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## 4 THE GAZETTEER'S BACKGROUND

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The gazetteer has been compiled mainly on the basis of the available geological literature, most of which dates to the period 1860 to 1930 (for example, Bryce 1859; Judd 1893; Gunn et al 1903; Tyrrell 1928). Detailed guides to the Arran geology were produced through the entire 20th century (for example, Gregory & Tyrrell 1924; Tomkeieff 1961; Macgregor 1983, his first edition being presented in 1965; McKerrow & Atkins 1989).

The 1-inch or 1:50,000 geological maps of Arran are a standard source of geological information, but they are a very poor source of information on pitchstone occurrences. At these scales, many pitchstone occurrences have simply had to be omitted for clarity. Different editions of the map (for example, Ordnance Survey 1972 and 1987) also include different selections of occurrences. In addition, the colour used for pitchstone intrusions, and the key letters, are very similar to those for other silicic minor intrusions. This makes it very hard to distinguish pitchstone occurrences from other compositionally similar rocks on the maps.

Judd's paper (1893) is arguably the first 'modern' discussion of Arran pitchstone, with the author discussing the definition and classification of composite dykes, clarifying the terminology surrounding acid intrusions (for example, disposing of terms such as 'trap', 'claystone' and 'hornstone') and presenting important outcrops in the north (Cir Mhor) and on the island's west coast (the Tormore dykes, now referred to as 'Judd's Dykes'); Gunn et al (1903) presents the most substantial pitchstone sources in Arran's northern half, whereas Scott (1915b) deals with the outcrops of southern Arran; and Tyrrell (1928) combines the above three papers, supplementing with information from multiple minor papers (for example, Allport 1872; Bell 1874; Glen & Young 1884; Zirkel 1894; Corstorphine 1895; Scott 1915 (a)), to produce what is probably still the pre-eminent paper on Arran's geological pitchstone and its sources.

Due to the fairly comprehensive nature of Tyrrell's catalogue (1928), the authors found it natural to let this compilation form the point of departure for the production of the gazetteer. On the basis of the geological literature listed above, as well as results from the survey, outcrops were then either added to Tyrrell's catalogue, or this literature was consulted to expand on Tyrrell's occasionally very brief entries. Diagrams have been included from the primary papers to explain either the location of the outcrops, or the local, frequently complex, geological setting. A number of the most important pitchstone sub-types have been photographed, macroscopically as well as in thin-section, to give the reader an impression of

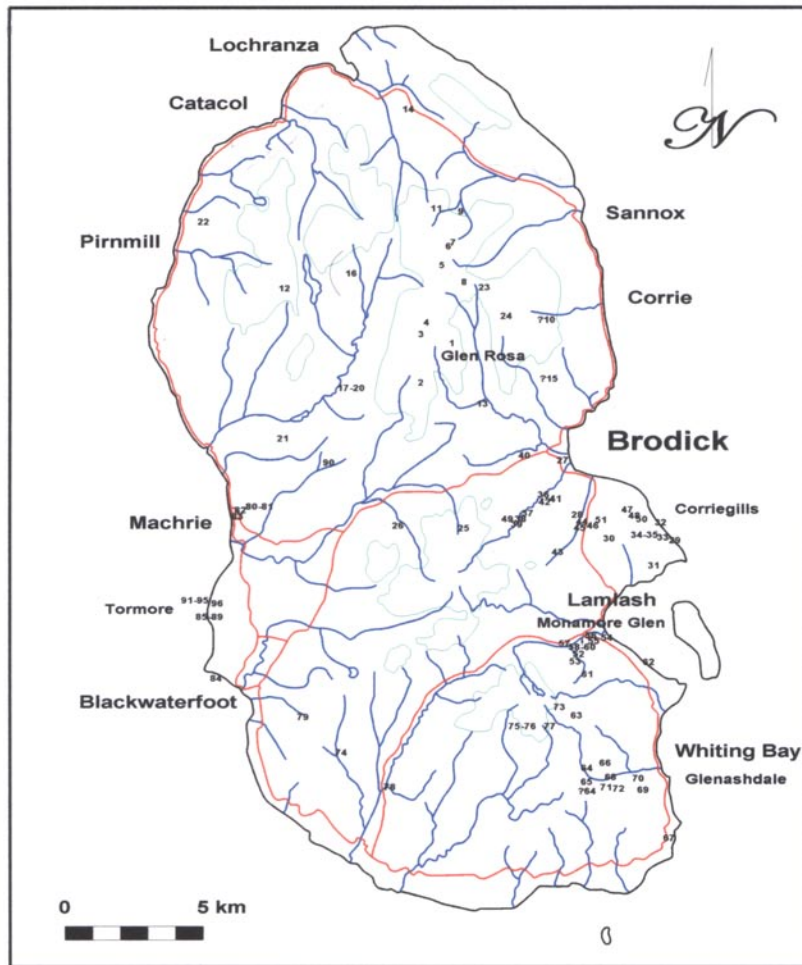
the huge variation between the local forms (see geological section, above).

