



How to use this CD

This field guide has been designed to provide ready access to information on the major diseases of aquatic animals of significance to Australia. The diseases covered here are those on Australia's National List of Reportable Diseases of Aquatic Animals, which includes all those diseases listed as reportable by the Network of Aquaculture Centres in Asia-Pacific (NACA) and the OIE (the World Organisation for Animal Health, formerly the Office International des Epizooties), as well as other diseases of more national significance.

The field guide is aimed primarily at fishery and aquaculture managers and field staff, veterinary workers and professionals. However, the publication also has a much broader relevance to those engaged in the seafood processing and retail industry, recreational and commercial fishers, and the general public. For those participating in national surveillance and monitoring for aquatic animal disease, the guide is a valuable tool for informed decision making about aquatic animal health and sustainable industry practices. For the casual reader, the guide gives an informative and often graphic account of the diseases and organisms that threaten Australia's expanding aquaculture industries.

The marine and freshwater environments are rich with many types of animals. The field guide focuses on fish, crustaceans (e.g. prawns) and molluscs (e.g. oysters). It is not possible to list every disease for every species in a publication of this type, so the emphasis is on infectious diseases of commercially important species, most often those found in aquaculture. This apparent bias towards diseases of aquaculture is not because other species do not experience disease, but because commercially important animals have been more closely observed than others. In addition, sick individuals in the wild are very quickly eaten by other animals and are often not noticed by humans.

Information on the national distribution of listed diseases is based on formal reporting by states and territories through the NACA–Food and Agriculture Organization (FAO)–OIE quarterly aquatic animal disease reporting program, in which Australia has been an active participant since 1998.

Where a listed disease has been reported under the program to have been present, a map illustrating where it occurred in Australia is included. The distribution map highlights states or territories having reported disease as red. It is important to note that, while a map may identify an entire state or territory as having reported a disease, it does not necessarily mean that the entire state or territory has been affected.

Readers should consult the World Animal Health Information Database (WAHID) interface (www.oie.int/wahid-prod/public.php?page=home) or the OIE International Database on Aquatic Animal Diseases (<http://www.collabcen.net/toWeb/aq2.asp>) for current information on global distribution outside of Australia.

In writing this guide, the author has assumed that the average user will not have extensive experience in histological examination or the equipment required for such examination in the field. Hence, much of the diagnostic information is based on clinical signs and 'gross pathology' (abnormalities that can be seen with the naked eye—level I diagnosis), with links to additional information to help identify further pathology if required. In most cases, it is impossible to arrive at a definitive diagnosis on the basis of clinical signs or gross pathology alone.

When presented with an abnormality (be it large numbers of dead fish or a single ulcer on a single fish), start by asking 'What do I see here?' The answer at first should not be 'Disease A' or 'Disease B'; it should be an observation, such as 'Lots of dead fish, with ulcers on the skin'.

After making this type of observation, go to the differential diagnostic table, which links what you have observed with the disease entries. Look up the diseases listed beside your observation, and you will find photographs and further information to help you narrow the search for the cause of the disease. For example, you might have observed a marine fish, but then find that one of the listed diseases affects only freshwater species—in this way you will eliminate the unlikely and your list of differential diagnoses will be shorter. In all cases, however, extensive laboratory tests would also be required to make a definitive diagnosis.

The differential diagnostic table and the list of similar diseases appearing at the bottom of each disease page refer only to the diseases covered by this field guide. Gross signs observed might well be representative of a wider range of diseases not included here. Therefore, these diagnostic aids should *not* be read as a guide to a definitive diagnosis, but rather as a tool to help identify the listed diseases that most closely account for the gross signs.

A list of relevant contact numbers has been provided in this field guide so that you can report your find and ask further questions on the observations you have made. You will be directed to an expert on diseases of aquatic animals within your state or territory.