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Nota di contenuto	1. Introduction -- 2. Fundamental Retinal Circuitry for Circadian Rhythms -- 3. Circadian photoreception: from phototransduction to behaviour -- 4. Role of Melatonin and Dopamine in the Regulation of Retinal Circadian Rhythms -- 5. Circadian Organization of the Vertebrate Retina -- 6. Rhythmicity of the Retinal Pigment Epithelium -- 7. Retinal Circadian Rhythms in Mammals Revealed Using Electroretinography -- 8. Circadian Clock and Light Induced Retinal Damage -- 9. Circadian Rhythms and Vision in Zebrafish -- 10. Circadian Modulation of the Limulus Eye for Day and Night Vision -- 11. Molluscan Ocular Pacemakers: Lessons Learned. .
Sommario/riassunto	The retina plays a critical role in the organization of the circadian system by synchronizing the brain’s central clock with the external day through transduction of the daily light/dark cycle. However, the substantial variation in luminance imposed on the retina between day and night also poses a challenge to its role as a sensory tissue – how is it possible to faithfully encode the enormous dynamic range of luminance that can exceed 10 orders of magnitude? The Retina and Circadian Rhythms summarizes the knowledge accumulated over the last 30 years about the organization of the retinal circadian clock in many different species, concentrating on the roles that this circadian system plays in retinal function. About the Series: The Springer Series

in Vision Research is a comprehensive update and overview of cutting edge vision research, exploring, in depth, current breakthroughs at a conceptual level. It details the whole visual system, from molecular processes to anatomy, physiology and behavior and covers both invertebrate and vertebrate organisms from terrestrial and aquatic habitats. Each book in the Series is aimed at all individuals with interests in vision including advanced graduate students, post-doctoral researchers, established vision scientists and clinical investigators.The series editors are N. Justin Marshall, Queensland Brain Institute, The University of Queensland, Australia and Shaun P. Collin, Neuroecology Group within the School of Animal Biology and the Oceans Institute at the University of Western Australia.