

# INFORMATION SOURCES FOR VETERINARY TOXICOLOGY IN AUSTRALIA

*Nam et ipsa scientia potestas est* (Knowledge itself is power)

Francis Bacon (1561-1626) *Religious Meditations*. Of Heresies.

A little learning is a dang'rous thing;  
Drink deep, or taste not the Pierian spring:  
There shallow draughts intoxicate the brain,  
And drinking largely sobers us again.

Alexander Pope (1688-1744) *An Essay on Criticism*. 1711

## 1: Reference Books, Software, Review Articles and Multimedia Resources - Toxicology



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Outside of a dog, a book is a man's best friend.

Inside of a dog, it's too dark to read!

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### Key to symbols:

-  indicates a **recommended reference**
-  indicates a recommended source (criteria: authority, currency, depth, good coverage or combinations of these)
- # indicates sources with specifically Australian content
- [ ] indicates the abbreviation used in reference lists in the body of this work for a frequently-cited reference work

### **Compendium of Information Sources in Toxicology**

Wexler P, Hakkinen PJ, Kennedy GL Jr, Stoss FW (eds.) (2000) *Information Resources in Toxicology*. 3rd edition. Academic Press, San Diego. xxviii + 921 pp. ISBN 0 12 744770 9 [North American and medical toxicology emphasis. Covers all media.]

### **Dictionaries of Toxicology & Veterinary Medicine**

-  #  Blood DC, Studdert VP (1999) *Saunders Comprehensive Veterinary Dictionary*. 2nd edition. WB Saunders, London. xiv + 1380 pp. ISBN 0 7020 2034 6 Covers many botanical and common names of poisonous plants and their effects on animals. Consultant on plant intoxications and toxic plants: R.A.McKenzie.
- Hodgson E, Mailman RB, Chambers JE (eds.) (1998) *Dictionary of Toxicology*. 2nd edition. Macmillan Reference Ltd., London. xiii + 504 pp. ISBN 0 333 547004. An inferior source to Lewis (1998), but with numerous chemical structures included.
-  Lewis RA (1998) *Lewis' Dictionary of Toxicology*. Lewis Publishers (CRC Press), Boca Raton, Florida. vii + 1127 pp. ISBN 1 56670 223 2

### **General Toxicology**

- Aldridge WN (1996) *Mechanisms and Concepts in Toxicology*. Taylor & Francis, London.
- Ballantyne B, Marrs T, Turner P (eds.) (1995) *General and Applied Toxicology*. Abridged Edition (1 volume) Macmillan, London. xiv + 1361 pp. ISBN 1 56159 167 X. Original published in 2 volumes ISBN 0 333 49801 1
- Hodgson E, Smart RC (eds.) (2001) *Introduction to Biochemical Toxicology*. 3rd. edition. John Wiley & Sons. 752 pp. ISBN 0 471 33334 4

- ◆ [K] Klaassen CD (editor) (1996) *Casarett & Doull's Toxicology: The Basic Science of Poisons*. 5th edition, McGraw Hill Book Company, New York, xv + 1111 pp. ISBN 0 0710 5476 6.
- Loomis TA, Hayes AW (1996) *Loomis's Essentials of Toxicology*. 4th edition, Academic Press, San Diego, California, xi + 282 pp. ISBN 0 12 455625 6
- Timbrell JA (1982) *Principles of Biochemical Toxicology*. Taylor & Francis Ltd., London., x + 249 pp. ISBN 0 85066 221 4

### **Veterinary Toxicology**

- Albiston HE (ed.) (1975) *Diseases of Domestic Animals in Australia. Some Metabolic Diseases, Deficiencies and Toxaemias*. Service Publication (Animal Quarantine) Number 12, Australian Department of Health. Australian Government Publishing Service, Canberra. 128 pp. ISBN 0 642 00622 9
- ◆ Ammerman CB, Fontenot JP, Fox MRP, Hutchinson HD, Lepore P, Stowe HD, Thompson DJ, Ullrey DE (1980) *Mineral Tolerance of Domestic Animals*. National Academy of Sciences, Washington DC.
  - Andrews AH, Humphreys DJ (undated, probably early-mid 1990s) *Poisoning in Veterinary Practice*. 2nd edition. National Office of Animal Health Ltd., Enfield. 114 pp. Covers major intoxications in summary form from a British perspective.
  - ◆ Beasley VR, Dorman DC, Fikes JD, Diana SG, Woshner V (1997) *A Systems Affected Approach to Veterinary Toxicology*. (Loose-leaf lecture notes) College of Veterinary Medicine, University of Illinois at Urbana-Champaign, Urbana, IL USA. lvii + xxiv + 989 pp. + index (39 pp.)
  - Bruère AN, Cooper BS, Dillon EA (1990) *Veterinary Clinical Toxicology*. Publication 127, Foundation for Continuing Education of the New Zealand Veterinary Association, Massey University, Palmerston North. vi + 233 pp. ISSN 0112 9643. Covers veterinary intoxications in New Zealand.
  - ◆ Campbell A, Chapman M (2000) *Handbook of Poisoning in Dogs and Cats*. Blackwell Science, Oxford. x + 272 pp. ISBN 0 632 05029 2. Based on the work of the Veterinary Poisons Information Service in London and thus with a British bias
- Chapman M (ed.) (2001) *Veterinary Toxicology*. Blackwell Science. ISBN 0 632 05028 4
- ◆ Cheeke PR (1998) *Natural Toxicants in Feeds, Forages, and Poisonous Plants*. 2nd edition, Interstate Publishers Inc., Danville, Illinois, xii + 479 pp. ISBN 0 8134 3128 X. Covers intoxications worldwide, with emphasis on North America.
  - # Galely FD, Raisbeck MF *et al.* (1998) *Clinical Toxicology*. Proceedings 318, Post-Graduate Foundation in Veterinary Science, University of Sydney. x + 262 pp. Limited coverage of major intoxications and envenomations.
  - ◆ [GM] Gfeller RW, Messonnier SP (1998) *Handbook of Small Animal Toxicology & Poisonings*. Mosby Inc., St.Lois, Missouri, x + 405 pp. ISBN 0 8151 6454 8. Covers toxic drugs, chemicals and poisonous plants in North America with emphasis on emergency care of companion animals.
  - Hall JO, Buck WB, Côté L-M (1995) *Natural Poisons in Horses*. 2nd edition. National Animal Poison Control Centre, University of Illinois, Urbana Illinois, v + 45 pp. No ISBN recorded. Covers common toxic plants, mycotoxins and insects and common venomous insects and snakes of North America. Written for horse owners.
  - ◆ Humphreys DJ (1988) *Veterinary Toxicology*. 3rd edition, Baillière Tindall, London, vii + 356 pp. ISBN 0 7020 1249 1 [The successor to Clarke & Clarke]
  - Lorgue G, Lechenet J, Rivière A (1996) *Clinical Veterinary Toxicology*. (1987) French edition edited in English by MJ Chapman. Blackwell Science Ltd., Oxford. vi + 210. ISBN 0 632 03269 3. Covers intoxications from a French perspective.
  - Murphy MJ (1996) *A Field Guide to Common Animal Poisons*. Iowa State University Press, Ames, Iowa, xvi + 330 pp. ISBN 0 8138 2934 8. Covers common toxins and management of toxicity in North America.
  - # Oehme FW *et al.* (1987) *Veterinary Clinical Toxicology*. Proceedings 103, Post-Graduate Foundation in Veterinary Science, University of Sydney. 630 pp. Covered major intoxications and envenomations from both an Australasian and North American perspective.
  - ◆ Osweiler GD, Carson TL, Buck WB, Van Gelder GA (1985) *Clinical and Diagnostic Veterinary Toxicology*. 3rd edition, Kendall/Hunt Publishing Company, Dubuque, Iowa, xiii + 494 pp. ISBN 0 8403 3332 3. A new edition of this work is imminent.

- 📖 ♦ [Os] Osweiler GD (1996) *Toxicology. The National Veterinary Medical Series for Independent Study*. Williams & Wilkins, Philadelphia, xiii + 491 pp. ISBN 0 683 06664 1. This book provides concise up-to-date coverage of veterinary toxicology from a North American perspective.
- Parton K, Bruère AN, Chambers JP (2001) *Veterinary Clinical Toxicology*. 2nd edition. Publication 208, Foundation for Continuing Education of the New Zealand Veterinary Association, Massey University, Palmerston North. ii + 397 pp. ISSN 0112 9643. Covers veterinary intoxications in New Zealand (revised edition of Bruère *et al.* 1990).
- ♦ Peterson ME, Talcott PA (eds.) (2001) *Small Animal Toxicology*. W.B.Saunders, Philadelphia. xix + 796 pp. ISBN 0 7216 7826 2. A multi-author work providing good coverage of its field with a largely North American focus.
- Poppenga RH, Volmer PA (guest eds.) (2002) *Toxicology. The Veterinary Clinics of North America. Small Animal Practice*. 32 (2) W.B.Saunders Company, Philadelphia.
- 📖 # ♦ [Se] Seawright AA (1989) *Animal Health in Australia. Volume 2 (Second Edition). Chemical and Plant Poisons*. Australian Government Publishing Service, Canberra, xii + 362 pp. ISBN 0 644 08179 1. This book covers veterinary toxicology from an Australian perspective, but is out of print.

### **Veterinary Medicine Texts with sections on toxicology**

- Bistner SI, Ford RB (1995) *Kirk and Bistner's Handbook of Veterinary Procedures & Emergency Treatment*. 6th edition, WB Saunders Co., Philadelphia, ix + 1006 pp. ISBN 0 7216 4972 6. Emergency care of poisoned dogs & cats - pp.169-212.
- Bonagura JD (ed.) (2000) *Kirk's Current Veterinary Therapy XIII: Small Animal Practice*. W.B.Saunders, Philadelphia. ISBN 0 7216 5523 8. Section 3 deals with toxicoses.
- Calnek BW, Barnes HJ, Beard CW, McDougald LR, Saif YM (eds.) (1997) *Diseases of Poultry*. 10th edition. Iowa State University Press, Ames Iowa & Mosby-Wolfe. xviii + 1080. ISBN 0 7234 2955 3. Chapter 36 deals with toxicoses.
- Fairbrother A, Locke LN, Hoff GL (eds.) (1996) *Noninfectious Diseases of Wildlife*. 2nd edition. Iowa State University Press, Ames, Iowa ISBN 0813804515 / Manson Publishing – The Veterinary Press, London ISBN 1 874545 75 8 xiii + 219 pp. North American perspective. Contains chapters on mycotoxins, environmental oestrogens, cholinesterase-inhibiting pesticides, organochlorine pesticides, polychlorinated biphenyls, dioxin, cyanide, lead, mercury, selenium and oil and petroleum toxicity.
- Howard JL, Smith RA (eds.) (1999) *Current Veterinary Therapy. Food Animal Practice 4*. W.B.Saunders Co., Philadelphia. xxvii + 766 pp. ISBN 0 7216 7654 5 [Section 6 Physical & Chemical Diseases, consulting editor GD Osweiler, covers a number of toxicoses; data refer to North America]
- # [VM9] Radostits OM, Gay CC, Blood DC, Hinchcliff KW (2000) *Veterinary Medicine. A Textbook of the Diseases of Cattle, Sheep, Pigs, Goats and Horses*. 9th edition, W.B.Saunders, London, xxviii + 1877 pp. ISBN 0 7020 26042. Chapters 31 & 32 of this text deal with poisonings. Consultant on Chapter 32: R.A.McKenzie.
- Roskopf WJ, Woerpel RW (eds.) (1996) *Diseases of Cage and Aviary Birds*. Williams & Wilkins, Baltimore. ISBN 0 683 07382 6. Chapter 39 *Toxic Disorders*. LaBonde J pp. 511-522.
- Stoskopf MK (ed.) (1993) *Fish Medicine*. W.B.Saunders Company, Philadelphia, xix + 882 pp. ISBN 0 7216 2629 7
- Straw BE, D'Allaire S, Mengeling WL, Taylor DJ (eds.) (1999) *Diseases of Swine*. 8th edition. Iowa State University Press, Ames, Iowa. xx + 1209 pp. ISBN 0 8138 0338 1. Chapter 55 authored by TL Carson deals specifically with intoxications.

### **Poisonous Plants and Fungi (Veterinary orientation)**

- # Acamovic T, Stewart CS, Pennycott T (eds.) (2002) *Poisonous Plants and Related Toxins*. [Sixth International Symposium on Poisonous Plants] CAB International, Wallingford UK. ISBN 0 85199 614 0.
- Anon. (1998) *Household Plant Reference*. American Society for Prevention of Cruelty to Animals (ASPCA) National Animal Poison Control Centre, Chicago, Illinois. 70 pp. No ISBN recorded. [Lists of household plants in North America recorded as either consistently toxic, potentially toxic or non-toxic to pets in the records of the ASPCA NAPCC; includes brief descriptions of syndromes and toxins where known]

- Bruneton J (1999a) *Toxic Plants Dangerous to Humans and Animals*. (translated from the French edition of 1996 by Caroline K. Hatton) Lavoisier Publishing/Intercept Ltd. , Paris/Andover (UK). xi + 545 pp. ISBN 1 898298 62 9. Covers plants in Europe affecting humans and companion animals with very limited coverage of livestock.
- ◆ Burrows GE, Tyrl RJ (2001) *Toxic Plants of North America*. Iowa State University Press, Ames, Iowa. viii + 1342 pp. ISBN 0813822661. Covers toxic vascular plants (flowering plants, cone-bearing plants, ferns and horsetails) in North America from the Tropic of Cancer to the Arctic Circle. Emphasis is on the effects on domestic animals. Fungi and cyanobacteria are not covered. Illustrated with line drawings and a small number of coloured photographs.
  - # Chippendale GM, Murray LR (1963) *Poisonous Plants of the Northern Territory*. Northern Territory Administration Animal Industry Branch Extension Article No.2, 2nd edition.
  - Chopra RN, Badhwar RL, Ghosh S (1965) *Poisonous Plants of India*. 2nd edition. Volumes 1 & 2 Indian Council of Agricultural Research, New Delhi. xxiii + 972 pp. (Combined volumes). No ISBN recorded.
  - # Colegate SM, Dorling PR (eds.) (1994) *Plant-associated Toxins. Agricultural, Phytochemical and Ecological Aspects*. [Fourth International Symposium on Poisonous Plants] CAB International, Wallingford UK. xiii + 581 pp. ISBN 0 85198 909 8
  - Connor HE (1977) *The Poisonous Plants in New Zealand*. 2nd edition. Bulletin 99, New Zealand Department of Scientific and Industrial Research. Government Printer, Wellington. 247 pp. ISBN 0 477 01007
  - Cooper MR, Johnson AW (1998) *Poisonous Plants and Fungi in Britain. Animal and Human Poisoning*. 2nd edition. The Stationery Office, London. xviii + 398 pp. ISBN 0 11 242981 5
  - D'Mello JPF (ed.) (1997) *Handbook of Plant and Fungal Toxicants*. CRC Press, Boca Raton, Florida.
  - 📖 # [DM] Dowling RM, McKenzie RA (1993) *Poisonous Plants: A Field Guide*. Queensland Department of Primary Industries, Brisbane, xi + 164 pp. ISBN 0 7242 3982 0. This book provides coloured photographs and information for the main plants toxic to livestock that occur in Queensland.
  - Everist SL (1964) A review of the poisonous plants of Queensland. *Proc. Roy. Soc. Qd.* **74**:1-20.
  - 📖 # ◆ [Ev] Everist SL (1981) *Poisonous Plants of Australia*. Revised edition, Angus & Robertson Publishers, Sydney, xviii + 966 pp. ISBN 0 2071 4228 9. This book remains the single most comprehensive reference on poisonous plants in Australia despite not covering recent additions to knowledge.
  - Fowler M, Hayes R, Preisler D (1998) *Poisonous Plants: A Veterinary Guide to Toxic Syndromes*. CD-ROM. School of Veterinary Medicine, University of California, Davis. ISBN 0 8138 2090 1. Text, still & moving images of North American plants and poisonings.
  - # Garland T, Barr AC (eds.) (1998) *Toxic Plants and Other Natural Toxicants*. [Fifth International Symposium on Poisonous Plants] CAB International, Wallingford UK. xvi + 585 pp. ISBN 0 85199 263 3
  - Hails MR, Crane TD (1982) *Plant Poisoning in Animals. A Bibliography from the world literature 1960-1979*. Commonwealth Agricultural Bureaux, Farnham Royal, Slough, United Kingdom. 158 pp. [Originally published in 5 parts in the *Veterinary Bulletin* (1982) **52**:557-579, 679-698, 783-807, 895-916, 1023-1048.]
  - Hails MR (1986) *Plant Poisoning in Animals. A Bibliography from the world literature. No.2. 1980-1982*. Annotated Bibliography No. V39. C.A.B International, Farnham Royal, Slough, United Kingdom. 92 pp. ISBN 0 85198 578 5
  - Hails MR (1994) *Plant Poisoning in Animals. A Bibliography from the world literature. No.3. 1983-1992*. CAB International, Wallingford Oxon OX10 8DE, United Kingdom. v + 297 pp. ISBN 0 85198 916 0
  - # James LF, Keeler RF, Bailey EM Jr, Cheeke PR, Hegarty MP (eds.) (1992) *Poisonous Plants*. [Third International Symposium on Poisonous Plants] Iowa State University Press, Ames. xv + 661 pp. ISBN 0 8138 1241 0
  - # Keeler RF, van Kampen KR, James LF (eds.) (1978) *Effects of Poisonous Plants on Livestock*. [First International Symposium on Poisonous Plants] Academic Press, New York. xvii + 600 pp. ISBN 0 12 403250 8
  - ◆ Kellerman TS, Coetzer JAW, Naudé TW (1988) *Plant Poisonings and Mycotoxicoses of Livestock in Southern Africa*. Oxford University Press, Cape Town. 243 pp. ISBN 0 19 570488 6
  - ◆ Kingsbury JM (1964) *Poisonous Plants of the United States and Canada*. Prentice-Hall Inc., Englewood Cliffs, New Jersey. viii + 626 pp. No ISBN recorded. This is the classic reference for toxic plants in North America. Its coverage of vascular plants has been superseded by Burrows & Tyrl (2001).

