Doc 9332-AN/909

MANUAL ON THE ICAO BIRD STRIKE INFORMATION SYSTEM (IBIS)

THIRD EDITION — 1989

Approved by the Secretary General and published under his authority

INTERNATIONAL CIVIL AVIATION ORGANIZATION

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AMENDMENTS

Amendments are announced in the supplements to the *Catalogue of ICAO Publications;* the Catalogue and its supplements are available on the ICAO website at www.icao.int. The space below is provided to keep a record of such amendments.

RECORD OF AMENDMENTS AND CORRIGENDA

AMENDMENTS		
No.	Date	Entered by

CORRIGENDA		
No.	Date	Entered by

Foreword

The ICAO Bird Strike Information System (IBIS) is a reporting system designed to collect and disseminate information on bird strikes which occur as a result of a collision between an aircraft and a bird. Data supplied by Contracting States and aircraft operators to ICAO are stored in a computer for easy retrieval and analysis. This manual describes the reporting system, the codes used for storage of data in the computer and the types of analyses of the reported data that are available. Many States may be concerned only with the reporting and analysis aspects of bird strikes. Some States, however, may want to report bird strikes to ICAO by computer tape and code their own bird strikes. For these States, the IBIS Manual is a source document for data coding of bird strikes.

Any enquiries concerning IBIS or this manual should be addressed to the Secretary General of ICAO, making reference to AN 4/9.1.1.

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Chapter 1
Reporting

ICAO State letter AN 4/9.1-79/179, dated 23 November 1979, requested Contracting States to report all bird strikes to aircraft. For this purpose, a Bird Strike Reporting Form was developed (see Sample Form 1). An over-all review of the ICAO Bird Strike Information System (IBIS) was carried out in 1985. After careful consideration of the advantages and disadvantages of amending the questions included in the reporting form, it was decided that, in order to retain continuity, no changes should be made to the reported strike data. Notwithstanding the decision to retain the current reporting form, a new Supplementary Bird Strike Reporting Form (see Sample Form 2) was developed for airlines, which are required to provide information pertaining to costs resulting from bird strikes, as well as detailed information on damage to engines. This is a post-incident report since engine damage and cost can only be ascertained after detailed inspection and assessment. It is believed that the questions on the forms are self-explanatory. However, several general remarks about the forms and on certain questions may be useful.

1.1 PRINTING AND DISTRIBUTION OF REPORTING FORMS

1.1.1 The forms are designed for direct reproduction by States. At the beginning of each form, space is provided for each State to add the address and/or instructions for returning the form to its appropriate authorities. It should be noted that it is not intended that forms be sent directly to ICAO. Similarly, at the end of each form, space has been provided to include the address within the State to which any bird remains, including feather fragments, should be sent. States will wish to complete these two pieces of information before reproducing the forms. Depending on the organizational structure of the State, it may be advantageous to reproduce self-copying forms to allow for multiple uses by different authorities within the State.

1.1.2 After reproduction by States, the blank reporting forms should be distributed to aircraft operators and to each aerodrome in the State.

1.1.3 In connexion with the question pertaining to the identification of the bird species involved in strikes, States are urged to confirm such identifications. Confirmation should be accomplished by means of a positive identification by a qualified person. When the bird species has been confirmed, the State should so indicate in the "remarks" portion of the form. Such confirmations will be coded in the computer-stored data.

1.2 REPORTING BIRD STRIKE DATA

1.2.1 The ICAO Bird Strike Reporting Form is normally completed by the pilot following an aircraft collision with a bird; however, reports may be completed by airport ground staff, air traffic controllers or aircraft maintenance staff. The Supplementary Bird Strike Reporting Form is expected to be completed by the operator involved. The reports are normally sent to the appropriate authority in each State, after

BIRD STRIKE REPORTING FORM

Send to:

Operator 01/02

Aircraft Make/Model 03/04

Engine Make/Model 05/06

Aircraft Registration 07

Date *day .... month .... year ....* 08

Local time 09

dawn ☐A *day* ☐B *dusk* ☐C *night* ☐D 10

Aerodrome Name 11/12

Runway Used 13

Location if En Route 14

Height AGL ..... *ft* 15

Speed (IAS) ..... *kt* 16

Phase of Flight 17

parked	☐A	*en route*	☐E
taxi	☐B	*descent*	☐F
take-off run	☐C	*approach*	☐G
climb	☐D	*landing roll*	☐H

Part(s) of Aircraft

	Struck		*Damaged*
radome	☐	18	☐
windshield	☐	19	☐
nose (excluding above)	☐	20	☐
engine no. 1	☐	21	☐
2	☐	22	☐
3	☐	23	☐
4	☐	24	☐
propeller	☐	25	☐
wing/rotor	☐	26	☐
fuselage	☐	27	☐
landing gear	☐	28	☐
tail	☐	29	☐
lights	☐	30	☐
other (specify)	☐	31	☐

Effect on Flight

none	☐32
aborted take-off	☐33
precautionary landing	☐34
engines shut down	☐35
other (specify)	☐36

Sky Condition 37

no cloud	☐A
some cloud	☐B
overcast	☐C

Precipitation

fog	☐38
rain	☐39
snow	☐40

Bird Species* 41

Number of Birds

	*Seen*42	*Struck*43
1	☐A	☐A
2-10	☐B	☐B
11-100	☐C	☐C
more	☐D	☐D

Size of Bird44

small	☐S
medium	☐M
large	☐L

Pilot Warned of Birds45

yes ☐Y no ☐X

Remarks *(describe damage, injuries and other pertinent information)* 46/47

.....

.....

.....

.....

Reported by ..... *(Optional)*

**THIS INFORMATION IS REQUIRED FOR AVIATION SAFETY*

**Send all bird remains including feather fragments to:*

Sample Form 1

SUPPLEMENTARY BIRD STRIKE REPORTING FORM
OPERATOR COSTS AND ENGINE DAMAGE INFORMATION

A. BASIC DATA

Operator 01/02

Aircraft Make/Model 03/04

Engine Make/Model 05/06

Aircraft Registration 07

Date of strike *day*.....*month*.....*year*..... 08

Aerodrome/Location if known 11/12/14

B. COST INFORMATION

Aircraft time out of service ..... *hours* 52

Estimated cost of repairs or replacement *U.S.$ (in thousands)*..... 53

Estimated other costs
(e.g. loss of revenue, fuel, hotels) *U.S.$ (in thousands)*..... 54

C. SPECIAL INFORMATION ON ENGINE DAMAGE STRIKES

Engine position number	1	2	3	4
Reason for failure/shutdown	55	56	57	58
uncontained failure	☐A	☐A	☐A	☐A
fire	☐B	☐B	☐B	☐B
shutdown — vibration	☐C	☐C	☐C	☐C
shutdown — temperature	☐D	☐D	☐D	☐D
shutdown — fire warning	☐E	☐E	☐E	☐E
shutdown — other (specify)	☐Y	☐Y	☐Y	☐Y
.....				
shutdown — unknown	☐Z	☐Z	☐Z	☐Z
Estimated percentage of thrust loss*	___59	___60	___61	___62
Estimated number of birds ingested	___63	___64	___65	___66

Bird species 41

* These may be difficult to determine but even estimates are useful.

Send all bird remains including feather fragments to:

Reported by .....

Sample Form 2

which State officials forward the reports to ICAO. Reports completed by aircraft operators are normally sent to the State of the operator for onward transmission to ICAO and the State of occurrence. Reports completed by airport ground staff, air traffic controllers, etc. are normally transmitted to the State of occurrence. It is essential that the State of occurrence be advised as soon as possible so as to ensure that the appropriate airport authorities are aware of the bird strike and can take appropriate action. Postal addresses for States' civil aviation authorities can be found in ICAO's *Designators for Aircraft Operating Agencies, Aeronautical Authorities and Services* (Doc 8585).

1.2.1.1 States should report to ICAO all strikes they are aware of, irrespective of the State of the operator. It is preferable for the strike report form to be relayed to ICAO either at the time it is received by the authority or at short intervals when several have been collected. Completed forms should be sent to ICAO marked "Attention AGA".

1.2.2 Reports should be submitted only when a bird strike has actually taken place. Occurrences of birds flying near aircraft should not be reported.

1.2.3 States which use computer programmes to store their bird strike data are urged to transmit the information to ICAO in the form of coded computer tapes. To be usable, such tapes must be in accordance with the following:

Tape format: 1 600 BPI, nine tracks, EBCDIC code, Standard label.
Record format: Fixed block, 1 record/block.

Note.— Record size is 700 characters.

When reporting by computer tape, it is necessary that the ICAO record format and the ICAO codes be used, as many fields are generated automatically by the update programme.

1.2.4 When additional information on a bird strike becomes available after a report has been forwarded to ICAO, such additional information should also be forwarded with a reference to the initial bird strike report. When the ICAO file number is known this will be the most precise way of referring to a bird strike and is all the information that is required by ICAO. When the ICAO file number is not known, the reference to the initial bird strike report should include aircraft registration and date and location of bird strike. For States that report to ICAO by computer tape, minor changes should be reported in writing. When many changes are involved and the updated report is submitted on tape, the entire revised record for that bird strike should be submitted.

1.2.5 Questions on the form have not been numbered. However, to the right of each question will be found a two-digit number which represents the final two digits of the computer field identification number. These field numbers may be used for referring to specific questions.

1.3 ADDITIONAL QUESTIONS

1.3.1 Should a State, for purposes of its own national investigation, wish to include additional questions on the forms, it is suggested that these be included at the end. This will not disrupt the sequence of questions developed for the international forms (such disruptions make computer coding by ICAO much more difficult). The computer programme includes provision for storing answers to national questions. States wishing to augment the ICAO forms with their own questions are urged to co-ordinate with ICAO the method by which this will be done so that a mutually acceptable field number and coding system can be developed. By this means, States collecting such additional information may also be able to interchange it readily with other interested States.

Chapter 2

Analyses of Bird Strike Reports

There are four standard printouts of the data stored in IBIS:

— State bird strike record print;
— World bird strike statistics;
— State bird strike statistics; and
— Significant bird strikes list.

In addition to the standard printouts, special analyses may be made on request.

2.1 STATE BIRD STRIKE RECORD PRINT

2.1.1 The State bird strike record print is intended to provide each State with a record of the information in IBIS on bird strikes in the State concerned (see Example 1). It is printed annually after it is believed all of the bird strike reports for the preceding calendar year have been received by ICAO and includes all the bird strike reports received by ICAO and occurring in the particular State for that period.

2.1.2 Bird strikes occurring on or near airports are listed alphabetically by airport followed by bird strikes occurring off airports. Bird strikes occurring on or near a given airport are listed chronologically with the airport name and location indicator appearing only with the first bird strike for each airport. In order to provide as much information as possible in a concise format, coding of several subjects is necessary. These codes, explained in Example 1, will appear in the prints distributed to States.

2.1.3 Each State is also provided with a list of bird strikes occurring outside the State involving its national aircraft.

2.1.4 A State bird strike record print is not sent to a State which has its own computer programme for bird strike reports.

2.2 WORLD BIRD STRIKE STATISTICS

2.2.1 The world bird strike statistics printout provides an analysis of world bird strikes for a particular period and thereby provides a general overview of the problem of bird strikes to aircraft. As shown in Example 2, it compares the types of birds struck with other factors. It is normally distributed on an annual basis and includes all the bird strike reports received by ICAO for the preceding calendar year.

I B I S
STATE BIRD STRIKE RECORD PRINT - 1999
FINLAND

AIRPORT OR LOCATION	DATE / TIME	AIRCRAFT / OPERATOR	RUNWAY / PHASE	HEIGHT / IAS	PARTS/S / PARTS/D	PRECIP / SKY	BIRD / SIZE	SEEN / STRUCK	SC / PW	DAMAGE / INJURY	EFFECT / ICAO #
ON AIRPORT											
HALLI	270899	MILITARY-	08	0	R		YI	2-10	-	-	NONE,
EFHA	1441	MILITARY	LDG			SCLD	S	1	NO	-	99033540
HELSINKI-MALMI	070599	BEECH-18	36	0	E2 P WG		-	2-10	-	-	NONE,
EFHF	910	BUSINESS	TORUN	80		NCLD	M	1	NO	-	99034030
HELSINKI-VANTAA	290499	DOUGLAS-DC9 40	33	0	R		ZX006	2-10	YES	-	NONE,
EFHK	741	FINNAIR O/Y	TORUN	100		NCLD	S	2-10	NO	-	99034040
	220599	DOUGLAS-DC1030	22	0	W		-	1	-	-	NONE,
	1918	FINNAIR O/Y	TORUN	125		SCLD	S	1	NO	-	99033990
	100699	MILITARY-	22	100	N		-	1	-	-	P-LDG,
	1637	MILITARY	CLIMB	160		NCLD		1	NO	-	99033940
	170699	DOUGLAS-DC9 50	22	400	F		-	1	-	-	NONE,
	1317	FINNAIR O/Y	CLIMB	160		NCLD	S	1	NO	-	99033900
	170699	DOUGLAS-DC9 50	33	0	N		YL	11-100	-	-	NONE,
	725	FINNAIR O/Y	TORUN	100		NCLD	S	2-10	NO	-	99033910
NEAR AIRPORT											
HELSINKI-VANTAA	280599	DOUGLAS-DC9 40	15	700	N		-	1	-	-	NONE,
EFHK	1248	FINNAIR O/Y	CLIMB	150		SCLD	S		NO	-	99033980
	010799	DOUGLAS-DC9 40	15	300	W		YI	1	-	-	NONE,
	848	FINNAIR O/Y	APP	130		NCLD	S	1	NO	-	99033850
	130799	BOEING-737	04	500	WG		-	2-10	-	-	NONE,
	1225	D.L.H.	APP	135		SCLD	M	1	NO	-	99001780
	140899	DOUGLAS-DC9 50	04	1000	W		-	1	-	-	NONE,
	1820	FINNAIR O/Y	APP	140		OVER	S	1	NO	-	99033630
VAASA	230999	DOUGLAS-DC9 40	16	300	WG		-	2-10	-	-	NONE,
EFVA		FINNAIR O/Y	APP	140		SCLD	S	1	NO	-	99033410
OFF AIRPORT											
HELSINKI-VANTAA	020999	AEROSPATLE-A310	22	3000	R W		-		-	-	NONE,
EFHK	30	SWISSAIR	APP	235		NCLD		1	NO	-	99004580
	130999	DOUGLAS-DC9 50	04	5400	W F		-		-	-	NONE,
	2220	FINNAIR O/Y	APP	270		NCLD	L	1	NO	-	99033450
	240999	DOUGLAS-DC9 50	33	2500	W		-	2-10	-	-	NONE,
	1550	FINNAIR O/Y	CLIMB	220		NCLD	M	1	YES	-	99033380
LAPPEENRANTA	300999	DOUGLAS-DC9 50	06	1800	WG		-	2-10	-	-	NONE,
EFLP		FINNAIR O/Y		180		NCLD	S	1	NO	-	99033360
TURKU	050699	DOUGLAS-DC9 50	08	1600	R		YI	2-10	-	-	NONE,
EFTU	1855	FINNAIR O/Y	APP	180		SCLD	S	1	NO	-	99033960
UNKNOWN											
HELSINKI-MALMI	140899	BOEING-737	04		R		YI	2-10	-	-	NONE,
EFHF	1230	D.L.H.	APP	130		OVER	S	1	NO	-	99001340
KAUHAVA	280499	MILITARY-	17		G		-		-	-	NONE,
EFKA	1314	MILITARY	APP			NCLD	S	1	NO	-	99034050
LAPPEENRANTA	140599	CESSNA-150	24				N61		-	-	
EFLP		PRIVATE				OVER	M	1	NO	-	99034010

Example 1

Explanation of State Bird Strike Record Print

AIRPORT: On and near airports — "on airports" are entered first, in alphabetical order; "near airports" follow in alphabetical order

LOCATION: Other locations, i.e. "off airports," follow in alphabetical order

DATE/TIME: Of the bird strike

AIRCRAFT: Model

OPERATOR: Operator name, or business, private, governmental or military aircraft

RUNWAY: Designation number

PHASE (of flight):

PARKE	= parked
TAXI	= taxi
TORUN	= take-off run
CLIMB	= climb
ENRUT	= en route
DCENT	= descent
APPR	= approach
LDG	= landing roll

HEIGHT: In feet above ground level

IAS: Indicated air speed in knots

PARTS /S (struck) or D (damaged):

R	= radome
W	= windshield
N	= nose
E1,2,3 or 4	= engine 1, 2, 3 or 4
P	= propeller
WG	= wing/rotor
F	= fuselage
G	= landing gear
T	= tail
L	= lights
PS	= *pitot/static head*
A	= antenna
TR	= tail rotor
HT	= helicopter transmission

PRECIPITATION: Precipitation

SKY (condition):

NCLD	= no cloud
SCLD	= some cloud
OVER	= overcast

BIRD (species): See Appendix 4, *Codes for Birds*

SIZE (of bird):

S	= small
M	= medium
L	= large

For strikes involving more than two species, larger bird size.

SEEN: Number of birds

STRUCK: Number of birds

SC (species confirmed):

—	= unknown

PW (pilot warned of birds):

—	= unknown

DAMAGE (aircraft):

D	= destroyed
S	= substantial
M	= minor
N	= none
—	= unknown

INJURY (index of):

F	= fatal
S	= serious
M	= minor
N	= none
—	= unknown

EFFECT (on flight):

ABORT	= aborted take-off
P-LDG	= precautionary landing
F-LDG	= forced landing
FIRE	= fire
PEN-WIND	= penetration of windshield
PEN-ARF	= penetration of airframe
VISION	= vision obscured
E-SD	= engines shut down
E-I	= engine ingestion
E-UF	= engine uncontained failure

ICAO # (file number):

Example 1 (cont.)

I B I S
WORLD BIRD STRIKE STATISTICS - 1999

	TOTAL	BIRD CODES (SEE EXPLANATION FOLLOWING EXAMPLE 3)												
		NE	S-Z	NS	K	O	N	J	R	P	A-I	L	11	UNKNOWN
TOTAL	3823	785	527	358	304	132	106	44	39	33	25	23	8	1439
MONTH OF OCCURRENCE														
JANUARY	217	54	14	18	26	6	5	2	2	5	2	1	0	82
FEBRUARY	186	29	6	29	32	3	8	4	2	3	0	1	3	66
MARCH	244	35	21	31	22	9	5	2	3	2	1	2	2	109
APRIL	268	30	37	24	33	13	10	3	1	0	2	2	0	113
MAY	340	69	60	14	30	13	23	10	3	5	1	2	1	109
JUNE	335	49	73	16	27	21	5	0	4	2	4	1	2	131
JULY	447	104	88	24	22	19	3	0	2	2	2	2	0	179
AUGUST	451	109	85	27	37	16	12	5	2	4	1	1	0	152
SEPTEMBER	438	107	56	28	27	15	13	3	2	5	8	3	0	171
OCTOBER	375	73	39	54	19	13	11	9	4	2	2	6	0	143
NOVEMBER	300	77	29	47	12	3	5	6	3	1	2	1	0	114
DECEMBER	207	47	15	46	16	1	6	0	10	2	0	1	0	63
LIGHT CONDITION														
DAWN	127	54	14	8	9	3	2	5	1	1	0	5	0	25
DAY	2653	590	444	264	247	114	73	22	5	29	20	14	1	830
DUSK	179	34	26	28	7	2	6	4	4	0	2	4	3	59
NIGHT	523	60	17	40	7	6	11	8	27	1	3	0	4	339
AIRCRAFT CLASSIFICATION														
TURBO FAN OVER 27 000	2381	443	365	161	150	71	46	24	18	9	14	10	0	1070
TURBO PROP UNDER 27 000	494	153	60	76	46	13	23	7	5	4	2	5	3	97
PISTON UNDER 5 700	416	100	40	64	49	21	18	8	2	14	5	7	5	83
OTHER, UNK AND GLIDER	363	43	45	34	55	19	14	2	11	6	4	1	0	129
TURBO PROP OVER 27 000	42	18	3	8	1	3	0	0	1	0	0	0	0	8
TURBO JET OVER 27 000	41	4	2	3	1	1	0	1	0	0	0	0	0	29
TURBO JET UNDER 27 000	32	9	4	4	1	0	2	1	2	0	0	0	0	9
TURBO FAN UNDER 27 000	24	5	5	6	1	3	1	0	0	0	0	0	0	3
HELICOPTER	23	8	1	1	0	1	1	1	0	0	0	0	0	10
PISTON OVER 5 700	7	2	2	1	0	0	1	0	0	0	0	0	0	1
FLIGHT PHASE														
PARKED	14	4	1	1	0	0	1	0	0	0	0	1	0	6
TAXI	26	5	6	1	3	4	1	0	0	0	0	0	0	6
TAKE-OFF RUN	1015	255	155	105	88	39	33	8	8	11	4	7	0	302
CLIMB	539	112	60	46	20	19	11	9	1	0	3	1	1	256
EN ROUTE	44	3	2	1	5	0	0	2	0	0	2	0	0	29
DESCENT	23	1	0	0	0	0	0	0	0	0	0	0	0	22
APPROACH	1076	191	162	67	67	34	14	20	6	6	3	4	7	495
LANDING ROLL	770	180	108	107	82	27	31	2	18	12	11	9	0	183
HEIGHT AGL (FT)														
0 - 100	1920	547	261	231	142	82	36	13	24	3	15	19	0	547
101 - 200	211	43	42	23	7	7	2	2	0	0	0	0	1	84
201 - 500	232	29	40	6	8	11	0	9	0	0	1	0	5	123
501 - 1000	132	15	18	0	7	3	2	6	1	0	1	0	0	79
1001 - 2500	189	15	20	2	9	5	2	4	1	0	1	0	2	128
OVER 2501	161	5	5	2	8	0	0	1	0	0	2	0	0	138
UNKNOWN	100	12	12	13	22	4	8	1	1	6	1	0	0	20
SPEED (IAS - KT)														
0 - 80	160	42	17	27	15	8	6	0	2	3	0	7	1	32
81 - 100	235	64	29	33	24	5	9	4	1	6	1	4	2	53
101- 150	1534	336	246	157	116	55	27	21	14	6	14	6	1	535
151- 200	471	78	53	16	23	19	0	6	2	0	3	0	0	271
201- 250	82	4	5	1	0	2	1	1	0	0	0	0	0	68
SPEED (IAS - KT)														
OVER 250	71	1	1	1	3	0	0	0	0	0	1	0	0	64
UNKNOWN	273	28	42	38	56	7	21	1	3	13	3	0	3	58
PILOT WARNED														
NO	2147	378	327	141	164	79	35	25	26	19	15	13	6	919
YES	241	61	16	27	49	2	9	3	1	4	3	2	1	63

