

# Frédéric JACQUES

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Born on 30.11.1979 in France.  
Bachelor, no child.

## PALEOBOTANIST

*Systematics, Palaeoclimates, Cenozoic*

### Research Experience in Foreign Countries

- 10.2009-09.2011 Young fellow at Nanjing Institute of Geology and Palaeontology – Chinese Academy of Sciences, Jiangsu, China.  
Study of palaeoclimates and palaeovegetations of the South China Neogene.
- 11.2007-09.2009 Postdoctoral fellow at Kunming Institute of Botany – Chinese Academy of Sciences, Yunnan, China.  
Study of the Menispermaceae (phylogeny, palaeobotany and palaeogeography) and palaeoclimates of western China Neogene (Yunnan, Tibet).  
Several field trips in Himalayas foothills.

### Research Experience in France

- 09.2003-10.2006 PhD candidate at Paris National Natural History Museum.  
Study of Menispermaceae morphological and molecular phylogeny as well as their fossil record.

### Teaching Experience

- 09.2006-08.2007 Biology Teacher, François 1<sup>er</sup> Senior High School in Vitry-le-François.
- 01.2004-12.2005 Permanent Formation at Paris National Natural History Museum.  
Involvement in teaching of cycles 3 and 4 of Botany.
- 09.2003-08.2006 Teaching Assistant in Paris XI University.  
Teaching of plant biology to Bachelor 1 students.  
Teaching of animal and plant biology to Master 1 students.  
Teaching of plant biology to students preparing the teaching certificate.

### Education

- 2006 PhD thesis at Paris National Natural History Museum, Grade very honorable with committee congratulations.  
Major: Systematic Botany  
Title: « Evolutive History of Menispermaceae »  
Supervisors: Pascal Tassy and Dario De Franceschi.
- 2003 Master « Biodiversity : genetics, history, evolution processes »  
University Paris XI.  
Lab work at Paris National Natural History Museum  
Title: Menispermaceae phylogeny  
Direction: Dario De Franceschi.
- 2003 Magister biology-biochemistry, Grade Good  
Paris Superior Normal School.
- 2002 Agrégation (First Class teaching certificate) Life and Earth Sciences.  
Ranked 5<sup>th</sup>.

- 2001 Master 1 Molecular and Cellular Genetics, Grade Good.  
University Paris XI.
- 2000 Licence de Biochimie, Grade Good.  
Université Paris-Sud.
- 1999 Admission in Paris Superior Normal School.  
Ranked 6<sup>th</sup>.
- 1997 Baccalauréat Sciences, Grade Good.  
Lyon's education province.

### **Professional Training**

- 12.2010 Training in Geographical Information Systems (GIS).
- 09.2006-08.2007 Trainings for new teachers, Reims' education province.
- 2005 First Emergency certificate.
- 09.2003-09.2006 27 days of training for teaching assistant in Paris XI University.

### **Field work, meetings and visits in China**

- Field trips: Northwest Yunnan (Dali, Lijiang, Xianggelila, Eryuan, Lanping, Yongping)  
Emeishan, Ya'an, Sichuan  
Xiamen, Fuzhou, Fujian  
Xuancheng, Anhui
- Visits: Institute of Botany, Beijing (2 months, 2008)  
Lanzhou University (1 month, 2008)
- Meetings: Nanjing (2009)  
Xishuangbanna (2010)  
Kunming (2009, 2010)  
Shanghai (2011)

### **Business travels in foreign countries**

- 2009 Bonn (Germany), Goldfuss Museum, several days.  
Methodological discussions on coexistence approach.
- 2009 Turin (Italy), University, several days.  
Consultation of fossil collections.
- 2006 London (United Kingdom), Natural History Museum, two weeks  
Consultation of palaeobotanical collections.  
Funding: Eclipse grant.
- 2005 Tervuren (Belgium), Royal Museum of Central Africa, one week  
Consultation of Menispermaceae anatomical slides.
- 2005 Utrecht and Leiden (The Netherlands), Nationaal Herbarium Nederland, two weeks  
Consultation of the wood collection.  
Funding: European grant, Synthesys (NL-TAF 680).
- 2004 London (United Kingdom), Kew Herbarium, one week.  
Consultation of herbarium specimens.
- 2003 South-East Asia (Indonesia, Malaysia and Thailand), two months.  
Collection of specimens and consultation of Herbaria, for Menispermaceae.  
Funding: LVMH-Asia grant.
- 2000 Leipzig (Germany), Institut für Botanik, two months  
Training of plant physiology, work on the LHC2 protein complex from spinach.