- ◆ Knight AP, Walter RG (2001) *A Guide to Plant Poisoning of Animals in North America*. Teton New Media, Jackson Wyoming. xv + 367 pp. ISBN 1 893441 11 3. Coverage is of livestock-poisoning plants, mainly from USA. Distribution maps are confined to USA.
- # McBarron EJ (1972) *The Nitrate and Cyanogenetic Status of Certain Plants in New South Wales*. Science Bulletin No.83, Department of Agriculture New South Wales, Sydney. 68 pp. No ISBN recorded.
- # McBarron EJ (1977) *Medical and Veterinary Aspects of Plant Poisons in New South Wales*. Department of Agriculture New South Wales, Sydney. vii + 243. ISBN 0 7240 0885 3. Includes information on meat, milk and egg taints, and plants poisonous to bees.
- # McKenzie RA (1994) *Plant Poisonings of Horses in Australia*. Proceedings of the 16th Bain-Fallon Memorial Lectures, Australian Equine Veterinary Association, Artarmon, Sydney, pp. 1-56.
- # McKenzie RA, Blood DC, Larcombe MT, Brightling P (1995) *PHYTOX*. Animal Information Management Pty. Ltd., 209 Watton Street, Werribee VIC 3030. [Minimum requirements - IBM-compatible PC, MS-DOS 3.0, 80286 processor, 512 k RAM, 8 MB hard disk space] This software was a précis of the world literature on poisoning by plants, fungi and cyanobacteria, structured to be used as diagnostic support. No longer available.
- # McKenzie RA (1996) *Toxins in feed: A guide to identifying and managing poisoning hazards for feedlot and other handfed cattle in Australia*. Australian Association of Cattle Veterinarians "Feeding and Breeding" Conference Proceedings, Toowoomba, Queensland 23-27 September 1996, pp. 147-157.
- # Munday BL, Morris DI (1978) *Tasmanian Plants Toxic for Animals*. Tasmanian Department of Agriculture, Hobart. 101 pp. No ISBN recorded.
- # Poison Plants Committee (1934) *Some Important Poison Plants of North Australia*. Pamphlet No. 49. Council for Scientific and Industrial Research, Melbourne. 44 pp. No ISBN recorded. Seventeen native plant species are included.
- Riet-Correa F, del Carmen Méndez M, Schild AL (1993) *Intoxicações por Plantas e Micotoxicoses em Animais Domésticos*. [Plant and Mycotoxin Poisonings of Domestic Animals] Editorial Agropecuaria Hemisferio sur Editorial Hemisferio sul do Brasil, Pelotas, Rio Grande do Sul, Brazil. ix + 340 pp. ISBN 9974 556 77 5. In Portuguese.
- # Seawright AA, Hegarty MP, James LF, Keeler RF (eds.) (1985) *Plant Toxicology*. [Second International Symposium on Poisonous Plants] Queensland Poisonous Plants Committee, Brisbane. xxi + 625 pp. ISBN 0 7242 1217 1
- # Simmonds H, Holst P, Bourke C (2000) *The Palatability and Potential Toxicity of Australian Weeds to Goats*. Rural Industries Research & Development Corporation, Kingston ACT. 166 pp.. ISBN 0 642 58169 X Useful guide with some minor technical inaccuracies and some misidentified illustrations.
- Steyn DG (1934) *The Toxicology of Plants in South Africa together with a consideration of poisonous foodstuffs and fungi*. Central News Agency Ltd., Cape Town. xii + 631 pp.
- Tokarnia CH, Döbereiner J, da Silva MF (1979) *Plantas Tóxicas da Amazônia a bovinos e outros herbívoros*. [Toxic Plants of Amazonia affecting cattle and other herbivores] Instituto Nacional de Pesquisas da Amazônia, Manaus, Brazil. vii + 95 pp. ISBN 85 211 0002 7. In Portuguese.
- ◆ Tokarnia CH, Döbereiner J, Peixoto PV (2000) *Plantas Tóxicas do Brasil*. [Toxic Plants of Brazil] Editoria Helianthus, Rio de Janeiro. x + 310 pp. ISBN 85 87809 01 6. In Portuguese. An excellent full colour coverage of plants and syndromes by the veteran investigators from Brazil.
- Vahrmeijer J, Steyn DG, Naudé TW, Kellerman TS (1981) *Poisonous Plants of Southern Africa that cause stock losses*. Tafelberg, Cape Town. 168 pp. ISBN 0 624 01459 2 Highly illustrated account with limited text.
- ◆ Watt JM, Breyer-Brandwijk MG (1962) *Medicinal and Poisonous Plants of Southern and Eastern Africa*. 2nd edition. E & S Livingstone Ltd., Edinburgh. xii + 1457 pp. No ISBN recorded. An encyclopaedic account for the geographical region treated. The only readily-available source for much material.
- # Webb LJ (1948) *Guide to the Medicinal and Poisonous Plants of Queensland*. Bulletin No. 232. Council for Scientific and Industrial Research, Melbourne. 202 pp. No ISBN recorded.

### **Poisonous Plants and Fungi (Human & Alternative Medicine orientation)**

- # Aplin THE (1976) *Poisonous Garden Plants and Other Plants Harmful to Man in Australia*. Bulletin 3964, Western Australian Department of Agriculture, Perth. 58 pp.

- # Bolza E (1976) *Timber and Health*. CSIRO Division of Building Research, Highett, Victoria. 19 pp. ISBN 0 643 02039 X. [Documents Australian and imported timbers known to be health hazards for wood workers]
- Bruneton J (1999b) *Pharmacognosy, Phytochemistry, Medicinal Plants*. 2nd ed. (translated from the French edition of 1993 by Caroline K. Hatton) Lavoisier Publishing/Intercept Ltd. , Paris/Andover (UK). xiii + 1119 pp. ISBN 1 898298 63 7
- # Collins DJ, Culvenor CCJ, Lamberton JA, Loder JW, Price JR (1990) *Plants for Medicines. A Chemical and Pharmacological Survey of Plants in the Australian Region*. CSIRO, Melbourne. vi + 303 pp. ISBN 0 643 04992 7 [Data from the Australian Phytochemical Survey concentrating on alkaloids and anti-tumour activity; bibliography of > 2000 publications on phytochemicals in Australian plants 1940-1987]
- # Covacevich J, Davie P, Pearn J (editors) (1987) *Toxic Plants and Animals. A Guide for Australia*. Queensland Museum, Brisbane, vii + 501 pp. ISBN 0 7242 2381 9. Emphasis on human envenomation & intoxication.
- De Smet PAGM, Keller K, Hänsel R, Chandler RF (eds) (1992) *Adverse Effects of Herbal Drugs. Volume 1*. Springer-Verlag, Berlin. xiv + 275 pp. ISBN 0 387 53100 9
- De Smet PAGM, Keller K, Hänsel R, Chandler RF (eds) (1993) *Adverse Effects of Herbal Drugs. Volume 2*. Springer-Verlag, Berlin. xiv + 348 pp. ISBN 0 387 55800 4
- # Francis DF, Southcott RV (1967) *Plants Harmful to Man in Australia*. Miscellaneous Bulletin No.1, Botanic Gardens, Adelaide, South Australia. 53 pp.
- Frohne D, Pfänder HJ (1984) *A Colour Atlas of Poisonous Plants. A Handbook for Pharmacists, Doctors, Toxicologists, and Biologists*. [English translation by N.G.Bisset] Wolfe Publishing, London. 291 pp. ISBN 0 7234 0839 4. Highly illustrated source of information on plants in Europe.
- Harborne JB, Baxter H (1996) *Dictionary of Plant Toxins*. John Wiley & Sons, Chichester. xv + 523 pp. ISBN 0 471 95107 2
- Hiddins LJ (2001) *Bush Tucker Field Guide*. Penguin Books Australia Ltd., Ringwood, Victoria. xvi + 184 pp. ISBN 0 14 028986 0
- # Jackes BR (1992) *Poisonous Plants in Northern Australian Gardens*. Botany Department, James Cook University of North Queensland.
- McCaughy H (1980) *Is It Poisonous? Poisoning Prevention and First Aid. A Lifesaving Manual*. Revised edition. Angus & Robertson Publishers, North Ryde, NSW. x + 110 pp. ISBN 0 207 15558 5. Includes a list of plants rated on severity of effects in humans, but contains some important errors such as not rating aconite as a serious toxin. Otherwise a useful household reference.
- McGuffin M, Hobbs C, Upton R, Goldberg A (eds) (1997) *American Herbal Products Association's Botanical Safety Handbook*. CRC Press, Boca Raton, Florida. xviii + 231 pp. ISBN 0 8493 1675 8
- ◆ Mitchell JC, Rook A (1979) *Botanical Dermatology. Plants and Plant Products Injurious to the Skin*. Greengrass, Vancouver. xii + 787 pp. ISBN 0 88978 047 1 Comprehensive source now available on the internet (see below)
- ◆ Newall CA, Anderson LA, Phillipson JD (1996) *Herbal Medicines. A Guide for Health-Care Professionals*. The Pharmaceutical Press, London. ix + 296 pp. ISBN 0 85369 289 0
- Spoerke DG Jr, Smolinske SC (1990) *Toxicity of Houseplants*. CRC Press, Boca Raton, Florida. 244 pp. ISBN 0 8493 6655 0
- # Talalaj S, Czechowicz AS (1989) *Herbal Remedies. Harmful and Beneficial Effects*. Hill of Content, Melbourne. viii + 379 pp. ISBN 0 85572 189 8
- Wilson S (1997) *Some Plants are Poisonous*. Reed (Reed Books Australia), Kew, Victoria. xvi + 264 pp. ISBN 0 7301 0505 9. A popular account of plants actually and potentially poisonous to humans in Australia erring on the side of caution and containing a number of inaccuracies. 151 genera are included and illustrated with pencil sketches and some coloured photographs.
- Yan X, Zhou J, Xie G, Milne GWA (1999) *Traditional Chinese Medicines. Molecular Structures, Natural Sources, and Applications*. Ashgate Publishing, London. xix + 1024 pp. ISBN 0 566 08210 1 Lists 6808 chemical compounds in traditional Chinese medicines including structural formulae and sources. Cross references are given between Chinese, English vernacular and botanical plant names. There is no cross reference or index allowing simple access to the chemicals present in particular plants.

## **Poisonous Fungi**

- ◆ Benjamin DR (1995) *Mushrooms: Poisons and Panaceas. A Handbook for Naturalists, Mycologists and Physicians.* W.H.Freeman & Co., New York. xxvi + 422 pp. ISBN 0 7167 2600 9 (hardback) 0 7167 2649 1 (paperback)
- ◆ Bresinsky A, Besl H (1990) *A Colour Atlas of Poisonous Fungi. A Handbook for Pharmacists, Doctors, and Biologists.* [English translation by N.G.Bisset] Wolfe Publishing, London. xi + 295 pp. ISBN 0 7234 1576 5
- Cole RJ, Cox RH (1981) *Handbook of Toxic Fungal Metabolites.* Academic Press, New York.
- Hay B, Young T (1988) *Poisonous Fungi of Australia.* Published by the authors, Nanango, Queensland. 73 pp. No ISBN recorded.
- Kirk PM, Cannon PF, David JC, Stalpers JA (2001) *Ainsworth and Bisby's Dictionary of the Fungi.* 9th edition. CABI Bioscience. xi + 655 pp. ISBN 0 85199 377 X
- Wyllie TD, Morehouse LG (eds.) (1977-78) *Mycotoxic Fungi, Mycotoxins, Mycotoxicoses. An Encyclopaedic Handbook.* Volumes 1, 2 & 3. Marcel Dekker Inc., New York & Basel.  
(1977) Vol 1. *Mycotoxic Fungi and Chemistry of Mycotoxins.* xxiv + 538 pp. ISBN 0 8247 6550 8  
(1978) Vol 2. *Mycotoxicoses of Domestic and Laboratory Animals, Poultry, and Aquatic Invertebrates and Vertebrates.* xxv + 570 pp. ISBN 0 8247 6551 6  
(1978) Vol 3. *Mycotoxicoses of Man and Plants: Mycotoxin Control and Regulatory Aspects.* xxiii + 202 pp. ISBN 0 8247 6552 4

## **Cyanobacteria (cyanophytes, blue-green algae) & marine dinoflagelates**

- ◆ Chorus I, Bartram J (eds.) (1999) *Toxic Cyanobacteria in Water. A guide to their public health consequences, monitoring and management.* E & FN Spon (Routledge), London & New York. xv + 416 pp. ISBN 0 419 23930 8
- Hallegraeff GM, Anderson DM, Cembella AD (eds.) (1995) *Manual on Harmful Marine Microalgae.* Intergovernmental Oceanographic Commission (IOC) Manuals and Guides No.33, UNESCO, Paris.
- # Ransom R, Soong FS, Fitzgerald J, Turczynowicz L, El Saadi O, Roder D, Maynard T, Falconer I (1994) *Health Effects of Toxic Cyanobacteria (Blue-Green Algae).* National Health & Medical Research Council, Canberra. ISBN 0 644 32908 4

## **Chemicals and Pharmaceuticals (including Agricultural, Veterinary & Medical)**

- Adams HR (ed.) (2001) *Veterinary Pharmacology and Therapeutics.* 8th edition. Iowa State University Press, Ames, Iowa. 1220 pp.
- Bishop (ed.) (2001) *The Veterinary Formulary.* 5th edition. British Veterinary Association.
- Booth NH, McDonald LE (1988) *Veterinary Pharmacology and Therapeutics.* 6th edition. Iowa State University Press, Ames, Iowa. x + 1227 pp. ISBN 0 8138 1739 0 [superseded by Adams (2001) q.v.]
- ◆ O'Neil MJ, Smith A, Heckelman PE, Obenchain JR Jr, Gallipeau JAR, D'Arecca MA, Budavari S (eds.) (2001) *The Merck Index. An Encyclopedia of Chemicals, Drugs and Biologicals.* 13th edition. Merck Research Laboratories Division of Merck & Co., Inc., Whitehouse Station, New Jersey USA. xvi + 2564 pp. ISBN 0911910 13 1 [also available on CD-ROM]
- Gangolli S (ed.) (1999) *The Dictionary of Substances and Their Effects. (DOSE)* 2nd edition. Royal Society of Chemistry, Cambridge.
- Hardman JG, Limbird LE, Molinoff PB, Ruddon RW, Gilman AG (eds.) (1996) *Goodman & Gilman's The Pharmacological Basis of Therapeutics.* 9th edition. McGraw-Hill, New York. xxi + 1905 pp. ISBN 0 07 026266 7
- # ◆ *Infopest CD-ROM.* Department of Primary Industries Queensland, Animal and Plant Health Service, Brisbane. infopest@dpi.qld.gov.au [Comprehensive data on Australian registered agricultural and veterinary chemicals and their uses. Annual subscription with quarterly updates \$198, single copies \$99.] Also on the Web (see below).
- # ◆ *Infopest MSDS CD-ROM.* Department of Primary Industries Queensland, Animal and Plant Health Service, Brisbane. infopest@dpi.qld.gov.au [Material Data Safety Sheets for Australian registered agricultural and veterinary chemicals. Annual subscription with quarterly updates \$98, single copies \$44.]
- # ◆ *IVS Annual (Index of Veterinary Specialties, Australian Edition),* MIMS Australia, St.Leonards, NSW ISSN 1033 2863 [Available on subscription]
- Karch SB (ed.) (1996) *The Pathology of Drug Abuse.* CRC Press, Boca Raton, Florida.

