

---

## References

- Aberdeen University Engineering Services (1994) *An Investigation into the Flooding of Garmouth, Speyside*. Unpublished report.
- Acreman, M.C. (1983) The significance of the flood of September, 1981 on the Ardessie Burn, Wester Ross. *Scottish Geographical Magazine*, 99, 150–60.
- Acreman, M.C. (1986) Estimating flood statistics from basin characteristics in Scotland. Unpublished PhD thesis, University of St Andrews.
- Acreman, M.C. (1989) Extreme historic UK floods and maximum flood estimation. *Journal of the Institution of Water and Environmental Management*, 4(3), 104–12.
- Acreman, M.C. (1991) The flood of July 25th on the Hermitage Water, Roxburghshire. *Scottish Geographical Magazine*, 107, 170–8.
- Agassiz, L. (1841) On glaciers, and the evidence of their having once existed in Scotland, Ireland and England. *Proceedings of the Geological Society of London*, 3, 327–32. (Also in *Philosophical Magazine*, 18, 1841, 569–74).
- Agassiz, L. (1842) The glacial theory and its recent progress. *Edinburgh New Philosophical Journal*, 33, 217–83.
- Allen, J.R.L. (1970) *Physical Processes of Sedimentation*, George Allen and Unwin, London, 248pp.
- Allen, P., Benton, M.J., Black, G.P., Cleal, C.J., Evans, K.M., Jusypiw, S.I., Rowlands, M.A. and Weston, T.S. (1989) The future of earth-science site conservation in Great Britain. *Geological Curator*, 5, 101–09.
- Allen, P., Keen, D.H., Lewis, S. *et al.* (in prep.) *Quaternary of East Anglia and the Midlands*. Geological Conservation Review Series. Chapman and Hall, London.
- Anderson, M.G. and Calver, A. (1977) On the persistence of landscape features formed by a large flood. *Transactions of the Institute of British Geographers*, 2, 243–54.
- Andrews, E.D. (1983) Entrainment of gravel from naturally sorted riverbed material. *Bulletin of the Geological Society of America*, 94, 1225–31.
- Archer, D. (1992) *Land of Singing Waters, Rivers and Great Floods of Northumbria*. Spredden Press, Northumbria.
- Arkell, B., Leeks, G.J.L., Newson, M.D. and Oldfield, F. (1983) Trapping and tracing: some recent observations of supply and transport of coarse sediment from upland Wales. In *Modern and Ancient Fluvial Systems* (eds J.D. Collinson and J. Lewin), International Association of Sedimentologists Special Publication, Blackwell Scientific, London, 6, 107–19.
- Arnell, N.W., Brown, R.P.C. and Reynard, N.S. (1990) Impact of climatic variability and change on river flow regimes in the UK, *Institute of Hydrology Report*, 107, 154pp.
- Asaad, N.M. (1982) Sediments and sediment transport in the Forth basin. Unpublished PhD thesis, University of Dundee.
- Asaad, N.M. and McManus, J. (1986) The bathymetry, sediment and sedimentation of Loch Lubnaig, Scotland. *Journal of Water Resources*, 5, 187–205.
- Ashworth, P.J. (1982) Abandoned channel sedimentation on the upper Severn. Unpublished BSc dissertation, University of Wales, Aberystwyth.

- Ashworth, P. (1987) Bedload transport and channel change in gravel-bed rivers. Unpublished PhD thesis, University of Stirling.
- Aspinall, R.J., Macklin, M.G. and Brewis, T. (1986) Metal mining and floodplain sedimentation at Garrigill, and their influence on terrace and floodplain soil development. In *Quaternary River Landforms and Sediments in the Northern Pennines, England* (eds M.G. Macklin and J. Rose), Quaternary Research Association, Cambridge, 35–45.
- Atherden, M.A. (1976) The impact of late prehistoric cultures on the vegetation of the North York Moors. *Transactions of the Institute of British Geographers*, 1, 284–300.
- Atkinson, R.W. (1890) Field walk to the waterfalls of the Vale of Neath. *Transactions of the Cardiff Naturalists' Society*, 21, 40–1.
- Auton, C.A. (1990) The middle Findhorn valley. In *Beaully to Nairn: Field Guide* (eds C.A. Auton, C.R. Firth and J.W. Merritt), Quaternary Research Association, Cambridge, 74–96.
- Bailey, E.B. and Maufe, H.B. (1916) *The Geology of Ben Nevis and Glen Coe, and the Surrounding Country*. Memoirs of the Geological Survey of Scotland. HMSO, Edinburgh, 247 pp.
- Baird, P.D. and Lewis, W.V. (1957) The Cairngorm floods, 1956: summer solifluction and distributary formation. *Scottish Geographical Magazine*, 73, 91–100.
- Baker, V.R. (1977) Stream channel response to floods, with examples from central Texas. *Bulletin of the Geological Society of America*, 88, 1057–71.
- Ballantyne, C.K. (1979) A sequence of Lateglacial ice-dammed lakes in east Argyll. *Scottish Journal of Geology*, 15, 153–60.
- Ballantyne, C.K. (1991a) Late Holocene erosion in upland Britain: climatic deterioration or human influence? *The Holocene*, 1 (1), 81–5.
- Ballantyne, C.K. (1991b) Holocene geomorphic activity in the Scottish Highlands. *Scottish Geographical Magazine*, 107, 84–98.
- Ballantyne, C.K. and Harris, C. (1994) *The Periglaciation of Great Britain*, Cambridge University Press, Cambridge, 330pp.
- Barber, K.E. (1981) *Peat Stratigraphy and Climatic Change: a Palaeoecological Test of the Theory of Cyclic Peat Bog Regeneration*, Balkema, Rotterdam.
- Barber, K.E., Chambers, F.M., Maddy, D., Stoneman, R. and Brew, J.S. (1994) A sensitive high-resolution record of late Holocene climatic change from a raised bog in northern England. *The Holocene*, 4 (2), 198–205.
- Barrow, G. and Cunningham-Craig, E.H. (1912) *The Geology of Braemar, Ballater and Glen Clova*. Memoirs of the Geological Survey of Scotland, HMSO, Edinburgh.
- Bathurst, J.C. (1979) Distribution of boundary shear stress in rivers. In *Adjustment of the Fluvial System* (eds D.D. Rhodes and G.P. Williams), Kendall/Hunt Publishing Company, Dubuque, Iowa, 95–116.
- Bathurst, J.C., Thorne, C.R. and Hey, R.D. (1977) Direct measurement of secondary currents in river bends. *Nature*, 269, 504–6.
- Bathurst, J.C., Thorne, C.R. and Hey, R.D. (1979) Secondary flows and shear stresses at river bends. *Journal of the Hydraulics Division, American Society of Civil Engineers*, HY10, 1277–95.

- Battarbee, R.W. (1984) Diatom analysis and the acidification of lakes, *Philosophical Transactions of the Royal Society of London*, B305, 451–77.
- Battarbee, R.W., Appleby, P.G., Odell, K. and Flower, R.J. (1985)  $^{210}\text{Pb}$  dating of Scottish lake sediments, afforestation and accelerated erosion, *Earth Surface Processes and Landforms*, 10, 137–42.
- Battiau-Queney, Y. (1984) The pre-glacial evolution of Wales. *Earth Surface Processes and Landforms*, 9, 229–52.
- Beckinsdale, R.P. and Richardson, L. (1964) Recent findings on the physical development of the Lower Severn Valley. *Geological Journal*, 130, 87–105.
- Beven, K.J. and Carling, P. (eds) (1989) *Floods: Hydrological, Sedimentological and Geomorphological Implications*. John Wiley, Chichester.
- Black, A.R. (1992) Seasonality of flooding in Scottish rivers. Unpublished. PhD thesis, University of St Andrews.
- Black, A.R. and Anderson, J.L. (1994) The great Tay flood of January 1993. In *Hydrological Data UK: 1993 Yearbook*, Institute of Hydrology, Wallingford, pp. 25–34.
- Black, A.R. and Werritty, A. (1993) Seasonality and the generation of peak flow in small Scottish upland catchments. In *Proceedings of the Fourth National Hydrology Symposium*, September 1993, British Hydrological Society, pp. 4.7–4.12.
- Blackford, J.J. and Chambers, F.M. (1991) Proxy records of climate from blanket mires: evidence from a Dark Age (1400 BP) climatic deterioration in the British Isles. *The Holocene*, 1 (1), 63–7.
- Blacknell, C. (1982) Morphology and surface sedimentary features of point bars in Welsh gravel bed rivers. *Geological Magazine*, 119, 181–91.
- Bleasdale, A. and Douglas, C.K.M. (1952) The storm over Exmoor on August 15th 1952. *Meteorological Magazine*, 81, 353–67.
- Bluck, B.J. (1971) Sedimentation in the meandering River Endrick. *Scottish Journal of Geology*, 7, 93–138.
- Bluck, B.J. (1976) Sedimentation in some Scottish rivers of low sinuosity. *Transactions of the Royal Society of Edinburgh*, 69, 425–56.
- Bluck, B.J. (1981) Scottish alluvium: modern and ancient. In *Field Guides to Modern and Ancient Fluvial Systems in Britain and Spain* (ed. T. Elliot), International Fluvial Sedimentology Conference, University of Keele, 5.1–5.5.
- Bluck, B.J. (1987) Bed forms and clast size changes in gravel-bed rivers. In *River Channels — Environment and Process* (ed. K.S. Richards), Blackwell, Oxford, 159–78.
- Boardman, J. (1988) *Classic Landforms of the Lake District*, Geographical Association, Classic Landform Guides No. 8, 46 pp.
- Boon, P.T., Calow, P. and Petts, G.E. (eds) *River Conservation and Management*, John Wiley, Chichester, 207–35.
- Born, S.M. and Ritter, D.F. (1978) Modern terrace development near Pyramid Lake, Nevada, and its geological implications. *Bulletin of the Geological Society of America*, 81, 1233–42.
- Bowen, D.Q. (1967) On the supposed ice-dammed lakes of South Wales. *Transactions of the Cardiff Naturalists' Society*, 93, 4–17.
- Bowen, D.Q. (1973) The Pleistocene succession of the Irish Sea. *Proceedings of the Geologists' Association*, 84, 249–73.

- Bowen, D.Q. and Gregory, K.J. (1965) A glacial drainage system near Fishguard, Pembrokeshire. *Proceedings of the Geologists' Association*, 74, 275–82.
- Bowen, D.Q. and Lear, D.L. (1982) The Quaternary geology of the lower Teifi Valley. In *Geological Excursions in Dyfed, SW Wales* (ed. M.G. Bassett), National Museum of Wales, Cardiff, 297–302.
- Bowen, D.Q., Rose, J., McCabe, A.M. and Sutherland, D.G. (1986) Correlation of Quaternary glaciations in England, Ireland, Scotland and Wales. *Quaternary Science Reviews*, 6, 299–340.
- Bower, M.M. (1960) The erosion of blanket peat in the Pennines. *East Midland Geographer*, 13, 22–3.
- Bower, M.M. (1961) The distribution of erosion in the blanket peat bogs in the Pennines. *Transactions of the Institute of British Geographers*, 29, 17–30.
- Bower, M.M. (1962) The causes of erosion in blanket peat bogs. *Scottish Geographical Magazine*, 78, 33–44.
- Brazier, V.B. (1987) Late Quaternary alluvial fans, debris cones and talus cones in the Grampian Highlands, Scotland. Unpublished PhD thesis, University of St Andrews.
- Brazier, V.B. and Ballantyne, C.K. (1989) Late Holocene debris cone evolution in Glen Feshie, western Cairngorm Mountains, Scotland. *Transactions of the Royal Society of Edinburgh*, 80, 17–24.
- Brazier, V.B. and Werritty, A. (1992) *The Geomorphology, Conservation and Management of the Endrick Water, Downstream of Drymen Bridge*, Report to the Nature Conservancy Council of Scotland.
- Brazier, V.B. and Werritty, A. (1994) Conservation management of dynamic rivers: the case of the River Feshie, Scotland. In *Geological and Landscape Conservation* (eds D. O'Halloran, C. Green, M. Harley, M. Stanley and J. Knill), Geological Society, London, 147–52.
- Brazier, V.B., Kirkbride, M. and Werritty, A. (1993) Scottish landform examples: the River Clyde–Medwin meanders. *Scottish Geographical Magazine*, 109, 45–9.
- Brazier, V.B., Whittington, G. and Ballantyne, C.K. (1988) Holocene debris cone evolution in Glen Etive, Western Grampian Highlands, Scotland. *Earth Surface Processes and Landforms*, 13, 525–31.
- Bremner, A. (1939) The River Findhorn. *Scottish Geographical Magazine*, 55, 65–85.
- Bridgland, D.R. (1994) *Quaternary of the Thames*. Geological Conservation Review Series, 7. Chapman and Hall, London, 441pp.
- Briggs, D.J., Coope, G.R. and Gilbertson, D.D. (1975) Late Pleistocene terrace deposits at Beckford, Worcestershire, England. *Geological Journal*, 10, 1–17.
- Broadhurst, F.M. (1985) The geological evolution of North-West England. In *The Geomorphology of North-West England* (ed. R.H. Johnson), University Press, Manchester, 24–36.
- Brookes, A. (1988) *Channelized Rivers: Perspectives for Environmental Management*, John Wiley, Chichester, 326pp.
- Brookes, A. (1990) Restoration and enhancement of engineered river channels: some European experiences. *Regulated Rivers; Research and Management*, 5, 45–56.
- Brookes, A. (1992) Recovery and restoration of some engineered British river channels. In *River Conservation and Management* (eds P.J. Boon, P. Calow and G.E. Petts), John Wiley, Chichester, 337–52.
- Brookes, A., Gregory, K.J. and Dawson, F.H. (1983) An assessment of river channelisation in England and Wales. *The Science of the Total Environment*, 27, 97–111.

