



Image from: [The structure of a bird's feather \(A\) shows how... in Philip's Encyclopedia](#)

Summary Article: **feather**

From *The Hutchinson Unabridged Encyclopedia with Atlas and Weather Guide*

Rigid outgrowth of the outer layer of the skin of birds, made of the protein keratin. Feathers provide insulation and facilitate flight. There are several types, including long quill feathers on the wings and tail, fluffy down feathers for retaining body heat, and contour feathers covering the body. The colouring of feathers is often important in camouflage or in courtship and other displays. Feathers are normally replaced at least once a year.

There is an enormous variation between species in the number of feathers; for example a whistling swan has over 25,000 contour feathers, whereas a ruby-throated hummingbird has less than 950.

Feathers generally consist of two main parts, axis and barbs, the former of which is divided into the quill, which is bare and hollow, and the shaft, which bears the barbs. The quill is embedded in the skin, and has at its base a small hole through which the nourishment passes during the growth of the feather. The barbs which constitute the vane are lath-shaped and taper to a point, and each one supports a series of outgrowths known as barbules, so that each barb is like a tiny feather. Adjacent barbs are linked to each other by hooks on the barbules.

Many feathers have an 'aftershaft' or second shaft springing from the underside near where the quill passes into the true stem. This is usually small, but in some birds, such as the cassowary and emu, the aftershaft is as large as the mainshaft.

**APA**

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## APA

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## Chicago

"feather." In *The Hutchinson Unabridged Encyclopedia with Atlas and Weather Guide*, edited by Helicon. Helicon, 2018. <https://search.credoreference.com/content/topic/feather>

## Harvard

Feather. (2018). In Helicon (Ed.), *The Hutchinson unabridged encyclopedia with atlas and weather guide*. [Online]. Abington: Helicon. Available from: <https://search.credoreference.com/content/topic/feather> [Accessed 15 November 2019].

## MLA

"feather." *The Hutchinson Unabridged Encyclopedia with Atlas and Weather Guide*, edited by Helicon, 2018. *Credo Reference*, <https://search.credoreference.com/content/topic/feather>. Accessed 15 Nov. 2019.