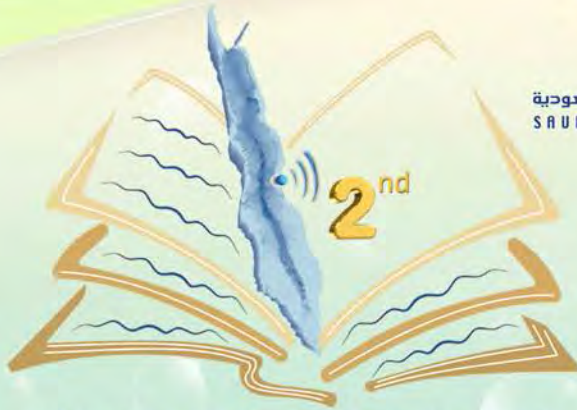




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ورشة عمل الوضع الجيولوجي والدراسات البحرية والبيئية للبحر الأحمر

WORKSHOP ON
THE GEOLOGICAL SETTING, OCEANOGRAPHY AND ENVIRONMENT OF THE RED SEA

Opening Ceremony

February 14, 2016

- 18:45 - 18:55 Meet and Greet
18:55 - 19:00 Tilawat from the Holy Quran
19:00 - 19:10 Welcome Speech by H.E. Dr. Zohair A. Nawab

Invited Speakers

- 19:10 - 19:20 Geoff Bailey
19:20 - 19:30 Bill Bosworth
19:30 - 19:40 Michael Petraglia
19:40 - 19:50 Mohammed Qurban
19:50 - 20:00 Dimitrios Sakellariou
20:00 - 20:10 Nico Agustin
20:10 - 20:20 Abdullah M. Al Attas
20:20 - 21:30 Dinner

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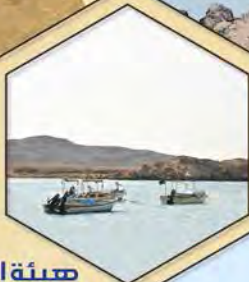
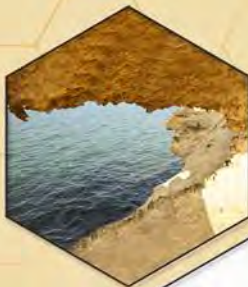
The Red Sea Books

The Red Sea is of considerable interest both from a scientific viewpoint as an ocean basin in the early stages of development as well as an economic one as it is major transport route that is also undergoing rapid developments along its coastlines.

Following on from the successful production of our first book on the Red Sea, which included contributed chapters on the formation of the Red Sea, its geology, environment and ecology, two further volumes are planned.

The books will present comprehensive new data regarding the Red Sea with invited contributions from researchers with an interest in the geology, geophysics, oceanography and environment of the Red Sea. One volume will deal with geological matters while the second will focus on the oceanography, ecology and biology of the area. The books will contain invited contributions from active researchers in their fields and so will present the latest data as well as comprehensive reviews of the literature.

These new chapters will include topics that were not covered in the first volume or will provide additional new material. It is anticipated that the books will be of interest not only to researchers who are studying the Red Sea and its environment, but should also serve as reference for all those involved in planning and managing the Red Sea, its environment and resources in the surrounding countries.





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WORKSHOP ON
THE GEOLOGICAL SETTING, OCEANOGRAPHY AND ENVIRONMENT OF THE RED SEA

February 14-18, 2016
Jeddah, Kingdom of Saudi Arabia

٩-٥ جمادى الأولى ١٤٣٧ هـ
جدة - المملكة العربية السعودية

Workshop Program



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Center for Marine Geology

The Center for Marine Geology is the country's focal point for marine research, and represents an unparalleled asset in coastal and marine research and development in the eastern Red Sea and the western Arabian Gulf of the Kingdom of Saudi Arabia. The Center was established in 2009 at the Saudi Geological Survey in Jeddah. It owns two research boats and is home to 13 researchers and support staff in the newly established marine geological laboratory. The activities at the Center are concentrated on both sediment and water related research, including coral reefs. In addition to its many research themes the Center plays an important role in addressing local environmental issues. It focuses on areas of rapidly emerging scientific and community needs, and provides environmental assessment advisory and consultancy services to both governmental and private organizations. In addition, the Center collaborates with various international and domestic research institutes and organizations to carry out research activities in the Red Sea and the Arabian Gulf.



Session 1: Coordinator: Luigi Vigliotti

Chairman: **Daniel Stockli**

Co-Chairman: **Alessio Sanfilippo**

08:15 - 08:40

Oceanization starts from below during continental rupturing in the northern Red Sea.

Marco Ligi, Enrico Bonatti, Bill Bosworth and Sarah Ronca

08:40 - 09:05

Dynamics of the upper mantle upwelling during seafloor spreading in the southern Red Sea.

Ryan Gallacher, Derek Keir and Nicholas Harmon

09:05 - 09:30

Rifting kinematics along the Arabian Margin, Red Sea.

