

Bird Conservation Society of Gujarat

Flight of Birds



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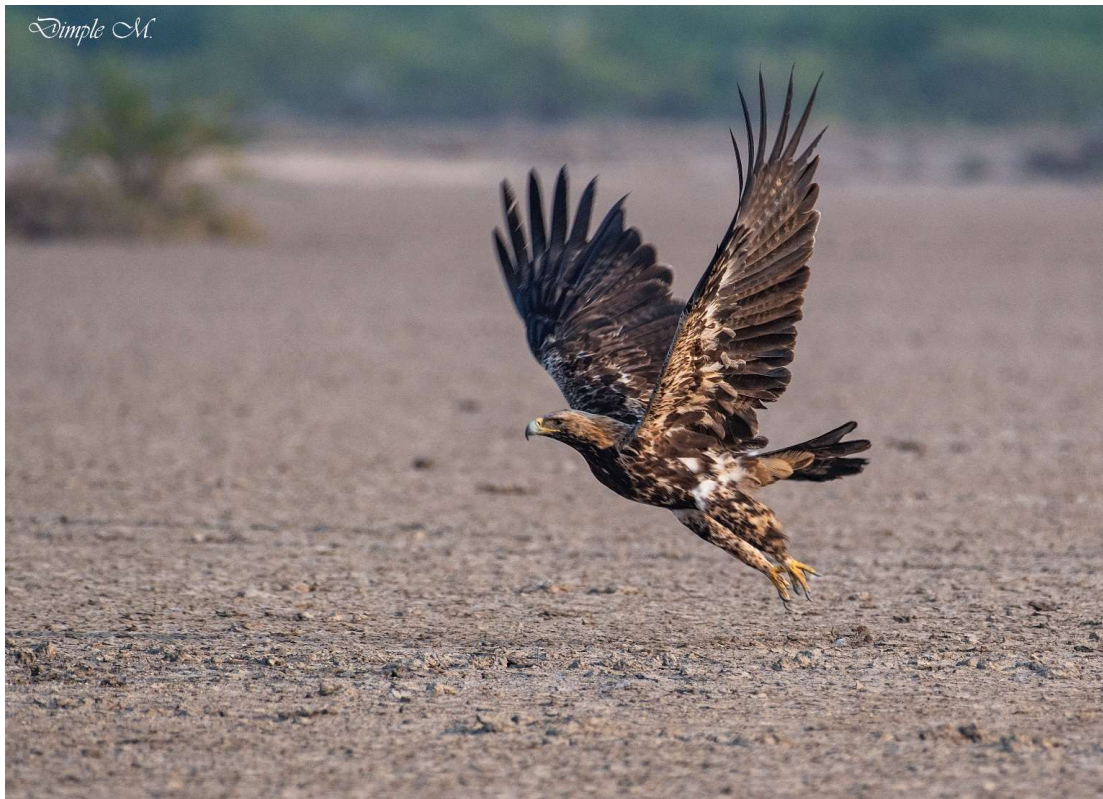
Why birds can fly??

- Wings
- Feathers
- Hollow bones
- Lack of teeth and jaws
- Efficient respiratory system
- High metabolic rate which increases their ability to convert energy to flying power



How do birds start flight??

- Small birds simply flap their wings
- Larger birds have to generate forward motion by running



How long in the air??

- Variable. Depends on species.
- Swifts and albatrosses are known to spend longer periods in air
- Swifts can feed, sleep or even copulate in flight



At what height??

