

The Newsletter of the International Association of Sedimentologists

Issue 8, 2021



Dear IAS Members,

Welcome to the August 2021 issue of the IAS Newsletter. I hope that everyone has managed to get a break from the computer, maybe you even made it back into the field. Bliss!

In this issue we have a lot of exciting news from around the field of Sedimentology including meeting reports, meeting announcements, grant reports, the latest news from our journals and lots more besides. The looming deadline this month is for IAS grant submissions – these strictly close on the 30th September! The IAS has four grant schemes offering a total of 20 grants. Please encourage your colleagues and students to apply. The application process is easy – details are below.

As usual, if you have any announcements for the IAS community then don't hesitate to get in touch with your Regional Correspondent or contact me directly at general_secretary@sedimentologists.org.

Stephen Lokier, *General Secretary*

Announcement – IAS Journals go Online-Only

From 2022 onwards, the IAS will publish all of the journals offered to our members (Sedimentology, Basin Research, The Depositional Record and Journal of Petroleum Geology) as online-only. Globally, more and more journals have taken this route in order to reduce the large carbon footprint involved in printing and shipping physical copies. In parallel, we also have seen a steady decline in the number of print subscriptions over the past few years.

With this decision, the IAS will contribute a reduction of 22.12 t CO₂ annually. Moreover, each volume of Sedimentology is equivalent of 23 trees being used. In return, Wiley will plant a tree for every copy that will no longer be printed. In 2021, Sedimentology amounted to 2,450 printed copies, meaning that with this decision a Sedimentology forest will be planted.

What does this mean for you? With the membership renewals for 2022 (starting in fall 2021), you will no longer be able to select a print copy of either Sedimentology or the Journal of Petroleum Geology. Those members that still wish to receive print copies will be able to utilise a discounted Print-On-Demand (POD) service that will be offered directly to our membership from Sheridan Printing. The IAS will not be a partner in this POD service. Details of how to subscribe to this service will be released soon along with costs and instructions as to how to benefit from the IAS discount.

In case you have any question, please don't hesitate to contact the IAS office (IAS-office@sedimentologists.org).

David Van Rooij, *Treasurer of the IAS*

Last call! – Applications for Institutional Grants (Fall 2021 Session)

Twice a year, IAS awards an **Institutional Grant** of maximum 10,000 Euro, which is intended to support capacity building initiatives in less developed countries (LDCs). Grants will allow earth science departments in LDCs to acquire durable sedimentological equipment for teaching and research, or tools that can be used by all geology students. The grant application should thus clearly demonstrate how the grant will increase the recipient's capacity to teach sedimentology at undergraduate level in a sustainable way.

Applications have to be submitted via the [IAS website](#). Application deadline for the Spring 2021 Session is **30th September 24h00 Brussels Time (CEST, UTC+2)**.

More information about the Institutional Grant Scheme and guidelines on how to apply can be found on your membership profile.



Get to know:

International Fossil Coral and Reef Society (IFCRS)

We are a rather small society, which has been around for some time - in fact, this year is our 50th anniversary! Formerly known as the International Association for the Study of Fossil Cnidaria and Porifera, at our last meeting we changed the association name to make it much clearer what we actually do.



Thus, if you are interested in the fossil record of reefs and the organisms who formed them or lived in them or any other environments corals and sponges lived in, then the IFCRS is the right place for you. Members are interested in a wide range of research fields and use various approaches in fields including (palaeo)biology, sedimentology, mineralogy, and geochemistry. We are much more than a bunch of palaeontologists describing species – though doing so is really useful for some research questions.

Traditionally we held a symposium every four years and, with time, it has travelled to almost all continents. The last meeting was in Italy (Modena) and the next one will be in 2023 in the Holy Cross Mountains in Poland. There, we shall have easy access to splendid outcrops with reefs and reefbuilders from very different geological periods. If you want to see some of the interesting science that our members are currently undertaking, then have a look into the last proceeding volume published in the Bollettino della Società Paleontologica Italiana

[\(http://paleoitalia.org/archives/bollettino-spi/114/vol-59-3-2020-open-access/\)](http://paleoitalia.org/archives/bollettino-spi/114/vol-59-3-2020-open-access/).

