



## 2nd Annual Meeting of IGCP 735, Marrakesh, Morocco

### 3rd Edition of the National Day of Geological Heritage of Morocco under the theme: "African Geoparks", Zagora, Morocco

*3ème Édition de la Journée Nationale du Patrimoine Géologique du Maroc, sous le thème : "Les Géoparcs africains", Zagora, Maroc*





The new project of the International Geoscience Programme IGCP 735 'Rocks and the Rise of Ordovician Life' ('Rocks n'ROL') is the successor of IGCP 653 'The onset of the Great Ordovician Biodiversification Event' (2016-2020).

IGCP 735 is bringing together researchers from all over the world, focussing on the most significant marine radiation in the history of the Earth (the so-called 'GOBE').

We are happy to announce the main topics of the Marrakesh 2022 Annual Meeting :

***Filling knowledge gaps in the Early Palaeozoic Biodiversification and « Promoting Geological Heritage »***

# THE 2ND ANNUAL MEETING OF IGCP 735 PROGRAMME

## DAY 1 **Wednesday October 19th 2022**

**CHAIR: PR. KHADIJA EL HARIRI**

**09H00 - 09H30    OPENING CEREMONY**

- Abdellatif MIRAOUI, Minister of Higher Education, Scientific Research and Innovation.
- Karim Kassi-LAHLOU, Wali Marrakesh – Safi Region
- My El Hassan HBID, President Cadi Ayyad University
- Moha TAOURIRTE, Dean Faculty of Sciences and Technics
- David HARPER, Chairman of International Commission on Stratigraphy (ICS)
- Thomas SERVAIS, Chairman of Subcommission on Ordovician Stratigraphy (ISOS)
- Bertrand LEFEBVRE, Co-Leader IGCP 735

**09H30 - 10H00    COFFEE BREAK AND POSTER SESSION**

**CHAIR: DAVID HARPER**

**10H00 - 11H00    KEYNOTE 1 - JAVIER ORTEGA HERNANDEZ**

Preservation and evolutionary significance of fossilized central nervous systems in Paleozoic metazoans

**11H00 - 11H20    TALK 1 - AZIZI ET AL.**

Diverse microbially induced sedimentary structures from the later Ediacaran-early Cambrian Tabia Member in the western Anti-Atlas, Morocco

**11H20 - 11H40    TALK 2 - BELKACIM ET AL.**

The lower to middle Cambrian formations of Zaouite Ouzdine (Central Anti-Atlas): Potential geoheritage for science, education and geotourism

**11H40 - 12H10    TALK 3 - EL BAKHOUCHE ET AL.**

Small Shelly Fossils from the Cambrian Series 2-Cambrian Series 3 succession of the High Atlas Mountains, Morocco

**12H10 - 12H30    TALK 4 - ORTEGA ET AL.**

Trilobite legs from high latitudes: exceptional preservation in a paradoxidid from the mid-Cambrian Tatelt Formation of Morocco

**12H30 - 14H30    LUNCH**

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**CHAIR: BERTRAND LEFEBVRE**

**14H30- 15H30 KEYNOTE 2 – DAVID HARPER**

Late Ordovician (Katian) brachiopod biodiversity in and adjacent to the Iapetus Ocean: the significance of localized high-diversity hot spots

**15H30- 15H50 TALK 5 - CANDELA ET AL.**

Lower Ordovician brachiopods from the Fezouata Shale, Anti-Atlas, Morocco: initial results, identity and origin of the fauna

**15H50- 16H10 TALK 6 - MERGL**

The "Paradise" of linguliformean brachiopods: New data from the Early Ordovician of the Prague Basin (Czech Republic)

**16H10- 16H40 COFFEE BREAK AND POSTER SESSION**

**16H40- 17H00 TALK 7 - ROGAL & SPROAT**

Size and shape of subadult shells of Ordovician dalmanellid brachiopods of North America

**17H00- 17H20 TALK 8 - SPROAT & YOUNG**

An unusual brachiopod association within a Late Ordovician lagerstätte in central Manitoba, Canada

