

Fruit: Edible, Inedible, Incredible. Wolfgang Stuppy & Rob Kessler. Newbury, Berkshire: Papadakis Publisher. 2008. iv + 264 pp. ISBN 978 1 901 09274 5. £30 (hardback).

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After the successful debut of visual artist Rob Kessler and palynologist Madeline Harley with *Pollen: The Hidden Sexuality of Flowers*, featuring the intriguing structure of pollen, Rob Kessler approached seed morphologist Wolfgang Stuppy and produced another award-winning book, *Seeds: Time Capsules of Life*. Now the latter duo is back to complete the circle of plant reproductive secrets with the third (and last?) book, *Fruit: Edible, Inedible, Incredible*. One might expect that the same artistic idea presented a third time around might not have the same appeal. The good news is that it has. I left it casually on my office table and watched my visitors' reactions. Some started to fiddle with the book even before saying hello. Conclusion? It is once again a book which attracts readers irrespective of profession, age or gender. The high-definition scanning electron micrographs look simply marvellous with the coloration carefully applied. The superb-quality smooth paper and text printed in colours that tastefully match the colours of the photographs make you wonder what is on the next page. Readers with more serious botanical aspirations might brush it away as 'just another coffee table book' but wait a minute before you do so as this book gives more than enough scientific detail to chew on, while revealing much of the incredible diversity of shapes, colours and unique structures associated with fruits.

The book is divided into several parts but, after discounting the Preface, Foreword, Appendices and three short chapters (introductory *Fruit: Edible, Inedible, Incredible*, *The Millennium Seed Bank Project* and *Lusciousness*, dedicated to the art of digital imaging), the main body of the book is formed by just two of them: 'What is a fruit?' and 'Dispersal – the many ways to get around'. Each of these two parts is further divided into numerous chapters and subchapters with names as captivating as *Love-in-a-puff and other balloon travellers*, *Babylonian confusion*, *Sausages that grow on trees*, *Arillate seeds and the fate of New York* and *A shameless display*, to name just a few. These will probably answer every fruit-related question one might ever have, including those that curious kids are likely to ask, e.g. why are some fruits poisonous for humans but not for animals, is a pine cone a fruit, and what is the largest fruit a tree can bear?

The part named 'What is a fruit?' covers 120 pages and tries to present all the facts necessary to answer this rather tricky question. The meaning of the word 'fruit' seems to be heavily loaded in our everyday life to mean something edible, often sweet and juicy. To many people, it comes as a surprise that fruits can be pretty dry, full of thorns, inedible or even poisonous. This book puts readers back on track emphasising that the true nature of fruit lies in embedding the seeds and ensuring their dispersal rather than pleasing us humans. The authors explain the difference between angiosperms and gymnosperms and then guide the reader through the

amazing carpological universe. The journey starts with simple and multiple fruits before moving on to the more tricky schizocarpic, anthocarpous and compound fruits, with text well spiced with stories and accompanied by awesome pictures. Throughout the text the facts are presented in a historical context clearly showing that botanists, in their attempts to understand the plant kingdom, have been interested in the diversity of fruit morphology and classification for more than 300 years. During this ample period, botanists created more than 150 different technical fruit names with numerous synonyms and, not surprisingly, the whole system was quite a mess until the recent treatment of fruit types proposed by Richard Spjut.

The title of the second main part, 'Dispersal – the many ways to get around', already sums up its content. Achieving continuity in life cycle and the ultimate survival of the species is all that plants worry about – getting pollinated, producing seeds and getting them to a suitable locality at a favourable time of year so that they can grow into new plants. Then the whole cycle starts all over again. With tens of thousands of plants inhabiting the various environments of the earth, hundreds of different strategies to disperse seeds with the help of water, wind, animals and humans or even the plant's own mechanisms are reflected in the way the fruits have evolved. All these strategies are illustrated and discussed in the book. Much space, some 60 pages out of a hundred, is, however, dedicated to fleshy fruits, reflecting the tremendous evolutionary success of the relationship between angiosperms and frugivorous animals. In tropical rain forests, this method of dispersal is employed by 80–95% of plants and even in Mediterranean shrublands by almost 50%.

Since the day I received this book with an electron microscope image of a young strawberry on its cover, I wondered how the authors managed to get it under the microscope. Are you curious too? The last chapter, *Lusciousness*, reveals this rather time-consuming trick and provides other insights into the artists' technique. It is quite easy to lose one's sense of size while looking at pages on which some structures are magnified hundreds of times or, in contrast, reduced somewhat. The authors anticipated this and in most cases indicate the true size of the fruit in the captions.

The Appendices, containing among other things a glossary, an index of illustrated plants and a bibliography (including resources on both art and botany), are a welcome bonus.

Seeing the shapes of fruits one never imagined existed is fascinating, but similarly intriguing are the close-ups of the most familiar fruits we all know and often pop into our mouths without much thought. As I was turning the last page of this book I thought it did not really matter whether fruits are edible or inedible. I am utterly convinced that all are indeed incredible!

P.S. I secretly hope that Rob Kessler will approach a mycologist soon!

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