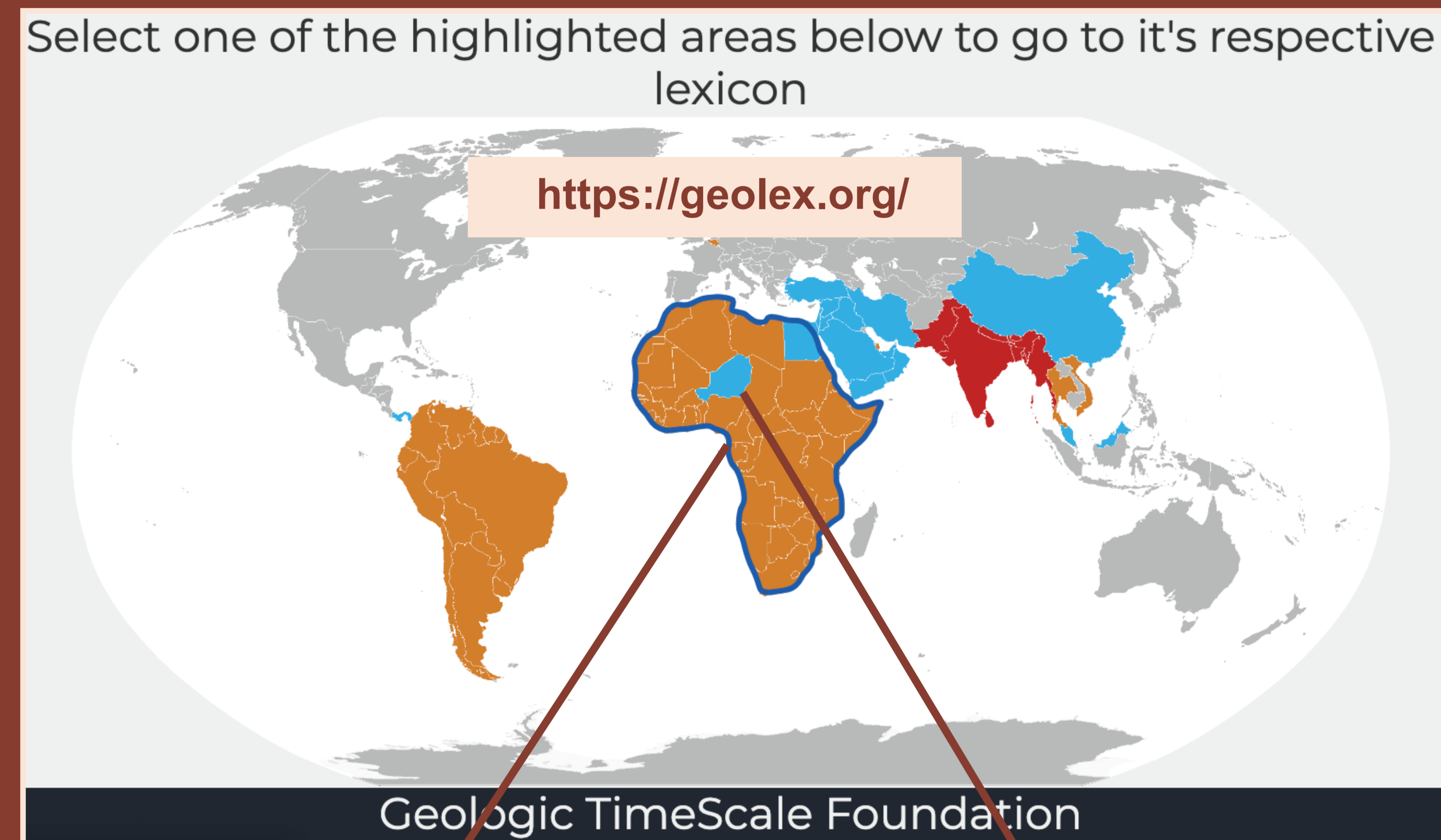


Wen Du^{1,2}, James Ogg^{1,2,3}, Gabriele Ogg⁴, Rebecca Bobick³, Jacques LeBlanc⁵, Monica Juvane⁶, Dércio José Levy⁶, Aditya Sivathanu³, Suyash Mishra⁷, Yuzheng Qian⁸, and Sabrina Chang⁹

