALIFORNIA GULL	13
NE136	LARUS RIDIBUNDUS	BLACK-HEADED GULL	160
NE137	LARUS THAYERI	THAYER'S GULL	1
NE2	LARIDAE	TERNS	14
NE203	HYDROPROGNE CASPIA	CASPIAN TERN	3
NE204	STERNA HIRUNDO	COMMON TERN	2
NE210	STERNA NERENSIS	FAIRY TERN	1
NE214	STERNA PARADISAEA	ARCTIC TERN	7
NE217	STERNA ANTILLARUM	LEAST TERN	1
NE218	ANOUS MINUTUS	BLACK NODDY	1
NE219	ANOUS STOLIDUS	BROWN NODDY	5
O INCLUDES			
O	COLUMBIFORMES	PIGEONS, GROUSE	55

CODE	SCIENTIFIC NAME	ENGLISH NAME	NUMBER OF CASES*
O INCLUDES			
O2	COLUMBIDAE	PIGEONS, DOVES	20
O21	COLUMBIDAE	PIGEONS	157
O2109	COLUMBA PALUMBUS	COMMON WOOD-PIGEON	119
O22	COLUMBIDAE	DOVES	246
O2201	COLUMBA LIVIA	COMMON ROCK DOVE	381
O2202	COLUMBA OENAS	COMMON STOCK DOVE	8
O2203	STREPT. DECAOCTO	COLLARED DOVE	1
O2205	ZENAIDURA MACROURA	AM. MOURNING DOVE	453
O2211	STREPT. CHINENSIS	SPOTTED DOVE	8
O2212	GEOPELIA STRIATA	BARRED GROUND DOVE	1
O2213	COLUMBINA INCA	INCA DOVE	2
O2215	ZENAIDA ASIATICA	WHITE-WINGED DOVE	2
O2216	STREPTOPELIA LUGENS	DUSKY TURTLE-DOVE	3
P INCLUDES			
P	PSITTACIFORMES	PARROT,MACAW, PARAKEET, LORIE	289
P11	PSITTACHIFORMES	PARROTS	3
R INCLUDES			
R	STRIGIFORMES	OWLS	137
R11	TYTONIDAE	BARN OWLS	4
R1101	TYTO ALBA	COMMON BARN OWL	72
R2	STRIGIDAE	TYPICAL OWLS	2
R2001	NYCTEA SCANDIACA	SNOWY OWL	7
R2002	ATHENE NOCTUA	LITTLE OWL	2
R2003	STRIX ALUCO	TAWNY OWL	2
R2004	ASIO FLAMMEUS	SHORT-EARED OWL	8
R2005	ASIO OTUS	NORTH. LONG-EARED OWL	4
R2008	ATHENE CUNICULARIA	BURROWING OWL	4
R2009	STRIX VARIA	BARRED OWL	2
R22	STRIGIDAE	EAGLE OWLS	1
R2201	BUBO BUBO	EAGLE OWL	1
R2203	BUBO VIRGINIANUS	GREAT HORNED OWL	12
R2301	CICCABA WOODFORDII	AFRICAN WOOD-OWL	1
S-Z INCLUDES			
S	CAPRIMULGIFORMES	GOATSUCKER NIGHTJAR FROGMOUTH	1
S52	CAPRIMULGIDAE	NIGHTJARS	1
S5213	CHORDEILES MINOR	COMMON NIGHTHAWK	10
S5213	CHORDEILES MINOR	COMMON NIGHTHAWK	27
T	APODIFORMES	SWIFT, TREE-SWIFT, HUMMINGBIRD	11
T1	APODIDAE	SWIFTS	56
T1002	CHAETURA PELAGICA	CHIMNEY SWIFT	18
T1006	APUS APUS	COMMON SWIFT	115
T1009	AERONAUTES SAXATALIS	WHITE-THROATED SWIFT	1
T1055			22
W	CORACIIFORMES	KINGFISHERS,MOTMOTS, HORNBILL	2

CODE	SCIENTIFIC NAME	ENGLISH NAME	NUMBER OF CASES*
S-Z INCLUDES			
W4	MEROPIDAE	BEE-EATERS	1
X61	PICIDAE	WOODPECKERS	3
X6101	COLAPTES AURATUS	NORTHERN FLICKER	3
