



International Organisation of Palaeobotany

IOP NEWSLETTER 101

July 2013

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The views expressed in the newsletter are those of its correspondents, and do not necessarily reflect the policy of IOP.

Please send us your contributions for the next edition of our newsletter (November 2013) by October 31st, 2013.

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Vice Presidents: Bob Spicer (Great Britain), Harufumi Nishida (Japan), Mihai Popa (Romania)
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Conference/Congress Member: To be determined

IOP Logo: The evolution of plant architecture (© by A. R. Hemsley)

FROM THE SECRETARY/TREASURER

Dear International Organisation of
Palaeobotany Members,

It is hard to believe that this is my third
Newsletter and that, this represents the first
year of my term as your Secretary/Treasurer.
It is also embarrassing to admit that my term
got off to such a slow start.

For example, it seems that I sent Newsletters
99 and 100 to an obsolete mailing list so
numerous members did not receive them. I
apologize for that, and if you did not receive
those newsletters, please go to the website
where they are posted, or send me an email,
and I'll send them to you directly.

Please feel free to contact me with
questions, comments, or any information
you would like passed on to the
Membership.

I can be reached at:

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REGIONAL NEWS

Please send any Palaeobotanically related
news or information to your Regional
Representative who will pass those data on
to me. News from each region may translate

to success stories for other regions and we
all appreciate hearing about what's going on.

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IPC XIV/IOPC X 2016

The 2016 joint meeting of the International Palynological Congress and the International Organization of Palaeobotanists will be held in Salvador, Brazil.

At this time we can only say that the meeting will be during the fall, hopefully early in October, or late in September.

I will send additional details as they are worked out, but please do keep this date in mind. 2016 will be here before we know it, and it is never too early to start thinking about symposia etc.

I am also excited to announce that the Organizing Committee of the XIII IPC/ IX IOPC Tokyo, reported that they closed their books in a very healthy condition, and have donated a considerable amount to future International Conferences. The XIII IPC/ IX IOPC 2012 Tokyo Commemorative Fund will support young scientist and student participation. Ruth Stockey is chairing the Committee that will formalize this new fund, and I will hopefully report on the status of the fund in the November newsletter.

OBITUARY



Dr. Shya Chitaley

1918-2013

We are sad to announce that Dr. Shyamla Dinkar Chitaley passed away in her sleep, March 31, 2013 at the age of 95. She was with her younger son Dr. Aniruddha Chitaley in Boston, USA since April, 2012. Dr. Chitaley devoted her career spanning six decades to paleobotany with studies in India, England, and USA and had a remarkable influence on students, museum volunteers, and colleagues.

Dr. Chitaley, respectfully and affectionately known by her friends and colleagues as Madame Chitaley or simply as Shya, contributed substantially to the development of the Botany Department, Institute of Science in Nagpur and Mumbai, India (1948-1978) as a Professor and Head. She also established the Palaeobotany Department at the Cleveland Museum of Natural History, USA (1980-2011) as

Curator and Head. Her scientific contributions have enriched our knowledge about plants of the Maastrichtian Deccan Intertrappean Beds and the Late Devonian (Famennian) Cleveland Shale.

Shya was born in Nasik, a mid-sized town in Maharashtra, India and was married at the age of 16 in 1934 to Legal Advocate Dinkarrao Chitale at Nagpur. She and her husband had two sons. She received her undergraduate (1942) and master's (1945) degrees in Botany from the University of Nagpur, India. In 1955 she was awarded the Ph.D. in Palaeobotany at the University of Reading, under the supervision of Prof. Thomas M. Harris.

In India, Shya taught botany for a total of 28 years, first as Lecturer (1948-1961), then as Associate Professor (1961-1974) and finally as Professor (1974-1976) in the Botany Department, Institute of Science-Nagpur & Mumbai. She was a pioneer in introducing palaeobotany as a special subject in the botany department at Nagpur University. She worked extensively on the exquisitely preserved Deccan Intertrappean plant fossils of Central India with special attention to permineralized angiosperm and conifer reproductive organs from very near the Cretaceous-Tertiary boundary. During her "first" career in India she published 110 research papers and 13 students were awarded the Ph. D. Degree under her supervision. She was a founder and Chief Editor of the quarterly botanical journal "The Botanique" (1971-1980) and founding

member of Science Research Institute Internationale-Nagpur.