## Professional Volunteer

07.2011-now	Board member of the French Organization of Palaeobotany.
03.2011-now	Security correspondent of Shanghai French Consulate in Nanjing.
09.2004-09.2005	Treasurer of the student union at the Museum.
09.2003-09.2005	Student representant at the doctoral school of the Museum.

## Scientific Societies

Member of Lyon's Linnean Society since 1998.  
Member of the International Association for Plant Taxonomy since 2004.  
Member of the International Organisation of Palaeobotany since 2008.  
Member of the Botanical Society of Yunnan since 2008.  
Member of the Alumni Association of Paris Superior Noraml School since 2003.

## Language Skills

French: native language.  
English: bilingual (TOEIC 2009, 990 pints).  
German: fluent.  
Chinese: fluent (spoken and written; HSK 2010, Level 6th).

## Interests

Classical music, Litterature, Chinese calligraphy.  
Accompanying several school trips to Italy and various places.

## Research interests

My researches essentially focus on two directions: plant systematics and palaeoenvironments. Both strongly interacts. Systematics is one of the basic tool of palaeoclimatic reconstruction methods, like the coexistence approach. Palaeoclimates history is important to understand the morphological diversification of plant groups.

On plant systematic, my studies focus on the Menispermaceae family, and namely the phylogenetic reconstruction based on molecular and morphological data, for living species as well as for fossil ones. At the morphological level, I am interested at the carpology and xylogy. I used morphometrics as a tool for fossil systematics.

On palaeoenvironments, I am interested at the reconstruction of palaeoclimates and palaeovegetations. I am also interested at the methodological aspects of these reconstructions.

## Publications

### *Scientific Journals:*

**Frédéric M.B. Jacques**, Gongle Shi, Weiming Wang. 2011. Reconstruction of Neogene zonal vegetation in South China using the Integrated Plant Record (IPR) analysis. *Palaeogeography, Palaeoclimatology, Palaeoecology* 307: 272-284. IF=2.39 (2010).

**Frédéric M.B. Jacques**, Shuangxing Guo, Tao Su, Yaowu Xing, Yongjiang Huang, Yusheng (Christopher) Liu, David K. Ferguson, Zhekun Zhou. 2011. Quantitative reconstruction of the Late Miocene monsoon climates of southwest China: a case study of the Lincang flora from Yunnan province. *Palaeogeography, Palaeoclimatology, Palaeoecology* 304 (3-4): 318-327. IF=2.39 (2010). Cited 2 times.

**Frédéric M.B. Jacques**, Yusheng (Christopher) Liu, Edoardo Martinetto, Zhekun Zhou. 2011. Revised taxonomy of selected fossil endocarp species in the Menispermaceae using a morphometric

approach. *Geodiversitas* 33 (1): 177-197. IF=0.986 (2010). Cited 1 time.

**Frédéric M.B. Jacques**, Tao Su, Robert A. Spicer, Yaowu Xing, Yongjiang Huang, Weiming Wang, Zhekun Zhou. 2011. Leaf physiognomy and climates: are monsoon systems different? *Global and Planetary Change* 76 (1-2): 56-62. IF=3.351 (2010). Cited 1 time.

Tao Su, **Frédéric M.B. Jacques**, Yusheng (Christopher) Liu, Jianying Xiang, Yaowu Xing, Yongjiang Huang, Zhekun Zhou. 2011. A new *Drynaria* (Polypodiaceae) from the Upper Pliocene of Southwest China. *Review of Palaeobotany and Palynology* 164 (1-2): 132-142. IF= 1.985 (2010).

