



The Biology of Molt in Birds. Lukas Jenni¹ and Raffael Winkler. 2020. Helm / Bloomsbury, 306 pp. ¹ lukas.jenni@vogelwarte.ch

The Biology of Molt in Birds is a textbook on the what, why, where, when, and how of molt, with some fascinating examples. The book is organized into five chapters: (1) functions of plumage, (2) plumage maintenance and need for renewal, (3) processes of molt, such as feather growth and physiology, (4) effects of environmental conditions during molt on plumage quality, and (5) molt strategies, or fitting molt into the annual cycle. Each chapter is divided into sub-sections, each of which has a plain language summary, plus a summary and concluding remarks at the end of the chapter. The text is superbly complemented by 151 figures, all with clear and informative captions. Many of the figures include multiple photographs, from microscopic detail of feathers to stages of molt in different species, and the colored illustrations include a variety of styles of graphs, 3-D drawings, and flow charts. Most of the examples, whether in the text or the figures, are of European species, which reflects where Jenni and Winkler are based, but also where much of the research on molt has been undertaken, but it is reasonably easy to think of similar species in Jan. - Jun. 2022

North America. I confess to skimming over some of the details, such as on physiology, but felt that I understood the basics by reading the summaries and studying the figures. I found the final chapter, on fitting molt into the annual cycle, the most interesting. As a bird bander, an understanding of a species' molt strategy – the timing, place, extent, speed and sequence of molt – is critical to being able to determine the age of a bird, a key demographic parameter in scientific studies. Molt strategy is determined by: (1) the length of the longest primaries, which impacts the time required to grow new ones, (2) the degree of flight capability needed during molt, (3) the timing of breeding and/or migration, and (4) the ease of obtaining food during molt. Molt studies have been difficult to undertake, but the authors have done a good job of synthesizing the data. As Jenni and Winkler state in their concluding remarks: “Many studies of annual cycles by default give a premium role to reproduction and migration, rather than molt. However, while breeding can be skipped, molt is a life-history stage essential for survival by maintaining flight and feather function.” (p. 238). It is a fascinating topic. **CMS**

Note: full review published originally in Canadian Field-Naturalist 135:90–91.