In 1978, Chitale, retired from her career teaching botany in her native India and immigrated to Cleveland, Ohio with her husband and younger son Aniruddha. In 1980, she joined the museum staff at the Cleveland Museum of Natural History and created its Palaeobotany Department. Soon after, she negotiated the acquisition of the 30,000 specimens of the Hoskins Collection of fossil plants as a gift from the University of Cincinnati and a collection of 300 books and 10,000 reprints from the collections of Prof. Gerhard Kremp, University of Arizona.

After her arrival at the Cleveland Museum, Chitale turned her attention to the fossil plants of the 363 million year old Late Devonian Cleveland Shale. During the next 31 years she studied the lycopods and other plants in the Cleveland Shale, eventually publishing 40 papers on the flora. In 1989 she organized and hosted at the museum, the 7th Mid-Continent Paleobotanical Colloquium, a popular, annual informal meeting for North American paleobotanists. In 1996 she described and published a paper with Kathleen Pigg on a new lycopod (club moss) from the Cleveland Shale, which was named *Clevelandodendron ohioensis*, coinciding with the city's bicentennial. Her department is now recognized internationally for its outstanding collection of plant fossils from the Cleveland Shale and Deccan Intertrappean Beds. She developed a parafin wax technique for

preserving highly pyritic coal balls and, with the help of museum volunteers, applied the method to conserve about 1,500 coal balls of the Hoskins collection.

Shya started an informal group of volunteers in palaeobotany in the Cleveland area in 1982, “The Fossil Society” at the Cleveland Museum. A second independent group, the North Coast Fossil Club (NCFC), was established in 1997. Through these groups Shya encouraged the participation of the public in palaeontology, sharing both her expertise and, for the NCFC, her financial support. For her extraordinary achievements in the Natural Sciences Dr. Shya Chitale received the Jared Potter Kirtland Award by the trustees of the Museum in 2011. Her other awards include the Medal for Excellence in Paleobotanical Research and a lifetime achievement award from the Birbal-Savitri Sahni Foundation in Lucknow, India.

During her PhD Dissertation work at Reading under Professor Thomas M. Harris, Shya began developing her international reputation in palaeobotany.

Professor Bill Chaloner remembers:

“I first met Shya when I was working as a post-graduate student with Professor Tom Harris in the Botany Department of Reading University, some 20 miles west of London. I believe she arrived in the academic year 1952-53. She had just come to Britain from India, and was working for a PhD on the

silicified flowers and fruits from the Deccan Intertrapean chert. She had brought a selection of (ground) thin sections with her, and was engaged most of the time in making careful detailed drawings (using microscope and a camera lucida) of the plant structure. But she was always keen to discuss her interpretations of the material with anyone around, and debate what they meant structurally and in systematic terms.

“The influence that Tom Harris, who was supervising her research, had on her is exemplified in her naming one of her Intertrapean fossils Harrisocarpon. Tom was always very enthusiastic about drawing fossil material rather than photographing it. Indeed he had a vigorous scepticism of the general view that photographs were innately more objective and “impartial” than drawings. This philosophy left a distinctive stamp on all his published work on the Jurassic flora!

“Shya was, in the language of those times, already a “mature student” – indeed she had a son with her in Britain, who was attending one of our well-known naval colleges. In the Department she was always “Mrs. Chitale” – never Shya! But she was always keen to take part in any departmental or student activity, and this brought her into the BotSoc. This was theoretically the students’ Botanical Society, but Tom had a very strong influence on our activities. About once a month we would go out on our bicycles and botanise in a good range of habitats around Reading, from Heathland to

Beechwoods to Chalk grassland. The weather was never an impediment, though it tended to reduce the size of the party, but the idea of canceling on account of rain or snow was anathema to Tom Harris. Shya would turn up for these occasions very faithfully, but always in her normal attire of an elegant sari, usually decorated with sequins. This was a challenge for Tom, who would eagerly lead the party through the undergrowth of brambles, resulting in a trail of silken fragments and sequins left behind us. It was a different kind of challenge for Shya, but she carried on with characteristic, firm botanical commitment!

