

Code Definitions of 2016 MAPS Banding Data

Last revised December 10, 2015

Each banding record includes (if applicable): a) a band number; b) species determination; c) age and sex; d) how aged and sexed; e) date, time, station and net; and f) physical information such as degree of skull pneumaticization, degree of breeding condition, some plumage characteristics, etc. Supplementary information such as the original determinations of species, age, sex, etc. (if these determinations were altered during the verification procedures) and verification codes are also included for each record.

1. LOC: location code (identifies national forest, national park, military installation or other location where a single station or a set of stations is located and is run by a single operator). Location codes are unique.
2. BI: bander's initials. The initials of the bander or person taking the data.
3. BS: Data sheet on which record was recorded:
 - New captures: band size
 - Recaptures: "R"
 - Unbanded birds: "U"
4. PG: page number of raw data sheet for that band size (or for recaptures or unbanded) on which the record was written
5. C: capture code (codes L, D, C, and A indicate records that are not used in any analysis)
 - N - newly banded bird
 - R - recaptured bird
 - U - unbanded bird
 - L - lost band
 - D - destroyed band
 - C - changed band (duplicate recapture record containing the original band number)
 - A - added band (double-banded bird)
6. OBAND: original band number if BAND was subsequently changed during verification
7. BAND: band number
8. SSN: species sequence number
A unique sequence number created by the Institute for Bird Populations to place species into the AOU taxonomic order in place corresponding to the file date.
9. NUMB: species number
A sequence number created by the Institute for Bird Populations to place species into taxonomic order according to AOU 2008. Some taxa are merged with others and given a single species number for analyses as the species cannot be reliably separated in the hand. These are:
 - 11475 - Traill's Flycatcher (includes Alder, Willow, and Traill's)
 - 11555 - Western Flycatcher (includes Pacific-slope, Cordilleran, and Western)
10. OSP: original four letter species alpha code if SPEC code was subsequently changed during verification

11. SPEC: four-letter species alpha code. Four-letter species alpha codes from “Four-letter and six-letter alpha codes for birds recorded from the American Ornithologists’ Union check-list area” (Pyle and DeSante 2003, 2005, 2007,2009) are used for all data from 2003 and subsequent years rather than the coding system given in Pyle (1997) and used by the BBL. Very few discrepancies that are likely to be encountered by banders exist between the two lists; the most notable is the use of “TUTI” by Pyle and DeSante (2003, 2005, 2007, 2009) instead of “ETTI” by the BBL for Tufted Titmouse (formerly Eastern Tufted Titmouse). All discrepancies are listed in Appendix 1 of Pyle and DeSante (2003, 2005, 2007, 2009). The Pyle and DeSante (2003, 2005, 2007, 2009) system reflects updated AOU taxonomy. Codes for gallinaceous species and certain taxa not identified to species were developed by IBP in conjunction with general usage (birds recorded with these species determinations should not be banded, unless proper permits are available).
12. OSP6: original six letter species alpha code if SPEC6 code was subsequently changed during verification
13. SPEC6: six letter species alpha code - based on latin name
These codes reflect AOU taxonomy as closely as possible.
14. OA: original age if AGE was subsequently changed during verification (Data-analysis file only)
15. OHA: original how-aged codes if HA was subsequently changed during verification (Data-analysis file only)
16. AGE: age (final determination)
 - 0 - indeterminable age
 - 4 - local (young bird incapable of sustained flight)
 - 2 - hatching-year bird
 - 1 - after-hatching-year bird
 - 5 - second-year bird
 - 6 - after-second-year bird
 - 7 - third-year bird
 - 8 - after-third-year bird
17. HA: how aged
 - S - skull pneumaticization
 - B - brood patch
 - C - cloacal protuberance
 - L - presence of two generations of feathers within a feather tract or between two adjacent feather tracts
 - P - plumage (exact plumage not specified)
 - A - adult plumage
 - H - 1st basic plumage
 - J - juvenal plumage
 - E - eye color
 - F - flight feather wear
 - M - active molt occurring
 - I - mouth\bill
 - O - other (needs explanation in notes)
 - R - recapture information from between-record verification
 - V - photo verification done and age changed based upon information in photo
 - G - used by IBP after changing the age to a less specific age category because it is not possible to age the bird to the more specific category in that month according to Pyle (1997)
 - U - used by IBP when HA is not provided or cannot be assessed from supplemental data

Y - used by IBP after changing the age to 1 (AHY) because no useful evidence exists within the Molt Limits and Plumage fields to support the more specific age of 5, 6, 7 or 8 (SY, ASY, TY or ATY) in that month according to Pyle (1997)