Pietro Paolo Pierantoni, Najeeb Rasul and Davide Zanoni

09:30 - 09:55

Plate motions around the Red Sea since the Early Oligocene.

Antonio Schettino, Chiara Macchiavelli and Najeeb Rasul

09:55 - 10:15

Coffee Break

Session 2: Coordinator: Ryan Gallacher

Chairman: **Martin Mai**

Co-Chairman: **Antonio Schettino**

10:15 - 10:40

Rifting and salt deposition in continental rifts: differences and similarities from the Red Sea with the South Atlantic sedimentary basins.

Webster Mohriak

10:40 - 11:05

Timing of extensional faulting along the magma-poor central and northern Red Sea rift margin – Transition from regional extension to necking along a hyperextended rifted margin.

Daniel Stockli and Bill Bosworth

11:05 - 11:30

A modern view on the Red Sea Rift: tectonics, volcanism and salt blankets.

Nico Augustin, Colin W. Devey and Froukje van der Zwan

11:30 - 11:55

Crustal structure at the Western Margin of Saudi Arabia from receiver functions and surface wave analysis.

Martin Mai, Zheng Tang and Jordi Julia

11:55 - 13:20

Lunch and Prayer Break



Day 2

February 15, 2016 (Monday)

Session 3: Coordinator: **Pietro Paolo Pierantoni**

Chairman: **Marco Taviani**

Co-Chairman: **Riyad Manasrah**

13:20 - 13:45

Neotectonics of the Red Sea, Gulf of Suez and Gulf of Aqaba.
Bill Bosworth, Marco Taviani and Najeeb Rasul

13:45 - 14:10

Geochronology and paleomagnetism of the Lunayyir and Khaybar lava fields, Saudi Arabia.
Luigi Vigliotti, Sidney Hemming, Najeeb Rasul and Marco Ligi

14:10 - 14:35

Geochemistry and Sr-Nd-Pb isotopic composition of the Lunayyir and Khaybar volcanic fields, Saudi Arabia.
Alessio Sanfilippo, Marco Ligi and Yue Cai

14:35 - 15:00

Geological structure and submerged landscapes of the continental shelf in the region of the Farasan Islands.
Dimitrios Sakellariou, Grigoris Rousakis and Ioannis Panagiotopoulos

15:00 - 15:20

Coffee Break

Session 4: Coordinator: **Islam Elsadek**

Chairman: **Anna Kottarba**

Co-Chairman: **Lorenzo Angeletti**

15:20 - 15:45

Landscape survey, palaeolithic archaeology and coastline change in Asir and Jizan provinces, SW Saudi Arabia.
Anthony Sinclair and Robyn Inglis

15:45 - 16:10

The multi-disciplinary search for underwater archaeology in the southern Red Sea.
Garry Momber and Ioannis Morfis

16:10 - 16:35

Investigating the Coastal Archaeology and Raised Coral Terraces of the Southern Red Sea.
Robyn Inglis, Najeeb Rasul, Bill Bosworth and Geoff Bailey

16:35 - 17:00

Optically Stimulated Luminescence dating as a geochronological tool for the dating of Late Quaternary sediments in the Red Sea region.
David Sanderson and Timothy Kinnaird



Day 2

February 15, 2016 (Monday)

Session 5: Coordinator: *Alaa Albarakati*

Chairman: **Andre Antunes**

Co-Chairman: *Manikandan Karuppasamy*

- 08:15 - 08:40 Physical and chemical properties of seawater in the Gulf of Aqaba, Red Sea.
Riyad Manasrah, Ahmad Abu Hilal and Mohammed Rasheed
- 08:40 - 09:05 Characteristics of atmospheric dust, surface water particulate matter and sediment organic tracers from the Red Sea.
Ahmed Rushdi, Zanna Chase, Bernd Simoneit and Adina Paytan
- 09:05 - 09:30 Geochemistry and life at the interfaces of brine-filled Deeps in the Red Sea.
André Antunes, Stein Kaartvedt and Mark Schmidt
- 09:30 - 09:55 Metal pollution assessment in the sediments of Red Sea coast of Saudi Arabia.
Manikandan Karuppasamy, Mohammed Ali B. Qurban and Krishnakumar Periyadan

09:55 - 10:15 Coffee Break

Session 6: Coordinator: *Radwan Al-Farawati*

Chairman: **Ahmed Rushdi**

Co-Chairman: *Niklas Hausmann*

- 10:15 - 10:40 Preliminary results of micropaleontological analyses on sediment core FA09 from the southern Red Sea continental shelf.
Maria Geraga, Eelco Rohling and Antonia Diamantopoulou
- 10:40 - 11:05 Red Sea palaeoclimate: stable isotope and element-ratio analysis of marine molluscs.
Niklas Hausmann, Olga Kokkinaki and Melanie Leng
- 11:05 - 11:30 Mollusc fauna associated with Late Pleistocene coral reef systems of the Saudi side of the Gulf of Aqaba, Red Sea.
Lorenzo Angeletti, Najeeb Rasul and Marco Taviani
- 11:30 - 11:55 Pleistocene coral reef terraces on the Saudi Arabian side of the Gulf of Aqaba, Red Sea.
Marco Taviani, Paolo Montagna and Najeeb Rasul