- Brown, E.H. (1960) The building of Southern Britain. *Zeitschrift für Geomorphologie*, 4, 264–74.
- Brown, A.G. (1982) Human impact on the former floodplain woodlands of the Severn. In *Archaeological Aspects of Woodland Ecology* (eds M. Bell and S. Limbrey), British Archaeological Research Series, 116, 93–105.
- Brown, A.G. (1983a) Late Quaternary palaeohydrology, palaeoecology and floodplain development of the lower River Severn. Unpublished PhD thesis, University of Southampton.
- Brown, A.G. (1983b) Floodplain deposits and accelerated erosion in the lower Severn basin. In *Background to Palaeohydrology* (ed. K.J. Gregory), John Wiley, Chichester, 375–97.
- Brown, A.G. (1983c) *Guidelines for Excursions in the Severn Basin*. INQUA Eurosiberian Subcommittee for the study of the Holocene, International Geological Correlation Programme Project 158: Palaeohydrology of the temperate zone in the last 15,000 years, UK Symposium, 19–26 September 1983, Attingham Hall, Shrewsbury.
- Brown, A.G. (1984) The Flandrian vegetation history of Hartlebury Common, Worcestershire. *Proceedings of the Birmingham Natural History Society*, 25, 89–98.
- Brown, A.G. (1987) Holocene floodplain sedimentation and channel response of the lower River Severn, U.K. *Zeitschrift für Geomorphologie*, NF 31, 293–310.
- Brown, A.G. (1988) The palaeoecology of *Alnus* (elder) and the Postglacial history of floodplain vegetation: pollen percentage and influx data from the West Midlands, U.K. *New Phytologist*, 110, 425–36.
- Brown, P.E. (1991) Caledonian and earlier magmatism. In *Geology of Scotland* (ed. G.Y. Craig) (3rd edn), Geological Society, London, 229–95.
- Brunsdon, D. and Thornes, J.B. (1979) Landscape sensitivity and change. *Transactions of the Institute of British Geographers*, New Series, 4, 463–84.
- Buck, S.G. (1978) The sedimentology of a coarse bed-load braided river, the River Feshie, Inverness-shire, Scotland. Unpublished MSc thesis, University of Reading.
- Bull, W.B. (1979) Threshold of critical power in streams. *Bulletin of the Geological Society of America*, 90, 453–64.
- Burrin, P. (1985) Holocene alluviation in south east England and some implications for palaeohydrological studies. *Earth Surface Processes and Landforms*, 10, 257–71.
- Burton, J.H. (1864) *The Cairngorm Mountains*, William Blackwood, Edinburgh.
- Calver, A. (1978) Modelling drainage headwater development. *Earth Surface Processes*, 3, 233–41.
- Campbell, S. and Bowen, D.Q. (1989) *Quaternary of Wales*, Geological Conservation Review Series, 2, Nature Conservancy Council, Petersborough, 238 pp.
- Campbell, S., Hunt, C.O., Scourse, J.D., Keen, D.H. and Stephens, N. *Quaternary of South-West England*, Geological Conservation Review Series, 14, in press, Chapman and Hall, London.
- Carling, P.A. (1986) The Noon Hill flash floods; July 17th 1983. Hydrological and geomorphological aspects of a major formative event in an upland landscape. *Transactions of the Institute of British Geographers*, New Series 11, 105–18.
- Carling, P.A. (1987a) Reconstruction of a flood resulting from a moraine-dam failure using geomorphological evidence and dam break modelling. In *Catastrophic Flooding* (eds L. Mayer and D. Nash), Allen and Unwin, Boston, 181–200.
- Carling, P.A. (1987b) Hydrodynamic interpretation of a boulder berm and associated debris–torrent deposits. *Geomorphology*, 1, 53–67.

- Carling, P.A. (1991) An appraisal of the velocity-reversal hypothesis for stable pool–riffle sequences in the River Severn, England, *Earth Surface Processes and Landforms*, 16, 19–31.
- Carlston, C.W. (1965) The relation of free meander geometry to stream discharge and its geomorphic implications. *American Journal of Science*, 263, 864–85.
- Carson, M.A. and Kirkby, M.J. (1972) *Hillslope Form and Process*, Cambridge University Press, Cambridge, 475pp.
- Charlesworth, J.K. (1929) The South Wales end moraine. *Quarterly Journal of the Geological Society of London*, 85, 335–58.
- Charlesworth, J.K. (1956) The late-glacial history of the Highlands and Islands of Scotland, *Transactions of the Royal Society of Edinburgh*, 62, 769–928.
- Cheetham, G.H. (1980) Late Quaternary palaeohydrology, the Kennet Valley case study. In *The Shaping of Southern Britain* (ed. D.K.C. Jones), Academic Press, London, 203–23.
- Church, M. (1978) Palaeohydrological reconstructions from a Holocene valley fill. In *Fluvial Sedimentology* (ed. A.D. Miall), Memoir of the Canadian Society of Petroleum Geologists, 5, 743–72.
- Church, M. (1983) Patterns of instability in a wandering gravel bed channel. In *Modern and Ancient Fluvial Systems* (eds J.D. Collinson and J. Lewin), International Association of Sedimentologists Special Publication, 6, 169–80.
- Church, M. (1984) On experimental method in geomorphology. In *Catchment Experiments in Fluvial Geomorphology* (eds T.P. Burt and D.E. Walling), Geobooks, Norwich, pp. 563–80.
- Church, M. and Jones, D.P. (1982) Channel bars in gravel-bed rivers. In *Gravel-bed Rivers: Fluvial Processes, Engineering and Management* (eds R.D. Hey, J.C. Bathurst and C.R. Thorne), John Wiley, Chichester, 291–324.
- Church, M. and Ryder, J.M. (1972) Paraglacial sedimentation: a consideration of fluvial processes conditioned by glaciation, *Bulletin of the Geological Society of America*, 83, 3059–72.
- Clement, P. (1984) The drainage of a marginal ice-dammed lake at Nordbogletscher, Johan Dahl Land, south Greenland. *Arctic and Alpine Research*, 16, 209–16.
- Common, R. (1958) The Border floods, August 1956: observations and comment. *Scottish Geographical Magazine*, 72, 160–2.
- Conelly, U. (1993) Modelling natural pipe flow. Contributions to the stormflow hydrograph. Unpublished PhD thesis, University of Wales, Aberystwyth.
- Conway, V.M. (1954) Stratigraphy and pollen analysis of southern Pennine blanket peats. *Journal of Ecology*, 42, 117–47.
- Cooke, R.U. and Reeves, R.W. (1976) *Arroyos and Environmental Change in the American South-West*, Clarendon Press, Oxford.
- Coope, G.R. and Shotton, F.W. (1981) *The Late-glacial Domain: the Devensian Terraces of the Severn below Ironbridge and the Warwickshire Avon*, IGCP 158A Progress Report.
- Cordiner, C. (1780) Antiquities and scenery of the north of Scotland, Letters to Thomas Pennant Esq., London.
- Crampton, C.B. (1969) The chronology of certain terraced river deposits in the north-east Wales area. *Zeitschrift für Geomorphologie*, 13, 245–59.

- Crowther, P.R. and Wimbledon, W.A. (eds) (1988) The use and conservation of palaeontological sites. *Special Papers in Palaeontology*, 40, 1–200.
- Cryer, R. (1978) A study of the sources and variations of major solutes in selected mid-Wales catchments. Unpublished PhD thesis, University of Wales.
- Cryer, R. (1980) The chemical quality of some pipeflow waters in upland Mid-Wales and its implications. *Cambria*, 6 (2), 1–19.
- Cullingford, R.A. and Gregory, K.J. (1978) Till ridges in Wensleydale, Yorkshire. *Proceedings of the Geologists' Association*, 89, 67–79.
- Cundill P.R. (1976) Late Flandrian vegetation and soils in Carlingill Valley, Howgill Fells. *Transactions of the Institute of British Geographers*, New Series 1, 301–9.
- Dalrymple, J.B., Long, R.J. and Conacher, A. (1968) An hypothetical nine-unit landsurface model. *Zeitschrift für Geomorphologie*, 12, 60–76.
- Darby, S.E. and Thorne, C.R. (1992) Impact of channelisation on the Mimmshall Brook, Hertfordshire, U.K. *Regulated Rivers: Research and Management*, 7, 193–204.
- Davies, J.H., Holroyd, J., Lumley, R.G. and Owen-Roberts, D. (1983) *Geology of Powys in Outcrop—A Field Guide to the Geology of Powys*, Merioneth Field Study Press, Dolgellau.
- Davies, M. (1967) *Brecon Beacons—National Park*, HMSO, London.
- Davis, R.J. and Gregory, K.J. (1994) A new distinct mechanism of river bank erosion in a forested catchment. *Journal of Hydrology*, 157, 1–11.
- Davis, W.M. (1899) The geographical cycle. *Geographical Journal*, 14, 481–504.
- Davis, W.M. (1893) The topographic maps of the United States Geological Survey. *Science*, 21, 225–7.
- Dawson, A.G. (1983) Glacier-dammed lake investigations in the Hullet lake area, South Greenland. *Meddelelser om Growlland, Geoscience*, 11, 22 pp.
- Dawson, M. (1985) Environmental reconstruction of a late Devensian terrace sequence. Some preliminary findings. *Earth Surface Processes and Landforms*, 10, 237–46.
- Dawson, M.R. (1986) Late Devensian fluvial environments of the lower Severn basin, U.K. Unpublished PhD thesis, University of Leicester.
- Dawson, M.R. and Gardiner, V. (1987) River terraces: The general model and a palaeohydrological and sedimentological interpretation of the terraces of the lower Severn. In *Palaeohydrology in Practice* (eds K.S. Gregory, J. Lewin and J.B. Thornes) John Wiley, Chichester.
- Dawson, A.G., Matthews, J.A. and Shakesby, R.A. (1987) Rock platform erosion on periglacial shores: a modern analogue for Pleistocene rock platforms in Britain. In *Periglacial Processes and Landforms in Britain and Ireland* (ed. J. Boardman). Cambridge University Press, Cambridge, pp. 173–82.
- De Jong, C. (1991) A reappraisal of the significance of obstacle clasts in cluster bedform dispersal. *Earth Surface Processes and Landforms*, 16, 737–44.
- Delderfield, E.R. (1981) *The Lynmouth Flood Disaster, Exmoor*, 10th edn, E.R.D. Publications, Exmouth, 160 pp.

- Dewey, H. (1916) On the origin of some river gorges in Cornwall and Devon. *Quarterly Journal of the Geological Society of London*, 72, 63–76.
- Dixon, E.E.L. (1921) The Geology of the South Wales Coalfield, Part 8. The country around Pembroke and Tenby. *Memoirs of the Geological Survey of Great Britain*, HMSO.
- Dobbie, U. and Wolf, P.O. (1953) The Lynmouth flood of August 1952. *Proceedings of the Institution of Civil Engineers*, 2, 522–88.
- Dobson, M.R. and Whittington, R.J. (1987) The geology of Cardigan Bay. *Proceedings of the Geologists' Association*, 98, 331–53.
- Downs, P.W. and Gregory, K.J. (1992) The sensitivity of river channels in the landscape system. In *Landscape Sensitivity* (eds D.S.G. Thomas and R.J. Allison), John Wiley, Chichester, 15–30.
- Downs, P.W. and Gregory, K.J. (1994) Evaluation of river conservation sites: the context for a drainage basin approach. In *Geological and Landscape Conservation* (eds D. O'Halloran, C. Green, M. Harley, M. Stanley and J. Knill), Geological Society, London, 139–43.
- Downs, P.W. and Gregory, K.J. (1995) Approaches to river channel sensitivity. *Professional Geographer*, 47, 168–75.
- Downward, S.R., Gurnell, A.M. and Brookes, A. (1994) A methodology for quantifying river planform change using G.I.S. In *Variability in Stream Erosion and Sediment Transport* (eds L.J. Olive, R.J. Loughran and J.A. Kesby), International Association of Hydrological Sciences Publication 224, 449–56.
- Dreghorn, W. (1968) *Geology Explained in the Forest of Dean and Wye Valley*, David and Charles, Newton Abbot.
- Drew, I.D. (1992) Bedload transport, vertical exchange and sediment storage in two Scottish Highland gravel-bed streams. Unpublished PhD thesis, University of St Andrews.
- Duck, R.W. (1984) Sediments of Loch Lubnaig. Abstract of a paper presented to the Forth Study Group at Stirling University on 7 February 1984.
- Duck, R.W. and McManus, J. (1990) Relationships between catchment characteristics, land use and sediment yield in the Midland Valley of Scotland. In *Soil Erosion on Agricultural Land* (ed. J. Boardman), John Wiley, Chichester, 284–99.
- Dunham, K.C. (1944) The production of galena and associated metals in the northern Pennines; with comparative statistics for Great Britain. *Transactions of the Institution of Mining and Metallurgy*, 53, 181–252.
- Dunham, K.C. (1990) *Geology of the Northern Pennine Orefield, Volume 1. Tyne to Stainmore*, 2nd edn, Memoir of the British Geological Survey, HMSO, London.
- Dury, G.H. (1953) A note on the upper Cherwell. *Journal of the Northamptonshire Natural History, Science and Field Club*, 32, 236.
- Dury, G.H. (1954) Contribution to a general theory of meandering valleys. *American Journal of Science*, 152, 193–224.
- Dury, G.H. (1961) Bankfull discharge—an example of its statistical relationships. *International Association of Hydrology Bulletin*, 6, 48–55.
- Dury, G.H. (1964) Principles of under-fit streams. *United States Geological Survey Professional Paper*, 452-A.
- Dury, G.H. (1966) Incised valley meanders on the lower Colo River, New South Wales. *Australian Geographer*, 10, 17–25.



- Dury, G.H. (1977) Underfit streams: Retrospect, perspect and prospect. In *River Channel Changes* (ed. K.J. Gregory), John Wiley, Chichester, pp.281–93.
- Dury, G.H. (1980) Neocatastrophism? A further look. *Progress in Physical Geography*, 4, 391–413.
- Dury, G.H. (1983) Osage-type underfitness on the River Severn near Shrewsbury, Shropshire, England. In *Background to Palaeohydrology* (ed. K.J. Gregory), John Wiley, Chichester, 399–412.
- Dury, G.H. (1984) Abrupt variation in channel width along part of the River Severn near Shrewsbury, Shropshire, England. *Earth Surface Processes and Landforms*, 9, 485–92.
- Dury, G.H., Sinker, C.A. and Pannett, D.J. (1972) Climatic change and arrested meander development on the River Severn. *Area*, 4, 81–5.
- Ellis, N.V. (ed.), Bowen, D.Q., Campbell, S., Knill, J.L., McKirdy, A.P., Prosser, C.D., Vincent, M.A. and Wilson, R.C.L. (1996) *An Introduction to the Geological Conservation Review*. Geological Conservation Review Series, 1. Joint Nature Conservation Committee, Peterborough, 131pp.
- Embleton, C. (1957) Some stages in the drainage evolution of part of north-east Wales. *Transactions of the Institute of British Geographers*, 23, 19–35.
- Evans, D.J.A. and Hansom, J.D. (1991) Scottish landform examples — 1. The Parallel Roads of Glen Roy. *Scottish Geographical Magazine*, 107, 63–6.
- Fairbairn, W.A. (1967) Erosion in the River Findhorn. *Scottish Geographical Magazine*, 83, 46–52.
- Ferguson, R.I. (1973) Channel patterns and sediment type. *Area*, 5, 38–41.
- Ferguson, R.I. (1976) Disturbed periodic model for river meanders. *Earth Surface Processes*, 1, 337–47.
- Ferguson, R.I. (1981) Channel forms and channel changes. In *British Rivers* (ed. J. Lewin), George Allen and Unwin, London, 90–125.
- Ferguson, R.I. (1984) The threshold between meandering and braiding. *Proceedings of the First International Conference on Hydraulic Design in Water Resources Engineering: Channels and Channel Control Structures*. University of Southampton, 6, 15–29.
- Ferguson, R.I. (1987) Hydraulic and sedimentary controls of channel pattern. In *River Channels: Environment and Processes* (ed. K.S. Richards), Blackwell, Oxford, pp. 129–58.
- Ferguson, R.I. and Ashworth, P. (1991) Slope-induced changes in channel character along a gravel-bed stream: the Allt Dubhaig, Scotland. *Earth Surface Processes and Landforms*, 16, 65–82.
- Ferguson, R.I. and Werritty, A. (1983) Bar development and channel changes in the gravelly River Feshie, Scotland. In *Modern and Ancient Fluvial Systems* (eds. J.D. Collinson and J. Lewin), International Association of Sedimentologists Special Publication 6, Blackwell Scientific, London, pp. 181–95.
- Ferguson, R.I. and Werritty, A. (1991) Channel change and sedimentology in the River Feshie: a wandering gravel-bed river, Scottish Highlands. In *Fluvial Processes in Scottish Highland Rivers*, Field Excursion Guide (ed. A. Werritty), BGRG/COMTAG Joint International Symposium on 'Theory in Geomorphology', Leeds and St Andrews, September 1991, 17–36.
- Ferguson, R.I., Hoey, T.B., Wathen, S.J. and Werritty, A. (1996). Field evidence for rapid downstream fining of river gravels through selective transport. *Geology*, 24, 179–82.