X6102	SPHYRAPICUS VARIUS	YELLOW-BELLIED SAPSUCKER	1
X6103	PICOIDES VILLOSUS	HAIRY WOODPECKER	1
X6104	SPHYRAPICUS NUCHALIS	RED-NAPED SAPSUCKER	1
X6105	PICOIDES PUBESCENS	DOWNY WOODPECKER	1
Y	PASSERIFORMES	PERCHING BIRDS	481
Y1	EURYLAIMIDAE	BROADBILLS	3
Y9	TYRANNIDAE	TYRANT FLY CATCHERS	1
Y9001	CONTOPUS VIRENS	EASTERN WOOD PEEWEE	1
Y9004	TYRANNUS TYRANNUS	EASTERN KINGBIRD	3
Y9005	MUSCIVORA FORFICATA	SCISSOR-TAILED FLYCATCHER	5
Y9006	EMPIDONAX VIRESCENS	ACADIAN FLYCATCHER	1
Y9008	TYRANNUS VERTICALIS	WESTERN KINGBIRD	4
Y9009	MYIARCHUS CINERASCENS	ASH-THROATED FLYCATCHER	1
YH	ALAUDIDAE	LARKS	7
YH001	GALERIDA CRISTATA	CRESTED LARK	2
YH002	ALAUDA ARVENSIS	SKYLARK	107
YH004	EREMOPHILA ALPESTRIS	HORNED LARK	128
YH007	ALAUDA ARVENSIS	EURASIAN SKYLARK	2
YI	HIRUNDINIDAE	SWALLOWS	742
YI001	PROGNE SUBIS	PURPLE MARTIN	14
YI003	RIPARIA RIPARIA	BANK SWALLOW	28
YI004	HIRUNDO NEOXENA	WELCOME SWALLOW	11
YI005	HIRUNDO RUSTICA	BARN SWALLOW	236
YI008	DELICHON URBICA	HOUSE MARTIN	24
YI009	HIRUNDO PYRRHONOTA	CLIFF SWALLOW	55
YI010	TACHYICINETA BICOLOR	TREE SWALLOW	27
YI011	THACHY. THALASSINA	VIOLET-GREEN SWALLOW	4
YI012	STELGID. SERRIPENNIS	NORTH. ROUGH-WINGED SWALLOW	4
YL	STURNIDAE	STARLINGS	64
YL001	STURNUS VULGARIS	EUROPEAN STARLING	494
YL1	STURNIDAE	MYNA	17
YL101	ACRIDOTHERES TRISTIS	COMMON MYNA	3
YM	CORVIDAE	CROWS, JAYS, MAGPIES	1
YM001			2
YM002	CORVUS FRUGILEGUS	ROOK	55
YM003	CORVUS MONEDULA	COMMON JACKDAW	1
YM1	CORVIDAE	CROWS	168
YM102	CORV. BRACHYRHYNCHOS	AMERICAN CROW	47
YM103	CORVUS CORONE	CARRION CROW	27
YM104	CORV. CORONE CORNIX	HOODED CROW	2
YM107	CORVUS SPLENDENS	HOUSE CROW	13
YM2	CORVIDAE	JAYS	1
YM201	CYANOCITTA CRISTATA	BLUE JAY	2
YM3	CORVIDAE	RAVENS	11
YM301	CORVUS CORAX	COMMON RAVEN	3

CODE	SCIENTIFIC NAME	ENGLISH NAME	NUMBER OF CASES*
S-Z INCLUDES			
YM4	CORVIDAE	MAGPIE	4
YM401	PICA PICA	EUROPEAN MAGPIE	12
YM402	PICA NUTTALLI	YELLOW-BILLED MAGPIE	1
YM403	PICA HUDSONIA	AMERICAN MAGPIE	3
YN102	CRATICUS NIGROGULAR	PIED BUTCHERBIRD	1
YR002	PARUS MAJOR	GREAT TIT	1
YR1	PARIDAE	TITMICE	1
YR2	PARIDAE	CHICKADEES	3
YR201	POECILE ATRICAPILLA	BLACK-CAPPED CHICKADEE	4
Z	PASSERIFORMES	PERCHING BIRDS	127
Z1001	PYCNONOTUS CAFER	RED-VENTED BULBUL	1
