



**British
Geological Survey**

NATURAL ENVIRONMENT RESEARCH COUNCIL

Late Cretaceous foraminifera from a suite of samples south of Salisbury

Internal Report IR/04/074

BRITISH GEOLOGICAL SURVEY

INTERNAL REPORT IR/04/074

Late Cretaceous foraminifera from a suite of samples south of Salisbury

Ian P. Wilkinson

The National Grid and other
Ordnance Survey data are used
with the permission of the
Controller of Her Majesty's
Stationery Office.
Ordnance Survey licence number
GD 272191/1999

Key words

50K sheet 298, foraminifera,
Late Cretaceous, biostratigraphy.

Bibliographical reference

WILKINSON, IP, 2004. Late
Cretaceous foraminifera from a
suite of samples south of
Salisbury. *British Geological
Survey Internal Report*,
IR/04/074. 7pp.

BRITISH GEOLOGICAL SURVEY

The full range of Survey publications is available from the BGS Sales Desks at Nottingham and Edinburgh; see contact details below or shop online at www.thebgs.co.uk

The London Information Office maintains a reference collection of BGS publications including maps for consultation.

The Survey publishes an annual catalogue of its maps and other publications; this catalogue is available from any of the BGS Sales Desks.

The British Geological Survey carries out the geological survey of Great Britain and Northern Ireland (the latter as an agency service for the government of Northern Ireland), and of the surrounding continental shelf, as well as its basic research projects. It also undertakes programmes of British technical aid in geology in developing countries as arranged by the Department for International Development and other agencies.

The British Geological Survey is a component body of the Natural Environment Research Council.

Keyworth, Nottingham NG12 5GG

☎ 0115-936 3241 Fax 0115-936 3488
e-mail: sales@bgs.ac.uk
www.bgs.ac.uk
Shop online at: www.thebgs.co.uk

Murchison House, West Mains Road, Edinburgh EH9 3LA

☎ 0131-667 1000 Fax 0131-668 2683
e-mail: scotsales@bgs.ac.uk

London Information Office at the Natural History Museum (Earth Galleries), Exhibition Road, South Kensington, London SW7 2DE

☎ 020-7589 4090 Fax 020-7584 8270
☎ 020-7942 5344/45 email: bgs london@bgs.ac.uk

Forde House, Park Five Business Centre, Harrier Way, Sowton, Exeter, Devon EX2 7HU

☎ 01392-445271 Fax 01392-445371

Geological Survey of Northern Ireland, 20 College Gardens, Belfast BT9 6BS

☎ 028-9066 6595 Fax 028-9066 2835

Maclea Building, Crowmarsh Gifford, Wallingford, Oxfordshire OX10 8BB

☎ 01491-838800 Fax 01491-692345

Parent Body

Natural Environment Research Council, Polaris House, North Star Avenue, Swindon, Wiltshire SN2 1EU

☎ 01793-411500 Fax 01793-411501
www.nerc.ac.uk

Contents

Contents.....	i
Summary	i
1 Introduction	1
2 Sample details and stratigraphical conclusions.....	1
2.1 MPA52354 AJN8 SU 15462 25762	1
2.2 MPA52365 AJN19 SU 13350 27150	1
2.3 MPA52366 AJN20 SU 13340 28490	2
2.4 MPA52392 AJN25 SU 12406 28079	2
2.5 MPA52393 AJN26 SU 12171 27563	2

Summary

Foraminifera from the Chalk to the south of Salisbury indicates foraminiferal zones BGS17-20 and the Upper Seaford to Lower Culver chalks are inferred.

1 Introduction

Five samples of Chalk, listed below, were analysed for foraminifera. Full foraminiferal lists are included on the Biostratigraphy logging sheets held at Keyworth, but only biostratigraphically useful species are listed herein.

2 Sample details and stratigraphical conclusions

2.1 MPA52354 AJN8 SU 15462 25762

Stensioeina exsculpta exsculpta

Gavelinella stelligera

Stensioeina szajnochae praecursor

Conclusions: The incoming of *G. stelligera* and *R. szajnochae praecursor* indicates an age no older than the upper part of foraminiferal subzone BGS17iii. High in the *coranguinum* Zone, above the Barrois Sponge Bed and lateral equivalents. The extinction of *S. exsculpta exsculpta* indicates an age no younger than basal BGS 19 (basal *pilula* zone). However, *Gavelinella cristata* was not present probably indicating a position no higher than immediately below Peake's Sponge Bed, and lateral equivalents, at which horizon this species normally becomes common or abundant. Uppermost Seaford Chalk is suggested.

2.2 MPA52365 AJN19 SU 13350 27150

Gavelinella usakensis

Gavelinella cf trochus

Neoflabellina rugosa

Bolivinooides culverensis

Stensioeina pommerana

Bolivinooides culverensis/decoratus transition

Conclusions: The presence of *G. usakensis* proves foraminiferal zone BGS20. A position above the Arundel Sponge Bed and lateral equivalents is suggested. *Gavelinella lorneiana*, a Lazaras species, was not recorded, and this, together with the presence of *Gavelinella cf trochus* suggests

a position in the 'middle' part of the zone (?foraminiferal subzone BGS20ii), perhaps above the Lancing Flints. (but below Whitecliff Marl). The *quadrata* macrofaunal zone can be suggested and the Culver Chalk is inferred.

2.3 MPA52366 AJN20 SU 13340 28490

Gavelinella usakensis

Bolivinoidea culverensis

Conclusions: Most species in the assemblage are long ranging, but Foraminiferal zone BGS20 (*quadrata* macrofaunal zone) is indicated by the presence of *Gavelinella usakensis* and *Bolivinoidea culverensis* and Culver Chalk inferred.

2.4 MPA52392 AJN25 SU 12406 28079

Stensioeina exsculpta exsculpta

Stensioeina polonica

Gavelinella stelligera

Conclusions: Foraminiferal subzone BGS17iii (Upper *coranguinum* zone) is indicated by the presence of *Stensioeina polonica* and *Gavelinella stelligera*. *Gavelinella cristata* is absent. A position within the interval between Barrois Sponge Bed and Peake's Sponge Bed (and lateral equivalents) is indicated. Upper, but not uppermost, Seaford Chalk is inferred.

2.5 MPA52393 AJN26 SU 12171 27563

Stensioeina polonica

?*Lingulogavelinella arnagerensis*

Conclusions: Foraminifera are mainly long ranging, but *G polonica* places the assemblage within foraminiferal zone BGS17 (upper *coranguinum* Zone), between the Chartham Flint and Peake's Sponge Bed (and lateral equivalents). Species indicative of higher levels within the zone were not seen, and if the single fragment tentatively assigned to *L. arnagerensis* is correctly identified, foraminiferal Subzone BGS17i and a position no higher than immediately above Whitakers 3" Flint (and lateral equivalents) is suggested. The Upper, but not uppermost, Seaford Chalk is inferred.