

BOOK REVIEWS



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NOSE DIVE: A Field Guide to the World's Smells

Reviewed: Dr Tony Curtis

This is another book where the title is slightly misleading. This comprehensive text may be a field guide but it is not a pocket field guide. Its 654 pages are packed with interesting thoughts on this enthralling topic.

In David Williams' discussion of the historical development of odour theory & language he starts off with two selected early examples of schemes for the classification of odours which have been put forward since the fourth century, B.C. These early attempts were aimed at considering the whole spectrum of odour (some good, some not so appealing!)

Aristotle (384-322 B.C.)

Classified smells into five categories: Sweet, Harsh, Astringent, Pungent, Rich

Linnaeus (Carl von Linné, 1756)

Linnaeus was the great Swedish botanist upon whose work the classification of animals and plants in use today is based. He suggested a scheme of odour classification based on seven categories: Aromatici (Aromatic), Fragrantes (Sweet-scented), Ambrosiaci (Ambrosial), Alliacei (Garlic-like), Hircini, (Goat-like), Tetri (Putrid) and Nauseosi (Nauseous).

I can relate to wet dog odour but I have not any memory of smelling goat! Most modern texts focus on the odour profiling of fragrances and flavours. This book does go the extra mile and considers the whole spectrum of odours. Ali in her excellent review of the Green Chemistry discussion brings attention to VOC (Volatile Organic Compounds). In the early days of the manufacture of aroma chemicals from CST (crude sulphate turpentine) the odour could be discerned for miles around the Jacksonville USA plant. Not so now, the EPA has regulated for the problem.

What is natural and what is un-natural. On page 71 Chapter 4 we explore the issue of factory farming. Intensive farming operations provide generous quantities of excrement from CAFOs (Concentrated Animal Feeding Operations) with odours that would make CST smell like roses.

However if this aspect of odour studies does not appeal to you we get onto more familiar ground in Chapter 8: *Plant*

Volatile Families. I select one example of very useful tables (a particularly valuable feature of the book). On page 158/9 the table covers alcohols C1 to C8 (and corresponding acids) with a table: *Some alcohol – acid combinations – esters and their smells*. What is so useful about this is in a concise space; you get a lot of information and can see both the wood & the trees.

Fragrances are not neglected in this epic book: Chapters 17 Fragrances, provides good succinct cover of this topic area: again, the wealth of tables provides much information about the materials considered (e.g., *some resins and gums used in incense and perfumes*, Page 445).

Flavours get their fair attention in two chapters 18: *Cooked Foods* and 19: *Cured and Fermented Foods*: again, a wealth of tables explores these aspects of odour/flavour. Here of course we have some different molecules such as *A Nutty Bouquet of Cooked Smells*: with pyrrolines, and pyrazines. Of course the sulphur compounds are not neglected with *A Sulphurous Bouquet of Cooked Smells*. Where would we be without methyl thiopropanal and dimethyl sulphide, disulphide & trisulphide! The wide coverage and international orientation is continued with 19: *Cured and Fermented Foods*. We not only get cover of brandy and whisky, but also of other regional products such as Asian rice wines. Flavourists will also find this book of great interest.

In such an epic book it might be quite daunting to find one's way around; however, the indexing is excellent. If 654 pages are not enough to cover this topic there are 34 pages of detailed references. These take the reader from the individual chapters to a vast array of key papers and books.

Overall I am not certain this is a book for the individual student. However, it is an essential addition to the library of all organizations involved in the Aroma Trades. In that rare thing, a few hours of spare time, Creative Flavourists, Perfumers and all involved in new product development will find much to stimulate original thought.

Do get your organization to purchase a copy for the laboratory bookshelf and make certain you are the first to get to read it!