Example 2

	BIRD CODES (SEE EXPLANATION FOLLOWING EXAMPLE 3)													
	TOTAL	NE	S-Z	NS	K	O	N	J	R	P	A-I	L	11	UNKNOWN
NUMBER OF BIRDS SEEN														
1	1175	192	173	63	134	38	15	11	16	2	16	3	1	511
2-10	1002	247	161	108	57	53	22	19	1	12	4	13	2	303
11-100	442	163	52	95	14	16	11	2	0	10	0	3	1	75
100 +	60	17	9	11	2	0	5	1	0	0	1	0	2	12
NUMBER OF BIRDS STRUCK														
1	2388	463	341	201	270	71	58	26	35	11	21	13	5	873
2-10	765	218	108	122	15	41	32	11	1	17	2	7	3	188
11-100	55	16	7	11	0	1	7	0	0	2	0	0	0	11
100 +	2	0	1	1	0	0	0	0	0	0	0	0	0	0
PARTS STRUCK														
RADOME	391	81	60	26	18	11	7	4	2	4	2	0	0	176
WINDSHIELD	531	91	100	36	15	24	4	8	3	5	1	2	1	241
NOSE	585	85	105	46	26	27	7	6	2	2	4	3	1	271
NUMBER OF ENGINES STRUCK														
1	598	108	46	43	47	29	6	5	8	6	5	7	0	288
2	51	17	6	8	1	3	4	0	0	2	0	0	0	10
3	1	0	0	0	0	0	0	0	0	0	0	0	0	1
PROPELLER	159	66	5	28	10	10	5	1	0	3	1	5	1	24
WING/ROTOR	571	148	42	78	49	20	19	14	3	6	5	8	1	178
FUSELAGE	463	92	53	43	24	21	6	8	3	1	1	2	1	208
LANDING GEAR	272	85	30	38	20	8	10	4	6	3	0	6	0	62
TAIL	47	9	4	3	3	5	2	1	0	1	2	2	1	14
LIGHTS	45	11	4	4	2	2	2	2	0	0	0	1	1	16
PITOT/STATIC HEAD	24	7	5	3	2	0	0	0	0	0	0	0	0	7
ANTENNA	2	0	0	0	0	0	0	0	0	0	0	0	0	2
OTHER PART	41	12	2	6	4	2	1	0	0	1	1	1	0	11
PARTS DAMAGED														
RADOME	27	5	2	1	5	0	0	2	1	0	1	0	0	10
WINDSHIELD	23	2	2	0	2	1	0	3	0	1	1	0	0	11
NOSE	16	6	1	0	1	2	0	0	0	0	1	0	0	5
NUMBER OF ENGINES DAMAGED														
1	183	40	5	14	13	9	1	3	2	2	4	1	0	89
2	7	3	0	1	0	1	1	0	0	0	0	0	0	1
PROPELLER	9	1	1	1	0	3	1	0	0	0	0	0	0	2
WING/ROTOR	125	28	4	6	18	1	3	8	2	1	2	1	0	51
FUSELAGE	18	3	0	0	1	2	0	2	0	0	0	0	0	10
LANDING GEAR	22	9	1	1	2	1	1	1	0	0	0	0	0	6
TAIL	11	0	1	1	1	1	0	1	0	0	1	1	0	4
LIGHTS	36	10	3	2	2	2	2	2	0	0	0	0	1	12
PITOT STATIC	8	2	0	1	1	0	0	0	0	0	0	0	0	4
ANTENNA(E)	1	0	0	0	0	0	0	0	0	0	0	0	0	1
OTHER	19	8	0	2	2	1	0	0	0	0	1	0	0	5
AIRCRAFT DAMAGE														
NONE	3373	690	510	332	255	112	99	31	35	27	16	19	7	1240
MINOR	273	60	13	15	33	10	6	7	2	4	6	3	1	113
SUBSTANTIAL	177	35	4	11	16	10	1	6	2	2	3	1	0	86
INJURY INDEX														
MINOR	1	0	0	0	0	0	0	0	0	0	0	0	0	1
EFFECT ON FLIGHT														
NONE	3185	622	436	305	250	110	65	31	31	30	18	18	6	1263
ABORTED TAKE-OFF	74	27	3	7	4	4	0	0	1	1	0	3	0	24
PRECAUTIONARY LANDING	93	23	6	10	6	5	2	4	1	0	3	0	1	32
ENGINE(S) SHUTDOWN	25	8	1	2	2	0	0	0	0	0	1	0	0	11
FIRE	2	2	0	0	0	0	0	0	0	0	0	0	0	0
PENETRATION OF WINDSHIELD	6	1	1	0	1	0	0	1	0	0	0	0	0	2
PENETRATION OF AIRFRAME	4	0	0	1	0	0	0	1	0	0	1	0	0	1
VISION OBSCURED	23	5	4	0	0	0	0	2	0	0	0	0	0	12

Example 2 (cont.)

I B I S
STATE BIRD STRIKE STATISTICS - 1999
FINLAND

			BIRD CODES (SEE EXPLANATION FOLLOWING THIS EXAMPLE)						
		TOTAL	S-Z	NE	NS	L	N	R	K	UNKNOWN
TOTAL		69	13	12	7	5	5	3	1	23
CITY	/AERODROME									
HELSINKI	/HELSINKI-MALMI	1	0	1	0	0	0	0	0	0
HELSINKI	/HELSINKI-VANTAA	8	1	0	0	0	0	2	0	5
JYVASKYLA	/JYVASKYLA	2	0	0	1	0	0	0	1	0
KAUHAVA	/KAUHAVA	1	0	0	0	1	0	0	0	0
KEMI	/KEMI	1	0	0	1	0	0	0	0	0
KAJAANI	/KAJAANI	4	3	0	0	1	0	0	0	0
KUOPIO	/KUOPIO	8	2	0	2	0	2	0	0	2
MARIEHAMN	/MARIEHAMN	6	1	2	0	0	1	0	0	2
OULU	/OULU	7	2	4	0	0	1	0	0	0
PORI	/PORI	4	1	2	1	0	0	0	0	0
SAVONLINNA	/SAVONLINNA	1	0	0	0	1	0	0	0	0
TAMPERE	/PIRKKALA	1	0	0	1	0	0	0	0	0
TURKU	/TURKU	1	0	0	0	1	0	0	0	0
VAASA	/VAASA	2	1	1	0	0	0	0	0	0
NEAR CITY	/AERODROME									
HELSINKI	/HELSINKI-VANTAA	3	0	0	0	0	0	0	0	3
JYVASKYLA	/JYVASKYLA	1	0	0	0	0	0	0	0	1
KUOPIO	/KUOPIO	1	1	0	0	0	0	0	0	0
OULU	/OULU	1	0	0	0	0	0	0	0	1
EN ROUTE		6	0	1	0	0	0	0	0	5
UNKNOWN		9	1	1	1	1	1	1	0	3
MONTH OF OCCURRENCE										
APRIL		14	3	0	5	1	2	0	0	3
JULY		11	4	1	2	0	1	0	0	3
AUGUST		10	1	5	0	0	0	0	0	4
SEPTEMBER		10	1	2	0	0	0	0	1	6
OCTOBER		7	0	0	0	1	0	1	0	5
MAY		6	1	2	0	1	2	0	0	0
JUNE		6	2	1	0	1	0	1	0	1
DECEMBER		2	0	1	0	0	0	1	0	0
JANUARY		1	1	0	0	0	0	0	0	0
MARCH		1	0	0	0	1	0	0	0	0
NOVEMBER		1	0	0	0	0	0	0	0	1
LIGHT CONDITION										
DAY		44	11	9	6	4	3	1	0	10
NIGHT		11	0	1	0	0	0	2	0	8
DUSK		6	1	2	0	1	0	0	0	2
DAWN		4	0	0	1	0	0	0	1	2
PRECIPITATION										
FOG		7	0	0	3	2	1	0	0	1
RAIN		4	1	1	0	0	1	0	1	0
FLIGHT PHASE										
TAXI		1	0	1	0	0	0	0	0	0
TAKE-OFF RUN		7	3	1	1	1	0	0	0	1
CLIMB		18	4	2	1	0	2	0	0	9
EN ROUTE		1	0	0	0	0	0	0	0	1
APPROACH		20	3	5	0	0	2	0	0	10
LANDING ROLL		18	3	3	4	3	1	2	1	1
HEIGHT AGL (FT)										
0 - 100		44	9	10	7	4	4	3	1	6
HEIGHT AGL (FT)										
101 - 200		1	0	0	0	0	0	0	0	1
201 - 500		3	1	0	0	0	0	0	0	2
501 - 1000		5	2	0	0	0	0	0	0	3
1001 - 2500		7	0	1	0	0	0	0	0	6
OVER 2501		2	0	0	0	0	0	0	0	2

Example 3

		BIRD CODES (SEE EXPLANATION FOLLOWING THIS EXAMPLE)							
	TOTAL	S-Z	NE	N5	L	N	R	K	UNKNOWN
SPEED (IAS - KT)									
0 - 80	3	0	2	0	1	0	0	0	0
81 - 100	3	1	2	0	0	0	0	0	0
101- 150	31	6	4	6	3	4	0	1	7
151- 200	11	3	0	1	0	0	0	0	7
201- 250	6	1	1	0	0	0	0	0	4
OVER 250	3	0	0	0	0	0	0	0	3
AIRCRAFT DAMAGE									
NONE	64	12	12	7	4	3	3	1	22
MINOR	4	1	0	0	1	1	0	0	1
SUBSTANTIAL	1	0	0	0	0	1	0	0	0
LIST BY MANUFACTURER AND MODEL									
MILITARY	11	4	2	2	1	0	0	0	2
BOEING 737	3	0	0	0	0	0	0	0	3
CESSNA 150	1	0	1	0	0	0	0	0	0
CESSNA 207	1	0	1	0	0	0	0	0	0
CESSNA 310	1	0	0	0	0	1	0	0	0
CESSNA 402	2	0	1	0	1	0	0	0	0
CESSNA 404	1	0	1	0	0	0	0	0	0
EMBRAER EMB110	2	1	0	0	0	0	0	0	1
FOKKER F27	6	1	1	1	0	1	0	0	2
DOUGLAS DC9 10	2	0	1	0	0	0	1	0	0
DOUGLAS DC9 30	1	0	0	0	0	0	0	0	1
DOUGLAS DC9 40	7	1	0	0	1	0	0	0	5
DOUGLAS DC9 50	11	3	2	0	0	2	1	0	3
DOUGLAS DC1030	1	0	0	0	0	0	0	0	1
DOUGLAS MD80 SERIES	4	0	0	1	0	0	0	1	2
DOUGLAS DC9	14	3	1	3	2	1	1	0	3
POLYTEKNIKK PIK15	1	0	1	0	0	0	0	0	0
TOP TEN OPERATORS									
FINNAIR O/Y	44	9	5	5	3	4	3	1	14
MILITARY	10	3	2	2	1	0	0	0	2
BUSINESS	5	0	4	0	0	1	0	0	0
O.L.H.	3	0	0	0	0	0	0	0	3
FINNAVIATION O/Y	2	1	0	0	0	0	0	0	1
S.A.S.	2	0	0	0	0	0	0	0	2
AUST. AIRLINES	1	0	0	0	0	0	0	0	1
PRIVATE	1	0	1	0	0	0	0	0	0

Example 3 (cont.)

Explanation of Column Headings in Examples 2 and 3

CODE	*SCIENTIFIC NAME*	*ENGLISH NAME*	*NUMBER OF CASES**
A — I INCLUDES			
G22	—	FULMARS	1
H41	—	CORMORANTS	1
I11	—	HERONS	10
I1101	ARDEA CINEREA	GREY HERON	4
I1102	ARDEA HERODIAS	GREAT BLUE HERON	1
I1103	ARDEA NOVAEHOLLANDIAE	WHITE-FACED HERON	1
I13	—	EGRET	1
I4	SCOPIDAE	HAMMERHEAD	1
I5001	CICONIA CICONIA	WHITE STORK	1
I61	—	IBISES	1
I6102	HAGEDASHIA HAGEDASH	HADADA IBIS	3
J INCLUDES			
J	ANSERIFORMES	DUCKS, GEESE, SWANS	2
J2	ANATIDAE	DUCKS, GEESE, SWANS	1
J21	—	DUCKS	25
J2106	ANAS CRECCA	COMMON TEAL	1
J2109	ANAS PLATYRHYNCHOS	MALLARD	3
J22	—	GEESE	7
J2204	BRANTA CANADENSIS	CANADA GOOSE	1
J23	—	SWANS	1
J2302	CYGNUS OLOR	MUTE SWAN	1
K INCLUDES			
K	FALCONIFORMES	HAWKS, EAGLES, VULTURES	1
K1	CATHARTIDAE	VULTURES	17
K3	ACCIPITRIDAE	KITES, EAGLES, HAWKS	4
K31	—	KITES	60
K3101	ELANUS NOTATUS	BLACK-SHOULDERED KITE	1
K3102	MILVUS MIGRANS	BLACK KITE	19
K3104	HALIASTUR INDUS	BRAHMINY KITE	3
K3105	HALIASTUR SPHENURUS	WHISTLING KITE	3
K32	—	EAGLES	19
K3205	AQUILA AUDAX	WEDGE-TAILED EAGLE	2
K3206	AQUILA CHRYSAETOS	GOLDEN EAGLE	1
K33	—	HAWKS	97
K3302	BUTEO JAMAICENSIS	RED-TAILED HAWK	2
K34	—	BUZZARD	11
K3401	BUTEO BUTEO	COMMON BUZZARD	5
K3402	PERNIS APIVORUS	HONEY BUZZARD	1
K3501	CIRCUS AERUGINOSUS	MARSH HARRIER	4
K3502	CIRCUS CYANEUS	NORTHERN MARSH HARRIER	7
K5	FALCONIDAE	FALCONS	6
K5005	FALCO COLUMBARIUS	MERLIN	1
K5101	FALCO CENCHROIDES	AUSTRALIAN KESTREL	16
K5103	FALCO TINNUNCULUS	EURASIAN KESTREL	22
L INCLUDES			
L31	—	GROUSE	1
L3101	LYRURUS TETRIX	COMMON BLACK GROUSE	5
L42	—	PHEASANTS	2
L4201	PHASIANUS COLCHICUS	RING-NECKED PHEASANT	1
L43	—	PARTRIDGES	5
L4301	ALECTORIS RUFA	RED LEGGED PARTRIDGE	1
L4302	PERDIX PERDIX	HUNGARIAN PARTRIDGE	4
L6	MELEAGRIDIDAE	TURKEYS	4

* *NUMBERS IN THIS COLUMN REPRESENT THE NUMBER OF TIMES A SPECIES WAS IDENTIFIED AND NOT THE NUMBER OF BIRDS KILLED.*

CODE	SCIENTIFIC NAME	ENGLISH NAME	NUMBER OF CASES*
M INCLUDES			
MC003	EUPODOTIS AUSTRALIS	AUSTRALIAN BUSTARD	1
M4001	GRUS CANADENSIS	SANDHILL CRANE	1
N INCLUDES			
NA1	—	COURSERS	15
NA2	—	PRATINCOLES	3
NA201	GLAREOLA MALDIVARUM	ORIENTAL PRATINCOLE	1
NA202	GLAREOLA PRATINCOLA	COLLARED PRATINCOLE	1
ND2	—	JAEGER	1
N4	HAEMATOPODIDAE	OYSTERCATCHERS	4
N4001	HAEMATOPUS OSTRALEGUS	OYSTERCATCHER	11
N6	SCOLOPACIDAE	SANDPIPERS	24
N6008	TRINGA TOTANUS	COMMON REDSHANK	1
N6009	GALLINAGO GALLINAGO	COMMON SNIPE	14
N6013	CALIDRIS ALPINA	DUNLIN	11
N6014	CALIDRIS BAIRDII	BAIRD'S SANDPIPER	1
N6021	PHILOMACHUS PUGNAX	RUFF	1
N61	—	CURLEW	2
N6101	NUMENIUS ARQUATA	EUROPEAN CURLEW	1
N6103	NUMENIUS PHAEOPUS	WHIMBREL	7
N9	BURHINIDAE	STONE CURLEWS	3
N9002	BURHINUS OEDICNEMUS	EURASIAN STONE CURLEW	1
NE INCLUDES			
NE	LARIDAE	GULLS, TERNS	8
NE1	—	GULLS	512
NE101	LARUS ARGENTATUS	HERRING GULL	57
NE102	LARUS CANUS	COMMON GULL	22
NE104	LARUS DELAWARENSIS	RING-BILLED GULL	1
NE106	LARUS GLAUCESCENS	GLAUCOUS-WINGED GULL	1
NE108	LARUS MARINUS	GREATER BLACK-BACKED GULL	12
NE109	LARUS MELANOCEPHALUS	MEDITERRANEAN GULL	1
NE110	LARUS NOVAHOLLANDIAE	SILVER GULL	4
NE117	LARUS FUSCUS	LESSER BLACK-BACKED GULL	7
NE136	LARUS RIDIBUNDUS	BLACK-HEADED GULL	122
NE2	—	TERNS	8
N5 INCLUDES			
N51		PLOVERS	109
N5101	VANELLUS MILES	MASKED PLOVER	8
N5102	VANELLUS TRICOLOR	BANDED PLOVER	3
N5103	PLUVIALIS APRICARIA	EURASIAN GOLDEN PLOVER	1
N5105	PLUVIALIS SQUATAROLA	GRAY PLOVER	1
N5108	CHARADRIUS HIATICULA	COMMON RINGED PLOVER	1
N5111	CHARADRIUS VOCIFERUS	KILLDEER	11
N5112	CHARADRIUS MELANOPS	BLACK FRONTED DOTTEREL	1
N5114	PLUVIALIS OBSCURA	NEW ZEALAND DOTTEREL	1
N5115	VANELLUS SPINOSUS	SPUR-WINGED PLOVER	6
N52	—	LAPWINGS	174
N5201	VANELLUS VANELLUS	COMMON LAPWING	42
O INCLUDES			
O21	—	PIGEONS	82
O2109	COLUMBA PALUMBUS	COMMON WOOD-PIGEON	18
O22	—	DOVES	12
O2201	COLUMBA LIVIA	COMMON ROCK DOVE	4
O2202	COLUMBA OENAS	COMMON STOCK DOVE	12
O2203	STREPTOPELIA DECAOCTO	COLLARED DOVE	2
P INCLUDES			
P0001	CACATUA ROSEICAPILLA	GALAH	28
P0002	CACATUA SANGUINEA	LITTLE CORELLA	1
P11	—	PARROTS	1
P15	—	COCKATOO	2