Z4	TROGLODYTIDAE	WRENS THRASHER,	9
Z5	MIMIDAE	MOCKINGBIRD,CATBIRD	1
Z52	MIMIDAE	MOCKINGBIRDS	3
Z5201	MIMUS POLYGLOTTOS	NORTHERN MOCKINGBIRD	3
Z5301	DUMETELLA CAROLINESI	GRAY CATBIRD	2
Z6	TURDIDAE	THRUSHES	17
Z6001	SIALIA MEXICANA	WESTERN BLUEBIRD	2
Z6003	OENANTHE OENANTHE	WHEATEAR	2
Z6004	CATHARAS USTULATUS	SWAINSON'S THRUSH	3
Z6005	TURDUS ILIACUS	REDWINGED THRUSH	4
Z6006	TURDUS MERULA	COMMON BLACKBIRD	15
Z6007	TURDUS MIGRATORIUS	AMERICAN ROBIN	52
Z6008	TURDUS PHILOMELOS	COMMON SONG THRUSH	2
Z6009	TURDUS PILARIS	FIELDFARE	4
Z6014	CATHARUS GUTTATUS	HERMIT THRUSH	2
Z6017	IXOREUS NAEVIUS	VARIED THRUSH	2
Z6018	HYLOCICHLA MUSTELIN	WOOD THRUSH	3
ZA3	MUSCICAPIDAE	WHISTLERS	1
ZA4	MUSCICAPIDAE	ROBIN-FLYCATCHER	1
ZC1	MOTACILLIDAE	WAGTAILS	6
ZC101	MOTACILLA ALBA	WHITE WAGTAIL	11
ZC102	MOTACILLA FLAVA	YELLOW WAGTAIL	1
ZC2	MOTACILLIDAE	PIPITS	2
ZC203	ANTHUS PRATENSIS	MEADOW PIPIT	22
ZC204	ANTHUS SPINOLETTA	WATER PIPIT	2
ZD102	BOMBYCILLA CEDRORUM	CEDAR WAXWING	4
ZL003	VIREO FLAVIFRONS	YELLOW-THROATED VIREO	1
ZL005	VIREO OLIVACEUS	RED-EYED VIREO	2
ZL006	VIREO CASSINII	CASSIN'S VIREO	1
ZS	PARULIDAE	WOOD WARBLERS	6
ZS002	ICTERIA VIRENS	YELLOW-BREASTED CHAT	1
ZS008	GEOETHLYPIS TRICHAS	COMMON YELLOWTHROAT	1
ZS012	SETOPHAGA RUTICILLA	AMERICAN REDSTART	1
ZS019	VERMIVORA RUFICAP.	NASHVILLE WARBLER	2
ZS020	DENDROICA TOWNSENDI	TOWNSENDS WARBLER	1
ZT000	STURNELLA	MEADOWLARK	20

CODE	SCIENTIFIC NAME	ENGLISH NAME	NUMBER OF CASES*
S-Z INCLUDES			
ZT001	STURNELLA MAGNA	EASTERN MEADOWLARK	49
ZT002	STURNELLA NEGLECTA	WESTERN MEADOWLARK	47
ZT005	DOLICHO. ORYZIVORU	BOBOLINK	1
ZT1	ICTERIDAE	BLACKBIRDS	230
ZT101	AGELAIUS PHOENICEUS	RED-WINGED BLACKBIRD	23
ZT102	XANTHOCEPHALUS XANTH	YELLOW-HEADED BLACKBIRD	1
ZT103	EUPHAGUS CYANOCEPHAL	BREWER'S BLACKBIRD	1
ZT104	MOLOTHRUS ATER	BROWN-HEADED COWBIRD	19
ZT201	ICTERUS GALBULA	BALTIMORE ORIOLE	2
ZT3	ICTERIDAE	GRACKLES	12
ZT301	QUISCALUS QUISCULA	COMMON GRACKLE	7
ZT303	QUISCALUS MAJOR	BOAT-TAILED GRACKLE	1
ZT304	QUISCALUS MEXICANUS	GREAT-TAILED GRACKLE	2
ZV001	PIRANGA OLIVACEA	SCARLET TANAGER	2
ZV002	PIRANGA LUDOVICIANA	WESTERN TANAGER	1
ZX	FRINGILLIDAE	CARDINALS, BUNTINGS, SPARROWS	29
ZX000	FRINGILLIDAE	FINCHES	35
ZX001	EMBERIZA CITRINELLA	YELLOWHAMMER	2
