

Animals' magnetic sense

based on article "The compass within" from Scientific American,
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Plan

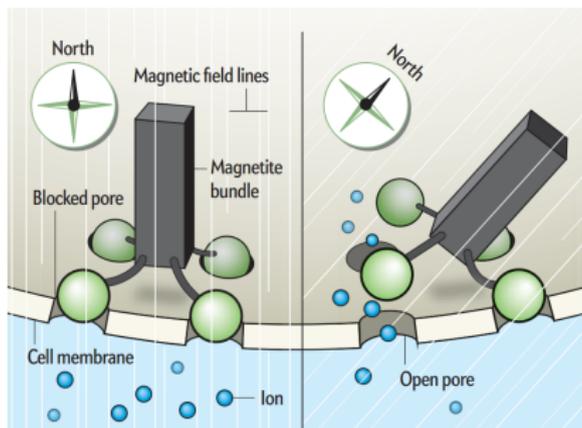
- Observation and experiments, proving magnetic sense
- Animal's magnetic organs
 - Cells with ferromagnetic 'arrows'
 - Quantum effects in pigment in eye

Observation and experiments

- Birds' migration
- Electromagnetic coil around the cage — tricks birds
- Resetting right direction only in daylight
- Radiovawes

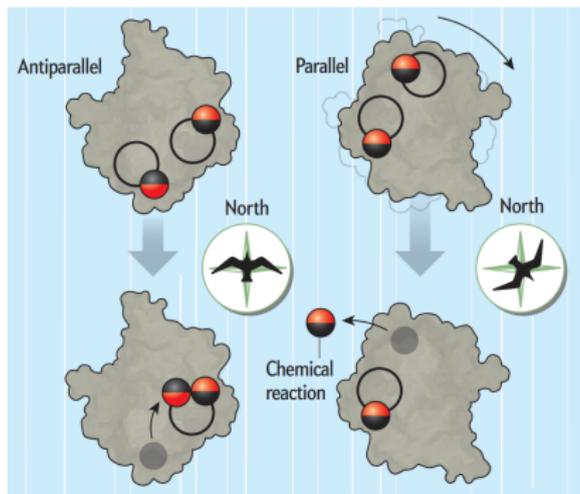
Ferromagnetic particles

- Magnetite bundle orientates along magnetic field
- Pores are opened, ions go through membrane, forming nerve impuls



Quantum effects

- Cryptochrome — pigment in eye
- Photon kicks electron — free radical is obtained
- If spins are antiparallel (can be caused by outer field) — chemical reaction goes



Summary

- Animals have abilities to detect geomagnetic field and use it
- Researchers have located the organs for this magnetic sense
- New sense is discovered and proved, but not studied completely