Our society is like a big family, we discuss and argue, but in the end we all sit together and enjoy good food and a drink.



If these sentences got you interested, please have a look at our website www.ifcrs.org or write to us fossilcoralreef@gmail.com or check out our Twitter [@fossil_reef](https://twitter.com/fossil_reef). Early career researchers should look out for the online early Career Researcher Symposium organised by IFCRS on the 15th of October 2021.

Francesca Bosellini (President) and Markus Aretz (Secretary)

The 21st International Sedimentological Congress, Beijing 2022



The 21st International Sedimentological Congress will be held in Beijing between the 22nd and 26th August 2022 – get the dates into your diary. [Visit the website for full details.](#)

This promises to be a truly exceptional meeting with a plethora of exciting, once-in-a-lifetime fieldtrips on offer.

The Journals of the IAS

For a quick overview of the latest issues of **Sedimentology**, **Basin Research** and **The Depositional Record**, follow these links:

- **Sedimentology**: directly at [Wiley](#) or via the [IAS website](#)
- **Basin Research**: directly at [Wiley](#) or via the [IAS website](#)
- **The Depositional Record**: directly at [Wiley](#) or via the [IAS website](#)

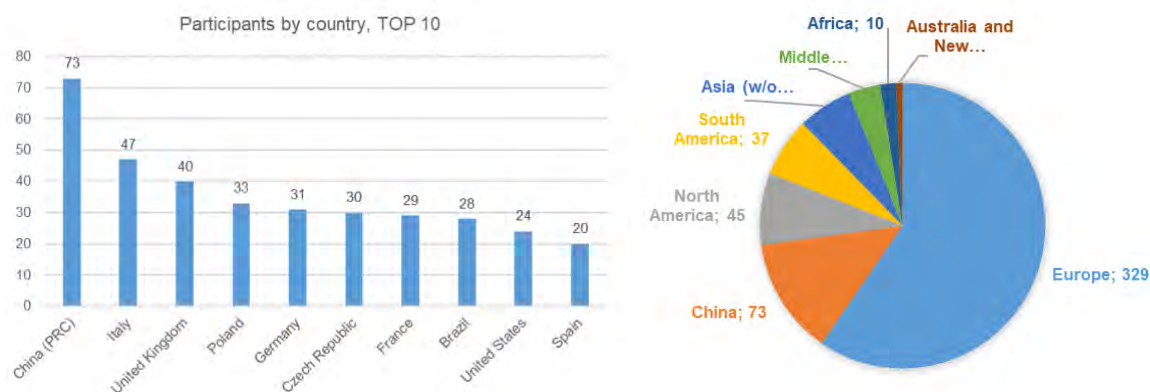
All of the journals of the IAS are active on Twitter. Stay up to date on the latest news and papers in @sedimentology by following the IAS journals: @JSedimentology, @DepositRecord, @BasinResearch.



Report from the 35th IAS International Meeting of Sedimentology

The 35th IAS Meeting of Sedimentology was formally held in Prague, Czech Republic on June 21-25, 2021. Because of the Covid-19 pandemic and travel restrictions, the meeting was organized after a one-year break (originally scheduled for June 2020), and in fully on line mode.

The meeting was attended by 552 participants, 179 females and 373 males, from 55 countries from Europe, Asia, South America, North America, Australia and New Zealand. Students were represented by 209 participants (~38 %). Eighty one percent (447) of all participants were members of IAS.



The online meeting was run on *gCon* virtual platform, a comprehensive software and hardware solution for the administration of an event's electronic content (<https://gcon.cz/en/>). The conference was split into 5 conference days; 4 days with four parallel streams, and 1 day with three parallel streams. The scientific programme included 3 invited plenary talks given by internationally recognized experts, 3 lectures by IAS Awardees, 3 session keynote lectures, 207 regular oral presentations, 62 short oral presentations, and 228 posters. The programme constituted 12 meeting themes covering the major field of basic research and applied sedimentary geology, which further included 26 special sessions. The conference programme was supplemented by early-career scientist activities (ECS Virtual Party and two ECS Workshops), and a poster competition.

