

MAPS BANDING CODES - 2026

Skull Pneumatization

- 0 - None; single pinkish layer.
- 1 - Trace at very back of skull; 1-5% of total area.
- 2 - 6-33% at back; distinct contrast; whitish dots.
- 3 - 34-66%; rear half and some of the front, midline, and sides.
- 4 - 67-94%; two oval red spots on either side of the cranium - rest completed.
- 5 - 95-99%; two tiny pinkish spots. (Some birds stay at class 5.)
- 6 - Complete, fully pneumatized.
- 8 - Skull examined, but the degree of pneumatization is not determinable.

Cloacal Protuberance

- 0 - Cloaca not enlarged.
- 1 - Small (conical; wide at base, narrow at tip.)
- 2 - Medium (cylindrical; as large at tip as at base.)
- 3 - Large (bulbous; larger at tip than at base.)

Brood Patch

- 0 - None present, breast feathered.
- 1 - Feathers dropped, skin smooth and dark red; some vascularization.
- 2 - Skin vascularized and wrinkled, fluid present.
- 3 - Vascularization is extreme, skin wrinkled, and there is much fluid.
- 4 - Wrinkled skin, thin and dry; vascularization and fluid are mostly gone.
- 5 - Vascularization, fluid, and wrinkles gone; pinfeathers appearing.

Fat

- 0 - No fat anywhere.
- 1 - Furcular hollow less than 5% full.
- 2 - Furcular hollow 5-33% full.
- 3 - Furcular hollow about half full (34%-66%).
- 4 - Furcular hollow full, 67%-100%, fat thick in wingpits and on abdomen.
- 5 - Fat bulging above furcular hollow, in wingpits, and on abdomen.
- 6 - Fat is greatly bulging in all areas.
- 7 - Excessive; fat nearly joined from all areas.

Body Molt

- 0 - None.
- 1 - Trace: a few feathers anywhere on the body.
- 2 - Light: a number from any individual tract.
- 3 - Medium: a number from several tracts or most of the head.
- 4 - Heavy: more than half from most tracts; more than ½ of the body.

Flight-feather Molt

(primaries and secondaries (not tertials or tail)

Most species do not molt juvenile flight feathers. Check Pyle 1997 for each species. The code "S" essentially means "flight-feather molt occurring" - It may not always be exactly symmetrical

- N - None.
- A - Adventitious, accidental, asymmetric.
- S - Full, normal symmetric molt.
- J - Growth of juvenile (1st-generation) flight feathers.

Flight-feather Wear

(outer four primaries; not rectrices)

- 0 - None; light feather edges remain.
- 1 - Very slight edge wear; no fraying or nicks.
- 2 - Slight; definitely worn but very little fraying, very few nicks.
- 3 - Moderate; definite fraying and nicks; chips along vanes.
- 4 - Heavy; feathers worn and frayed, tips missing.
- 5 - Excessive; extreme wear, shafts exposed beyond vanes, tips broken off.

Juvenile Body Plumage

(include body feathers only; not wing feathers)

- 3 - Juvenile plumage growing in or full.
- 2 - In preformative molt, more than half of the juvenile plumage remains.
- 1 - In preformative molt, less than half of the juvenile plumage remains.
- 0 - None; no juvenile plumage remaining.

Molt Limits & Plumage

Unless a tract, with the exception of the body, is completely composed of alternate feathers, alternate feathers are ignored.

- J - Juvenile; feather tract comprised entirely of retained juvenile feathers or non-feathered body part shows characteristics indicative of a young bird
- L - Molt limit; molt limit between juvenile 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 juvenile and basic feathers are present within the tract (typically with woodpeckers only)
- M - Mixed; multiple generations of basic feathers are present in the tract (typically with woodpeckers only)
- A - Alternate; ALL feathers in the tract are of alternate plumage; exception - if some of the body feathers are alternate, then the BPL column should be scored A.
- N - definitely not juvenile feathers, but whether or not they are formative or basic feathers cannot be determined with confidence
- U - Unknown; feather tract or non-feathered body part examined, but shows ambiguous characteristics or cannot be coded with confidence

Status (more status codes online at BBL website)

- 300 - Normal, healthy, banded bird.
- 301 - Healthy, color-banded bird.
- 318 - Blood sample taken; healthy, banded bird.
- 325 - Radiotag/GPS; healthy, banded bird.
- 500 - Banded but injured or diseased.
- 700 - Held over 24 hours for observation or rehabilitation.
- 000 - Unbanded or dead.