18. OWRP: original WRP if WRP was subsequently changed during verification (Data-analysis file only)

19. WRP: age using molt based ageing system created by Wolfe-Ryder-Pyle based on recognition of molt cycle and plumage phase. Usually not used for MAPS banding but can include:
UCU - unknown molt cycle, unknown plumage
UCB - unknown molt cycle, basic plumage
UCA - unknown molt cycle, alternate plumage
FCJ - first molt cycle, juvenal plumage
FCF - first molt cycle, formative plumage
FCA - first molt cycle, alternate plumage
FCS - first molt cycle, supplemental plumage
SCB - second molt cycle, basic plumage
SCA - second molt cycle, alternate plumage
DCB - definitive molt cycle, basic plumage
DCA - definitive molt cycle, alternate plumage
20. OS: original sex determination if SEX was subsequently changed during verification (Data-analysis file only)
21. OHS: original how-sexed codes if HS was subsequently changed during verification (Data-analysis file only)
22. SEX: sex (final determination)
M - male
F - female
U - unknown
X - unattempted
23. HS: how sexed
B - brood patch
C - cloacal protuberance
P - plumage
J - juvenal plumage
E - eye color
I - mouth\bill
O - other (requires explanation in notes)
T - tail length
W - wing chord
R - recapture information (based on between-record verification)
G - used by IBP after changing the sex to unknown because it is not possible to sex the bird male or female in that month according to Pyle (1997)
U - used by IBP when HS is not provided or cannot be assessed from supplemental data
24. SK: skull pneumaticization
0 - none
1 - trace (less than 5%)
2 - less than 1/3 but greater than 5%
3 - half (1/3 to 2/3)
4 - greater than 2/3 but less than 95%
5 - almost complete (greater than 95%)
6 - complete
8 - undeterminable, but attempted

25. CP: cloacal protuberance
0 - none
1 - small
2 - medium
3 - large
26. BP: brood patch
0 - none
1 - smooth (feathers lost)
2 - vascularized
3 - heavy (very heavily vascularized)
4 - wrinkled
5 - molting (growing new feathers)
27. F: fat content
0 - none
1 - trace (furculum less than 5% filled)
2 - light (furculum greater than 5% but less than 1/3 filled)
3 - half (furculum 1/3 to 2/3 filled)
4 - full (furculum greater than 2/3 filled but not bulging)
5 - bulging
6 - greatly bulging
7 - very excessive
28. BM: body molt
0 - none
1 - trace
2 - light
3 - medium
4 - heavy
29. FM: flight feather molt
N - no flight feather molt
A - asymmetric
S - symmetric
J - juvenal flight feather growth
30. FW: flight feather wear (outer 4-5 primaries only)
0 - none
1 - slight
2 - light
3 - moderate
4 - heavy
5 - excessive
31. JP: extent of juvenal plumage (body plumage only)
3 - full juvenal plumage
2 - greater than 1/2 juvenal plumage but not full
1 - less than 1/2 juvenal plumage but some remaining
0 - none, completely molted into basic plumage
32. WNG: wing chord (mm)
33. WEIGHT: mass of bird (g)

34. STATUS: status and additional information codes (see North American Bird Banding Manual, Vol. 1, for additional codes)
- 000 - not banded or bird died prior to release
 - 300 - healthy bird banded and released
 - 301 - healthy bird color-banded and released
 - 325 - healthy bird with geotracker and released
 - 500 - injured bird banded and released
 - 501 - injured bird color-banded and released
35. DATE: date of capture (MM/DD/YY)
36. TIME: starting time of the net run during which the bird was captured, to the nearest ten minutes, e.g., 7:32am=073, 24-hr clock
37. STA: unique station number
38. STATION: four-character station code. A station is defined as a discrete study area consisting of a number of net sites. Station codes are unique within a location.
39. NET: up to 4-character original net designation (net in which bird was captured)
40. ANET: 2-character numeric net designation used in analyses
41. DISP: disposition of birds upon release or after capture
- O - old (healed) injury
 - M - malformed (deformity such as crossed mandibles)
 - W - wing injury
 - L - leg injury
 - T - tongue injury
 - E - eye injury
 - B - body injury
 - I - illness/infection/disease
 - S - stress or shock
 - P - predation (death due to predation)
 - D - dead (death due to causes other than predation or removed permanently from station)
 - R - band removed from bird and then bird released bandless
 - " " - blank, bird released alive, uninjured
42. NOTE: designates if a note was written on the reverse of the banding sheet. Operator can use any alpha numeric designation with the following two having a distinct definition.
- NM - not MAPS: record not from a MAPS station or a MAPS net
 - " " - blank, no note