CODE	SCIENTIFIC NAME	ENGLISH NAME	NUMBER OF CASES*
R INCLUDES			
R	STRIGIFORMES	OWLS	16
R1101	TYTO ALBA	COMMON BARN OWL	6
R12	—	GRASS OWLS	1
R2	STRIGIDAE	TYPICAL OWLS	4
R2001	NYCTEA SCANDIACA	SNOWY OWL	3
R2002	ATHENE NOCTUA	LITTLE OWL	1
R2004	ASIO FLAMMEUS	SHORT-EARED OWL	4
R2201	BUBO BUBO	EAGLE OWL	1
R2203	BUBO VIRGINIANUS	GREAT HORNED OWL	1
S — Z INCLUDES			
S2	PODARGIDAE	FROGMOUTHS	1
S52	—	NIGHTJARS	2
T1	APODIDAE	SWIFTS	23
T1055	APUS APUS	COMMON SWIFT	8
W1	ALCEDINIDAE	KINGFISHERS	3
YH	ALAUDIDAE	LARKS	5
YH002	ALAUDA ARVENSIS	SKYLARK	18
YI	HIRUNDINIDAE	SWALLOWS	187
YI004	HIRUNDO NEOXENA	WELCOME SWALLOW	2
YI005	HIRUNDO RUSTICA	BARN SWALLOW	11
YI008	DELICHON URBICA	HOUSE MARTIN	4
YL	STURNIDAE	STARLINGS	32
YL001	STURNUS VULGARIS	COMMON STARLING	17
YL1	—	MYNA	3
YM001	PICA PICA	BLACK-BILLED MAGPIE	1
YM002	CORVUS FRUGILEGUS	ROOK	8
YM003	CORVUS MONEDULA	COMMON JACKDAW	1
YM1	—	CROWS	25
YM103	CORVUS CORONE	CARRION CROW	1
YM3	—	RAVENS	2
YN201	GYMNORHINA TIBICEN	ASTL BELL MAGPIE	17
YO	GRALLINIDAE	MAGPIE-LARKS	4
YO001	GRALLINA CYANOLEUCA	MUDLARK	5
YR2	—	CHICKADEES	1
YZ	CAMPEPHAGIDAE	CUCKOO SHRIKES	1
Z	PASSERIFORMES	PERCHING BIRDS	8
ZC1	—	WAGTAIL	1
ZT1	—	BLACKBIRDS	2
ZW	CATAMBLYRHYNCHIDAE	PLUSH-CAPPED FINCH	1
ZX000	—	FINCHES	3
ZX006	FRINGILLA COELEBS	COMMON CHAFFINCH	1
ZX008	CARDUELIS CARDUELIS	EUROPEAN GOLDFINCH	2
ZX009	CARDUELIS CHLORIS	EUROPEAN GREENFINCH	1
ZX011	ACANTHIS CANNABINA	EURASIAN LINNET	3
ZX202	PLECTROPHENAX NIVALIS	SNOW BUNTING	14
ZX3	—	SPARROWS	71
ZZ	PLOCEIDAE	WEAVERS, TRUE SPARROW	1
ZZ2	—	TRUE SPARROWS	7
ZZ201	PASSER DOMESTICUS	HOUSE SPARROW	1
Z6	TURDIDAE	THRUSHES	4
Z6006	TURDUS MERULA	COMMON BLACKBIRD	7
Z6007	TURDUS MIGRATORIUS	AMERICAN ROBIN	1
Z6008	TURDUS PHILOMELOS	COMMON SONG THRUSH	1
Z6009	TURDUS PILARIS	FIELDFARE	1
BATS			
1	CHIROPTERA	BATS	3
11	PTEROPIDAE	FRUIT BATS OR FLYING BATS	8
12	VESPERTILIONIDAE	"ORDINARY BATS"	1

2.3 STATE BIRD STRIKE STATISTICS

2.3.1 The State bird strike statistics printout is similar to the world bird strike statistics printout described above, but analyses only the bird strikes occurring in one State. A special printout is made for each State and is distributed to the State concerned if more than ten bird strikes have occurred (see Example 3).

2.3.2 The intent of the State bird strike statistics analysis is to provide the State with information on when and under what conditions bird strikes are occurring within the State. This should assist the State in taking corrective measures.

2.4 SIGNIFICANT BIRD STRIKE LIST

2.4.1 The Significant Bird Strike List is intended to bring to public attention those bird strikes which have caused significant damage to the aircraft or affected the flight. As shown in Example 4, it includes only major elements of the total bird strike report. This is to facilitate study of the reports and minimize the length of the print. This printout will be sent to all States and will include all significant bird strike reports received by ICAO for the preceding calendar year.

2.4.2 For the purpose of this printout, significant bird strikes are identified as:

Subject	*IBIS field*
aborted take-off	0133
precautionary landing	0134
engine(s) shut down	0135
aircraft damage (destroyed or substantial)	0201 D or S
injury index (fatal or serious)	0202 F or S
forced landing	0207
fire	0208
penetration of windshield	0209
penetration of airframe	0210
vision obscured	0211
engine ingestion (multiple engine ingestions only)	0212
engine uncontained failure	0213
strikes involving costs over U.S.$100 000	0153 and 0154

Note 1.— For aircraft under 5 700 kg, aborted take-off or precautionary landing without damage is not considered to be a significant bird strike.

Note 2.— Bird strikes to military aircraft are not included in the printout.

2.5 SPECIAL PRINTS

2.5.1 Special analyses of bird strike data in IBIS, such as bird strikes involving aircraft engines, may be obtained on request by writing to the Secretary General of ICAO, making reference to AN 4/9.1.1. Such requests should state clearly the information desired and specify the field identifier (listed in Chapter 3) to be analysed.

I B I S
SIGNIFICANT BIRD STRIKE LIST - 1999

NOTE: DUE TO THE VARYING EFFICIENCY OF REPORTING PRACTICES , THIS LIST DOES NOT NECESSARILY REFLECT THE DEGREE OF THE BIRD HAZARD PROBLEM IN ANY GIVEN STATE AND MAY BE INCOMPLETE.

```
FILE NUMBER : 99023860                    ++  AIRCRAFT TYPE         : AEROSPATLE-A300B
DATE        : 25/10/99                    ++  ENGINE TYPE           : CF6 SERIES
STATE       : ALGERIA                     ++  REGISTRATION          : F-BVGC
LOCATION    : HOUARI BOUMEDIENE           ++  PARTS OF A/C DAMAGED  : ENGINE # 1,
FLIGHT PHASE: TAKE-OFF RUN                ++  EFFECTS ON FLIGHT     : PRECAUTIONARY LANDING,
HEIGHT      :     0                       ++  INJURY                : NOT REPORTED
SPEED       :                             ++
  BIRDS     : 1/UNKNOWN
  REMARKS   : THREE FAN BLADES OUT OF SERVICE. TWELVE HOURS LATE.


FILE NUMBER : 99100431                    ++  AIRCRAFT TYPE         : BOEING-747100
DATE        : 04/01/99                    ++  ENGINE TYPE           : JT-9
STATE       : AUSTRALIA                   ++  REGISTRATION          : VH-ECA
LOCATION    : KINGSFORD SMITH INTL        ++  PARTS OF A/C DAMAGED  :
FLIGHT PHASE: TAKE-OFF RUN                ++  EFFECTS ON FLIGHT     : ABORTED TAKE-OFF,
HEIGHT      :                             ++  INJURY                : NOT REPORTED
SPEED       :                             ++
  BIRDS     : 1/GULLS
  REMARKS   : ENGINE SURGE BUT NO VIBRATION. A/C RETURNED TO SYDNEY. BIRSTRIKE CONFIRMED. NO EVIDENCE OF CORE
        INGESTION.


FILE NUMBER : 99100561                    ++  AIRCRAFT TYPE         : BOEING-747SP
DATE        : 31/01/99                    ++  ENGINE TYPE           :
STATE       : AUSTRALIA                   ++  REGISTRATION          : VH-EAA
LOCATION    : KINGSFORD SMITH INTL        ++  PARTS OF A/C DAMAGED  : ENGINE # 1,
FLIGHT PHASE: TAKE-OFF RUN                ++  EFFECTS ON FLIGHT     : PRECAUTIONARY LANDING,
HEIGHT      :                             ++  INJURY                : NOT REPORTED
SPEED       :                             ++
  BIRDS     : 1/GULLS
  REMARKS   : HIGH VIBRATION ON NO1 ENGINE. ENGINE SHUT DOWN, 100,000 KG FUEL DUMPED & 3 ENGINE LANDING MADE.


FILE NUMBER : 99010950                    ++  AIRCRAFT TYPE         : DORNIER-228
DATE        : 17/12/99                    ++  ENGINE TYPE           : TPE 331 FAMILY
STATE       : BOTSWANA                    ++  REGISTRATION          : A2-ABA
LOCATION    : FRANCISTOWN                 ++  PARTS OF A/C DAMAGED  : ENGINE #2,
FLIGHT PHASE: LANDING ROLL                ++  EFFECTS ON FLIGHT     : OTHER EFFECT
HEIGHT      :     0                       ++  INJURY                : NOT REPORTED
SPEED       :  60                         ++
  BIRDS     : 1/PLOVERS
  REMARKS   : REMAINDER OF FLIGHT CANCELLED. FIRST STAGE COMPRESSOR BLADE DAMAGE. AIRCRAFT FERRIED TO BASE FOR ENGINE
        CHANGE. COST TO REPAIR - APPROXIMATELY USD10 000. OUT OF SERVICE APPROXIMATELY ONE WEEK.


FILE NUMBER : 99201380                    ++  AIRCRAFT TYPE         : BOEING-737200
DATE        : 26/07/99                    ++  ENGINE TYPE           : JT-8
STATE       : CANADA                      ++  REGISTRATION          : C-GNDC
LOCATION    : TORONTO INTL                ++  PARTS OF A/C DAMAGED  : ENGINE #2,
FLIGHT PHASE: CLIMB                       ++  EFFECTS ON FLIGHT     : PRECAUTIONARY LANDING,
HEIGHT      :   200                       ++  INJURY                : NOT REPORTED
SPEED       : 160                         ++
  BIRDS     : 1/UNKNOWN
  REMARKS   : ENG# 2 CHANGED DUE DAMAGE OF 1ST & 2ND STAGE FAN BLADES.


FILE NUMBER : 99202070                    ++  AIRCRAFT TYPE         : BOEING-737200
DATE        : 04/08/99                    ++  ENGINE TYPE           : JT-8
STATE       : CANADA                      ++  REGISTRATION          : C-GNDL
LOCATION    : SAULT STE MARIE             ++  PARTS OF A/C DAMAGED  :
FLIGHT PHASE: TAKE-OFF RUN                ++  EFFECTS ON FLIGHT     : ABORTED TAKE-OFF,
HEIGHT      :     0                       ++  INJURY                : NOT REPORTED
SPEED       :                             ++
  BIRDS     : 1/UNKNOWN
  REMARKS   : DUE TO ABORTED T/O, BRAKES OVERHEATED, 2 BRAKES SEIZED AND 2 TIRES DEFLATED.
```

Example 4

2.6 CALCULATION BY STATES OF BIRD STRIKE RATES

2.6.1 Although it is not possible to calculate bird strike rates on a world-wide basis, some States calculate the number of national bird strikes per 10 000 aircraft movements to give a bird strike rate which may be used for comparison purposes between:

a) aerodromes;

b) aircraft types; and

c) airlines or other factors.

2.6.2 Whilst bird strike rates may indicate significant differences and be useful in determining action which may be required to reduce bird hazards to aircraft, these rates should be used with caution. It may be misleading to compare bird strike rates between different airlines, aircraft types or aerodromes even within a State. This is because of variations in aircraft operational factors, bird strike and aircraft movement reporting procedures, aerodrome environmental conditions and bird species.

2.6.3 In addition, bird strike rates may not necessarily reflect the degree of bird hazard that may exist. For instance, a relatively high bird strike rate at one aerodrome, if due to bird strikes involving small, non-flocking birds, may not reflect a greater hazard than that at an aerodrome which has a relatively low bird strike rate, but which is frequented by larger birds which also form flocks.

Chapter 3

Computer Storage of Bird Strike Reports

3.1 IBIS DATA SOURCES

3.1.1 The data within the computer files have three distinct sources:

1) *The ICAO Bird Strike Reporting Form.* Each entry on the form contains a field identifier and codes which are contained in this manual. The printing of field identifiers directly on the form facilitates the transfer of the data to the computer.

2) *Derived data.* These data are a direct result of analysis of the bird strike reporting form and possible supplementary information. Derived data are essentially extracted from the "remarks" section of the bird strike reporting form during analysis by each State or by ICAO. Derived data may include information supplied by the State subsequent to reporting to ICAO.

3) *Automatic data.* Information generated by the computer itself, using information stored in the IBIS master file. Information which is automatically entered does not appear as a data item on the bird strike reporting form.

The accuracy of the data reported to ICAO through the bird strike reporting form will directly affect the quality of the data stored in the computer file. IBIS can accommodate storage of incomplete data; however, States are requested to complete as many of the data items as possible on the bird strike reporting form.

3.2 IBIS SYSTEM DESCRIPTION

3.2.1 IBIS is a programme similar to the ICAO Accident/Incident Reporting Programme (ADREP) in that it uses a decode file organized for direct access. The three-language decode file is used during updating to verify field data entered and to provide data for automatic entry. IBIS uses ADREP-style drive tables for updating and printing, making the computer programmes independent of the data stored. Changes to the programme or the data, including output formatting, can be made to meet specific needs with only minor modifications in programming.

3.3 DATA FILE RECORD DESCRIPTION

3.3.1 *Record length.* The record length for IBIS is 700 characters, divided as follows:

1-342 — Present IBIS file

343-400 — Reserved by ICAO for future programme expansion

401-700 — May be used for remarks. Replaced in ICAO by narratives described separately. Narratives are up to 1 000 characters in length and are stored on a separate file.

3.3.2 *Field identifier code.* Each data element contains a field identifier code which is composed of four digits. The first two digits are the "group", the last two digits specify the individual field within the group:

00	01
Group	Field

The IBIS programme contains three groups:

OOXX — Administrative fields and all fields which are generated automatically during updating.

O1XX — Fields found on the ICAO Bird Strike Reporting Form. The last two digits of this group represent the field and are printed on the form.

O2XX — Fields derived from the analysis of the form.

With this basic understanding of the fields used in IBIS, States can follow this manual's instructions for coding, using the ICAO Bird Strike Reporting Form and derived data.

3.4 CODING INSTRUCTIONS

00XX — ADMINISTRATIVE AND DERIVED FIELDS

0001 — ICAO File Number

0001	9	9	0	8	7	2	3	0

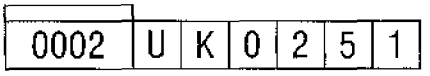
The first two digits of this eight-digit field are the last two digits of the calendar year: 1999 is coded '99'. The third through seventh digits are the basic component of the identification number and are assigned sequentially with receipt of the bird strike report. In this example, '08723' is a reference number assigned to ICAO. States and areas are assigned these five-digit codes if they participate in computer transmittal and sharing of bird strike data. The following reference numbers are currently assigned:

ICAO	00001 to 09999
Australia	10001 to 19999
Canada	20001 to 29999
Europe	30001 to 39999
United States	40001 to 49999

ICAO will use its numbers to code bird strikes sent directly to ICAO. Other States which elect to computerize their own data will be assigned a group of reference numbers upon request to ICAO.

The final character of this eight-digit field is not used at present.

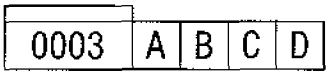
0002 — State File Number



At the option of the State, six characters are available to further identify its bird strikes. Characters available include alphabet letters A through Z or numerals 0 through 9.

If the State wishes to use the ICAO file number for its own reference number, it will not be necessary to complete this six-character field. If a State elects to use field 0002, it should provide ICAO with a description of the code. If there is no State code, the field is left blank.

0003 — State Submitting Report

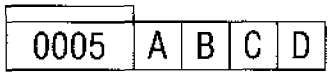


Enter the four-letter State code as contained in Appendix 1.

0004 — State of Occurrence

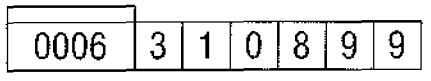
Enter the four-letter State codes as found in Appendix 1. If State of occurrence is unknown, enter 'Z'.

0005 — State of Registry



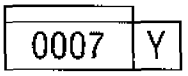
Enter the four-letter State codes as found in Appendix 1. If aircraft State of registry is unknown, enter 'Z'.

0006 — Date of Last Record Change



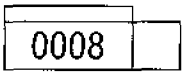
This is an automatic entry and is entered or changed during updating. The first two digits represent the day, the second two the month and the last two the year of data entry or update into IBIS. The example is for 31 August 1999.

0007 — "Flag" Errors



If the updating programme detects any errors or inconsistencies in the report, the programme will automatically enter an error flag (the letter 'Y') in the single-character field.

0008 — "Flag" State Different

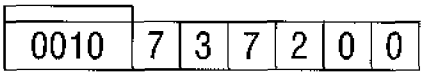


Not used.

0009 — Aircraft Make

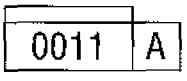
This is an 11-character plain-language field which automatically prints out the first 11 characters or an abbreviation of the aircraft manufacturer's name based upon the aircraft make code in field 0103 from the bird strike reporting form. The computer takes the code in 0103 and outputs these 11 characters from the computer decode file. In this example, the manufacturer is The Boeing Company.

0010 — Aircraft Model



A six-character coded plain-language field which automatically prints out the model number of an aircraft based upon information provided in field 0104 from the bird strike reporting form.

0011 — Aircraft Classification



This classification code is an automatic entry based upon information provided in fields 0103 and 0104 with one of the following nine entries possible:

A — Aeroplane
B — Helicopter
C — Glider
D — Balloon
F — Dirigible
I — Gyroplane
J — Powered glider
Y — Other
Z — Unknown

0012 — Aircraft Mass Category

0012	3

A single-character code in the decode file which, based upon information provided in fields 0103 and 0104, is automatically added to the record as one of the following:

1 — 2 250 kg or less
2 — 2 251-5 700 kg
3 — 5 701-27 000 kg
4 — 27 001-272 000 kg
5 — Above 272 000 kg
Z — Unknown

Note.— All mass categories are maximum certificated take-off mass.

0013 — Number of Engines

0013	2

A single-character code in the decode file which, based upon information provided in fields 0103 and 0104, is automatically added to the record. Numerals 0 to 9 may be entered indicating the number of engines, with 'Z' representing "unknown".

0014 — Type of Power

0014	C

A single-character code in the decode file which, based upon information reported in fields 0103 and 0104, is automatically added to the record. The following codes reflect the basic power configuration:

A — Reciprocating engine
B — Turboprop engine
C — Turbojet engine D — Turbofan engine
E — None (glider)
F — Turboshaft (helicopter)
Y — Other
Z — Unknown

0015 — Bird Scientific Name

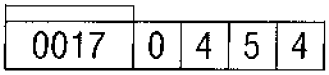
0015	L	A	R	U	S		D	E	L	A	W	A	R	E	N	S	I	S		

A 20-character field which automatically produces the first 20 letters, in plain language, of the scientific name for the bird species struck. In this example, *Larus delawarensis*, the ring-billed gull, is the bird identified as being struck by an aircraft. The scientific name is derived from Edward's *A Coded List of Birds of the World*, Edition a. The automatic field prints the scientific name of the bird identified by code in field 0141.

0016 — Bird Common Name

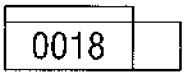
A 20-character field which is a plain-language output of the bird's common name in English, French or Spanish based upon the code entered in field 0141 and the language chosen.

0017 — Bird Mean Mass



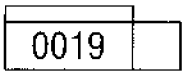
The bird mean mass in grams will be input automatically based upon the code entered in field 0141. Bird mean mass is the mean mass of both sexes of a particular bird species based on collection of scientific data. Since the mean mass of a particular bird may vary from one area to the next, considerable differences in the mass of a species of bird will exist. The four-character code represents the nearest whole gram. In the example the bird mass is 454 grams. A list of bird mean masses in grams is provided in Appendix 4.

0018 — (Reserved for engine information)

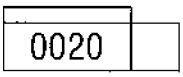


0019 — 0025 Engine Position

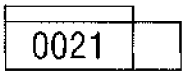
This is a multiple field which automatically records the aircraft engine position when the engine is struck by a bird. The information is dependent on data from field elements 0103, 0104 and 0121, 0122, 0123 and 0124. These automatic fields are as follows:



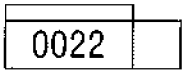
Engine mounted below the wing



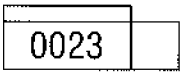
Engine mounted above the wing



Engine is an integral part of the wing root



Engine is nacelle-mounted on the wing (i.e. piston or turboprop)



Engine is mounted on the aft fuselage

0024	

Engine is mounted in the empennage

0025	

Engine is mounted with an intake at the nose

This single-character field will record a count of the number of engines of each position struck and/or damaged.

01XX — REPORTING FORM DATA FIELDS

0101 — Operator Name

0101														

The first 15 characters of the operator's name are automatically entered, based on the code in field 0102. If a business, private, governmental or military aircraft is involved, the appropriate term will be automatically entered from field 0102.