- Firth, C.R. 1993. Fort Augustus. In *Quaternary of Scotland. Geological Conservation Review* (eds J.E. Gordon and D.G. Sutherland). Chapman and Hall, London, 192–6.
- Forestry Commission (1951) *Strathgryne* (Britain's Forests), Forestry Commission, London.
- Francis, T.J.G. (1964) A seismic refraction survey of preglacial Teifi valley near Cenarth. *Geological Magazine*, 101, 108–12.
- Frostick, L.E. and Reid, I. (1977) Sorting mechanisms in coarse-grained alluvial sediments: fresh evidence from a basalt plateau gravel in Kenya. *Quarterly Journal of the Geological Society of London*, 137, 431–41.
- Gale, S.J. (1985) The late and post-glacial environmental history of the southern Cumbrian massif and its surrounding lowlands. In *The Geomorphology of North-West England* (ed. R.H. Johnson), University Press, Manchester, 282–98.
- Gardiner, J.L. (ed.) (1991) *River Projects and Conservation. A Manual for Holistic Appraisal*. John Wiley, Chichester, 236 pp.
- Garrard, R.A. (1977) The sediments of the south Irish Sea and Nympe Bank area of the Celtic Sea. In *The Quaternary History of the Irish Sea* (eds C. Kidson and M.J. Tooley), Seel House, Liverpool, 69–92.
- Gaunt, G.D. (1981) Quaternary history of the southern part of the Vale of York. In *The Quaternary in Britain* (eds J. Neale and J. Flenley), Pergamon Press, Oxford, 82–97.
- Geikie, A. (1865) *The Scenery of Scotland Viewed in Connexion with its Physical Geology*, 1st edn, Macmillan, London, 360pp.
- Geikie, A. (1901) *The Scenery of Scotland Viewed in Connection with its Physical Geology*, 3rd edn, Macmillan, London, 540pp.
- George, T.N. (1958) The geology and geomorphology of the Glasgow district. In *The Glasgow Region* (eds R. Miller and J. Tivy), University of Glasgow, 17–61.
- George, T.N. (1960) The stratigraphical evolution of the Midland Valley. *Transactions of the Geological Society of Glasgow*, 24, 32–107.
- George, T.N. (1965) The geological growth of Scotland. In *The Geology of Scotland* (ed. G.Y. Craig). Oliver and Boyd, Edinburgh, pp. 1–48.
- Gilbert, G.K. (1877) Report on the geology of the Henry Mountains. *U.S. Geological Survey, Rocky Mountain Region Report*, 160 pp.
- Gilman, K. and Newson, M.D. (1980) *Soil Pipes and Pipe Flow—a Hydrological Study in Upland Wales*, British Geomorphological Research Group Research Monograph No. 1, Geo-books, Norwich.
- Glasspoole, J. and Douglas, C.K.M. (1949) Tweed valley floods: heavy rainfall of August 11–12th, 1948. *Meteorological Magazine*, 82, 344–7.
- Godwin, H. (1981) *The Archives of Peat Bogs*, Cambridge University Press, Cambridge.
- Godwin, H. and Mitchell, G.F. (1938) Stratigraphy and development of two raised bogs near Tregaron, Cardiganshire. *New Phytologist*, 37, 425–54.
- Gordon, J.E. (1993a) The Cairngorms. In *Quaternary of Scotland* (eds J.E. Gordon and D.G. Sutherland), Geological Conservation Review Series, Chapman and Hall, London, 259–76.

- Gordon, J.E. (1993b) Glen Roy and the Parallel Roads of Lochaber. In *Quaternary of Scotland* (eds J.E. Gordon and D.G. Sutherland), Geological Conservation Review Series, Chapman and Hall, London, 328–43.
- Gordon, J.E. (1993c) Loch Skene. In *Quaternary of Scotland* (eds J.E. Gordon and D.G. Sutherland), Geological Conservation Review Series, Chapman and Hall, London, 578–81.
- Gordon, J.E. (1994) Geomorphology and conservation in the uplands: framework for a developing role in sustaining Scotland's natural heritage. In *Conserving our Landscape: Evolving Landforms and Ice-Age heritage* (eds C. Stevens, C. P. Green, J.E. Gordon and M.G. Macklin). English Nature, Peterborough.
- Gordon, J.E. and Campbell, S. (1992) Conservation of glacial deposits in Great Britain: a framework for assessment and protection of Sites of Special Scientific Interest. *Geomorphology*, 6, 89–97.
- Gordon, J.E. and McEwen, U. (1993) North Esk and West Water Glaciofluvial landforms. In *Quaternary of Scotland* (eds J.E. Gordon and D.G. Sutherland). Geological Conservation Review Series, Chapman and Hall, London, 499–502.
- Gordon, J.E. and Sutherland, D.G. (1993) *Quaternary of Scotland*. Geological Conservation Review Series, 6. Chapman and Hall, London, 695pp.
- Gottschalk, L.C. (1964) Reservoir sedimentation. In *Handbook of Applied Hydrology* (ed. V.T. Chow), McGraw-Hill, New York, 17.1–17.34.
- Gray, J.M. (1978) Report of a short field meeting at Oban. *Quaternary Newsletter*, 26, 14–6.
- Green, F.H.W. (1958) The Moray floods of July and August, 1956. *Scottish Geographical Magazine*, 74, 48–50.
- Green, F.H.W. (1971) History repeats itself —flooding in Moray, August, 1970. *Scottish Geographical Magazine*, 87, 150–2.
- Greenwood, G. (1857) *Rain and Rivers or Hutton and Playfair Against Lyell and All Comers*, Longman Brum, Green Longmans and Roberts, London.
- Gregory, K.J. (1976) Changing drainage basins. *Geographical Journal*, 142, 237–47.
- Gregory, K.J. (1978) Fluvial processes in British basins. In *Geomorphology: Present Problems and Future Prospects* (eds C. Embleton, D. Brunnsden and D.K.C. Jones), Oxford University Press, Oxford, 40–72.
- Gregory, K.J. (ed.) (1983) *Background to Palaeohydrology*, John Wiley, Chichester, 486pp.
- Gregory, K.J. (1984) Why rivers change their course. *Geographical Magazine*, 55, 120–8.
- Gregory, K.J. (1987) Environmental effects of river channel changes. *Regulated Rivers*, 1, 349–75.
- Gregory, K.J. (1992) Vegetation and river channel process interactions. In *River Conservation and Management* (eds P.J. Boon, P. Calow and G.E. Petts), John Wiley, Chichester, 207–35.
- Gregory, K.J. and Davis, R.J. (1992) Coarse woody debris in stream channels in relation to river channel management in woodland areas. *Regulated Rivers Research and Management*, 7, 117–36.
- Gregory, K.J. and Gurnell, A.M. (1988) Vegetation and river channel form and process. In *Biogeomorphology* (ed. H. Viles), Blackwell, Oxford, 11–12.
- Gregory, K.J. and Lewin, J. (1987) Conclusions: Palaeohydrological synthesis and application, In *Palaeohydrology in Practice* (eds K.J. Gregory, J. Lewin and J.B. Thornes), John Wiley, Chichester, 341–60.

- Gregory, K.J., Davis, R.J. and Tooth, S. (1993) Spatial distribution of coarse woody debris dams in the Lymington basin, Hampshire, U.K. *Geomorphology*, 6, 207–24.
- Gregory, K.J., Gurnell, A.M. and Hill, C.T. (1985) The permanence of debris dams related to river channel process. *Hydrological Sciences Journal*, 30, 371–81.
- Gregory, K.J., Gurnell, A.M., Hill, C.T. and Tooth, S. (1994) Stability of the pool–riffle sequence in changing river channels. *Regulated Rivers: Research and Management*, 9, 35–43.
- Gregory, K.J., Lewin, J. and Thornes, J.B. (eds) (1987) *Palaeohydrology in Practice*. John Wiley, Chichester.
- Grove, A.T. (1955) The mouth of the Spey. *Scottish Geographical Magazine*, 71, 104–6.
- Gurnell, A.M. (1996) Hydrological and geomorphological change on the River Dee meanders. *Proceedings of Rivertech 96*, the first international conference on new/ emerging concepts for rivers. International Water Resources Association, Volume 2, 484–91.
- Gurnell, A.M. (1997a) Channel change on the River Dee, 1946 to 1992, from the analysis of air photographs. *Regulated Rivers: Research and Management* (in press).
- Gurnell, A.M. (1997b) Adjustments in river channel geometry associated with hydraulic discontinuities across the fluvial-tidal transition of a regulated river. *Earth Surface Processes and Landforms* (in press).
- Gurnell, A.M. and Gregory, K.J. (1984) The influence of vegetation on stream channel processes. In *Catchment Experiments in Fluvial Geomorphology* (eds T.P. Burt and D.E. Walling), Geo-books, Norwich, 515–35.
- Gurnell, A.M., Clark, M.J., Hill, C.T., Downward, S.R., Petts, G.E., Scaife, R.G. and Wainwright, J. (1993) *The River Dee Meanders (Holt to Worthenbury)*. Report prepared for the Countryside Council for Wales by the GeoData Institute, University of Southampton, 69 pp.
- Gurnell, A.M., Downward, S.R. and Jones, R. (1994) Channel planform change on the River Dee meanders, 1876–1992. *Regulated Rivers: Research and Management*, 9, 187–204.
- Gurnell, A.M., Gregory, K.J., Hollis, S. and Hill, C.T. (1985) Detrended correspondence analysis of heathland vegetation: the identification of runoff contributing areas. *Earth Surface Processes and Landforms*, 10, 343–51.
- Gustayson, T.C., Ashley, G.H. and Boothroyd, J.C. (1975) Depositional sequences in glaciolacustrine deltas. In *Glaciofluvial and Glaciolacustrine Sedimentation* (eds A.V. Jopling and B.C. McDonald), Society of Economic Paleontologists and Mineralogists, No. 23, 264–80.
- Hadfield, C. (1969) *The Canals of South and South-East England*, David and Charles, Newton Abbott.
- Hamblin, R.J.O. (1986) The Pleistocene sequence of the Telford district. *Proceedings of the Geologists' Association*, 97, 365–77.
- Harmer, F.W. (1907) On the origin of certain canyon-like valleys associated with lake-like areas of depression. *Quarterly Journal of the Geological Society of London*, 63, 470–514.
- Harold, C.H.H. (1937) The flow and bacteriology of the underground water in the Lee Valley. In *The Results of the Chemical and Bacteriological Examination of the London Waters for the 12 Months Ended 31st December 1937*, 32nd Annual Report of the Metropolitan Water Board, 89–99.
- Harris, R. (1985) Variations in the Durham rainfall and temperature record. In *The Climate Scene* (eds M.J. Tooley and G.M. Sheail) George Allen and Unwin, London, 39–59.

- Harrison, S.S. (1970) Note on the importance of frost weathering in the disintegration and erosion of till in east central Wyoming. *Bulletin of the Geological Society of America*, 81, 3407–10.
- Harvey, A.M. (1969) Channel capacity and the adjustment of streams to hydrological regime. *Journal of Hydrology*, 8, 82–98.
- Harvey, A.M. (1974) Gully erosion and sediment yield in the Howgill Fells, Westmorland. In *Fluvial Processes in Instrumented Watersheds* (eds K.J. Gregory and D.E. Walling), Institute of British Geographers Special Publication, 6, 45–58.
- Harvey, A.M. (1975) Some aspects of the relations between channel characteristics and riffle spacing in meandering streams. *American Journal of Science*, 275, 470–8.
- Harvey, A.M. (1977) Event frequency in sediment production and channel change. In *River Channel Changes* (ed. K.J. Gregory), John Wiley, Chichester, 301–15.
- Harvey, A.M. (1985a) The river systems of northwest England. In *The Geomorphology of North-West England* (ed. R.H. Johnson), University Press, Manchester, 122–42.
- Harvey, A.M. (1985b) Holocene and contemporary erosion and deposition in the Howgill Fells, Cumbria. In *Guide to Field Excursions in North-West England* (ed. A.M. Harvey),  
First International Conference on Geomorphology, British Geomorphological Research Group, Manchester, 25–30.
- Harvey, A.M. (1986) Geomorphic effects of a 100 year storm in the Howgill Fells, north-west England. *Zeitschrift für Geomorphologie*, 30, 71–91.
- Harvey, A.M. (1987a) Sediment supply to upland streams; influence in channel adjustment. In *Sediment Transport in Gravel Bed Rivers* (eds C.R. Thorne, J.C. Bathurst and R.D. Hey), John Wiley, Chichester, 121–50.
- Harvey, A.M. (1987b) Seasonality of processes on eroding gullies, a twelve year record of erosion rates. In *Processes et Mesure de L'erosion* (eds A. Goddard and A. Rapp), CNRS, Paris, 438–54.
- Harvey, A.M. (1989) Reading the landscape: A.M. Harvey looks at the interactions between slope and channel form in the Howgill Fells. *Geographical Magazine, Analysis*, GM Supplement, 19, 6–7.
- Harvey, A.M. (1991) The influence of sediment supply on the channel morphology of upland streams: Howgill Fells, Northwest England. *Earth Surface Processes and Landforms*, 16, 675–84.
- Harvey, A.M. (1992a) Process interactions, temporal scales and the development of hillslope gully systems: Howgill Fells, Northwest England. *Geomorphology*, 5, 323–44.
- Harvey, A.M. (1992b) Controls on sedimentary styles on alluvial fans. In *Dynamics of Gravel-bed Rivers*, (eds P. Billi, R.D. Hey, C.R. Thorne and P. Tacconi), John Wiley, Chichester, 519–35.
- Harvey, A.M. (1992c) The influence of sedimentary style on the morphology and development of alluvial fans. *Israel Journal of Earth Sciences*, 41, 123–37.
- Harvey, A.M. (1994) Influence of slope/stream coupling on process interaction on eroding gully slopes: Howgill Fells, Northwest England. In *Process Models and Theoretical Geomorphology* (ed. M.J. Kirkby), John Wiley, Chichester, 247–70.
- Harvey, A.M. (1996), Holocene hillslope gully systems in the Howgill Fells, Cumbria. In *Advances in Hillslope Processes, Volume 2* (eds M.G. Anderson and S.M. Brooks, (Wiley) Chichester, 731–52.

