

The status of the Great Glen Fault, Scotland

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To the northwest of the northeast-trending Great Glen Fault, polyphase deformation of Moine metasedimentary rocks involved Precambrian subrecumbent, north-northwest facing, curvilinear nappe folds reworked by Ordovician-Silurian north-northeast-trending, upward-facing upright folds. Both episodes of deformation were accompanied by greenschist-mid-amphibolite facies Barrovian metamorphism. To the southeast of the fault, the Dalradian succession, the oldest part of which is lithologically strikingly similar to the Moine, has undergone a geometrically remarkably similar structural history, also involving lower Paleozoic reworking of Precambrian nappes. However, somewhat sparse isotopic evidence derived from opposite sides of the fault points to con-

trasts in the age of the nappe-forming episodes of as much as 400 Ma. There is some evidence that it occurred at ~ 1000 Ma to the northwest of the fault, and better evidence that it occurred ~ 600 Ma to the southeast. There is much less contrast in the age of Caledonian reworking of the nappes on either side of the fault. It possibly began in the mid-Ordovician to the northwest, but in the early Ordovician to the southeast. The waning of Caledonian orogenesis appears to have occurred everywhere in the late Silurian-early Devonian. Does the Great Glen separate far-traveled terranes, largely juxtaposed by the early Devonian, or are the contrasts in age more apparent than real?