

Feathers

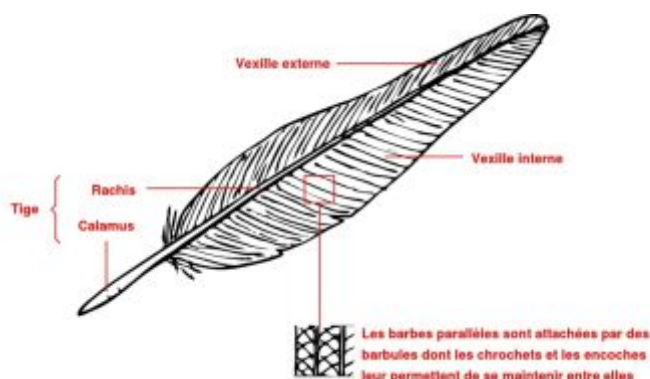


Figure 1. The feather is a phanera like fingernails, but it has evolved to provide three functions: insulation, flight and demonstration (e.g. in displays or advertising). [Source: https://www.federn.org/bestimmung_fr.html; GNU license]

The feather is a complex structure made, like the nails and part of the beak, of keratin and composed of a pipe (the calamus), planted in the epidermis and extended by a **rachis which is** the central axis of the feather. On both sides of the rachis are the **vexillae**, each of which is made of rows of barbs composed of hundreds of **barbules** which are linked to one another by thousands of barbicelles, tiny hooks that look like small hooks that ensure the cohesion of the whole vexilla (Figure 1).

Modern birds have **seven types of feathers** whose morphology depends on the function they perform: vibrissae, filoplumes, down, and four types of closed, rigid feathers (Figure 2).

The latter are the semi-feathers, contour feathers, remiges and rectrices, the latter two being the functional instruments of flight itself. Most of the others have a protective, insulating or demonstrative function except for the vibrissae, which are sensory organs located around the beak that facilitate prey location.

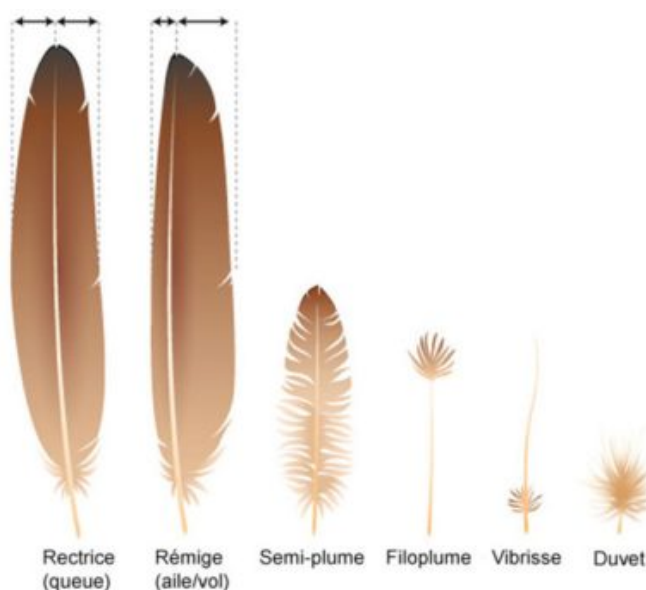


Figure 2. The various types of feathers. [Source Anaxibia, CC BY-SA 3.0, via Wikimedia Commons]

Notes & References

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