- # ♦ *MIMS Annual* (Monthly Index of Medical Specialties, Australian Edition), MIMS Australia, St.Leonards, NSW [Available on subscription]
- # ♦ *MIMS OTC* (annual volume) MIMS Australia, St.Leonards, NSW [Available on subscription with MIMS Annual] [A guide to non-prescription “over-the-counter” drugs including herbal remedies]
- Morgan DP (1982) *Recognition and Management of Pesticide Poisonings*. 3rd ed. US Environmental Protection Agency, Washington D.C. pp v + 120.
- National Drugs & Poisons Schedule Committee (2000) *Standard for the Uniform Scheduling of Drugs and Poisons No.15*. [Effective date – 1 July 2000]. Commonwealth Department of Health and Aged Care, Canberra. x + 343 pp. ISBN 0642446385
- Parfitt K (ed.) (1999) *Martindale: The Complete Drug Reference*. 32nd edition. Pharmaceutical Press, London.
- Tomlin CDS (ed.) (2000) *The Pesticide Manual. A World Compendium*. 12th edition. British Crop Protection Council, Farnham, Surrey UK. xxvi + 1250 pp. ISBN 1 901396 12 6

### **Chemical carcinogenesis**

International Agency for Research on Cancer (1971–2000) *IARC Monographs on the Evaluation of Carcinogenic Risks to Humans. Overall Evaluations of Carcinogenicity*. Monographs Volumes 1 to 76. Lyon: IARC (US Library of Congress call number - RC268.6.I57).

Bast RC, Kufe DW, Pollock RE, Weichselbaum RR, Holland JF, Frei E (editors) (2000) *Cancer Medicine*. 5th ed. Canada: BC Decker Inc

### **Envenomations & zootoxins**

- # Cogger HG (2000) *Reptiles and Amphibians of Australia*. 6th edition. Reed New Holland, Sydney, 808 pp. ISBN 1 876334 33 9. Highly illustrated guide to identification and biology.
- # Covacevich J, Davie P, Pearn J (editors) (1987) *Toxic Plants and Animals. A Guide for Australia*. Queensland Museum, Brisbane, vii + 501 pp. ISBN 0 7242 2381 9. Emphasis on human envenomation & intoxication.
- Fowler ME (1993) *Veterinary Zootoxicology*. CRC Press, Boca Raton, ix + 250 pp. ISBN 0 8493 6791 3. Written from a North American perspective.
- # Grant EM (1999) *Grant's Guide to Fishes*. 8th ed., E.M.Grant Pty. Ltd., Redcliffe. 880 pp. ISBN 0 646 14106 6. Highly illustrated field identification guide to marine and fresh water species covering Australia (emphasis on northern waters). Includes a section on poisonous and venomous fishes.
- # Southcott RV (1975) *Australian Venomous and Poisonous Fishes*. R.V.Southcott, Mitcham, South Australia.
- # Sutherland SK (1983) *Australian Animal Toxins. The creatures, their toxins and care of the poisoned patient*. Oxford University Press, Melbourne, xx + 527 pp. ISBN 0 19 554367 X. Emphasis on human envenomation.
- # ♦ Sutherland SK, Tibballs J (2001) *Australian Animal Toxins. The creatures, their toxins and care of the poisoned patient*. 2nd edition, Oxford University Press, Melbourne, xxiv + 856 pp. ISBN 0 19 550643 X. Emphasis on human envenomation.
- # Sutherland SK, Sutherland J (1999) *Venomous Creatures of Australia. A Field Guide with Notes on First Aid*. 5th edition. Oxford University Press, Melbourne, xi + 131 pp. ISBN 0 19 550846 7. Emphasis on human envenomation.
- # Oehme FW *et al.* (1987) *Veterinary Clinical Toxicology*. Proceedings 103, Post-Graduate Foundation in Veterinary Science, University of Sydney. 630 pp.
- # Galey FD, Raisbeck MF *et al.* (1998) *Clinical Toxicology*. Proceedings 318, Post-Graduate Foundation in Veterinary Science, University of Sydney. x + 262 pp.
- ♦ Halstead BW (1988) *Poisonous and Venomous Marine Animals of the World*. 2nd revised edition. Darwin Press Inc., Princeton, New Jersey. 1 + 1168 pp. + 288 pp. of plates. ISBN 0 87850 050 2. Emphasis on human intoxication & envenomation. Comprehensive to date of publication.
- # Williamson JA, Fenner PJ, Burnett JW, Rifkin JF (eds.) (1996) *Venomous and Poisonous Marine Animals: A Medical and Biological Handbook*. University of New South Wales Press, Sydney & Surf Lifesaving, Queensland, Inc., Fortitude Valley, Queensland. 504 pp. ISBN 0 86840 279 6. Emphasis on human envenomation.



### **Ecotoxicology (Veterinary orientation)**

- Beyer WN, Heinz GH, Redmon-Norwood AW (eds.) (1996) *Environmental Contaminants in Wildlife. Interpreting tissue concentrations*. Lewis Publishers (CRC Press), Boca Raton, Florida. xvi + 494 pp. ISBN 1 56670 071 X
- Fairbrother A, Locke LN, Hoff GL (eds.) (1996) *Non-infectious Diseases of Wildlife*. 2nd edition. Manson Publishing, London. 204 pp. ISBN 1 874545 75 8
- Peterle TJ (1996) *Wildlife Toxicology*. Van-Nostrand-Reinhold, New York.

### **Miscellaneous – animal health**

- # Anon. (2000) *Prime Notes on CD-ROM*. Version 10, September 2000. Queensland Department of Primary Industries, Brisbane. ISBN 0 7345 0106 4 [\$49.50 + \$6 p&p] [Includes over 4500 extension articles for a wide range of subjects including animal health, plant poisonings and weed control produced by state departments of Agriculture/Primary industries and Natural Resources for Queensland, South Australia, Victoria, Western Australia, Tasmania and the Northern Territory and by industry bodies and CSIRO]
- # Australian and New Zealand Environment and Conservation Council & Agriculture and Resource Management Council of Australia and New Zealand (2000) *Australian and New Zealand Guidelines for Fresh and Marine Water Quality. Volume 1. The guidelines. Volume 2. Aquatic ecosystems – rationale and background information. Volume 3. Primary Industries – rationale and background information*. National Water Quality Management Strategy. Paper No.4. ISBN09578245 0 5 (set). On-line at [www.ea.gov.au/water/quality/nwqms/volume1.html](http://www.ea.gov.au/water/quality/nwqms/volume1.html) and [www.ea.gov.au/water/quality/nwqms/volume2.html](http://www.ea.gov.au/water/quality/nwqms/volume2.html)
- McConnell VC, Ritchie BW (2000) *Calculations for the Veterinary Professional*. Iowa State University Press, Ames, Iowa. ISBN 0 8138 0879 0
- # McKenzie RA (editor) (1992) *Veterinary Laboratory User's Guide*. 5th edition, Queensland Department of Primary Industries Information Series QI92027. QDPI, Brisbane, iv + 137 pp. ISBN 0 7242 3910 3 [New edition in preparation - Taylor JA (ed) (2002/3) *Veterinary Laboratory User's Guide*. 6th edition. Queensland Department of Primary Industries, Brisbane.]
- ♦ Puls R (1994a) *Mineral Levels in Animal Health. Diagnostic Data & Bibliographies* (separate volumes). 2nd edition. Sherpa International, Clearbrook BC, Canada. 356 & 343 pp. ISBN 0 9693429 2 6 & 0 9693429 3 4
- ♦ Puls R (1994b) *Vitamin Levels in Animal Health. Diagnostic Data and Bibliographies*. Sherpa International, Clearbrook BC, Canada. 184 pp. ISBN 0 9693429 4 2

## **2: Serial publications (scientific journals) – the primary scientific literature**

Writing is in itself a joy,  
Yet saints and sages have long since held it in awe.  
For it is Being, created by tasking the Great Void,  
And 'tis sound rung out of Profound Silence.  
In a sheet of paper is contained the Infinite,  
And, evolved from an inch-sized heart, an endless panorama.

Lu Chi (261-363) *On Literature (Wen Fu)*. Translated by S.H.Chen

Access to the primary scientific literature is either directly through subscription or from journals in libraries or on-line (in increasing numbers), or indirectly through searches of bibliographic databases (see data under internet-based resources in this document). Some journals offer contents pages and abstracts, and in some cases e-mail contents notification, as well as searches of journal contents via the World Wide Web (see below).

Journals publishing significant amounts of material relevant to *veterinary* toxicology include

- ❖ Specialised journals devoted to toxicology.
  - *Veterinary & Human Toxicology*

- *Toxicon*
  - *Food & Chemical Toxicology*
  - *Toxicology and Applied Pharmacology*
  - *Environmental Toxicology*
  - *Natural Toxins* (ceased publication)
- ❖ Journals in fields that may include toxicological subject matter
- *Journal of Veterinary Diagnostic Investigation*
  - *Journal of Comparative Pathology*
  - *Veterinary Pathology*
  - *Journal of Agricultural & Food Chemistry*
  - *Journal of Animal Science*
  - *Journal of Natural Products*
  - *Phytochemistry*
- ❖ Some generalist veterinary journals that include toxicological subject matter
- *Australian Veterinary Journal*
  - *Australian Veterinary Practitioner*
  - *Journal of the American Veterinary Medical Association*
  - *American Journal of Veterinary Research*
  - *Compendium of Continuing Education for Practicing Veterinarians*
  - *Veterinary Clinics of North America: Food Animal Practice*
  - *Veterinary Clinics of North America: Small Animal Practice*
  - *Onderstepoort Journal of Veterinary Research*
  - *Journal of the South African Veterinary Association*
  - *The Veterinary Record*
  - *In Practice*
  - *New Zealand Veterinary Journal*
  - *Canadian Veterinary Journal*
  - *The Veterinary Journal* (formerly *The British Veterinary Journal*)
  - *Veterinary Research Communications*
  - *Research in Veterinary Science*
  - *Canadian Journal of Veterinary Research*

See Wexler *et al.* (2000) for an extended list of journals covering toxicology as a whole.

### 3: Reference Books, Software and Multimedia Resources – Weed Control, Plant Identification & Use in Australia

Full many a flower is born to blush unseen,  
And waste its sweetness on the desert air.

Thomas Gray (1716-1771) *Elegy in a Country Churchyard*.

♦ indicates recommended sources

#### **Synoptic publications on vascular plants and fungi**

Kirk PM, Cannon PF, David JC, Stalpers JA (2001) *Ainsworth and Bisby's Dictionary of the Fungi*. 9th edition. CABI Bioscience. xi + 655 pp. ISBN 0 85199 377 X

Mabberley DJ (1997) *The Plant Book. A portable dictionary of the vascular plants*. 2nd edition. Cambridge University Press, Cambridge. xvi + 858 pp. ISBN 0 521 41421 0

Ulloa M, Hanlin RT (2000) *Illustrated Dictionary of Mycology*. American Phytopathological Society Press, St.Paul, Minnesota. ISBN 0 89054 257 0

### **Weed Control**

- ◆ Blood K, Taylor U, Nugent T, Timmins S (1998a) *Weed Navigator Resource Guide*. Cooperative Research Centre for Weed Management Systems, Adelaide. pp. vi + 96.
- ◆ Blood K, Taylor U, Nugent T, Timmins S (1998b) *Weed Navigator Contact Directory*. Cooperative Research Centre for Weed Management Systems, Adelaide. pp. iv + 75.

These volumes constituted a comprehensive directory of information resources and contacts for environmental and agricultural weed control in Australia and New Zealand at the time of publication.

DPI Queensland Beef Industry Institute (Tropical Beef Centre, PO Box 5545, Rockhampton Mail Centre 4702) publishes *Woody Weed Adviser for Windows*, a software package containing information on chemical and mechanical control measures and management options.

- Parsons WT, Cuthbertson EG (2001) *Noxious Weeds of Australia*. 2nd edition. CSIRO Publishing, Melbourne, xii + 698 pp. ISBN 0 643 06514 8
- Julien M, White G (eds.) (1997) *Biological Control of Weeds: theory and practical application*. ACIAR Monograph No. 49. iv + 190 pp. ISBN 1863202161
- Simmonds H, Holst P, Bourke C (2000) *The Palatability and Potential Toxicity of Australian Weeds to Goats*. Rural Industries Research & Development Corporation, Kingston ACT. 166 pp.. ISBN 0 642 58169 X [Useful guide with some minor technical inaccuracies and some misidentified illustrations]

### **Plant identification - general**

- ◆ Clarke I, Lee H (1987) *Name that Flower. The Identification of Flowering Plants*. Melbourne University Press, Melbourne. xii + 256 pp. ISBN 0 522 84335 2 [written for the interested amateur using Australian examples, clearly illustrated with line drawings and a selection of coloured photographs, and with a glossary of botanical terms]

### **Plant identification guides on CD-ROM**

- Brooker I, Connors J, Slee A (1997) *EUCLID. Eucalypts of South-eastern Australia CD-ROM*. CSIRO Publishing, Melbourne. ISBN 0 643 06046 4
- ◆ Gullan P, Opie W, Saul P, Opie A, Edwards G (1999) *Wild Plants of Victoria*. CD-ROM 4th edition. Viridans Biological Databases, Viridans Pty. Ltd., 614 Hawthorn Road, Brighton East, VIC 3187 [provides distribution maps for all species, searchable by region, and colour illustrations of many]
  - ◆ Hyland BPM, Whiffin T, Christophel DC, Gray B, Elick RW, Ford AJ (1999) *Australian Tropical Rain Forest Trees and Shrubs. An interactive identification system for trees and shrubs*. CD-ROM CSIRO Publishing, Melbourne. ISBN 0 643 06047 2
  - ◆ Maslin BR (coordinator) (2001) *WATTLE. Acacias of Australia*. Australian Biological Resources Study Identification Series CD-ROM. CSIRO Publishing, Melbourne. ISBN 0 643 06606 3
  - ◆ Sharp D, Simon BK (2002) *AusGrass. Grasses of Australia*. Australian Biological Resources Study Identification Series CD-ROM. CSIRO Publishing, Melbourne. ISBN 0 643 06861 9
  - ◆ Thiele KR, Adams LG (eds.) (1999) *The Families of Flowering Plants of Australia. An Interactive Identification Guide*. CSIRO Publishing, Melbourne. ISBN 0 643 06452 4

### **Plant identification guides – reference books**

All guides listed include data, images or both on toxic species

### **Guides to identification of weeds, agricultural plants or poisonous plants**

The titles listed do not require detailed botanical knowledge for their use and are well illustrated with photographs, line drawings or both.

- Anon. (1989) *Weeds of Forests, Roadsides and Gardens*. [in Victoria] Friends of Sherbrooke Forest & Department of Conservation Forests and Lands, Victoria. xxiv + 82 pp. ISBN 7241 4753 5
- ◆ Auld BA, Medd RW (1987) *Weeds. An illustrated botanical guide to the weeds of Australia*. Inkata Press, Melbourne, viii + 255 pp. ISBN 0 9096 0537 8

- ◆ Blood K (2001) *Environmental Weeds. A Guide for SE Australia*. CH Jerram Science Publishers, Mt.Waverley, Victoria. iv + 228 pp. ISBN 0 9579086 0 1
  - ◆ Dowling RM, McKenzie RA (1993) *Poisonous Plants: A Field Guide*. Queensland Department of Primary Industries, Brisbane, xi + 164 pp. ISBN 0 7242 3982 0.
  - ◆ Friend E, Fillery BJ, Roberts AM (1983) *Queensland Weed Seeds*. Miscellaneous Publication 81013, Queensland Department of Primary Industries, Brisbane. xii + 206 pp. ISBN 0 7242 1896 3
  - ◆ Hussey BMJ, Keighery GJ, Cousens RD, Dodd J, Lloyd SG (1997) *Western Weeds. A Guide to the Weeds of Western Australia*. The Plant Protection Society of Western Australia (Inc.), Perth, ii + 254 pp. ISBN 0 646 32440 3.
- Kleinschmidt HE, Johnson RW (1979) *Weeds of Queensland*. Queensland Department of Primary Industries, Brisbane, v + 469 pp. ISBN 0 7242 2195 6
- Kleinschmidt HE, Rankin G, Saul M (1991) *Suburban Weeds*. 2nd edition. Information Series QI90037, Queensland Department of Primary Industries, Brisbane. v + 86 pp. ISBN 0 7242 3937 5
- Lamp C, Collet F (1989) *Field Guide to Weeds in Australia*. 3rd edition, Inkata Press, Melbourne, xi + 351 pp. ISBN 0 9096 0553 X
- ◆ Parsons WT, Cuthbertson EG (2001) *Noxious Weeds of Australia*. 2nd edition. CSIRO Publishing, Melbourne, xii + 698 pp. ISBN 0 643 06514 8
  - ◆ Pearson CJ, Cunningham GM, King DH (1993) *A Plain English Guide to Agricultural Plants*. Longman Cheshire Pty. Ltd., Melbourne, vii + 247 pp. ISBN 0 5828 6911 0
- Vaughan JG, Geissler CA (1997) *The New Oxford Book of Food Plants*. Oxford University Press, Oxford. xx + 239 pp. ISBN 0 19 854825 7
- Wilson BJ, Hawton B, Duff AA (1995) *Crop Weeds of Northern Australia. Identification at seedling and mature stages*. Queensland Department of Primary Industries, Brisbane, xxiv + 160 pp. ISBN 0 7242 5941 4

### **Floras and guides to specific plant groups in Australia**

Some botanical knowledge is an advantage when using these books.

