

i This type of experiment is carried out using a variety of bird species whose (potential) magnetoreception is of interest, not just European robins. Different species could of course employ different mechanisms for this, yielding different results in these orientation experiments. Although the general phenomenon of avian magnetoreception is of interest, there is an extra layer of complexity in its explanation compared with that of particular species. So, I am focusing on the case of European robins for narrative simplicity.

ii Traditionally, the direction was marked directly on the cone, e.g., by inking the blunted end so that the bird's foot marks are recorded on the slanted part of the cone. But more modern versions can use electronic registration, video recordings, or other techniques [14].

iii This is effectively an instance of the Zeeman effect.

iv Because the radical pair electrons will generically be in a superposition of singlet and triplet states, it's more precisely the proportion of the component of the state in a triplet state over time that matters for the rate of signaling.