*1Deep-time Digital Earth (DDE) Research Center of Excellence (Suzhou), International Union of Geological Sciences (IUGS), China (wendu_0911@icloud.com; jogg@purdue.edu), *2Institute of Sedimentary Geology, Chengdu University of Technology, Chengdu, China
*3Electrical and Computer Engineering, Purdue University, West Lafayette, Indiana, USA *4Geologic TimeScale Foundation, West Lafayette, Indiana, USA, *5International Consulting Geologist, Alberta, Canada, *6Empresa Moçambicoma de Hidrocarbonetos, Maputo, Mozambique,
*7J.P. Morgan Chase & Co., New York, USA, *8Amazon.com Services LLC, San Francisco, USA, *9J.P. Morgan Chase & Co., Seattle, USA

Select one of the highlighted areas below to go to it's respective lexicon



<https://geolex.org/>

Geologic TimeScale Foundation

Welcome to the African Basin Lexicon of Stratigraphic Units!
Please enter a formation name or group to retrieve more information.

Search Formation Name...

Search by:
 Period:
 Date:
 Date Range:
 and Stage:
 Lithology includes:
 Fossil includes:

Select Province to search:

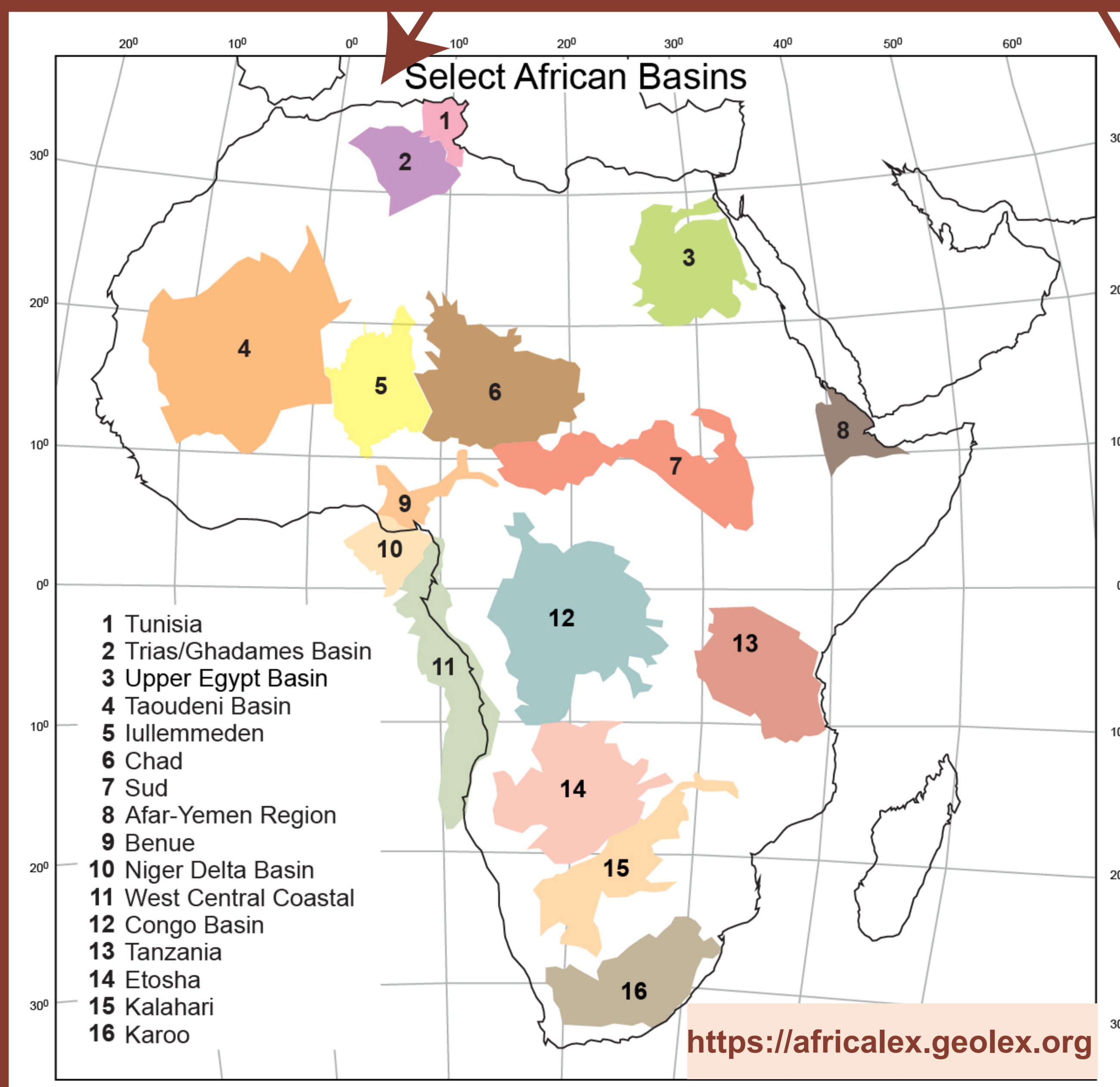
INFORMATION AT A CLICK

1. Cloud-based open lexicons with clickable map navigator
2. User interface for Niger and Africa.
3. Google-like search for formation name or part of the name. Or filter by period, and lithology etc.
4. Users can choose a plate tectonic model and a time slice to view the formation in earth history with just one click!