11:55 - 13:20 Lunch and Prayer Break



Day 3

February 16, 2016 (Tuesday)

Session 7: Coordinator: *Gopikrishna Mantha*

Chairman: *Dirar Nasr*

Co-Chairman: *Julia Spaet*

13:20 - 13:45

Molecular mechanisms and gene expressions as indicators for determining stress responses in coral reefs from the Red Sea.

Hany Abdel-Salam

13:45 - 14:10

The Red Sea and climate change.

Ahmed Khalil and Dirar Nasr

14:10 - 14:35

Primary productivity, diversity and community composition of phytoplankton in the Saudi Arabian waters of the northern Red Sea

Mohammed Qurban, Mohideen Wafar and Moritz Heinle

14:35 - 15:00

Zooplankton of the Red Sea.

Maher Amer

15:00 - 15:20

Coffee Break

Session 8: Coordinator: *Mohsen El-Sherbiny*

Chairman: *Mohammed Shobrak*

Co-Chairman: *Ahmed Khalil*

15:20 - 15:45

Cetaceans of the Red Sea.

Marina Costa, Maddalena Fumagalli and Amina Cesario

15:45 - 16:10

Morphology and anatomy of the pearl oyster, *Pinctada margaritifera* in the Red Sea: A case study from Dungonab Bay, Sudan.

Dirar Nasr

16:10 - 16:35

Red Sea shark populations - their current status, fisheries and conservation.

Julia Spaet

16:35 - 17:00

Green Arabia, Blue Arabia: examining human colonisation and dispersal models.

Michael Petraglia



Day 3

February 16, 2016 (Tuesday)

Session 9: Coordinator: Davide Zanoni

Chairman: **Garry Momber**

Co-Chairman: **Anthony Sinclair**

08:15 - 08:40 The role of citizen science in monitoring megafauna of the Red Sea.

Islam Elsadek and Agnese Mancini

08:40 - 09:05 Status and conservation of the breeding seabirds of the Red Sea of Saudi Arabia.

Mohammed Shobrak and Abdullah Alsuhaibany

09:05 - 09:30 Coastal environments and human dispersals: the Red Sea as bridge and barrier.

Geoff Bailey and Abdullah Alsharekh

09:30 - 09:55 Ancient ports of trade on the Red Sea coast - human adaptations to fluctuating land- and sea-scapes.

Anna Kotarba

09:55 - 10:15 Coffee Break

10:15 - 12:15

PANEL DISCUSSION (All authors must attend)

Panelists

Geoff Bailey, Bill Bosworth, David Sanderson, Marina Costa, Hany Abdel-Salam, Ali Al-Aidaroos, Webster Mohriak, Abdullah Al Sharekh, Marco Ligi, Maria Geraga, Maher Amer, Fazal Ahmed, Robyn Inglis, Nasser El Agami.

12:15 - 14:00 Lunch and Prayer Break

17:30

Muster at Hotel's Lobby

18:00 - 21:30

OBHUR CRUISE and DINNER on board



Day 4

February 17, 2016 (Wednesday)

P o s t e r s

Title Microstructure, petrography, and geochronology of dykes from the Arabian margin, Red Sea.

Contributors *Davide Zanoni, Najeeb Rasul and Antonio Langone*

Title Hydrothermal prospection in the Red Sea Rift: Geochemical messages from basalts.

Contributors *Froukje van der Zwan, Colin Devey and Nico Augustin*

Title Red Sea coastal lagoons: their changing environment and dynamics.

Contributors *Alaa M. A. Albarakati and Fazal Ahmad*

Title Carbon, nitrogen and phosphorus in the Saudi Red Sea coastal waters: Behavior and human impact.

Contributors *Radwan Al-Farawati, Mohamed El Sayed and Najeeb Rasul*

Title Physico-chemical and biological structuring of coral reefs in the central Red Sea.

Contributors *Anna Roik, Maren Ziegler and Christian Voolstra*

Title Copepoda: their status and ecology in the Red Sea.

Contributors *Ali M. Al-Aidaroos, Mohsen M. El-Sherbiny and Gopikrishna Mantha*

Title Mn and other metals mineralization related to the Red Sea rift system; Examples from Red Sea coast and Sinai, Egypt

Contributor *Nasser El Agami*

Title Coral Diseases on Reefs of the Red Sea.

Contributors *Amin Esmail, Hany Abdel-Salam and Abdel-Hamid M. Ali*



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