**Frédéric M.B. Jacques**, Wei Wang, Rosa Del C. Ortiz, Honglei Li, Zhekun Zhou, Zhiduan Chen. 2011. Integrating fossils in a molecular-based phylogeny and testing them as calibration points for divergence time estimates in Menispermaceae. *Journal of Systematics and Evolution* 49 (1): 25-49. IF=1.295 (2010). Cited 1 time

Tao Su, Yaowu Xing, **Frédéric M.B. Jacques**, Wenyun Chen, Yongjiang Huang, Yusheng (Christopher) Liu, Zhekun Zhou. 2010. Quantitative reconstructions of mean annual temperatures for Chinese Cenozoic palaeofloras based on the Chinese leaf margin analysis model. *Geological review* 56 (5): 638-646. (In Chinese with English abstract.)

**Frédéric M.B. Jacques** & Zhekun Zhou. 2010. Geometric morphometrics: a powerful tool for the study of shape evolution in Menispermaceae endocarps. *Taxon* 59 (3): 881-895. IF=2.364. Cited 2 times.

Tao Su, Yao-Wu Xing, Yu-Sheng (Christopher) Liu, **Frédéric M.B. Jacques**, Zen-Yun Chen, Yong-Jiang Huang, Zhe-Kun Zhou. 2010. Leaf margin analysis: a new equation from the humid to mesic forests in China. *Palaios* 25 (4), 234-238. IF= 1.709. Cited 4 times.

Yaowu Xing, Yu-Sheng (Christopher) Liu, Tao Su, **Frédéric M.B. Jacques**, Zhekun Zhou. 2010. *Pinus prekesiya* sp. nov. from the upper Miocene of Yunnan, southwestern China and its biogeographical implications. *Review of Palaeobotany and Palynology* 160 (1-2), 1-9. IF= 1.985.

Yusheng (Christopher) Liu, **Frédéric M.B. Jacques**. 2010. *Sinomenium macrocarpum* sp. nov. (Menispermaceae) from the Miocene-Pliocene transition of Gray, northeast Tennessee, USA. *Review of Palaeobotany and Palynology* 159 (1-2) : 112-122. IF= 1.985. Cited 3 times.

**Frédéric M.B. Jacques**. 2009. Survey of the Menispermaceae endocarps. *Adansonia* 31 (1) : 47-87. IF=0.359. Cited 4 times.

**Frédéric M.B. Jacques**. 2009. Fossil History of the Menispermaceae (Ranunculales). *Annales de Paléontologie* 95 (2) : 53-69. IF= 0.867. Cited 4 times.

Ke Xia, Tao Su, Yusheng (Christopher) Liu, Yaowu Xing, **Frédéric M.B. Jacques**, Zhekun Zhou. 2009. Quantitative climate reconstructions of the Late Miocene Xiaolongtan megaf flora from Yunnan, southwest China. *Palaeogeography, Palaeoclimatology, Palaeoecology* 276 (1-4) : 80-86. IF=2.646. Cited 8 times.

**Frédéric M.B. Jacques** & Paola Bertolino 2008. Molecular and Morphological Phylogeny of Menispermaceae (Ranunculales). *Plant Systematics and Evolution* 274 (1-2) : 83-97. IF=1.44. Cited 9 times.

**Frédéric M.B. Jacques**, Shuangxing Guo. 2007. *Palaeoskapha sichuanensis* gen. et sp. nov. (Menispermaceae) from the Eocene Relu Formation in western Sichuan, West China. *Acta Phytotaxonomica Sinica* 45 (4) : 576-582. IF=0.31. Cited 3 times.

**Frédéric M.B. Jacques**, Cyril Gallut, Régine Vignes-Lebbe & René Zaragüeta i Bagils. 2007. Resolving phylogenetic reconstruction in Menispermaceae (Ranunculales) using fossils and a novel statistical test. *Taxon* 56 (2) : 379-392. IF=2.524. Cited 5 times.

