

How to identify juvenile Harlequin Ducks

Cyndi M. Smith (E-mail: cyndi.smith9@gmail.com)

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Reproductive success is a key demographic driver for avian populations. To study or track reproductive success, though, researchers and managers must be able to differentiate young birds from adult birds. This can be difficult for many species as the young often look very similar to the adult, as is the case with Harlequin Ducks.

The following descriptions are based on over 25 years of experience observing, capturing and banding Harlequin Ducks on breeding streams in Banff National Park and Kananaskis Country, AB, and Glacier National Park, MT, and at coastal moulting and wintering areas in the Salish Sea and Strait of Georgia, BC.

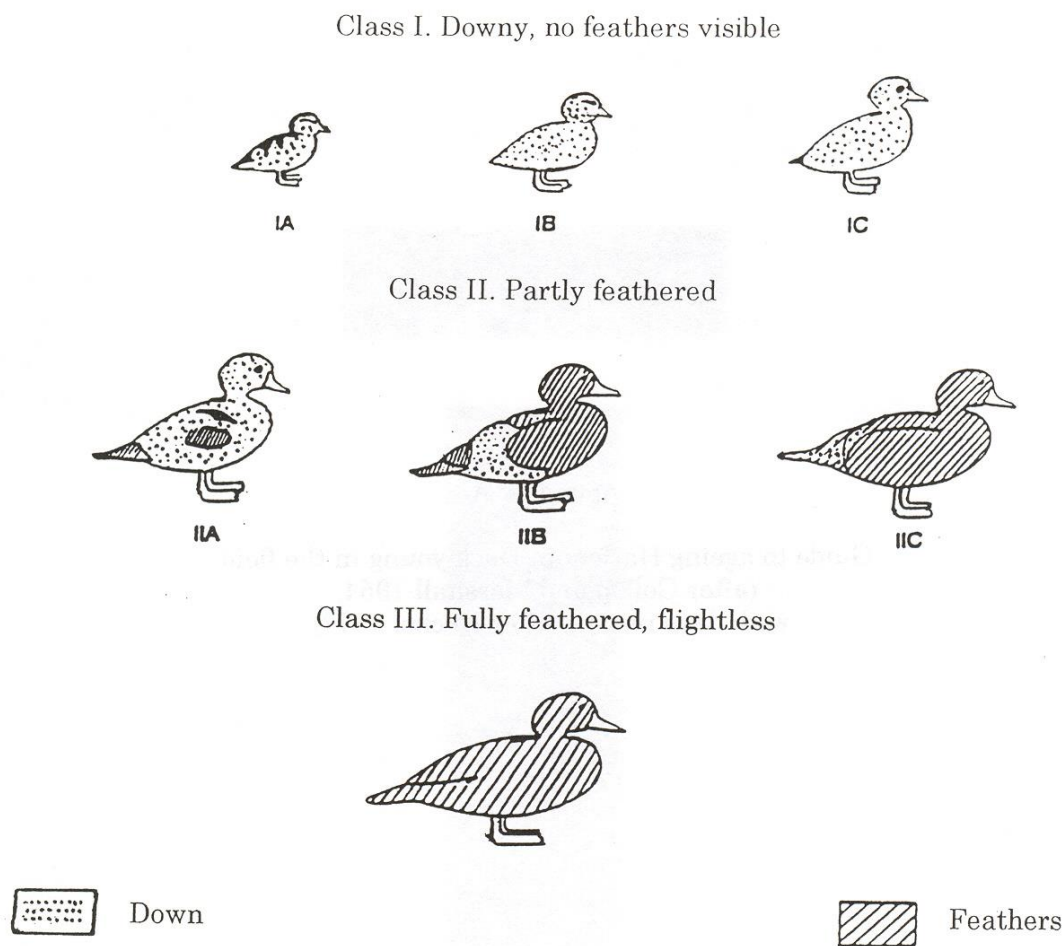
Gollop and Marshall (1954) developed one of the first field guides to ageing ducklings in general. This was adapted by Kuchel (1977) for Harlequin Ducks, and further refined (Fig. 1) using unpublished data I obtained by following known-aged broods (the females had radio transmitters). Younger ducklings are quite easy to identify, although they can be confused with goldeneye ducklings (Fig. 2). Figures 3, 4 and 5 show subsequent age classes up to class 2c, in chronological order.