0102 — Operator Code

0102	A	A	L

A three-letter code derived from ICAO's *Designators For Aircraft Operating Agencies, Aeronautical Authorities and Services* (Doc 8585). IATA two-character codes may be used if the three-letter code is not known. If the operator is not an airline, enter one of the following:

BUS — Business aircraft
PRI — Private aircraft other than business
GOV — Government aircraft
MIL — Military aircraft

0103 — Aircraft Make Code

0103	1	4	8

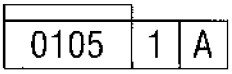
Enter the three-character aircraft manufacturer code found in Appendix 2. In the example, the code is for the Boeing Company.

0104 — Aircraft Model Code

0104	0	1

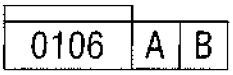
Enter the two-character aircraft model code from Appendix 2.

0105 — Engine Make Code



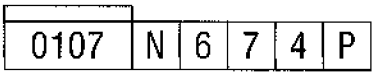
If an engine has been struck or damaged, enter the two-character engine manufacturer code from Appendix 3.

0106 — Engine Model Code



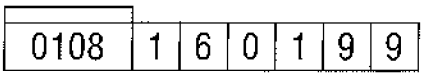
If an engine has been struck or damaged, enter the two-character engine model code from Appendix 3.

0107 — Aircraft Registration



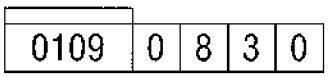
Enter the aircraft registration number or letters for the aircraft involved in the incident. In the example, the aircraft registration is N674P.

0108 — Date of Occurrence



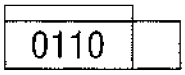
Enter the date of the bird strike as day, month and year. The first two digits are for the day, the second two for the month and the last two for the year. In the example, the bird strike occurred on 16 January 1999.

0109 — Local Time of Occurrence



Enter the hour and minutes of occurrence, if known, based upon a 24-hour clock. In the example, the bird strike occurred at eight-thirty in the morning.

0110 — Light Conditions



Enter one of the following single-character codes:

A — Dawn
B — Day
C — Dusk
D — Night

0111 — Aerodrome Name

0111	P	A	R	I	S	/	C	H	A	R	L	E	S	-	D	E	-	G	A	U

The first 20 characters of the aerodrome name are automatically entered, based on the code in field 0112. The example shows how Paris/Charles-de-Gaulle would appear.

0112 — Aerodrome Code

0112	A	B	C	D	

If the bird strike occurred on, near or off an airport (excluding en-route bird strikes), enter the four-letter ICAO identifier code for the airport from *Location Indicators* (Doc 7910). If the bird strike occurred en route, leave blank. If the airport name is not known, enter 'ZZZZ' meaning "unknown" in order to be able to distinguish between bird strikes that occurred on or in the vicinity of an airport and en route. If a code does not exist for that airport, one should be made up for bird strike reporting purposes and ICAO advised. A fifth character code has been included for those States for which a four-character code would not be sufficient. RIGG should be used to identify a bird strike occurring on an oil rig.

"On airport" bird strikes are strikes that occurred at or below 200 ft above ground level (AGL) during approach or 500 ft AGL during climb, or during the parked, taxi, take-off run or landing roll phases. "Near airport" bird strikes are strikes which occurred between 201 ft AGL and 1 000 ft AGL during approach or between 501 ft AGL and 1 500 ft AGL during climb. "Off airport" bird strikes are strikes that occurred above 1 000 ft AGL during approach and above 1 500 ft AGL during climb.

0113 — Runway Used

0113	0	9	

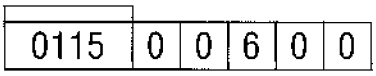
Enter the runway used for approach, landing or take-off when the bird strike occurred. Three characters are available. In the example the runway used was 09; runway 26 left would be entered '26 L'.

0114 — Location if En Route

0114	M	O	O	S	O	N	E	E		2	0	K		N	O	R	T	H		

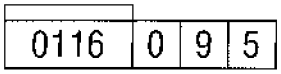
Enter in plain language up to 20 characters identifying the location of the bird strike. Many different entries are possible — latitude and longitude, azimuth and distance from a navigation aid, direction and distance from a town, etc. Leave blank if not appropriate. In the example, the bird strike occurred 20 km north of Moosonee.

0115 — Height of Bird Strike



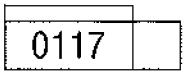
Enter, in feet, the height above ground level (AGL) at which the bird strike occurred. Leave blank if unknown. Numbers should be right justified. In the example, the bird strike occurred at 600 ft.

0116 — Speed



Enter the aircraft indicated airspeed (IAS) in knots at the time of the bird strike. Leave blank if unknown. Numbers should be right justified. In the example the aircraft speed was 95 kt.

0117 — Phase of Flight



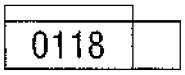
Enter in this single-character field one of the following codes:

A — Parked
B — Taxiing
C — Take-off run (from start of ground run to lift-off)
D — Climb
E — En route
F — Descent
G — Approach
H — Landing roll

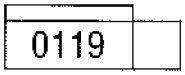
Leave blank if unknown.

0118-0131 — Part(s) of Aircraft Struck or Damaged

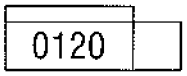
This series of single-character fields allows for multiple entry of aircraft components struck. One of two characters can be entered, 'S' for struck or 'D' for damaged. A blank in the field means that the component was not involved in the bird strike.



Radome



Windshield



Nose (except as in field 0118 and 0119)

0121 Engine No. 1

0122 Engine No. 2

0123 Engine No. 3

0124 Engine No. 4

0125 Propeller

0126 Wing/Rotor

0127 Fuselage

0128 Landing gear

0129 Tail

0130 Lights

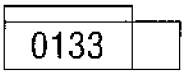
0131 Other — Enter 'S' or 'D' if additional information is entered in the narrative. However, do not enter 'S' or 'D' if fields 0203 to 0206, 0209, 0210 or 0213 can be entered.

0132-0136 — Effect on Flight

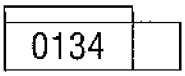
This series of single-character fields allows for multiple entry of the effect the bird strike had on the flight. Enter 'Y' for yes if the effect occurred or leave blank if there was no effect. An exception is Field 0135, "Engines shut down", for which the number of engines that were shut down because of the bird strike should be entered.

0132 None — enter 'Y' for no effect.

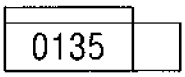
Note.— 'Y' should not be entered if fields 0133 to 0136 are entered.



Aborted take-off — enter 'Y' for abort.

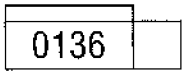


Precautionary landing — enter 'Y' for landing.



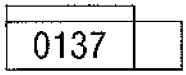
Engine(s) shut down — enter '1', '2', '3', etc. for number of engines shut down.

Note.— This is not the engine position number.



Other (specify) — either code in fields 0207, 0208 to 0211 or, if not appropriate, enter 'Y' and describe in the narrative.

0137 — Sky Condition

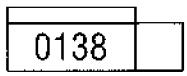


Enter in this single-character field one of the following codes:

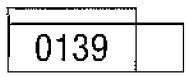
A — No cloud
B — Some cloud
C — Overcast

0138-0140 — Precipitation

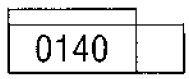
This series of single-character fields allows for entry of any precipitation that may have been occurring when the strike occurred. Complete as many fields as are appropriate:



Fog — Enter 'Y' for fog or leave blank



Rain — Enter 'Y' for rain or leave blank



Snow — Enter 'Y' for snow or leave blank

0141 — Bird Species

0141					

Enter the alphanumeric code found in Appendix 4 which identifies the bird involved in the strike. The five-character code is constructed as follows:

First character	= Order: 1, 2 and A to Z; with both Y and Z used for *Passeriformes*
Second character	= Family: 1 to 9 and A to Z
Third character	= Sub-groups: 1 to 9
Fourth and fifth characters	= Species: 1 to 9

The classification of birds is derived from Edwards' *A Coded List of Birds of the World*. For aviation purposes the list has been expanded to include a code for bats. The coding should be as complete as identification permits.

For example: If an aircraft hits a black-headed gull, *Larus ridibundus*, the code from Appendix 4 would be:

0141	N	E	1	3	6

If it is known only that the bird was a gull, the entry would be:

0141	N	E	1		

If two or more bird species are involved in a strike, information on the other bird species should be included in the narrative. For birds not included in Appendix 4, contact ICAO for the proper code. If the bird was not identified, leave blank.

0142 — Number of Birds Seen

0142	A

If the bird(s) were seen, enter in this single-character field one of the following codes:

A — 1
B — 2-10
C — 11-100
D — more than 100

If more than one species of bird is involved in a strike enter total number of all species seen. Leave blank if bird(s) were not seen prior to the bird strike.

0143 — Number of Birds Struck

0143	A

Enter code 'A', 'B', 'C' and 'D' as described for field 0142. It may be difficult to define the exact number of birds struck; however, in the case of engine ingestion this data is important in analysis of engine damage. If the exact number is known, enter the appropriate code in this field and include exact number in the narrative.

0144 — Size of Bird

0144	S

Enter in this single-character field one of the following codes:

S — small
M — medium
L — large

In case of bird strikes involving more than one species, enter the code for the larger bird. If unknown, leave blank. Size as reported by the pilot is a relative scale. The entry should reflect the perceived size as opposed to a scientifically determined value.

0145 — Pilot Warned of Birds

0145	Y

Enter in this single-character field one of the following codes:

Y — yes, if the pilot was warned
N — no, if the pilot was not warned

Fields 0146 through 0151 are no longer used by ICAO.

0152 — Aircraft time out of service

0152	0	0	7	2

Enter number of hours aircraft was out of service. Four characters are available and numerals 0 to 9 may be entered. If unknown, leave blank.

0153 — Estimated cost of repairs or replacement

0153	0	5	3	4	0

Enter estimated cost of repairs or replacement in thousands of U.S. dollars. Five characters are available and numerals 0 to 9 may be entered. In the example the estimated cost is U.S.$5 340 000.

0154 — Estimated other costs

0154	0	0	0	1	6

Enter estimated costs, other than those shown in field 0153, in thousands of U.S. dollars. These other costs may include loss of revenue, hotel expenses due to flight cancellation, costs of fuel dumped, etc.

0155-0158 — Reason for engine failure/shutdown

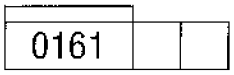
0155		No. 1 Engine
0156		No. 2 Engine
0157		No. 3 Engine
0158		No. 4 Engine

Enter in this single-character field one of the following codes to identify the reason for engine failure/shutdown:

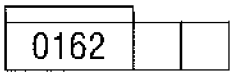
A — Uncontained failure
B — Fire
C — Shutdown — vibration
D — Shutdown — temperature
E — Shutdown — fire warning
Y — Shutdown — other (specify)
Z — Shutdown — unknown

0159-0162 — Estimated percentage of thrust loss

0159	2	0	No. 1 Engine
0160			No. 2 Engine



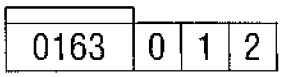
No. 3 Engine



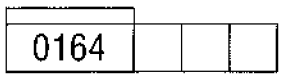
No. 4 Engine

Enter estimated percentage of thrust loss for each engine. Two characters are available and numerals 0 to 9 may be entered. If unknown, enter 'Z'. In the example, the percentage of thrust loss was 20 per cent for No. 1 Engine.

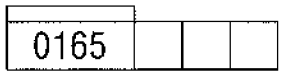
0163-0166 — Estimated number of birds ingested



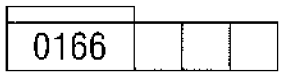
No. 1 Engine



No. 2 Engine



No. 3 Engine



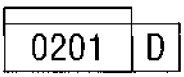
No. 4 Engine

Enter in this three-digit field the estimated number of birds ingested into each engine. Three characters are available and numerals 0 to 9 may be entered. If unknown, enter 'Z'.

02XX — SPECIAL TECHNICAL DATA FIELDS

A series of fields has been established primarily to assist in computer sorting of significant bird strikes. By making entries in the following fields, the computer can search for significant data which would normally be listed only in the REMARKS fields. After reading the REMARKS, if any of the following are identified, enter the appropriate code; if not, leave entry blank.

0201 — Aircraft Damage



Enter this single-character field with one of the following codes if extent of damage is known, and leave blank if unknown:

D — Destroyed — When the damage sustained makes it inadvisable to restore the aircraft to an airworthy condition.

S — Substantial — When the aircraft incurs damage or structural failure which adversely affects the structure strength, performance or flight characteristics of the aircraft and which would normally require major repair or replacement of the affected component.

Note.— Specifically excluded are:
— bent fairings or cowlings;
— small dents or puncture holes in the skin;
— damage to wing tips, antennae, tires or brakes;
— engine blade damage not requiring blade replacement.

M — Minor — When the aircraft can be rendered airworthy by simple repairs or replacements and an extensive inspection is not necessary.

N — None

0202 — Injury Index

0202	F

Enter this single-character field with one of the following codes for the most serious degree of injury involved, if known, and leave blank if unknown.

F — Fatal — Injury which results in the death of a person within a period of 30 days following the accident.

S — Serious — An injury which is sustained by a person in an accident and which:

a) requires hospitalization for more than 48 hours, commencing within seven days from the date the injury was received; or

b) results in a fracture of any bone (except simple fractures of fingers, toes, or nose); or

c) involves lacerations which cause severe haemorrhage, nerve, muscle or tendon damage; or

d) involves injury to any internal organ; or

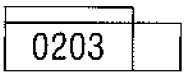
e) involves second or third degree burns, or any burns affecting more than 5 per cent of the body surface.

M — Minor

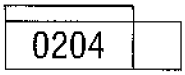
N — None

0203-0206 — Additional Part(s) of Aircraft Struck or Damaged

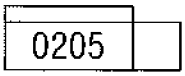
This series of single-character fields allows for multiple entry of aircraft components struck. One of two characters can be entered, 'S' for struck or 'D' for damaged. A blank in the field means that the component was not involved in the bird strike.



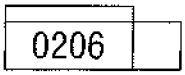
Pitot/static head



Antenna(e)

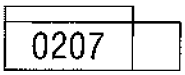


Tail rotor (helicopter)



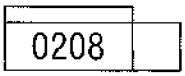
Helicopter Transmission

0207 — Forced Landing



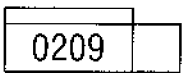
If a forced landing was made, enter 'Y'.

0208 — Fire



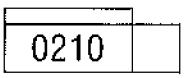
If a fire occurred as a result of the bird strike or subsequent accident/incident, enter 'Y'.

0209 — Penetration of Windshield



If the bird broke and passed through an aircraft windshield, enter 'Y'.

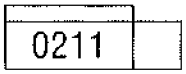
0210 — Penetration of Airframe



If the bird broke and passed through the airframe, enter 'Y'.

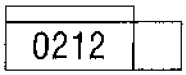
Note.— This does not include engine ingestion.

0211 — Vision Obscured



If the pilot's or co-pilot's vision was obscured because of shattered windshield or bird remains, enter 'Y'.

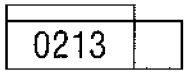
0212 — Engine Ingestion



Enter the number of engines which ingested birds, either '1', '2', '3' or '4'.

Note.— This is not the engine position number.

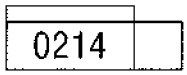
0213 — Engine Uncontained Failure



Enter the number of engines which had an uncontained failure (blades departed engine). Enter either '1', '2', '3' or '4'.

Note.— This is not the engine position number.

0214 — Bird Species Confirmed



If the bird species was identified by an experienced biologist after visual inspection of the bird remains, enter 'Y' for yes; otherwise, leave this field blank.

Narrative

The narrative may be up to 1 000 characters in length but should not duplicate information included elsewhere. For example, do not enter "no damage received" as this would be identified by fields 0118 to 0131. Where possible, contractions and common abbreviations should be used and unnecessary words deleted. The narrative should be examined and any information which can be entered in fields 0201 to 0214 extracted and not included. To avoid problems in translation, abbreviations in the *PANS-ABC — ICAO Abbreviations and Codes* (Doc 8400) should be used.

APPENDIX 1

CODES FOR STATES, TERRITORIES AND OCEANS*

CODE	TEXT
AFGH	Afghanistan
ALBN	Albania
ALGR	Algeria
AMSM	American Samoa
ANDR	Andorra
ANGL	Angola
ANGU	Anguilla
ANTG	Antigua and Barbuda
ARGT	Argentina
ARUB	Aruba
ASCE	Ascension Island
ASTL	Australia
AUST	Austria
BAHM	Bahamas
BAHR	Bahrain
BANG	Bangladesh
BARB	Barbados
BEEF	Beef Island
BELG	Belgium
BELI	Belize
BENI	Benin
BERM	Bermuda
BHUT	Bhutan
BOLV	Bolivia
BOTW	Botswana
BRAZ	Brazil
BRUN	Brunei Darussalam
BULG	Bulgaria
BURF	Burkina Faso
BURM	Burma
BURU	Burundi
CAMR	Cameroon
CAND	Canada
CAPV	Cape Verde
CARO	Caroline Islands
CAYM	Cayman Islands
CEAF	Central African Republic
CHAD	Chad
CHIL	Chile
CHIN	China
COCO	Cocos (Keeling) Islands
COLM	Colombia
COMO	Comoros
CONG	Congo
COOK	Cook Islands
COST	Costa Rica
COTV	Côte d'Ivoire

CODE	TEXT
CUBA	Cuba
CYPR	Cyprus
CZCH	Czechoslovakia
DEKA	Democratic Kampuchea
DEMK	Democratic People's Republic of Korea
DEMY	Democratic Yemen
DENM	Denmark
DJIB	Djibouti
DMCA	Dominica
DOMR	Dominican Republic
EAST	Easter Island
ECUD	Ecuador
EGYP	Egypt
ELSA	El Salvador
EQGU	Equatorial Guinea
ETHP	Ethiopia
FARO	Faroe Islands
FIJI	Fiji
FINL	Finland
FRAN	France
FRAT	French Antilles
FREG	French Guiana
FREP	French Polynesia
GABN	Gabon
GAMB	Gambia
GERD	German Democratic Republic
GERF	Germany, Federal Republic of
GERW	Germany (Berlin)
GHAN	Ghana
GIBR	Gibraltar
GREC	Greece
GREE	Greenland
GREN	Grenada
GUAD	Guadeloupe
GUAM	Guam
GUAT	Guatemala
GUIN	Guinea
GUNB	Guinea-Bissau
GUYN	Guyana
HAIT	Haiti
HOLY	Holy See
HOND	Honduras
HONG	Hong Kong
HUNG	Hungary

CODE	TEXT
ICLD	Iceland
INDA	India
INDO	Indonesia
IRAN	Iran, Islamic Republic of
IRAQ	Iraq
IRLD	Ireland
ISRL	Israel
ITAL	Italy
JAMC	Jamaica
JAPN	Japan
JOHN	Johnston Island
JORD	Jordan
KENY	Kenya
KING	Kingman Reef
KIRI	Kiribati
KUWT	Kuwait
LAOS	Lao People's Democratic Republic
LEBN	Lebanon
LESO	Lesotho
LIBR	Liberia
LIBY	Libyan Arab Jamahiriya
LIEC	Liechtenstein
LUXM	Luxembourg
MACA	Macao
MADG	Madagascar
MALA	Malawi
MALB	Malaysia
MALD	Maldives
MALI	Mali
MALT	Malta
MARI	Mariana Islands
MARS	Marshall Islands
MART	Martinique
MAUR	Mauritania
MAUT	Mauritius
MAYO	Mayotte I.
MEXC	Mexico
MICR	Micronesia
MIDW	Midway Islands
MONC	Monaco
MONG	Mongolia
MONT	Montserrat
MORC	Morocco
MOZB	Mozambique

* The designations employed and the presentation of the material in this Appendix do not imply the expression of any opinion whatsoever on the part of ICAO concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries.

