



2nd ed. 2014, XVII, 649 p. 409 illus., 313 illus. in color.

Printed book

Hardcover

- ▶ 149,99 € | £135.00 | \$209.00
- ▶ *160,49 € (D) | 164,99 € (A) | CHF 200.00

eBook

Available from your library or

- ▶ springer.com/shop

MyCopy

Printed eBook for just

- ▶ € | \$ 24.99
- ▶ springer.com/mycopy

G. Horváth (Ed.)

Polarized Light and Polarization Vision in Animal Sciences

Series: Springer Series in Vision Research, Vol. 2

- ▶ **Extensively revised and updated new edition**
- ▶ **Richly illustrated with color figures**
- ▶ **With videos and additional figures as electronic supplementary material**

This book covers advances made since the 2004 Springer volume “Polarized Light in Animal Vision” edited by Horvath and Varju, but also provides reviews and synopses of some areas. Part I examines polarization sensitivity across many animal taxa including vertebrates and invertebrates and details both terrestrial and aquatic life. Part II is devoted to the description of polarized light in nature and explores how the physics of light must be taken into account when understanding how polarized light is detected by the visual system. This includes underwater polarization due to scattering; polarization patterns reflected from freshwater bodies; polarization characteristics of forest canopies; normal and anomalous polarization patterns of the skies; skylight polarization transmitted through Snell’s window and both linearly and circularly polarized signals produced by terrestrial and aquatic animals. This Part also examines polarized “light pollution” induced by anthropogenic factors such as reflection off asphalt surfaces, glass panes, car bodies, and other man-made structures that are now known to form ecological traps for polarotactic insects. Part III surveys some of the practical applications of polarization vision including polarization-based traps for biting insects, ground-based polarimetric cloud detectors and an historical examination of the navigational abilities of Viking seafarers using the sky polarization compass. The deterrent qualities of ungulate pelage to polarization-sensitive biting insects is also examined in this section.



Order online at springer.com ▶ or for the Americas call (toll free) 1-800-SPRINGER ▶ or email us at: orders-ny@springer.com. ▶ For outside the Americas call +49 (0) 6221-345-4301 ▶ or email us at: orders-hd-individuals@springer.com.

The first € price and the £ and \$ price are net prices, subject to local VAT. Prices indicated with * include VAT for books; the €(D) includes 7% for Germany, the €(A) includes 10% for Austria. Prices indicated with ** include VAT for electronic products; 19% for Germany, 20% for Austria. All prices exclusive of carriage charges. Prices and other details are subject to change without notice. All errors and omissions excepted.