

taking in their elegance. For example, see the Java browser of the mouse genome and the way that this allows you access to this information (<http://flybase.bio.indiana.edu:82/maps/java/>). Molecular biology is a discipline in which new information is added by the minute and is therefore ideally suited to this electronic world – but resources that sparkle one day look dusty the next.

The last decade has seen molecular biology revolutionize our understanding of biology. The Internet provides a window onto this world and gives us the tools and environment in which to interpret and analyse the data. Knowing how to use the tools effectively requires practice; this book lists what those tools are, but does not convey the pleasure of using them.

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Introduction to Veterinary Genetics. By F. W. NICHOLAS. Oxford University Press. 1996. xiv + 317 pages. Paperback. Price £17.95. ISBN 0 19 854292 5.

Genetic issues get an increasing amount of attention in the popular press, particularly as they relate to the understanding, avoidance and alleviation of disease in man, but only occasionally as they relate to animals (e.g. double muscling in cattle and welfare) or their interaction with man (e.g. BSE and CJD). An understanding of genetics should be an essential component of any medical or veterinary training, not just so the practitioner knows what can be done but also so he knows what cannot. I have the impression that, because information on genetic mechanisms and on specific diseases has expanded so rapidly, it is underrepresented in the crowded medical and veterinary curricula. In animal health, recent developments in understanding the molecular basis of specific animal diseases such as citrullinaemia, methods for identifying carrier heterozygotes by molecular markers and an understanding of the role of variation in the MHC system should be available to the practising veterinarian. (About 10 years ago I was startled to discover that the vet who was a fellow member of a committee to review livestock research did not know what the MHC system was!) The vet should also know some of the rudiments of animal breeding, if only to realize there is more to animal improvement than choosing the right colour of animal and avoiding lethal recessives.

It seems to me to be the case that, perhaps because

of the volume of work (money?), there is an increasing interaction of medical and basic genetics, but that animal and veterinary genetics, where the animal is not simply a mouse model, are barely in the mainstream, apart from certain areas such as the encephalopathies and the development of micro-satellite genome maps. Whilst this enables animal genetics to ride on the back of the human genetics, and save a lot of money, it does not attract the best people into the subject. I consider that anything which makes genetics more accessible and attractive to those in animal health and production is to be commended.

In his book *Veterinary Genetics*, published in 1987, I believe Frank Nicholas did an excellent service in producing a text which covered comprehensively the basic genetics and its application to the health and the breeding of animals. It was and is suitable not just for veterinarians, but for all engaged in genetics and breeding of domestic animals. It did, however, cover a lot more material in depth than could be assimilated by the typical veterinary student or animal breeder, for example on genetic improvement procedures. This new, shorter, edition is at a simpler level and concentrates rather more closely on the genetics of disease. It also brings in the considerable new knowledge on specific diseases and on use of markers. I suspect it is more suitable than its predecessor both for the undergraduate vet and agriculture student and for the professional or amateur reader concerned with animal genetics and breeding. It is undoubtedly a nice piece of work.

In essence the book comprises chapters on basic genetics and molecular biology, on information on known genetic abnormalities in animals (farm livestock, cats, dogs, etc.), on interactions of the host with pathogens, and on the genetics and improvement of farm animals utilizing both major gene and quantitative genetic variation. Whilst the basic theory and the animal breeding applications can be found elsewhere, the content on the genetics of animal disease is, I believe, uniquely available here. Overall I liked the structure of the book, except for the last section on animal improvement, in which some of the chapters were no more than three pages long. Some reorganization, rather than expansion, would be justified in a revision.

I hope this volume, if not the longer one, is kept under constant revision, if only to serve as a much needed reference. I need to emphasize that this book is not only for veterinarians.

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