**17H20- 17H40 TALK 9 - STIGALL ET AL.**

Constraining diversification, ecological structure, and morphological change across the Great Ordovician Biodiversification Event: A case study from the Arbuckle Mountains of Oklahoma

**17H40- 18H00 TALK 10 - HINTS ET AL.**

Trace element signatures in Early Ordovician phosphorites and black shales from the Baltic Palaeobasin: sulfidic facies control of the P cycle

**18H00- 18H30 IGCP 735- BUSINESS MEETING**

# THE 2ND ANNUAL MEETING OF IGCP 735 PROGRAMME

## DAY 2 Thursday October 20th 2022

09H00- 09H10    **INFORMATIONS**

**CHAIR: ABDERRAZZAK EL ALBANI**

09H10- 10H10    **KEYNOTE 3 – ALCIA STIGALL**

Ordovician paleobiogeography: current knowledge, new ideas, and emerging methods

10H10- 10H30    **COFFEE BREAK AND POSTER SESSION**

10H30- 10H50    **TALK 11 - HINTS ET AL.**

Oxygen isotope composition of Ordovician conodonts: a SIMS approach from the East Baltic

10H50- 11H10    **TALK 12 - LEATHAM**

How the Rise of Ordovician Life (ROL) affected carbonate depositional systems

11H10- 11H30    **TALK 13 - SCHMITZ & TERFELT**

The breakup of the L-chondrite parent body 466 Ma and its terrestrial effects - A search for a mid-Ordovician biodiversity event

11H30- 12H50    **OLLE HINTS – INFORMATION ON THE JOINT 3RD ANNUAL MEETING OF IGCP 735 AND 14TH INTERNATIONAL SYMPOSIUM ON THE ORDOVICIAN SYSTEM IN TALLINN, ESTONIA (17-20 JULY 2023)**

12H00- 14H00    **LUNCH**

**CHAIR: ALCIA STIGALL**

14H00- 15H00    **KEYNOTE 4 – THOMAS SERVAIS**

The Great Ordovician Biodiversification of Land Plants

15H00- 15H20    **TALK 14 - GUTIÉRREZ-MARCO ET AL.**

A reappraisal of the Ordovician trilobites from the Jefarah-Ghadames and Murzuq basins (Lybia and Tunisia)

15H20- 15H40    **TALK 15 - PEREIRA & COLMENAR**

Where was Belgium during the Ordovician: what do trilobites have to say?

15H40- 16H10    **COFFEE BREAK AND GROUP PHOTOGRAPH**

# THE 2ND ANNUAL MEETING OF IGCP 735 PROGRAMME

**16H10- 16H30 TALK 16 - DUPICHAUD & LEFEBVRE**

Solutan echinoderms from the Fezouata Shale Lagerstätte (Lower Ordovician, Morocco): diversity, exceptional preservation and palaeobiogeographic

**16H30- 16H50 TALK 17 - NANGLU ET AL.**

Rhabdopleura-like pterobranch epibionts from the Fezouata biota illustrate the complexity of Ordovician marine ecosystems

**16H50- 17H10 TALK 18 - RICHARDS**

The typicality of the Fezouata

**17H10- 17H40 INFORMATIONS ON FIELD EXCURSION ANNUAL MEETING**

**19H30- 22H30 GALA DINNER**

## Talk instructions :

- Laptops will be made available to participants for their presentations.
- Presentations must be in PPT format. A common template will be shared with all participants in the coming days.

**The indoor sessions** with keynote talks and regular lectures will take place in the new 'Cité de l'Innovation' of Cadi Ayyad University on the Campus. They are scheduled for Wednesday, October 19th and Thursday, October 20th.