Change to Alphabetical Listing Or Change to By-Age Listing

Katberg Fm	Airf el-Naga Fm	Nezla Fm	Ras El Hamia Tripolitania And Sirta Basin Fm	Zarzabine Fm	Akra Shale Yemen Basin General Lithology Fm
Balfour Fm	Balfour Karoo Basin Cape Fold Belt Fm	Middleton Fm	Middleton Karoo Basin Cape Fold Belt Fm	Koonap Karoo Basin Cape Fold Belt Fm	Baaufort Gr
Koonap Fm	Waterford Fm	Waterford Karoo Basin Cape Fold Belt Fm	Fort Brown Fm	Fort Brown Karoo Basin Cape Fold Belt Fm	Ripon Fm
Ripon Karoo Basin Cape Fold Belt Fm	Collingham Fm	Collingham Karoo Basin Cape Fold Belt Fm	Whitehill Fm	Whitehill Karoo Basin Cape Fold Belt Fm	Continental Posttassilian Cyrenaica Basin Gr
Tiguentourine Fezzan Basin Fm	Ecca Gr	Prince Albert Fm	Prince Albert Karoo Basin Cape Fold Belt Fm	Tiguentourine Fm	Dwyka Karoo Basin Cape Fold Belt Gr
Dwyka Gr	Dembaba Fm	Dimbabah Fezzan Basin Fm	El Adeb Larache Fm	Illizi Carb F Fm	Assedjefar Fezzan Basin Fm
Ataqa Fm	Illizi Carb E Fm	Oubarakat Fm	Assed Jeffar Fm	Assekaifaf Fm	Illizi Carb D Fm
Dome Of Collenia Beds Fezzan Basin Fm	Illizi Carb C Fm	Issendjel Fm	Illizi Carb B Fm	Illizi Carb A Fm	Marar Fezzan Basin Fm
Mrar Fm	Sbaa Fm	Um Bogma Fm	Gara Mas Melouki Fm	Illizi Dev F2 Fm	Tahara Fm
Illizi Dev C2 Fm	Aouinet Ouenine Fm	Witpoort Fm	Witteburg Gr	Witpoort Karoo Basin Cape Fold Belt Fm	Illizi Dev F3 Fm

