

Introduction

PRIMER 8 with PERMANOVA+ is a substantial upgrade on its predecessor, offering a host of marvelous new tools and statistical methods. These range from simple utilities to make your life easier (such as a tool to easily rename the levels of a factor), through to sophisticated novel analytical methods that are found no-where else (such as dissimilarity-based multivariate control charts, and a valid PERMANOVA test for differences in centroids when dispersions differ).

This book has been written for those who have some familiarity with prior versions of PRIMER/PERMANOVA+ software. To get started quickly using PRIMER 8 software, first consult the following resource:

- Anderson, M.J. (2026). *"Get Started with PRIMER 8."* PRIMER-e Learning Hub. PRIMER-e, Auckland, New Zealand.

For additional details regarding the methods and tools available in the software produced by PRIMER-e, please consult the following *historical books and manuals*, available in the [PRIMER-e Learning Hub](#):

- Clarke KR, Gorley RN, Somerfield PJ & Warwick RM. (2014). *"Change in Marine Communities, 3rd edition."* PRIMER-E Ltd: Plymouth, UK.
- Clarke KR & Gorley RN. (2015). *"PRIMER v7: User Manual / Tutorial."* PRIMER-E Ltd: Plymouth, UK.
- Anderson MJ, Gorley RN & Clarke KR. (2008). *"PERMANOVA+ for PRIMER: Guide to Software and Statistical Methods."* PRIMER-E Ltd: Plymouth, UK.

In this text, we will refer to the new version (including PERMANOVA+) as '**P8**', and to the previous version as '**P7**'. What follows is a short list of the most important new features in P8. These items have been classified into two major groups: [New Statistical Methods in P8](#) and [New Tools & Utilities in P8](#). Just click on any link from within either of these lists to explore what is new!

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