

layer lining both sides of the gills), and the tissues of the mushroom. Not only were features measured, but the data were used to make critical comparisons between species. Such comparisons are essential in evaluating the significance of the features in separating taxa.

The manual has two major sections. The introductory part (nine pages) discusses a) the materials and methods; b) observations on some critical characters, i.e., the stipe trama, the broad hairs at the stem apex, the taxonomic significance of the greyish scales on the cap, and the size of the terminal elements of the cap exterior; c) the geographic distribution of these mushrooms in Greenland; d) the ecology of the species; and e) phenology. The major portion of 39 pages, titled "Taxonomic part," is composed of sections on classification, i.e., an overview of the apparent relationships between the taxa; dichotomous keys to aid in the naming of collections; and detailed descriptions of the characters of the 29 taxa, including observations pertinent to each species. The manual concludes with the citation of nearly 80 references consulted in its preparation.

This is a carefully prepared technical manual that is recommended for ecologists, botanists, mycologists, advanced students, and others studying the biodiversity of grasslands and shrub-heaths of the boreal forest and more northern areas.

*J. Ginns*  
1970 Sutherland Road  
Penticton, British Columbia, Canada  
V2A 8T8  
*ginnsj@telus.net*

**FISH OTOLITHS FROM THE PALEOCENE (SELANDIAN) OF WEST GREENLAND.** By WERNER SCHWARZHANS. Copenhagen: Danish Polar Center, 2004. Meddelelser om Grønland, Geoscience 42. 32 p., maps, b&w illus., bib. Softbound. DKK125 + s&h.

Fish otoliths, the aragonitic "ear stones" of the acoustico-lateralis sensory system, are often preserved in sediments where no other parts of the animal survive. Otoliths are the oldest records of some fish lineages, with millions of years between the oldest otolith record of a given family and the oldest record based on other remains. Otoliths, therefore, are valuable in providing information on the age and past distributions of fishes that are not documented by other evidence.

In this book, Schwarzhans describes a new otolith-based marine ichthyofauna from a mid-Palaeocene (roughly 60 million years old) site in Greenland. The site contains 24 species, seven of which are new, based on over 170 otoliths collected. For each new species, diagnoses and descriptions are presented, as well as a section on ontogeny and variability where appropriate. Drawings of all the taxa are presented, and each taxon includes a "remarks" section, which is very useful to indicate the geological and geographical range of each group. While Schwarzhans

himself is an expert, two other otolith experts, B. Reichenbacher and D. Nolf, also reviewed the book, indicating that the identification and classification of the material can be relied upon.

Schwarzhans not only describes the material, but uses this otolith fauna to interpret the depositional environment of the locality. The mixture of taxa suggests the palaeoenvironment was predominantly that of an intermediate shelf area, but that the faunal assemblage may have been influenced by transportation of sediments and their fossils from other environments in shallower water. If this is the case, it would be interesting to know how the otoliths have been affected, as Nolf (1985) pointed out that otoliths may be distinctly eroded by post-mortem transportation. Nolf (1985) also noted that most otolith assemblages are the result of predators' excreting otoliths into the sediments. The predators might feed in a variety of habitats, but the otoliths of various taxa would be mixed in the predator's excreta, which would explain the mixture of shallow- to deep-water specimens in the otolith fauna. If this is the case, possible damage to otoliths may occur during digestion.

Schwarzhans also compares this Greenland fauna with other contemporaneous otolith faunas from Europe and the United States. From the species composition of these faunas, he determines that certain areas had similar climatic conditions and indicates probable climatic changes in the region. He also suggests palaeogeographic connections that best fit with the evidence of the otolith faunas.

Although the book is well laid out, with good reproduction of figures, the editing could have been better. In a number of places in the text, grammar, and spelling are rather confused. However, this will not greatly interfere with the readers' understanding of the material, and being written in English greatly increases the book's potential number of readers.

Most figures of otoliths in published works are drawings of the specimens, as is the case with this book. Scanning electron micrographs of otoliths might be more helpful to those of us who are less familiar with these remains, but who nevertheless have found otoliths in fossil sites and would like to identify them more easily. Additionally, for the non-expert, a figure of a generalized otolith depicting the relevant terms (e.g., antirostrum, colliculum, cauda, excisura) would greatly help. Although references to previously published works will guide readers to terminological information, non-specialists would have benefited from finding it included in this book, rather than having to rifle through other works to understand Schwarzhans' terminology. In the same vein, the most substantial complaint is that the figure captions contain less information than wanted. None of the captions indicate the view in which each otolith is drawn, or whether the otolith is from the right or left side, although the text indicates this information is clearly relevant.