All presentations and posters were pre-recorded and uploaded in the *gCon* before the meeting. During the meeting, the oral presentations were launched by technicians, chaired by session chairs, and commented by the first authors, according to the meeting schedule. Participants could ask written questions using a chat option, while the authors were invited to answer immediately after the presentation. All video-recordings and chats were made visible to the registered meeting participants during the entire meeting duration and even after the meeting.

Twelve physical field trips were offered to the participants of the virtual conference, but all except one had to be cancelled due to lack of interest. Out of four originally offered short courses, two were held virtually and two were cancelled.

Short courses

- SC1: Carbonate Diagenesis (Microscopy Course)
- SC4: Rock magnetic methods in sedimentology

Field trips

- FT12: Mid-Cretaceous transgressions on the northern edge of Prague (Czech Republic; 1 day)

A book of abstracts from the meeting, field guides from FT3 and FT12, video-recordings of talks, and certificates of participation were available for download to all registered participants. Although the interest for sponsorship was negatively influenced by the online mode of the meeting, the virtual conference was finally supported by 5 commercial partners. A total of 14 383 EUR was raised to support the conference organization.

The 35th Meeting of Sedimentology was the first fully online conference in IAS history, and definitely an unusual experience. Despite the limitations, the number of participants, and the feedback that the organizers received afterwards, suggest that the conference was a success.

Ondrej Babek

Last call! – Applications for the Judith McKenzie Field Work Award (Fall 2021 Session)

The [Judith McKenzie Field Work Award](#) aims to promote sedimentological field observations for the newest generation of Earth Scientists – MSc Students.



Up to 5 awards of €300 each, will be awarded twice per year to IAS student members. Since the award is only available for MSc students, proof of student status will be required. The awardee shall also receive a one-year IAS student membership, upon submission of their MSc thesis.

Applicants should apply for the Judith McKenzie Field Work Award via the [IAS website here](#). The application requires submission of a grant proposal (written by the student) with budget and CV (template provided on the submission webpage), and a signed letter of recommendation from the student's supervisor.

Application deadline for the Fall 2021 Session is **30th September 24h00 Brussels Time (CEST, UTC+2)**.

IAS Grant Reports

The IAS supports postgraduate and post-doctoral researchers via our various grant schemes.

At the end of this Newsletter you will find some of the latest grant reports received by the IAS.

You can also read recent and past Grant Reports from IAS members who have benefited from [Post-Doctoral](#) or [Post-Graduate](#) grants [here](#).



The IAS still pays the APC for papers accepted in The Depositional Record!

The Depositional Record is a fully open access journal publishing high quality articles from across the field of Sedimentology. The journal covers all timescales, from Ancient to Modern, and welcomes articles that emphasise the application of sedimentary processes to the study of paleoclimate, changes in the chemical environment, ocean acidification, extra-terrestrial sedimentology, and the application of genetic methods to understanding sedimentological processes.



Article publication charges are still fully covered by the IAS but this will have to change soon, so [submit your paper today!](#)



Don't miss out on all that the IAS has to offer - RENEW TODAY!

The IAS is the home of Sedimentology.

We are very proud of our ability to keep our membership fees so much lower than most other professional societies.

You can find a complete list of the benefits of membership of the IAS [website](#).

You may also consider becoming a full member for 5 years at a cost of only €100 – effectively getting one year's membership for free. We also offer 'lifelong' membership for just €400.

