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Question no. :- 69 Flight Adaptation of Birds
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karne...?

Answer :- Bird Flight :-

Bird flight is the primary mode of locomotion used by most bird species in which birds take off and fly. Flight assists with feeding, breeding, avoiding predators, and migrating.

Bird flight is one of the most complex forms of locomotion in the animal kingdom. Each facet of this type of motion, including hovering, taking off, and landing, involves many complex movements. As different bird species adapted over millions of years through evolution for specific environments, prey, predators, and other needs, they developed specializations in their wings, and acquired different forms of flight.

Various theories exist about how bird flight evolved, including flight from falling or gliding (the trees down hypothesis), from wing-assisted incline running or from prowis (pouncing) behaviour.

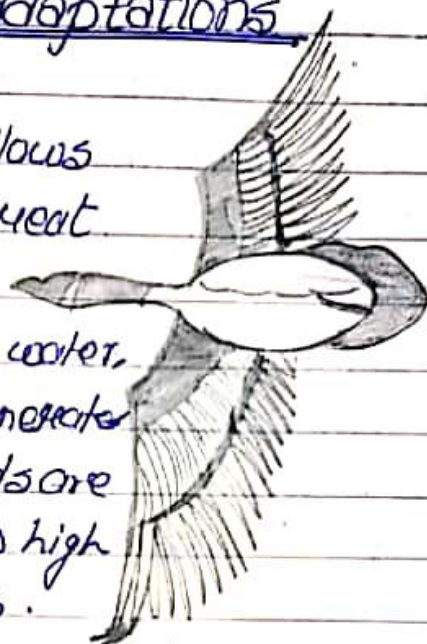
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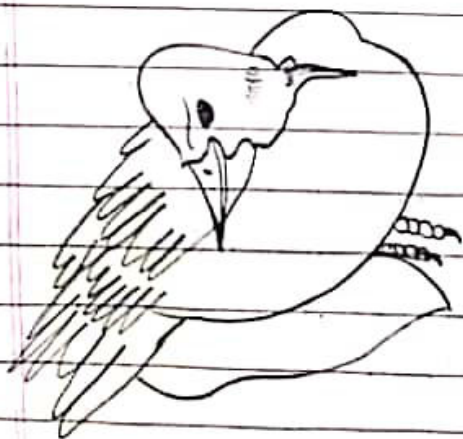


Bird Adaptations

The ability to fly allows birds to cover great distances in the search for food and water. And because flight generates a lot of heat, birds are naturally adapted to high body temperatures.



Flight also enables a bird to leave areas of extreme hot or cold temperatures and move to a more temperate climate.



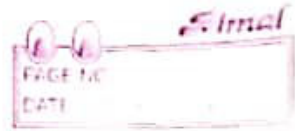
Feathers also play a part in insulating birds from the heat of the sun.

Some birds dissipate heat absorbed from their surroundings. Owls and night hawks gape open-mouthed while rapidly fluttering their throat region to evaporate water from their mouth cavities.



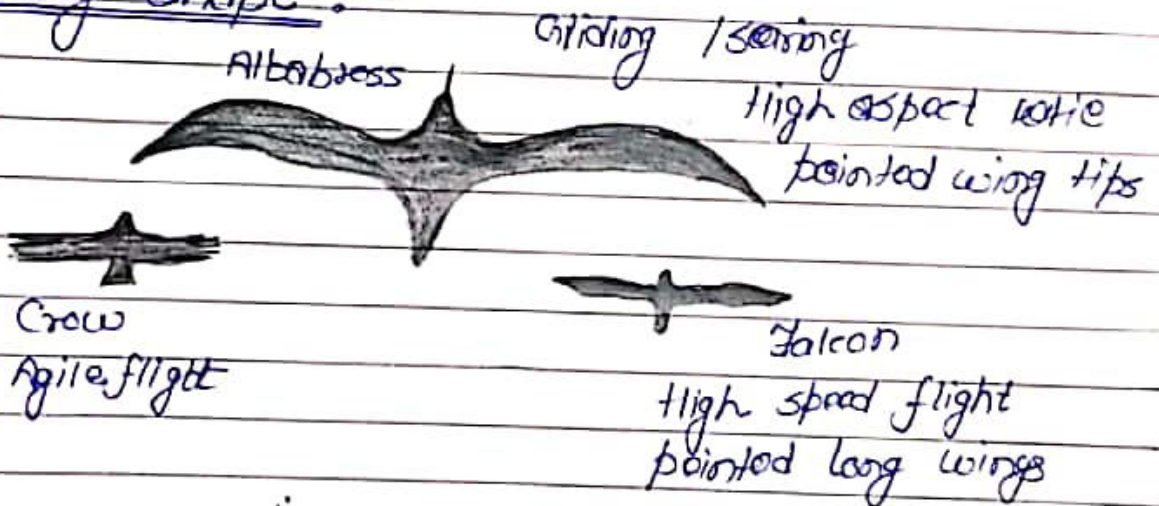
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Many birds are active primarily at dawn and within a few hours of sunset, retiring to a cool, shady spot for the remainder of the day.