#### **Floras**

- Cowie ID, Short PS, Osterkamp Madsen M (2000) *Floodplain Flora. A flora of the coastal floodplains of the Northern Territory, Australia*. Flora of Australia Supplementary Series Number 10. Australian Biological Resources Study, Canberra, and Parks and Wildlife Commission, Northern Territory, Darwin. xvi + 382 pp. ISBN 0 642 56808 1
- Curtis WM, Morris DI (1975) *The Student's Flora of Tasmania. Part 1*. 2nd edition. Government Printer, Tasmania. xlix + 240 pp.
- Curtis WM (1963) *The Student's Flora of Tasmania. Part 2*. Government Printer, Tasmania. Pp. 225-475.
- Curtis WM (1967) *The Student's Flora of Tasmania. Part 3*. Government Printer, Tasmania. Pp. 465-661.
- Curtis WM (1979) *The Student's Flora of Tasmania. Part 4a*. Government Printer, Tasmania. vi + 138 pp.
- Foreman DB, Walsh NG (eds.) (1993) *Flora of Victoria. Volume 1*. Inkata Press, Melbourne, viii + 320 pp. ISBN 0 909605 77 7 (4 volume set – see Walsh & Entwisle 1994-1999)
- ◆ Harden GJ (ed) (1990, 1991, 1992, 1993) *Flora of New South Wales*. 4 volumes, New South Wales University Press, Sydney, xxviii + 601; xxi + 574; xxii + 717; xxii + 775 pp. ISBN 0 86840 196 X (set)
  - ◆ Jessop JP, Toelken HR (eds) (1986) *Flora of South Australia. Parts 1-4*. 4th edition, South Australian Government Printing Division, Adelaide, 2248 pp. ISBN 0 7243 4672 4
- Marchant NG, Wheeler JR, Rye BL, Bennett EM, Lander NS, Macfarlane TD (1987) *Flora of the Perth Region. Parts 1 & 2*. Western Australian Herbarium, Perth, viii, vi + 1080 pp. ISBN 0 7244 8966 5
- Stanley TD, Ross EM (1983, 19886, 1989) *Flora of South-eastern Queensland*. Volumes 1-3, Queensland Department of Primary Industries, Brisbane, iv + 545; iii + 623; x + 532 pp. ISBN 0 7242 2127 1 (3 volumes)
- The Australian Systematic Botany Society (Jessop JP, editor-in-chief) (1981) *Flora of Central Australia*. AH & AW Reed, Sydney. xxxvi + 537 pp. ISBN 0 589 50226 2
- ◆ Walsh NG, Entwisle TJ (eds) (1994, 1996, 1999) *Flora of Victoria. Volumes 2, 3 & 4*. Inkata Press, Melbourne, ix + 946, xi + 1093, xii + 1088 pp. ISBN 0 909605 77 7 (4 volume set – see Foreman & Walsh 1993)

Wheeler JR (ed), Rye BL, Koch BL, Wilson AJG (1992) *Flora of the Kimberley Region*. Western Australian Herbarium, Perth, xxii + 1327 pp. ISBN 0 7309 5221 5

## Specific Plant Groups

### Ferns

- Andrews SB (1990) *Ferns of Queensland. A Handbook to the ferns and fern allies*. Queensland Department of Primary Industries, Brisbane, xx + 427 pp. ISBN 0 7242 3224 9
- Duncan BD, Isaac G (1986) *Ferns and Allied Plants of Victoria, Tasmania and South Australia*. Melbourne University Press, Melbourne. xii + 258 pp. ISBN 0 522 84262 3
- Jones DL, Clemesha SC (1976) *Australian Ferns and Fern Allies with notes on their cultivation*. A.H. & A.W. Reed, Sydney. 294 pp. ISBN 0 589 07197 1

### Cycads

- ◆ Hill KD, Osborne R (2001) *Cycads of Australia*. Kangaroo Press [Simon & Schuster (Australia) Pty Ltd], Sydney. x + 116 pp. ISBN 0 7318 0886 X
- ◆ Jones DL (2002) *Cycads of the World. Ancient Plants in Today's Landscape*. 2nd edition. Reed New Holland, Frenchs Forest NSW. 456 pp. ISBN 1 876334 69 X

### Grasses

- Lamp CA, Forbes SJ, Cade JW (1990) *Grasses of Temperate Australia. A Field Guide*. Inkata Press, Melbourne, ix + 310 pp. ISBN 0 9096 0558 0
- Tohill JC, Hacker JB (1983) *The Grasses of Southern Queensland*. University of Queensland Press, Brisbane, x + 475 pp. ISBN 0 7022 1881 2

### Legumes

- ◆ Hacker JB (1990) *A Guide to Herbaceous and Shrub Legumes of Queensland*. University of Queensland Press, Brisbane, xiii + 351 pp. ISBN 0 7022 2257 7

### Eucalypts

- Brooker MIH, Kleinig DA (1983) *Field Guide to Eucalypts. Volume 1. South-eastern Australia*. Inkata Press, Melbourne. vii + 288 pp. ISBN 0909605 31 9
- Brooker MIH, Kleinig DA (1990) *Field Guide to Eucalypts. Volume 2. South-western and Southern Australia*. Inkata Press, Melbourne. viii + 428 pp. ISBN 0909605 59 9
- Brooker MIH, Kleinig DA (1994) *Field Guide to Eucalypts. Volume 3. Northern Australia*. Inkata Press, Melbourne. vii + 383 pp. ISBN 0909605 67 X

### Algae & cyanobacteria

- ◆ Entwisle TJ, Sonneman JA, Lewis SH (1997) *Freshwater Algae in Australia. A Guide to Conspicuous Genera*. Sainty & Associates, Potts Point NSW. vi + 242 pp. ISBN 0 646 31408 4

### Aquatic & Wetland Plants

- Romanowski N (1998) *Aquatic and Wetland Plants. A Field Guide for Non-Tropical Australia*. University of New South Wales Press Ltd., Sydney. 119 pp. ISBN 0 86840 632 5
- Stephens KM, Dowling RM (2002) *Wetland Plants of Queensland. A Field Guide*. CSIRO Publishing, Collingwood, Victoria. vi + 146 pp. ISBN 0 643 06674 8

## Plant Censuses and Checklists

- Day SA, Wickham RP, Entwisle TJ, Tyler PA (1995) *Bibliographic Checklist of Non-Marine Algae in Australia*. Flora of Australia Supplementary Series No. 4. , Australian Biological Resources Study, Canberra. viii + 276 pp. ISBN 0 642 22788 8
- Hnatiuk RJ (1990) *Census of Australian Vascular Plants*. Australian Flora and Fauna Series No.11, Bureau of Flora and Fauna, Canberra. Australian Government Publishing Service, Canberra. xvi + 650 pp. ISBN 0 644 11606 4
- Nelder VJ (1992) *Vascular Plants of Western Queensland*. Queensland Botany Bulletin No.11, Queensland Herbarium, Queensland Department of Environment and Heritage, Brisbane. iv + 171 pp. ISBN 0 7242 4950 8
- Paczkowska G, Chapman AR (2000) *The Western Australian Flora. A Descriptive Catalogue*. Wildflower Society of Western Australia Inc., The Western Australian Herbarium, WA Department of Conservation and Land Management and The Botanic Gardens & Parks Authority, Perth. Xvi + 652 pp. ISBN 0 646 40243 9 (hbk) 0 646 40100 9 (pbk)
- Queensland Herbarium [Henderson RJF (ed.)] (2002) *Names and Distribution of Queensland Plants, Algae and Lichens*. Environmental Protection Agency, Queensland Government, Brisbane. 282 pp. ISBN 0 7345 2702 0 (Book), 0 7345 2703 9 (CD-ROM)

## Guides to plants (native and naturalised) in Australia

The titles listed do not require detailed botanical knowledge for their use and are well illustrated with photographs, paintings, line drawings or combinations of these.

### Australia as a whole

- Boland DJ, Brooker MIH, Chippendale GM, Hall N, Hyland BPM, Johnston RD, Kleinig DA, Turner JD (1984) *Forest Trees of Australia*. Thomas Nelson Australia & CSIRO, Melbourne. xvi + 687 pp. ISBN 0 17 006264 3
- ◆ Elliott WR, Jones DL (1980, 1982, 1984, 1986, 1990, 1993, 1997, 1999) *Encyclopaedia of Australian Plants suitable for cultivation. Volumes 1-7 and Supplement*. Lothian Publishing Co., Melbourne. xvi + 336 pp. ISBN (set) 0 85091 148 6
- Francis WD (1970) *Australian Rainforest Trees*. 3rd edition (revised by GM Chippendale). [Paperback edition 1981] Australian Government Publishing Service, Canberra. xvi + 468 pp. ISBN 0 642 05643 9 [1st edition published 1929]
- Wrigley JW, Fagg M (1996) *Australian Native Plants: propagation, cultivation and use in landscaping*. 4th edition. Reed Books Australia. 696 pp. ISBN 0 7301 0493 1

### South-eastern Australia

- Carolin RC, Clarke PJ (1991) *Beach Plants of South-eastern Australia*. Sainty & Associates, Potts Point NSW. 119 pp. ISBN 0 646 05147 4
- Cochrane GR, Fuhrer BA, Rotherham ER, Simmons J, Simmons M, Willis JH (1973) *Flowers and Plants of Victoria and Tasmania*. AH & AW Reed, Sydney. 176 pp. ISBN 0 589 50256 5
- Costermans LF (1983) *Native Trees and Shrubs of South-eastern Australia*. Rigby Publishers, Adelaide, vii + 422 pp. ISBN 0 7270 1799 3
- Costin AB, Gray M, Totterdell CJ, Wimbush DJ (1979) *Kosciusko Alpine Flora*. CSIRO, East Melbourne & William Collins, Sydney. 408 pp. ISBN 0 643 02473 5
- Floyd AG (1989) *Rainforest Trees of Mainland South-eastern Australia*. Inkata Press, Melbourne. xii + 420 pp. ISBN 0 909605 57 2
- Marriott N, Marriott J (1998) *Grassland Plants of South-eastern Australia*. Blooming Books, Hawthorn Vic. xv + 183 pp. ISBN 1 876 47300 2
- Romanowski N (1998) *Aquatic and Wetland Plants. A Field Guide for Non-Tropical Australia*. University of New South Wales Press Ltd., Sydney. 119 pp. ISBN 0 86840 632 5

### Northern Australia

- Hiddens LJ (1999) *Explore Wild Australia with the Bush Tucker Man*. Viking (Penguin Books Australia Ltd.), Ringwood, Victoria. 244 pp. ISBN 0 670 87914 2
- ◆ Wheaton T (ed) (1994) *Plants of the Northern Australian Rangelands*. Northern Territory Department of Lands, Housing and Local Government, Darwin, ii + 143 pp. ISBN 0 7245 1635 2

### New South Wales & Southern Queensland

- Rotherham ER, Blaxell DF, Briggs BG, Carolin RC (1975) *Australian Flora in Colour: Flowers and Plants of New South Wales and Southern Queensland*. AH & AW Reed, Sydney. 191 pp. ISBN 0 589 07171 8
- ◆ Williams JB, Harden GJ, McDonald WJF (1984) *Trees and Shrubs in Rainforests of New South Wales & Southern Queensland*. Botany Department, University of New England, Armidale. iii + 142 pp. ISBN 0 85834 555 2

### Queensland

- ◆ Anderson ER (1993) *Plants of Central Queensland, their identification and uses*. Queensland Department of Primary Industries, Brisbane, xvi + 272 pp. ISBN 0 7242 3990 1
- ◆ Bright F, Cox D, Glazebrook J, Leiper G, Rathie K, Waldron C, Waldron I (Committee of Logan River Branch, Society for Growing Australian Plants) (2002) *Mangroves to Mountains. A Field Guide to the Native Plants of the Logan-Albert Rivers Catchment*. Copyright Publishing Company Pty Ltd. 384 pp. ISBN 1 875401 95 4
- ◆ Cooper WT, Cooper W (1994) *Fruits of the Rainforest. A Guide to Fruits in Australian Tropical Rain Forests*. RD Press, Surry Hills NSW. 327 pp. ISBN 0 86438 778 4

- ◆ Cribb AB, Cribb JW (1985) *Plant Life of the Great Barrier Reef and Adjacent Shores*. University of Queensland Press, St. Lucia. xviii + 294 pp. ISBN 0 7022 1984 3
- Hauser PJ (1992) *Fragments of Green. An Identification Field Guide for Rainforest Plants of the Greater Brisbane Region*. Rainforest Conservation Society Inc, Bardon Q. 381 pp. ISBN 0 9589891 1 7
- ◆ Henry DR, Hall TJ, Jordan DJ, Milson JA, Sclafe CM, Silcock RG (1995) *Pasture Plants of Southern Inland Queensland*. Queensland Department of Primary Industries, Brisbane, viii + 261 pp. ISBN 0 7242 5940 6
- ◆ Milson J (1995) *Plant Identification in the Arid Zone*. Information Series QI94035, Queensland Department of Primary Industries, Brisbane. viii + 104 pp. ISSN 0727 6273
- ◆ Milson J (2000) *Pasture Plants of North-west Queensland*. Queensland Department of Primary Industries, Brisbane. 348 pp. ISBN 0 7345 0082 3
- ◆ Milson J (2000) *Trees and Shrubs of North-west Queensland*. Queensland Department of Primary Industries, Brisbane. 330 pp. ISBN 0 7345 0083 1
- Pearson S, Pearson A (undated - ca.1989) *Plants of Central Queensland*. [Leichhardt Pastoral District]. Society for Growing Australian Plants New South Wales Ltd., Sydney. 416 pp. ISBN 0 909830 36 3
- Pearson S, Pearson A (1992) *Rainforest Plants of Eastern Australia*. Kangaroo Press, Kenthurst NSW. 224 pp. ISBN 0 86417 474 8
- Roberts BR, Silcock RG, Scott G (1982) *Western Grasses. A Grazier's Guide to the Grasses of South Western Queensland*. Darling Downs Institute Press, Toowoomba, 118 pp. ISBN 0 9093 0628 1
- Stephens KM, Dowling RM (2002) *Wetland Plants of Queensland. A Field Guide*. CSIRO Publishing, Collingwood, Victoria. vi + 146 pp. ISBN 0 643 06674 8
- Williams KAW (1979) *Native Plants of Queensland. Volume 1*. KAW Williams, Ipswich. xvi + 288 pp. ISBN 0 9595570 0 8
- Williams KAW (1984) *Native Plants of Queensland. Volume 2*. KAW Williams, Ipswich. 304 pp. ISBN 0 9595570 1 6
- Williams KAW (1987) *Native Plants of Queensland. Volume 3*. KAW Williams, Ipswich. xvii + 319 pp. ISBN 0 9595570 2 4
- Williams KAW (1999) *Native Plants of Queensland. Volume 4*. KAW Williams, Ipswich. pp. ISBN 0 9595570

## New South Wales

- ◆ Cunningham GM, Mulham WE, Milthorpe PL, Leigh JH (1981) *Plants of Western New South Wales*. Soil Conservation Service of New South Wales/New South Wales Government Printing Office, Sydney, 766 pp. ISBN 0 7240 2003 9
- Fairley A, Moore P (1989) *Native Plants of the Sydney District. An Identification Guide*. Kangaroo Press, Kenthurst NSW. 432 pp. ISBN 0 86417 261 3
- Sainty GR, Jacobs SWL (1981) *Waterplants of New South Wales*. Water Resources Commission, New South Wales. 550 pp. ISBN 0 7240 3730 6