While this book would be difficult for the general reader, it is a valuable resource for palaeontologists and ichthyologists who are interested in the past distribution of

marine fishes. The sections on palaeogeographic connections and palaeoecology provide valuable information even to those palaeontologists who are not particularly interested in otoliths or fishes. Those familiar with otoliths will find the book very useful, while others will also need a more comprehensive guide to otoliths, such as Nolf (1985), to aid in interpreting the otolith structures and terminology used by Schwarzzhans.

#### REFERENCE

NOLF, D. 1985. *Otolithi Piscium*. Handbook of Paleichthyology, Vol. 10. Stuttgart: Gustav Fischer Verlag, 145 p.

*Alison M. Murray*  
Research Division  
Canadian Museum of Nature  
P.O. Box 3443, Station D  
Ottawa, Ontario, Canada  
K1P 6P4  
[amurray@mus-nature.ca](mailto:amurray@mus-nature.ca)

LIVES AND LANDSCAPES: A PHOTOGRAPHIC MEMOIR OF OUTPORT NEWFOUNDLAND AND LABRADOR, 1949–1963. By ELMER HARP, Jr. Edited and introduced by M.A.P. RENOUF. Montreal and Kingston: McGill-Queen's University Press, 2003. ISBN 0-7735-2517-3. xxi + 265p., 4 maps, 219 colour illus., bib., index. Hardbound. Cdn\$39.95.

In 1949, Elmer Harp Jr., a young PhD candidate from Harvard University, travelled to Newfoundland and Labrador to begin a series of archaeological investigations. This research and related publications, as well as other field excursions in the High Arctic, earned Harp the reputation as a pioneering scholar of archaeology in these areas. In his latest monograph, the visually stunning and elegantly written narrative *Lives and Landscapes: A Photographic Memoir of Outport Newfoundland and Labrador, 1949–1963*, Harp has transcended the role of scholar and emerged as photographer and storyteller. Instead of being the focus of this book, archaeology is rather an underlying theme and, more importantly, a catalyst for Harp's unforgettable journey into the coves, coasts, and bays of the province.

Themes intermingled throughout the book include adventure, travel, geography, geology, and history, as well as the economics and sociology of these outports. Although this volume is not an ethnography, it is ethnography-like because of Harp's accurate understanding, depiction, and description of such outport social phenomena as boat-building by men, fish-drying by couples, bread-making by women, housing styles and colour schemes, gardening, and the near-mandatory socializing at "times" (i.e., parties). These local enterprises are further put into

context by M.A.P. Renouf's insightful introduction to the book, which identifies opportunism, resilience, and social ties between family and friends as key systems that support successful living in the province.

The book is divided into three chapters, each devoted to a specific year or period: 1949, 1950, and 1960–63. The first chapter is filled with excitement and anticipation as Harp embarks on his primary trip to the province. Urged to survey the coast by his early mentor, F. Johnson of the R.S. Peabody Foundation, and equipped with the knowledge of previous research conducted by Strong and Wintemberg, Harp was personally moved by the possibility of what he might find. His connection with the locals as he traveled by boat and their immediate liking for him speak volumes about the character of both. This chapter is filled with humorous anecdotes about their interactions and foreshadows relationships that would develop and last for over 50 subsequent years. Harp's acceptance into the society of Port aux Choix, the prime location of his excavations on the northwest coast, was heightened by the inclusion of his wife and children at his field station, as described in the second chapter. Harp was now seen as a man of education and family, a value extremely important in rural Newfoundland. The chapter also includes short passages by Elaine Harp (e.g., p. 122–127) about her own experiences, which are different from her husband's and add warmth to the book. Elaine's presence at activities reserved for females, such as tea parties, provides additional insight into the fishing village culture that Harp was not privy to. By the third chapter, Harp's growing reputation is based not only on his good character, but also on the fruitful archaeology of Port aux Choix, where he uncovered thousands of Paleoeskimo artefacts, several houses, and a Paleoeskimo child burial. Harp's success initiated visits from scholars such as Anne Stine and Helge Ingstad (famed for their L'Anse aux Meadows discovery), notable Arctic archaeologist Henry B. Collins, and author Farley Mowat.

This book is primarily a photographic memoir, as the title suggests, and the text seems to play a supportive rather than a primary role. The portraits are so captivating and charming that even without the accompanying text, they themselves could tell an interesting story of rural Newfoundland between 1949 and 1963. The year 1949 is pivotal for Newfoundland, since it signifies confederation with Canada. Through photography, Harp documents chronologically the steadfast changes brought by this new union, such as paved roads and the management turnover of coastal boats like the *Northern Ranger* to Canadian National Railways. Only one picture is allotted per page, even on those without text, which is quite appealing. This enhances the vivid colour and accentuates the realism of the images, which embody the cheerful essence of rural Newfoundland. Harp also captures cultural practices that are waning in fishing villages, as well as outports that no longer exist. For this reason Harp has provided a great service to the province by publishing these images. I would equate the significance of these photos with those of