Select African Basins

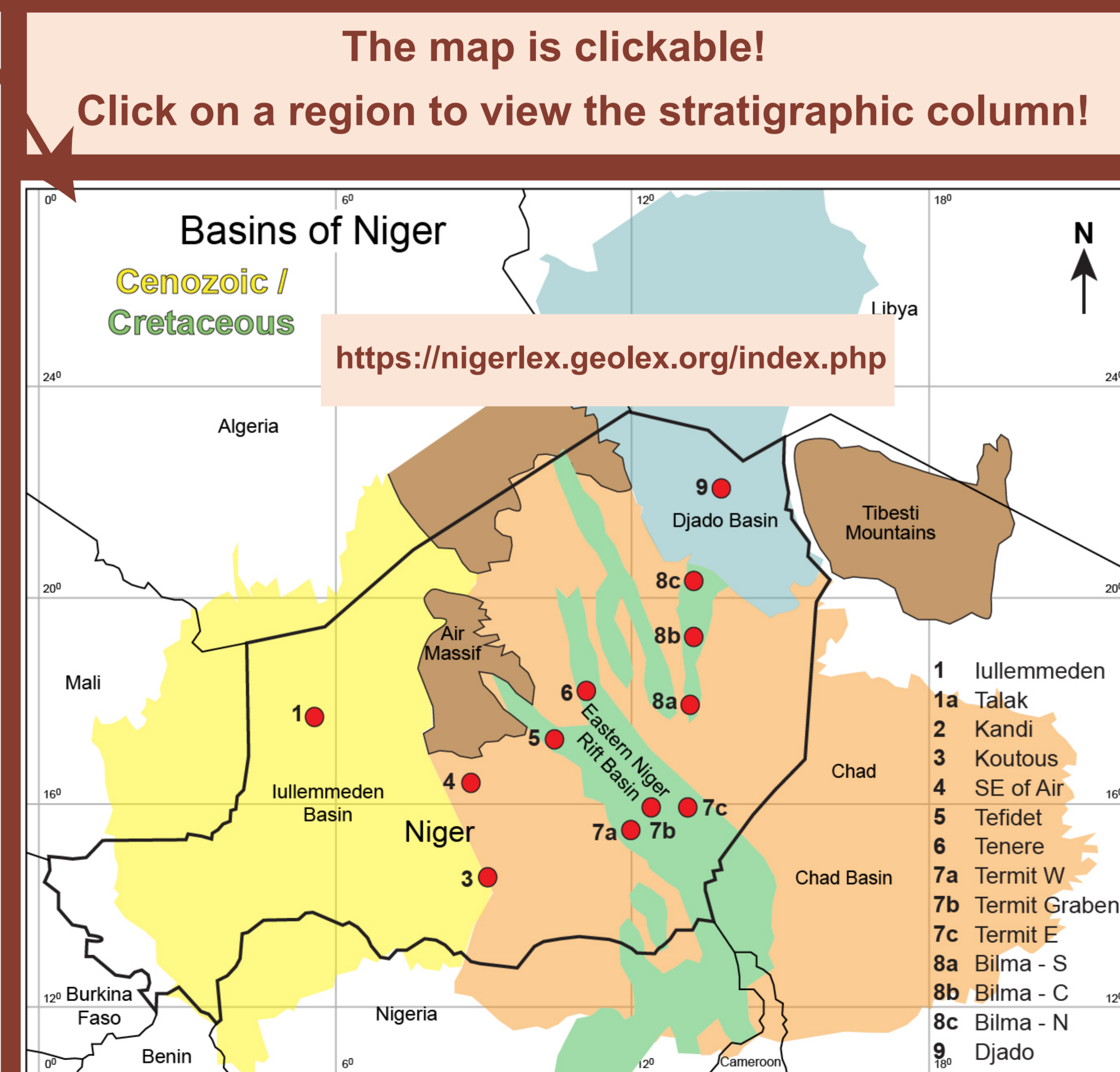


- 1 Tunisia
- 2 Trias/Ghadames Basin
- 3 Upper Egypt Basin
- 4 Taoudeni Basin
- 5 Iullemeden
- 6 Chad
- 7 Sud
- 8 Afar-Yemen Region
- 9 Benue
- 10 Niger Delta Basin
- 11 West Central Coastal
- 12 Congo Basin
- 13 Tanzania
- 14 Etosha
- 15 Kalahari
- 16 Karoo

<https://africalex.geolex.org>

The map is clickable!
Click on a region to view the stratigraphic column!