ZX003	CALCARIUS ORNATUS	CHES.-COLL. LONGSPUR	16
ZX004	JUNCO HYEMALIS	DARK-EYED JUNCO	2
ZX008	CARDUELIS CARDUELIS	EUROPEAN GOLDFINCH	4
ZX011	ACANTHIS CANNABINA	EURASIAN LINNET	1
ZX017	CARDUELIS TRISTIS	AMERICAN GOLDFINCH	2
ZX018	CARPODACUS MEXICANUS	HOUSE FINCH	1
ZX019	CALCARIUS PICTUS	SMITHS LONGSPUR	1
ZX022	AMANDAVA AMANDAVA	RED AVADAVAT	1
ZX023	DIUCA DIUCA	COMMON DIUCA FINCH	2
ZX202	PLECTRO. NIVALIS	SNOW BUNTING	43
ZX204	EMBERIZA CALANDRA	CORN BUNTING	1
ZX211	CALAMOS. MELANOCORY	LARK BUNTING	4
ZX3	FRINGILLIDAE	SPARROWS	739
ZX303	PASS. SANDWICHENSIS	SAVANNAH SPARROW	4
ZX304	PASSERELLA ILIACA	FOX SPARROW	4
ZX305	ZONOTRICHIA ALBICOLL	WHITE-THROATED SPARROW	2
ZX314	MELOSPIZA LINCOLNII	LINCOLN'S SPARROW	1
ZX315	MELOSPIZA MELODIA	SONG SPARROW	10
ZX316	AMPHISPIZA BELLI	SAGE SPARROW	1
ZX4	FRINGILLIDAE	TOWHEE	1
ZY101	LONCHURA PUNCTULATA	NUTMEG MANNIKIN	6
ZY102	LONCHURA MALACCA	CHESNUT MANNIKIN	4
ZY103	LONCHURA MALABARICA	WARBLING SILVERBILL	1
ZZ2	PLOCEIDAE	TRUE SPARROWS	4
ZZ201	PASSER DOMESTICUS	HOUSE SPARROW	17

CODE	SCIENTIFIC NAME	ENGLISH NAME	NUMBER OF CASES*
1	INCLUDES		
1			225
1A1	DIDELPHUS VIRGINIANA	OPOSSUM	6
1B1	DASYPUS NOVEMCINCTUS	ARMADILLO	2
1C	CHIROPTERA	BATS	50
1C21	VESPERTILLIONIDAE	VESPER BATS	2
1C22A	TADARIDA BRASILIENSI	BRAZILIAN FREE-TAILED BAT	1
1D11	LEPUS CALIFORNICUS	BLACK-TAILED JACKRABBIT	9
1D12	LEPUS TOWNSENDII	WHITE-TAILED JACKRABBIT	2
1D2	LEPORIDAE	RABBITS	16
1D21	SYLVILAGUS FLORIDANU	EASTERN COTTON TAIL RABBIT	1
1E31	CYNOMYS SP	PRAIRIE DOG	1
1E32	MARMOTA MONAX	WOODCHUCK	12
1E62	RATTUS NORVEGICUS	NORWAY RAT	1
1E71	ERETHIZON DORSATUM	NORTH AMERICAN PORCUPINE	2
1F1	CANIDAE	CANIDS	1
1F11	CANIS LATRANS	COYOTE	66
1F12	CANIS FAMILIARIS	DOMESTIC DOG	4
1F13	CANIDAE (FOXES)	FOX	23
1F131	VULPES FULVA	RED FOX	7
1F31	PROCYON LOTOR	RACCOON	12
1F4	MEPHITIDAE	SKUNKS	3
1F41	MEPHITIS MEPHITIS	STRIPED SKUNK	4
1F61	FELIS SILVESTRIS	HOUSE CAT	1
1G1	ODOCOILEUS	DEER	7
1G11	ODOCOILEUS VIRGINIAN	WHITE-TAILED DEER	97
1G12	ODOCOILEUS HEMIONUS	MULE DEER	3
1G3	ALCES ALCES	MOOSE	1
1G4	RANGIFER TARANDUS	CARIBOU	1
1G6	ANTILOCAPRA AMERICAN	PRONGHORN	1

* This column represents the number of times a species was identified, not the number of bird killed