“My contact with her after that was rather diminished when I left Reading, although we kept in touch and saw one another at the sequence of Botanical Congresses, which she usually managed to get to. I think our last contact was at the Vienna Congress, and we had resumed palaeobotanical communication through her work on Devonian lycopod fructifications. She served as a wonderful inspiration to those of us who might have thought that increasing age diminished the capacity to do research – she was as tireless and as enthusiastic in her work as she had been when I first knew her in the 1950s! The palaeobotanical community will miss her sadly.”

Many of us in the US met Shya only at the beginning of her "second career" when she came to Cleveland in 1980. Two of us who had the pleasure of working with her share our recollections below.

Kathleen Pigg remembers:

“*Clevelandodendron ohioensis* is a slender lycopod stem 1.25 M long, and Shya was not much taller. As it lay there in its little coffin looking up at us, we scratched our heads on what information we could eak out of this little cattail-sized plant that had apparently rafted out into the marine black shales only to be unearthed in 1960 when Cleveland built its freeway. Because of my interest in lycopods, Gar Rothwell suggested I write this paper with Shya. In doing so I had the opportunity to see a different side of Shya that I wouldn't have known otherwise. The US palaeocommunity was never quite the same after this tiny dynamo of a lady swept in and made her presence known. She appeared at every meeting, on every field trip, always cheerful and excited to participate. When I visited her in Cleveland and stayed in her home, I met her husband, a delightful, quite talkative, retired lawyer, and was fed incredible Indian food. (Shya, a vegetarian, nevertheless cooked meat for her husband, leaving his lunch carefully laid out for him). I learned about her love of red roses, cultivated in a tiny patio area. Her tenacious friendship followed me the next 15 years, with notes and occasional calls, as I helped her edit a few other manuscripts. She remained upbeat and energetic even through the loss of her dear husband and older son. At a party in Sid Ash's kitchen some years ago, I fondly remember a long discussion between Shya and Aureal Cross, both in their 80's, figuring out who was the older (I think Shya was).“

Steve Manchester remembers:

“Shya Chitale was a devoted colleague who regularly attended national and international conferences, including the Botanical Society of America and IOP conferences and was recognized for her enduring contributions at the 8th IOP Conference in Bonn, Germany. Although we had been acquainted for a couple decades through such conferences, it was not until 2008 that she inticed me to join in her research by sending pictures of silicified flowers and fruits from the Deccan Intertrappean beds with the invitation to collaborate. I was greatly impressed by the anatomical details revealed in peels and thin sections that she and her colleagues had prepared and the possibilities for investigating biogeographic affinities of the flora of “India the Island” during the late Cretaceous. Shya was a kind hostess, inviting me, and others who visited her lab from time to time, to stay overnight at her flat and enjoy her home-made, traditional Indian cuisine. Shya then encouraged me to visit her “academic grandson” Dashrath Kapgate, in Bhandara, Maharastra, India whose ongoing field and laboratory work continues to reveal new additions to the Deccan flora. As a result of reciprocal exchange visits, we have developed a thriving collaboration. Currently in press with American Journal of Botany is the world’s oldest known fruit of the Vitaceae from Deccan Maastrichtian deposits. Based on well preserved grapes with intact seeds and distinguished from modern *Vitis* by characters of the seed hilum, we named this

fruit *Indovitis chitaleya*, honoring Dr. Shyamala Chitale and the impact that she has had on our discipline.”