- Harvey, A.M. (1997), Coupling between hillslope gully systems and stream channels in the Howgill Fells, northwest England: temporal implications. *Geomorphologie: Relief processus, environment*, 1, 3–20.
- Harvey, A.M. and Calvo-Cases, A. (1991) Process interactions and rill development on badland and gully slopes. *Zeitschrift für Geomorphologie, Supplementband*, 83, 175–94.
- Harvey, A.M. and Renwick, W.H. (1987) Holocene alluvial fan and terrace formation in the Bowland Fells, northwest England. *Earth Surface Processes and Landforms*, 12, 249–57.
- Harvey, A.M., Alexander, R.W. and James, P.A. (1984) Lichens, soil development and the age of Holocene valley floor landforms, Howgill Fells, Cumbria. *Geografiska Annaler*, 66A, 353–66.
- Harvey, A.M., Hitchcock, D.H. and Hughes, D.J. (1979) Event frequency and morphological adjustment of fluvial systems in upland Britain. In *Adjustments of the Fluvial System* (eds D.D. Rhodes and G.P. Williams), Kendall-Hunt, Dubuque, Iowa, 139–67.
- Harvey, A.M., Oldfield, F., Baron, A.F. and Pearson, G.W. (1981) Dating of postglacial landforms in the central Howgills. *Earth Surface Processes and Landforms*, 6, 401–12.
- Haworth, E.Y. and Allen, P.V. (1982) Temporal changes in the composition of a postglacial diatom profile from Ullswater. *Seventh Diatom Symposium*, 431–42.
- Hay, T. (1926) Delta formation in the English Lakes. *Geological Magazine*, 63, 292–301.
- Heathwaite, A.L. (1993) Disappearing peat-regenerating peat? The impact of climatic change on British peatlands. *Geographical Journal*, 159 (2), 203–8.
- Hey, R.D. (1975) Design discharges for natural channels. In *Science Technology and Environmental Management* (eds R.D. Hey and T.D. Davies), Saxon House, Farnborough, 73–88.
- Hey, R.D. (1976) Impact prediction in the physical environment. In *Environmental Impact Assessment* (eds T. O'Riordan and R.D. Hey), Saxon House, Farnborough, 71–81.
- Hey, R.D. (1979) Flow resistance in gravel-bed rivers. *Journal of the Hydraulics Division, American Society of Civil Engineers*, 105, HY4, 365–79.
- Hey, R.D. (1980) Final report on channel stability. Craig Goch Joint Committee (unpublished report).
- Hey, R.D. (1986) River response to inter-basin water transfers; Craig Goch feasibility study. *Journal of Hydrology*, 85, 407–21.
- Hey, R.D., Heritage, G.L. and Patterson, M. (1994) Impact of flood alluviation schemes on aquatic macrophytes. *Regulated Rivers: Research and Management*, 9, 103–19.
- Hey, R.D., Lewin, J., Newson, M. and Wood, R. (1981) River management and process studies on the River Severn. In *Field Guide to Ancient and Modern Fluvial Systems in Britain and Spain* (ed. T. Elliot), International Fluvial Sediments Conference, University of Keele, 6.1–6.20.
- Hickin, E.J. (1969) A newly identified process of point bar formation in natural streams. *American Journal of Science*, 267, 999–1010.
- Higgs, G. (1987) Environmental change and flood hazard on the Upper River Severn. Unpublished PhD thesis, University of Wales, Aberystwyth.

- Higgs, G. and Petts, G.E. (1988) Hydrological changes and river regulation in the UK. *Regulated Rivers: Research and Management*, 2, 349–68.
- Hinxman, L.W. (1901) The River Spey. *Scottish Geographical Magazine*, 17, 185–93.
- Hitchcock, D.H. (1977a) Channel pattern changes in divided reaches: an example in the coarse bed material of the Forest of Bowland. In *River Channel Changes* (ed. K.J. Gregory), John Wiley, Chichester, pp. 206–20.
- Hitchcock, D.H. (1977b) Channel pattern changes in divided streams. Unpublished PhD thesis, University of Liverpool.
- HMSO (1885) *British Rainfall*, HMSO, London. Hoey, T.B. and Ferguson, R.I. (1994) Numerical simulation of downstream fining by selective transport in gravel-bed rivers: model development and illustration. *Water Resources Research*, 30, 2251–60.
- Hollingworth, S.E. (1929) Evolution of the Eden drainage in the south and west. *Proceedings of the Geologists' Association*, 40, 115–38.
- Hollingworth, S.E. (1931) The glaciation of western Edenside and adjoining areas, and the drumlins of Edenside and the Solway basin. *Quarterly Journal of the Geological Society of London*, 87, 281–359.
- Hooke, J.M. (1977) The distribution of changes in river channel patterns: the example of Devon. In *River Channel Changes* (ed. K.J. Gregory), John Wiley, Chichester, 265–80.
- Hooke, J.M. (1980) Magnitude and distribution of rates of river erosion. *Earth Surface Processes and Landforms*, 5, 143–57.
- Hooke, J.M. (1984a) Meander behaviour in relation to slope characteristics. In *River Meandering* (ed. C.M. Elliott), American Society of Civil Engineers, New York, 67–76.
- Hooke, J.M. (1984b) Changes in river meanders. *Progress in Physical Geography*, 8, 473–508. .
- Hooke, J.M. (1985) Meander evolution and change on the River Dane, Cheshire. In *Guide to Field Excursions in North-West England* (ed. A.M. Harvey). First International Conference on Geomorphology, British Geomorphological Research Group, Manchester, 69–72.
- Hooke, J.M. (1986) The significance of mid-channel bars in an active meandering river. *Sedimentology*, 33, 839–50.
- Hooke, J.M. (1987) Changes in meander morphology. *International Geomorphology 1986, Part I*, (ed. V. Gardiner), John Wiley, Chichester, 591–609.
- Hooke, J.M. (1995) Processes of channel planform change on meandering channels in the UK. In *Changing River Channels* (eds A.M. Gurnell and G.E. Petts), John Wiley, Chichester, 87–116.
- Hooke, J.M. (1996) River channel adjustment to meander cutoffs on the River Bollin and River Dane, northwest England. *Geomorphology*, 14, 235–53.
- Hooke, J.M. and Harvey, A.M. (1983) Meander changes in relation to bend morphology and secondary flows. In *Modern and Ancient Fluvial Systems* (eds J.D. Collinson and J. Lewin), International Association of Sedimentologists Special Publication, 6, Blackwell Scientific, Oxford, 121–32.
- Hooke, J.M. and Kain, P.J.P. (1982) *Historical Change in the Physical Environment*. Studies in physical geography. Butterworths Scientific, London, 236 pp.
- Hooke, J.M. and Redmond, C.E. (1992) Causes and nature of river planform change. In *Dynamics of Gravel Bed Rivers*, (eds P. Billi, R.D. Hey, C.R. Thorne and P. Tacconi), John Wiley, Chichester, pp. 549–63.

- Hooke, J.M., Harvey, A.M., Miller, S.Y. and Redmond, C.E. (1990) The chronology and stratigraphy of the alluvial terraces of the River Dane valley, Cheshire, N.W. England. *Earth Surface Processes and Landforms*, 15, 717–37.
- Hooke, J.M., Horton, B.P., Moore, J. and Taylor, M.P. (1994) *Upper River Severn (Caersws) channel study*. Report commissioned by the Countryside Council for Wales. University of Portsmouth, 158 pp.
- Hooper, I.D. (1992) Relationships between vegetation and hydrogeomorphic characteristics of British riverine environments: a remote sensed perspective. Unpublished PhD thesis, University of Southampton, 308 pp.
- Horne, J. (1923) *The Geology of the Lower Findhorn and Lower Strathnairn: Including Part of the Black Isle near Fortrose*. Memoirs of the Geological Survey of Scotland, HMSO, Edinburgh, 128 pp.
- Horne, J. and Hinxman, L.W. (1914) *The Geology of the Country Around Beauly and Inverness*. Memoirs of the Geological Survey of Scotland, HMSO, Edinburgh, 108pp.
- Howe, G.M. and Thomas, J. M. (1963) *Welsh Landforms and Scenery*, Macmillan, London.
- Howell, H.H., Geikie, A. and Young, J. (1866) *The Geology of East Lothian*. Memoirs of the Geological Survey of Great Britain.
- Howells, M.F., Francis, E.H., Leveridge, B.E. and Evans, C.D.R. (1978) *Capel Curig and Betws-y-Coed*. Description of 1:25, 000 Sheet SH 75, Classical Areas of British Geology, HMSO, London.
- Howson, J.S. (1898) *The River Dee, Its Aspect and History*. J.S. Virtue and Co., London.
- Huggett, R. (1989) *Cataclysms and Earth History. The Development of Diluvialism*, Clarendon Press, Oxford.
- Hughes, E. (1983) *River*, Poems by Ted Hughes, photographs by Peter Keen, Faber and Faber, London.
- Humphries, A.M. (1979) The Quaternary deposits of the upper Severn basin and adjoining areas. Unpublished PhD thesis, University of Wales, Aberystwyth.
- Hyett, G.A. (1990) The effect of accelerated throughflow on the water yield chemistry under polluted rainfall. Unpublished PhD thesis, University of Wales, Aberystwyth.
- IGCP (1983) Project 158. *Palaeohydrology of the Temperate Zone in the Last 15,000 Years*. Guide book for excursions in the Severn basin, UK Symposium, September 1983, Shrewsbury.
- Imeson, A.C. (1974) The origin of sediment in a moorland catchment with particular reference to the role of vegetation. In *Fluvial Processes in Instrumented Watersheds* (eds K.J. Gregory and D.E. Walling), Institute of British Geographers Special Publication, 6, 59–72.
- Inglis, D.J., McEwen, U. and MacLean, A.G. (1988) Channel stability and flooding in The River Spey. *Proceedings of the Symposium on Land Use on the River Spey*, Aberdeen Centre for Landuse, pp. 10–8.
- Innes, J. (1982) Debris Flow Activity in the Scottish Highlands. Unpublished PhD thesis, University of Cambridge.
- Innes, J. (1983) Lichenometric dating of debris flow deposits in the Scottish Highlands. *Earth Surface Processes and Landforms*, 8, 579–88.
- Innes, J.L. (1985) Magnitude-frequency relations of debris flows in north-west Europe, *Geografiska Annaler*, 67A, 23–32.
- Jackson, R.G. (1976) Depositional model of point bars on the Lower Wabash River. *Journal of Sedimentary Petrology*, 46, 579–94.



- Jamieson, T.F. (1863) On the Parallel Roads of Glen Roy, and their place in the history of the glacial period. *Quarterly Journal of the Geological Society of London*, 19, 235–59.
- Jamieson, T.F. (1892) Supplementary remarks on Glen Roy. *Quarterly Journal of the Geological Society of London*, 48, 5–28.
- Jennings, J.N. (1952) The origin of the Broadlands. *Royal Geographical Society Research Series No. 2*.
- Johnson, R.H. (1969) A reconnaissance survey of some river terraces in part of the Mersey and Weaver catchments. *Memoirs and Proceedings of the Manchester Literary and Philosophical Society*, 112, 1–35.
- Johnson, R.H. (ed.) (1985a) *The Geomorphology of North-West England*, University Press, Manchester.
- Johnson, R.H. (1985b) The impact of glaciation on the west Pennine uplands. In *The Geomorphology of North-West England* (ed. R.H. Johnson), University Press, Manchester, 237–262.
- Jones, J.A.A. (1971) Soil piping and stream channel initiation. *Water Resources Research*, 7, 602–10.
- Jones, J.A.A. (1975) Soil piping and the subsurface initiation of stream channel networks. Unpublished PhD thesis, University of Cambridge.
- Jones, J.A.A. (1978) Soil pipe networks: distribution and discharge. *Cambria*, 5 (1), 1–21
- Jones, J.A.A. (1979) Extending the Hewlett model of runoff generation. *Area*, 11, 110–4.
- Jones, J.A.A. (1981) *The Nature of Soil Piping — a Review of Research*, British Geomorphological Research Group Research Monograph No. 3, Geo-books, Norwich.
- Jones, J.A.A. (1982) Experimental studies of pipe hydrology. In *Badland Geomorphology and Piping* (eds R.B. Bryan and A. Yair), Geo-books, Norwich, 355–70.
- Jones, J.A.A. (1986) Some limitations to the a/s index for predicting basinwide patterns of soil water drainage. *Zeitschrift für Geomorphologie, Supplementband*, 60, 7–20.
- Jones, J.A.A. (1987a) The effects of soil piping on contributing areas and erosion patterns. *Earth Surface Processes and Landforms*, 12, 229–48.
- Jones, J.A.A. (1987b) The initiation of natural drainage networks. *Progress in Physical Geography*, 11, 207–45.
- Jones, J.A.A. (1988) Modelling pipeflow contributions to stream run off. *Hydrological Processes*, 2, 1–17.
- Jones, J.A.A. (1990) Piping effects in humid lands. In *Groundwater geomorphology: the role of subsurface water in earth-surface processes and landforms*, (eds C.G. Higgins and D.R. Coates), Geological Society of America, Boulder, Colorado, Special Paper 252, 111–38.
- Jones, J.A.A. (1994) Soil piping and its hydrogeomorphic function. *Cuaternario y Geomorfología*, 8 (3–4), 77–102.
- Jones, J.A.A. (1997a) Pipeflow contributing areas and runoff response. *Hydrological Processes*, 11 (1), 35–42.
- Jones, J.A.A. (1997b) Subsurface flow and subsurface erosion: further evidence on forms and controls. In *Process and Form in Geomorphology* (ed. D.R. Stoddart), Routledge, London, 74–120.
- Jones, J.A.A. and Crane, F.G. (1982) New evidence of rapid interflow contributions to the streamflow hydrograph. *Beiträge zur Hydrologie, Sonderheft 3*, 219–32.

- Jones, J.A.A. and Crane, F.G. (1984) Pipeflow and pipe erosion in the Maesnant experimental catchment. In *Catchment Experiments in Fluvial Geomorphology*, (eds T.P. Burt and D.E. Walling), Geobooks, Norwich, 55–72.
- Jones, J.A.A. and Hyett, G.A. (1987) *The Effect of Natural Soil Piping on Streamwater Quality in Upland Wales*. XIX General Assembly of the International Union of Geology and Geophysics, Vancouver. Abstracts Volume 3, p. 998.
- Jones, J.A.A., Richardson, J.M. and Jacob, H. (in press) Factors controlling the distribution of piping in Britain: a reconnaissance survey. *Geomorphology*, Special Edition on Piping Erosion, Elsevier.
- Jones, J.A.A., Wathern, P., Connolly, L.J. and Richardson, J.M. (1991) Modelling flow in natural soil pipes and its impact on plant ecology in mountain wetlands. In *Hydrological Basis of Ecologically Sound Management of Soil and Groundwater*, (ed. P. Nachtnebel) International Association of Hydrological Sciences, Publication No. 202, 131–42.
- Jones, M. (1949) The development of the Teifi drainage system. *Geography*, 34, 136–45.
- Jones, M.D. (1982) The palaeogeography and palaeohydrology of the River Severn, Shropshire, during the Late-Devensian glacial stage and the early Holocene. Unpublished MPhil. thesis, University of Reading.
- Jones, O.T. (1965) The glacial and post glacial history of the Lower Teifi valley. *Quarterly journal of the Geological Society of London*, 121, 247–81.
- Jones, O.T. and Pugh, W.J. (1935) The geology of the districts around Machynlleth and Aberystwyth. *Proceedings of the Geologists' Association*, 46, 247–300.
- Keller, E.A. (1971) Areal sorting of bed-load material: the hypothesis of velocity reversal. *Bulletin of the Geological Society of America*, 82, 753–6.
- Keller, E.A. (1976) Channelization: environmental, geomorphic and engineering aspects. In *Geomorphology and Engineering* (ed. D.R. Coates) George Allen and Unwin, London, pp. 115–40.
- Kellerhals, R., Church, M. and Bray, D.I. (1976) Classification and analysis of river processes. *Journal of the Hydrological Division, American Society of Civil Engineers*, 102 (HY7), 813–29.
- Kelly, J.L. (1976) Superficial deposits in the two abandoned meanders of the River Dee, near Llangollen. Unpublished dissertation, University of Wales, Aberystwyth.
- Kennedy, B.A. (1972) 'Bankfull' discharge and meander forms. *Area*, 4, 209–12.
- Kidson, C. (1953) The Exmoor storm and the Lynmouth floods. *Geography*, 38, 1–9.
- King, C.A.M. (1976) *The Geomorphology of the British Isles: Northern England*, Methuen, London, 213 pp.
- King, W.B.R. (1935) The upper Wensleydale River system. *Proceedings of the Yorkshire Geological Society*, 23, 10–24.
- Kirk, W., Rice, R.J. and Synge, F.M. (1966) Deglaciation and vertical displacement of shorelines in Wester and Easter Ross. *Transactions of the Institute of British Geographers*, 39, 65–78.
- Kirkaldy, J.F. (1950) Solution of the chalk in the Mimms Valley, Herts. *Proceedings of the Geologists' Association*, 61, 219–23.
- Kirkby, M.J. (1972) Alluvial and non-alluvial meanders. *Area*, 4, 284–8.
- Kirkby, M.J. (1978) Implications for sediment transport. In *Hillslope Hydrology* (ed. M.J. Kirkby), John Wiley, Chichester, 325–64.
- Knighton, A.D. (1972) Changes in a braided reach. *Bulletin of the Geological Society of America*, 83, 3813–22.