STUDENT	FULL
STARTING FROM 10€	STARTING FROM 25€ /year
INCLUDED	INCLUDED
Annual membership fee	Annual membership fee
Online Sedimentology	Online Sedimentology
Online Basin Research	Online Basin Research
Online Special Publications (5+ years)	Online Special Publications (5+ years)
Travel Grants	Post-doctoral Grants
Postgraduate Grants	Institutional Grants
J. McKenzie Field Work Award	Conference Sponsorship Request
Conference Sponsorship Request	Printed Sedimentology at reduced fee
Printed Sedimentology at favourable rates	Reduction for IAS Conferences
Reduction for IAS Conferences	Printed thematic books discounts
Printed thematic books discounts	Special Lecture Tour hosting
Special Lecture Tour hosting	Newsletter
Newsletter	Contributed Content
Contributed Content	Members Directory
Members Directory	OPTIONAL
OPTIONAL	Multiple years membership at reduced fee
Printed Sedimentology • 20€	Lifelong membership at reduced fee
Online Petroleum Geology • 45€	Printed Sedimentology • 20€ /year
Online • Printed Petroleum Geology • 50€	Online Petroleum Geology • 45€ /year
Friendship Scheme Sponsor • 15€	Online • Printed Petroleum Geology • 50€ /year
	Friendship Scheme Sponsor • 15€ /year

IAS Regional Correspondents

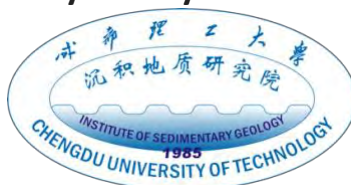
IAS **Regional Correspondents** are your local hotline to the IAS.

Check out the [News Feed](#) to see what is happening in your local community. At this link you will also be able to select your correspondent and even elect to receive information from multiple correspondents.



IAS **Regional Correspondents** are IAS Members who have volunteered to act as a representative between sedimentologists in their region and the IAS. If you know of any sedimentology events going on in your region, then please get in touch with your Regional Correspondent and let them know. Similarly, if your region lacks a Regional Correspondent ([see the map here](#)) and you would like to propose an IAS Member (Full or Student), or yourself, for this position then please send an email to the [General Secretary](#).

While in China for the ISC 2022 you may also want to consider...



PGC22

Particulate Gravity Currents in the Environment

Chengdu, 2022

2nd to 4th September 2022

This conference, to be held at Institute of Sedimentary Geology, Chengdu University of Technology, shortly after the 21st International Sedimentological Congress in Beijing (August 22nd to 26th), will be relevant to all those with an interest in the field of particulate gravity currents. Although we expect a majority of the participants to be from the Earth and environmental sciences, we would like to encourage participation from all those working with: turbidity currents; pyroclastic density currents; haboobs; cohesive and non-cohesive non-Newtonian flows, including transitional or hybrid flows, fluid muds, and rapid granular flows. To encourage interdisciplinary exchange, we will have **keynote addresses** from the following:

Wei Hu	<i>Mechanics of landslides</i>	Chengdu University of Technology, China
Peter Talling	<i>Monitoring modern turbidite systems</i>	University of Durham, UK
Gert Lube	<i>Pyroclastic flows</i>	Massey University, New Zealand
Bernhard Vowinkel	<i>Non-Newtonian cohesive flows</i>	Leichtweiß-Institut für Wasserbau, Germany
Elisabeth Guazzelli	<i>Non-Newtonian non-cohesive flows</i>	CNRS, Université de Paris, France
Jim McElwaine	<i>Snow avalanches</i>	University of Durham, UK
Tom Gill	<i>Haboobs</i>	University of Texas El Paso, US
Giovanni de Cesare	<i>Reservoir sedimentation</i>	EPFL, Lausanne, Switzerland
He Zigu	<i>Laboratory experiments</i>	Zhejiang University, China
Eckart Meiburg	<i>Numerical modelling</i>	University of California, Santa Barbara, US
Andy Woods	<i>Buoyancy and particle transport</i>	University of Cambridge, UK

Oral presentations will be of approximately 20 minutes including questions, and may be supported by poster presentations; posters independent of oral presentations will also be welcomed. The balance of oral vs. poster sessions will depend on the number of participants, which we expect to range in the few hundred. Limited hotel accommodation will be available on campus for overseas participants in addition to other local hotels.

