

Review of Fortschritte der Chemie Organischer Naturstoffe/Progress in the Chemistry of Organic Natural Products. Volume 91

Fortschritte der Chemie Organischer Naturstoffe/Progress in the Chemistry of Organic Natural Products. Volume 91. By G. W. Gribble (Dartmouth University). Edited by A. D. Kinghorn (The Ohio State University), H. Falk (Johannes-Kepler-Universität), and J. Kobayashi (Hokkaido University). Springer-Verlag/Wien. 2010. xv + 613 pp. 16.5 × 24 cm. \$409.00. ISBN 978-3-211-99322-4.

referred to extensive reviews), the review of structures and occurrence is impressive in its scope and quality. This is an essential reference book for all chemists whose work intersects with naturally occurring organohalogens.

David Horgen

Hawaii Pacific University
 Kaneohe, Hawaii

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As a sequel to Volume 68, Volume 91, “Naturally Occurring Organohalogen Compounds—A Comprehensive Update”, continues the strong reputation of the *Progress in the Chemistry of Organic Natural Products* series. This review picks up where Volume 68 left off, combing the literature from the mid-1990s into 2008 for biotic and abiotic fluorine-, chlorine-, bromine-, and iodine-containing organic compounds from marine, terrestrial, and extraterrestrial environments. Relying on 2671 references, this work adds 2266 naturally occurring organohalogens to the 2448 compounds surveyed in Volume 68.

The actual review of new structures (Chapter 3, Occurrence) is organized by compound class (alkaloids, heterocycles, polyacetylenes, enediynes, etc.), following a layout consistent with the previous volume. However, reflecting the considerable chemotaxonomic order in nature, much of the discussion and description of new compounds within each section is arranged by organism. The structural representations are drawn accurately with consistent format, and the author uses a helpful convention for identifying structures: drawings of new compounds are numbered, while letters are given to previously reported structures (e.g., mentioned if synthesized or structurally revised). One of the strongest aspects of this review is the significance, context, and connections that are woven throughout, providing coherence and perspectives that reflect the author’s long-time expertise in the field.

The extensive chapter on new compounds is preceded by a short introduction and a brief discussion of the distribution of organohalogens in the various environments and is followed by a chapter that discusses the enzymes that introduce halogens into organic compounds (Chapter 4, Biohalogenation) and chapters on degradation of organohalogens (Chapter 5, Biodegradation) and roles of these compounds in ecosystems and the environment (Chapter 6, Natural Function). The text concludes with very brief chapters that provide perspective on the biomedical potential and future prospects of organohalogens (Chapter 7, Significance, and Chapter 8, Outlook, respectively).

This book is impeccably edited, as this reviewer was unable to find a single typographical error. Its organization is effective and familiar to natural products chemists, and the presentation is visually pleasing, including its 41 color photos (mostly of marine organisms) that are beautifully rendered. Although the later chapters on halogenating enzymes and natural functions leave the reader desiring more because of their brevity (while being

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