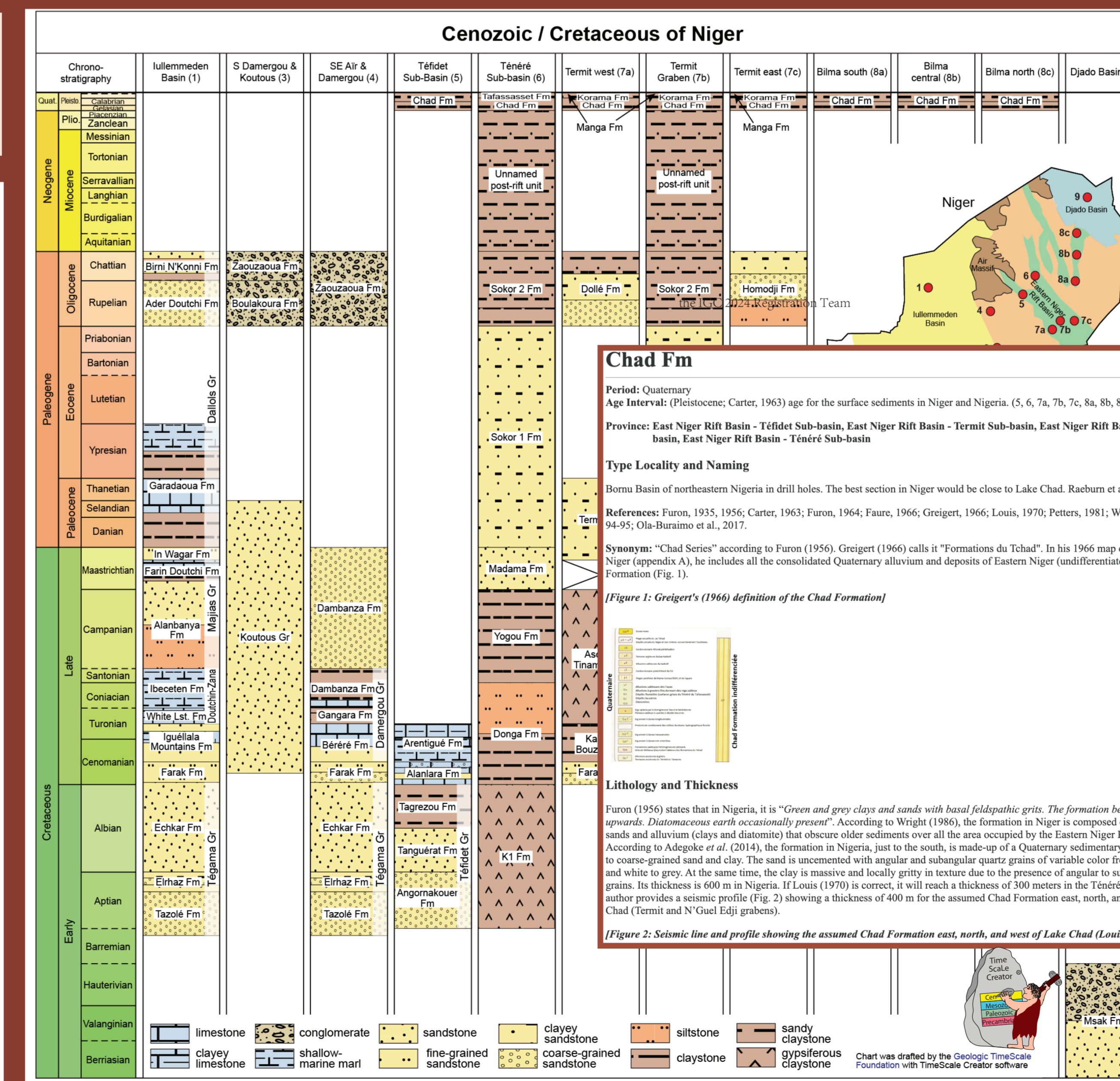
Basins of Niger
Cenozoic / Cretaceous



<https://nigerlex.geolex.org/index.php>

- 1 Iullemeden
- 1a Talak
- 2 Kandi
- 3 Koutous
- 4 SE of Air
- 5 Tefidet
- 6 Tenere
- 7a Termit W
- 7b Termit Graben
- 7c Termit E
- 8a Bilma - S
- 8b Bilma - C
- 8c Bilma - N
- 9 Djado

Cenozoic / Cretaceous of Niger



Chad Fm
 Period: Quaternary
 Age Interval: (Pleistocene, Curat, 1963) age for the surface sediments in Niger and Nigeria. (5, 6, 7a, 7b, 7c, 8a, 8b, 8c)
 Provinces: East Niger Rift Basin - Tefidet Sub-basin, East Niger Rift Basin - Termit Sub-basin, East Niger Rift Basin - Bilma Sub-basin, East Niger Rift Basin - Tefidet Sub-basin

Type Locality and Naming
 Reference: Fourn, 1915, 1916; Camet, 1963; Fourn, 1964; Fourn, 1966; Giegengoff, 1966; Lenoir, 1970; Pennes, 1981; Wu, 84-91; Ota-Brazato et al., 2017.
 Synonym: "Chad Series" according to Fourn (1956). Giegengoff (1966) calls it "Formation de Tefidet". In his 1966 map of Niger (Appendix A), he includes all the consolidated Quaternary alluvium and deposits of Eastern Niger (unconsolidated).

Lithology and Thickness
 Fourn (1956) states that in Nigeria, it is "Green and grey clay and sands with basal feldspathic grits. The formation has a thin and abundant clay and detritus that obscures older sediments over all the