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Cretaceous foraminifera from the Selby area

Internal Report IR/04/076

BRITISH GEOLOGICAL SURVEY

INTERNAL REPORT IR/04/076

Cretaceous foraminifera from the Selby area

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Key words

Foraminifera, Late Cretaceous,
biostratigraphy

Bibliographical reference

WILKINSON IP. 2004.
Cretaceous foraminifera from the
Selby area. *British Geological
Survey Internal Report*,
IR/04/076. 3pp.

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Summary

A suite of chalk samples from the Selby area yielded impoverished and generally poorly preserved foraminiferal faunas of Cenomanian to early Turonian age.

1 Introduction

Foraminifera from thirteen chalk samples from the Selby area, Yorkshire, were examined in order to determine the stratigraphical position of the faunas. Foraminifera are rare throughout the suite of samples and preservation is generally poor. Selected lists are given below, the full list are held on logging sheets in the palaeontological data files.

2 Sample details and stratigraphical conclusions.

2.1 MPA52682 JRF1

Lenticulina sp

Hedbergella brittonensis

Tritaxia pyramidata

Age: Foraminifera are very rare, but *Tritaxia pyramidata* is Cenomanian in age. The Ferriby Chalk is tentatively suggested.

2.2 MPA52683 JRF2

Gavelinella berthelini

Gyroidinoides parva

Mosaleberis cf. *pseudomacrophthalma* (ostracod)

Age: *Gavelinella berthelini* suggests an position no higher than the *Mytiloides* (formerly *labiatus*) Zone, although the age is probably no higher than Cenomanian.

As there is some evidence that *Gyroidinoides parva* did not survive the anoxic event towards the end of the Cenomanian. It is suggested that the fauna is from a position no higher than Lower Welton Chalk

2.3 MPA52684 JRF3

Dicarinella cf *hagni*

Praeglobotruncana helvetica

Valvulineria cf *lenticularis*

Age: Preservation of the foraminifera is poor. The presence of *Dicarinella* cf *hagni*, *Praeglobotruncana helvetica* and *Valvulineria* cf *lenticularis* suggests Foraminiferal Zone BGS9 (lower part of *Mytiloides* macrofossil zone) and the Lower Welton Chalk.

2.4 MPA52685 JRF4

Dicarinella cf *imbricata*

Age: Foraminifera are long ranging, but *Dicarinella* cf *imbricata* suggests foraminiferal zone BGS9-12 (*Mytiloides-lata* macrofossil zones) and the Welton Chalk is inferred.

2.5 MPA52686 JRF5

Praeglobotruncana cf helvetica

Dicarinella hagni

Age: The foraminifer listed suggest Foraminiferal Zone BGS9 (lower part of *Mytiloides* Macrofossil zone) and the Lower Welton Chalk is inferred

2.6 MPA52687 JRF6

Heterohelix globosus

Hedbergella delrioensis

Age: A very sparse fauna that is probably stratigraphically no lower than Turonian Welton Chalk.

2.7 MPA52688 JRF7

Gyroidinoides parva

Hedbergella delrioensis

Radiolaria

Age: *Gyroidinoides parva* apparently becomes extinct at the base of the Plenus Marl. A Cenomanian age is indicated and the Ferriby Chalk is tentatively suggested.

2.8 MPA52689 JRF8

Gavelinella berthelini

Hedbergella delrioensis

Age: A sparse fauna, but the presence of *Gavelinella berthelini* suggests a position no younger than *Mytiloides* (=labiatus) Zone and thus no higher than the lower Welton Chalk.

2.9 MPA52690 JRF9

Gavelinella tourainensis

Hedbergella planipsira

Hedbergella delrioensis

Age: A poor fauna, but *Gavelinella tourainensis* is particularly characteristic of chalks no younger than *Mytiloides* (=labiatus) Zone in Britain. This suggests a position no higher than lower Welton Chalk.

2.10 MPA52691 JRF10

Dicarinella cf imbricata

Dicarinella hagni

Marginotruncana marginata

Age: Benthonic taxa are extremely rare, but planktonic forms were present. Foraminiferal zone BGS9 (*Mytiloides* (=labiatus) macrofaunal Zone) is indicated and the Lower Welton Chalk is inferred.

2.11 MPA52692 JRF11

Hedbergella delrioensis

Gyroidinoides parva

Gavelinella sp

Age: The occurrence of *Gyroidinoides parva* suggests an age no younger than the Cenomanian and the Ferriby Chalk is suggested.

2.12 MPA52693 JRF12

Whiteinella aprica

Gavelinella sp

Age: The fauna is very poor. In southern England the appearance of *W aprica* is at or slightly below the base of the New Pit Chalk. A position no older than upper part of *Mytiloides* Zone is suggested. In terms of the Yorkshire nomenclature, a position no lower than lower Welton Chalk is suggested.

2.13 MPA52694 JRF13

Barren, age not known.