## Victoria

- Elliot R, Blake T, Brownlie J (1984) *A Field Guide to the Grampians Flora*. Revised edition. Algonia Publications, Northcote Vic. 144 pp. ISBN 0 909594 20 1
- Kelly M (1989) *An Introduction to the Wildflowers of "The Millewa", including Lindsay Island and the Northern Sunset Country*. Margaret Kelly, Meringur. 156 pp. ISBN 0 7316 6903 7
- McCann IR (1989) *The Mallee in Flower*. Victorian National Parks Association. 120 pp. ISBN 1 875100 01 6
- McCann IR (1992) *The Coast and Hinterland in Flower*. Victorian National Parks Association. 120 pp. ISBN 1 875100 05 9
- Scarlett NH, Wallbrink SJ, McDougal K (1992) *Field Guide to Victoria's Native Grasslands. Native Plants of Victorian Lowland Plains*. Victoria Press, South Melbourne. iv + 190 pp. ISBN 0 7241 8441 4
- Society for Growing Australian Plants Maroondah Group (1991) *Flora of Melbourne. A Guide to the Indigenous Plants of the Greater Melbourne Area*. Society for Growing Australian Plants, Maroondah Inc., Ringwood Vic. x + 335 pp. ISBN 0 909830 42 8
- Vaughan B (ed.) (1994) *The Forgotten Forests. A Field Guide to Victoria's Box and Ironbark Country*. Victorian National Parks Association, East Melbourne. 120 pp. ISBN 1 875100 08 3

## Tasmania

Launceston Field Naturalists Club (Cameron M, editor) (1981) *Guide to Flowers and Plants of Tasmania*. Reed Books, Frenchs Forest NSW. 120 pp. ISBN 0 589 50283 2

## South Australia

◆ Dashorst GRM, Jessop JP (1990) *Plants of the Adelaide Plains and Hills*. Kangaroo Press, Kenthurst NSW. 224 pp. ISBN 0 86417 323 7

## Northern Territory

Brennan KG (1986) *Wildflowers of Kakadu*. Kym Brennan, Jabiru NT. 128 pp. ISBN 0 9588971 0 7

◆ Brock J (1988) *Top End Native Plants. A comprehensive guide to the trees and shrubs of the Top End of the Northern Territory*. John Brock, Darwin, xii + 354 pp. ISBN 0 7316 0859 3

◆ Urban A (1990) *Wildflowers and Plants of Central Australia*. Southbank Editions, Melbourne. 240 pp. ISBN 0 949318 03 5

## Western Australia

Corrick MG, Fuhrer BA, George AS (1997) *Wildflowers of Southern Western Australia*. The Five Mile Press, Noble Park VIC and Monash University. 224 pp. ISBN 1 87597 149 1

Ericson R, George AS, Marchant NG, Morcombe MK (1973) *Australian Flora in Colour: Flowers and Plants of Western Australia*. AH & AW Reed, Sydney. 216 pp. ISBN 0 589 07123 8

◆ Mitchell AA, Wilcox DG (1994) *Arid Shrubland Plants of Western Australia*. 2nd edition, University of Western Australia Press, Perth, x + 478 pp. ISBN 1 875560 22 X

◆ Petheram RJ, Kok B (1983) *Plants of the Kimberley Region of Western Australia*. University of Western Australia Press, Perth, xii + 556 pp. ISBN 0 85564 215 7

## Guides to macrofungi (“mushrooms”, “toadstools”) in Australia

Aberdeen JEC (1979) *Introduction to the Mushrooms, Toadstools and Larger Fungi of Queensland*. Handbook No.1, Queensland Naturalists' Club, Brisbane. 120 pp. ISBN 0 9595 607

◆ Bougher NL, Syme K (1998) *Fungi of Southern Australia*. University of Western Australia Press, Nedlands WA. Xii + 391 pp. ISBN 1 875560 80 7 [uses specific examples from south-western Australia]

Bresinsky A, Bresl H (1990) *A Colour Atlas of Poisonous Fungi. A Handbook for pharmacists, doctors and biologists*. [English translation by NG Bisset] Wolfe Publishing, London. xi + 295 pp. ISBN 0 7234 1576 5 [European species]

Führer BA (2001) *A Field Companion to Australian Fungi (Revised edition)*. Blooming Books, Hawthorn, Victoria. 162 pp. ISBN 1 876473 40 1 [Covers south-eastern Australia]

Hay B, Young T (1988) *Poisonous Fungi of Australia*. Published by the authors, Nanango Q 4315. 73 pp. [This booklet was written to accompany a computer program for identification of poisonous species in Australia, had a limited distribution and is no longer in print. Access may be difficult.]

MacDonald R, Westerman J (1979) *A Field Guide to Fungi of South-eastern Australia*. Thomas Nelson Australia, Melbourne. 153 pp. ISBN 0 17 005290 7

◆ Shepherd CJ, Totterdell CJ (1988) *Mushrooms and Toadstools of Australia*. Inkata Press, Melbourne. vi + 162 pp. ISBN 0 909605 51 3

Stamets P (1996) *Psilocybin Mushrooms of the World. An Identification Guide*. Ten Speed Press, Berkeley California. ix + 245 pp. ISBN 0 89815 839 7

Young AM (2000) *Common Australian Fungi. A Bushwalker's Guide*. University of New South Wales Press, Sydney. iv + 154 pp. ISBN 0 86840 650 3

## Guides to ornamental garden and indoor plants, herbs and medicinal plants

The titles listed do not require detailed botanical knowledge for their use and are well illustrated with photographs, line drawings or both.

Beckett KA (1987) *The RHS Encyclopaedia of House Plants including greenhouse plants*. Century Hutchinson, London. 492 pp. ISBN 0 8317 7399 5

◆ Bricknell C (ed.) (1996) *The Royal Horticultural Society A-Z Encyclopaedia of Garden Plants*. Dorling Kindersley, London. 1080 pp. ISBN 1 8718 5448 2



- Burnie G *et al.* (1997) *Botanica. The Illustrated A-Z of over 10,000 garden plants for Australian gardens*. Random House Australia, Milsons Point NSW. 1007 pp. ISBN 0 09 183201 2
- Macoboy S (1989) *Sirling Macoboy's What Shrub is That?* Weldon Publishing, Willoughby NSW. 368 pp. ISBN 1 86302 014 4
- Macoboy S (1986) *Sirling Macoboy's What Flower is That?* Weldon Publishing, Willoughby NSW. 455 pp. ISBN 1 86302 043 8
- ◆ Reader's Digest (1991) *The Reader's Digest Gardeners' Encyclopedia of Plants and Flowers*. Reader's Digest, Sydney. 608 pp.
  - ◆ Rodd AN (Tony) (1996) *The Ultimate Book of Trees and Shrubs for Australian Gardens*. Random House Australia, Milson's Point NSW. 512 pp. ISBN 0 09 183205 5
- Sajeva M, Costanzo M (1994) *Succulents. The Illustrated Dictionary*. Cassell, London. 239 pp. ISBN 0 304 34250 5

### **Guides to medicinal plants and herbs (culinary and medicinal)**

The titles listed do not require detailed botanical knowledge for their use and are well illustrated with photographs, line drawings or both.

- ◆ Bown D (1995) *Encyclopaedia of Herbs and their Uses*. RD Press, Surry Hills NSW. 424 pp. ISBN 0 86438 874 8
- Bremness L (1994) *Herbs*. Harper Collins Publishers (Australia), Pumble NSW. 304 pp. ISBN 0 7322 5031 5
- ◆ Chevallier A (1996) *The Encyclopaedia of Medicinal Plants*. Dorling Kindersley, London. 336 pp. ISBN 0 7513 0314 3
- Cribb AB, Cribb JW (1981) *Wild Medicine in Australia*. William Collins, Sydney. 228 pp. ISBN (Fontana Paperback) 0 00 636559 0
- ◆ Duke JA (2002) *Handbook of Medicinal Herbs*. 2nd edition. CRC Press, Boca Raton, Florida. 900 pp. ISBN 0 8493 1284 1 [Covers 1000 medicinal herbs]
- Duke JA (2002) *CRC Handbook of Medicinal Spices*. CRC Press, Boca Raton, Florida. 520 pp. ISBN 0 8493 1279 5 [Covers 60 spice plants]
- Lassak EV, McCarthy T (1983) *Australian Medicinal Plants*. Methuen Australia, North Ryde NSW. 240 pp. ISBN 0 454 00438 9
- Low T (1990) *Bush Medicine. A Pharmacopoeia of Natural Remedies*. Collins/Angus & Robertson Publishers, Sydney. 238 pp. ISBN 0 207 16462 2
- Reader's Digest (1994) *Reader's Digest Magic and Medicine of Plants*. Reader's Digest, Surry Hills NSW. 464 pp. ISBN 0 86438 560 9

### **Australian aboriginal plant use and Australian native and naturalised food plants (bush tucker)**

The titles listed do not require detailed botanical knowledge for their use and are well illustrated with photographs, line drawings or both.

- Aboriginal Communities of the Northern Territory of Australia (1988) *Traditional Bush Medicines. An Aboriginal Pharmacopoeia*. Greenhouse Publications, Richmond VIC. 256 pp. ISBN 0 86436 167 X
- Cherikoff V, Isaacs J (undated – ca.1988) *The Bush Food Handbook. How to gather, grow, process and cook Australian wild foods*. Ti Tree Press, Balmain NSW. 208 pp. ISBN 0 7316 6904 5
- Cribb AB, Cribb JW (1981) *Useful Wild Plants in Australia*. William Collins, Sydney. 269 pp. ISBN 0 00 216441 8
- Cribb AB, Cribb JW (1987) *Wild Foods in Australia*. 2nd edition. Fontana/Collins, Sydney. xi + 284 pp. ISBN 0 00 636896 4
- Hiddins LJ (2001) *Bush Tucker Field Guide*. Penguin Books Australia Ltd., Ringwood, Victoria. xvi + 184 pp. ISBN 0 14 028986 0
- Institute for Aboriginal Development (1985) *Punu. Yankunytjajjara Plant Use. Traditional Methods of Preparing Foods, Medicines, Utensils and Weapons from Native Plants*. Angus and Robertson Publishers, North Ryde NSW. 166 pp. ISBN 0 207 15715 4
- Isaacs J (1987) *Bush Food. Aboriginal Food and Herbal Medicine*. Weldons, McMahons Point NSW. 256 pp. ISBN 0 949708 33 X
- Lands M (ed) (1987) *Mayi. Some Bush Fruits of Dampierland*. Magabala Books, Kimberley Aboriginal Law and Culture Centre, Broome. 60 pp. ISBN 0 7316 0335 4

- Latz PK (1995) *Bushfires and Bushtucker. Aboriginal Plant Use in Central Australia*. IAD Press, Alice Springs. xv + 400 pp. ISBN 0 949659 83 5
- Leiper G, Hauser J (undated – ca.1984) *Mutooroo. Plant Use by Australian Aboriginal People*. Assembly Press. 80 pp. ISBN 07242 1185 3 [A guide to plants grown in a project garden at Eaglby South State School]
- Low T (1985) *Wild Herbs of Australia and New Zealand*. Angus and Robertson Publishers, North Ryde NSW. viii + 160 pp. ISBN 0 207 151679
- Low T (1988) *Wild Food Plants of Australia*. Angus and Robertson Publishers, North Ryde NSW. 236 pp. ISBN 0 207 14383 8
- Low T (1989) *Bush Tucker. Australia's Wild Food Harvest*. Angus and Robertson Publishers, North Ryde NSW. 233 pp. ISBN 0 207 16373 1

## **4: Sources of Veterinary Toxicological and related Expertise in Australia – Individual scientists**

An old dog for a hard road  
Anonymous (Proverbial)

### **Veterinary Toxicologists & Pathologists**

- Prof Alan A. Seawright, University of Queensland School of Veterinary Science (retired), National Research Centre for Environmental Toxicology (associate), 39 Kessels Road, Coopers Plains [PO Box 594 Archerfield] Brisbane, Qld 4108; Phone (07) 3274-9114, Fax (07) 3274-9003, e-mail a.seawright@mailbox.uq.edu.au
- Dr Jeremy G. Allen, Animal Health Laboratories, Agriculture Western Australia, 3 Baron-Hay Court, South Perth WA 6151 [Locked Bag No. 4, Bentley Delivery Centre, WA 6983] Phone (08) 9368-3466 Fax (08) 9474-1881 e-mail jgallen@agric.wa.gov.au
- Dr Chris A. Bourke, NSW Agriculture (CRC for Weed Management Systems), Orange Agricultural Institute, Forest Road, Orange NSW 2800; Phone (02) 6391-3867 Fax (02) 6391-3899 e-mail chris.bourke@agric.nsw.gov.au
- Dr Leigh Lehane, Office of Animal and Plant Health, Agriculture, Fisheries and Forestry – Australia, GPO Box 858, Canberra, ACT 2601; Phone (02) 6272-4697, Fax (02) 6272-4533, e-mail leigh.lehane@affa.gov.au web page: <http://www.affa.gov.au/nat-offices/ocvo/pubs>
- Dr Ross A. McKenzie, Yeerongpilly Veterinary Laboratory, Animal Research Institute, Queensland Department of Primary Industries, Ortive Street, Yeerongpilly [Locked Mail Bag No. 4, Moorooka Q 4105] Phone DPI Call Centre (from Qld) 13 25 23 or (07) 3362 9432 Fax (07) 3362 9440 e-mail ross.mckenzie@dpi.qld.gov.au or yapunyah.house@bigpond.com
- Dr Michael (Mike) A Pass, Faculty of Science, University of the Sunshine Coast, Locked Bag No.4, Maroochydore D.C. Q 4556; Phone (07) 5430-2840, Fax (07) 5430-2887, e-mail mpass@usc.edu.au

### **Veterinary Pharmacologists & Pharmacists**

- Dr Ian A Shiels, Department of Physiology & Pharmacology, University of Queensland, St.Lucia Q 4072; Phone (07) 3365 4756; Fax (07) 3365 1766, e-mail shiels@plpk.uq.edu.au
- Mrs Josphine Isaacs, Pharmacist, Companion Animal Practice, University of Queensland School of Veterinary Science, St.Lucia Q 4072; Phone (07) 3365 3093 or 3365 4851, Fax (07) 3365 1899, e-mail j.isaacs@mailbox.uq.edu.au

### **Chemists & Biologists with expertise in toxins of veterinary importance**

#### **Mycotoxins**

- Mr Barry J. Blaney, Animal Research Institute, Queensland Department of Primary Industries, Ortive Street, Yeerongpilly [Locked Mail Bag no.4, Moorooka Q 4105] Phone DPI Call Centre (from Qld) 13 25 23 or (07) 3362 9470, Fax (07) 3362 9429, e-mail barry.blaney@dpi.qld.gov.au
- Prof Wayne L. Bryden, Dept of Animal Science, Faculty of Natural Resources, Agriculture and Veterinary Science, University of Queensland, Gatton, Qld;

### **Plant toxins**

Dr Steven M. Colegate, Plant Toxins Unit, CSIRO Division of Animal Health, Australian Animal Health Laboratory, Private Mail Bag 24, Geelong, VIC 3220; Phone (03) 5227-5739, Fax (03) 5227-5555, e-mail [steven.colegate@li.csiro.au](mailto:steven.colegate@li.csiro.au)

Dr Peter R. Dorling, Division of Veterinary Biology, Murdoch University, Perth WA; e-mail [dorling@numbat.murdoch.edu.au](mailto:dorling@numbat.murdoch.edu.au)

Dr John A. Edgar, Plant Toxins Unit, CSIRO Division of Animal Health (retired), Australian Animal Health Laboratory, Private Mail Bag 24, Geelong, VIC 3220; e-mail [John.Edgar@li.csiro.au](mailto:John.Edgar@li.csiro.au)

Dr. Mervyn P. Hegarty, [ex-CSIRO Division of Tropical Crops & Pastures (retired)], Plantchem Pty Ltd., Phone (07) 3378-3530, Fax (07) 3378-3530, e-mail [Hegarty.Plantchem@uq.net.au](mailto:Hegarty.Plantchem@uq.net.au)

### **Ciguatera**

Dr Richard J Lewis, Institute for Molecular Biology-Drug Design & Development/Queensland Agricultural Biotechnology Centre, Gehrmann Laboratories, University of Queensland, St.Lucia Q 4072; Phone (07) 3365 1924; e-mail [r.lewis@imb.uq.edu.au](mailto:r.lewis@imb.uq.edu.au)

### **Marine microalgae (dinoflagellates)**

Dr Gustaaf M. Hallegraeff, School of Plant Science, University of Tasmania, GPO Box 252C, Hobart Tasmania 7001; Phone (03) 6226 2623, Fax (03) 6226 2698; e-mail [hallegraeff@utas.edu.au](mailto:hallegraeff@utas.edu.au)

