HOW DO BIRDS FIND THE WAY?

Many speculations have been put forward from time to time as to how migratory birds orientate themselves. FLYING MIGRANTS maintain their course from the angle the sun makes with the earth at the appropriate season, while nocturnal migrants are guided by the major constellations of stars. Probability is lent to these findings by the commonly observed fact that in cloudy weather when the sky remains obscured for prolonged periods migrating birds often lose their way. Migratory birds also use two electromagnetic tools to find their destinations: one that is entirely innate and another that relies on experience.

VELOCITY

OF MIGRATORY FLIGHT

The average cruising speed of ducks and geese, for instance, has been found to be between 65 and 80 km per hr. or slightly more. A bird's flying day (or night) ranges from 6 to 11 hours.

THE USEFULNESS OF BIRD

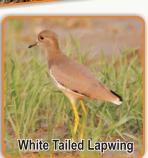
It has been said that birds could exist without man but that man would perish without birds.

Uses of the Birds in ecosystem are:

- **★** As destroyers of insect pests
- ★ As destroyers of other vermin
- **★** As scavengers
- * As flower pollinator
- **★** As seed dispersers
- **★** Edible Birds' nests









BIRD WATCHING AT SUKHNA LAKE

Sukhna wetland is an excellent habitat for the avian and aquatic birds. A large no of birds are present in and around the lake round the year. Birds at the lake can be witnessed in large number from October – March, when a variety of Migratory birds joins the resident birds.

Department of Forest, provides following facilities for the birders at the regulatory end of the Sukhna Lake.

- **★** Spotting Scopes
- **★** Binoculars
- **★** Field Guides for Bird Identification
- Self-Explanatory Illustrative Boards regarding Birds, their habitat, Migration etc.



TIMINGS

From October to March (Tentative)
07:00 am to 09:30 am & 02:30 pm to 05:00 pm

BIRDING TIPS

- You need a Field guide.
- A Binocular.
- Checklist of birds in your area.
- Learn about the habitat of bird.
- Join a group of other Birders & Share knowledge.
- Try a Birding trip or tour.
- Read about Birds.
- Record your Bird sightings.
- HAVE FUN. ASK LOTS OF QUESTIONS. BE KIND TO BIRDS.



DEPARTMENT OF FOREST & WILDLIFE CHANDIGARH ADMINISTRATION

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MIGRATORY BIRDS AT SUKHNA LAKE CHANDIGARH



BIRDS: FEATHERED BIPED

The total number of bird species known to science as inhabiting the earth today has been estimated as about 8600. If subspecies or geographical

races are taken into account the figure would rise to nearly 30,000.Birds are vertebrate warm-blooded animals, i.e. whose temperature remains more or less constant and independent of the surrounding temperature. The body of a bird is covered with non-conducting feathers- its chief characteristic- which in details of structure and arrangement reflects the mode of life of Yellow Wattled Lapwin the group of which the bird belongs



The body temperature of birds, about 38-44'C., is higher than that of most mammals. Assisted by their non-conducting covering of feathers birds are able to withstand great extremes of climate. As long as they can procure a sufficiency of food supply, or 'fuel' for the system, it makes little material difference to them whether the surrounding temperature is over 60'C. On the burning desert sands or 40'C.Below zero in the icy frozen north.



Of the senses, those of Sight and Hearing are most highly developed in birds that of Taste are comparatively poor, while Smell is practically absent. In rapid accommodation of the eye, the bird surpasses all other creatures. The focus can be altered from a distant object to a near one almost instantaneously; as an American naturalist puts it, 'In a fraction of time it (the eye) can change itself from a telescope to a microscope".

For the safety of their eggs and young, birds build nests which may range from a simple scrape in the ground, as of the Lapwing, to such elaborate structures as the compactly woven nest of the Weaver Bird.

DO BIRDS HAVE A LANGUAGE?

They certainly have, if by language is meant that they can communicate with and understand one another. It consists not of speech as we know it, but of simple sounds and actions and enables birds- especially the more sociable ones - to maintain contact amongst themselves and convey simple reactions such as those of pleasure, threat, alarm invitation, and others.

MIGRATION

"Changes of habitat periodically recurring and alternating in direction, which tend to secure optimum environmental conditions at all times."

On account of their special attributes – warm-bloodedness, feather covering and unparalleled powers of flight- the phenomenon of migration finds its highest development in birds. Although directly they are the least affected of all animals by extremes of heat and cold, it is the

difficulties connected with food-getting under adverse winter conditions that compel them to change their

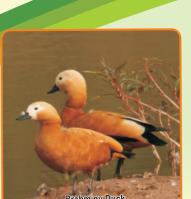
quarters or perish. to inhabit two respective seasons each. It involves a or nesting placefeeding or resting quarters. Although place from east to west,

Migration enables birds different areas at the most favorable in swing from a breeding the bird's home – to a place—its winter some migration takes its general direction as a

whole may be considered as North and South. The movement may vary from no more than a few kilometers—such as from the north Indian plains to a couple of thousand feet up in the Himalayan foothills—to several thousand kilometers either way as is the case with many of our wintering wildfowl. The longest known migratory journey is performed twice each year by the Arctic Tern which from the Arctic winter travels south right across the world to the Antarctic summer and back again--- a distance of over 17,000 km each way.

WHAT STIMULATES A BIRD TO MIGRATE?

The urge to migrate at the appropriate seasons is evoked by both external and internal stimuli. Experiments point to the assumption that one of the primary external stimuli is the variation in day length. The internal stimulus seems to be provided by the state of the reproductive organs which, in the laboratory, can be brought to known stages of maturity by artificial manipulation of day length.





MIGRATORY BIRDS AT SUKHNA LAKE



