**Frédéric M.B. Jacques**, Dario De Franceschi. 2007. Menispermaceae wood anatomy and cambial variants. *IAWA Journal* 28 (2) : 139-172. IF=0.687. Cited 7 times.

**Frédéric M.B. Jacques**. 2006. Lorsque le bois vient au secours de l'identification : exemple sur

quelques Menispermaceae. *Bulletin de la Société Linnéenne de Lyon* 75 (3) : 297-299.

**Frédéric M.B. Jacques** & Dario De Francesch. 2005. Endocarps of Menispermaceae from Le Quesnoy outcrop (Sparnacian facies, Lower Eocene, Paris Basin), *Review of Palaeobotany and Palynology* 135 (1-2) : 61-70. IF=1.074. Cited 10 times.

IF total (first author): 20.037.

IF total (all papers): 30.347.

Total citations (first author): 49 times.

Total citations (all papers): 64 times.

H-index: 4.

### *Oral communication in international conferences:*

**Frédéric M.B. Jacques**, Gongle Shi, Haomin Li, Weiming Wang. 2011. Preuves paléobotaniques d'une mousson antarctique pendant l'Eocène moyen. Journées OFP. Paris.

Yaowu Xing, Tao Su, **Frédéric M.B. Jacques**, Yusheng (Christopher) Liu, Yongjiang Huang, Zhekun Zhou. 2010. Reconstruction of monsoon climates based on leaf physiognomy of the late Miocene Xianfeng flora, Central Yunnan, China. Neclime 2010. Kunming.

Tao Su, Zhekun Zhou, **Frédéric M.B. Jacques**, Yusheng (Christopher) Liu, Yaowu Xing, Yongjiang Huang, Wenyun Chen. 2010. On the establishment of the leaf physiognomy – climate model from Chinese humid to mesic forests and case study. Neclime 2010. Kunming.

**Frédéric M.B. Jacques**, Weiming Wang. 2010. Palaeovegetations of South China during the Neogene. NECLIME 2010. Kunming.

**Frédéric M.B. Jacques**, Weiming Wang. 2010. Palaeovegetations of South China during the Neogene. VII Chinese Palaeobotanical Conference. Xishuangbanna.

**Frédéric M.B. Jacques**, Tao Su, Yaowu Xing, Yongjiang Huang, Zhekun Zhou & Weiming Wang. 2010. CLAMP climatic reconstruction: are monsoon climates different? VIII European Palaeobotany – Palynology Conference. Budapest.

**Frédéric M.B. Jacques** & Zhekun Zhou. 2008. Morphometrics of modern and fossil Menispermaceae endocarps: a key to species identification. VIII International Organization of Palaeobotany Congress. Bonn.

**Frédéric M.B. Jacques**. 2006. Saturation de *rbcL* et reconstruction phylogénétique chez les Menispermaceae. Journées annuelles de la Société Française de Systématique. Paris.

**Frédéric M.B. Jacques** & Cyril Gallut. 2004. Menispermaceae (Ranunculales) phylogeny : statistical tests and fossils contributions to the resolution. Hennig XXIII Phylogenetics and Evolutionary Biology. Paris.

### *Written communication in international conferences:*

Rosa del C. Ortiz, Sara Fuentes-Soriano, **Frédéric M.B. Jacques**. 2011. Evaluating the phylogenetic signal and mode of evolution of continuous traits in Menispermaceae (Ranunculales) : an example using endocarp size. Botany 2011. St. Louis.

**Frédéric M.B. Jacques**. 2007. Palaeobotanic approach of the evolution and Biogeography of the Menispermaceae. Palaeobotany and the Evolution of Plants: Current Issues. Paris.

**Frédéric M.B. Jacques** & Dario De Franceschi. 2006. Menispermaceae fossils around the world. VII European Palaeobotany and Palynology Conference. Prague.

**Frédéric M.B. Jacques**. 2005. Phylogenetic study of Menispermaceae. XVII International Botanical Congress. Vienna.

**Frédéric M.B. Jacques.** 2004. Towards a new phylogeny of Menispermaceae (Ranunculales).  
Hennig XXIII Phylogenetics and Evolutionary Biology. Paris.