CODE	TEXT
NAMB	Namibia
NAUR	Nauru
NEPL	Nepal
NETH	Netherlands, Kingdom of the
NETS	Netherlands Antilles
NEWC	New Caledonia
NEWZ	New Zealand
NICG	Nicaragua
NIGE	Niger
NIGR	Nigeria
NIUE	Niue Island
NORF	Norfolk Island
NORW	Norway
OMAN	Oman
PAKI	Pakistan
PALM	Palmyra Island
PANM	Panama
PAPG	Papua New Guinea
PARG	Paraguay
PERU	Peru
PHIL	Philippines
PITC	Pitcairn Island
POLD	Poland
PORT	Portugal
PURI	Puerto Rico
QATR	Qatar
REPK	Republic of Korea
REUN	Reunion
ROMN	Romania
RWAN	Rwanda
SAIB	Saint Kitts and Nevis
SAIC	Saint Croix
SAIJ	Saint John
SAIL	Saint Lucia
SAIT	Saint Thomas
SAIV	Saint Vincent and the Grenadines
SAMO	Samoa
SANM	San Marino
SATP	Sao Tomé and Principe
SAUD	Saudi Arabia
SENG	Senegal
SEYC	Seychelles
SIER	Sierra Leone
SING	Singapore
SOLI	Solomon Islands
SOML	Somalia
SOUF	South Africa
SPAN	Spain
SRIL	Sri Lanka
SUDN	Sudan
SURN	Suriname
SWAZ	Swaziland
SWED	Sweden
SWTZ	Switzerland
SYRI	Syrian Arab Republic

CODE	TEXT
THAI	Thailand
TOGO	Togo
TONG	Tonga
TRIN	Trinidad and Tobago
TUNS	Tunisia
TURK	Turkey
TURS	Turks and Caicos Islands
TUVA	Tuvalu
UGND	Uganda
UISR	Union of Soviet Socialist Republics
UNAR	United Arab Emirates
UNKG	United Kingdom
UNRT	United Republic of Tanzania
UNST	United States
URUG	Uruguay
VANU	Vanuatu
VENZ	Venezuela
VIET	Viet Nam
VIRB	Virgin Is. (UK)
VIRS	Virgin Is. (US)
WAKE	Wake Island
WALL	Wallis
WIAS	West Indies Associated States
WSAH	Western Sahara
YEMN	Yemen
YUGO	Yugoslavia
ZAIR	Zaire
ZAMB	Zambia
ZIMB	Zimbabwe

OCEANS

Note.— These ocean codes are unofficial ICAO proposed codes.

ZANO	Antarctic Ocean
ZARO	Arctic Ocean
ZIND	Indian Ocean
ZMDS	Mediterranean Sea
ZNAO	North Atlantic Ocean
ZNPO	North Pacific Ocean
ZSAO	South Atlantic Ocean
ZSPO	South Pacific Ocean

APPENDIX 2

CODES FOR AIRCRAFT BY MANUFACTURER AND MODEL

CODE	TEXT
030	**AERONCA**
10	L-3 GRASSHOPPER
031	**AEROSPATIALE**
18	AS 332 SUPER PUMA
15	AS 350 ASTAR
16	AS 355 TWINSTAR
02	CONCORDE
03	N 262 FREGATE
04	SA 315 LAMA
05	SA 316 ALOUETTE III
06	SA 318 ALOUETTE II
08	SA 321 SUPER FRELON
09	SA 330 PUMA
10	SA 341 GAZELLE
14	SA 365 DAUPHIN 2
11	SE 210 CARAVELLE
17	SE 212 CARAVELLE
12	SN 601
033	**AEROSTAR**
04	600
036	**AGUSTA**
04	A 109
06	AB 204
08	AB 206A
07	AB 207
039	**AIR PARTS**
01	FU-24A
041	**AIR TRACTOR**
01	AT-301

CODE	TEXT
04A	**AIRBUS INDUSTRIES**
01	A 300 AIRBUS
02	A 310 AIRBUS
03	A 320 AIRBUS
070	**AMERICAN AVIATION**
01	AA-1
02	AA-5
097	**AVIONS DE TRANSPORT REGIONAL**
01	ATR 42
100	**AYRES**
02	TURBO THRUSH S-2R
114	**BEAGLE AIRCRAFT**
01	B.121 PUP-100
04	B.206
115	**BEAGLE-AUSTER**
03	AUSTER
123	**BEECH**
21	100 KING AIR
02	18 (C-45)
27	1900
21	100 KING AIR
22	200 KING AIR
04	23 SUNDOWNER
05	24R SIERRA
06	33 BONANZA
07	35 BONANZA
08	36 BONANZA
10	50 TWIN-BONANZA
11	55/95-55 BARON
12	58 BARON

CODE	TEXT
13	60 DUKE
14	65/70 QUEEN AIR
25	76 DUCHESS
16	80 QUEEN AIR
17	88 QUEEN AIR
18	90 KING AIR
19	95 TRAVEL AIR
20	99 AIRLINER
26	SKIPPER 77
128	**BELL HELICOPTER**
01	47
02	204B
03	205A-1
04	206
05	212
06	214
07	222
08	412
148	**BOEING**
07	707
08	707 INTERCONTINENTAL
19	707-100
20	707-200
21	707-300
09	720
10	727-100
11	727-200
12	737-100
13	737-200
24	737-300
15	747 B
16	747 C/F
18	747 SP
17	747 SR
14	747-100/200
25	747-300
26	757-200
29	767-200
167	**BRISTOL**
01	170 FREIGHTER; WAYFARER

CODE	TEXT
168	**BRITISH AEROSPACE**
02	BA 125 SERIES 700
08	BA 125 SERIES 800
04	BA 146-100
05	BA 146-200
03	BA 31 JETSTREAM
01	BA 748
06	BA ONE-ELEVEN
169	**BRITISH AIRCRAFT CORP.**
01	CONCORDE
02	ONE-ELEVEN
03	VC10
172	**BRITTEN-NORMAN**
01	BN-2A ISLANDER
02	BN-2A MK3 TRISLANDER
188	**CANADAIR**
01	CL-44
06	CL-600
07	CL-601
03	CL215
02	CL44J
222	**CERVA**
01	CE43
223	**CESKOSLOVENSKE ZAVODY LETECK**
11	L200 MORAVA
226	**CESSNA**
03	120
05	150
36	152
06	170
07	172 (T-41)
09	177
10	180 SKYWAGON
11	182
12	185 SKYWAGON
17	206 STATIONAIR
18	207 SKYWAGON
19	210 CENTURION
21	310
22	320 SKYKNIGHT
25	337 SUPER SKYMASTER
26	340
27	401
33	402
34	404 TITAN
28	411
29	414
30	421
40	425
35	441 CONQUEST
31	CITATION
37	CITATION II
39	CITATION III
41	303
227	**CESSNA-ARGENTINA**
01	172
271	**CASA**
05	CN 235
279	**CONVAIR**
01	240 CONVAIR-LINER
09	28 CATALINA
02	340 LINER/CONVERTIBLE
03	440 METROPOLITAN
04	600
05	640
06	880
07	990
14	CV 580
300	**DASSAULT-BREGUET**
02	FALCON 10
03	FALCON 20
10	FALCON 200
04	FALCON 20T
05	FALCON 30
08	FALCON 50
11	FALCON 900
07	MERCURE
303	**DE HAVILLAND**
01	DHC1 CHIPMUNK
02	DHC2 MK. I BEAVER
04	DHC3 OTTER
05	DHC4 CARIBOU
08	DHC5 BUFFALO
07	DHC6 300
06	DHC6 TWIN OTTER
09	DHC7 DASH 7
10	DHC8 DASH 8
316	**DORNIER**
07	228 100/200
04	28D1 SKYSERVANT
332	**EMBRAER**
01	110 BANDEIRANTE
11	120 BRASILIA
10	121 XINGU
09	820
345	**FAIRCHILD**
01	F27 FRIEND/FREIGHT-SHIP
02	FH227
372	**FOKKER**
02	F27 FRIEND/FREIGHT-SHIP
03	F27 MK 500
04	F28 MK 1000
05	F28 MK 2000
06	F28 MK 3000
07	F28 MK 4000
08	F28 MK 5000
09	F28 MK 6000
389	**FUJI**
01	FA-200-160
395	**GATES LEARJET**
01	23
02	24
03	25
04	35 TRANSCONTINENTAL
05	36 INTERCONTINENTAL

CODE	TEXT
415	**GOVERNMENT A/C FACTORY**
01	N22B NOMAD
02	N24A NOMAD
417	**GRUMMAN**
08	G1159 GULFSTREAM II
05	G159 GULFSTREAM I
06	G164 AG-CAT
07	G164 SUPER AG-CAT
01	G21 GOOSE
02	G44 WIDGEON
04	G73 MALLARD
10	TBM-1; TBM-3
418	**GRUMMAN AMERICAN**
01	AA1A TRAINER
02	AA5 TRAVELER
04	G1159 GULFSTREAM II
05	GA-7 (COUGAR)
433	**HANDLEY PAGE**
02	HP137 JETSTREAM
03	HPR7 HERALD
443	**HAWKER SIDDELEY**
06	ARGOSY 650
18	DH82 TIGER MOTH
28	DHC1 CHIPMUNK
29	DOVE
32	HERON 1/DH 114
33	HERON 2/DH 114
40	HS104
30	HS125 DOMINIE 1-600
31	HS748/AVRO 748
36	TRIDENT 1/DH 121
37	TRIDENT 1E
38	TRIDENT 2E
467	**HINDUSTAN**
01	HA31 MK.II BASANT
02	HS748
04	HUL26 PUSHPAK
503	**ISRAEL**
02	IAI-1123 WESTWIND
03	IAI-1124

CODE	TEXT
561	**LOCKHEED**
17	1049 SUPER CONSTELLATION
20	1329 JETSTAR
07	18 LODESTAR
11	188 ELECTRA
12	382B/100 HERCULES
03	9 ORION
15	L-1011-1/100/200/250
16	L-1011-500 SERIES
583	**MCDONNELL-DOUGLAS**
35	A-4 SKYHAWK
03	B-26 INVADER
36	C-133
24	DC-10-10
25	DC-10-30
34	DC-10-30F
26	DC-10-40
05	DC-3 DAKOTA/C-47
06	DC-4 SKYMASTER/C-54
09	DC-6B
10	DC-7
14	DC-8
30	DC-8-10,-20
33	DC-8-30,-40
31	DC-8-50
32	DC-8-60
16	DC-8-61
17	DC-8-62
18	DC-8-63
38	DC-8-70
15	DC-8F
19	DC-9-10
20	DC-9-20
21	DC-9-30
22	DC-9-40
23	DC-9-50
37	DC-9-80
07	DC6 CLOUDMASTER
600	**MARTIN**
04	404
603	**MAULE**
01	M4
612	**MESSERSCHMITT-BOLKOW-BLOHM**
01	BO105
07	BK117
05	HFB320 HANSA

CODE	TEXT
627	**MITSUBISHI**
01	MU2
02	MU2F
03	MU2G/K
632	**MOONEY**
03	M20 SCOTSMAN
04	M20B/C RANGER
10	M20J (201)
11	M20K (M231)
635	**MORANE SAULNIER**
06	760A PARIS I
08	880/1 RALLYE-CLUB
10	890/2 RALLYE COMM.
644	**MURRAYAIR**
01	MA-1
659	**NAMC**
01	YS-11A
662	**NOORDUYN**
01	UC64 NORSEMAN
667	**NORD-AVIATION**
16	262
672	**NORTH AMERICAN**
09	1121 JET COMMANDER
05	COM.680-SUPERAERO
01	COMMANDER 111/112
02	COMMANDER 200
27	COMMANDER 500
03	COMMANDER 520
04	COMMANDER 560
05	COMMANDER 680 SUPERAERO
07	COMMANDER 690/1685
18	NA16 HARVARD
19	NA73 MUSTANG
26	SABRE 75
24	SABRELINER
25	SABRELINER SERIES 60
16	THRUSH COMMANDER S-21

CODE	TEXT
706	**PARTENAVIA**
05	P68 VICTOR
06	P70 ALPHA
726	**PILATUS**
02	PC-6 PORTER
729	**PIPER**
07	PA-11 CUB SPECIAL
13	PA-18/19 SUPER CUB
15	PA-22 COLT
17	PA-23 APACHE
18	PA-23-250 AZTEC
19	PA-23-250 TURBO AZTEC
20	PA-24 COMANCHE
22	PA-25 PAWNEE
23	PA-28
24	PA-30 TWIN COMANCHE
25	PA-31
01	PA-31T CHEYENNE
40	PA-31T CHEYENNE II
26	PA-32
27	PA-34 SENECA
29	PA-36 PAWNEE BRAVE
30	PA-38 TOMAHAWK
31	PA-39 TWIN COMANCHE
32	PA-42 CHEYENEE III
33	PA-44 SEMINOLE
34	PA-60 600
35	PA-60 601/601P
730	**PITTS**
01	S1 SPECIAL
02	S2 SPECIAL
732	**PZL**
19	SZD 30 PIRAT
733	**PIK (EIRIAVION OY)**
01	15 HINU
753	**REIMS**
01	F150
03	F177RG CARDINAL

CODE	TEXT
764	**ROBIN**
20	2+2
03	AMBASSADEUR DR100
10	DAUPHIN
11	MAJOR
13	PETIT PRINCE
21	R1180 AIGLON
22	R2000 SERIES
23	R3000 SERIES
14	REGENT
19	TIARA
765	**ROCKWELL**
01	COMMANDER 112
05	SABRE 60
06	SABRE 75
08	SHRIKE COMMANDER
09	THRUSH COMMANDER
10	TURBO COMMANDER 681B
11	TURBO COMMANDER 690
775	**RYAN AIRCRAFT**
01	ST-A/3 RECRUIT,PT-22
778	**SAAB**
05	340
783	**SAUNDERS**
01	ST27
784	**SCHEIBE**
06	SF25 MOTORFALKE
794	**SCOTTISH AVIATION**
01	JETSTREAM
804	**SHORT**
08	360
06	BELFAST
04	SC.7 (SKYVAN) SRS 1 TO 3
07	SC.7 SKYLINER
05	SD-3-30

CODE	TEXT
813	**SIKORSKY**
14	S-76
04	S52
05	S-55
06	S-58
07	S-58T
08	S-61L MARK I
09	S61N
10	S62
15	SH 3 SERIES
830	**SMITH, TED**
05	AEROSTAR 600
831	**SMITH, TED R.**
01	AEROSTAR 600
832	**SNOW**
01	S2R
842	**SOCATA**
01	GARDAN GY-80
02	MS 8808B RALLYE-CLUB
05	MS 893 RALLYE COMM. 180
19	R235 GT
07	RALLYE 100S
13	ST10 DIPLOMATE
16	TB 10 (TOBAGO)
17	TB 20
15	TB 9 (TAMPICO)
874	**SOVIET STATE**
11	IL18
12	IL62
13	IL62M
14	IL76
45	IL-86
31	TU 134
32	TU134A
34	TU154
39	YAK 40
46	YAK 42
880	**SPORTAVIA-PUTZER**
02	AVION-PLANEUR RF5

CODE	TEXT
899	**SUD-AVIATION**
05	SE313B ALOUETTE II
906	**SUPERMARINE**
02	SPITFIRE/TRAINER
915	**SWEARINGEN**
02	MERLIN IIA/SA-26T
04	MERLIN III
06	MERLIN IV
03	MERLIN IIB
05	SA-226 TC METRO II
07	SA227AC/METRO III
933	**TRANSALL**
01	TRANSALL C-160
958	**VERTOL-BOEING**
09	VERTOL 234
960	**VFW**
01	VFW614
962	**VICKERS-ARMSTRONG**
03	VANGUARD
02	VC-2 VISCOUNT
981	**WASSMER**
01	D112 CLUB
03	WA4/21 PRESTIGE
984	**WESTLAND**
06	WG 30 B

APPENDIX 3

CODES FOR ENGINES BY MANUFACTURER AND MODEL

CODE	TEXT
01	**ALLISON**
01	250 FAMILY
04	501 FAMILY
04	**ALVIS**
01	LEONIDES
07	**AVCO LYCOMING**
01	145 FAMILY
04	233 FAMILY
07	235 FAMILY
10	320 FAMILY
13	340 FAMILY
16	350 FAMILY
19	360 FAMILY
22	435 FAMILY
25	480 FAMILY
28	53 FAMILY
31	540 FAMILY
34	55 FAMILY
37	580 FAMILY
40	720 FAMILY
43	ALF 502 SERIES
46	LTC 1B
49	LTP FAMILY
52	LTS FAMILY
55	R 530
58	R 680
10	**CFM INTERNATIONAL**
01	CFM 56
13	**CONTINENTAL (TELEDYNE)**
01	200 FAMILY
04	300 FAMILY
07	346 FAMILY
10	360 FAMILY
13	470 FAMILY
16	520 FAMILY

CODE	TEXT
19	526 FAMILY
22	670 FAMILY
25	A 65 SERIES
28	A 50 SERIES
31	C 145 SERIES
34	C 75/85 SERIES
37	TIARA
16	**CURTISS-WRIGHT**
01	1820 FAMILY
04	C9 FAMILY
07	C14 FAMILY
10	C18 FAMILY
13	R 975 SERIES
16	R 1300 SERIES
19	R 2600 SERIES
22	R 3350 SERIES
19	**GARRET AIRESEARCH**
01	TFE 731 SERIES
04	TPE 331 FAMILY
07	TSE 36
22	**GENERAL ELECTRIC**
01	CF 700 SERIES
04	CF 34
07	CF 6 SERIES
10	CJ 610 SERIES
13	CJ 805 SERIES
16	CT 58 SERIES
19	CT 64 SERIES
22	CT 7 SERIES
25	**IVCHENKO**
01	AI-20
04	AI-24
07	AI-25

CODE	TEXT
28	**KUZNETSOV**
01	NK8
04	NK86
29	**LOTAREV**
01	D-18
04	D-36
07	D-136
10	D-236
2A	**MOTORLET**
01	M601
31	**PRATT & WHITNEY (CANADA)**
01	JT-15
04	PT-6 FAMILY
07	PT-6-3 (TWIN PACK)
10	PW100 FAMILY
13	PW200 FAMILY
34	**PRATT & WHITNEY (USA)**
01	JT-3
04	JT-4
07	JT-6
10	JT-8
13	JT-9
16	JT-12
19	R 985
22	R 1340
25	R 1800
28	R 1830
31	R 2000
34	R 2800

CODE	TEXT
37	**ROLLS-ROYCE**
01	AVON
04	CONWAY
07	DART
10	GAZELLE
13	GEM
16	GNOME
19	GYPSY-QUEEN
22	HERCULES
25	M45H
28	NIMBUS
31	OLYMPUS
34	PROTEUS
37	RB 211
40	RB 162
43	SPEY
46	TAY
49	TYNE
52	VIPER
40	**SOLIEV**
01	D30
02	D25V
43	**TURBOMECA**
01	ARRIEL
04	ARTOUSTE
07	ASTAZOU TURBOPROP
10	ASTAZOU TURBOSHAFT
13	BASTAN
16	BI-BASTAN
19	MAKILA
22	MARBORE
25	TURMO TURBOPROP
28	TURMO TURBOSHAFT

APPENDIX 4

CODES FOR BIRDS

CODE	ORDER/FAMILY/SUB-GROUP/SPECIES ENGLISH NAME	SCIENTIFIC NAME	MEAN MASS (g)
A	OSTRICH, RHEAS	STRUTHIONIFORMES	
A1	OSTRICH	STRUTHIONIDAE	9999
A2	RHEAS	RHEIDAE	
B	CASSOWARIES, EMU	CASUARIIFORMES	
B1	CASSOWARIES	CASUARIIDAE	
B2	EMU	DROMAIIDAE	9999
C	KIWIS	APTERYGIFORMES	
C1	KIWIS	APTERYGIDAE	
D	TINAMOUS	TINAMIFORMES	
D1	TINAMOUS	TINAMIDAE	
E	LOONS	GAVIIFORMES	
E1	LOONS	GAVIIDAE	
F	GREBES	PODICIPEDIFORMES	
F1	GREBES	PODICIPEDIDAE	
F1002	WESTERN GREBE	AECHMOPHORUS OCCIDENTALIS	1470
G	ALBATROSS, SHEARWATERS, PETREL	PROCELLARIIFORMES	
G1	ALBATROSSES	DIOMEDEIDAE	
G2	PETRELS, FULMARS, SHEARWATERS	PROCELLARIIDAE	
G21	PETRELS	—	
G22	FULMARS	—	
G23	SHEARWATERS	—	
G2301	MANX SHEARWATER	PUFFINUS PUFFINUS	450
G3	STORM-PETRELS	HYDROBATIDAE	
G4	DIVING-PETRELS	PELECANOIDIDAE	
H	PELICANS, CORMORANTS, BOOBIES	PELECANIFORMES	
H1	TROPICBIRDS	PHAETHONTIDAE	
H1001	WHITE-TAILED TROPICBIRD	PHAETHON LEPTURUS	

