Notes

A MOLLUSCAN ANALYSIS FROM A LATE IRON AGE LINEAR DITCH AT MOULSFORD, SOUTH OXFORDSHIRE

In 1989 Thames Valley Archaeological Services conducted a watching brief and excavation on the line of the Cleeve–Didcot pipeline.[1] One of the occupation sites, discovered at Moulsford North Road (SU587836), was of Late Iron Age and Roman date. Adjacent to this site was a V-shaped ditch, 1.6 m. deep, aligned north-east/south-west (F19).[2] Pottery finds from the lower fill suggested a Late Iron Age origin for the ditch with some recutting in Roman times. It was suggested that this ditch was not part of an enclosure but was a linear earthwork similar to the Mongewell Grims ditch and Streatley Grims ditch.[3]

During the excavation, samples were taken for molluscan analysis from a column through the fills at 0.05 m. intervals. For various reasons it was not possible to process these samples at the time and this note reports on the analysis that has now taken place.

Analysis

Many more snails were recovered from samples above 0.60 m. than from below, and there was also a change in the species composition at 0.65 m. These discontinuities correspond to a break in the stratigraphy of the ditch, suggesting the presence of a recut or land-use change.

Below the break at 0.65–0.95 m. *Vallonia costata, V. excentrica* and *Helicella itala* were dominant. Above the break at 0.35–0.65 m. the numbers of these species were lower, while *Discus rotundatus, Carychium tridentatum* and *Vitrea contracta* became abundant and the proportion of *Nesovitrea/Aegopinella* spp. also increased. Such changes indicate moister, more shaded conditions. Possibly these conditions extended to the more general environment. Kerney, for example, has interpreted a similar pattern as evidence of Neolithic woodland regeneration at Waylands Smithy.[4] However, we do not wish to make such a claim on the basis of just one snail assemblage. While *Discus* is typical of woodland, it is also found in other damp habitats, and we have in addition recovered high numbers of *Carychium* and *Vitrea* from a bank covered in long grass, well away from any woodland elsewhere on the Downs. It is possible that a change in land use from arable to pasture produced this difference.

[1] S. Ford, 'The Archaeology of the Cleeve–Didcot Pipeline, South Oxfordshire', *Oxoniensia,* lv (1990), 1–40.

[2] Ibid. 29, fig. 12.

[3] J. Hinchcliffe, 'Excavations of Grims Ditch, Mongewell, 1975', *Oxoniensia,* xl (1975), 122–35; S. Ford, 'Linear Earthworks on the Berkshire Downs', *Berkshire Archaeol. Jnl.* lxxi (1982), 1–20.

[4] M. Kerney in A. Whittle, 'Waylands Smithy, Oxfordshire: Excavations at the Neolithic tomb in 1962–63 by R.J.C. Atkinson and S. Piggott', *Proc. Prehist. Soc.* lvii (1991), pt. 2, 61–101.