**Faculty of Sciences and Technics of Marrakesh :** (GPS: N31.64499, -8.02033)

**Innovation City of Marrakesh :** (GPS: 31.64297, -8.01922)

**Google MAP Link :**

<https://goo.gl/maps/q5ZgUu74WsGCTVB YA>



# EXCURSIONS

A three days post-conference (Oct. 21, 23 and 24) field trip will be organized across the Marrakech High Atlas and Central Anti-Atlas regions. This will be an opportunity to visit the fossil sites that gave rise to the well-preserved Lower Paleozoic Fezouata Biota assemblages.

Regular and voluntary stops for panoramic views and cultural sites will be planned along the Central High Atlas and Anti Atlas Geotrail.

## MID-CONFERENCE FIELD TRIP

October 21, 2022 Day 1 (J1): Marrakesh-Zagora via Tizi n'Tichka-Agdz : Geotraverse of Central High Atlas and Anti-Atlas

- **Stop J1.1:** Lower-Middle Cambrian transition "Brèche à Micmacca" at Assanfou (GPS: 7°22'42.54"O; 31°18'21.07"N).
- **Stop J1.2:** Middle Cambrian-Lower Ordovician transition at Tichka Pass (High Atlas) (GPS: N31°17'11.39"; W 7°22'53.48").
- **Stop J1.3:** Late Neoproterozoic stromatolites at Aït Saoune (Central Anti-Atlas) (GPS : N 30°47'30.30"; W 6°43'16.39").
- **Stop J1.4:** -Panorama (Jbel Kissane and Anti-Atlas), north of Agdz (GPS: O6°33'35.50"; N30°43'25.88").
- **Stop J1.6:** Sunset on Draa Valley (GPS: N 30°23'52.12"; O5°51'44.81")

Night in Zagora

## THE 3RD EDITION OF THE NATIONAL DAY OF GEOLOGICAL HERITAGE OF MOROCCO UNDER THE THEME: "AFRICAN GEOPARKS", ZAGORA, MOROCCO

October 22, 2022 (day 2: J2)

Consult the programme on this link: <https://bit.ly/3eW2Aam>

Or visit our website: <http://ens-marrakech.ac.ma/projets/igcp735/>

## POST-CONFERENCE FIELD TRIP

October 23, 2022 (day 3: J3)

- **AM: Stop J2.1:** Stop J2.1: Late Ordovician glacial records at Oued Tarhbalt (GPS : N30°32'58.93"; W5°19'54.93");
- **PM: J2-1, J2-1** The Fezouata Biota at Jbel Tizagzaouine

Night in Zagora

**Day 3 (J3):** Zagora-Marrakesh via Aït Ben Haddou: The Ouarzazate Cultural Heritage

- **Stop J3.1:** Taourirt Kasbah
- **Stop J3.2:** Ouarzazate Studio-Museum
- **Stop J3.3:** Lunch at Ksar of Aït Ben Haddou: UNESCO World heritage

Marrakesh end of the field trip

SEPTEMBER 2022

# SCIENTIFIC COMMITTEE



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(DURHAM,  
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ESTONIE)



WAISFELD, BEATRIZ  
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ARGENTINE)



WANG, WENHUI  
(CHANGSHA, CHINE)



# ORGANIZING COMMITTEE



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MAROC)



EL HARIRI, KHADIJA  
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TAOURIRTE MOHA  
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LEFEBVRE,  
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CANDELA, YVES  
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**ROCKS N' ROL'S ANNUAL MEETING  
OF IGCP 735 - 3RD CIRCULAR**

# CONTACT INFORMATION

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**EVENT'S WEBSITE :**

<http://ens-marrakech.ac.ma/projets/igcp735/>

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**SEPTEMBER 2022**

# OFFICIAL EVENT PARTNERS



المملكة المغربية  
ROYAUME DU MAROC

وزارة الانتقال الطاقم والتنمية المستدامة  
Ministère de la Transition Énergétique  
et du Développement durable

ROYAUME DU MAROC  
MINISTÈRE DE L'ENSEIGNEMENT  
SUPÉRIEUR, DE LA RECHERCHE  
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Collège des Sciences et Techniques,  
de l'Environnement, de la Terre et de l'Univers



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