- Knowles, A. (1985) The Quaternary history of North Staffordshire. In *The Geomorphology of North-West England*, (ed. R.H. Johnson), University Press, Manchester, 222–36.
- Knox, J. (1987) Stratigraphic evidence of large floods in the upper Mississippi Valley. In *Catastrophic Flooding* (eds L. Mayer and D. Nash), Allen and Unwin, London, 155–80.
- Komar, P.D. (1987) Selective grain entrainment from a bed of mixed sizes: a re-analysis. *Journal of Sedimentary Petrology*, 57, 203–11.
- Lake, P. (1900) Bala lake and the river systems of North Wales. *Geological Magazine*, 7, 141, 204–15 and 241–5.
- Lamb, H.H. and Frydendahl, K. (1991) *Historic Storms of the North Sea, British Isles and Northwest Europe*, Cambridge University Press, Cambridge.
- Lambert, C.P. and Walling, D.E. (1987) Floodplain sedimentation: a preliminary investigation of contemporary deposition within the lower reaches of the River Culm, Devon, U.K. *Geografiska Annaler*, 69A (3–4), 393–404.
- Lambert, J.H., Jennings, J.N., Smith, C.T., Green, C. and Hutchinson, J.N. (1970) The making of the Broad: a reconsideration of their origin in the light of new evidence. *Royal Geographical Society Research Series No.3*.
- Langbein, W.B. (1964) Geometry of river channels. *Journal of the Hydraulics Division, American Society of Civil Engineers*, 90, 301–12.
- Lapworth, (1898) Long excursion to the Birmingham District. *Proceedings of the Geological Association*, 15, 417–28
- Lauder, T.D. (1830) *An Account of the Great Floods of August, 1829 in the Province of Moray and Adjoining District*, Adam Black, Edinburgh.
- Lawler, D.M. and Leeks, G.L.J. (1992) River bank erosion in the Upper Severn detected by the Photo-Electronic Erosion Pin (PEEP) system. In *Erosion and Sediment Transport Monitoring Programmes in River Basins*, Proceedings of the Oslo Symposium, August 1992, IAHS Publication 210, 95–105.
- Laxton, J.L. and Nickless, E.F.P. (1980) *The Sand and Gravel Resources of the Country Around Lanark, Strathclyde Region*. Description of 1:25,000 sheet NS 94 and part of NS 84, Mineral Assessment Report, Institute of Geological Sciences, No. 49, 144 pp.
- Lear, D.L. (1986) The Quaternary deposits of the lower Teifi Valley. Unpublished PhD thesis, University of Wales, Aberystwyth.
- Learmonth, A.T.A. (1950) The floods of 12th August 1948 in S.E. Scotland. *Scottish Geographical Magazine*, 66, 147–53.
- Leeks, G.J.L. (1983) Development of field techniques for assessment of river erosion and deposition in mid-Wales. In *Catchment Experiments in Fluvial Geomorphology* (eds T.P. Burt and D.E. Walling), Geo-books, Norwich, 299–309.
- Leeks, G.J.L. (1986) Fluvial sediment responses to high water discharge from a regulating reservoir–The effects of the 5 March 1985 test release from Llyn Clywedog on the upper Severn. Report to Severn-Trent Water Authority.
- Leeks, G.J., Lewin, J. and Newson, M.D. (1988) Channel change, fluvial geomorphology and river engineering: the case of the Afon Trannon, mid-Wales. *Earth Surface Processes and Landforms*, 13, 207–23.
- Leopold, L.B. (1962) The vigil network. *Bulletin of the International Association of Scientific Hydrology*, 7, 6–9.
- Leopold, L.B. (1969) Quantitative comparison of some esthetic factors among rivers. *U.S. Geological Survey Circular*, 620, 16pp.

- Leopold, L.B. and Wolman, M.G. (1957) River channel patterns — braided, meandering and straight. *United States Geological Survey Professional Paper*, 282-B.
- Leopold, L.B. and Wolman, M.G. (1960) River meanders. *Bulletin of the Geological Society of America*, 71, 764–9.
- Lewin, J. (1976) Initiation of bedforms and meanders in coarse grained sediment. *Bulletin of the Geological Society of America*, 87, 281–5.
- Lewin, J. (1980) Available and appropriate timescales in geomorphology. In *Timescales in Geomorphology* (eds R.A. Cullingford, D.A. Davidson and J. Lewin), John Wiley, Chichester, 3–10.
- Lewin, J. (ed.) (1981a) *British Rivers*, George Allen and Unwin, London, 216pp.
- Lewin, J. (1981b) Contemporary erosion and sedimentation. In *British Rivers* (ed. J. Lewin), George Allen and Unwin, London, 34–58.
- Lewin, J. (1983) Changes of channel patterns and floodplains. In *Background to Palaeohydrology* (ed. K.J. Gregory), John Wiley, Chichester, 303–20.
- Lewin, J. (1987) Historical river channel changes. In *Palaeohydrology in Practice* (eds K.J. Gregory, J. Lewin and J.B. Thornes), John Wiley, Chichester, 161–75.
- Lewin, J. (1992) Alluvial sedimentation style and archaeological sites: the lower Vyrnwy, Wales. In *Alluvial Archaeology in Britain* (eds S. Needham and M.G. Macklin), Oxbow Monograph 27, Oxbow Press, Oxford, 103–9.
- Lewin, J. and Brindle, B. (1977) Confined meanders. In *River Channel Changes* (ed. K.J. Gregory), John Wiley, Chichester, 221–33.
- Lewin, J. and Hughes, D. (1976) Assessing channel change on Welsh rivers. *Cambria*, 3, 3–10.
- Lewin, J. and Hughes, D. (1980) Welsh floodplain studies. II. Application of a qualitative inundation model. *Journal of Hydrology*, 46, 35–49.
- Lewin, J. and Macklin, M.G. (1987) Metal mining and floodplain sedimentation in Britain. In *International Geomorphology 1986* (ed. V. Gardiner), Part 1. John Wiley, Chichester, 1009–27.
- Lewin, J. and Manton, M.H.M. (1975) Welsh flood-plain studies — the nature of floodplain geometry. *Journal of Hydrology*, 25, 37–50.
- Lewin, J. and Weir, M.J.C. (1977) Morphology and recent history on the lower Spey. *Scottish Geographical Magazine*, 93, 45–51.
- Lewin, J., Bradley, S.B. and Macklin, M.G. (1983) Historical valley alluviation in mid-Wales. *Geological Journal*, 18, 331–50.
- Lewin, J., Cryer, R. and Harrison, D.I. (1974) Sources of sediments and solutes in mid-Wales. In *Fluvial Processes in Instrumented Watersheds* (eds K.J. Gregory and D.E. Walling), British Geomorphological Research Group Special Publication 6, 73–85.
- Lewin, J., Davies, B.E. and Wolfenden, P. (1977) Interactions between channel change and historic mining sediment. In *River Channel Changes* (ed. K.J. Gregory), John Wiley, Chichester, 355–367.
- Lewis, G.W. (1982) The geomorphology of alluvial cutoffs: geometry, processes, development rates and sedimentation. Unpublished PhD thesis, University of Aberystwyth.

- Lewis, G.W. and Lewin, J. (1983) Alluvial cutoffs in Wales and the borderlands. In *Ancient and Modern Fluvial Systems* (eds J.D. Collinson and J. Lewin). Special Publication of the International Association of Sedimentologists, 6, 145–54.
- Lewis, G. and Williams, G. (1984) *Rivers and Wildlife Handbook*. RSPB, Sandy, Bedfordshire.
- Liestol, O. (1956) Glacier dammed lakes in Norway. *Norsk Geografisk Tidsskrift*, 15, 122–49.
- Linton, D.L. (1949) Some Scottish river captures re-examined. *Scottish Geographical Magazine*, 65, 123–32.
- Linton, D.L. (1951) Watershed breaching by ice in Scotland, *Transactions of the Institute of British Geographers*, 15, 1–15.
- Linton, D.L. (1963) The forms of glacial erosion. *Transactions of the Institute of British Geographers*, 33, 1–28.
- Lisle, T.F. (1987) Overview: channel morphology and sediment transport in streams. *International Association of Hydrological Sciences Publication* No. 165.
- Longworth, D. (1985) The Quaternary history of the Lancashire Plain. In *The Geomorphology of North-West England*, (ed. R.H. Johnson), University Press, Manchester, 178–200.
- Lowe, J.J. and Cairns, P. (1989) Palynological investigations: biostratigraphy. In *Glen Roy Area: Field Guide* (eds J.D. Peacock and R. Cornish). Quaternary Research Association, Cambridge, 10–11.
- Lowe, J.J. and Cairns, P. (1991) New Pollen–stratigraphic evidence for the deglaciation and lake drainage chronology of the Glen Roy–Glen Spean area. *Scottish Journal of Geology*, 27, 41–56.
- Lowe, J.J. and Walker, M.J.C. (1980) Problems associated with radiocarbon dating the close of the Lateglacial period in the Rannoch Moor area, Scotland. In *Studies in the Lateglacial of North West Europe* (eds J.J. Lowe, J.M. Gray and J.E. Robinson), Pergamon, Oxford, 123–38.
- Lyell, C. (1834) *Principles of Geology, Being an Inquiry How Far the Former Changes of the Earth's surface are Referable to Causes Now in Operation* (3rd edn), 4 volumes, John Murray, London.
- Macklin, M.G. (1986) Channel and floodplain metamorphosis in the River Nent, Cumberland. In *Quaternary River Landforms and Sediments in the Northern Pennines, England* (eds M.G. Macklin and J. Rose), Quaternary Research Association, Cambridge, 19–33.
- Macklin, M.G. (1992) Metal contaminated soils and sediment: a geographical perspective. In *Managing the Human Impact on the Natural Environment: Patterns and Processes* (ed. M.D. Newson), Belhaven Press, London, 172–95.
- Macklin, M.G. (1996) Fluxes and storage of sediment-associated heavy metals in floodplain systems: assessment and river basin management issues at a time of rapid environmental change. In *Floodplain Processes* (eds M.G. Anderson, D.E. Walling and P.D. Bates), John Wiley, Chichester, 441–60..
- Macklin, M.G. and Aspinall, R.J. (1986) Historic floodplain sedimentation in the River West Allen, Northumberland: a case study of channel change in an upland, gravel-bed river in the northern Pennines. In *Quaternary River Landforms and Sediments in the Northern Pennines, England* (eds M.G. Macklin and J. Rose), Quaternary Research Association, Cambridge, 7–17.
- Macklin, M.G. and Dowsett, R.B. (1989) The chemical and physical speciation of trace metals in fine grained overbank flood sediments in the Tyne basin, north-east England. *Catena*, 16, 135–51.
- Macklin, M.G. and Lewin, J. (1986) Terraced fills of Pleistocene and Holocene age in the Rheidol valley, Wales. *Journal of Quaternary Science*, 1, 24–34.

Macklin, M.G. and Lewin, J. (1989) Sediment transfer and transformation of an alluvial valley floor: the River South Tyne, Northumbria, U.K. *Earth Surface Processes and Landforms*, 14, 233–46.

Macklin, M.G. and Lewin, J. (1994) Holocene river alluviation in Britain. *Zeitschrift für Geomorphologie, Supplementband*, 88, 109–22.

Macklin, M.G. and Smith, R.S. (1990) Historic riparian vegetation development and alluvial metallophyte plant communities in the Tyne basin, north-east England, U.K. In *Vegetation and Erosion* (ed. J.B. Thornes), John Wiley, Chichester, 239–56.

Macklin, M.G. and Needham, S. (1992) Studies in British alluvial archaeology: potential and prospect. In *Alluvial Archaeology in Britain*, (eds S. Needham and M.G. Macklin), Oxbow Monograph 27, Oxbow Press, Oxford, 9–23.

Macklin, M.G., Passmore, D.G. and Newson, M.D. (in press) Controls of short and long term river instability: processes and patterns in gravel-bed rivers, the Tyne basin, northern England. In *Gravel-Bed Rivers in the Environment*, John Wiley, Chichester.

Macklin, M.G., Passmore, D.G. and Rumsby, B.T. (1992a) Climatic and cultural signals in Holocene alluvial sequences: the Tyne basin, northern England. In *Alluvial Archaeology in Britain* (eds S. Needham and M.G. Macklin), Oxbow Monograph 27, Oxbow Press, Oxford, 123–39.

Macklin, M.G., Passmore, D.G., Stevenson, A.C., Cowley, D.C., O'Brien, C.F. and Edwards, D. (1991) Holocene alluviation and land-use change on Callaly Moor, Northumberland. *Journal of Quaternary Science*, 6 (3), 225–32.

Macklin, M.G., Ridgway, J., Passmore, D.G. and Rumsby, B.T. (1994a) The use of overbank sediment for geochemical mapping and contamination assessment: results from selected English and Welsh floodplains. *Applied Geochemistry*, 9, 689–700.

Macklin, M.G., Rumsby, B.T. and Heap, T. (1992b) Flood alluviation and entrenchment: Holocene valley floor development and transformation in the British uplands. *Bulletin of the Geological Society of America*, 104, 631–43.

Macklin, M.G., Rumsby, B.T. and Newson, M.D. (1992c) Historic overbank floods and vertical accretion of fine-grained alluvium in lower Tyne valley, north east England. In *Dynamics of Gravel-Bed Rivers* (eds P. Billi, R.D. Hey, C.R. Thorne and P. Tacconi), John Wiley, Chichester, pp. 573–89.

Macklin, M.G., Rumsby, B.T., Heap, T. and Passmore, D.G. (1994b) Thinhope Burn, Northumberland. In *The Quaternary of Cumbria: Field Guide* (eds J. Boardman and J. Walden), Quaternary Research Association, Oxford, 50–7.

Maizels, J.K. (1976) A comparison of Pleistocene and present-day proglacial environments with particular reference to morphology and sedimentology. Unpublished PhD thesis, University of London.

Maizels, J.K. (1983a) Channel changes, palaeohydrology and deglaciation: evidence from some late glacial sandur deposits of northeast Scotland. *Quaternary Studies in Poland*, 4, 171–87.

Maizels, J.K. (1983b) Proglacial channel systems: change and thresholds for change over long, intermediate and short time-scales. In *Modern and Ancient Fluvial Systems* (eds J.D. Collinson and J. Lewin), International Association of Sedimentologists Special Publication, 6, 251–66.

Maizels, J.K. (1983c) Palaeovelocity and palaeodischarge determination for coarse gravel deposits. In *Background to Palaeohydrology* (ed. K.J. Gregory), John Wiley, Chichester, pp. 101–39.