### **Cyanobacteria**

Prof. Ian R. Falconer, Department of Clinical and Experimental Pharmacology (& CRC for Water Quality & Treatment), Adelaide University SA 5005; Phone 02 6251 1345; e-mail [ifalconer@medicine.adelaide.edu.au](mailto:ifalconer@medicine.adelaide.edu.au)

Dr Gary Jones, CRC for Freshwater Ecology, Building 15, University of Canberra, ACT 2600; Phone 02 6201 5168; e-mail [gjones@lake.canberra.edu.au](mailto:gjones@lake.canberra.edu.au)

Dr Glen Shaw, National Research Centre for Environmental Toxicology, 39 Kessels Road, Coopers Plains, Brisbane 4108; Phone 07 3274 9120; e-mail [g.shaw@mailbox.uq.edu.au](mailto:g.shaw@mailbox.uq.edu.au)

Dr Geoffrey K Eaglesham, Queensland Health Scientific Services, 39 Kessels Road, Coopers Plains, Brisbane 4108; Phone 07 3274 9085; e-mail [Geoff\\_Eaglesham@health.qld.gov.au](mailto:Geoff_Eaglesham@health.qld.gov.au)

Dr Michael Burch, CRC for Water Quality & Treatment, Private Mail Bag 3, Salisbury, South Australia 5108; Phone 08 8259 0352; e-mail [michael.burch@sawater.sa.gov.au](mailto:michael.burch@sawater.sa.gov.au)

Dr Andrew R. Humpage, Australian Water Quality Centre (& CRC for Water Quality & Treatment), Private Mail Bag 3, Salisbury, South Australia 5108; Phone 08 8259 0222; e-mail [andrew.humpage@sawater.sa.gov.au](mailto:andrew.humpage@sawater.sa.gov.au)

Dr Philip T. Orr, CSIRO Land & Water, 120 Meiers Road, Indooroopilly, Brisbane 4068; Phone 07 3214 2721; e-mail [philip.orr@bne.clw.csiro.au](mailto:philip.orr@bne.clw.csiro.au)

Dr Larelle Fabbro, Centre for Land and Water Resource Management, University of Central Queensland, Rockhampton Q 4702

## **5: Sources of Veterinary Toxicological and related Expertise in Australia – Scientific Institutions**

### ***Australian Research Centres with expertise pertinent to Veterinary Toxicology***

#### **Veterinary orientation**

**CSIRO Plant Toxins Unit**, Australian Animal Health Laboratory, Private Mail Bag 24, Geelong, VIC 3213

#### **Medical and Veterinary orientation**

**National Research Centre for Environmental Toxicology**, 39 Kessels Road, Coopers Plains [PO Box 594 Archerfield] Brisbane, Qld 4108; Web Homepage <http://www.uq.edu.au/nrcet/>

**Australian Venom Research Unit**, Department of Pharmacology, University of Melbourne; Web pages <http://www.pharmacology.unimelb.edu.au/PHARMWWW/avruweb/Page1.htm>

**Australian Water Quality Centre / Cooperative Research Centre for Water Quality and Treatment** [cyanobacterial studies], Private Mail Bag 3, Salisbury, South Australia 5108. Phone 08 8259 0221, Fax 08 8259 0228, e-mail [crc@sawater.sa.gov.au](mailto:crc@sawater.sa.gov.au), web site <http://www.waterquality.crc.org.au/>

### **Poisons Information Centres**

These centres are human-oriented, based in the Pharmacy Departments of major metropolitan hospitals and staffed by pharmacists. They have access to large databases on pharmaceuticals, household and industrial products and plants poisonous to humans (mainly children). They may be willing to deal with veterinary enquiries and may refer veterinary callers to other local sources of expertise.

Australia-wide Phone 13 1126. You will be connected to your local state Poisons Information Centre.

### **State Herbariums (Plant Identification Services)**

**See the chapter on collection and submission of plant, fungal and cyanobacterial specimens for identification by centres of expertise**

**Queensland:** Identification and Advisory Service, Queensland Herbarium (Environmental Protection Agency), Brisbane Botanic Gardens Mt.Coot-tha, Mt.Coot-tha Rd., Toowong Q 4066. Phone (07) 3896 9318 Fax (07) 3896 9624.

**New South Wales:** Botanical Enquiry Section, National Herbarium of New South Wales, Royal Botanic Gardens, Mrs Macquaries Road, Sydney, NSW 2000. Phone (02) 9231 8111. Fax (02) 9251 4403.

**Victoria:** National Herbarium of Victoria, Royal Botanic Gardens, Birdwood Avenue, South Yarra, Vic 3141. Phone (03) 9252 2300. Fax (03) 9252 2350.

**Tasmania:** The Curator, Tasmanian Herbarium, GPO Box 252c, Hobart, TAS 7001. [Tasmanian Herbarium, College Road, University of Tasmania, Sandy Bay, Hobart] Phone (03) 6226 2635. Fax (03) 6226 7865.

**South Australia:** State Herbarium of South Australia, The Botanic Gardens of Adelaide, North Terrace, Adelaide, SA 5000. Phone (08) 8228 2311. Fax (08) 8223 1809.

**Western Australia:** Western Australian Herbarium (Department of Conservation and Land Management), Locked Bag 104, Bentley Delivery Centre, WA 6983. [Western Australian Herbarium, George Street, South Perth] Phone (08) 9334 0500. Fax (08) 9334 0515.

**Northern Territory:** Northern Territory Herbarium, Conservation Commission of the Northern Territory, PO Box 496, Palmerston, Darwin NT. 0831. Phone (08) 8999 4516. Fax (08) 8999 4527.

**Australian Capital Territory:** Plant Enquiry Service, Australian National Botanic Gardens, GPO Box 1777, Canberra, ACT 2601. Phone (02) 6250 9450. Fax (02) 6250 9599.

### **Weed Control Research Centres**

**National: South Australia, Victoria, New South Wales, Western Australia**

- **Cooperative Research Centre for Weed Management Systems** based at University of Adelaide, Waite Campus, PMB 1, Glen Osmond SA 5064 and including participants in several states. [crcweeds@waite.adelaide.edu.au](mailto:crcweeds@waite.adelaide.edu.au) ; [weeds@agric.nsw.gov.au](mailto:weeds@agric.nsw.gov.au)

#### **Queensland**

- Department of Natural Resources (DNR) **Alan Fletcher Research Station** (27 Magazine St., Sherwood Q 4075) is a research centre for weed control in southern Queensland.
- DNR Charters Towers **Tropical Weed Research Centre** (PO Box 187, Charters Towers Q 4820) is a research centre for weed control in northern Queensland.
- **Cooperative Research Centre for Tropical Pest Management** Gehrman Laboratories, University of Queensland, St.Lucia

### Victoria

- **Keith Turnbull Research Institute**, Natural Resources and Environment Victoria, Ballarto Road, Frankston Vic 3199. KTRI@nre.vic.gov.au

### Western Australia

- **Agriculture Western Australia Weed Science Unit** 3 Baron-Hay Court, South Perth (Locked Bag 4, Bentley Delivery Centre WA 6983) infotech@agric.wa.gov.au

## 6: Internet Resources (including resources external to Australia)

To err is human but to really foul things up requires a computer  
Anonymous: *Farmers' Almanac for 1978*

The World Wide Web is a growing source of information with a wide range of reliability and veracity. Sites are continually being added, modified and deleted (abandoned?) with the passing of time. Thus, **the sites included in this document are not, and cannot be, an exhaustive listing.** See Wexler *et al.* (2000) for an extended list of sites covering toxicology as a whole. Poppenga & Spoo (2002) have reviewed internet resources for veterinary toxicologists.

At present, sites with high relevance as information sources for veterinary toxicology in Australia are very few. Those available reflect the dominance of this field by professionals from North America and the emphasis placed on largely human-focused concerns such as carcinogens and environmental contamination by potential intoxicants. The lack of large volumes of easily accessible technical information may reflect the relatively early stage of development of web use by the profession and the lack of control available over intellectual property.

There are two basic avenues for current access to toxicological information through the World Wide Web –

- specific sites (some listed below) not charging fees for access, or
- access to the scientific literature through on-line bibliographic databases charging fees for access and use

It has been suggested that the refereed scientific (scholarly) literature should, can and will be made available free online through the establishment of e-print archives by scholarly institutions. See Harnad S (2001) How and why to free the give-away research literature. Freeing the scholarly and scientific research literature online through author/institution self-archiving. (Keynote Address) *Information Online 2001*

[text available at [http://www.csu.edu.au/special/online2001/papers/keynote\\_harnad.htm](http://www.csu.edu.au/special/online2001/papers/keynote_harnad.htm) ]

### **World Wide Web literature search databases**

#### **PubMed (free access)**

<http://www.ncbi.nlm.nih.gov/PubMed/>

<http://www.ncbi.nlm.nih.gov/entrez/query.fcgi>

Provides access to MedLine, a bibliographic database of the medical literature (including veterinary literature) developed by the US National Centre for Biotechnology Information at the National Library of Medicine, located at the National Institutes of Health.

#### **TOXNET**

<http://toxnet.nlm.nih.gov/>

<http://toxnet.nlm.nih.gov/servlets/simple-search>

Search interface providing access to the TOXNET system of databases on toxicology, hazardous chemicals, and related areas. TOXNET is sponsored by the US National Library of Medicine, through the Toxicology and Environmental Health Information Program of its Specialized Information Services Division. Toxicology Data Search - Select and search any of the following files containing factual

information related to the toxicity and other hazards of chemicals: HSDB (Hazardous Substances Data Bank), CCRIS (Chemical Carcinogenesis Research Information System) from the National Cancer Institute, and GENE-TOX (Genetic Toxicology/Mutagenicity Data Bank) and IRIS (Integrated Risk Information System) both from the Environmental Protection Agency (EPA). Toxic Releases (TRI) Search - Select and search any of the Environmental Protection Agency's (EPA) TRI series of files (beginning with TRI87) containing data on the estimated quantities of chemicals released to the environment or transferred off-site for waste treatment, as well as information related to source reduction and recycling. Toxicology Literature Search - Select and search any of the following bibliographic files, consisting of citations to the scientific literature: DART (Developmental and Reproductive Toxicology) and its backfile ETICBACK, and EMIC (Environmental Mutagenesis Information Centre) and its backfile EMICBACK.

### **TOXLINE**

<http://igm.nlm.nih.gov/cgi-bin/doler?account=++&password=++&datafile=toxline>  
<http://www.medscape.com>

Toxline through Grateful Med and the US National Library of Medicine provides bibliographic information on biochemical, pharmacological, physiological and toxicological effects of drugs and chemicals reported in humans, domestic and laboratory animals and wildlife.

### **World Wide Web free access sites**

**Poisoning Management, Clinical Toxicology Synopsis & Core Data from *Toxicology for Australian Veterinarians* by R.A.McKenzie: Extracts from Veterinary Clinical Toxicology Course Notes, University of Queensland School of Veterinary Science**

<http://www.library.uq.edu.au/>

To access the material from the above address, click on Course Materials, then Veterinary Science, then VETS4005 – Lecture Notes.

This document is Copyright (© R.A.McKenzie). It includes the basic material presented in the course. Access to the source document, *Toxicology for Australian Veterinarians*, is through the author. Currently, it is not commercially available.

**National Registration Authority for Agricultural and Veterinary Chemicals (Australia)**

<http://www.dpie.gov.au/nra/welcome.html>

**National Residue Survey (Australia)**

[http://www.affa.gov.au/docs/product\\_integrity/residues](http://www.affa.gov.au/docs/product_integrity/residues)

Conducted by the Commonwealth government department responsible for agricultural aspects of trade (whatever the name of the instrumentality happens to be in any given year – currently Agriculture, Forestry and Fisheries – Australia [Commonwealth Department of]).

**Infopest [database of all registered Agricultural & Veterinary Chemicals in Australia]**

<http://www.dpi.qld.gov.au/extra/asp/infopest/default.asp>

Launched 2001, material available limited compared with the CD-ROM version (*q.v.*) but being expanded. Maintained by DPI Queensland

**ASPCA National Animal Poison Control Centre (USA)**

<http://www.napcc.asPCA.org/>

A division of the American Society for the Prevention of Cruelty to Animals and affiliated with the University of Illinois (Urbana-Champaign) College of Veterinary Medicine  
888-426-4435 Fee \$US45 per case; credit cards only; no extra charge for follow-up calls (within USA only?)

**ToxicologyOnline.com (USA)**

<http://www.toxicologyonline.com>

Centred at the College of Veterinary Medicine of Michigan State University, USA, launched in March 2000 and under continuous development. Provides linkage to commercial services in toxicology with emphasis on environmental toxicology. Claims world-wide coverage, but currently dominated by North American material. A directory of poison control centres is included (Currently, coverage of Australia



is incomplete). The site contains links to other toxicology sites including specifically veterinary toxicology sites. Includes a bulletin board for public access to toxicological expertise.

**American Board of Veterinary Toxicology**

<http://www.abvt.org/>

Certifying organisation for veterinary toxicologists. The site includes toxicological profiles.

**American Academy of Clinical Toxicology**

<http://www.aactox.org>

**American Association of Poison Control Centres**

<http://www.aapcc.org>

**American Association of Veterinary Laboratory Diagnosticians**

<http://www.aavld.org>

**Massachusetts Poison Control Centre**

<http://www.mapoison.org>

Provides access to old Clinical Toxicology Reviews (brief reviews of specific toxicants)

**Food Animal Residue Avoidance Databank [FARAD] (USA)**

<http://www.farad.org/>

e-mail enquiries: FARAD@ncsu.edu or FARAD@ucdavis.edu

888-873-2723

Information on animal drugs and chemicals with the potential to cause food-bourn residues. Includes information on withdrawal times.

**Bad Bug Book - USFDA-CFSAN (Centre for Food Safety & Applied Nutrition)**

<http://www.cfsan.fda.gov/list.html>

Includes information on a number of food-bourn natural toxins

**National Pesticide Telecommunications Network (USA)**

800-858-7877

Sponsored by EPA and Oregon State University

Provides information about pesticide products and poisonings, toxicology, environmental chemistry, and other pesticide-related issues.

**EXTOXNET (Extension Toxicology Network) (USA)**

<http://ace.ace.orst.edu/info/extoxnet/ghindex.html>

Pesticide information profiles +

Based at the Oregon State University. Run co-operatively by University of California-Davis, Oregon State University, Michigan State University, Cornell University, and the University of Idaho.

**ToxFAQs: Agency for Toxic Substances and Disease Registry (USA)**

<http://atsdr1.atsdr.cdc.gov/toxfaq.html>

Hazardous substance fact sheets relating to hazardous waste sites

**Environmental Contaminants Encyclopaedia (US National Parks Service)**

<http://www1.nature.nps.gov/toxic/index.html>

**Material Safety Data Sheets (Where to find MSDSs on the internet)**

<http://www.ilpi.com/msds/>

**MSDS Search 2001**

<http://www.msdssearch.com>

### **National Toxicology Program (USA)**

<http://ntp-server.niehs.nih.gov/>

Report on Carcinogens – lists substances recognised or reasonably suspected to be human carcinogens and to which the public may be exposed in the USA.

### **Environmental Protection Agency (USA) Carcinogenic Pesticides**

<http://www.epa.gov/pesticides/carlist/>

### **Society of Toxicology (USA) – Sites of interest**

<http://www.toxicology.org/Sites/sites-body.html>

### **Toxicology Links [University of Kentucky Library]**

<http://www.uky.edu/Subject/toxicology.html>

### **The Lead Advisory Service (Australia)**

<http://www.lead.org.au>

Based in Sydney. Freecall 1800 626 086. Provides information on effects and prevention including lead test kits.

### **IPCS INCHEM**

<http://www.inchem.org/>

IPCS INCHEM is a tool for those concerned with chemical safety and the sound management of chemicals. Produced through cooperation between the International Programme on Chemical Safety (IPCS) and the Canadian Centre for Occupational Health and Safety (CCOHS). IPCS INCHEM directly responds to one of the Intergovernmental Forum on Chemical Safety (IFCS) priority actions to consolidate current, internationally peer-reviewed chemical safety-related publications and database records from international bodies, for public access.

IPCS INCHEM provides access to searchable full-text documents on chemical risks and the sound management of chemicals, helping countries fulfil their commitments under UNCED's Agenda 21, Chapter 19.

