Lamprophyre intrusions, Newry Igneous Complex, Late Palaeozoic intrusives, Northern Ireland

From Earthwise


**Introduction**

Geological map of the Ards Peninsula showing distribution of tracts in the Central Belt. (P947808)
Interbedded sandstone and conglomerate of the Cushendun Formation showing the predominance of quartzite pebbles and large cobbles. Coastal exposure [D 252 324], 120 m southeast of Cave House and 500 m southeast of Cushendun, Co. Antrim. (Hammer 46 cm long). (P947994)

Boulder conglomerate and pebbly sandstone of Unit 1 of the Red Arch Formation. Coastal exposure [D 244 249], at the Lifeboat House slipway, 1 km southeast of Cushendall, Co. Antrim. (Hammer 46 cm long). (P947995)

Numerous lamprophyre dykes and subconcordant intrusions are mainly orientated parallel to the northeast-southwest structural grain of the Southern Uplands-Down-Longford Terrane. Two distinct phases of lamprophyre intrusion are recognised in Co. Down. An earlier ‘crushed’ series were cleaved, but are not seen folded, by the D1 deformation and occur mainly in the southern part of the Ards Peninsula, Co. Down, south of a west-east line (P947808) from Ringboy Point [J 650 575] to Ringburr Point [J 573 554]. A fine example (P947994) occurs at Kearney Point [J 646 512]. The implication is that intrusion of this earlier series of lamprophyres overlapped in time with intrusion of the Newry Igneous Complex and with the continuing D1 deformation. A later suite of unfoliated, post-tectonic lamprophyre intrusions (P947995) are most numerous in north Co. Down, and on the east coast of the Ards Peninsula at Wallace’s Rocks [J 635 677], Black Rock [J 633 712] and Ballyhalbert Pier [J 660 633].

The lamprophyres are divided petrographically on the basis of the main phenocrystic mineral and groundmass feldspar. The majority of the undeformed intrusions are identified as vogesite or minette, with hornblende and biotite/pyroxene respectively as the dominant phenocrysts, although spessartite, which contains phenocrystic hornblende in a plagioclase-dominated groundmass, is also recorded. All the lamprophyre dykes contain xenoliths, most commonly of greywacke or mudstone country rock, with very rare examples of igneous material of probable cognate origin. Although the majority of lamprophyres are recognised in coastal locations, examples also occur inland in Co. Armagh, north and west of the Newry Igneous Complex. In contrast to the Co. Down dyke swarm the orientation of the majority of inland intrusions is NNW-SSE, parallel to the Palaeogene basic dykes. While there is little doubt that the lamprophyres are Caledonian, the age of a few non-lamprophyric intrusions composed of pitchstone, felsite, microdiorite, quartz trachyandesite and quartz-hornblende trachyte is unclear but all are most likely late Palaeozoic. In Co. Armagh the lamprophyre suite is augmented by the presence of kersantite, a biotite lamprophyre with a plagioclase-rich groundmass. None of the inland intrusions are cleaved or folded but most are heavily altered to sericite, chlorite and carbonate.
Newry Igneous Complex, Late Palaeozoic intrusives, Northern Ireland

References


Retrieved from ‘http://earthwise.bgs.ac.uk/index.php?title=Lamprophyre_intrusions,_Newry_Igneous_Complex,_Late_Palaeozoic_intrusives,_Northern_Ireland&oldid=32578’

Category:
- The geology of Northern Ireland

Navigation menu

Personal tools
- Not logged in
- Talk
- Contributions
- Log in
- Request account

Namespaces
- Page
- Discussion

variants

Views
- Read
- Edit
- View history