Fully feathered, flightless, class 3 ducklings, though, are harder to differentiate from the adult female. They are, of course, easiest to identify in the hand, but with experience you can identify most fully fledged ducklings with a spotting scope. The breast and head colouring is usually darker in ducklings than in the adult female (Fig. 6); duckling wing and tail feathers are darker and fresher than the worn feathers of the adult female (Fig. 7); the duckling tail may still have a few downy tips, or simply have bare shafts where the down has broken off (Fig. 8), and; duckling legs and toes are yellowish-olive while adult ones are grayish (Fig. 9).

It is also important to observe the behaviour of the group of ducks – the adult female is generally the most vigilant, often with her head up and scanning around for danger while the ducklings are obviously feeding or loafing. Newly fledged ducklings are often reluctant to fly and, when they do, often do not fly as far as the adult female.

By late September some male ducklings start to moult some of the feathers that result in the distinct adult male plumage (Smith et al 1998), particularly in the extended loreal patch on the face, the crown stripe and white tertial feathers (Pyle 2008). Some individuals may be more advanced in plumage development than others at the same time of year (Fig. 10), depending on hatch date, which can vary by 8-10 weeks between coastal breeding streams and those in the Rocky Mountains.

Figure 1. Guide to ageing Harlequin Duck young in the field (after Gollop and Marshall 1954, with days in class after Kuchel 1977).



CLASS I
Downy Young

- a) Bright ball of fluff (1-7 days)
Colours bright. Patterns distinct. Body rounded; neck and tail not prominent.
- b) Fading ball of fluff (8-14 days)
Brightness fading, patterns less distinct. Body still rounded; neck and tail are not yet prominent.
- c) Gawky-downy (15-21 days)
Down colour and patterns faded. Neck and tail becomes prominent. Body becomes long and oval.

CLASS II
Partly Feathered

- a) First feathers (22-26 days)
First feathers show on side under ideal field conditions. Stays in this class until side view shows one-half of side and flank feathered.
- b) Mostly feathered (27-39 days)
Side view shows half or more of side and flank feathered. Primaries break from sheaths. Stays in this class until side view shows down in one or two areas only (eg., nape, back, or upper rump).
- c) Mostly feathered (40-46 days)
Almost fully feathered, with down on rump.

CLASS III
Fully Feathered

- Feathered-flightless (>46 days)
No down visible. Primaries completely out of sheaths but not fully developed. Stays in this class until capable of flight. Wing and tail feathers very dark compared to those of the female. Legs yellowish compared to female's grayish legs.



Figure 2. Class 1a ducklings (1 day old) leaving the nest with female. Just little black-and-white fluffballs. Photo: Glacier National Park, MT.



Figure 3. Class 2b duckling – 28 days old. (A) Side view shows half or more of side and flank feathered. (B) Primaries break from sheaths in this class.



Figure 4. Class 2b ducklings (30 days old). Female (with radio transmitter antennae extending over her back) is still larger than the juveniles.



Figure 5. Class 2c ducklings (40 days old). Ducklings are almost fully feathered, with down only on the rump. Note that the female (2nd from right) is alert, head up, while the young are feeding.



Figure 6. Class 3 duckling on the left; adult female on the right. Note overall darker colouring of the duckling, especially in the upper breast (wavy pattern called vermiculations). Lorale patch (in front of eye) is generally duskiest in ducklings, and lighter in the adult female.



Figure 7. Class 3 duckling on the left, adult female on the right in both photographs. Note the colour/texture difference, and contrast with the body feathers, between the fresh wing feathers (A) and tail feathers (B) of the duckling compared to those of the adult. The female won't moult her old, worn feathers until she returns to the coast with her brood.



Figure 8. (A) As the rectrices grow in on a duckling, sometimes you will still find downy feathers attached at the tip. (B) But as time goes on, that downy tip drops off and each rectrix will be left with a bare shaft at the tip. During the next moult, the duckling will grow a full adult tail.



Figure 9. The adult female's legs and toes are grayish (right), while ducklings have yellowish legs and toes (left). This difference may extend through the first winter. Photo: www.johnashleyfineart.com.



Figure 10. Two different male ducklings in November of their hatch year, showing how variable the plumage changes can be. Adult male on far right.

Acknowledgements

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References

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