43. PPC: 2004 and onward, designates the feather generations present in the primary coverts
- J - Juvenal; feather tract comprised entirely of retained juvenal feathers or non-feathered body part shows characteristics indicative of a young bird
 - L - Molt limit; molt limit between juvenal and formative feathers
 - F - Formative; feather tract comprised entirely of formative feathers
 - B - Basic; feather tract entirely of basic feathers or non-feathered body part shows characteristics indicative of an adult bird
 - R - Retained; both juvenal and basic feathers are present within the tract
 - M - Mixed; multiple generations of basic feathers are present in the tract
 - A - Alternate; ALL feathers in the tract are of alternate plumage
 - N - Non-juvenal; feather tract may include formative, basic, and/or alternate feathers, but no juvenal feathers are present.
 - U - Unknown; feather tract or non-feathered body part examined, but shows ambiguous characteristics or cannot be coded with confidence
- 1998 to 2003, age class of bird indicated by feather generations present in the primary coverts
- 1 - tract is not indicative of a specific adult age class
 - 5 - tract contains some or all retained juvenal feathers, indicating a second-year bird
 - 6 - tract contains no retained juvenal feathers (or few juvenal feathers in non-passerines), indicating an after-second-year bird
 - 7 - tract contains few retained juvenal feathers, indicating a third-year bird
 - 8 - tract contains no retained juvenal feathers, indicating an after-third-year bird
44. SSC: 2004 and onward, designates the feather generations present in the secondary coverts and in 1998 to 2003, age class of bird indicated by feather generations present in the secondary coverts
Codes as for PPC
45. PPF: 2004 and onward, designates the feather generations present in the primaries and in 1998 to 2003, age class of bird indicated by feather generations present in the primaries
Codes as for PPC
46. SSF: 2004 and onward, designates the feather generations present in the secondaries, not including tertials, and in 1998 to 2003, age class of bird indicated by feather generations present in the secondaries, not including tertials
Codes as for PPC
47. TT: 2004 and onward, designates the feather generations present in the tertials, and in 1998 to 2003, age class of bird indicated by feather generations present in the tertials
Codes as for PPC
48. RR: 2004 and onward, designates the feather generations present in the rectrices, excluding central pair, and in 1998 to 2003, age class of bird indicated by feather generations present in the rectrices, excluding central pair
Codes as for PPC
49. HD: 1998 to 2003, age class of bird indicated by feather generations present in the head feathers (forehead; crown; nape; supercilium; eye ring; eye line; auricular; subauricular, submoustachial and malar stripes; and lores).
Codes as for PPC
50. UPP: 1998 to 2003, age class of bird indicated by feather generations present in the feathers of the upperparts (back, scapulars, rump, and uppertail coverts)
Codes as for PPC
51. UNP: 1998 to 2003, age class of bird indicated by feather generations present in the feathers of the underparts (chin, throat, breast, belly, sides, flanks, and undertail coverts)
Codes as for PPC

52. BPL: 2004 and onward, collective for the codes HD, UPP, and UNP designates the feather generations present in the feathers of the head, upperparts, and underparts,
Codes as for PPC
53. NF: 2004 and onward, indicates the plumage best matched by non-feather characteristics, including bill, mouth, eye, legs, and feet
J - non-feather parts indicative of a young bird
B - non-feather parts indicative of an adult bird
N - non-feather parts indicative of an adult bird
U - Unknown; non-feather parts not indicative of a specific age
- 1998 to 2003, age class of bird indicated by non-feather characteristics, including bill, mouth, eye, legs, and feet
1 - non-feather parts not indicative of a specific adult age class
5 - non-feather parts show some retained juvenal characteristics, indicating a second-year bird
6 - non-feather parts show no retained juvenal characteristics, indicating an after-second-year bird
54. FP: indicates whether feathers were pulled.
P - rectrices pulled (possibly contour feathers as well) (pre-2006 coding)
C - only contour feathers pulled (pre-2006 coding)
O - Outer two rectrices were pulled (i.e., rectrix 6 from both the left and right side of the tail). Previous to 2006 this was indicated by FTHR. PULL = P.
I - An inner and an outer rectrix were pulled (i.e., rectrix 1 from one side and rectrix 6 from the other side were pulled).
“-“ - dash; no feathers were pulled
55. SW: indicates whether a cloacal swab sample was taken
1 - 1mm wide swab used to collect the sample from within the cloacal cavity
2 - 2mm wide swab used to collect the sample from within the cloacal cavity
Y - swab used to collect the sample from within the cloacal cavity but of unknown size
“-“ - dash; no swab sample was taken
56. COLOR: color band sequence
57. SC: skull check (if code present, record was re-examined for accuracy)
U - skull suggests age unknown, but age determined
Y - skull suggests HY bird, but AGE not equal to 2 or 4
A - skull suggests adult bird, but AGE not equal to 1, 5 or 6
5 - SK=5, record re-examined
" " - blank, record OK, not re-examined
58. CC: cloacal protuberance check (if code present, record was re-examined for accuracy), arranged hierarchically
A - CP suggests adult, but AGE not equal to 1, 5 or 6
M - CP suggests male, but SEX not equal to M
U - SEX=M, but CP is blank
1 - CP=1, record re-examined
H - AGE=0, 2 or 4, but SEX=M
P - SEX=M, but CP=0
" " - blank, record OK, not re-examined