- Depends on species: Just above sea level to several thousand meters
- Most of the birds seldom have any cause to rise above 500 meters or so
- Swans, geese and vultures have been recorded flying at jet airline heights
- Bar headed geese: recorded at 30000 feet (Over Mount Everest)



Wing Loading

- Decided by wing area and the weight.
- If more wing area in proportion to weight, less wing loading. E.g. Vultures: They are able to fly for longer periods without flapping wings
- If less wing area in proportion to weight. E.g. Pigeon: They have to flap wings constantly



Different Flight Techniques

- Gliding
- Soaring
- Hovering



Gliding

- Using outstretched wings in order to travel forward without flapping
- E.g. Sparrowhawk, Kite



Soaring

- Gliding in a circling pattern using thermals or air currents to gain and maintain lift
- Conserves energy
- E.g. Eagles, Vultures, storks



Howering

- Flapping wings very rapidly in order to stay at one place for short period of time
- E.g. Kestrels, Kingfishers, Hummingbirds



Flying in a flock

- To concentrate on food source. E.g. Vultures, Pelicans
- Reduces chances of being attacked by predator
- Helps in migration especially young birds



Flying in V formation

- To reduce wind resistance
- Birds taking turns in the lead position



Can birds fly backwards??

- No
- Exception: Hummingbirds



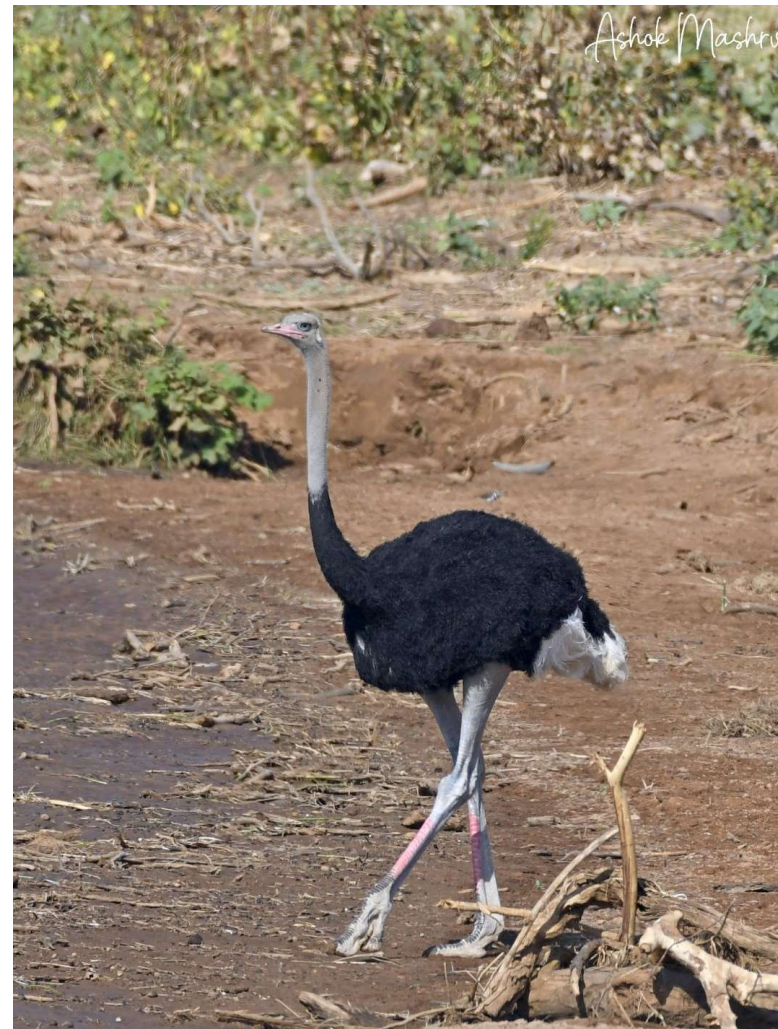
Flight Speed

- Most of the smaller birds: 25-40 km/h
- Larger birds: 40-75 km/h
- World's fastest flying bird is Peregrine Falcon: 180km/h during its stooping dive



Flightless birds

- Ostrich
- Emu
- Kiwi
- Cassowari
- Penguins



Acknowledgements

- www.clipart-library.com
- Everything you wanted to know about birds but were afraid to ask by Stephen Moss