Chengdu, the capital of the province of Sichuan, sits a mere 60 km from the eastern margin of the Tibetan Plateau, rising to 6,000 metres. In addition to the well-known panda sanctuary, Chengdu is also famous for its culinary prowess, tea culture, and the World Heritage Site of the Dujiangyan Irrigation system, still functioning after 2,000 years. It is well-connected both domestically by air and high-speed rail, and by direct international flights from several cities in US, Europe and Japan.

Convenors

Ben Kneller. University of Aberdeen, UK, and Chengdu University of Technology, China

Eckart Meiburg. University of California, Santa Barbara, US

Tian Yang. Chengdu University of Technology, China

<http://pgc22.huicekeji.com/En/>

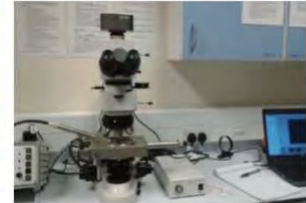
Last call! – Applications for Post-Graduate Research Grants (Fall 2021 Session)

Up to [10 research grants](#), each to a maximum of €1,000, are awarded twice a year to **IAS Post-Graduate Student Members**. This grant scheme is designed to support PhD students in their studies and research. Post-Graduate Research Grants can be used to (co-)finance fieldwork, acquisition and analysis of data, visits to other institutes to use specialized facilities, etc.

Applications must be submitted via the [IAS website](#).

Application deadline for the Fall 2021 Session is **30th September 24h00 Brussels Time (CEST, UTC+2)**.

More information about the Post-Graduate Grant Scheme and guidelines on how to apply can be found on your membership profile.



Last call! – Applications for IAS Post-Doctoral Research Grants (Fall 2021 Session)

[IAS Post-Doctoral Research Grants](#) are intended as a seed to assist Early-Career post-doctoral researchers in either establishing a proof of concept, in order to support applications to national research funding bodies, or to fund areas of a project that were not included in the original project scope.

Up to 4 grants, each to a maximum of €2,500, are awarded twice per year to Early Career IAS members.

The application requires submission of a research proposal with budget and CV (template provided on the [submission webpage](#)), and a letter of support from the researcher's supervisor, line manager or Head of School. More details about the application procedure can be found on your membership profile.



Application deadline for the Fall 2021 Session is **30th September 24h00 Brussels Time (CEST, UTC+2)**.

Eligibility:

- Applicants must be full members of the IAS.
- Applicants must have secured their Ph.D. within the previous 7 years.
- Applicants can only benefit from a Post-Doctoral grant on one occasion.



pre-Tidalites Virtual Symposium

A free, on-line workshop preceding the
10th International Congress of Tidal
Sedimentology in Italy, Tidalites 2022

<https://www.tidalites2021.it/symposium/>

October 5th-6th 2021



The current pandemic emergency has forced us once again to postpone the **10th International Congress of Tidal Sedimentology**, which for 40 years has been held every four years hosted by various countries around the world and which for the first time will be organized in Italy.

While waiting for a better international situation allowing to resume congress activities, hopefully in the spring of 2022, the organizing committee of Tidalites proposes a virtual symposium on **October 5th and 6th 2021**, sponsored by the Italian Geological Society.

The workshop will host key notes by six international geoscientists who will present some of the latest breakthroughs on the sedimentary dynamics of modern and ancient tidal environments. The international community is invited to join us at the **pre-Tidalites Virtual Symposium**, as we wait for **Tidalites 2022** in Matera.