59. BC: brood patch check (if code present, record was re-examined for accuracy), arranged hierarchically
 - A - BP suggests adult, but AGE not equal to 1, 5 or 6
 - F - BP suggests female, but SEX not equal to F
 - U - Pre-1997: SEX=F, but BP=" " or BP#3 in species in which males develop BPs
 - U - 1997+: only used when SPEC=WREN and SEX=F; SEX should probably be U
 - 5 - BM>2 and BP=5, record re-examined
 - H - AGE=0, 2, or 4, but SEX=F
 - P - SEX=F, but BP=0
 - 1 - BP=1 or 5, record re-examined
 - " " - blank, record OK, not re-examined
60. MC: molt check (if code present, record was re-examined for accuracy)
 - A - FM suggests adult, but AGE not equal to 1, 5 or 6
 - Y - BM+FM suggest HY, but AGE not equal to 2 or 4
 - " " - blank, record OK, not re-examined
61. WC: flight feather wear check (if code present, record was re-examined for accuracy)
 - A - FW suggests adult, but AGE not equal to 1, 5 or 6
 - " " - blank, record OK, not re-examined
62. JC: juvenal plumage check (if code present, record was re-examined for accuracy)
 - Y - JP suggests HY, but AGE not equal to 2 or 4
 - " " - blank, record OK, not re-examined
63. OV1: original single-year verification code for a given band number if V1 changed during between-record verification
64. V1: single year verification for a given band number (if code present, record was re-examined for accuracy), arranged hierarchically
 - 2 - two records with C=N and the same band number or two records with C=R and the same date, time and net
 - BN - band number discrepancy
 - SP - species discrepancy
 - NM - species sequence number discrepancy
 - A - age discrepancy
 - WP - WRP discrepancy
 - S - sex discrepancy
 - DL - destroyed/lost band and a captured bird with the same band number
 - ST - station discrepancy
 - SS - status discrepancy
 - " " - blank, record OK, not re-examined
65. VM: multi-year verification through 1993 (if code present, record was re-examined for accuracy)
Same codes as V1
66. V94: 1994 multi-year verification (if code present record was re-examined for accuracy)
Same codes as V1
67. V95: 1995 multi-year verification (if code present record was re-examined for accuracy)
Same codes as V1
68. V96: 1996 multi-year verification (if code present record was re-examined for accuracy)
Same codes as V1
69. V97: 1997 multi-year verification (if code present record was re-examined for accuracy)
Same codes as V1

70. OVYR: original post-1997 multi-year verification code for a given band number if VYR changed during between-record verification
71. VYR: Post-1997 multi-year verification (if code present record was re-examined for accuracy)
Same codes as V1
72. N: codes that designate whether or not the record is to be included in productivity and survivorship analyses
The following codes mean record is not to be used in productivity or survivorship analyses:
O - not caught at MAPS station
S - caught within MAPS station boundary, but not in a MAPS net
E - part of extremely irregular effort at site
D - date outside of MAPS periods
T - time outside normal MAPS operation for that station
? - uncertain species identification or band number
H - hummingbird
G - gallinaceous bird
U - unbanded bird released alive
R - recaptured bird, but no band number recorded
The following codes indicate record can be used in productivity and survivorship analyses:
- - record examined with current MAPS analytical procedures
+ - record examined with preliminary MAPS analytical procedures (1989-1991)
73. B: comparability to previous year (year Before), using constant-effort analysis
The following codes mean record cannot be used in constant-effort productivity analyses:
B - non-comparable, using net-by-net, hour-by-hour protocol (protocol used subsequent to 1991)
Y - non-comparable using net-by-net, period-by-period protocol (one protocol used prior to 1992)
X - non-comparable using period-by-period protocol (another protocol used prior to 1992)
The following codes mean record can be used in constant-effort productivity analyses:
- - comparable by B or M protocol
+ - comparable by Y or X protocol
The following code means no comparison made:
* - no comparison made; constant-effort analyses not completed between this year of operation and the preceding year of operation.
74. A: comparability to next year (year After), using constant-effort analysis
Same codes as B (Item 63), except for B, plus the following additional codes:
A - (takes place of B) non-comparable using net-by-net, hour-by-hour protocol
* - no comparison made; constant-effort analyses not completed between this year of operation and the following year of operation

