1. Record Nr. UNINA9911022166203321 Autore Satz Helmut Titolo How Birds Find Their Way: Avian Orientation and Navigation / / by Helmut Satz Cham:,: Springer Nature Switzerland:,: Imprint: Springer,, 2025 Pubbl/distr/stampa **ISBN** 3-031-92181-X Edizione [1st ed. 2025.] Descrizione fisica 1 online resource (136 pages) Collana Physics and Astronomy Series Disciplina 571.4 Soggetti **Biophysics** Psychobiology Human behavior Magnetism Animal culture Behavioral Neuroscience **Animal Science** Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Preface -- 1 Prelude The Return of AX658 -- 2 True Navigation -- 3 Nota di contenuto Unconventional Signs -- 4 The Flight of the Dove -- 5 Avian Magnetoreception -- 6 Migration -- 7 Life on the Wing -- 8 The Geography of the Species -- 9 Epilogue. Sommario/riassunto This book describes our current understanding of the navigation of birds, their methods, capabilities, and achievements. Our knowledge of this field has progressed immensely in the last fifty years due to the availability of miniaturized tracking and positioning devices, which now allow us to know when and where a specific bird is located and where it is flying. The book is written for a general readership and requires no more of the reader than a true interest in the topic. The text provides an accessible overview of the relevant geographic and geophysical basics (latitudes and longitudes, geomagnetism) and of the neural faculties that allow birds to identify these features. The author surveys

a variety of striking avian achievements, ranging from trans-ocean and pole-to-pole flights to circumnavigations of the earth. Readers will also learn how the required knowledge is provided and passed on to future

generations, through instinct as well as through experience. Our understanding of such information transfer is much today deeper than it was fifty years ago. Nevertheless, many open questions remain. How an albatross leaving the coast of Brazil can find the way to its nest on a rock off the coast of New Zealand—this is a question still waiting to be answered. Thus, a further purpose of the book is to stimulate additional interest and new research into the fascinating and challenging world of avian navigation.