Maizels, J.K. (1985) The physical background of the River Dee. In *The Biology and Management of the River Dee* (ed. D. Jenkins), Institute of Terrestrial Ecology, Huntingdon, 7–22.

Maizels, J.K. (1986) Modelling of palaeohydrologic change during deglaciation. *Geographie Physique et Quaternaire*, 40, 263–77.

Maizels, J.K. (1988) Sediment size and channel changes in braided and meandering gravel-bed streams, upper Deeside, Scotland. In *International Conference on River Regime* (ed. W.R. White), Hydraulics Research Limited, John Wiley, Chichester, 215–30.

Maizels, J.K. and Aitken, J.F. (1991) Palaeohydrological change during deglaciation in upland Britain: case study from northeast Scotland. In *Temperate Palaeohydrology* (eds L. Starkel, K.J. Gregory and J.B. Thornes), John Wiley, Chichester, 105–45.

Malkin, B. (1907) *The Scenery, Antiquities and Biography of South Wales*, Longman, London.

Marr, J.E. and Fearnside, W.G. (1909) The Howgill Fells and their topography. *Quarterly Journal of the Geological Society of London*, 65, 587–610.

Marshall, W.A.L. (1952) The Lynmouth floods. *Weather*, 7, 338–67.

Mathews, W.H. (1973) Record of two jökulhlaups. *International Association for Scientific Hydrology Publication*, No. 95, 99–110.

Matthews, J.A., Dawson, A.G. and Shakesby R.A. (1986) Lake shoreline development, frost weathering and rock platform erosion in an alpine periglacial environment, Jotunheimen, southern Norway. *Boreas*, 15, 33–50.

May, J. (1981) The Glaciation and Deglaciation of Upper Nithsdale and Annandale. Unpublished PhD thesis, University of Glasgow.

McCaig, M. (1983) Contributions to storm quickflow in a small headwater catchment —the role of natural pipes and soil macropores. *Earth Surface Processes and Landforms*, 8 (3), 239–52.

McEwen, L.J. (1981) An assessment of the geomorphic significance of the flash flood, occurring on 4th August 1978 on the Allt Mor, Glenmore, Inverness-shire. Unpublished MA dissertation, Department of Geography, University of St Andrews.

McEwen, L.J. (1986) River channel planform changes in upland Scotland with specific reference to climatic fluctuations and landuse changes over the last 250 years. Unpublished PhD thesis, University of St Andrews.

McEwen, L.J. (1987) The use of long term rainfall records for augmenting historical flood series: a case study on the upper Dee, Aberdeenshire, Scotland. *Transactions of the Royal Society of Edinburgh*, 78, 275–85.

McEwen, L.J. (1989a) River channel changes in response to flooding in the upper River Dee catchment, Aberdeenshire, over the last 200 years. In *Floods: Hydrological, Sedimentological and Geomorphological Implications* (eds K. Beven and P. Carling), John Wiley, Chichester, 219–38.

McEwen, L.J. (1989b) Extreme rainfall and its implications for flood frequency: a case-study of the middle River Tweed basin, Scotland. *Transactions of the Institute of British Geographers*, 14 (3), 287–98.

McEwen, L.J. (1990) The establishment of a historical flood chronology for the River Tweed catchment, Berwickshire, Scotland. *Scottish Geographical Magazine*, 106 (1), 37–48.

McEwen, L.J. (1994a) Site assessment criteria for the conservation of fluvial systems: the Scottish experience. In *Conserving our Landscape* (eds C. Stevens, J.E. Gordon, C.P. Green and M.G. Macklin). Proceedings of the Conference 'Conserving our Landscape: Evolving Landforms and Ice-Age Heritage', Crewe, May 1992, English Nature, Peterborough, 131–6.

- McEwen, L.J. (1994b) Channel planform adjustment and stream power variations on the middle River Coe, Western Grampian Highlands, Scotland. *Catena*, 21, 357–74.
- McEwen, U. and Werritty, A. (1988) The hydrology and long-term geomorphic significance of a flash flood in the Cairngorm Mountains, Scotland. *Catena*, 15, 361–77.
- McManus, J. and Duck, R.W. (1988) Scottish freshwater lochs and reservoirs: a physical perspective. *Scottish Geographical Magazine*, 104, 97–107.
- McLellan, A.G. (1969) The last glaciation of central Lanarkshire, *Scottish Journal of Geology*, 5, 248–68.
- Meigh, J.R. (1987) Transport of bed material in a gravel-bed river. Unpublished PhD thesis, University of East Anglia, 272pp.
- Miall, A.D. (1978) Lithofacies types and vertical profile models in braided river deposits: a summary. In *Fluvial Sedimentology* (ed. A.D. Miall). *Memoirs of the Canadian Society of Petroleum Geologists*, 5, 597–604.
- Miall, A.D. (1985) Architectural-element analysis: a new method of facies analysis applied to fluvial deposits. *Earth Science Reviews*, 22, 261–308.
- Miller, A.A. (1935) The entrenched meanders of the Herefordshire Wye. *Geological Journal*, 85, 160–78.
- Miller, A.A. (1937) Entrenched meanders of the Herefordshire Wye. *Geological Journal*, 90, 1148.
- Miller, H. (1887) The Black Rock of Novar. *Transactions of the Inverness Scientific Society*, 3, 308.
- Miller, M. (1987) Laminated sediments in Glen Roy, Inverness-shire. Unpublished MSc thesis, City of London Polytechnic.
- Miller S.Y. (1991) Soil chronosequences and fluvial landform development: studies in SE Spain and NW England. PhD thesis, University of Liverpool.
- Millward, R. and Robinson, A. (1978) *Aspects of the North Wales Landscape*. David and Charles, Newton Abbot.
- Milne, J.A. (1982) River channel change in Harthope valley, Northumberland, since 1897. *Department of Geography, University of Newcastle upon Tyne, Research Series*, 13.
- Mosley, M.P. (1972) Gully systems in blanket peat, Bleaklow, north Derbyshire. *East Midland Geographer*, 5 (5), 235–44.
- Mosley, M.P. (1975a) Channel changes on the River Bollin, Cheshire, 1872–1973. *East Midland Geographer*, 6, 189–99.
- Mosley, M.P. (1975b) Meander cut-offs on the River Bollin, Cheshire, in June 1973. *Revue de Géomorphologie Dynamique*, 24, 21–31.
- Moss, C.E. (1913) *Vegetation of the Peak District*, Cambridge.
- Murray, J. and Pullar, L. (1910) *Bathymetrical Survey of the Scottish Freshwater Lochs*, 6 volumes, Challenger Office, Edinburgh.
- Musk, L.F. (1985) Glacial and Post-Glacial climatic conditions in North-west England. In *The Geomorphology of North-west England*, (ed. R.H. Johnson), University Press, Manchester, 59–79.
- Nairne, D. (1895) *Memorable Floods in the Highlands During the 19th Century with Some Accounts of the Great Frost of 1895*, Northern Counties Printing and Publishing Company Limited, Inverness.



- Nanson, G. and Page, K. (1983) Lateral accretion of fine-grained concave benches on meandering rivers. In *Modern and Ancient Fluvial Systems* (eds J.D. Collinson and J. Lewin), International Association of Sedimentologists Special Publication, Blackwell Scientific, London, 6, 133–43.
- Nanson, G.C. and Young, R.W. (1981) Downstream reduction of river channel size with contrasting urban effects in small coastal streams of southeastern Australia. *Journal of Hydrology*, 52, 239–55.
- National Museum of Wales (1979) *Brecon Beacons National Park Scenery — a Geological Interpretation*, National Museum of Wales, Cardiff.
- Natural Environment Research Council (NERC) (1975) *Flood Studies Report*, HMSO, London, volume 2.
- Nature Conservancy Council (NCC) (1968) *Cors Tregaron National Nature Reserve*, Nature Conservancy Council, London.
- Newson, M.D. (1980) The erosion of drainage ditches and its effects on bed-load yields in Mid Wales: reconnaissance case studies. *Earth Surface Processes*, 5, 275–90.
- Newson, M.D. (1981) Mountain streams. In *British Rivers* (ed. J. Lewin), George Allen and Unwin, London, 59–89.
- Newson, M.D. (1987) River basin engineering —fluvial geomorphology. *Journal of the Institution of Water Engineers and Scientists*, 40, pp. 307–24.
- Newson, M.D. (1989) Flood effectiveness in river basins: progress in Britain during a decade of drought. In *Floods: Hydrological, Sedimentological and Geomorphological Implications* (eds K. Beven and P. Carling), John Wiley, Chichester, 151–69.
- Newson, M.D. (1992) Geomorphic thresholds in gravel-bed rivers — refinement for an era of environmental change. In *Dynamics of Gravel-Bed Rivers*, (eds P. Billi, R.D. Hey, C.R. Thorne and P. Tacconi), John Wiley, Chichester, pp. 3–20.
- Newson, M.D. and Leeks, G.J.L. (1985) Mountain bedload yields in the United Kingdom. Further information from undisturbed fluvial environments. *Earth Surface Processes and Landforms*, 10, 412–6.
- Newson, M.D. and Leeks, G.J.L. (1987) Transport processes at a catchment scale: a regional study of increasing sediment yield and its effects in mid-Wales, U.K. In *Sediment Transport in Gravel Bed Rivers* (eds C.R. Thorne, J.C. Bathurst and R.D. Hey), John Wiley, Chichester, 187–218.
- Newson, M.D. and Macklin, M.G. (1990) The geomorphologically-effective flood and vertical instability in river channels — a feedback mechanism in the flood series for gravel-bed rivers. In *International Conference on River Flood Hydraulics* (ed. W.R. White), John Wiley, Chichester, 123–40.
- Nicholas, A.P. and Walling, D.E. (1995) Modelling contemporary overbank sedimentation on floodplains: some preliminary results. In *River Geomorphology* (ed. E.J. Hickin), John Wiley, Chichester, 131–53.
- Nicholas, A.P., Ashworth, P.J., Kirkby, M.J., Macklin, M.G. and Murray, T. (1995) Sediment slugs: large-scale fluctuations in fluvial transport rates and storage volumes. *Progress in Physical Geography*, 19, 500–19.
- North, F.J. (1930) *The Evolution of the Bristol Channel*. National Museum of Wales, Cardiff, 103pp.
- North, F.J. (1955) The geological history of Brecknock. *Brycheiniog*, 1, 9–77.
- North, F.J. (1962) *The River Scenery at the Head of the Vale of Neath*, National Museum of Wales, Cardiff.
- Oldfield, F. (1963) Pollen analysis and Man's role in the ecological history of the south-east Lake District. *Geografiska Annaler*, 45, 23–40.

- Ovenden, J.C. and Gregory, K.J. (1980) The permanence of stream networks in Britain. *Earth Surface Processes*, 5, 47–60.
- Palmer, J. (1956) Tor formation at the Bridestones in north east Yorkshire and its significance in relation to valley side development and regional glaciation. *Transactions of the Institute of British Geographers*, 22, 55–71.
- Palmer, W.J. (1882) *The Tyne and its Tributaries*. George Bell, London.
- Passmore, D.G. (1994) River response to Holocene environmental change: the Tyne basin, northern England. Unpublished PhD thesis, University of Newcastle upon Tyne.
- Passmore, D.G. and Macklin, M.G. (1994) Provenance of fine-grained alluvium and late Holocene land-use change in the Tyne basin, northern England. *Geomorphology*, 9, 127–42.
- Passmore, D.G., Macklin, M.G., Brewer, P.A., Lewin, J., Rumsby, B.T. and Newson, M.D. (1993) Variability of late Holocene braiding in Britain. In *Braided Rivers* (eds J.L. Best and C.S. Bristow), Geological Society Special Publication 75, London, 205–29.
- Passmore, D.G., Macklin, M.G., Stevenson, A.C., O'Brien, C.F. and Davies, B.A.S. (1992) A Holocene alluvial sequence in the lower Tyne valley, northern Britain. *The Holocene*, 2 (2), 138–47.
- Peach, B.N., Gunn, W., Clough, C.T., Hinxman, L.W., Crampton, C.B. and Anderson, E.M. (1912) *The Geology of Ben Wyvis, Cam Chuinneag, Inchbae and the Surrounding Country, including Garve, Evanton, Alness and Kincardine*. Memoirs of the Geological Survey of Scotland, HMSO, Edinburgh, 189pp.
- Peach, B.N., Horne, J., Gunn, W., Clough, C.T. and Greenly, E. (1913a) *The Geology of the Fannich Mountains and the Country around Upper Loch Maree and Strath Broom*. Memoirs of the Geological Survey of Scotland, HMSO, Edinburgh, 127pp.
- Peach, B.N., Horne, J., Hinxman, L.W., Crampton, C.B., Anderson, E.M. and Carruthers, R.G. (1913b) *The Geology of Central Ross-shire*. Explanation of Sheet 82. Memoirs of the Geological Survey of Scotland, HMSO, Edinburgh, 114pp.
- Peacock, J.D. (1970) Glacial Geology of the Lochy–Spean area. *Bulletin of the Geological Survey of Great Britain*, 33, 43–56.
- Peacock, J.D. (1986) Alluvial fans and an outwash fan in upper Glen Roy, Lochaber. *Scottish Journal of Geology*, 22, 347–66.
- Peacock, J.D. (1989) Survey of Quaternary land-forms and deposits of Glen Roy, Glen Gloy and Glen Spean, Lochaber District, and recommendations for conservation. Nature Conservancy Council, Peterborough, CSD Report, No. 923, 59 pp.
- Peacock, J.D. and Cornish, R. (1989) *Field Guide to the Glen Roy Area*, Quaternary Research Association, Cambridge, 69 pp.
- Penn, I.E. (1987) Geophysical logs in the stratigraphy of Wales and adjacent offshore and onshore areas. *Proceedings of the Geologists' Association*, 98, 275–314.
- Pennington, W. (1970) Vegetational history in the north-west of England. A regional synthesis. In *Studies in the Vegetational History of the British Isles* (eds D. Walker and R.G. West), Cambridge University Press, Cambridge, 41–79.
- Perrault, P. (1674) *De l'Origine des Fontaines*, Paris, Trans. A. LaRocque, Hafner, New York, 1967.
- Petts, G.E. (1977) Channel response to flow regulation. In *River Channel Changes* (ed. K.J. Gregory), John Wiley, Chichester, 145–64.