Structure for 2016 MAPS banding data

Field	Field Name	Type	Width	Dec
1	LOC	Character	4	
2	BI	Character	2	
3	BS	Character	2	
4	PG	Character	3	
5	C	Character	1	
6	OBAND	Character	9	
7	BAND	Character	9	
8	SSN	Numeric	5	0
9	NUMB	Character	5	
10	OSP	Character	4	
11	SPEC	Character	4	
12	OSP6	Character	6	
13	SPEC6	Character	6	
14	OA	Character	1	
15	OHA	Character	2	
16	AGE	Character	1	
17	HA	Character	2	
18	OWRP	Character	3	
19	WRP	Character	3	
20	OS	Character	1	
21	OHS	Character	2	
21	SEX	Character	1	
22	HS	Character	2	
23	SK	Character	1	
24	CP	Character	1	
25	BP	Character	1	
26	F	Character	1	
27	BM	Character	1	
28	FM	Character	1	
30	FW	Character	1	
31	JP	Character	1	
32	WNG	Numeric	3	
33	WEIGHT	Numeric	5	1
34	STATUS	Character	3	
35	DATE	Date	8	
36	TIME	Character	3	
37	STA	Numeric	5	
38	STATION	Character	4	
39	NET	Character	4	
40	ANET	Character	2	
41	DISP	Character	1	
42	NOTE	Character	2	
43	PPC	Character	1	

44	SSC	Character	1
45	PPF	Character	1
46	SSF	Character	1
47	TT	Character	1
48	RR	Character	1
49	HD	Character	1
50	UPP	Character	1
51	UNP	Character	1
52	BPL	Character	1
53	NF	Character	1
54	FP	Character	1
55	SW	Character	1
56	COLOR	Character	5
57	SC	Character	1
58	CC	Character	1
59	BC	Character	1
60	MC	Character	1
61	WC	Character	1
62	JC	Character	1
63	OV1	Character	2
64	V1	Character	2
65	VM	Character	2
66	V94	Character	2
67	V95	Character	2
68	V96	Character	2
69	V97	Character	2
70	OVYR	Character	2
71	VYR	Character	2
72	N	Character	1
73	B	Character	1
74	A	Character	1

Code Definitions of 2016 MAPS Effort Data

Revised March 8, 2014

The information provided by this file includes: a) the dates within each period and sub-period the station was operated; b) which nets were run each day; c) the length of each net; d) the time each net was opened and subsequently closed; e) flags on nets that did not have a single opening and closing time; f) flags on nets run more often than normal within a period; and g) flags on years in which the season was delayed due to weather.

1. LOC: location code (identifies national forest, national park, military installation or other location where a single station or a set of stations is located and is run by a single operator). Location codes are unique.
2. STA: unique station number
- 3..STATION: four-character station code. A station is defined as a discrete study area consisting of a number of net sites. Station codes are unique within a location.
4. DATE: date the station was run (MM/DD/YYYY)
5. IP: intended period. Period in which the effort was intended to be completed (defined by date), with adjustments for weather and other eventualities. Periods 1-10 are the regular MAPS season. TMAPS can encompass any or all periods.
 - Period 1: May 01 - May 10
 - Period 2: May 11 - May 20
 - Period 3: May 21 - May 30
 - Period 4: May 31 - June 09
 - Period 5: June 10 - June 19
 - Period 6: June 20 - June 29
 - Period 7: June 30 - July 09
 - Period 8: July 10 - July 19
 - Period 9: July 20 - July 29
 - Period 10: July 30 - August 08
 - Period 11: August 09 - August 18 (only part of regular MAPS effort up through the 1996 MAPS season)
 - Period 12: August 19 - August 28 (only part of regular MAPS effort up through the 1996 MAPS season)
 - Period 13: August 29 - September 07
 - Period 14: September 08 - September 17
 - Period 15: September 18 - September 27
 - Period 16: September 28 - October 07
 - Period 17: October 08 - October 27
 - Period 18: October 28 - November 01
 - Period 19: November 02 - November 11
 - Period 20: November 12 - November 21
 - Period 21: November 22 - December 01
 - Period 22: December 02 - December 11
 - Period 23: December 12 - December 21
 - Period 24: December 22 - December 31
 - Period 25: January 01 - January 10
 - Period 26: January 11 - January 20
 - Period 27: January 21 - January 30
 - Period 28: January 31 - February 09
 - Period 29: February 10 - February 19
 - Period 30: February 20 - March 01
 - Period 31: March 02 - March 11