An important part of the production of the present paper was to re-calculate the original imperial measurements, from inches, feet, yards and miles to centimetres, metres and kilometres. This was of importance to the description of site location, as well as to the characterisation of the individual outcrops. As most of the gazetteer's captions have been copied from the original 19th- and early 20th-century literature, these include some terms which are now deemed obsolete, such as 'trap', 'claystone' and 'hornstone'. It was difficult to replace these terms in a consistent manner, as they did not always refer exactly to the same rock forms. It was therefore chosen to retain these terms in the captions, and the reader is referred to the glossaries at the end of the paper, in which they are explained.

As the original geological literature did not include national grid references, and as the same outcrops might occasionally be referred to under different names (for example, Gunn's *Birk Glen* site corresponds to one of Tyrrell's *Lag a' Bheith* locations), it was difficult to identify the individual outcrops in dense clusters of outcrops, such as, the Glen Cloy/Kilmichael sites; the Lag a' Bheith sites; the Corriegills/Clauchland Hills sites; and the Monamore Glen sites. Absolutely certain identification of these outcrops is not possible without a complete geological inspection of all Arran pitchstone sources. Consequently, it should be noted that all grid references are approximations.

The individual entries of the gazetteer include: 1) main name, and alternative names, of each location; 2) national grid reference; 3) description of the outcrop and other relevant site information; 4) attributes of the individual pitchstone forms (primarily colour and porphyritic/aphyric status); and 5) relevant references. The locations of the individual gazetteer entries can be seen in [illus 24](#).

As part of the compilation of the present gazetteer, the authors examined pitchstone samples from the survey, as well as samples in the stores of the Hunterian Museum and Art Gallery, Glasgow. The geological collections of the Hunterian Museum and Art Gallery include a large number of specimens from Arran, most of which were collected by G.W. Tyrrell, the author of the 1928 Arran memoir. As part of this project, we have attempted to locate all the Hunterian Arran pitchstone specimens, and add them to the museum's computer catalogue, together with hand-specimen and (where available) thin-section images. As a result of this work there are now 111 Arran pitchstone records with images (plus many pitchstones from other Scottish localities, as



*Illus 24 The location of Arran's known pitchstone outcrops. The numbers on this map correspond to the site numbers in the Gazetteer. Red lines = main roads; green lines = 1200 ft contours (c 365m); blue lines = water courses.*

well as felsites) available via the online catalogue at: <http://www.huntsearch.gla.ac.uk>.

There is also a page giving direct links to various categories of pitchstones from the catalogue at: <http://www.hmag.gla.ac.uk/john/pitchstone/>.

This resource contains a few pitchstone occurrences which are not otherwise documented in the

literature. They are included in this gazetteer. The Hunterian also contains the thin-section collection, and geological field-slips of Alex Herriot, who worked extensively on the minor intrusions of the island. These are not yet available on computer, but represent a further useful resource for pitchstone investigators.