

BOOK REVIEW

THE FIELD DESCRIPTION OF IGNEOUS ROCKS 2nd ed.
by Dougal Jerram and Nick Petford (2011) Wiley, 256 pages.
\$39.95. ISBN: 978-0-470-02236-8.

This book is part of the Geological Field Guide Series, beloved of students and amateur geologists. The newly published second edition represents a thorough revamp and update of the original 1985 version, and the authors acknowledge their debt to this original in the preface. The first edition was in black and white, whereas this new edition is packed with excellent and informative color photographs and diagrams.

The second edition is well laid out, with an introduction and overview of magmatic rocks followed by two chapters on field skills and the identification and description of igneous rocks in the field. Following these introductory topics, separate chapters describe the features unique to five different main classes of igneous rocks, and the final two chapters look at specific issues: magma mixing and mingling, and applied uses of igneous rocks.

The stated aim of this book is to focus on field techniques, and the authors have done a good job of sticking to the brief. I was pleased to see an initial section on the importance of fieldwork, and a whole chapter about field skills—though slightly disappointed by the emphasis on analogue techniques, with even GPS receiving only a cursory mention. With digital data capture becoming more commonplace, a brief reference to such methods might have been deserved.

The description and classification of igneous rocks in the field are covered in detail in Chapter 3, and this is an excellent section, which is sure to be widely used by those getting to grips with igneous rocks in the field. The main schemes for naming igneous rocks on the basis of mineralogy and grain size are all covered in this section. However, I did note that many igneous rock names are used in Chapters 1 and 2, but without any reference to these classification schemes. A brief description of how igneous rocks are classified could usefully have been included in the introduction.

Chapters 4 to 8 provide good, concise overviews of the main classes of igneous rocks, divided into volcanics, shallow-level intrusions, and plutonic intrusions. The authors have focused on descriptions of the main rock-types seen in the field, and have avoided too much discussion of processes and compositions that can only be understood by much subsequent work, which would be beyond the scope of this book. I was slightly disappointed to read in the introduction to Chapter 7 (“granitic complexes”) that it focused entirely on the calc-alkaline association. Alkaline felsic rocks, such as syenites and carbonatites, are unfortunately only accorded the very briefest of mentions. Otherwise, these chapters seem very comprehensive.

The final chapters deal with two separate subjects. Chapter 9 gives a good overview of magma mingling and mixing textures. Chapter 10 deals with mineralization and engineering properties, although the mineralization section is very short.

There is one unfortunate feature that lets this book down, which is the standard of editing. The text and figures are littered with typographical errors in both grammar and spelling. In most cases this is not serious, but in a few incidences the meaning of the text is actually compromised by these errors. Inconsistencies in spelling are also likely to confuse readers—I found three different spellings for “poikilitic” in one page.

Overall, then, this is a good revamp of the original field guide. It is written at a good level, well laid out, and comprehensively illustrated—although it would benefit from thorough copyediting. This book is certain to be of use to all geological students and enthusiasts interested in studying igneous geology in the field.

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