October 5th, 2021 <https://global.gotomeeting.com/join/347245757>
h 14:30 (CET)



14:45-15:10:
Tidal, seasonal, and anthropogenic control on the sedimentology and morphologic evolution of macrotidal flats, west coast of Korea

Prof. Kyungsik Choi
School of Earth and Environmental Sciences
Seoul National University, Korea



15:20-15:45:
Seafloor morphologies and benthic habitats in tidal environments: a case study from the Venice Lagoon

Dr. Fantina Madricardo
Consiglio Nazionale delle Ricerche
ISMAR Istituto di Scienze Marine
Bologna, Italy



15:55-16:20:
Sedimentology and internal heterogeneity of tidal bar deposits: input in reservoir modelling with an example from the Norwegian Continental Shelf

Dr. Carlo Messina
Equinor, Oslo, Norway

<https://global.gotomeeting.com/join/371504069> **October 6th, 2021**
h 15:30 (CET)



15:45-16:10:
Dynamic interactions between tides and coastal systems: a modelling approach

Prof. Nicoletta Leonardi
Department of Geography and Planning
University of Liverpool, UK



16:20-16:45:
Ichthyology of tidal environments: assessing environmental controls, benthos response, and ecosystem engineering

Prof. Lousi Buatois
College of Arts and Science
University of Saskatchewan, Saskatoon, Canada



16:55-17:20:
Sedimentology, stratigraphy, and regional significance of a latest Miocene to early Pliocene fault-controlled tidal straight in the lower Colorado River valley, USA

Prof. Rebecca Dorsey
Department of Earth Sciences
University of Oregon, Eugene, USA

<https://www.tidalites2021.it/symposium/>
www.tidalites2021.it
info@tidalites2021.it

Report on fieldwork completed during 2021 with a Postgraduate Grant from IAS

Project title: A basin-wide sedimentary facies analysis on the Witpoort Formation (Witteberg Group, South Africa)

Student: Christopher Harris¹

Academic Supervisor: Zubair Jinnah¹

¹ School of Geosciences, University of the Witwatersrand, Johannesburg, Private Bag 3, Wits, 2050, South Africa

04 August 2021

Outline

This study aims to produce a modern sedimentary facies analysis and a stratigraphic framework for the Witpoort Formation (Witteberg Group, South Africa) of the Late Devonian Period. In the first of three field seasons, two composite sections in the eastern part of the basin were logged, in which high resolution data of sedimentary structures, tectonic deformation structures and palaeocurrent indicators were attained. Ichnofossils from the collections of the Albany Museum in Makhanda have been described. The data collected during this fieldwork are currently being processed.

Introduction

During the first year of a PhD study, the student spent two months in the field and lab in Makhanda in the Eastern Cape. The aim of this trip was a) to construct a thorough sedimentary facies analysis, b) to log excellent exposure of the Witpoort Formation in the area, c) to document structures that affect the stratigraphy and d) to describe trace fossils in the field and in the collections of the Albany Museum.

The Makhanda region is a favourable place to construct a sedimentary facies analysis because sedimentary structures are well preserved at outcrop near the town, and a number of fossil sites discovered nearby in recent years provide important palaeoenvironmental information (Gess and Whitfield, 2020; Harris et al., 2021).

Two lithological sections were selected for study, both of which are anchored to formational contacts. Howison's Poort is a historical locality which gives its name to a Middle Stone Age tool industry and also provides historically important fossils within Late Devonian strata. Two species of Devonian plants have been described from a black shale layer at the locality, including *Dutoitia maraisia* Plumstead 1967 and *Platyphyllum albanense* Plumstead 1967. Sedimentology and stratigraphy of the locality was described by Hiller and Taylor (Hiller and Taylor, 1992), who suggested that the Witpoort Formation here represents a barrier island setting along a liner wave-dominated, mesotidal shoreline. It is possible to test their hypothesis by ascertaining whether tidal, shoreface and beach deposits can be recognised at outcrop. Rock exposures at Howison's Poort exhibit remarkably little tectonic disturbance, and sedimentary structures are well preserved, and furthermore provides the best exposure of the Weltevrede Formation–Witpoort Formation contact known from the region (Figure 1A, B).