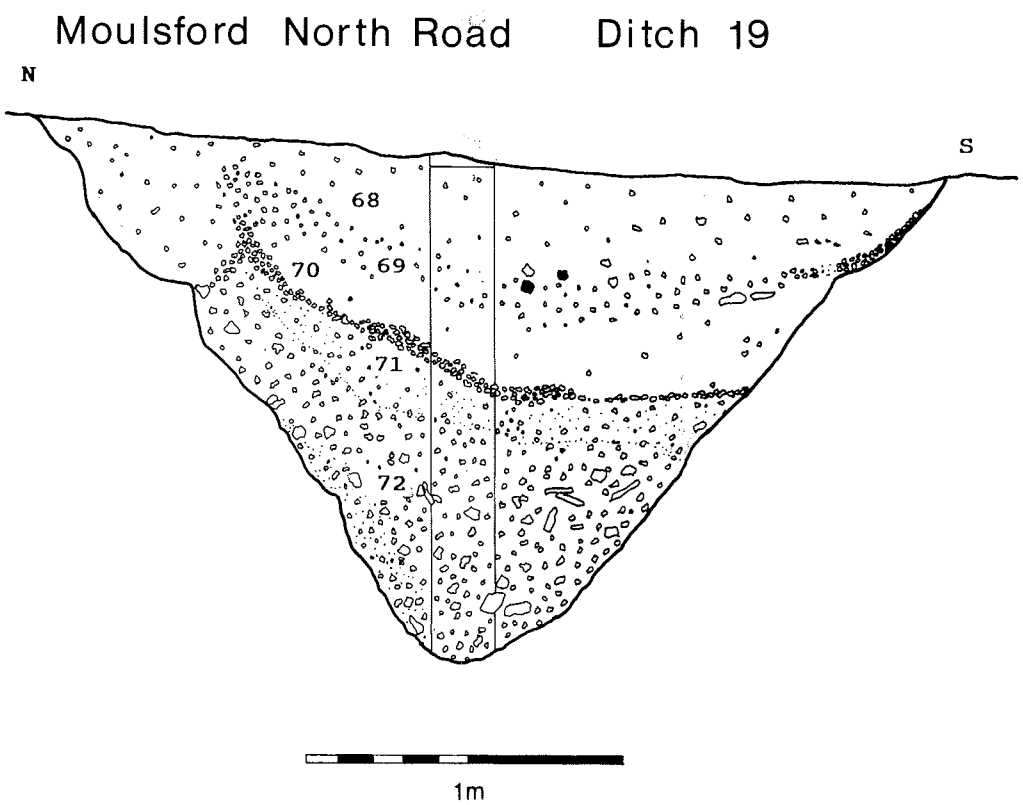

Fig. 1.

The uppermost fills of the recut (topsoil-stripped surface to 0.35 m.) are dominated by *Vallonia* spp. together with *Helicella itala* and *Pupilla muscorum*. These snails are typical of short-turved, dry calcareous grassland. A similar assemblage was found between depths of 0.95 m. and 1.30 m. indicating the same conditions as when the ditch was first dug out. The decline in numbers of *Pupilla muscorum* at 0.95 m. probably reflects either a change in the way the ditch was maintained or a change in use of the surrounding landscape, though it was not clearly paralleled by changes in the abundance of the other species. However, *Nesovitrea/Aegopinella, Discus*, and *Vitrea* were all present in moderate numbers at 0.85–0.90 m., indicating that conditions had become damper. The sporadic appearance of these species at all depths below the recut may have been caused by the ditch being periodically cleaned out. Relatively higher numbers of *Pomatias elegans*, found in loose soil, also point to this conclusion.

Comment

One aspect of ditches dug on the chalkland is that, unless levelled by cultivation, they never quite become fully infilled and can continue to accumulate evidence of past environments up to the present day. In contrast ditches on the river gravels, for example, usually become

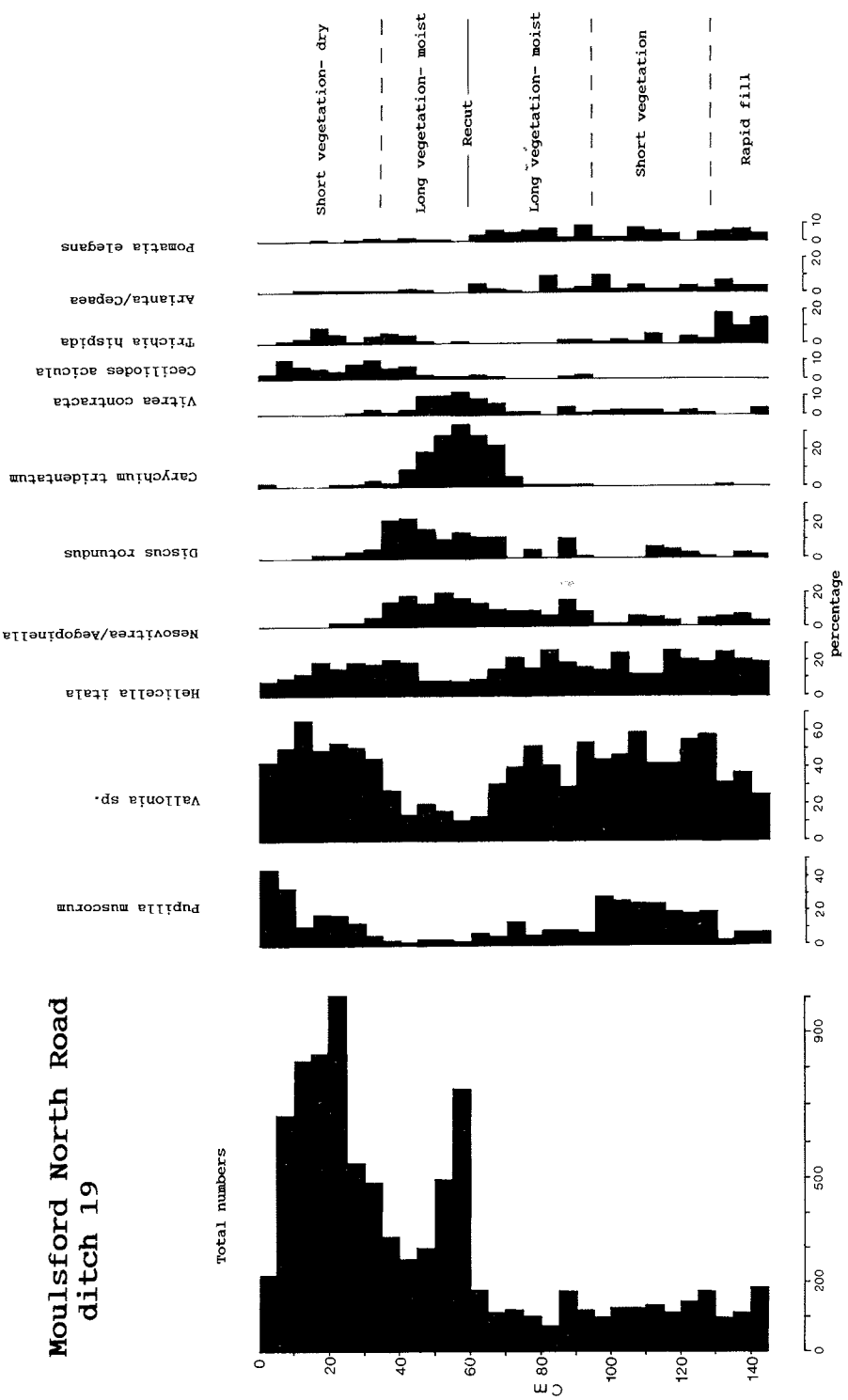
Moulsford North Road
ditch 19
Total numbers
Pupilla muscorum
Vallonia sp.
Helicella itala
Nesovitrea/Aegopinella
Discus rotundus
Carychium tridentatum
Vitrea contracta
Cecilioides acicula
Trichia hispida
Arianta/Cepaea
Pomatia elegans
Short vegetation- dry
Long vegetation- moist
Recut
Long vegetation- moist
Short vegetation
Rapid fill
percentage