IPCS INCHEM contains the following:

- CIS Chemical Information (ILO/CIS)
- Concise International Chemical Assessment Document (CICADS)
- Environmental Health Criteria (EHC) monographs
- Health and Safety Guides (HSGs)
- International Agency for Research on Cancer (IARC) - Summaries and Evaluations
- International Chemical Safety Cards (ICSCs)
- IPCS/CEC Evaluation of Antidotes Series
- Joint Expert Committee on Food Additives (JECFA) - Monographs and evaluations
- Joint Meeting on Pesticide Residues (JMPR) - Monographs and evaluations
- Pesticide Data Sheets (PDSs)
- Poisons Information Monographs (PIMs). The Poisons Information Monographs include industrial chemicals, pharmaceuticals and natural toxins including some poisonous plants and fungi
- Screening Information Data Set (SIDS) for High Production Volume Chemicals

### **Annals of Clinical Biochemistry**

<http://www.leeds.ac.uk/acb/annals>

Extensive tabulation of therapeutic and toxic concentrations of pharmaceuticals in plasma

### **Toxikon Multimedia Project**

<http://toxikon.er.uic.edu/>

Human clinical toxicology case discussions & toxidrome summary tables



### **Guidelines for the interpretation of analytical toxicology results and unit of measurement conversion factors**

<http://www.leeds.ac.uk/acb/annals/Webwise/Webwise97-1.html>

RJ Flanagan (1998) Guidelines for the interpretation of analytical toxicology results and unit of measurement conversion factors. *Annals of Clinical Biochemistry* **35**:261-7. From the Poisons Unit, Guy's and St Thomas' Hospital Trust, Avonley Road, London SE14 5ER, UK. 'Therapeutic' or 'normal' plasma/whole blood/urine concentrations for humans, as well as the concentrations associated with serious (generally acute) toxicity (if known), for some 700 analytes of toxicological interest are given together with (when possible) relative atomic or formula masses, and mass/amount and amount/mass concentration conversion factors. The paper published in the Journal gives background and supplementary information which should be borne in mind when providing interpretation or using the Web table. Copyright ©1998 Association of Clinical Biochemists.

### **WWW free-access sites – Poisonous Plants**

N.B. Currently, there are no Australian sites useful to veterinarians

### **US Department of Agriculture Agricultural Research Service [USDA/ARS] Poisonous Plants Research Laboratory Poisonous Plant Reference Database: Reviews of Specific Poisonous Plants**

<http://www.pprl.usu.edu/newpage31.htm>

PPRL Home Page: <http://www.pprl.usu.edu/default.htm>

North American species. Limited coverage in itself. Contains links to numerous other poisonous plant pages for North American plants.

### **U.S. Food & Drug Administration [FDA] Centre for Food Safety & Applied Nutrition Poisonous Plant Database**

<http://vm.cfsan.fda.gov/~djw/readme.html>

The Poisonous Plant Database is a set of working files of scientific information about the animal and human toxicology of vascular plants of the world. The initial files were created in 1994, and are updated periodically. The files in this database are intended only for scientific information exchange.

### **USDA/ARS Phytochemical and Ethnobotanical Databases**

<http://www.ars-grin.gov/duke/>

<http://www.ars-grin.gov/duke/highchem.html>

Lists plants with particular chemical constituents. Searchable by chemical name, plant common name and botanical name.

### **Botanical Dermatology Database [BoDD]**

<http://www.uwcm.ac.uk/uwcm/dm/BoDD/BoDDHomePage.html>

BoDD is an electronic re-incarnation of BOTANICAL DERMATOLOGY by J Mitchell & A Rook, which was originally published in 1979 by Greengrass Ltd, Vancouver [ISBN 0-88978-047-1]. This updated on-line version is made available to you with the kind permission of the original authors.

### **Poisonous Plant Botanical Resources, Norton-Brown Herbarium, University of Maryland**

<http://www.inform.umd.edu/PBIO/FindIT/poppl.html>

Links to numerous web pages with poisonous plants information. Mostly North American orientation.

### **Atlantic Veterinary College, University of Prince Edward Island (Canada)**

<http://www.upei.ca/~avc/toxic/toxic.htm>

The **Veterinary Garden of Poisonous and Medicinal Plants** was established in 1996. Displays of plants toxic to various species of animals are found in the garden and are labelled with markers. Many indoor plants also are identified by species and poisonous principle. Booklets containing pictures and information on plants currently planted in the Garden are available in the waiting areas of the Small and Large Animal Hospitals.

The web site displays coloured images and very brief information on 45 plant taxa listed for searching by common name. The individual web pages carry the botanical names and plant family name,

toxin(s) contained and clinical effects produced. Images are not large enough or clear enough to be used as identification tools.

#### **Cornell University - Poisonous Plants**

<http://ansci.cornell.edu/plants/plants.html>

#### **University of Pennsylvania - Poisonous Plants**

<http://cal.nbc.upenn.edu/poison>

#### **Canada - Poisonous Plants**

[http://sis.agr.gc.ca/pls/pp/poison?p\\_x=px](http://sis.agr.gc.ca/pls/pp/poison?p_x=px)

#### **North Carolina - Poisonous Plants**

<http://www.ces.ncsu.edu/depts/hort/consumer/poison/poison.htm>

#### **Oklahoma State University - Poisonous Plants**

<http://www.pp.okstate.edu/ehs/links/poison.htm>

### **WWW free-access sites – venoms & envenomation**

#### ***Ixodes holocyclus* biology and envenomation management (Australian site)**

<http://www.ozemail.com.au/~norbertf/frontpage.htm#introduction>

#### **International Venom & Toxin Database (Australian-based Site)**

<http://www.kingsnake.com/toxinology/>

Data on snakes, lizards, amphibians, arthropods (scorpions, spiders, paralysis ticks, ants, bees, wasps, beetles, centipedes, millipedes, insects causing allergies), coelenterates (box jellyfish, bluebottles), molluscs (blue-ringed octopi, cone shells), leeches & platypus. Australian, Asian, African and American species covered.

#### **Australian Venom Research Unit**

<http://www.pharmacology.unimelb.edu.au/PHARMWWW/avruweb/Page1.htm>

#### **Cone shells & conotoxins**

<http://grimwade.biochem.unimelb.edu.au/cone/>

<http://grimwade.biochem.unimelb.edu.au/~bgl/content.htm>

#### **Zootoxins - Oklahoma State University**

<http://www.pp.okstate.edu/ehs/links/poison.htm>

Information on poisonous plants and zootoxins. Links to other sites with zootoxin information.

### **WWW free-access sites – botanical information**

#### **Australia's Virtual Herbarium**

<http://www.chah.gov.au/avh.html>

A website organised through the Council of Heads of Australian Herbaria (CHAH) combining databases from all Australian herbariums. Contributing herbariums/organisations are Australian National Herbarium, Queensland Herbarium, National Herbarium of New South Wales, National Herbarium of Victoria, Herbarium of the Northern Territory, Western Australian Herbarium, Tasmanian Herbarium, State Herbarium of South Australia and Australian Biological Resources Study. By 2001, just over 40% of specimens housed in Australian herbariums have been databased. Queensland Herbarium is fully databased (HERBRECS).

This site is under construction. Projects include

- an on-line species distribution mapper planned for 2002

- tools to collate an integrated national census and nomenclator of current and historic names by 2003
- priority plant groups databased by 2004
- incorporation of enhancements such as images, descriptions and identification tools to commence by 2005
- completion of data capture and validation of the 6 million specimens in Australian herbariums by 2006

#### **Australian Plant Name Index (Botanical Names)**

<http://www.anbg.gov.au/cgi-bin/apni>

A website maintained by the Australian National Botanic Garden, Canberra. It allows searches of **botanical names** and provides information on current correct names, authorities and relevant taxonomic publication details. Photographs of some taxa are available for viewing on-line.

#### **Common Names of Australian Plants**

[http://www.anbg.gov.au/common\\_names/](http://www.anbg.gov.au/common_names/)

A website maintained by the Australian National Botanic Garden, Canberra. It allows searches of **common names** of Australian plants and provides botanical names. Photographs of some plants are available for viewing on-line.

#### **Families of flowering plants**

<http://biodiversity.uno.edu/delta/>

L. Watson and M. J. Dallwitz (1992 onwards). The Families of Flowering Plants: Descriptions, Illustrations, Identification, and Information Retrieval. Version: 14th December 2000.

#### **WWW free-access sites - weeds**

##### **Weeds Australia**

<http://www.weeds.org.au/index.html>

##### **CRC for Weed Management Systems (Waite Institute, SA)**

<http://www.waite.adelaide.edu.au/CRCWMS/>

##### **Weeds List (Australia & International)**

<http://www.agric.wa.gov.au/progserv/plants/weeds/weeds/weedlist.htm>

##### **Weedbuster Week**

<http://www.weedbusterweek.info.au/>

##### **Invasive Garden Plants**

<http://www.agric.wa.gov.au/progserv/plants/weeds/weedsci3.htm>

#### **WWW free-access sites – water quality**

##### **Australian and New Zealand Guidelines for Fresh and Marine Water Quality**

Australian and New Zealand Environment and Conservation Council & Agriculture and Resource Management Council of Australia and New Zealand National Water Quality Management Strategy. Paper No.4. (2000)

<http://www.ea.gov.au/water/quality/nwqms/volume1.html>

<http://www.ea.gov.au/water/quality/nwqms/volume2.html>

## **WWW free-access sites - cell biology**

### **National Centre for Biotechnology Information Digital Biomedical Library**

<http://www.ncbi.nlm.nih.gov:80/entrez/query.fcgi?db=Books>

Full text versions of textbooks including *Molecular Biology of the Cell* (3rd edition), *Molecular Cell Biology & Cancer Medicine* (5th edition). Hyperlinked to relevant abstracts in PubMed.

## **WWW Subscription sites**

### **Veterinary Information Network (VIN)**

<http://vin.com>

USA-based site run by veterinarians. Subscribers (*ca.* \$US450 annually) have access to resources including a subscriber-searchable literature database and to consultants in a range of fields including toxicology. Toxicology consultants at time of inspection of the site [28 Aug 01] included well-respected diplomates of the American Board of Veterinary Toxicology.

### **Clinical Toxinology Resources (Women's & Children's Hospital & University of Adelaide)**

<http://www.toxinology.com/>

Australian-based site with the aim of world-wide coverage of envenomations and intoxications of humans. Annual subscription \$A198 (including GST). Covers snakes, spiders, scorpions, marine organisms, fungi (mushrooms), poisonous plants. Coverage of plants and fungi is apparently very limited at time of inspection (September 2002).

## **On-line Bibliographic Databases providing access to the veterinary toxicological literature**

Access for those working in scientific institutions such as universities, CSIRO and Departments of Agriculture/Primary Industries is through their in-house library services. Programs such as WINSPIRS and WEBSPIRS are used for access to some databases.

The main databases with useful material include

- ❖ CAB ABS, CAB Health or combined into CAB Direct – originally the Commonwealth Agricultural Bureaux, now CAB International, publishers of *Index Veterinarius* and *The Veterinary Bulletin*; based in the UK. Electronic database back to 1973. [Note: CAB Direct annual single site subscription (up to 4 concurrent users) = £4,100.00 @ 27Nov2000]
- ❖ animalscience.com is a recent product from CABI Publishing providing access to CAB ABS databases with linkage to full-text articles plus other features and available at <http://www.animalscience.com/content/html/index.htm> Individual annual subscriptions = £125.00.
- ❖ AGRICOLA – based in the USA

The full text of scientific papers in an increasing number of journals are available on-line and many are linked to the database listings, providing rapid access to the primary literature through hypertext links.

Access for independent veterinarians is problematic, given the requirement to pay for access. The Post-Graduate Foundation in Veterinary Science in the University of Sydney is developing links to the databases through the University of Sydney Library that will be available to individual veterinarians.

**VEIN** - The University of Sydney Faculty of Veterinary Science, Post Graduate Foundation in Veterinary Science Library and the Veterinary Science Foundation will be working in partnership to develop a new service called the **Veterinary Education and Information Network (VEIN)**. VEIN will provide information services to veterinary and animal scientists in Australasia. The service will promote information literacy and access for its client group to foster lifelong learning and professional development. Access to Research Databases and Indexes (available now), Journal indexing and abstracting services will be accessible via the VEIN website. Links to free services such as PubMed and Agricola will be provided along with passworded access to the subscription based CAB Abstracts and Medline for Post Graduate Foundation in Veterinary Science (PGFVS) Associate Members. CAB Abstracts and Medline is provided via the OVID interface, which allows the user to set up automatic current awareness profiles (AutoAlerts) to receive details of new research in their area of interest via email. To receive a password send your details via email to [vein@library.usyd.edu.au](mailto:vein@library.usyd.edu.au)

To read more information on the service access the following link:  
<http://www.library.usyd.edu.au/VEIN>

***Internet Veterinary Toxicology Discussion List – VETTOX-L***

Access to this discussion group is only by subscription through a moderator and is open to veterinarians, chemists and others with a professional involvement in veterinary toxicology. Members are mostly North American, but include Australians, Europeans and Africans as active participants. Enquiries should be made to Prof. Merl Raisbeck, Wyoming State University [raisbeck@uwyo.edu](mailto:raisbeck@uwyo.edu) or Dr. Frank Galey, Wyoming State University [FGaley@uwyo.edu](mailto:FGaley@uwyo.edu).

**References**

Poppenga RH, Spoo W (2002) Internet resources for veterinary toxicologists. *Toxicology* **173**: 179-189.

## Regulatory Control of Poisons: The Schedule of Drugs and Poisons

Scheduling of drugs and poisons is intended to aid the effective control of dangerous chemical substances in the community so that the benefits of their use outweigh the potential damage that their use may cause. A standard for the uniform scheduling of drugs and poisons is proposed by the National Drugs & Poisons Schedule Committee (2000) in the interests of uniform scheduling across all State and Territory jurisdictions in Australia and New Zealand. These schedules are described below. The legal power to control drugs and poisons lies with State and Territory governments. Their legislation should be consulted for details.

Drugs and poisons are grouped into schedules that each require similar regulatory controls over their availability to the public. The choice of schedule for a particular substance is based on factors including toxicity, purpose of use, potential for abuse, safety in use and the need for the substance. Nine schedules are available, eight of which are currently used.

Within each of the following groups of schedules, the higher the number of the schedule, the stricter the control. Poisons for therapeutic use (drugs) are included in Schedules 2, 3, 4 and 8. Agricultural, domestic and industrial poisons are included in Schedules 5, 6 and 7. Schedule 9 contains substances that should be available only for medical and scientific research. Appendices to the standard include a list of substances or preparations, the sale, supply or use of which should be prohibited because of their dangerous properties (Appendix C). Inclusion of a substance in the schedules does not imply current availability.

**Schedule 1.** This schedule is currently not in use.

**Schedule 2. Pharmacy Medicine.** Substances, the safe use of which may require advice from a pharmacist and which should be available from a pharmacy or, where a pharmacy service is not available, from a licensed person.

**Schedule 3. Pharmacist Only Medicine.** Substances, the safe use of which requires professional advice, but which should be available to the public from a pharmacist without a prescription.

**Schedule 4. Prescription Only Medicine, or Prescription Animal Remedy.** Substances, the use or supply of which should be by or on the order of persons permitted by State or Territory legislation to prescribe and should be available from a pharmacist on prescription.

**Schedule 5. Caution.** Substances with a low potential for causing harm, the extent of which can be reduced through the use of appropriate packaging with simple warnings and safety directions on the label.

**Schedule 6. Poison.** Substances with a moderate potential for causing harm, the extent of which can be reduced through the use of distinctive packaging with strong warnings and safety directions on the label.

**Schedule 7. Dangerous Poison.** Substances with a high potential for causing harm at low exposure and which require special precautions during manufacture, handling or use. These poisons should be available only to specialised or authorised users who have the skills necessary to handle them safely. Special regulations restricting their availability, possession, storage or use may apply.

**Schedule 8. Controlled Drug.** Substances which should be available for use but require restriction of manufacture supply distribution, possession and use to reduce abuse, misuse and physical or psychological dependence.

**Schedule 9. Prohibited Substance.** Substances which may be abused or misused, the manufacture, possession, sale or use of which should be prohibited by law except when required for

medical or scientific research, or for analytical, teaching or training purposes with approval of Commonwealth and/or State or Territory Health Authorities.

Reference:

National Drugs & Poisons Schedule Committee (2000) *Standard for the Uniform Scheduling of Drugs and Poisons No.15*. [Effective date – 1 July 2000]. Commonwealth Department of Health and Aged Care, Canberra.

# Collecting and handling plant, fungal and cyanobacterial specimens for identification by state herbariums and other centres of expertise

## Preamble

*Diagnostic investigations:* If plant, fungal or cyanobacterial specimens are collected as part of an investigation of animal disease that involves sending specimens from animals to a veterinary diagnostic laboratory, include the plant, fungal or cyanobacterial specimens with these. The diagnostic laboratory will send them on to other centres of expertise for identification as needed, and the data will then be effectively integrated into the whole investigation.

