



## **Meeting Report:**

### **A report on the 12th International Symposium on Fossil Algae (Lucknow, India - September 16-18, 2019)**

Since the inception of the First International Symposium on Fossil Algae in 1975 at Erlangen (Germany), this event was organised under the auspices of the International Fossil Algae Association (IFAA) on a four-year basis. The International Symposium on Fossil Algae was held subsequently in Paris (France, 1979), Golden (Colorado, USA, 1983), Cardiff (Wales, UK, 1987), Napoli (Italy, 1991), Ankara (Turkey, 1995), Nanjing (China, 1999), Granada (Spain, 2003), Zagreb (Croatia, 2007), Cluj-Napoca (Romania, 2011), and Okinawa (Japan, 2015). Following the 11th International Symposium on Fossil Algae in 2015, it was unanimously decided to have the 12th IFAA meeting in 2019 at the Birbal Sahni Institute of Palaeosciences (BSIP), Lucknow (India). The registration and scientific sessions were held at BSIP during 16th to 18th September, 2019. After the registration and welcome to the delegates on 16th September, the Inaugural Ceremony was held on 17th September, with Prof. Ashok SAHNI, Emeritus Scientist of Indian National Science Academy (INSA) as Chief Guest and Prof. Daniela BASSO, University of Milano-Bicocca (Italy) as Guest of Honour. Prof. SAHNI addressed the scientific gathering regarding the significance of fossil algae in biostratigraphy, palaeoceanography and palaeoecology. Prof. BASSO in her speech explained

that the younger generation should be encouraged to work on various innovative ideas pertaining to research on fossil as well as recent algae. On this occasion, Dr. (Mrs.) Vandana PRASAD, Director, BSIP (Lucknow), welcomed the guests and delegates attending the symposium from different regions of India as well as from different countries of the world. The organizing Secretary of the symposium and President of International Fossil Algae Association (IFAA) Dr. Amit Kumar GHOSH of BSIP (Lucknow) introduced the theme of the symposium and also exposed the multifaceted significance of the study of fossil as well as recent algae, from geology to environmental monitoring. An abstract volume containing 58 abstracts and the Post Symposium Field Guide Book entitled "Mio-Pliocene outcrops and underwater recent marine algae in different islands of Andaman and Nicobar, India" were released on this occasion. The authors of the abstracts belong to different countries of the world viz., Brazil, Egypt, Ethiopia, France, Germany, Iran, Italy, Japan, Jordan, Portugal, Russia, Spain, Tunisia, USA, and of course India. This reflects the overwhelming response from the scientific community working on the specific themes of the symposium.



Release of Abstract volume of 12th IFAA



After the inauguration, the scientific sessions started with the specific themes of the symposium and oral presentations were given on two themes: i) Precambrian palaeobiology: Evolution and biostratigraphy and ii) Biostratigraphy, diversity and ecology of calcareous algae in time and space. A keynote lecture was delivered by Prof. Daniela BASSO, addressing "The influence of water transparency on fossil coralline algal assemblages: two examples from the Miocene of the Mediterranean". Apart from the above-mentioned pre-

sentations, thirteen oral contributions were given in the first day, on different topics ranging in age from Precambrian to Pleistocene and recent distribution of coralline algae in reef habitats. The afternoon of 17th September was devoted to the poster session, with twenty-one posters presented on different aspects of fossil and recent algae that include calcareous green and red algae, charophytes, carbonaceous brown algae, diatoms and nannoplankton.



Poster presentation

The scientific sessions on the second day of 12th IFAA Symposium (18th September, 2019) were devoted to the themes: i) Taxonomy, diversity and ecology of diatoms of the past and present, ii) Biostratigraphy and palaeoenvironmental implications of nannofossils and dinoflagellates cysts, iii) Carbonate sedimentology, geochemistry and facies analysis and iv) Applied aspects of algae including molecular systematic. Two keynote lectures were delivered by Dr. Andrey Yu. GLADENKOV entitled, "Observation of the recent data on Oligocene diatoms from Kamchatka, Kamchatka Peninsula, Russia", and Dr. Karthick BALASUBRAMANIAN entitled, "Exploring the freshwater dia-

tom diversity of the Indian subcontinent and its application in biomonitoring and bioprospecting", on two different sessions. At the end of the scientific presentations, the IFAA Business Meeting and Valedictory Session were the opportunity foremost of the participants to appreciate the success of the symposium, with 52 registered delegates. It was unanimously decided that the 13th International Symposium on Fossil Algae will be organised in 2023 by Prof. Daniela Basso at the University of Milano-Bicocca, Department of Earth and Environmental Sciences, Milano, Italy, and as per norms of the International Fossil Algae Association she has become the President of the IFAA.





