

The ratio between wing length and body mass in birds with different flight styles and types of development

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Relationship between flight style (continuous flapping, flapping and soaring, flapping and gliding and passerine-type flight) and development modes of birds (precocial, semi-precocial-semi-altricial, altricial) was explored. The sample consists of 192 species of birds.

It was determined a high degree of correlation between the flight styles and type of development of birds. Birds with altricial development mode use mainly passerine-type flight, precocial birds use continuous flapping flight and birds with semi-precocial-semi-altricial development mode use mainly continuous flapping flight and flapping and soaring.

RMA analysis result suggests that if the body mass increases wing length to body mass ratio (L/m) decreases. This indicates the load on the wing increases with increasing body weight of birds.

Flight styles connecte with the degree of wing loading of birds. Birds with altricial development mode and passerine-type flight have the least wing loading and birds with precocial and semi-precocial-semi-altricial development mode that have moved to soaring have the greatest wing loading.

Flight style, wing loading, type of development of birds