

## MIGRATION OF BIRDS

### What happens to birds in the temperate zone in winter?

People have long wondered what happens to bird species that disappear in autumn and reappear in spring. What happens to them? Previously, it was assumed that they survived the harsh winter by hiding in mud at the bottom of lakes. Or they turn into another bird. It was only quite late, in the late 18th century, that man accepted the fact that birds migrate.

Migration is the process when birds start their journey at around the same time. Migration can occur in groups (e.g. swallows) or alone (e.g. raptors).



Source: <https://pixabay.com/hu/photos/h%C3%B3lib%C3%A1k-madarak-madar%C3%A1szni-k%C3%A9k-%C3%A9g-8478370/>

Migration routes are species-specific. Most information on the migration paths of birds has been obtained by ringing, but nowadays it is also possible to equip specimens of medium-sized species with satellite-tracking transmitters.

### What triggers birds to leave the place where they hatched, where they learned to fly, the area they know?

- a reduction in food supplies,
- a change in the day length,
- lower temperatures,
- a gene-coded characteristic, and a combination of all of the above.

We can refer to **migration** as when birds set off at around the same time and return at around the same time.

**Dispersal**, when the specimen moves from its hatching site to another area within the same geographical zone.

**Philopatry**: the bird returns to the same area year after year.

### **What helps birds to travel distances that are often many thousands of kilometres?**

Smaller species that reach their wintering grounds quickly during migration will not have the opportunity to take in sufficient quantities of nutritious food, so they need to store energy for flight in the form of fat.

Large birds take months to reach their wintering grounds, but can feed on the way.

Their orientation can be helped by the position of the celestial bodies, the Earth's magnetic field, natural landmarks such as mountain ranges and rivers. Those migrating in a group will in most cases choose the "V" formation. Birds flying in this formation have to deal with less air resistance.

### **Migration hazards**

**Adverse weather**: sea storms, sandstorms

**Artificial, man-made hazards**:

Tall, glass-walled buildings, aircraft engines, high-voltage transmission lines

Removal of habitual resting and feeding areas, e.g. draining of wetlands or regular disturbance of birds.

Hunting: in Europe, most species are protected, so there are penalties for shooting them, but not all countries along the route of migration, e.g. in Africa, have rules to protect birds or are unable to enforce them. Unfortunately, in Mediterranean countries, many birds are still captured or trapped for food.