The Waterloo Farm lagerstätte is a fossil site of world renown, providing one of the most completely known fossil ecosystems of the Late Devonian. Based on the fossil biota preserved within black shale

horizons, the deposits are interpreted as representing an estuarine setting (Gess and Whitfield, 2020). Stratigraphy of the road cut exposures was recorded by Hiller and Taylor (1992), but the locality was not anchored to any formational contact, and its precise position within the Witpoort Formation is uncertain. This is important because the Devonian–Carboniferous (D–C) boundary (and the synchronous end-Devonian Hangenberg mass extinction event) are presently considered to occur at the top of the Witpoort Formation (Figure 1F) (Streel and Theron, 1999; Gess, 2016). This research presents an opportunity to test the postulated depositional environments and stratigraphy of the locality.

The Albany Museum’s Devonian Lab boasts the most impressive collection of ichnofossils from the Witpoort Formation, amounting to hundreds of traces on approximately 200 slabs, including fish drags, coprolites and invertebrate burrows and trails (Figure 1C). The trace fossils, furthermore, form part of recent collections (including by the student), all with good provenance records.

Preliminary results

-Stratigraphic section 1: Howison’s Poort

A composite section comprising four continuous sections was logged here at centimetre scale, including the upper 40 m of the Weltevrede Formation and the lower 150 m of the Witpoort Formation. 218 palaeocurrent indicators were recorded and a rare marine invertebrate fossil locality were discovered at a horizon just below the base of the Witpoort Formation (Figure 1E).

-Stratigraphic section 2: Waterloo Farm

Rock exposures at Waterloo Farm are influenced by structural deformation, which includes a number of faults recorded at outcrop (Figure 1G). Composite sections from the locality to the top of the Witpoort Formation were measured along two paths comprising opposing limbs of an open anticline. This, in order to mitigate against the effects of structural deformation to attain a realistic estimate of the stratigraphic position of the locality below the D–C boundary. An estimated 200 m of strata were logged at centimetre scale, and 204 palaeocurrent indicators were recorded from these composite sections at Waterloo Farm. Sedimentary structures within this hypothetical estuarine deposit are delicately preserved (Figure 1D), and have been described in detail.

-Labwork: Ichnological descriptions

Trace fossils identified in the field and lab have been described and photographed (Figure 1C). Together these comprise an estimated 30–50 ichnogenera, from which the first ichnotaxonomic paper from the Witpoort Formation will be formed. The majority of the traces that are described are anchored within the logged sections, making this work an invaluable contribution to the sedimentary facies and palaeoenvironmental analyses.

Work in progress

Data captured in the field requires much processing before coherent results are attained.

More than 400 palaeocurrent indicators are to be back-rotated using a Schmidt stereonet projection in order to restore the original horizontality.

Around 50 rock samples collected in the field will be cut and polished or thin sectioned for petrographic and microfacies analysis.

Detailed stratigraphic logs are drawn at approximately 1 cm: 1 m scale.

Sedimentary facies are constructed by compiling the qualitative and quantitative observations attained in the field. These are grouped within recognisable facies associations, which together with palaeocurrent, ichnological and fossil data will allow the interpretation of palaeoenvironments.