- Petts, G.E. (1988a) Accumulations of fine sediment within substrate gravels along two regulated rivers, U.K. *Regulated Rivers: Research and Management*, 2, 141–53.
- Pens, G.E. (1988b) The regulation of the Derbyshire Derwent. *East Midland Geographer*, 10 (2), 54–63.
- Petts, G. and Foster, I. (1985) *Rivers and Landscape*. Edward Arnold, London, 274 pp.
- Pocock, T.I. (1938) Glacial deposits between North Wales and the Pennine range. *Zeit Gletscherk, Eiszeitforsch. Gesch. Klimas*. 26, 52–69.
- Pocock, R.W., Whitehead, T.H., Wedd, C.B. and Robertson, T. (1938) Shrewsbury District including the Hanwood Coalfield. *Memoirs of the Geological Surevy of Great Britain*, sheet 152.
- Poole, E.G. and Whiteman, A.J. (1961) The Shropshire–Cheshire basin. *Quarterly Journal of the Geological Society of London*, 117, 91–130.
- Price, A. (1977) Quaternary deposits between Llanllioni and Pentreawart, middle Teifi valley, Dyfed. Unpublished MSc thesis, University of Wales, Aberystwyth.
- Probst, J.L. (1989) Hydroclimatic fluctuations of some European rivers since 1800. In *Historic changes of large alluvial rivers: Western Europe* (eds G.E. Petts, H. Moller and A.L. Roux), John Wiley, Chichester, 41–55.
- Pugh, J.C. (undated) Provisional checklist of sites of geomorphological interest. Unpublished manuscript, Kings College, London.
- Radley, J. (1962) Peat erosion on the high moors of Derbyshire and West Yorkshire. *East Midland Geographer*, 3, 40–50.
- Raistrick, A. (1926) Glaciation of Wensleydale, Swaledale and adjoining parts of the Pennines, *Proceedings of the Yorkshore Geological Society*, 20, 366–411.
- Raistrick, A. and Jennings, B. (1965) *A History of Lead Mining in the Pennines*. Longmans, London.
- Ramsay, A.C. (1876) On the physical history of the Dee, Wales. *Quarterly Journal of the Geological Society of London*, 32, 219–29.
- Read, H.H., Phemister, J. and Ross, G. (1926) *The Geology of Strath Oyckell and Lower Loch Shin*, Memoirs of the Geological Survey of Scotland, HMSO, Edinburgh.
- Richards, A.J., Lefebvre, C., Macklin, M.G., Nicholson, A. and Vekemans, X. (1989) The population genetics of *Ameria maritima* (mill) willd, on the River South Tyne, U.K. *New Phytologist*, 112, 281–93.
- Richards, K.S. (1972) Meanders and valley slope. *Area*, 4, 288–90.
- Richards, K.S. (1981) Evidence of Flandrian valley alluviation in Staindale, North York Moors. *Earth Surface Processes and Landforms*, 6, 183–6.
- Richards, K.S. (1982) *Rivers: Form and Process in Alluvial Channels*, Cambridge University Press, Cambridge, 358pp.
- Richards, K.S. and Wood, R. (1977) Urbanisation, water redistribution and their effect on channel processes. In *River Channel Changes* (ed. K.J. Gregory), John Wiley, Chichester, 369–88.
- Richards, K.S., Peters, N.R., Robertson-Rintoul, M.S.E. and Switsur, V.R. (1986) Recent valley sediments in the North York Moors, evidence and interpretation. In *International Geomorphology 1986 Part 1* (ed. V. Gardiner), John Wiley, Chichester, 869–83.

- Richardson, J.M. (1992) Catchment characteristics and the distribution of natural soil piping. Unpublished MPhil dissertation, University of Wales, Aberystwyth, 276 pp.
- Richardson, L. (1929) *The Country Around Moreton-in-Marsh*, Memoirs of the Geological Survey of Great Britain.
- Ringrose, P.S. (1987a) Investigations into the Aukhorn peat mounds, Keiss, Caithness: pollen, plant macrofossil and charcoal analyses. *New Phytologist*, 106, 185–200.
- Ringrose, P.S. (1987b) Fault activity and palaeoseismicity during Quaternary time in Scotland. Unpublished PhD thesis, University of Strathclyde.
- Ringrose, P.S. (1989) Evidence for palaeoseismicity: evidence from lake sediments. In *Glen Roy Area: Field Guide* (eds J.D. Peacock and R. Cornish), Quaternary Research Association, Cambridge, 8–9.
- Roberts, B.K., Turner, J. and Ward, P.F. (1973) Recent forest history and land use in Weardale, northern England. In *Quaternary Plant Ecology* (eds H.J.B. Birks and R.G. West), Blackwell, Oxford, 207–21.
- Roberts, G. (in press) *Progress Report to the Department of the Environment on the Effects of Afforestation on Water Quality*, Institute of Hydrology, Wallingford.
- Roberts, K. (1989) *Mimmshall Brook: Geomorphological and Hydrological Investigation*, Report to Thames Region, National Rivers Authority, 42pp.
- Robertson-Rintoul, M.S.E. (1986a) River planform, soil stratigraphy and the temporal and palaeoenvironmental significance of terraced valley fill deposits in upland Scotland. Unpublished PhD thesis, University of Hull.
- Robertson-Rintoul, M.S.E. (1986b) A quantitative soil–stratigraphic approach to the correlation and dating of post-glacial river terraces in Glen Feshie, Western Cairngorms. *Earth Surface Processes and Landforms*, 11, 605–17.
- Robinson, M.A. and Lambrick, G.H. (1984) Holocene alluviation and hydrology in the upper Thames basin. *Nature*, 306, 809–14.
- Rodda, J.C. (1970) Rainfall excesses in the United Kingdom. *Transactions of the Institute of British Geographers*, 49, 49–59.
- Rodda, J.C., Downing, R.A. and Law, J.F.M. (1976) *Systematic Hydrology*, Newnes–Butterworth, London.
- Ross, G. (1927) The superficial deposits in the Clyde Valley at Bonnington, 12 miles south of Lanark. Geological Survey of Great Britain. *Summary of Progress of the Geological Survey of Great Britain and the Museum of Geology for the Year of 1926*, HMSO, London, 158–60.
- RSPB, NRA and RSNC (1994) *The New Rivers and Wildlife Handbook*, RSPB, Sandy, 426 pp.
- Rudeforth, C.C. (1970) *Soils of North Cardiganshire*, Memoirs of the Soil Survey of Great Britain.
- Rumsby, B.T. (1991) Flood frequency and magnitude estimates based on valley floor morphology and floodplain sedimentary sequences: the Tyne basin, northeast England. Unpublished PhD thesis, University of Newcastle upon Tyne.
- Rumsby, B.T. and Macklin, M.G. (1994) Channel and floodplain response to abrupt climate change: the Tyne basin, northern England. *Earth Surface Processes and Landforms*, 19, 499–515.
- Russell, A.J. (1989) A comparison of two recent jökulhlaups from an ice-dammed lake, Sondre Stromqord, West Greenland. *Journal of Glaciology*, 35, 157–62.

- Rust, B.R. (1978) Depositional models for braided alluvium. In *Fluvial Sedimentology* (ed. A.D. Miall). *Memoir of the Canadian Society of Petroleum Geologists*, 5, 605–25.
- Ryder, J.M. (1971) The stratigraphy and morphology of paraglacial alluvial fans in south central British Columbia. *Canadian Journal of Earth Sciences*, 8, 279–98.
- Ryder, J.M. and Church, M. (1986) The Lillooet terraces of Fraser River: a palaeoenvironmental enquiry, *Canadian Journal of Earth Sciences*, 8, 869–84.
- Sambrook-Smith, G. and Ferguson, R.I. (1995) The gravel–sand transition along alluvial channels. *Journal of Sedimentary Research*, A65, 423–30.
- Sawyer, M.S. (1987) The rainfall of 25–6 August 1986. *Weather*, 42 (4), 114–7.
- Schirmer, W. (1983) Criteria for the differentiation of Late Quaternary river terraces. *Quaternary Studies in Poland*, 4, 199–204.
- Schumm, S.A. (1977) *The Fluvial System*, John Wiley, New York, 338pp.
- Schumm, S.A. (1991) *To Interpret the Earth: Ten Ways to be Wrong*, Cambridge University Press, Cambridge, 131pp.
- Schumm, S.A. and Hadley, R.F. (1957) Arroyos and the semiarid cycle of erosion. *American Journal of Science*, 225, 161–74.
- Schumm, S.A., Harvey, M.D. and Watson, C.C. (1984) *Incised Channels; Morphology, Dynamics and Control*, Water Resources Publication, Denver, Colorado.
- Sear, D.A. (1992) Impact of hydroelectric power releases on sediment transport processes in pool–riffle sequences. In *Dynamics of Gravel-Bed Rivers* (eds P. Billi, R.D. Hey, C.R. Thorne and P Tacconi), John Wiley, Chichester, 629–50.
- Sear, D.A. and Newson, M.D. (1991) Sediment and gravel transportation in rivers including the use of gravel traps. *National Rivers Authority Project Report 232/1/1991*, 93 pp.
- Sear, D.A., Darby, S.E., Thorne, C.R. and Brookes, A. (1994) Geomorphological approach to stream stabilisation and restoration: case study of the Mimms Hall Brook, Hertfordshire, U.K. *Regulated Rivers: Research and Management*, 9 (4) 205–23.
- Shakesby, R.A. (1985) Geomorphological effects of jökulhlaups and ice-dammed lakes, Jotunheimen, Norway, *Norsk Geografisk Tidsskrift*, 39, 1–16.
- Shakesby, R.A. and Matthews, J.A. (1987) Frost weathering and rock platform erosion on periglacial lake shorelines: a test of a hypothesis. *Boreas*, 67, 197–203.
- Shaw, J. (1969) Aspects of glacial sedimentation with special reference to the area around Shrewsbury. Unpublished PhD thesis, University of Reading.
- Shaw, J. (1972) The Irish Sea Ice glaciation of north Shropshire — some environmental reconstructions. *Field Studies*, 3, 603–31.
- Sherlock, R.L. (1912) *Manners Geological Agent*, Witherby, London, 372 pp.
- Shotton, F.W. (1953) The Pleistocene deposits of the area between Coventry, Rugby and Leamington, and their bearing upon the topographic development of the Midlands. *Philosophical Transactions of the Royal Society of London*, B, 237, 209–60.

- Shotton, F.W. (1968) The Pleistocene succession around Brandon, Warwickshire. *Philosophical Transactions of the Royal Society of London, Series B.*, 254, 387–400.
- Shotton, F.W. (ed.) (1977) *The English Midlands*, INQUA Xth Congress, Guidebook for Excursion A2, Geo Abstracts, Norwich.
- Shotton, F.W. and Coope, G.R. (1983) Exposures in the Power House terrace of the River Stour at Wilden, Worcestershire, England. *Proceedings of the Geologists' Association*, 94, 33–44.
- Simpson, S. (1953) The development of the Lyn drainage system and its relation to the origin of the coast between Coombe Martin and Porlock. *Proceedings of the Geologists' Association*, 64, 14–23.
- Sissons, J.B. (1967) *The Evolution of Scotland's Scenery*, Oliver and Boyd, Edinburgh, 259 pp.
- Sissons, J.B. (1974a) A Lateglacial ice-cap in the central Grampians. *Transactions of the Institute of British Geographers*, 62, 95–114.
- Sissons, J.B. (1974b) The Quaternary in Scotland, a review. *Scottish Journal of Geology*, 10, 34–7.
- Sissons, J.B. (1976) *The Geomorphology of the British Isles. Scotland*. Methuen, London, 150 pp.
- Sissons, J.B. (1977a) Former ice-dammed lakes in Glen Moriston, Inverness-shire, and their significance in upland Britain. *Transactions of the Institute of British Geographers*, NS 2, 224–42.
- Sissons, J.B. (1977b) *Glen Roy National Nature Reserve: the Parallel Roads of Glen Roy*. Nature Conservancy Council, London, 12pp.
- Sissons, J.B. (1977c) The Loch Lomond Readvance in southern Skye and some palaeoclimatic implications. *Scottish Journal of Geology*, 13, 23–36.
- Sissons, J.B. (1978) The Parallel Roads of Glen Roy and adjacent glens, Scotland. *Boreas* 7, 229–44.
- Sissons, J.B. (1979a) The later lakes and associated fluvial terraces of Glen Roy, Glen Spean and vicinity. *Transactions of the Institute of British Geographers*, NS 4, 12–29.
- Sissons, J.B. (1979b) The limit of the Loch Lomond Advance in Glen Roy and vicinity, *Scottish Journal of Geology*, 15, 31–42.
- Sissons, J.B. (1979c) Catastrophic lake drainage in Glen Spean and the Great Glen, Scotland. *Journal of the Geological Society of London*, 136, 215–24.
- Sissons, J.B. (1980) The Loch Lomond Advance in the Lake District, northern England. *Transactions of the Royal Society of Edinburgh*, 71, 13–27.
- Sissons, J.B. (1981a) Lateglacial marine erosion and a jökulhlaup deposit in the Beaulieu Firth. *Scottish Journal of Geology*, 17, 7–19.
- Sissons, J.B. (1981b) Ice-dammed lakes in Glen Roy and vicinity: a summary. In *The Quaternary in Britain* (eds J. Neale and J. Flenley). Pergamon Press, Oxford, 174–83.
- Sissons, J.B. (1982) A former ice-dammed lake and associated glacier limits in the Achnasheen area, central Ross-shire. *Transactions of the Institute of British Geographers*, NS, 7, 98–116.
- Sissons, J.B. and Cornish, R. (1982a) Rapid localized glacio-isostatic uplift at Glen Roy, *Nature*, 297, 213–4.

- Sissons, J.B. and Cornish, R. (1982b) Differential glacio-isostatic uplift of coastal blocks at Glen Roy, Scotland. *Quaternary Research*, 18, 268–88.
- Sissons, J.B. and Cornish, R. (1983) Fluvial landforms associated with ice-dammed lake drainage in upper Glen Roy, Scotland. *Proceedings of the Geologists' Association*, 94, 45–52.
- Smith, I. and Lyle, A. (1979) Distribution of Freshwaters in Great Britain. Institute of Terrestrial Ecology, Edinburgh, 44 pp.
- Smith, K. and Bennett, A.M. (1994) Recently increased river discharge in Scotland: effects of flow hydrology and some implications for water management. *Applied Geography*, 14, 123–33.
- Smith, N.D. (1974) Sedimentology and bar formation in the upper Kicking Horse River, a braided outwash stream. *Journal of Geology*, 82, 203–23.
- Sohag, M.A. (1994) Morphological estimates of sediment transport in gravel-bed rivers. Unpublished PhD thesis, University of Newcastle upon Tyne.
- Starkel, L., Gregory, K.J. and Thornes, J.B. (eds) (1990) *Temperate Palaeohydrology. Fluvial Processes in the Temperate Zone During the Last 15, 000 years*. John Wiley, Chichester.
- Statham, I. (1976) Debris flows in vegetated screes in the Black Mountains, Carmarthenshire. *Earth Surface Processes*, 1, 173–80.
- Steel, C. (1984) Downstream variation in cross-sectional geometry on the River Nairn, Inverness-shire. Unpublished BSc Dissertation, Department of Geography, University of St Andrews.
- Steven, H.M. and Carlisle, A. (1959) *The Native Pinewoods of Scotland*, Oliver and Boyd, Edinburgh.
- Stone, K.H. (1963) Alaskan ice-dammed lakes. *Annals of the Association of American Geographers*, 53, 332–49.
- Straw, A. (1979) Eastern England. In *Eastern and Central England* (eds A. Straw and K.M. Clayton), Methuen, London, 1–139.
- Sugden, D.E. (1970) Landforms of deglaciation in the Cairngorm Mountains. *Transactions of the Institute of British Geographers*, 51, 201–19.
- Sutherland, D.G. (1984) The Quaternary deposits and landforms of Scotland and the neighbouring shelves; a review. *Quaternary Science Reviews*, 3, 157–254.
- Sutherland, D.G. (1987) Corrieshalloch Gorge. In *Wester Ross Field Guide* (eds C.K. Ballantyne and D.G. Sutherland). Quaternary Research Association, Cambridge, pp. 94–7.
- Synge, F.M. (1956) The glaciation of north-east Scotland. *Scottish Geographical Magazine*, 72, 129–43.
- Tanis, J.H. (1964) Studies in southern Pennine peats. II. The pattern of erosion. *Journal of Ecology*, 52, 333–44.
- Tanis, J.H. (1965) Studies in southern Pennine peats. IV. Evidence of recent erosion. *Journal of Ecology*, 53, 509–20.
- Tallis, J.H. (1985) Mass movement and erosion of a southern Pennine blanket peat. *Journal of Ecology*, 73, 283–315.
- Tanis, J.H. (1987) Fire and flood at Holme Moss: erosion processes in an upland blanket mire. *Journal of Ecology*, 75, 1099–129.
- Taylor, M.P. (1993) Holocene sedimentation in River Severn catchments. Unpublished PhD thesis. Univeristy of Wales, Aberystwyth.