CODE	ENGLISH NAME	ORDER/FAMILY/SUB-GROUP/SPECIES SCIENTIFIC NAME	MEAN MASS (g)
H2	PELICANS	PELECANIDAE	
H2001	AUSTRALIAN PELICAN	PELECANUS CONSPICILLATUS	6050
H3	GANNETS, BOOBIES	SULIDAE	
H31	GANNETS	—	
H3101	NORTHERN GANNET	SULA BASSANUS	2900
H3102	AUSTRALASIAN GANNET	MORUS SERRATOR	
H32	BOOBIES	—	
H4	CORMORANTS, SHAGS	PHALACROCORADICAE	
H41	CORMORANTS	—	
H4101	COMMON CORMORANT	PHALACROCORAX CARBO	2200
H4102	LITTLE PIED CORMORANT	PHALACROCORAX MELANOLEUCOS	750
H4103	PIED CORMORANT	PHALACROCORAX VARIUS	1850
H4104	LITTLE BLACK CORMORANT	PHALACROCORAX SULCIROSTRIS	1000
H42	SHAGS		
H4201	COMMON SHAG	PHALACROCORAX ARISTOTELIS	1790
H4202	BLACK-FACED SHAG	PHALACROCORAX FUSCESCENS	
H5	ANHINGAS, DARTERS	ANHINGIDAE	
H51	ANHINGAS	—	
H52	DARTERS	—	1650
H6	FRIGATEBIRDS	FREGATIDAE	
H6001	LESSER FRIGATEBIRD	FREGATA ARIEL	
H6002	CHRISTMAS FRIGATEBIRD	FREGATA ANDREWSI	
I	HERON, STORK, IBIS, FLAMINGO	CICONIIFORMES	
I1	HERONS, BITTERNS	ARDEIDAE	
I11	HERONS	—	
I1101	GREY HERON	ARDEA CINEREA	1500
I1102	GREAT BLUE HERON	ARDEA HERODIAS	2700
I1103	WHITE-FACED HERON	ARDEA NOVAEHOLLANDIAE	611
I1104	NANKEEN NIGHT-HERON	NYCTICORAX CALEDONICUS	654
I1105	BLACK CROWNED NIGHT HERON	NYCTICORAX NYCTICORAX	670
I1106	WHITE-NECKED HERON	ARDEA PACIFICA	
I1107	PIED HERON	ARDEA PICATA	
I1108	STRIATED HERON	BUTORIDES STRIATUS	212
I12	BITTERNS	—	
I1201	CINNAMON BITTERN	IXOBRYCHUS CINNAMOMEUS	80
I1202	AMERICAN BITTERN	BOTAURUS LENTIGINOSUS	500
I13	EGRET	—	
I1301	CATTLE EGRET	BUBULCUS IBIS	345
I1302	GREAT EGRET	EGRETTA ALBA	1050
I1303	LITTLE EGRET	EGRETTA GARZETTA	470
I1304	INTERMEDIATE EGRET	EGRETTA INTERMEDIA	500
I1305	EASTERN REEF EGRET	EGRETTA SACRA	
I2	BOAT-BILLED HERON	COCHLEARIUS COCHLEARIUS	540
I3	SHOEBILL	BALAENICIPITIDAE	
I4	HAMMERHEAD	SCOPIDAE	425
I5	STORKS	CICONIIDAE	
I5001	WHITE STORK	CICONIA CICONIA	3400
I5002	ABDIM'S STORK	CICONIA ABDIMII	980
I5003	MARABOU STORK	LEPTOPTILOS CRUMENIFERUS	
I5004	BLACK STORK	CICONIA NIGRA	
I5005	BLACK-NECKED STORK	XENORHYNCHUS ASIATIC	

CODE	ORDER/FAMILY/SUB-GROUP/SPECIES ENGLISH NAME	SCIENTIFIC NAME	MEAN MASS (g)
I6	IBISES, SPOONBILLS	THRESKIORNITHIDAE	
I61	IBISES	—	
I6101	AUSTRALIAN WHITE IBIS	THRESKIORNIS MOLUCCUS	1800
I6102	HADADA IBIS	HAGEDASHIA HAGEDASH	
I6103	STRAW-NECKED IBIS	THRESKIORNIS SPINICOLLIS	1670
I6104	GLOSSY IBIS	PLEGADIS FALCINELLUS	048
I6105	SACRED IBIS	THRESKIORNIS AETHIOPICUS	1742
I62	SPOONBILLS	—	
I6201	YELLOW-BILLED SPOONBILL	PLATALEA FLAVIPES	
I6202	ROYAL SPOONBILL	PLATALEA REGIA	
I7	FLAMINGOS	PHOENICOPTERIDAE	
I7001	COMMON FLAMINGO	PHOENICOPTERUS RUBER	3540
J	DUCKS, GEESE, SWANS	ANSERIFORMES	
J1	SCREAMERS	ANHIMIDAE	
J2	DUCKS, GEESE, SWANS	ANATIDAE	
J21	DUCKS	—	
J2101	PLUMED TREE DUCK	DENDROCYGNA EYTONI	790
J2102	COMMON SHELDUCK	TADORNA TADORNA	1080
J2103	AMERICAN WIGEON	ANAS AMERICANA	730
J2104	PINTAIL	ANAS ACUTA	840
J2105	CHESTNUT TEAL	ANAS CASTANEA	600
J2106	COMMON TEAL	ANAS CRECCA	324
J2107	BLUE-WINGED TEAL	ANAS DISCORS	383
J2108	EUROPEAN WIGEON	ANAS PENELOPE	700
J2109	MALLARD	ANAS PLATYRHYNCHOS	1735
J2111	COMMON EIDER	SOMATERIA MOLLISIMA	2040
J2112	RING-NECKED DUCK	AYTHYA COLLARIS	690
J2113	GREATER SCAUP	AYTHYA MARILA	980
J2114	AMERICAN WOOD DUCK	AIX SPONSA	680
J2115	MUSCOVY DUCK	CAIRINA MOSCHATA	3600
J2116	COMMON GOLDENEYE	BUCEPHALA CLANGULA	830
J2117	RED BREASTED MERGANSER	MERGUS SERRATOR	1030
J2118	HOODED MERGANSER	LOPHODYTES CUCULLATUS	610
J2119	WANDERING TREE-DUCK	DENDROCYGNA ARQUATA	737
J2120	AUSTRALIAN SHELDUCK	TADORNA TADORNOIDES	1425
J2121	RADJA SHELDUCK	TADORNA RADJA	887
J2122	PACIFIC BLACK DUCK	ANAS SUPERCILIOSA	1070
J2123	GREY TEAL	ANAS GIBBERIFRONS	491
J2124	AUSTRALASIAN SHOVELER	ANAS RHYNCHOTIS	666
J2125	PINK-EARED DUCK	MALACORHYNCHUS MEMBRANACEUS	374
J2126	WHITE-EYED DUCK	AYTHYA AUSTRALIS	870
J2127	AUSTRALIAN WOOD-DUCK	CHENONETTA JUBATTA	808
J2128	BLUE-BILLED DUCK	OXYURA AUSTRALIS	832
J2129	MUSK DUCK	BIZIURA LOBATA	1975
J2130	GOOSANDER	MERGUS MERGANSER	1450
J2131	SHOVELLER	ANAS CLYPEATA	600
J2132	COMMON POCHARD	AYTHYA FERINA	
J2133	TUFTED DUCK	AYTHYA FULIGULA	
J22	GEESE	—	
J2201	GREYLAG GOOSE	ANSER ANSER	3325
J2202	SNOW GOOSE	CHEN CAERULESCENS	2450
J2203	BEAN GOOSE	ANSER FABALIS	3230
J2204	CANADA GOOSE	BRANTA CANADENSIS	3600
J2205	MAGPIE GOOSE	ANSERANAS SEMIPALMATA	2419
J2206	CAPE BARREN GOOSE	CEREOPSIS NOVAEHOLLANDIAE	
J2207	GREEN PYGMY-GOOSE	NETTAPUS PULCHELLUS	307

CODE	ENGLISH NAME	SCIENTIFIC NAME	MEAN MASS (g)
J2208	PINK-FOOTED GOOSE	ANSER BRANCHYRHYNCHU	2450
J23	SWANS	—	
J2301	BLACK SWAN	CYGNUS ATRATUS	5685
J2302	MUTE SWAN	CYGNUS OLOR	9999
J2303	WHISTLING SWAN	CYGNUS COLUMBIANUS	6000
J2304	WHOOPER SWAN	CYGNUS CYGNUS	
K	HAWKS, EAGLES, VULTURES	FALCONIFORMES	
K1	NEW WORLD VULTURES	CATHARTIDAE	
K1001	AMERICAN BLACK VULTURE	CORAGYPS ATRATUS	1710
K2	OSPREYS	PANDIONIDAE	1568
K2001	OSPREY	PANDION HALIAETUS	1525
K3	KITES, EAGLES, HAWKS	ACCIPITRIDAE	
K31	KITES	—	
K3101	BLACK-SHOULDERED KITE	ELANUS NOTATUS	278
K3102	BLACK KITE	MILVUS MIGRANS	591
K3103	RED KITE	MILVUS MILVUS	1020
K3104	BRAHMINY KITE	HALIASTUR INDUS	570
K3105	WHISTLING KITE	HALIASTUR SPHENURUS	745
K3106	LETTER-WINGED KITE	ELANUS SCRIPTUS	259
K3107	SQUARE-TAILED KITE	LOPHOICTINIA ISURA	680
K32	EAGLES	—	
K3201	BALD EAGLE	HALIAEETUS LEUCOCEPHALUS	5140
K3202	WHITE-BELLIED SEA EAGLE	HALIAEETUS LEUCOGASTER	3221
K3203	SHORT-TOED EAGLE	CIRCAETUS GALLICUS	1720
K3204	BLACK EAGLE	ICTINAETUS MALAYENSIS	
K3205	WEDGE-TAILED EAGLE	AQUILA AUDAX	3821
K3206	GOLDEN EAGLE	AQUILA CHRYSAETOS	4200
K3207	BROWN HARRIER EAGLE	CIRCAETUS CINEREUS	2048
K3208	LITTLE EAGLE	HIERAETUS MORPHNOID	975
K3209	BONELLI'S EAGLE	HIERAETUS FASCIATUS	
K33	HAWKS	—	
K3301	NORTHERN GOSHAWK	ACCIPITER GENTILIS	1026
K3302	RED-TAILED HAWK	BUTEO JAMAICENSIS	1100
K3303	ROUGH-LEGGED HAWK	BUTEO LAGOPUS	985
K3304	RED-SHOULDERED HAWK	BUTEO LINEATUS	590
K3305	SWAINSON'S HAWK	BUTEO SWAINSONI	990
K3306	BROWN GOSHAWK	ACCIPITER FASCIATUS	
K3307	COLLARED SPARROWHAWK	ACCIPITER CIRRHOCEPH	
K3308	GREY GOSHAWK	ACCIPITER NOVAEHOLLANDIAE	
K3309	EUROPEAN SPARROW HAWK	ACCIPITER NISUS	
K34	BUZZARD	—	
K3401	COMMON BUZZARD	BUTEO BUTEO	800
K3402	HONEY BUZZARD	PERNIS APIVORUS	785
K3403	AUGUR BUZZARD	BUTEO RUFOFUSCUS	
K3404	BLACK-BREASTED BUZZARD	HAMIROSTRA MELANOSTERNON	
K35	HARRIER	—	531
K3501	MARSH HARRIER	CIRCUS AERUGINOSUS	630
K3502	NORTHERN MARSH HARRIER	CIRCUS CYANEUS	430
K3503	MONTAGU'S HARRIER	CIRCUS PYGARGUS	310
K3504	SPOTTED HARRIER	CIRCUS ASSIMILIS	633
K36	OLD WORLD VULTURES	—	
K3601	LAMMERGEIER	GYPAETUS BARBATUS	5585
K3602	GRIFFON VULTURE	GYPS FULVUS	8000
K3603	HIMALAYAN GRIFFON	GYPS HIMALAYENSIS	9999
K3604	INDIAN WHITE-BACKED VULTURE	GYPS BENGALENSIS	5300
K3605	RUPPELL'S GRIFFON	GYPS RUEPPELLII	7550
K3606	HOODED VULTURE	NECROSYRTES MONACHUS	1880

CODE	ENGLISH NAME	ORDER/FAMILY/SUB-GROUP/SPECIES SCIENTIFIC NAME	MEAN MASS (g)
K4	SECRETARY BIRD	SAGITTARIIDAE	
K4001	SECRETARY BIRD	SAGITTARIUS SERPENTARIUS	3940
K5	FALCONS	FALCONIDAE	
K5001	BROWN FALCON	FALCO BERIGORA	526
K5002	PEREGRINE FALCON	FALCO PEREGRINUS	790
K5003	GYRFALCON	FALCO RUSTICOLUS	1300
K5004	NORTHERN HOBBY	FALCO SUBBUTEO	200
K5005	MERLIN	FALCO COLUMBARIUS	195
K5006	BLACK FALCON	FALCO SUBNIGER	743
K5007	AUSTRALIAN HOBBY	FALCO LONGIPENNIS	260
K5008	GREY FALCON	FALCO HYPOLEUCOS	
K5101	AUSTRALIAN KESTREL	FALCO CENCHROIDES	200
K5102	AMERICAN KESTREL	FALCO SPARVERIUS	105
K5103	EURASIAN KESTREL	FALCO TINNUNCULUS	204
L	CHICKEN-LIKE BIRDS	GALLIFORMES	
L1	MEGAPODES	MEGAPODIIDAE	
L2	CURASSOWS, GUANS, CHACHALACAS	CRACIDAE	
L21	CURASSOWS	—	
L22	GUANS	—	
L23	CHACHALACAS	—	
L3	GROUSE, PTARMIGANS	TETRAONIDAE	
L31	GROUSE	—	
L3101	COMMON BLACK GROUSE	LYRURUS TETRIX	1070
L3102	SAGE GROUSE	CENTROCERCUS UROPHASIANUS	1940
L32	PTARMIGANS	—	
L3201	WILLOW PTARMIGAN	LAGOPUS LAGOPUS	620
L4	QUAILS, PHEASANTS	PHASIANIDAE	
L4001	—	—	
L4002	INDIAN PEAFOWL	PAVO CRISTATUS	3800
L41	QUAILS	—	
L4101	COMMON BOBWHITE	COLINUS VIRGINIANUS	180
L4102	COMMON QUAIL	COTURNIX COTURNIX	100
L4103	JAPANESE QUAIL	COTURNIX JAPONICA	
L4104	STUBBLE QUAIL	COTURNIX PECTORALIS	110
L4106	BROWN QUAIL	COTURNIX AUSTRALIS	100
L4107	CALIFORNIA QUAIL	LOPHORTYX CALIFORNIC	176
L42	PHEASANTS	—	
L4201	RING-NECKED PHEASANT	PHASIANUS COLCHICUS	1100
L4202	RED JUNGLE FOWL	GALLUS GALLUS	
L43	PARTRIDGES	—	
L4301	RED-LEGGED PARTRIDGE	ALECTORIS RUFA	450
L4302	HUNGARIAN PARTRIDGE	PERDIX PERDIX	400
L4303	CHUKAR	ALECTORIS CHUKAR	
L5	GUINEAFOWLS	NUMIDIDAE	
L6	TURKEYS	MELEAGRIDIDAE	
M	CRANES, RAILS	GRUIFORMES	
MA	SUNBITTERN	EURYPYGIDAE	
MB	SERIEMAS	CARIAMIDAE	

ORDER/FAMILY/SUB-GROUP/SPECIES			MEAN MASS
CODE	ENGLISH NAME	SCIENTIFIC NAME	(g)
MC	BUSTARDS	OTIDIDAE	
MC001	GREAT BUSTARD	OTIS TARDA	6670
MC002	LITTLE BUSTARD	OTIS TETRAX	810
MC003	AUSTRALIAN BUSTARD	EUPODOTIS AUSTRALIS	6300
M1	ROATELO, MESITE, MONIAS	MESOENATIDAE	
M11	ROATELO	—	
M12	MESITE	—	
M13	MONIAS	—	
M2	BUTTONQUAILS	TURNICIDAE	
M2001	YELLOW-LEGGED BUTTONQUAIL	TURNIX TANKI	50
M3	PLAINS WANDERER	PEDIONOMIDAE	27
M4	CRANES	GRUIDAE	
M4003	PARADISE CRANE	ANTHROPOIDES PARADISEA	
M4001	SANDHILL CRANE	GRUS CANADENSIS	4240
M4002	BROLGA	GRUS RUBICUNDA	6000
M4004	COMMON CRANE	GRUS GRUS	5000
M5	LIMPKINS	ARAMIDAE	1080
M6	TRUMPETERS	PSOPHIIDAE	
M7	RAILS	RALLIDAE	
M7001	SORA	PORZANA CAROLINA	75
M7002	RUDDY CRAKE	PORZANA FUSCA	60
M7003	COMMON GALLINULE	GALLINULA CHLOROPUS	300
M7004	EASTERN PURPLE GALLINULE	PORPHYRIO PORPHYRIO	837
M7005	AMERICAN COOT	FULICA AMERICANA	615
M7006	TASMANIAN NATIVE HEN	GALLINULA MORTIERII	1339
M7007	BANDED LAND-RAIL	GALLIRALLUS PHILIPPE	176
M7008	BLACK-TAILED NATIVE-HEN	GALLINULA VENTRALIS	430
M7009	DUSKY MOORHEN	GALLINULA TENEBROSA	481
M7010	EURASIAN COOT	FULICA ATRA	508
M7011	WATER RAIL	RALLUS AQUATICUS	
M8	FINFOOTS	HELIORNITHIDAE	
M9	KAGU	RHYNOCHETIDAE	
N	SHORE BIRDS	CHARADRIIFORMES	
NA	COURSERS, PRATINCOLES	GLAREOLIDAE	
NA001	AUSTRALIAN DOTTEREL	PELTOHYAS AUSTRALIS	
NA1	COURSERS	—	
NA101	AUSTRALIAN COURSER	STILTIA ISABELLA	59
NA2	PRATINCOLES	—	
NA201	ORIENTAL PRATINCOLE	GLAREOLA MALDIVARUM	
NA202	COLLARED PRATINCOLE	GLAREOLA PRATINCOLA	
NB	SEEDSNIPES	THINOCORIDAE	
NC	SHEATHBILLS	CHIONIDIDAE	
ND	SKUAS, JAEGERS	STERCORARIIDAE	
ND1	SKUAS	—	
ND101	GREAT SKUA	CATHARACTA SKUA	
ND2	JAEGERS	—	
ND201	PARASITIC JAEGER	STERCORARIUS PARASITICUS	508

CODE	ORDER/FAMILY/SUB-GROUP/SPECIES: ENGLISH NAME	SCIENTIFIC NAME	MEAN MASS (g)
NE	GULLS, TERNS	LARIDAE	
NE1	GULLS	—	
NE101	HERRING GULL	LARUS ARGENTATUS	1226
NE102	COMMON GULL	LARUS CANUS	432
NE103	BLACK-TAILED GULL	LARUS CRASSIROSTRIS	
NE104	RING-BILLED GULL	LARUS DELAWARENSIS	561
NE105	SLENDER-BILLED GULL	LARUS GENEI	
NE106	GLAUCOUS-WINGED GULL	LARUS GLAUCESCENS	1010
NE107	ICELAND GULL	LARUS GLAUCOIDES	1093
NE108	GREATER BLACK-BACKED GULL	LARUS MARINUS	1829
NE109	MEDITERRANEAN GULL	LARUS MELANOCEPHALUS	
NE110	SILVER GULL	LARUS NOVAHOLLANDIAE	321
NE111	PACIFIC GULL	LARUS PACIFICUS	
NE112	FRANKLIN'S GULL	LARUS PIPIXCAN	280
NE113	LITTLE GULL	LARUS MINUTUS	120
NE114	LAUGHING GULL	LARUS ARTICILLA	
NE117	LESSER BLACK-BACKED GULL	LARUS FUSCUS	880
NE118	KELP GULL	LARUS DOMINICANUS	
NE136	BLACK-HEADED GULL	LARUS RIDIBUNDUS	275
NE2	TERNS	—	
NE201	WHITE-WINGED BLACK TERN	CHILDONIAS LEUCOPTERUS	
NE202	LITTLE TERN	STERNA ALBIFRONS	
NE203	CASPIAN TERN	HYDROPROGNE CASPIA	770
NE204	COMMON TERN	STERNA HIRUNDO	120
NE205	SANDWICH TERN	STERNA SANDVICENSIS	208
NE206	WHITE-FRONTED TERN	STERNA STRIATA	
NE207	GULL-BILLED TERN	GELOCHELIDON NILOTICA	218
NE208	WHISKERED TERN	CHLIDONIAS HYBRIDA	75
NE209	BLACK TERN	CHLIDONIAS NIGER	65
NE210	FAIRY TERN	STERNA NERENSIS	
NE211	CRESTED TERN	STERNA BERGII	318
NE212	LESSER CRESTED TERN	STERNA BENGALENSIS	
NE213	WHITE TERN	CYGIS ALBA	
NE214	ARCTIC TERN	STERNA PARADISAEA	105
NE215	ROSEATE TERN	STERNA DOUGALLII	110
NE3	KITTIWAKES	—	
NE301	BLACK-LEGGED KITTIWAKE	RISSA TRIDACTYLA	390
NE302	RED-LEGGED KITTIWAKE	RISSA BREVIROSTRIS	450
NF	SKIMMERS	RYNCHOPIDAE	
NG	AUKS, MURRES, PUFFINS	ALCIDAE	
NG1	AUKS	—	
NG2	MURRES	—	
NG3	PUFFINS	—	
NG301	COMMON PUFFIN	FRATERCULA ARTICA	381
N1	JACANAS	JACANIDAE	
N2	PAINTED SNIPES	ROSTRATULIDAE	
N2001	GREATER PAINTED SNIPE	ROSTRATULA BENGHALENSIS	125
N3	CRAB PLOVER	DROMADIDAE	280
N4	OYSTERCATCHERS	HAEMATOPODIDAE	
N4001	OYSTERCATCHER	HAEMATOPUS OSTRALEGUS	500
N4002	PIED OYSTERCATCHER	HAEMATOPUS LONGIROSTRIS	588
N4003	SOOTY OYSTERCATCHER	HAEMATOPUS FULIGINOSUS	600

