I tell students in my plant taxonomy course that if they are serious about being a taxonomist they must learn the Compositae. They cannot be daunted by the size and intricacy of the family—it is just too important a group to pass by. The editors of Systematics, Evolution, and Biogeography of Compositae state this more eloquently and topically: “To understand biodiversity across our planet’s landscape requires understanding of this massive, diverse, and fascinating family.” The Compositae Book (as it is called on The International Compositae Alliance (TICA) web site) is the most recent summary of what we know about this family. There have been earlier summarizing volumes (e.g., Heywood et al. 1977; Bremer 1994; Hind 1996), but this is the first to include results of analysis of extensive phylogenetic information based on molecular sequence data. The phylogenetic information presented is referenced largely to the (shall I say awesome?) Compositae supertree produced initially by Funk et al. (2005) and continually refined since. There is also a strong emphasis on biogeography of tribes and clades throughout the book.

At first glance, the book is stunning—to look at and to lift (it weighs in at 3.785 kilos). At around 1000 pages it is loaded with information that is relatively easy to retrieve. Despite there being around 80 authors across 44 chapters plus five appendices, the book reads well. There is even the occasional light spirited inclusion, for example the remark from a famous synantherologist that “speculating on base chromosome numbers offers, perhaps, the finest of all vehicles for intellectual auto-stimulation.”

The book is richly illustrated with generally high quality photos and diagrams—the production of the photos on the pages is commendable. In particular there is a rich selection of photos of comps that are unfamiliar to many of us, exotic looking genera from around the world. As I perused the photos I could not help wondering which of these genera would survive in my yard on the central California coast. Seeing these images will impress readers who still believe that all members of the family are “doggone yellow comps.”

The inside back cover is a summary of the supertree (you can also download an 8 foot by 4 foot detailed version of the supertree at the TICA site), the branches of which are differentially colored to reflect biogeographical affinity of higher taxa. On the inside front cover there is pocketed a removable color code piece to facilitate interpreting the biogeographic information on the summary tree on the inside back cover. Nice touch.

Very little was left out in the making of this book. Section I, the introduction, contains chapters on the history of comp taxonomy, an interesting read that combines the history of taxonomic thought on the Compositae with personal, humanizing details of the early workers in the family (such as Vaillant being a popular botany teacher as evidenced by his lectures being given at six in the morning and attended by hundreds of listeners). There is also a fascinating chapter by Simpson on the economic importance of the family, despite the relative dearth of economically useful comps, given the size of the family.

Section II contains chapters on character evolution in the family: chromosome numbers, secondary chemistry, microcharacters, pollen. The pollen chapter in particular is augmented by a list of characters measured, a data matrix of pollen characters used for supertree taxa, a summary of pollen features for each tribe, and an enormous bibliography containing over 1200 citations on composite pollen. Jeffrey’s chapter on evolution of Compositae flowers summarizes current thoughts on the topic. Many interpretations that were held only a few decades ago have been radically overturned upon the appearance of molecular data. A final chapter in the section on oceanic island comps, Baker’s Law, polyploidy is sure to stimulate the interest of future researchers intrigued by island biogeography.

Section III is really the meat of the book, beginning with a chapter on relationships of the family with other Asterales, followed by a chapter on classification of Compositae—this is a summary chapter for quick descriptions of tribes. The next thirty-two chapters cover, in supertree sequence, each tribe in the family, each written by active researchers specializing in that tribe. Chapters are organized for the most part in uniform pattern: historical overview; phylogeny; subtribal taxonomy; morphology; anatomy; pollen; embryology; chromosome numbers; chemistry; biogeography; evolution; economic uses. This systematic organization makes it easy to compare tribes across chapters.