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ADDITIONAL SAD NEWS

Professor, Dr. Dieter Hans Mai passed away (1934 - 2013)

Professor Mai was a palaeobotanist, palaeocarpologist, Professor Emeritus at the Museum of Natural History Berlin, Germany, author of the textbook "Tertiäre Vegetationsgeschichte Europas" (1995), as well as Editor-in-Chief of *Palaeontographica Abt. B* (1992-2011)

An obituary will be published soon in *Palaeontographica Abt. B*.

Submitted by Lutz Kunzman

SHORT CORRESPONDENCE

“Hair” of *Macroneuropteris scheuchzeri* (Hoffmann), a unique taxonomic entity?

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“Hair” has been, and continues to be, an important parameter for the taxonomy of *Macroneuropteris scheuchzeri* (Hoffmann)--but it is a misnomer at best. It is neither hair nor trichome. Its hypothetical formation is secretion-related, and it is a non-living biological entity, i.e., a protrusion. To demonstrate these assertions, I have been conducting numerous [time-consuming] experiments since 2012 with well-preserved compressed foliage from the Sydney Coalfield, Nova Scotia, Canada (basal Cantabrian strata). At the core of these experiments are real-time microscopical observation and photographic documentation that were carried out during (i) HF-treatment when the compressions were freed from the rock matrix, (ii) rinsing of the freed compressions in Petri dishes, and (iii) the maceration (Schulze’s) processes that lasted from 1 hour to 12 days.

At this time level, all topographical characteristics of the cuticles were destroyed by the oxidant, leaving only a small shiny

mass (ca. 6%-7% of the original compression mass).

The results of the experiments are summarized as follows, the protrusions of *M. scheuchzeri* (Hoffmann) are:

- 1) not always visible on the compressed foliage still embedded in the rock matrix, depending on the degree of coalification,
- 2) occurring only on the abaxial pinnule, where they are lying across (near the base) or alongside (near the apex) the lateral veins,
- 3) 1-4 mm long and up to 0.16 mm widest in the middle, pointed at both ends (1 μm), spindle-shaped, and straight,
- 4) opaque, non-segmented, and easily cross-fracture,
- 5) organically unattached to the pinnule, i.e., non-living,
- 6) more or less mutually parallel to each other over the entire pinnule, and most dense at the pinnule base, i.e., they are not randomly oriented,
- 7) prone to drop-off after being freed from the rock matrix, i.e., molds are left behind that are sometimes visible on the compression. Specimens also shed protrusions while in storage, assuming the abaxial surface is exposed, and
- 8) solubilized in Schulze’s after ca. 3-5

hours, not leaving a trace on the cuticle.

In contrast, some trichomes survive in situ the full-time maceration process of up to 7-8 hours, whereas the vast majority is dislodged as attested to by the numerous trichomatous bases left behind on the abaxial cuticle.

These results certainly suggest that for an authoritative determination of presence-absence of protrusions, compressions freed from the rock matrix are a prerequisite.

It is also suggested that presently synonymy-based determinations of *M. scheuchzeri* (Hoffmann) require re-examination. In the absence to-date of protrusions reported from other Carboniferous seed-fern foliage, is it reasonable to assert that protrusions are only borne on the *scheuchzeri*-plant, and hence constitute a unique taxonomic parameter for it?



Figure: Abaxial pinnule of *M. scheuchzeri* (Hoffmann) that is not chemically treated. The pointed protrusions, ca. 3 mm long, occur alongside or cross lateral veins. Trichomes are clearly visible. Photography by E.L. Zodrow, 2012.

On request, I will supply high-resolution (> 4 Mb) protrusion images from my library, i.e., mostly Nomarski phase-contrast digital photographs at x125 magnification.

A full-length MS is being prepared for publication.

UPCOMING MEETINGS

46th annual meeting of AASP –

The Palynological Society (AASP-TPS) will meet jointly with Dino 10, the Canadian Association of Palynologists (CAP), and the North American Micropaleontology Section of SEPM (NAMS). The meeting will be held in the Heart of San Francisco. 20-23 October 2013.