CODE	ORDER/FAMILY/SUB-GROUP/SPECIES ENGLISH NAME	SCIENTIFIC NAME	MEAN MASS (g)
N5	PLOVERS, LAPWINGS	CHARADRIIDAE	
N51	PLOVERS	—	
N5101	MASKED PLOVER	VANELLUS MILES	336
N5102	BANDED PLOVER	VANELLUS TRICOLOR	199
N5103	EURASIAN GOLDEN PLOVER	PLUVIALIS APRICARIA	185
N5104	AMERICAN GOLDEN PLOVER	PLUVIALIS DOMINICA	120
N5105	GRAY PLOVER	PLUVIALIS SQUATAROLA	296
N5106	SNOWY PLOVER	CHARADRIUS ALEXANDRINUS	38
N5107	LITTLE RINGED PLOVER	CHARADRIUS DUBIUS	38
N5108	COMMON RINGED PLOVER	CHARADRIUS HIATICULA	54
N5109	GREATER SANDPLOVER	CHARADRIUS LESCHENAULTII	94
N5110	MONGOLIAN PLOVER	CHARADRIUS MONGOLUS	74
N5111	KILLDEER	CHARADRIUS VOCIFERUS	85
N5112	BLACK-FRONTED DOTTEREL	CHARADRIUS MELANOPS	91
N5113	ORIENTAL PLOVER	CHARADRIUS VEREDUS	78
N5114	NEW ZEALAND DOTTEREL	PLUVIALIS OBSCURA	
N5115	SPUR-WINGED PLOVER	VANELLUS SPINOSUS	152
N5116	DOUBLE-BANDED DOTTEREL	CHARADRIUS BICINCTUS	60
N5117	RED-KNEED DOTTEREL	ERYTHROGONYS CINCTUS	54
N5118	RED-CAPPED PLOVER	CHARADRIUS RUBRICOLLIS	
N5119	CASPIAN PLOVER	CHARADRIUS ASIATICUS	
N5120	TAWNEY-THROATED DOTTEREL	EUDROMIS RUFICOLLIS	
N5121	RED-CAPPED PLOVER	CHARADRIUS RUFICAPILLUS	36
N52	LAPWINGS	—	
N5201	COMMON LAPWING	VANELLUS VANELLUS	215
N5202	GREY-HEADED LAPWING	VANELLUS CINEREUS	
N5203	CROWNED LAPWING	VANELLUS CORONATUS	156
N5204	RED-WATTLED LAPWING	VANELLUS INDICUS	181
N6	SANDPIPERS	SCOLOPACIDAE	
N6001	UPLAND SANDPIPER	BARTRAMIA LONGICAUDA	155
N6002	—	—	
N6003	—	—	
N6004	—	—	
N6005	GREY-TAILED TATTLER	HETEROSCELUS BREVIPES	116
N6006	WILLETT	CATOPTROPHORUS SEMIPALMATUS	225
N6007	COMMON GREENSHANK	TRINGA NEBULARIA	191
N6008	COMMON REDSHANK	TRINGA TOTANUS	130
N6009	COMMON SNIPE	GALLINAGO GALLINAGO	125
N6010	EURASIAN WOODCOCK	SCOLOPAX RUSTICOLA	304
N6011	AMERICAN WOODCOCK	SCOLOPAX MINOR	219
N6012	SHARP-TAILED SANDPIPER	CALIDRIS ACUMINATA	59
N6013	DUNLIN	CALIDRIS ALPINA	60
N6014	BAIRD'S SANDPIPER	CALIDRIS BAIRDII	39
N6015	CURLEW SANDPIPER	CALIDRIS FERRUGINEA	70
N6016	WESTERN SANDPIPER	CALIDRIS MAURI	23
N6017	PECTORAL SANDPIPER	CALIDRIS MELANOTOS	86
N6018	RED-NECKED STINT	CALIDRIS RUFICOLLIS	32
N6019	SANDERLING	CALIDRIS ALBA	59
N6020	BUFF-BREASTED SANDPIPER	TRYNGITES SUBRUFICOLLIS	71
N6021	RUFF	PHILOMACHUS PUGNAX	163
N6022	RUDDY TURNSTONE	ARENARIA INTERPRES	129
N6023	BAR-TAILED GODWIT	LIMOSA LAPPONICA	
N6024	LEAST SANDPIPER	CALIDRIS MINUTILLA	21
N6025	EASTERN CURLEW	NUMENIUS MADAGASCARIENSIS	
N6026	JAPANESE SNIPE	GALLINAGO HARDWICKII	162
N6027	WANDERING TATTLER	HETEROSCELUS INCANUS	
N61	CURLEW	—	
N6101	EUROPEAN CURLEW	NUMENIUS ARQUATA	770
N6102	LITTLE CURLEW	NUMENIUS MINUTUS	173
N6103	WHIMBREL	NUMENIUS PHAEOPUS	400

CODE	ENGLISH NAME	SCIENTIFIC NAME	MEAN MASS (g)
	ORDER/FAMILY/SUB-GROUP/SPECIES		
N7	PHALAROPES	PHALAROPODIDAE	
N8	AVOCETS, STILTS	RECURVIROSTRIDAE	
N81	AVOCETS	—	
N8101	RED-NECKED AVOCET	RECURVIROSTRA NOVAEHOLLANDIAE	315
N82	STILTS	—	
N8201	COMMON STILT	HIMANTOPUS HIMANTOPUS	160
N8202	LBANDED STILT	CLADORHYNCHUS LEUCOCEPHALUS	
N9	STONE CURLEWS	BURHINIDAE	
N9001	SOUTHERN STONE CURLEW	BURHINUS MAGNIROSTRIS	775
N9002	EURASIAN STONE CURLEW	BURHINUS OEDICNEMUS	
O	PIGEONS, GROUSE	COLUMBIFORMES	
O1	SANDGROUSE	PTEROCLIDAE	
O2	PIGEONS, DOVES	COLUMBIDAE	
O21	PIGEONS	—	
O2101	CRESTED PIGEON	OCYPHAPS LOPHOTES	212
O2102	TORRES STRAIT PIGEON	DUCULA SPILORRHOA	
O2109	COMMON WOOD-PIGEON	COLUMBA PALUMBUS	
O22	DOVES	—	
O2201	COMMON ROCK DOVE	COLUMBA LIVIA	337
O2202	COMMON STOCK DOVE	COLUMBA OENAS	
O2203	COLLARED DOVE	STREPTOPELIA DECAOCTO	
O2204	COMMON TURTLE DOVE	STREPTOPELIA TURTUR	
O2205	AMERICAN MOURNING DOVE	ZENAIDURA MACROURA	123
O2206	RUFOUS TURTLE DOVE	STREPTOPELIA ORIENTALIS	
O2207	LAUGHING DOVE	STREPTOPELIA SENEGAL	
O2208	PEACEFUL DOVE	GEOPELIA PLACIDA	51
O2209	BAR-SHOULDERED DOVE	GEOPELIA HUMERALIS	
O2210	COMMON BRONZEWING	PHAPS CHALCOPTERA	331
O2211	SPOTTED DOVE	STREPTOPELIA CHINENSIS	160
P	PARROT, MACAW, PARAKEET, LORIE	PSITTACIFORMES	
P0001	GALAH	CACATUA ROSEICAPILLA	326
P0002	LITTLE CORELLA	CACATUA SANGUINEA	355
P0003	EASTERN ROSELLA	PLATYCERCUS EXIMIUS	96
P0004	BUDGERIGAR	MELOPSITTACUS UNDULATUS	30
P1	PARROT, MACAW, PARAKEET, LORIE	PSITTACIDAE	
P11	PARROTS	—	
P1101	SENEGAL PARROT	POICEPHALUS SENEGALUS	
P1102	CRIMSON WINGED PARAKEET	APROSMICTUS ERYTHROPTERUS	
P1103	COCKATIEL	NYMPHICUS HOLLANDICUS	93
P1104	GREEN ROSELLA	PLATYCERCUS CALEDONICUS	
P1105	CRIMSON ROSELLA	PLATYCERCUS ELEGANS	135
P1106	PALE-HEADED ROSELLA	PLATYCERCUS ABSCITUS	
P1107	NORTHERN ROSELLA	PLATYCERCUS VENUSTUS	
P1108	RED-RUMPED PARROT	PSEPHOTUS HAEMATONOTUS	62
P1109	BLUE BONNET	PSEPHOTUS HAEMATOGASTER	
P1110	AUSTRALIAN KING PARROT	ALISTERUS SCAPULARIS	
P12	MACAWS	—	
P13	PARAKEETS	—	
P14	LORIES	—	
P1401	RAINBOW LORIKEET	TRICHOGLOSSUS HAEMATOD	
P1402	RED-COLLARED LORIKEET	TRICHOGLOSSUS RUBRITOROUIS	

CODE	ORDER/FAMILY/SUB-GROUP/SPECIES ENGLISH NAME	SCIENTIFIC NAME	MEAN MASS (g)
P1403	SCALY-BREASTED LORIKEET	TRICHOGLOSSUS CHLOROLEPIDOTUS	78
P1404	MUSK LORIKEET	GLOSSOPSITTA CONCINN	
P15	COCKATOO	—	1040
P1501	SULPHER-CRESTED COCKATOO	CACATUA GALERITA	785
P1502	YELLOW-TAILED BLACK COCKATOO	CALYPTORHYNCHUS FUNEREUS	
P1503	WHITE-TAILED BLACK COCKATOO	CALYPTORHYNCHUS BAUDINII	
P1504	LONG-BILLED CORELLA	CACATUA TENUIROSTRIS	
P1505	PINK COCKATOO	CACATUA LEADBEATERI	
P1506	RED-TAILED BLACK COCKATOO	CALYPTORHYNCHUS MAGNIFICUS	718
Q	CUCKOOS	CUCULIFORMES	
Q1	TURACOS	MUSOPHAGIDAE	
Q2	CUCKOOS, ROADRUNNERS	CUCULIDAE	
Q21	CUCKOOS	—	
Q2101	YELLOW-BILLED CUCKOO	COCCYZUS AMERICANUS	
Q22	ROADRUNNERS	—	
Q23	COUCALS	—	
Q2301	PHEASANT COUCAL	CENTROPUS PHASIANINUS	
Q3	HOATZIN	OPISTHOCOMIDAE	
R	OWLS	STRIGIFORMES	
R1	BARN, GRASS OWLS	TYTONIDAE	
R11	BARN OWLS	—	
R1101	COMMON BARN OWL	TYTO ALBA	330
R1102	GRASS BARN OWL	TYTO LONGIMEMBRIS	
R1103	MASKED OWL	TYTO NOVAEHOLLANDIAE	
R12	GRASS OWLS	—	
R2	TYPICAL OWLS	STRIGIDAE	
R2001	SNOWY OWL	NYCTEA SCANDIACA	1963
R2002	LITTLE OWL	ATHENE NOCTUA	
R2003	TAWNY OWL	STRIX ALUCO	
R2004	SHORT-EARED OWL	ASIO FLAMMEUS	378
R2005	NORTHERN LONG-EARED OWL	ASIO OTUS	279
R2006	BOREAL OWL	AEOGOLIUS FUNEREUS	167
R21	SCOPS, SCREECH OWLS	—	
R22	EAGLE OWLS	—	
R2201	EAGLE OWL	BUBO BUBO	
R2202	FOREST EAGLE OWL	BUBO NIPALENSIS	
R2203	GREAT HORNED OWL	BUBO VIRGINIANUS	1142
R23	HAWK OWLS	—	
R2301	AFRICAN WOOD-OWL	CICCABA WOODFORDII	
R2302	AUSTRALIAN BOOBOOK OWL	NINOX NOVAESEELANDIAE	268
S	GOATSUCKER, NIGHTJAR, FROGMOUTH	CAPRIMULGIFORMES	
S1	OWLET NIGHTJARS	AEGOTHELIDAE	
S2	FROGMOUTHS	PODARGIDAE	
S2001	TAWNY FROGMOUTH	PODARGUS STRIGOIDES	445
S3	OILBIRD	STEATORNITHIDAE	
S4	POTOOS	NYCTIBIIDAE	

CODE	ORDER/FAMILY/SUB-GROUP/SPECIES ENGLISH NAME	SCIENTIFIC NAME	MEAN MASS (g)
S5	GOATSUCKERS, NIGHTJARS	CAPRIMULGIDAE	
S5001	COMMON NIGHTHAWK	CHORDEILES MINOR	64
S51	GOATSUCKERS	—	
S52	NIGHTJARS	—	
S5201	SPOTTED NIGHTJAR	EUROSTOPODUS GUTTATUS	
S5202	SAVANNAH NIGHTJAR	CAPRIMULGUS AFFINIS	
S5203	JUNGLE NIGHTJAR	CAPRIMULGUS INDICUS	
S5204	WHIP-POOR-WILL	CAPRIMULGUS, VOCIFERUS	55
S5205	STANDARD-WINGED NIGHTJAR	MACRODIPTERYX LONGI	
S5206	NATAL NIGHTJAR	CAPRIMULGUS NATALENSIS	
S5207	WHITE-THROATED NIGHTJAR	CAPRIMULGUS MYSTACALIS	
S5208	NIGHTJAR	CAPRIMULGUS EUROPAEUS	70
S5209	AUSTRALIAN OWLET-NIGHTJAR	AEGOTHELES CRISTATUS	70
T	SWIFT, TREE-SWIFT, HUMMINGBIRD	APODIFORMES	
T1	SWIFTS	APODIDAE	
T1001	BLACK SWIFT	CYPSELOIDES NIGER	46
T1002	CHIMNEY SWIFT	CHAETURA PELAGICA	24
T1003	HOUSE SWIFT	APUS AFFINIS	
T1004	NORTHERN SPINE-TAILED SWIFT	HIRUNDAPUS CAUDACUTUS	
T1005	FORK-TAILED SWIFT	APUS PACIFICUS	
T1055	COMMON SWIFT	APUS APUS	
T2	TREE-SWIFTS	HEMIPROCNIDAE	
T3	HUMMINGBIRDS	TROCHILIDAE	
U	COLIES OR MOUSEBIRDS	COLIIFORMES	
U1	COLIES OR MOUSEBIRDS	COLIIDAE	
V	TROGONS	TROGONIFORMES	
V1	TROGONS, QUETZALS	TROGONIDAE	
V11	TROGONS	—	
V12	QUETZALS	—	
W	KINGFISHERS, MOTMOTS, HORNBILL	CORACIIFORMES	
WA	HORNBILLS	BUCEROTIDAE	
W1	KINGFISHERS	ALCEDINIDAE	
W1001	BELTED KINGFISHER	CERYLE ALCYON	148
W1002	BLUE-WINGED KOOKABURRA	DACELO LEACHII	
W1003	SMYRNA KINGFISHER	HALCYON SMYRNENSIS	
W1004	SACRED KINGFISHER	HALCYON SANCTA	45
W2	TODIES	TODIDAE	
W3	MOTMOTS	MOMOTIDAE	
W4	BEE-EATERS	MEROPIDAE	
W4001	RAINBOW BEE-EATER	MEROPS ORNATUS	
W5	ROLLERS	CORACIIDAE	
W5001	DOLLAR BIRD	EURYSTOMUS ORIENTALI	

CODE	ORDER/FAMILY/SUB-GROUP/SPECIES ENGLISH NAME	SCIENTIFIC NAME	MEAN MASS (g)
W6	GROUND ROLLERS	BRACHYPTERACIIDAE	
W7	CUCKOO ROLLER	LEPTOSOMATIDAE	
W8	HOOPOES	UPUPIDAE	
W8001	HOOPOE	UPUPA EPOPS	
W9	WOOD HOOPOES	PHOENICULIDAE	
X	WOODPECKERS, TOUCANS, BARBETS	PICIFORMES	
X1	JACAMARS	GALBULIDAE	
X2	PUFFBIRDS	BUCCONIDAE	
X3	HONEYGUIDES	INDICATORIDAE	
X4	TOUCANS	RAMPHASTIDAE	
X5	BARBETS	CAPITONIDAE	
X6	WOODPECKERS, PICULETS	PICIDAE	
X6001	COMMON FLICKER	COLAPTES AURATUS	111
Y	PERCHING BIRDS	PASSERIFORMES	
YA	SHARPBILL	OXYRUNCIDAE	
YB	PLANTCUTTERS	PHYTOTOMIDAE	
YC	PITTAS	PITTIDAE	
YD	NEW ZEALAND WRENS	ACANTHISITTIDAE	
YE	ASITIES	PHILEPITTIDAE	
YF	LYREBIRDS	MENURIDAE	
YG	SCRUB-BIRDS	ATRICHORNITHIDAE	
YH	LARKS	ALAUDIDAE	
YH001	CRESTED LARK	GALERIDA CRISTATA	
YH002	SKYLARK	ALAUDA ARVENSIS	30
YH003	SMALL SKYLARK	ALAUDA GULGULA	
YH004	HORNED LARK	EREMOPHILA ALPESTRIS	32
YH005	SINGING BUSHLARK	MIRAFRA JAVANICA	
YH006	WOOD LARK	LULLULA ARBOREA	
YI	SWALLOWS	HIRUNDINIDAE	
YI001	PURPLE MARTIN	PROGNE SUBIS	50
YI002	WHITE-BACKED SWALLOW	CHERAMOECA LEUCOSTERNUM	
YI003	COMMON SAND SWALLOW	RIPARIA RIPARIA	15
YI004	WELCOME SWALLOW	HIRUNDO NEOXENA	13
YI005	BARN SWALLOW	HIRUNDO RUSTICA	19
YI006	FAIRY MARTIN	PETROCHELIDON ARIEL	
YI007	AUSTRALIAN TREE MARTIN	PETROCHELIDON NIGRICANS	13
YI008	HOUSE MARTIN	DELICHON URBICA	
YJ	DRONGOS	DICRURIDAE	

CODE	ORDER/FAMILY/SUB-GROUP/SPECIES: ENGLISH NAME	SCIENTIFIC NAME	MEAN MASS (g)
YK	OLD WORLD ORIOLES	ORIOLIDAE	
YL	STARLINGS	STURNIDAE	
YL001	COMMON STARLING	STURNUS VULGARIS	73
YL1	MYNA	—	
YL101	COMMON MYNA	ACRIDOTHERES TRISTIS	
YM	CROWS, JAYS	CORVIDAE	
YM001	BLACK-BILLED MAGPIE	PICA PICA	141
YM002	ROOK	CORVUS FRUGILEGUS	
YM003	COMMON JACKDAW	CORVUS MONEDULA	
YM1	CROWS	—	
YM101	PIED CROW	CORVUS ALBUS	
YM102	COMMON CROW	CORVUS BRACHYRHYNCHOS	458
YM103	CARRION CROW	CORVUS CORONE	
YM104	HOODED CROW	CORVUS CORONE CORNIX	
YM105	LITTLE CROW	CORVUS BENNETTI	390
YM106	AUSTRALASIAN CROW	CORVUS ORRU	540
YM107	HOUSE CROW	CORVUS SPLENDENS	
YM2	JAYS	—	
YM201	BLUE JAY	CYANOCITTA CRISTATA	87
YM202	COMMON JAY	GARRULUS GLANDARIUS	
YM3	RAVENS	—	
YM301	COMMON RAVEN	CORVUS CORAX	1240
YM302	AUSTRALIAN RAVEN	CORVUS CORONOIDES	590
YM303	FOREST RAVEN	CORVUS TASMANICUS	692
YM304	LITTLE RAVEN	CORVUS MELLORI	570
YN	BELL MAGPIE, BUTCHERBIRD, CURRAWONG	CRACTICIDAE	
YN1	BUTCHERBIRDS	—	
YN101	GREY BUTCHERBIRD	CRACTICUS TORQUATUS	98
YN102	PIED BUTCHERBIRD	CRACTICUS NIGROGULARIS	
YN2	BELL MAGPIES	—	
YN201	AUSTRALIAN BELL MAGPIE	GYMNORHINA TIBICEN	327
YN3	CURRAWONGS	—	
YN301	PIED CURRAWONG	STREPERA GRACULINA	275
YO	MAGPIE-LARKS	GRALLINIDAE	
YO001	MUDLARK	GRALLINA CYANOLEUCA	88
YO002	WHITE-WINGED CHOUGH	CORCORAX MELANORHAMP	310
YO003	APOSTLEBIRD	STRUTHIDEA CINERAE	
YP	BOWERBIRDS	PTILONORHYNCHIDAE	
YQ	PARADISE-BIRDS	PARADISAEIDAE	
YR	TITMICE, CHICKADEES	PARIDAE	
YR001	BLUE TIT	PARUS CAERULEUS	
YR002	GREAT TIT	PARUS MAJOR	
YR1	TITMICE	—	
YR2	CHICKADEES	—	
YS	NUTHATCHES AND TREE CREEPERS	SITTIDAE	
YS1	NUTHATCHES	—	
YS2	TREE CREEPERS	—	
YT	CORAL-BILLED NUTHATCH	HYPOSITTIDAE	
YU	CREEPERS	CERTHIIDAE	
YU001	COMMON CREEPER	CERTHIA FAMILIARIS	
YU002	WALL CREEPER	TICHODROMA MURARIA	

