World Health Organization: Basic Laboratory Methods in Medical Parasitology.

14 Illustrations, 114 pp., WHO Geneva, 1991, Price 21.- Sw.fr., in developing countries 14.70 Sw.fr.

This comprehensive manual is based on information contained in training material and manuals produced by the Hospital for Tropical Diseases, London, GB; CDC, Atlanta, Georgia, USA; WHO, Geneva, Switzerland; and Pan American Health Organization, Washington, DC, USA. The list of contributors contains names of nine prominent parasitologists from Europe, America and Asia.

The first part of the book deals with the collection, preparation, staining, and examination of material for direct demonstration of parasites in the light microscope. Indirect methods like serology or molecular techniques are not included in this manual. Particular attention is paid to the handling of microscopes. Particular chapters are devoted to each type of biological material: Faecal specimens, Urine specimens, Vaginal and urethral material, Blood and other specimens, and Skin specimens. Instructive pictures delineate all the collecting and handling of materials. Step-by-step instructions may serve directly as working protocols during fieldwork. All the common parasitic diseases are covered, but special sections deal with the techniques required for plasmodia, trypanosomes, schistosomes, leishmania, and microfilariae. Malariological techniques are the most detailed, including the examination of chloroquine resistance in falciparum malaria etc. Techniques for *Trypanosoma* identification are very instructive as well. Brief attention is devoted to the cultivation techniques of leishmania.

The second section of the manual describes the morphological criteria used to identify parasites. Simple and comprehensive keys to the identification of helminth eggs, amoebic trophozoites, amoebic and flagellate cysts, flagellate trophozoites, and microfilariae found in human beings are presented predominately as figures, and are very useful tools for parasite determination. Unfortunately, information on the geographical distribution is given in microfilariae only. It should be worthwhile in some other groups as well: e.g. eggs of the flukes of families Opisthorchidae and Heterophyidae, which are more or less endemic. Special attention is paid to the differentiation of malaria plasmodia: colour pictures of all developmental stages both in Giemsa stained thick and thin blood films are attached. Out of opportunistic parasites infecting immunocompromised patients, *Isospora belli*, *Cryptosporidium* spp. and *Toxoplasma gondii* are briefly mentioned. The information about problems of identification of artefacts and pseudoparasites can help to avoid some false positive results.

In one page of the bibliography, manuals, textbooks, color atlas, and WHO materials from the eighties are referred to. Four annexes are attached to this manual: the first one is the list of equipment and materials for diagnostic parasitology in health centres and district hospital laboratories, the second one consists of the formula and preparation procedures for fixative solutions and staining reagents. The last two appendixes detail preparation of culture media (restricted to *Leishmania* cultivation), and the cleaning and storage of microscope slides after use; this is important especially for preparing blood films.

The value of the book could have been augmented by paying more attention to some details: e.g. while the trophozoite in Fig. 8 is designated as *Giardia lamblia* the text is about *Giardia intestinalis*. This might be confusing since any mention about these synonyms lacks. The title of Fig. 4 is also rather confusing. In fact, presented with the eggs of intestinal parasites are the eggs of tissue helminths which are excreted by stool or urine (*Schistosoma* spp., *Fasciola hepatica, Clonorchis sinensis, Opisthorchis felineus,* and *Paragonimus westermani*). The choice of the parasite species was limited and some important groups were completely excluded: e.g. no information about some significant tissue helminths (*Echinococcus* spp., larval stages of *Taenia saginata, Trichinella spiralis, Angiostrongylus cantonensis, Anisakis* sp., *Toxocara* spp. and other causative agents of visceral larva migrans like *Gnathostoma* spp.) or about parasitic arthropods (including *Sarcoptes scabiei*, that could be detected by the method described on pages 62–63) can be found in this book.

The book is precisely printed in big format. The rules and notices that should not be forgotten are graphically highlighted. It is clear that this manual cannot substitute introductory textbooks and handbooks. However, in spite of the deficiencies mentioned above, this book is recommended not only for laboratory workers in health centres and district hospitals in the tropics, but it can serve as a basic guide for parasitologists in all parts of the world.

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