- Taylor, M.P. and Lewin, J. (1997) Non-synchronous response of adjacent floodplain systems to Holocene environmental change. *Geomorphology*, 18, 251–64.
- Thomas, G.S.P. (1985) The Quaternary of the Northern Irish Sea Basin. In *The Geomorphology of North-West England*, (ed. R.H. Johnson), University Press, Manchester, 159–77.
- Thomas, G.S.P., Summers, A.J. and Dackombe, R.V. (1982) The late Quaternary deposits of the middle Dyfi valley. *Geological Journal*, 17, 297–309.
- Thomas, T.H. (1902) The upper Vale of Neath. *Transactions of Cardiff Naturalists' Society*, 34, 86–9.
- Thomas, T.M. (1956) Gully erosion in the Brecon Beacons area, south Wales. *Geography*, 41, 99–107.
- Thomas, T.M. (1974) The south Wales interstratal karst. *Transactions of the British Cave Research Association*, 1, 131–52.
- Thompson, A. (1984) Long and short-term channel changes in gravel bed rivers. Unpublished PhD thesis, University of Liverpool.
- Thompson, A. (1985) Channel patterns and channel change in upland streams of the Bowland Fells. In *Guide to Field Excursions in North-West England* (ed. A.M. Harvey), First International Conference on Geomorphology, British Geomorphological Research Group, Manchester, 43–8.
- Thompson, A. (1986) Secondary flows and the pool–riffle unit: a case study of the processes of meander development. *Earth Surface Processes and Landforms*, 11, 631–41.
- Thompson, A. (1987) Channel response to flood events in a divided upland stream. In *International Geomorphology 1986, Part I* (ed. V. Gardiner), John Wiley, Chichester, 691–709.
- Thompson, K.S.R. (1972) The last glaciers in western Perthshire. Unpublished PhD thesis, University of Edinburgh.
- Thompson, T.R.E. (1982) *Soils in Powys II. Sheet SJ 21 (Ardleen)*, Soil Survey of Great Britain Record, 75.
- Thorez, J., Bullock, P., Catt, J.A. and Weir, A.H. (1971) The petrography and origin of deposits filling solution pipes in the Chalk near South Mimms, Hertfordshire. *Geological Magazine*, 108, 413–23.
- Thorne, C.R. and Hey, R.D. (1979) Direct measurement of secondary currents at a river inflexion point. *Nature*, 280, 226–8.
- Thorne, C.R. and Lewin, J. (1979) Bank processes, bed material movement and planform development in a meandering river. In *Adjustments to the Fluvial System* (eds D.D. Rhodes and G.P. Williams), Kendall/Hunt, Dubuque, Iowa, 117–36.
- Thorne, C.R. and Tovey, N.K. (1981) Stability of composite river banks. *Earth Surface Processes and Landforms*, 6, 469–84.
- Thorp, P.W. (1981) A trimline method for determining the upper limit of the Loch Lomond Advance glaciers: examples from the Loch Leven and Glencoe areas. *Scottish Journal of Geology*, 17, 49–64.
- Thorp, P.W. (1986) A mountain icefield of Loch Lomond Stadial age, western Grampians, Scotland. *Boreas*, 15, 83–97.
- Tipping, R.C. (1992) The determination of cause in the generation of major prehistoric valley fills in the Cheviot Hills, Anglo-Scottish border. In *Alluvial Archaeology in Britain* (eds S. Needham and M.G. Macklin), Oxbow Monograph 27, Oxbow Press, Oxford, 111–21.
- Tipping, R.C. and Halliday S.P. (1994) The age of alluvial fan deposition at a site in the Southern Uplands of Scotland. *Earth Surface Processes and Landforms* 19, 333–48.



- Tomlinson, M.E. (1925) River terraces of the lower valley of the Warwickshire Avon. *Quarterly Journal of the Geological Society of London*, 81, 137–69.
- Tooley, M.J. (1985) Sea-level changes and coastal morphology in North-West England. In *The Geomorphology of North-West England*, (ed. R.H. Johnson), University Press, Manchester, 94–121.
- Tuckfield, C.G. (1964) Gully erosion in the New Forest, Hampshire. *American Journal of Science*, 262, 795–807.
- Tuckfield, C.G. (1980) Stream channel stability and forest drainage in the New Forest, Hampshire. *Earth Surface Processes and Landforms*, 5, 317–29.
- Turner, J. (1964) The anthropogenic factor in vegetational history. I. Tregaron and Whixall Mosses. *New Phytologist*, 63, 73–90.
- Turner, J. (1979) The environment of northeast England during Roman times as shown by pollen analysis. *Journal of Archaeological Science*, 6, 285–90.
- Twidale, C.R. (1964) Erosion of an alluvial bank at Birdwood, South Australia. *Zeitschrift für Geomorphologie*, 8, 189–211.
- Vincent, P. (1985) Quaternary geomorphology of the southern Lake District and Morecambe Bay area. In *The Geomorphology of North-West England*, (ed. R.H. Johnson), University Press, Manchester, 159–177.
- Walker, M.J.C. (1975) A pollen diagram from the Pass of Drumochter, central Grampian Highlands, Scotland. *Transactions of the Royal Society of Edinburgh*, 42, 335–43
- Walker, H.M. and Arnborg, L. (1966) Permafrost and ice-wedge effect on river bank erosion. In *Proceedings of the International Conference on Permafrost*, Proceedings National Academy of Sciences — National Research Council Publication 1247, Washington, D.C., 164–71.
- Walling, D.E. (1984) Physical hydrology. *Progress in Physical Geography*, 8 (1), 129–38.
- Walling, D.E. (1991) Drainage basin studies. In *Field Experiments and Measurements Programs in Geomorphology*, (ed. O. Slaymaker), Balkema, Rotterdam, 17–59.
- Walling, D.E. and Bradley, S.B. (1989) Rates and patterns of contemporary floodplain sedimentation: a case study of the River Culm, Devon, U.K. *GeoJournal*, 19 (1), 53–62.
- Walling D.E. and Webb B.W. (1981) Water quality. In *British Rivers* (ed. J. Lewin), Allen and Unwin, London, 126–169.
- Walsh, P.T. and Ockenden, A.C. (1982) Hydrogeological observations at the Water End swallow hole complex, North Mimms, Hertfordshire. *Transactions of the British Cave Research Association*, 9 (3), 184–94.
- Waltham, A.C., Simms, M.J., Farrant, A.R. and Goldie, H.S. (1996) *Karst and Caves of Great Britain*. Geological Conservation Review Series, 12. Chapman and Hall, London, 358pp.
- Walton, I. (1653) *The Compleat Angler or the Contemplative Man's Recreation*. T. Maxey, London.
- Ward, R.C. (1975) *Principles of Hydrology*. 2nd edn, McGraw-Hill, London, 367pp.
- Ward, R.C. (1980) Water: a geographical issue. In *Geography Yesterday and Tomorrow*. Oxford University Press, 130–45.
- Ward, R.C. (1981) River systems and river regimes. In *British Rivers* (ed. J. Lewin), George Allen and Unwin, London, pp. 1–33.

- Ward, R.C. (1982) *The Foundations of the Deep and the Windows of Heaven*. University of Hull Press, Hull.
- Waters, R.S. and Johnson, R.H. (1958) The terraces of the Derbyshire Derwent. *East Midland Geographer*, 2, 3–15.
- Wathen, S.J. (1995) The effect of sediment storage upon sediment transfer processes in a small Scottish gravel-bed river. Unpublished PhD thesis, University of St Andrews.
- Wathen, S.J., Ferguson, R.I., Hoey, T.B. and Werritty, A. (1995) Unequal mobility of gravel and sand in weakly bi-modal sediments. *Water Resources Research*, 31, 2087–96.
- Watson, E. (1970) The Cardigan Bay Area. In *The Glaciations of Wales and Adjoining Regions* (ed. C.A. Lewis), Longman, London, 125–45.
- Wells, S.G. and Harvey, A.M. (1987) Sedimentologic and geomorphic variations in storm-generated alluvial fans, Howgill Fells, north-west England. *Bulletin of the Geological Society of America*, 98, 182–98.
- Welsh Water Authority (1987) Llyn Brianne Acid Waters Project — First Technical Summary Report. Unpublished report to Department of Environment and Welsh Office.
- Werritty, A. (1984) Stream response to flash floods in upland Scotland. In *Catchment Experiments in Fluvial Geomorphology* (ed. T.P. Burt and D.E. Walling), Geo-books, Norwich, 537–60.
- Werritty, A. and Acreman, M. (1984) The flood hazard in Scotland. In *Climatic Hazards in Scotland* (ed. S.J. Harrison), Geo-books, Norwich, 25–40.
- Werritty, A. and Brazier, V. (1991a) *The Geomorphology, Conservation and Management of the River Feshie SSSI*, Report to the Nature Conservancy Council, Peterborough.
- Werritty, A. and Brazier, V. (1991b) *Geomorphological Aspects of the Proposed Strathspey Flood Alleviation Scheme*. Report to the Institute of Hydrology, Wallingford, 41 pp.
- Werritty, A. and Brazier, V. (1994) Geomorphic sensitivity and the conservation of fluvial geomorphology SSSIs. In *Conserving our Landscape* (eds C. Stevens, J.E. Gordon, C.P. Green and M.G. Macklin). Proceedings of the Conference 'Conserving our Landscape: Evolving Landforms and Ice-Age Heritage', Crewe, May 1992, English Nature, Peterborough, 100–9.
- Werritty, A. and Ferguson, R.I. (1980) Pattern changes in a Scottish braided river over 1, 30 and 200 years. In *Timescales in Geomorphology* (eds R.A. Cullingford, D.A. Davidson and J. Lewin), John Wiley, Chichester, 53–68.
- Werritty, A. and Inglis, G.E. (1985) Variations in size and shape of coarse-grained bedload sediments on the R. Findhorn, Scotland. Paper presented at the *Third International Fluvial Sediments Conference*, Fort Collins, Colorado, Abstracts Volume, p. 23.
- Werritty, A. and Kirkbride, M. (1992) *The Geomorphology, Conservation and Management of the Clyde Meanders SSSI*. Report to the Nature Conservancy Council of Scotland.
- Werritty, A., Brazier, V., Gordon, J.E. and McManus, J. (1994) Geomorphology. In *The Fresh Waters of Scotland. A National Resource of International Significance* (eds P.S. Maitland, P.J. Boon, D.S. McLusky), John Wiley, Chichester, 65–88.
- Werritty, A., Harper, F. and Burns, J. (1993) Rainfall and runoff response in the Loch Dee sub-catchments. In *Acidification, Forestry, Fisheries and Management in Upland Galloway*. Proceedings of the Loch Dee Symposium, December 1992 (ed. F. Lees), Foundation for Water Research, Marlow, pp. 13–21.

- Wharton, G.M., Arnell, N.W., Gregory, K.J. and Gurnell, A.M. (1988) River discharge estimated from channel dimensions. *Journal of Hydrology*, 106, 365–76.
- Whitaker, W. (1921) The water supply of Buckinghamshire and Hertfordshire from underground sources. *Memoirs of the Geological Survey of England and Wales*, 86–9.
- White, D.A. (1970) In *Man Shapes The Earth* (ed. E.H. Brown) *Geographical Journal*, 136, 81.
- Whittow, J.B. (1977) *Geology and Scenery in Scotland*, Penguin, Harmondsworth, 362 pp.
- Wilcock, D.N. (1967a) Coarse bedload as a factor determining bedslope. *International Association of Scientific Hydrology*, Berne, 143–50.
- Wilcock, D.N. (1967b) The bedload characteristics and channel morphology of the River Hodder. Unpublished PhD thesis, University of Liverpool.
- Wilcock, D.N. (1971) Investigations in the relations between bedload transport and channel slope. *Bulletin of the Geological Society of America*, 82, 2159–76.
- Wilkinson, H.R. and Gregory, S. (1956) Aspects of the evolution of the drainage pattern of northeast Wales. *Liverpool and Manchester Geological Journal*, 1, 543–58.
- Wilkinson, T.P. (1971) The transport of rock debris in upland streams, with particular reference to northern England. Unpublished PhD thesis, University of Newcastle upon Tyne.
- Williams, G.J. (1968) The buried channel and superficial deposits of the lower Usk and their correlation with similar features in the lower Severn. *Proceedings of the Geologists' Association*, 79, 325–48.
- Wills, L.J. (1912) Late glacial and post-glacial changes in the lower Dee valley. *Quarterly Journal of the Geological Society of London*, 69, 180–98.
- Wills, U. (1924) The development of the Severn Valley in the neighbourhood of Ironbridge and Bridgnorth. *Quarterly Journal of the Geological Society of London*, 80, 274–314.
- Wills, U. (1938) The Pleistocene development of the Severn from Bridgnorth to the sea. *Quarterly Journal of the Geological Society of London*, 94, 161–242.
- Wimbledon, W.A., Benton, M.J., Bevins, R.E., Black, G.P., Bridgland, D.R., Cleal, C.J., Cooper, R.G. and May, V.J. (1995) The development of a methodology for the selection of British geological sites for conservation: Part 1. *Modern Geology*, 20, 159–202.
- Winkley, B.R. (1972) River regulation with the aid of nature. *International Commission on Irrigation and Drainage*, Eighth Congress, Verna Transactions, Volume V, 29.1, 433–7.
- Wolfenden, P.J. and Lewin, L. (1977) Distribution of metal pollutants in floodplain sediments. *Catena*, 4, 309–17.
- Wolman, G. (1959) Factors influencing erosion of a cohesive river bank. *American Journal of Science*, 257, 204–16.
- Wolman, M.G. and Gerson, R. (1978) Relative scales of time and effectiveness of climate in watershed geomorphology. *Earth Surface Processes*, 3, 189–208.
- Wolman, M.G. and Leopold, L.B. (1957) River flood plains: some observations on their formation. *United States Geological Survey Professional Paper* 282-C.
- Wolman, M.G. and Miller, J.P. (1960) Magnitude and frequency of forces on geomorphic processes. *Journal of Geology*, 68, 54–74.

Wooldridge, S.W. and Kirkaldy, J.F. (1937) The geology of the Mimms valley. *Proceedings of the Geologists' Association*, 39, 1–26.

Worsley, P. (1985) Pleistocene history of the Cheshire–Shropshire Plain. In *The Geomorphology of North-West England* (ed. R.H. Johnson), University Press, Manchester, 201–21.

Young, J.A.T. (1974) Ice-wastage in Glenmore, upper Spey valley, Inverness-shire. *Scottish Journal of Geology*, 10, 147–57.

Young, J.A.T. (1975) Ice-wastage in Glen Feshie, Inverness-shire. *Scottish Geographical Magazine*, 91, 91–101.

Young, J.A.T. (1976) The terraces of Glen Feshie, Inverness-shire. *Transactions of the Royal Society of Edinburgh*, 69, 501–12.

Young, J.A.T. (1980) The fluvioglacial landforms of mid-Strathdearn, Inverness-shire. *Scottish Journal of Geology*, 16, 209–20.

Young, L.W. (1835) *Guide to the Beaches of Glyn Neath*, Longman, London.

## References