Period 32: March 12 - March 21
 Period 33: March 22 – March 31
 Period 34: April 01 - April 10
 Period 35: April 11 - April 20
 Period 36: April 21 - April 30
 "88" non-MAPS effort (use for MAPS data but not for TMAPS)

6. SP: sub-period. Used to designate the multiple days of operation in a period on which the station was run (ranked from A-J). The sub-periods are ranked according to: (1) whether at least 1/3rd the effort was completed within the sub-period; and (2) date. Blank for non-MAPS effort.
7. NET: up to 4-character original net designation (net in which bird was captured)
8. ANET: 2-character numeric net designation used in analyses, matching the ANET designations in the banding data file
9. LENGTH: length of the net relating to the standardized net length of 12m; used in the calculation of net hours; E.g 12m= 1.000, 9m = 0.750, 6m = 0.500, etc.
10. START: starting time of the first net run during which the net was opened, to the nearest ten minutes, e.g., 7:30 am=073
11. END: starting time of the net run during which the net was closed, to the nearest ten minutes, e.g., 11:32am=113
12. MAN: codes that designate any unusual running of the net that allows the computer programs to determine the comparability of effort between any two years.
 - B - broken effort. Effort for a net on **one** day where the hours of effort were broken into two or more time blocks. It involves both start1 and 2 and end1 and 2. (i.e. 060-072, 091-115)
 - # - divided effort. Effort for a net on multiple days (the number of days are entered into the field, i.e. 2, 3, etc.) required to make up the full effort for that period and sub-period. (e.g. May 05 060-090, May 06 090-120, Man=2)
 - ? - designates that ANET, START, or END lack full information and were compiled based upon the data available (usually a result of the protocol up to 1992).
13. MA: a designation (A) for use by the computer programs to indicate unusual net operation, i.e. broken, divided or questionable effort. Included in the year in which the unusual net operation occurred and in the corresponding record for the previous year (i.e. same intended period, sub-period, net) to indicate the unusual effort for the year after.
14. MB: a designation (B) for use by the computer programs to indicate unusual net operation, i.e. broken, divided or questionable effort. Included in the year in which the unusual net operation occurred and in the corresponding record for the following year (i.e. same intended period, sub-period, net) to indicate the unusual effort for the year before.
15. N: codes that designate whether or not the record is to be included in productivity or survivorship analysis. This field is comparable to the designation in the banding data. Effort marked with a code in the N field is not part of standard MAPS protocol.
 - O - effort from net not within the MAPS station boundary
 - S - effort from net within MAPS station boundary, but not a MAPS net
 - E - part of extremely irregular effort at site
 - D - date outside of MAPS periods, but a MAPS net
 - T - time outside normal MAPS operation for that station for that year, but a MAPS net and during the MAPS season

16. E: E indicates that the effort in the sub-period is **not completely** consistent with how the station was run throughout the MAPS season. This code is never assigned to effort from sub-period A. E.g. the station was operated three days a period except for one period in which it was operated only two days. Records for sub-period A and B would not receive an E designation but all records from sub-period C for the year would.
17. YEAR: year the station was run.
18. SHIFT: the number of periods the breeding, and hence MAPS, season was delayed due to extreme weather conditions.
19. DELAY: the average delay between the start of the net run and the time recorded on the banding data sheet

Structure for 2016 MAPS Effort Data

Field	FieldName	Type	Width	Dec
1	LOC	Character	4	
2	STA	Numeric	5	
3	STATION	Character	4	
4	DATE	Date	8	
5	IP	Character	2	
6	SP	Character	1	
7	NET	Character	4	
8	ANET	Character	2	
9	LENGTH	Numeric	4	2
10	START	Character	3	
11	END	Character	3	
12	MAN	Character	1	
13	MA	Character	1	
14	MB	Character	1	
15	N	Character	1	
16	E	Character	1	
17	YEAR	Numeric	4	
18	SHIFT	Character	1	
19	DELAY	Character	2	

Code Definitions of 2016 MAPS Breeding Status Data

Revised March 8, 2014

For each species at each station, the file includes a period by period determination of species activity and a year by year determination of its breeding status. The file also provides information regarding the years during which at least one individual of each species was captured, because a species can be determined to be breeding at a station during a given year even if it was not captured.