Fig. 2.

completely infilled within a relatively short time of going out of use. Chalkland ditches dug in prehistory, such as linear earthworks or around burial mounds, can therefore often provide a lengthy environmental sequence. However, molluscs, which are frequently the only environmental indicator recovered from the chalk, do not provide the same level of evidence about general environmental conditions as do pollen diagrams for example. Molluscs recovered from ditches in particular may well reflect a very localised set of conditions, the vegetation and moisture in the ditch allowing species to flourish that are not at all representative of those in the surrounding areas. Furthermore the ditch fills may only accumulate after the ditches have lost their purpose, putting another obstacle in the way of interpreting their environmental evidence.

Nevertheless the molluscan analysis from the site fits well into the general picture provided by a number of analyses from sites across the Berkshire Downs ranging in date from Neolithic to Roman times. These indicate generally open conditions from very early on. Thus the Early Neolithic monuments at Lambourn long barrow and Waylands Smithy were sited in grassland. Woodland regeneration occurred at the latter site, but was subsequently cleared in the later Bronze Age.[5] Open conditions were recorded at the sites of Early Bronze Age barrows at Farncombe Down and Hodcott as well as for various Late Bronze Age linear earthworks.[6] A more complicated sequence occurred in the Bronze Age at Rams Hill prior to construction of the hillfort. Here woodland was cleared and replaced by grassland on more than one occasion.[7] At a later time the 'Celtic' fields, which are widespread particularly in the western part of the Downs, were again laid out in an open environment.[8]

The snail assemblages from the lower part of the ditch at Moulsford also indicate open conditions. Indeed they are similar to those of modern short-turved grassland except for small numbers of *Discus, Pomatias* and *Zonitidae* which might be expected in the looser, moister conditions of a ditch. This resemblance is all the more striking because the ditch was over a metre deep. The wetter episode after the ditch had been recut could indicate woodland regeneration similar to that observed at Waylands Smithy and Rams Hill as we have already said.[9] However, pottery finds date the recut to Roman times when the Downs were predominantly open, and indeed widely cultivated.[10] Against this background it seems as likely that the snail fauna in the lower part of the recut ditch indicated purely local conditions when the vegetation was not cut or grazed, and litter was left to accumulate without the ditch being cleared.

Acknowledgement

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[5] J. Wymer, 'Excavation of the Lambourne Long Barrow', *Berkshire Archaeol. Jnl.* lxii (1966), 1–16; Kerney, op. cit. note 4.

[6] M.J. Kerney in P. Rahtz, 'Farncombe Down Barrow, Berkshire', *Berkshire Archaeol. Jnl.* lx (1962), 1–24; J. Shackleton in J. Richards, 'Death and the Past Environment', *Berkshire Archaeol. Jnl.* lxxiii (1986–90), 1–42; A. Pritchard in S. Ford, op. cit. note 3; M. Bowden in S. Ford, 'Fieldwork and Excavation on the Berkshire Grims Ditch', *Oxoniensia,* xlvii, 13–36.

[7] J.G. Evans in R. Bradley and A. Ellison, *Rams Hill*, BAR 19 (1975).

[8] G. Mees in M. Bowden, S. Ford, and G. Mees, 'The Date of the Ancient Fields on the Berkshire Downs' (forthcoming).

[9] Kerney, op. cit. note 4; Evans, op. cit. note 7.

[10] Op. cit. note 8.