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- *Gansserina gansseri* Zone
- *Globotruncana aegyptiaca* Zone
- *Globotruncanella havanensis* Zone
- *Globotruncanita calcarata* Zone

Biostratigraphy of Planktonic Foraminifera Within Shiranish Formation (Late Campanian-Middle Maastrichtian) in Butmah Well No. 15 Northwest Iraq

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ABSTRACT

Eighteen planktonic foraminiferal species belonging to five genera have been identified within the studied section of Shiranish Formation in Butmah well no.15; which is divided into four biozones. The first zone represents the Late Campanian age while the other three zones extend within the Early and Middle Maastrichtian age. These zones are:

- *Gansserina gansseri* Zone
- *Globotruncana aegyptiaca* Zone
- *Globotruncanella havanensis* Zone
- *Globotruncanita calcarata* Zone

The age of the studied section in Butmah well no.15 has been fixed as Late Campanian to Middle Maastrichtian while the upper part of the Middle Maastrichtian and the whole Upper Maastrichtian are missing. According to this fact the contact surface between Shiranish and Aaliji Formations is an unconformity surface.

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() (-) Aaliji Formation

Orbitoides

.Mushorah Formation

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1 – *Globotruncanita calcarata* Total Range Zone

Globotruncanita calcarata (Cushman) :

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Globotruncana calcarata :

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(Bolli , 1966 ; Pessagno , 1967 ; Postuma , 1971 ; Van Hinte , 1976)

Globotruncanita calcarata

(Witrock *et al.*,2003) . (Caron , 1985 ; Sliter , 1989)

Globotruncana calcarata- ()

(Kassab , 1979) *elevata–aegyptiaca*

(Abawi *et al.* , 1982) *Globotruncana calcarata*

Rosita fornicata – *Globotruncana elevata* – *stuartiformis*

- (AL – Mutwali , 1996)

- (Hammoudi, 2000) *Globotruncana rosetta*

2 – *Globo truncanella havanensis* Partial Range Zone .

Globo truncanella havanensis (Voorwijk) :

(Lower Early Maastrichtian) :

Globo truncanita calcarata (Cushman) :

Globo truncana aegyptiaca Nakkady

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(Caron, 1978 in Ismail, 2000)

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Globo truncana mariei (Banner and Blow); *Globo truncana rosetta* (Carsey); *Globo truncana linneiana* (d`Orbigny); *Globo truncana esnaensis* (Nakkady); *Globo truncanita stuarti* (de Lapparent); *Globo truncanita stuartiformis* (Dalbiez); *Globo truncanita pettersi* (Gandolfi); *Contusotruncana fornicata* (Plummer).

Gb.lapparenti- tricarinata :

Gll . havanensis (Bolli , 1966)

(Ismail ,) *Gll . havanensis* (Sliter, 1989; Caron, 1985)

.(1)

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Globo truncana arca-tricarinata subcircumnodifer

(Kassab, 1979)

(Abawi et al., 1982) *Rugotruncana subcircumnodifer*

(Hammoudi , 2000) *Gll . havanensis*

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3- *Globo truncana aegyptiaca* Interval Zone .

Globo truncana aegyptiaca Nakkady :
. *Gansserina gansseri* (Bolli)
.(Upper Early Maastrichtian) :
Gb.aegyptiaca :
. *Gansserina gansseri* (Bolli)
. :
() (Caron , 1985) :
:

Globo truncana arca (Cushman) , *Globo truncana insignis* Gandolfi
Globo truncanita stuartiformis (Dalbiez), *Globo truncanita stuarti*
(de Lapparent),*Contusotruncana fornicata* (Plummer) *Globo truncanella*
havanensis (Voorwijk) .

:
(Postuma , 1971) *Globo truncana stuartiformis*
. (Sliter,1989) (Caron, 1985) *Globo truncana aegyptiaca*
Globo truncana fornicata
Globo truncana aegyptiaca (El-Naggar,1966)
. () (Ismail , 2000)

Rugotruncana subcircumnodifer

Globo truncana . (Abawi et al. , 1982)
- (AL-Mutwali,1996) *aegyptiaca*
.()

4- *Gansserina gansseri* Total Range Zone (Part) .

. *Gansserina gansseri* (Bolli) :
. (Middle Maastrichtian) :
:
Gansserina gansseri (Bolli)
globo truncanids

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Abathomphalus mayaroensis (Bolli)

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Globo truncana aegyptiaca Nakkady, *Globo truncana rosetta* (Carsey), *Globo truncana esnaensis* Nakkady , *Globo truncanita stuartiformis*(Dalbiez), *Globo truncana orientalis* El-Naggar, *Globo truncanita stuarti*(deLapparent), *Contusotruncana contusa* (Cushman)

Globo truncana gansseri -:

Gansserina gansseri (Bolli , 1966)
(Sliter, 1989 ; Caron , 1985)

Globo truncana gansseri (Witrock *et al.*,2003)
Gansserina gansseri (El – Naggar , 1966)
. () (Ismail ,2000)

Globo truncana gansseri- bahiji - *Gublerina*

Gansserina (Kassab , 1979) -*cuvillieri*
- (Al–Mutwali , 1996) *gansseri*
()
Gansserina gansseri
. () - (Hammoudi , 2000)
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- Gansserina gansseri* Zone.
- Globotruncana aegyptiaca* Zone.
- Globotruncanella havanensis* Zone.
- Globotruncanita calcarata* Zone.

Gansserina gansseri Zone

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