*Legal requirements:* Collection of plant specimens from private property requires the permission of the owner. Collection of plants from public land (road or rail reserves, state forests, national parks or other nature reserves) requires the prior written permission of the responsible authority. Collection of rare or endangered plants from both private and public land requires the prior written permission of the responsible authority.

## 1. Conventional Technique for Vascular Plants – dried fertile specimens

This section is based on advice from the Queensland Herbarium (Anon. 2000; A Holland, personal communication 2000; MB Thomas, personal communication 2001).

### 1.1 What to collect

Botanists require **fertile specimens** if they are to make a definitive identification of a plant. Fertile specimens are those carrying flowers, fruit or both for flowering plants and the reproductive structures for non-flowering plants such as ferns and cycads.

For flowering plants in general, a specimen should comprise a small branch or part of the stem about 20-30 cm long with leaves plus flowers, fruits or both, all still attached. It is difficult and sometimes impossible to identify plants from leaves alone.

Specimens from certain types of plants need to have particular material in them and information with them to allow accurate identification:

- From *Eucalyptus* spp., collect specimens bearing flower buds, seed capsules, adult leaves (and juvenile leaves if available). Information about the bark type at the base of the tree and its extent and the bark type on the upper branches is very necessary.
- From *Solanum* spp., collect specimens bearing fruits as well as flowers.
- From *Xanthorrhoea* spp. (grass trees), collect a whole leaf showing the shape of the leaf base and a portion of the flower spike including the base and attachment onto the stem (scape), measure the lengths of both the flowering spike and non-flowering scape (the ratio of scape to flowering spike length is an important identification character), measure the height of the trunk if present, describe the leaf colour (e.g. blue-green, greyish, green).
- For small plants, grasses and sedges, collect the whole plant including underground roots, runners, stems, bulbs or tubers. Both flower heads and the base of the plant are needed.
- For grasses, the base of the plant and the flower or seed head are essential for identification.
- For ferns (other than tree ferns), collect the fertile (spore-bearing) fronds with a sample of the rhizome (root-like structure) attached together. The scales or hairs at the base of tree-fern frond stalks are essential for identification. These can be collected by slicing off a sliver of the outer stem (with scales attached) with a knife.



- For large leaves (e.g. palms or cycads) or flower heads, collect the uppermost (apical) and lowermost (basal) portions of the leaves or heads, measure the overall dimensions and report this with the specimens.

**Enough material should be collected to make at least 2 sets of specimens with the duplicates numbered identically and numbers attached to the specimens.** Send one set to the veterinary laboratory or the herbarium (depending on the type of investigation being done) and keep one for your future reference so that you can match the name provided by the herbarium to the appropriate plant. Thoroughly dry the specimens that you keep and take precautions to prevent insect damage to them. Eventually, specimens unprotected from insect attack will be destroyed by such insects as booklice and tobacco beetles.

### 1.2 Data to be recorded at the time of collection and sent with specimens

- Date of collection
- Details of the locality. The latitude and longitude are the ultimate locality record (GPS), but acceptable alternatives are the distance and direction from the nearest township or road junction (e.g. 15 km west of Roma on the Warrego Highway). The data should be detailed enough to allow another person to return to the same locality to find the plant.
- Data that are not visible from the specimen or that cannot be deduced reasonably from it. Coloured photographs may be useful for some of these purposes, but are not always an adequate substitute for careful written descriptions. These data include the
  - ❖ type and growth habit of the plant (e.g. upright, drooping, spreading, multi-stemmed)
  - ❖ height
  - ❖ flower colour
  - ❖ bark type
  - ❖ situation (e.g. in pasture, on a stream bank, in open forest)
  - ❖ surrounding vegetation
  - ❖ soil type

### 1.3 Drying

All specimens must be dried to preserve the plant tissues, help keep their colour and prevent them becoming mouldy.

Drying can be done by placing the plant specimen between several sheets of newspaper and replacing the sheets daily for about a week until drying is completed. The specimens must be kept flat during drying so that they will not shrink and become distorted. A flat piece of plywood, chipboard or Masonite can be placed over the paper and weighed down with a heavy object such as a large book or a brick.

Delicate plant parts, such as petals, may stick to the paper used for drying and accidentally become detached or torn when drying paper is changed. To prevent this, it is acceptable to place such parts between sheets of facial tissue (e.g. Kleenex®) and leave the tissue adherent to the plant part when transferring the specimen to fresh paper during drying.

The plant parts of some species may fall off the main specimen while drying. Keep these in an envelope and send them with the main specimen, also clearly marked with the specimen's number.

Fleshy specimens such as large fruits do not dry easily and are distorted if pressed flat. These should be preserved in alcohol such as methylated spirits or photographed in colour.

Succulent plants are difficult to dry successfully. Try crushing them to break the cuticles. Some species, such as *Bryophyllum* spp., will continue leaf and plantlet growth while in a plant press. Stopping this requires killing the tissues by some suitable means (boiling water, microwave oven).

Plants, particularly flowers, often change colour during drying. This is natural and cannot be prevented. Note the original colour of leaves, flowers and fruit and send this information to the herbarium with the specimens.

## 1.4 Labelling

Number the sets of specimens clearly, the duplicate specimens from each plant carrying the same number. Small blank price tags attached to a thread which may be tied to the specimen are useful for this task. Alternatively, tape the numbered tag to the base of the stem of the specimen. The number will be quoted in the report on the specimens from the herbarium.

## 1.5 Packing

**Do not send fresh plants to herbariums in plastic bags.** They allow condensation and promote mould and bacterial growth on specimens, rendering them rotten and unidentifiable. **Dry the specimens**, or (if urgent) pack the specimens well with newspaper before sending them (This is not recommended for very moist specimens).

Pack dried specimens flat in newspaper between sheets of cardboard to prevent crushing and breakage during transport. Do not use sticky tape to secure the specimens to the paper because you may cover and obscure some essential feature needed for identification.

Include a cover note with your name and address, the information requested from the herbarium and the extra data recorded about the plants as described above.

## 2. Rapid Technique for Vascular Plants – electronic data transfer

This section is based on advice from Ailsa Holland, Queensland Herbarium (A Holland, personal communication, 2000).

**Note well!** This method is not a substitute for a definitive identification based on a conventional pressed dried specimen submitted as above. If you use this method, subsequently press and dry the specimen as above and submit it for confirmation of the rapid identification.

### 2.1 Applications

When a rapid identification is required, an image of the plant in question can be generated and transmitted to a herbarium for a rapid tentative identification. This approach depends on the availability to the submitter of either a photocopier and a facsimile machine or a flat-bed scanner and computer with an e-mail connection and the willingness of the herbarium to provide an identification from this material. **Check with your local herbarium before using this method.**

### 2.2 Specimen and data collection

Follow the protocol set out under sections 1.1 and 1.2 above

### 2.3 Method

Photocopy or scan the plant specimen carefully, ensuring that any reproductive structures are not obscured by leaves. Then either fax or e-mail the image to the herbarium with the data collected on it, requesting an identification (if possible).

When using a colour flat-bed scanner, a blue background (a sheet of blue paper or card placed over the specimen on the scanner glass) may give best results. Pay attention to the size of the electronic file generated, as these are likely to be very large. Saving such files in JPEG format will tend to reduce their size without undue loss of resolution.

## 3. Fungi (*macrofungi* = “mushrooms”, “toadstools”)

Data in this section are based on Hay & Young (1988) and Bougher & Syme (1998) with further input from Megan Thomas, Queensland Herbarium (MB Thomas, personal communication (2001).

CAUTION: Not all herbariums provide an identification service for fungi. It is wise to contact your local herbarium for advice before submitting specimens.

### 3.1 What to collect

**Collect the whole fruiting body intact** (do not cut the stalks) and place it in a paper bag or twist of paper to protect it. If specimens of differing ages of the same species are available, collect a range of them. Collection may involve digging the structure from the soil or cutting out a section of the wood or

other substrate supporting it. If more than one species is collected at the same time, it is vital to keep them separately wrapped to prevent cross-contamination of spores.

If the only specimen available has been partly eaten by the patient, collect that – it may retain sufficient structure for identification.

Because dried specimens of fungi do not retain the shape or colour of the material at the time of collection, coloured photographs or sketches of the specimen can be a useful aid to identification.

Ideally, these should show young, mature and old specimens, some in longitudinal section, and should contain a scale graduated in millimetres or a standard object (e.g. small coin) to indicate the size of the fungus.

Some species of fungi disintegrate rapidly and do not dry well. For identification of these, photographs or sketches with notes on the colour or colours of the various parts of the specimen are essential.

**CAUTION:** Always wash your hands thoroughly after handling fungi.

### 3.2 Data to be recorded at the time of collection and sent with specimens

See 1.2 above

A checklist of data useful to the mycologist for identification of “mushroom”-type fungi follows: It can be adapted for use with other types of fungi.

Date of collection

Location

Habitat (under eucalypts, in pasture, in garden, *etc.*)

Surrounding vegetation (common plants nearby)

Substrate (wood, soil, leaf litter, *etc.*)

Occurrence (single, in clusters or groups?)

Shape of cap (conical, convex *etc.*)

Colour of cap

Scales present on cap?

Cap slimy?

Does fungus change colour if cut? If so, what is the new colour?

Colour of gills?

Stem ring present?

Cup present on the stem base?

Stem slimy?

Colour of stem

Describe odour

Describe taste if known [**Caution:** Persons liable to asthma or allergy may have these ailments triggered by tasting fungi. Taste may be assessed by placing a very small portion on the tongue and spitting it out after tasting. **Do not swallow any.**]

Any changes in colour following handling?

Any other observations

Sketch of fruiting body (including cross-section if possible)

### 3.3 Handling, Spore-printing & Drying

**CAUTION:** Always wash your hands thoroughly after handling fungi.

Clean off excess soil and debris, being careful not to remove any delicate structures such as veils or any attached mycelium at the base. Avoid freezing, bruising, breaking or squashing specimens.

Collect the specimens into paper bags. **Do not use plastic bags or containers.** Keep specimens cool, but do not refrigerate them if a spore print is to be made.

If the specimen can be transported to a herbarium swiftly, do this. If there will, or could be, a delay in submitting the specimen to a herbarium, make a spore print (if applicable to the type of fungus collected) and dry the specimen before transporting it.

*Spore printing:* Make a spore print of all mushroom, bracket, coral and club fungi to determine the colour of spores and to provide a sample for microscopic examination. Place a mature cap, spore-bearing structures (gills, pores) down, onto white paper. Cover the preparation to prevent desiccation and air movement. Spore deposition may take from 1 hour to overnight. Record the colour of the spore print as soon as possible as it may change on drying and after storage. Dry the paper carrying the spore

print, then fold it in half with the spore deposit facing inwards. Store in an envelope (or zip-lock plastic bag, but only if thoroughly dry).

*Drying:* Before drying, cut one or two fruiting bodies of mushroom-like fungi in half longitudinally; cut all truffle-like fungi in half. Air-drying is preferable to freeze-drying and significantly superior to preservation in liquid fixatives. Placing a specimen in good air circulation in the sun for about 2 days in warm, low-humidity weather or in the airflow from an electric hair dryer are two methods suggested by some mycologists. Heating overnight at 45-50°C in a drying cabinet is ideal. Drying can also be achieved by placing specimens on a wire mesh over a radiator or fan heater.

### 3.4 Labelling

See 1.4 above. Label the specimen & spore print of each fungus with the same number.

### 3.5 Packing

Dried fungi should be placed in crush-resistant containers to protect them from vibration and impact so that they will retain their shape in transit to the herbarium. Include the spore print. Add a small amount of naphthalene or some other insecticidal material to protect the specimen from attack by such insects as booklice. Do not use plastic bags because they trap moisture and lead to the rapid decomposition of the specimens.

Include a cover note with your name and address, the information requested from the herbarium and the extra data recorded about the fungus as described above.

Undried specimens should be delivered to the herbarium *as soon as possible after collection*.

## 4. Cyanobacteria (cyanoprokaryotes, cyanophytes, blue-green algae)

CAUTION: Ensure that minimal skin contact is made with bloom material. Always wear rubber / latex gloves and adopt normal hygiene precautions such as washing off any splashes and washing the hands immediately after the procedure.

Samples of cyanobacteria from suspected poisoning incidents should be submitted to laboratories equipped for toxicity testing. These are usually the regional veterinary laboratories maintained by or on behalf of state departments of agriculture/primary industries or laboratories within universities. Some herbariums provide an identification service for these organisms, but none do toxicity testing.

For identification and toxicity testing, collect the surface scum of the organisms, if present. If there is discoloration of the water (green or red-brown) but no surface scum, collect samples from the worst-affected areas. Two samples are required:

- For identification, preserve a separate 20 ml representative bloom sample by adding 1 ml of 10% formaldehyde solution and submit that with the chilled sample.
- For toxicity testing, fill a 1 litre container with a representative sample of the most concentrated part of the bloom, leaving at least a 25 mm air gap on the top of the container. Submit the sample on ice (not frozen) in an insulated container to arrive at the testing laboratory within 24 hours of sampling.

## 5. The fate of specimens

Do not expect herbariums to return specimens to you. They do not have the time or the funds for this. Most specimens sent to herbariums are discarded a short time after they have been examined and a report provided to the sender. Only those specimens of special interest to the herbarium staff may be retained in the permanent herbarium collection. If you are undertaking research with the plants that may lead to scientific publication, it is essential that you request that the specimens be retained in the herbarium as a voucher and the acquisition number be reported to you for citation in any resulting published papers. McKenzie (1993) discusses the reasons for establishing vouchers.

## References

- Anon. (2000) Botanical specimens for identification. What we require. *Advisory Leaflet, Queensland Herbarium*. 1p.  
Bougher NL, Syme K (1998) *Fungi of Southern Australia*. University of Western Australia Press, Nedlands WA.  
Hay B, Young T (1988) *Poisonous Fungi of Australia*. Published by the authors, Nanango Q 4315. pp.36 & 36-1  
McKenzie RA (1993) Plant Poisoning? Which Plant?! [Leading Article] *Aust Vet J* 70:201-2.

Web site reference: <http://www.anbg.gov.au:80/projects/collecting/collecting.html>

## Building the Australian Veterinary Toxicology Knowledge Base

Where do'st thou careless lie,  
Buried in ease and sloth?

**Knowledge, that sleeps, doth die;**

And this Securitie,

It is the common Moath,

That eats on wits, and Arts, and [oft] destroys them both.

Ben Jonson (?1573-1637): First stanza from *An Ode to Himselfe*

### **Recording poisoning cases: This means you!**

Why should you publish your interesting and unusual cases? Cogent reasons are

- Professional obligation to communicate with colleagues and contribute to our knowledge base. As a veterinarian, you use the knowledge base every day. You have an obligation to contribute to it whenever you can. Case reports compiled from practice records *and published in the scientific literature* are vital for furthering our knowledge and understanding of poisonings.
- Personal satisfaction from the creative process
- Building communication skills
- Building your *curriculum vitae* for future job & promotion applications

Vehicles for published case reports include the refereed journals (for example *Australian Veterinary Journal*, *Australian Veterinary Practitioner*), AVA Special Interest Group newsletters or periodicals (for example *Australian Equine Veterinarian*, *Australian Cattle Veterinarian*), *The Veterinary Pathology Report* (newsletter of the Australian Society for Veterinary Pathology), and the University of Sydney Post-Graduate Foundation in Veterinary Science *Control & Therapy* series. The refereed journals provide support for the inexperienced author – try them first and ask their editors for help with your paper.

Basic needs for a meaningful scientific paper:

- **Literature search** to ensure that your data will make an original contribution to knowledge
- **Plant identification supported by a herbarium voucher.** Accurate botanical identification of the plants, fungi or cyanobacteria involved is essential. Use the services of your state herbarium (*q.v.*); tell them that you intend publishing the case; request that they retain the specimen as a voucher for future reference and ask them for the acquisition number to quote in your paper. I have discussed the reasons for voucher specimens in McKenzie (1993).
- Data to rule out differential diagnoses
- Authorship list inclusive of all who made substantial intellectual contributions; acknowledgments section inclusive of all other contributors

Above all, get the data on paper first, *then* polish it!

### **Declining institutional research input**

Decreasing research on plant (in particular) and other poisonings of animals in Australia carried out by universities, government departments and CSIRO has essentially resulted from contracting resources of finance and staff and an increased concern for the welfare of experimental animals (Baker 2000). This places a greater reliance on accurate field observations to advance knowledge in the absence of experimental investigations.

References:

- Baker RM (2000) Animal experimentation and the veterinarian. *Aust. Vet. J.* **78**:546-548.  
McKenzie RA (1993) Plant Poisoning? Which Plant?! [Leading Article] *Aust Vet J* **70**:201-2.