1. LOC: location code (identifies national forest, national park, military installation or other location where a single station or a set of stations is located and is run by a single operator). Location codes are unique.
2. STA: unique station number
3. STA2: super-station number (indicates whether or not the station center is in close enough proximity [within 1350m] to the centers of one or more other stations for them to be grouped together as a super-station for survivorship analyses). The super-station number is the lowest station number + "S" for groups of two or more stations or is represented by six dashes ("-----") for ungrouped single stations. Groups of stations for which the proximity of the station centers to one another are not exactly known because of imprecise latitude and longitude coordinates the number is the lowest station number + "?" for groups of two or more stations.
4. STATION: four-character station code. A station is defined as a discrete study area consisting of a number of net sites. Station codes are unique within a location.
5. SSN: species sequence number
A unique sequence number created by the Institute for Bird Populations to place species into current taxonomic order as per the AOU.
6. NUMB: species number
A sequence number created by the Institute for Bird Populations to place species into taxonomic order according to AOU 2008. Some taxa are merged with others and given a single species number for analyses as the species cannot be reliably separated in the hand. These are:
11475 - Traill's Flycatcher (includes Alder, Willow, and Traill's)
11555 - Western Flycatcher (includes Pacific-slope, Cordilleran, and Western)
7. SPEC: four-letter species alpha code. Four-letter species alpha codes from "Four-letter and six-letter alpha codes for birds recorded from the American Ornithologists' Union check-list area" (Pyle and DeSante 2003, 2005, 2007, 2009) are used for all data from 2003 and subsequent years rather than the coding system given in Pyle (1997) and used by the BBL. Very few discrepancies that are likely to be encountered by banders exist between the two lists; the most notable is the use of "TUTI" by Pyle and DeSante (2003, 2005, 2007, 2009) instead of "ETTI" by the BBL for Tufted Titmouse (formerly Eastern Tufted Titmouse). All discrepancies are listed in Appendix 1 of Pyle and DeSante (2003, 2005, 2007, 2009). The Pyle and DeSante (2003, 2005, 2007, 2009) system reflects updated AOU taxonomy. Codes for gallinaceous species and certain taxa not identified to species were developed by IBP in conjunction with general usage (birds recorded with these species determinations should not be banded, unless proper permits are available).
8. YR: year
- 9-32. Period Specific Breeding Status codes. The status of each species as encountered during each period of operation

9. PS1: period breeding status code for period 1 (May 01 - May 10)
C - confirmed breeder; information found during this period confirms the species as a breeder for the season
P - probable breeder; information found during this period suggests, but does not confirm a species as a breeder:
O - observed; information found during this period indicates the species was detected, but displayed no evidence of local breeding
- - absent; the species was not encountered during this period
10. SB1: daily behavior sub-code. Each sub-code is assigned to a specific period breeding status code and is the supporting evidence for assigning that period breeding status code.
Sub-codes for period breeding status code = C
N - current year's nest found in the study area with eggs or young, in the process of being built, or already depredated or abandoned
M - adult seen gathering or carrying nesting material to a likely nest site in the study area
F - adult seen carrying food or fecal sac to or from a likely nest site in the study area
D - distraction display or injury feigning by an adult bird
L - a young bird incapable of sustained flight (a "local") captured in the study area; or very young (stub-tailed) fledglings found being fed by parents in the study area
Sub-codes for period breeding status code = P
C - copulation or courtship observed of a species within its breeding range
T - other territorial behavior observed in the study area
S - territorial song or drumming heard
Sub-codes for period breeding status code = O
B - bird captured or banded. NOTE: The presence of a brood patch or cloacal protruberance on a single individual is not valid evidence of local breeding
E - bird encountered (seen or heard) in the study area but with no territorial behavior
O - bird encountered flying over the study area.
Z - bird both captured/banded and encountered in, or flying over, the study area.
11. PS2: period breeding status code for period 2 (May 11 - May 20)
Same codes as PS1
12. SB2: daily behavior sub-code.
Same codes as SB1
13. PS3: period breeding status code for period 3 (May 21 - May 30)
Same codes as PS1
14. SB3: daily behavior sub-code.
Same codes as SB1
15. PS4: period breeding status code for period 4 (May 31 - June 09)
Same codes as PS1
16. SB4: daily behavior sub-code.
Same codes as SB1
17. PS5: period breeding status code for period 5 (June 10 - June 19)
Same codes as PS1
18. SB5: daily behavior sub-code.
Same codes as SB1
19. PS6: period breeding status code for period 6 (June 20 - June 29)
Same codes as PS1