Wing shape :-



Wing shapes

The shape of the wing is important in determining the flight capabilities of a bird. Different shapes correspond to different trade-offs between advantages such as speed, low energy use and maneuverability. Two important parameters are the aspect ratio and wing loading. Aspect ratio is the ratio of wingspan to the mean of its chord (or the square of the wingspan divided by wing area).

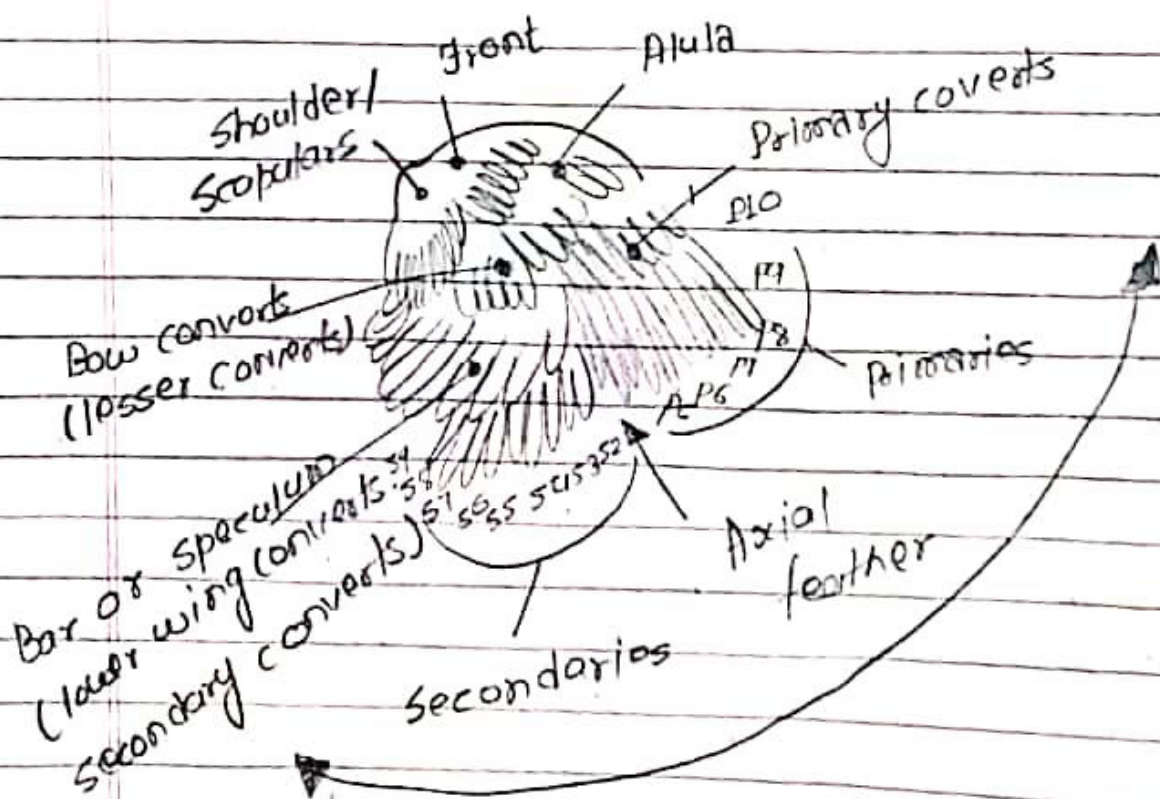
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High Speed Wings :-

High speed wings are short, pointed wings that when combined with a heavy wing loading and rapid wingbeats provide an energetically expensive, but high speed. This type of flight is used by the bird with the fastest wing speed, the peregrine falcon, as well as by most of the ducks. The same wing shape is used by the ducks for a different purpose; ducks use their wings to "fly" underwater.



Bird Flight