Questions or Suggestions? Contact
Co-Chairpersons:

Lanny H. Fisk (Lanny@PaleoResource.com)
and/or Joyce Lucas-Clark
(jluclark@comcast.net)

4th International Palaeontological Congress

The 4th International Palaeontological Congress will be held in Mendoza, Argentina, September 28 - October 3, 2014. the Congress website is already up and running at:

www.ipc4mendoza2014.org.ar.

Register early and save up to 20%.

The early registration deadlines are:

Professional July 30th 2013.

Student August 30th 2013.

You can visit the IPC4 registration website for further information about registration deadlines and fees.

The Organizing Committee along with IPA, the Palaeontological Association and other local institutions will provide financial assistance to Ph.D. students presenting their palaeontological results at the IPC4.

Dates and specifications for submitting applications will be announced shortly.

Five short courses are already scheduled

1. Trace Fossils in Evolutionary Palaeoecology, by Gabriela Mángano & Luis Buatois (University of Saskatchewan, Canada).

2. Arthropod Phylogeny, by Greg Edgecombe (Natural History Museum, London, UK).

3. Applied Micropalaeontology, by Felix Gradstein (Natural History Museum, University of Oslo, Norway).

4. Analytical Taphonomy, by Michal Kowalewski (Florida Museum of Natural History, Gainesville, USA).

5. Stratigraphical Palaeobiology, by Mark Patzkowski (Pennsylvania State University, USA) & Steve Holland (University of Georgia, USA).

9th EPPC 2014

(August 26-31, 2014, University of Padua)

Italian palaeobotanists and palynologists are enthusiastically preparing the next EPPC in Padua, or Padova as the Italian name is. We hope to meet all our European colleagues at this conference.

The present day problems of climate and floristic changes, ecosystem and landscape transformations caused by human activities, force the palaeobotanical and palynological world to study these subjects also in the past, and in this way reinforce the bridge between past and present. These subjects will be among the topics of the 9th EPPC meeting in Padua.

Padova is a charming historic city, located at about 40 km west of Venice, in Northern Italy, with a dense network of arcaded streets, large “piazze” (squares) and many bridges crossing the various branches of the Bacchiglione river. The almost 800 years old University of Padova is famous for having had Galileo Galilei among its lecturers as well as important 19th century palaeobotanists such as Abramo Massalongo and Barone Achille de Zigno.

All scientific sessions will be held at the new Department of Geoscience. However also the famous Botanical Garden and the Museum of Palaeontology will be involved in this conference.

In order to favor the attendance of young scientists, we hope to offer University residences and special grants. Field-trips are planned in the fascinating landscapes of the Dolomites, Sardinia, Emilia-Romagna, Latium and Tuscany.

Hoping to see you all in Padova,
The EPPC 2014 organizing group

More information will be available at the homepage of the congress:

<http://www.geoscienze.unipd.it/9th-european-palaeobotany-palynology-conference>



The 10th North American Paleontological Convention (NAPC) February 15 - 18, 2014

We are pleased to announce that the 10th North American Paleontological Convention (NAPC) will be held in Gainesville, Florida, in February 2014. The meeting will be hosted by the Florida Museum of Natural History (University of Florida) from February 15th through 18th (Saturday through Tuesday).

Pre-conference and post-conference field trips are tentatively planned for February 13th - 14th and 19th - 20th, respectively.

The North American Paleontological Convention is a major international paleontological event administered by the Paleontological Society under the auspices of the Association of North American Paleontological Societies. Initiated in 1969, NAPC meets every 4-5 years. The convention includes active participation from all fields of paleontology. Over 500 participants from 26 countries attended the most recent NAPC in Cincinnati (2009).

A more detailed 1st circular, including a formal solicitation for symposium/theme session proposals, student support information, important deadlines, and a preliminary website will be forthcoming shortly.

We extend our warmest invitation to all who are interested in paleontology and hope to see you in Florida in February 2014.

On behalf of the organizing committee of the 2014 North American Paleontological Convention,

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CALL FOR NEWS AND NOTICES

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To be assured of inclusion in the next newsletter, all information must be received by 31 October 2013.