area occupied by the Eastern Niger Basin. According to Adigbolu et al. (2014), the formation in Nigeria, just to the south, is made up of a Quaternary sedimentary to near-igneous sandstone. The sand is micaceous with angular and subangular quartz grains of variable size (fine and coarse) and white to grey. At the same time, the clay is massive and locally gritty in texture due to the presence of angular to sub-angular grains. Its thickness is 400 m in Nigeria. If water (1970) is correct, it will reach a thickness of 500 meters in the Tenere if water provides a seismic profile (Fig. 7) showing a thickness of 400 m for the assumed Chad Formation east, north, and Chad (Termit and Bilma Sub-basins).

Chart was drafted by the Geologic TimeScale Foundation with Timescale Creator software

(Merdith Williams et al., 2021)

56 Ma

(Marcilly Torsvik et al., 2021)

56 Ma

(Christophere Scotese, 2021)

Three reconstruction models are available!
Just click on the orange globe from the Multi-country search page!

Click to display on map of the African continent

56.00 Ma

Reconstruction Model: Scotese Global Plate Reconstruction, Williams et al., 2021
 Reconstruction Model: Continental Rifting Model, Scotese et al., 2021
 Reconstruction Model: Plate Tectonics (Plate Tectonics), Scotese et al., 2021

Generate All Models