Participants of 12th IFAA held at BSIP, Lucknow, India

The Post Symposium Field Excursion was organised during 19th to 24th September, 2019 in different islands of Andaman and Nicobar Group. All the participants of the Post Symposium Field Excursion commenced their journey from Lucknow on 19th September and reached Kolkata by air. On the next day the participants boarded on their early flight from Kolkata and reached Port Blair, where the first visit on 20th September was North Bay Island, one of the best places for coral and coralline algae sighting in Andaman Islands. The island is surrounded by crystal clear cyan coloured water with a shallow shoreline that offers a magnificent underwater view. The large coral belts near the isle, protected under the care of Andaman and Nicobar Administration, were quickly explored by some of the participants by diving and snorkelling. After returning to Port Blair by ferry, the field party visited Marina Park that hosts exhibitions about Andaman natural history and human geography, with rich collections of local marine invertebrates and vertebrates. On the next stop, on 20th September, the participants observed the Andaman flysch of Oligocene age which is well-exposed in the South Point area of Port Blair, near Science Centre. It

consists of basin-scale deposits of marine turbidites from an axially fed submarine fan. The Andaman flysch is sporadically exposed across the entire chain of the Andaman and Nicobar Group of Islands. Next day, in the early morning, the field party proceeded by ship to Havelock Island, the largest island of Ritchie's Archipelago Group (recently evolved islands). The outcrop near Kalapathar beach adjacent to Vijaynagar Village is a road cutting section situated in the east coast of Havelock Island. This outcrop represents Inglis Formation of late early to middle Miocene age and is lithologically characterised by soft, creamish, nano-foram chalk with inter-bedded calcareous silty bands. Later, after visiting the Radhanagar beach, Asia's best beach and the 7th best beach in the world, all the participants arrived at Neil Island by ship. During 21st September afternoon to 23rd September morning all the participants visited different outcrops of Neil Island. The Sawai Bay Formation of late Miocene age (Tortonian) is situated on the east coast of Neil Island. This outcrop is located beside the Sitapur Village along the Sitapur beach. The sediments are fragile and soft in nature.



Participants of post symposium field trip during the field work

Lithologically, it is composed of bluish-grey lumpy fossiliferous calcareous mud. The upper part is overlain by Pliocene rocks dominated by corals and bioherms. Top of the outcrop is dominated by coral rags. During 21st September to 23rd September the main focus of the field party was on the outcrops of Neill West Coast Formation of late Pliocene - early Pleistocene age, situated near the natural bridge in the west coast of Neil Island, adjacent to Laxmanpur Village. The outcrop is lithologically characterized by thinly laminated hard calcareous limestone at the base, followed by a buff-coloured hard calcareous unevenly sorted limestone. The formation is overlain by recent to sub-recent deposits comprising of

shell limestone with boulder and pebbles, coral rags and beach sands. Live colourful corals, coralline red algae, seaweeds, sea urchins, sea cucumbers, star fishes and several other marine biotas also were spotted. On 23rd September again all the participants reached Port Blair by ship and in the evening of 24th September reached Lucknow via Kolkata by air.

### Bibliographic references

Anonymous (2019).- 12th International Symposium on Fossil Algae (Lucknow, September 16-18, 2019) - Abstracts.- Birbal Sahni Institute of Palaeosciences, 66 p.

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**Daniela BASSO**<sup>1</sup>

**Arindam CHAKRABORTY**<sup>2, 3</sup>

**Amit K. GHOSH**<sup>2, 4</sup>

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<sup>1</sup> Department of Earth and Environmental Sciences, University of Milano-Bicocca Department of Earth and Environmental Sciences, Piazza della Scienza 4, I-20126 Milano (Italy)

[daniela.basso@unimib.it](mailto:daniela.basso@unimib.it)

<sup>2</sup> Birbal Sahni Institute of Palaeosciences 53 University Road, Lucknow - 226 007 (India)

<sup>3</sup> [arindam@bsip.res.in](mailto:arindam@bsip.res.in)

<sup>4</sup> [akghosh\\_in@yahoo.com](mailto:akghosh_in@yahoo.com)