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A Field Guide to Freshwater Fishes, Crayfish and Mussels of South-Western Australia

Morgan, D.L., Beatty, S.J., Klunzinger, M.W., Allen, M.G., and Burnham, Q.F.
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TIM BLAKE

MORGAN *et al.* have filled a significant gap in the library of pictorial guides to the fauna of South-Western Australia with this publication. This pocket-sized edition is a must for anyone who has any interest in the natural history of the South West as well as schools, community groups and anyone who wishes to start investigating the fauna of our rivers. Not only will this guide help anyone with identification, but it will alert them to the very existence of so many native species. Perhaps any small fish will no longer be written off as a "mosquito fish" and elicit a more detailed look. It is quite surprising that there are only 11 native species of fish in the whole south-west province but impressive that 9 are endemic – the highest ratio in any part of Australia. The presence of as many crayfish species (11), many of very limited distribution, is also of note. However, it is quite disturbing that 12 (and likely more) introduced fish species are also listed for identification. A further reflection is that only 1 fish and 3 crayfish in the whole of Australia are on the Critically Endangered list under the Environmental Protection and Biodiversity Conservation Act 1999 – all of these are in the area covered by the guide.

The introduction serves to highlight the worsening plight of aquatic environments in south-western Australia that have significantly degraded since European times. Modern land use, run off, introduced organisms and a whole host of other problems have all taken their toll, particularly the increased salinity of many water courses. Whilst native aquatic species have great cultural significance to the Nyoongar people their "cryptic and seldom

seen" presence has meant European culture has little awareness and consequently little value for them. Indeed, this is reflected in the incongruity that the average person will know far more about marine fish, and even fish from overseas, than they do of their own native fish. Were the average person, and even the average science educator, asked to name even one fish from the south-west they are likely to name an introduced variety such as trout or *Gambusia* than they are single native species. This guide will now allow all to readily identify any of the native fishes and crayfish.

Each of the fish and crayfish has its own well laid out plate and description. The terminology is easy to follow and only uses anatomical features when necessary. Maps are clear but an overlay of the river systems would help those wishing to locate the species to a more precise location. The use of photographs is also beneficial as drawings often enhance colours and detail that are not readily observable in the field. The authors, however, do note that the crayfish have many local variations and they are unable to include all varieties. Yet combined with the geographic range identification the guide will be reliable. The text covers all the necessary identification parameters but, perhaps, the size and dimension would be best placed in a separate paragraph or table. It is also hard to perceive that most of the species are less than 100mm in length so a scale on each picture would be an advantage. The inclusion of a dichotomous key for the crayfish would seem to be superfluous as there is no labelled diagram of the parts that need to be identified making this feature impractical for the layperson. However, the illustration and description are so clear that this is not noticed.

For those who wish to find out more information there is an excellent reference section for further reading. The glossary and river map (a surprising 51 river systems in S.W. Australia) also help the richness of the guide. The authors have done a very good job in making this guide simple, clear and easy to use. It should form an essential part of public, school and university libraries. At its modest price private citizens and biologists could also afford it.