20. SB6: daily behavior sub-code.
Same codes as SB1
21. PS7: period breeding status code for period 7 (June 30 - July 09)
Same codes as PS1
22. SB7: daily behavior sub-code.
Same codes as SB1
23. PS8: period breeding status code for period 8 (July 10 - July 19)
Same codes as PS1
24. SB8: daily behavior sub-code.
Same codes as SB1
25. PS9: period breeding status code for period 9 (July 20 - July 29)
Same codes as PS1
26. SB9: daily behavior sub-code.
Same codes as SB1
27. PS10: period breeding status code for period 10 (July 30 - August 08).
Same codes as PS1
28. SB10: daily behavior sub-code.
Same codes as SB1
29. PS11: period breeding status code for period 11 (August 9 - August 18). Only part of regular MAPS effort up through the 1996 MAPS season.
Same codes as PS1
30. SB11: daily behavior sub-code.
Same codes as SB1
31. PS12: period breeding status code for period 12 (August 18 - August 28). Only part of regular MAPS effort up through the 1996 MAPS season.
Same codes as PS1
32. SB12: daily behavior sub-code.
Same codes as SB1
33. YS: Year Specific Breeding Status codes.
 - B - breeder (at least one individual was a summer resident at the station)
 - L - likely breeder (at least one individual was a suspected summer resident at the station)
 - T - transient (station is within the breeding range of the species, but no individual of the species was a summer resident at the station)
 - A - altitudinal disperser (species breeds only at lower elevations than that of the station and which disperses to higher elevations after breeding)
 - H - high altitudinal disperser (species breeds usually designated an altitudinal disperser. However, has resided during the height of the breeding season (not just during the post-breeding period) in a given year above its normal breeding elevation.
 - M - migrant (station is not within the breeding range of the species, and the species was not a summer resident)
 - E - extralimital breeder (one or more individuals of the species was a summer resident at the station, but the station lies outside of the normal breeding range of the species)

- - absent (no evidence of species in data; presumably absent from station during year in question)
- ? - uncertain species identification or band number (no breeding status assigned)
- # - station operated this year, but breeding status determinations were not made for species that were not captured; used only for species without capture records
- D - the species was only encountered at the station outside of the MAPS season, but the station lies within breeding range of the species.
- W - the species was only encountered at the station outside of the MAPS season, and the station lies outside of the breeding range of species.
- @ - the Breeding Status List is missing or incomplete for these species this year.

34. B: presence of banding data. Banding data is cross-referenced to determine species captured in this particular year.
- X - species was captured
 - R - species was not captured, but breeding status information was recorded on a breeding status list, a point count form, etc.
 - " " - blank, species was not captured

Structure for 2016 MAPS Breeding Status Data

Field	Field Name	Type	Length
1	LOC	CHARACTER	4
2	STA	NUMERIC	5
3	STA2	CHARACTER	6
4	STATION	CHARACTER	4
5	SSN	NUMERIC	5
6	NUMB	CHARACTER	5
7	SPEC	CHARACTER	4
8	YR	NUMERIC	4
9	PS1	CHARACTER	1
10	SB1	CHARACTER	1
11	PS2	CHARACTER	1
12	SB2	CHARACTER	1
13	PS3	CHARACTER	1
14	SB3	CHARACTER	1
15	PS4	CHARACTER	1
16	SB4	CHARACTER	1
17	PS5	CHARACTER	1
18	SB5	CHARACTER	1
19	PS6	CHARACTER	1
20	SB6	CHARACTER	1
21	PS7	CHARACTER	1
22	SB7	CHARACTER	1
23	PS8	CHARACTER	1
24	SB8	CHARACTER	1
25	PS9	CHARACTER	1
26	SB9	CHARACTER	1
27	PS10	CHARACTER	1
28	SB10	CHARACTER	1
29	PS11	CHARACTER	1
30	SB11	CHARACTER	1
31	PS12	CHARACTER	1
32	SB12	CHARACTER	1
33	YS	CHARACTER	1
34	B	CHARACTER	1