CODE	ORDER/FAMILY/SUB-GROUP/SPECIES ENGLISH NAME	SCIENTIFIC NAME	MEAN MASS (g)
YV	BALD CROWS	PICATHARTIDAE	
YW	PARROTBILLS, SUTHORAS	PARADOXORNITHIDAE	
YX	WRENTIT	CHAMAEIDAE	
YY	BABBLERS	TIMALIIDAE	
YZ	CUCKOO SHRIKES	CAMPEPHAGIDAE	
YZ001	LARGE CUCKOO-SHRIKE	CORACINA NOVAEHOLLANDIAE	115
YZ002	GROUND CUCKOO-SHRIKE	PTEROPODOCYS MAXIMA	
Y1	BROADBILLS	EURYLAIMIDAE	
Y2	OVENBIRDS, HORNEROS, SPINETAIL	FURNARIIDAE	
Y21	OVENBIRDS	—	
Y22	HORNEROS	—	
Y23	SPINETAILS	—	
Y3	TROPICAL CREEPERS	DENDROCOLAPTIDAE	
Y4	ANTBIRDS	FORMICARIIDAE	
Y5	GNATEATERS	CONOPOPHAGIDAE	
Y6	TAPACULOS	RHINOCRYPTIDAE	
Y7	MANAKINS	PIPRIDAE	
Y8	COTINGAS	COTINGIDAE	
Y9	TYRANT FLY CATCHERS	TYRANNIDAE	
Y9001	EASTERN WOOD PEEWEE	CONTOPUS VIRENS	14
Z	PERCHING BIRDS	PASSERIFORMES	
ZA	OLD WORLD FLYCATCHERS, FANTAIL	MUSCICAPIDAE	
ZA1	OLD WORLD FLYCATCHERS	—	
ZA2	FANTAILS	—	
ZA3	WHISTLERS	—	
ZA4	ROBIN-FLYCATCHER	MUSCICAPIDAE	
ZA401	FLAME ROBIN-FLYCATCHER	PETROICA PHOENICEA	
ZA402	RED CAPPED ROBIN-FLYCATCHER	PETROICA GOODENOVII	
ZA403	SCARLET ROBIN-FLYCATCHER	PETROICA MULTICOLOR	
ZB	ACCENTORS	PRUNELLIDAE	
ZC	WAGTAILS, PIPITS	MOTACILLIDAE	
ZC1	WAGTAILS	—	
ZC101	WHITE WAGTAIL	MOTACILLA ALBA	18
ZC102	YELLOW WAGTAIL	MOTACILLA FLAVA	16
ZC103	WILLIE WAGTAIL	RHIPIDURA LEUCOPHRYS	20
ZC104	GREY WAGTAIL	MOTACILLA CINEREA	18
ZC2	PIPITS	—	
ZC201	RED-THROATED PIPIT	ANTHUS CERVINUS	21
ZC202	RICHARD'S PIPIT	ANTHUS NOVAESEELANDIAE	
ZC203	MEADOW PIPIT	ANTHUS PRATENSIS	
ZC204	WATER PIPIT	ANTHUS SPINOLETTA	22

CODE	ORDER/FAMILY/SUB-GROUP/SPECIES ENGLISH NAME	SCIENTIFIC NAME	MEAN MASS (g)
ZD	WAXWINGS, SILKY-FLYCATCHERS	BOMBYCILLIDAE	
ZD1	WAXWINGS	—	
ZD2	SILKY-FLYCATCHERS	—	
ZE	PALM CHAT	DULIDAE	
ZF	WOOD-SWALLOWS	ARTAMIDAE	
ZF001	BLACK-FACED WOOD-SWALLOW	ARTAMUS CINEREUS	
ZF002	WHITE BREASTED WOOD-SWALLOW	ARTAMUS LEUCORHYNCHUS	
ZF003	MASKED WOOD-SWALLOW	ARTAMUS PERSONATUS	
ZF004	WHITE BROWED WOOD-SWALLOW	ARTAMUS SUPERCILIOSUS	
ZF005	DUSKY WOOD-SWALLOW	ARTAMUS CYANOPTERUS	35
ZG	VANGAS	VANGIDAE	
ZH	SHRIKES	LANIIDAE	
ZH001	GREAT GREY SHRIKE	LANIUS EXCUBITOR	66
ZI	HELMET SHRIKES	PRIONOPIDAE	
ZJ	PEPPERSHRIKES	CYCLARHIDAE	
ZK	SHRIKE-VIREOS	VIREOLANIIDAE	
ZL	VIREOS	VIREONIDAE	
ZM	KOKAKO, SADDLEBACK	CALLAEIDAE	
ZM1	KOKAKO	—	
ZM2	SADDLEBACK	—	
ZN	HONEY EATERS	MELIPHAGIDAE	
ZN001	NOISY MINER	MANORINA MELANOCEPHALA	
ZO	FLOWER PECKERS	DICAEIDAE	
ZP	SUNBIRDS, SPIDERHUNTERS	NECTARINIIDAE	
ZP1	SUNBIRDS	—	
ZQ	WHITE-EYES	ZOSTEROPIDAE	
ZQ001	GREY-BREASTED SILVEREYE	ZOSTEROPS LATERALIS	
ZR	HAWAIIAN HONEYCREEPERS	DREPANIDIDAE	
ZS	WOOD WARBLERS	PARULIDAE	
ZT	BLACKBIRDS, AMERICAN ORIOLES	ICTERIDAE	
ZT001	EASTERN MEADOWLARK	STURNELLA MAGNA	102
ZT002	WESTERN MEADOWLARK	STURNELLA NEGLECTA	106
ZT003	COMMON GRACKLE	QUISCALUS QUISCULA	116
ZT004	BROWN-HEADED COWBIRD	MOLOTHRUS ATER	49
ZT005	BOBOLINK	DOLICHONYX ORYZIVORUS	47
ZT1	BLACKBIRDS	—	
ZT2	AMERICAN ORIOLES	—	
ZU	SWALLOW-TANAGER	TERSINIDAE	
ZV	TANAGERS	THRAUPIDAE	
ZW	PLUSH-CAPPED FINCH	CATAMBLYRHYNCHIDAE	

CODE	ORDER/FAMILY/SUB-GROUP/SPECIES ENGLISH NAME	SCIENTIFIC NAME	MEAN MASS (g)
ZX	CARDINALS, BUNTINGS, SPARROWS	FRINGILLIDAE	
ZX000	FINCHES	—	
ZX001	YELLOWHAMMER	EMBERIZA CITRINELLA	
ZX002	LAPLAND LONGSPUR	CALCARIUS LAPPONICUS	27
ZX003	CHESTNUT-COLLARED LONGSPUR	CALCARIUS ORNATUS	19
ZX004	DARK-EYED JUNCO	JUNCO HYEMALIS	20
ZX005	RED-BREASTED GROSBEAK	PHEUCTICUS LEUDOVICIANUS	46
ZX006	COMMON CHAFFINCH	FRINGILLA COELEBS	
ZX007	COMMON CANARY	SERINUS CANARIA	
ZX008	EUROPEAN GOLDFINCH	CARDUELIS CARDUELIS	13
ZX009	EUROPEAN GREENFINCH	CARDUELIS CHLORIS	
ZX010	PINE SISKIN	SPINUS PINUS	15
ZX011	EURASIAN LINNET	ACANTHIS CANNABINA	
ZX012	COMMON REDPOLL	ACANTHIS FLAMMEA	13
ZX013	PURPLE FINCH	CARPODACUS PURPUREUS	25
ZX014	RED CROSSBILL	LOXIA CURVIROSTRA	37
ZX015	COMMON BULLFINCH	PYRRHULA PYRRHULA	
ZX016	EVENING GROSBEAK	HESPERIPHONA VESPERTINA	60
ZX1	CARDINALS	—	
ZX2	BUNTINGS	—	
ZX201	YELLOW-BREASTED BUNTING	EMBERIZA AUREOLA	
ZX202	SNOW BUNTING	PLECTROPHENAX NIVALIS	42
ZX203	INDIGO BUNTING	PASSERINA CYANEA	15
ZX3	SPARROWS	—	
ZX301	HARRIS'S SPARROW	ZONOTRICHIA QUERULA	
ZX302	SWAMP SPARROW	MELOSPIZA GEORGIANA	
ZX303	SAVANNAH SPARROW	PASSERCULUS SANDWICHENSIS	
ZY	WAXBILLS	ESTRILDIDAE	
ZY001	ZEBRA FINCH	POEPHILA GUTTATA	12
ZY002	DOUBLE BARRED FINCH	POEPHILA BICHENOVII	9
ZZ	WEAVERS, TRUE SPARROWS	PLOCEIDAE	
ZZ1	WEAVERS	—	
ZZ2	TRUE SPARROWS	—	
ZZ201	HOUSE SPARROW	PASSER DOMESTICUS	28
ZZ202	TREE SPARROW	PASSER MONTANUS	
ZZ203	SPANISH SPARROW	PASSER HISPANIOLENSI	29
Z1	BULBULS	PYCNONOTIDAE	
Z2	LEAF BIRDS	IRENIDAE	
Z3	DIPPERS	CINCLIDAE	
Z4	WRENS	TROGLODYTIDAE	
Z4001	LONG-BILLED MARSH WREN	CISTOTHORUS PALUSTRIS	12
Z5	THRASHERS, MOCKINGBIRDS	MIMIDAE	
Z51	THRASHERS	—	
Z52	MOCKINGBIRDS	—	
Z6	THRUSHES	TURDIDAE	
Z6001	WESTERN BLUEBIRD	SIALIA MEXICANA	29
Z6002	WHINCHAT	SAXICOLA RUBETRA	
Z6003	WHEATEAR	OENANTHE OENANTHE	25
Z6004	SWAINSON'S THRUSH	CATHARAS USTULATUS	31
Z6005	REDWINGED THRUSH	TURDUS ILIACUS	
Z6006	COMMON BLACKBIRD	TURDUS MERULA	80
Z6007	AMERICAN ROBIN	TURDUS MIGRATORIUS	77
Z6008	COMMON SONG THRUSH	TURDUS PHILOMELOS	

CODE	ORDER/FAMILY/SUB-GROUP/SPECIES		MEAN MASS (g)
	ENGLISH NAME	SCIENTIFIC NAME	
Z6009	FIELDFARE	TURDUS PILARIS	
Z6010	MISTLE THRUSH	TURDUS VISCIVORUS	
Z6011	EUROPEAN ROBIN	ERITHACUS EUROPAEUS	18
Z7	WREN-THRUSH	ZELEDONIIDAE	
Z8	OLD WORLD WARBLERS	SYLVIIDAE	
Z8001	RUFOUS SONGLARK	CINCLORHAMPHUS MATHEWSI	
Z8002	BROWN SONGLARK	CINCLORHAMPHUS CRURALIS	
Z9	KINGLETS	REGULIDAE	
1	BATS	CHIROPTERA	
11	FRUIT BATS OR FLYING BATS	PTEROPIDAE	
12	"ORDINARY BATS"	VESPERTILIONIDAE	
2	PENGUINS	SPHENISCIFORMES	
21	PENGUINS	SPHENISCIDAE	

APPENDIX 5

BIRD MASTER RECORD FORMAT

Field	*Name*	*Start position*	*Length*	*Remarks*
0001	ICAO FILE NUMBER	001	08	YEAR + 6 DIGITS
0002	STATE FILE NUMBER	009	06	
0003	STATE SUBMITTING REPORT	015	04	ADREP
0004	STATE OF OCCURRENCE	019	04	ADREP
0005	STATE OF REGISTRY	023	04	ADREP
0006	DATE OF LAST RECORD CHANGE	027	06	DDMMYY (AUTOMATIC)
0007	"FLAG" ERRORS	033	01	ADREP (AUTOMATIC)
0008	"FLAG" STATE DIFFERENT	034	01	Y/BLANK (AUTOMATIC)
0009	AIRCRAFT MAKE	062	11	PLAIN LANGUAGE (AUTOMATIC)
0010	AIRCRAFT MODEL	073	06	PLAIN LANGUAGE (AUTOMATIC)
0011	AIRCRAFT CLASSIFICATION	079	01	ADREP (AUTOMATIC)
0012	AIRCRAFT MASS CATEGORY	080	01	ADREP (AUTOMATIC)
0013	NUMBER OF ENGINES	081	01	ADREP (AUTOMATIC)
0014	TYPE OF POWER	082	01	ADREP (AUTOMATIC)
0015	BIRD SCIENTIFIC NAME	203	20	PLAIN LANGUAGE (AUTOMATIC)
0016	BIRD COMMON NAME	223	20	PLAIN LANGUAGE (AUTOMATIC)
0017	BIRD MEAN MASS	243	04	IN GRAMS (AUTOMATIC)
0018	ENGINE BYPASS RATIO	252	01	(AUTOMATIC)
0019	ENGINE — PYLON BELOW WING	253	01	1/2/3/4/BLANK (AUTOMATIC)
0020	ENGINE — PYLON ABOVE WING	254	01	1/2/3/4/BLANK (AUTOMATIC)
0021	ENGINE — WING ROOT	255	01	1/2/3/4/BLANK (AUTOMATIC)
0022	ENGINE — WING SUSPENDED	256	01	1/2/3/4/BLANK (AUTOMATIC)
0023	ENGINE — AFT FUSELAGE	257	01	1/2/3/4/BLANK (AUTOMATIC)
0024	ENGINE — AFT CENTRAL	258	01	1/2/3/4/BLANK (AUTOMATIC)
0025	ENGINE — NOSE CENTRAL	259	01	1/2/3/4/BLANK (AUTOMATIC)
0026	BIRD COMMON NAME — FRENCH	267	20	PLAIN LANGUAGE (AUTOMATIC)
0027	BIRD COMMON NAME — SPANISH	287	20	PLAIN LANGUAGE (AUTOMATIC)
0101	OPERATOR NAME	035	15	(AUTOMATIC)
0102	OPERATOR CODE	050	03	ICAO DOC 8585
0103	AIRCRAFT MAKE CODE	053	03	ADREP
0104	AIRCRAFT MODEL CODE	056	02	ADREP
0105	ENGINE MAKE CODE	083	02	ADREP
0106	ENGINE MODEL CODE	085	02	ADREP
0107	AIRCRAFT REGISTRATION	087	05	DIRECT ENTRY
0108	DATE OF OCCURRENCE	095	06	DDMMYY
0109	LOCAL TIME OF OCCURRENCE	101	04	HHMM
0110	LIGHT CONDITIONS	105	01	A/B/C/D
0111	AERODROME NAME	106	20	(AUTOMATIC)
0112	AERODROME CODE	260	05	ICAO DOC 7910
0113	RUNWAY USED	130	03	DIRECT ENTRY
0114	LOCATION IF EN ROUTE	133	20	DIRECT ENTRY
0115	HEIGHT OF BIRD STRIKE	153	05	DIRECT ENTRY

Field	Name	Start position	Length	Remarks
0116	SPEED	158	03	DIRECT ENTRY
0117	PHASE OF FLIGHT	161	01	A/B/C/D/E/F/G/H
0118	S/D RADOME	162	01	S/D/BLANK
0119	S/D WINDSHIELD	163	01	S/D/BLANK
0120	S/D NOSE (EXCLUDING 0118 AND 0119)	164	01	S/D/BLANK
0121	S/D ENGINE 1	165	01	S/D/BLANK
0122	S/D ENGINE 2	166	01	S/D/BLANK
0123	S/D ENGINE 3	167	01	S/D/BLANK
0124	S/D ENGINE 4	168	01	S/D/BLANK
0125	S/D PROPELLER	169	01	S/D/BLANK
0126	S/D WING/ROTOR	170	01	S/D/BLANK
0127	S/D FUSELAGE	171	01	S/D/BLANK
0128	S/D LANDING GEAR	172	01	S/D/BLANK
0129	S/D TAIL	173	01	S/D/BLANK
0130	S/D LIGHTS	174	01	S/D/BLANK
0131	S/D OTHER PART	175	01	S/D/BLANK
0132	NO EFFECT ON FLIGHT	182	01	Y/BLANK
0133	ABORTED TAKE-OFF	183	01	Y/BLANK
0134	PRECAUTIONARY LANDING	184	01	Y/BLANK
0135	ENGINE(S) SHUT DOWN	185	01	1/2/3/4/BLANK
0136	OTHER EFFECT ON FLIGHT	186	01	Y/BLANK
0137	SKY CONDITION	194	01	A/B/C
0138	PRECIPITATION — FOG	195	01	Y/BLANK
0139	PRECIPITATION — RAIN	196	01	Y/BLANK
0140	PRECIPITATION — SNOW	197	01	Y/BLANK
0141	BIRD SPECIES	198	05	APPENDIX 4
0142	NUMBER OF BIRDS SEEN	247	01	A/B/C/D
0143	NUMBER OF BIRDS STRUCK	248	01	A/B/C/D
0144	SIZE OF BIRD	249	01	S/M/L
0145	PILOT WARNED OF BIRDS	250	01	Y/N
0146	NOT USED BY ICAO	000	00	
0147	NOT USED BY ICAO	000	00	
0148	NOT USED BY ICAO	000	00	
0149	NOT USED BY ICAO	000	00	
0150	NOT USED BY ICAO	000	00	
0151	NOT USED BY ICAO	000	00	
0152	AIRCRAFT TIME OUT OF SERVICE	308	04	DIRECT ENTRY
0153	ESTIMATED COST OF REPAIRS OR REPLACEMENT	312	05	DIRECT ENTRY
0154	ESTIMATED OTHER COSTS	316	05	DIRECT ENTRY
0155	REASON FOR FAILURE/SHUTDOWN — ENG. NO. 1	320	01	A/B/C/D/E/F/Y/Z
0156	REASON FOR FAILURE/SHUTDOWN — ENG. NO. 2	321	01	A/B/C/D/E/F/Y/Z
0157	REASON FOR FAILURE/SHUTDOWN — ENG. NO. 3	322	01	A/B/C/D/E/F/Y/Z
0158	REASON FOR FAILURE/SHUTDOWN — ENG. NO. 4	323	01	A/B/C/D/E/F/Y/Z
0159	EST. PERCENTAGE OF THRUST LOST — ENG. NO. 1	324	02	DIRECT ENTRY
0160	EST. PERCENTAGE OF THRUST LOST — ENG. NO. 2	327	02	DIRECT ENTRY
0161	EST. PERCENTAGE OF THRUST LOST — ENG. NO. 3	330	02	DIRECT ENTRY
0162	EST. PERCENTAGE OF THRUST LOST — ENG. NO. 4	333	02	DIRECT ENTRY
0163	ESTIMATED NUMBER OF BIRDS INGESTED — ENG. NO. 1	336	03	DIRECT ENTRY
0164	ESTIMATED NUMBER OF BIRDS INGESTED — ENG. NO. 2	338	03	DIRECT ENTRY
0165	ESTIMATED NUMBER OF BIRDS INGESTED — ENG. NO. 3	340	03	DIRECT ENTRY
0166	ESTIMATED NUMBER OF BIRDS INGESTED — ENG. NO. 4	342	03	DIRECT ENTRY

Field	*Name*	*Start position*	*Length*	*Remarks*
0201	AIRCRAFT DAMAGE	180	01	D/S/M (ICAO DEFINITION)
0202	INJURY INDEX	181	01	F/S/M (ICAO DEFINITION)
0203	S/D PITOT STATIC	176	01	S/D/BLANK
0204	S/D ANTENNA(E)	177	01	S/D/BLANK
0205	S/D TAIL ROTOR	178	01	S/D/BLANK
0206	S/D HELICOPTER TRANSMISSION	179	01	S/D/BLANK
0207	FORCED LANDING	187	01	Y/BLANK
0208	FIRE	188	01	Y/BLANK
0209	PENETRATION OF WINDSHIELD	189	01	Y/BLANK
0210	PENETRATION OF AIRFRAME	190	01	Y/BLANK
0211	VISION OBSCURED	191	01	Y/BLANK
0212	ENGINE INGESTION	192	01	1/2/3/4/BLANK
0213	ENGINE UNCONTAINED FAILURE	193	01	1/2/3/4/BLANK
0214	BIRD SPECIES CONFIRMED	251	01	Y/BLANK

— END —

ISBN 978-92-9231-301-2

Order No. 9332
Printed in ICAO