

Paperback Re-issue

"I had the good fortune to behold for the first time that fantastic ending of the growing axon. In my sections of the spinal cord of the three day chick embryo, this ending appeared as a concentration of protoplasm of conical form, endowed with amoeboid movements. It could be compared with a living battering ram, soft and flexible, which advances, pushing aside mechanically the obstacles which it finds in its path, until it reaches the region of its peripheral termination. This curious terminal club, I christened the growth cone."

—Santiago Ramón y Cajal, *Recollections of My Life*, 1937

In *Neuronal Growth Cones*, Phillip Gordon-Weeks presents the molecular biology of the behaviour of growth cones. The book discusses the history of the discovery of growth cones and their importance in the development of a properly connected nervous system. This book is the first detailed, critical analysis of all aspects of growth cone biology.

Neuronal Growth Cones covers the basic morphology and behaviour of growth cones, motility and neurite extension via the growth cone cytoskeleton, pathfinding, intracellular signalling, and synaptogenesis.

This detailed treatment of the growth cone is intended for advanced graduate students, postgrad, and researchers in cellular and molecular neuroscience, developmental biology, and anatomy.

Phillip R. Gordon-Weeks is in the Developmental Neurobiology Centre of King's College London.

Cover illustration: Figure 2/1B. A growth cone from a chick dorsal root ganglion cell in culture labelled for filamentous actin with fluorescent phalloidin. The filamentous actin is particularly concentrated in the periphery of the growth cone and the filopodia (arrows).

Cover design by Alice Soloway

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UNIVERSITY PRESS
www.cambridge.org

ISBN 0-521-01854-4



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