Disposition

- M - Malformed (deformity such as crossed mandibles).
- O - Old (healed) injury.
- I - Ill (diseased).
- X - Ectoparasite.
- S - Stress or shock.
- E - Eye injury.
- W - Wing injury.
- B - Body injury.
- L - Leg injury.
- T - Tongue injury.
- D - Dead (or permanently removed).

Feather Pull

- O - two Outer rectrices
- I - one Inner and one outer rectrix

WRP – Wolfe-Ryder-Pyle Ageing codes (2022 update)

The first of the three characters indicates the cycle:

- F - first cycle
- S - second cycle
- T - third cycle – used mostly for woodpeckers for MAPS purposes
- 4 - fourth cycle – not typically used for MAPS purposes
- D - definitive cycle
- U - unknown cycle

The second of the three characters indicates the molt status:

- C - mid-cycle, no molting feathers on bird
- P - bird in molt
- U - unknown

The third of the three characters indicates the plumage the individual is or into which it is molting:

- J - juvenile plumage, distinguished from definitive basic plumage as the first generation of feathers (after down)
- F - formative plumage
- A - alternate plumage
- B - basic plumage
- X - auxiliary formative
- U - unknown plumage

An adjunct code – placed before the three-character core code –to indicate when the core code cannot be specifically defined.

M - at minimum

H or A- specific to FCF. To separate HYs (H) and SYs (A) for species with no prealternate molt

The most common codes used during MAPS:

- FPJ - First prejuvenile molt, molting into juvenile plumage.
- FCJ - First cycle juvenile plumage, in full juvenile plumage, only juvenile feathers are present.
- FPF - First preformative molt, molting into formative plumage.
- FCF - First cycle formative plumage, in full formative plumage, has a mixture of juvenile and formative feathers.
 - H-FCF – HY bird in FCF plumage
 - A-FCF – SY bird in FCF plumage
- M-FCF - Minimum first cycle formative or unknown plumaged adults.
- FPA - First prealternate molt, molting into first alternate plumage.
- FCA - First cycle alternate plumage, full alternate plumage, a mixture of juvenile, formative and alternate feathers.

M-FCA - Minimum first cycle alternate

SPB - Second prebasic molt, molting into definitive basic plumage. During this portion of the molt, must retain some juvenile, formative or first alternate feathers as contrast to the new basic feathers.

M-SPB - Minimum second pre-basic molt

DCB - Definitive cycle basic plumage, full basic plumage.

DPA - Definitive prealternate molt, molting into definitive alternate plumage.

DCA - Definitive cycle alternate plumage, full alternate plumage, a mixture of basic and alternate feathers.

DPB - Definitive prebasic molt, molting into definitive basic plumage. During this portion of the molt, must retain at least some worn definitive basic and/or definitive alternate feathers as contrast to the newly replaced basic feathers.

UCU - Unknown cycle unknown plumage.

Less common codes:

SCB - Second cycle basic plumage, basic plumage with a few retained juvenile feathers. This code will most likely be used only for woodpeckers during MAPS banding.

TPB - Third prebasic molt, molting into definitive basic plumage. During this portion of the molt, must retain at least some juvenile and prior generation basic feathers as contrast to the newly replaced basic feathers.

TCB -Third cycle basic plumage, the individual is in basic plumage with a few retained prior generation basic feathers. This code will most likely be used only for woodpeckers during MAPS banding.

FCU, DCU, UPB, UPU, and UUU can be used when insufficient information is available for ageing but these should be used infrequently.