References

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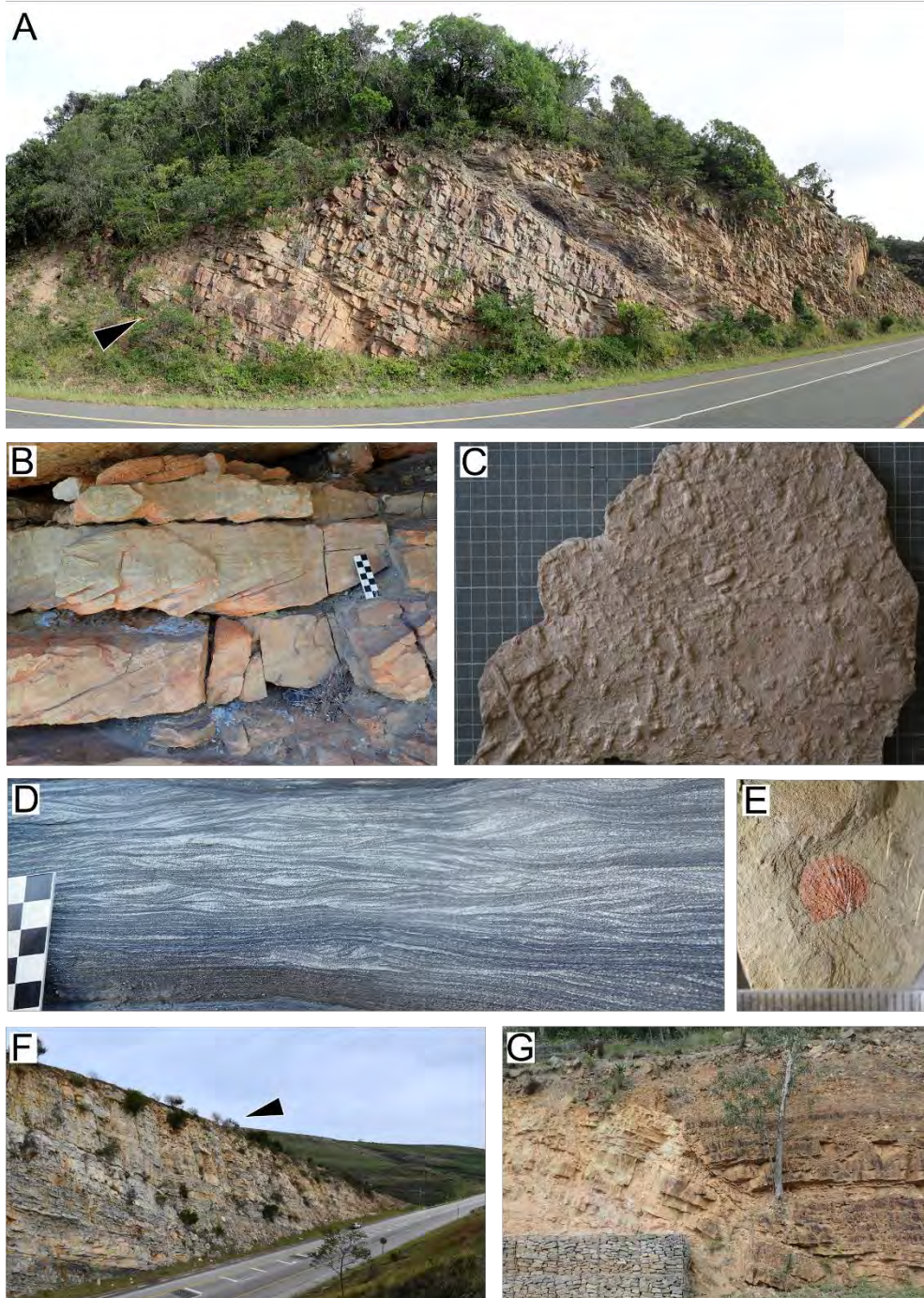


Figure 1: A) Exposure of the lowermost Witpoort Formation at Howison's Poort (arrow indicates the stratigraphic base of the Witpoort Formation). B) Planar cross-stratification at Howison's Poort (scale in cm). C) *Cruziana-Rusophycos* trace fossil association from the Waterloo Farm lagerstätte, (scale grid in cm). D) Wave-generated ripples from Waterloo Farm (scale in cm). E) Brachiopod fossil (*Tropidoleptus* sp.) from a horizon slightly underlying the Witpoort Formation (scale in mm). F) Uppermost Witpoort Formation strata near Waterloo Farm, arrow indicates the stratigraphic top of the Witpoort Formation, and the hypothetical Devonian-Carboniferous boundary. G) Thrust fault in the lower Witpoort Formation near Makhanda.

Follow the IAS on Social Media

Follow the IAS on [Facebook](#), [Twitter](#), [WeChat](#) and [LinkedIn](#) to keep up to date with all of the latest news, announcements and happenings.

[@sedimentology](#) and IAS沉积学之家

