**New Perspectives on Climbing Plants**

Wednesday 22nd to Thursday 23rd October

Linnean Society, Burlington House, Piccadilly, London, W1JoBF

Followed by a round table discussion

Friday 24th October at the Jodrell Laboratory,

Royal Botanic Gardens Kew.

**Wednesday 22nd October (1st day Linnean Society of London)**

9.00 *Registration*

9.25-9.40 **Welcome and introduction by Nick Rowe and Thomas Speck**

**Morning session - Chair: Nick Rowe**

9.40-10.25 **Stefan Schnitzer** (University of Wisconsin-Milwaukee, USA)

DETERMINING THE FACTORS RESPONSIBLE FOR THE DISTRIBUTION AND DIVERSITY MAINTENANCE OF LIANAS IN TROPICAL FORESTS

10.25-11.00 **Saara DeWalt** (Clemson University, USA)

GLOBAL PATTERNS OF LIANA ABUNDANCE AND DIVERSITY

11.00-11.30 *Tea / Coffee break in the library*

11.30-12.00 **Jennifer Powers** (University of Minnesota, USA)

RECIPROCAL INTERACTIONS BETWEEN LIANAS AND SOILS WITH A SPECIAL FOCUS ON SOIL MOISTURE

12.00-12.30 **Kunfang Cao** (Guangxi University, China)

WATER-USE ADVANTAGE FOR LIANAS OVER TREES IN SEASONAL TROPICAL RAINFORESTS

12.30-13.00 **Geertje van der Heijden-Corr** (University of Wisconsin-Milwaukee, USA)

LIANA IMPACTS ON THE CARBON CYCLE AND BALANCE OF

TROPICAL FORESTS – RESULTS FROM A LARGE-SCALE LIANA

REMOVAL EXPERIMENT

13.00 – 14.00 Lunch (buffet at Linnean Society)

**Afternoon session – Chair: Sandrine Isnard**

14.00-14.45 **Bill Baker** (Royal Botanic Gardens, Kew, UK)

CLIMBING PALMS – STRUCTURALLY CONSTRAINED YET

FUNCTIONALLY FLEXIBLE

14.45-15.15 **Rachael Gallagher** (Macquarie University, Australia)

TOWARDS A GLOBAL UNDERSTANDING OF THE FUNCTIONAL TRAITS AND EVOLUTIONARY HISTORY OF CLIMBING PLANTS

15.15 -15.45 *Tea / Coffee break in the library*

15.45-16.15 **Dave Marvin** (Carnegie Institution for Science, USA)

NO EVIDENCE THAT ELEVATED CO2 GIVES TROPICAL LIANAS AN ADVANTAGE OVER TROPICAL TREES

16.15-16.45 **Cloé Paul-Victor** (University of Freiburg, Germany)

ENHANCEMENT OF INVASIVE TRAITS IN TWO SPECIES

OF CLIMBING PLANT UNDER ELEVATED CO2

16.45-17.10 **Richard Boyne** (Royal Botanic Gardens, Kew, UK)

PLANT INVADERS FROM SOUTH AMERICA

17.10-17.30 **Carol Boulter** (University of London & Linnean Society, UK)

& **Dawn Sanders** (University of Gothenburg, Sweden)

HOW DO PLANTS FIND NEW PLACES TO CLIMB? USING DARWIN

INSPIRED LEARNING WITH SCHOOL SCIENCE STUDENTS

17.30  *End of first day*

17.30-19.00 *Evening reception in the Linnean Society library*

19.00  *Dinner at local restaurants*

**Thursday 23rd October (2nd day Linnean Society of London)**

**Morning session – Chair: Thomas Speck**

9.30-10.15 **Wendy Silk** (University of California, Davis, USA)

MECHANICS OF THE TWINING HABIT

10.15-10.45 **Sandrine Isnard** (Botany & Applied Ecology, IRD, Nouméa, New Caledonia)

A FIRST INSIGHT INTO THE DIVERSITY AND ECOLOGY OF CLIMBING PLANTS IN NEW-CALEDONIA

10.45-11.05 **Carolina Lopes Bastos** (University of São Paulo (USP), Brazil)

ARE LIANA ROOTS SIMILAR TO THE STEMS? A MACROSCOPICAL ANALYSIS OF PAULLINIEAE LIANAS (SAPINDACEAE)

11.05-11.30 *Tea / Coffee break in the library*

11.30-12.00 **Veronica Angylossy** (University of São Paulo (USP), Brazil)

LIANAS: STRUCTURE AND FUNCTION

12.00-12.30 **Christoph Neinhuis** (University of Dresden, Germany)

BIOMECHANICS AND FUNCTIONAL MORPHOLOGY OF THE

MONOCOTYLEDONOUS CLIMBER FLAGELLARIA INDICA (FLAGELLARIACEAE)

12.30-13.00 **Robyn Burnham** (University of Michigan, USA)

CROSSING OVER FROM TREE TO LIANA, AND BACK AGAIN:

A CASE STUDY IN DISTRIBUTION OF THE GENUS *MACHAERIUM*

(FABACEAE)

13.00-14.00 Lunch (Buffet at Linnean Society)

**Afternoon session – Chair: Wendy Silk**

14.00-14.45 **Thomas Speck** (University of Freiburg, Germany)

ATTACHMENT ORGANS IN CLIMBING PLANTS – STRUCTURE, MECHANICS AND INSPIRATION FOR BIOMIMETIC APPLICATIONS

14.45-15.15 **Olga Speck** (University of Freiburg, Germany)

LEARNING FROM LIANAS FOR TECHNICAL APPLICATIONS

15.15 -15.45 *Tea / Coffee break in the library*

15.45-16.15 **Marcelo Pace** (University of São Paulo (USP), Brazil)

EVOLUTION AND INCREASE OF DIVERSITY IN LIANOID LINEAGES

16.15-16.45 **Sarah Wagner** (University of Dresden, Germany)

SHIFTS BETWEEN CLIMBERS AND OTHER GROWTH FORMS IN THE

GENUS *ARISTOLOCHIA* (ARISTOLOCHIACEAE)

16.45-17.10 **Dave Marvin** (Carnegie Institution for Science, USA)

UNCOVERING THE SCALE OF THE NEOTROPICAL LIANA

TAKEOVER

17.10-17.30 **Margaret Collinson** (Royal Holloway, University of London, UK)

RECOGNISING CLIMBING PLANTS IN THE FOSSIL RECORD

17.30 End of second day

19.30 *Conference Dinner and gathering at "The Goat Tavern", 3 Stafford Street, Mayfair)*

**Friday 24th October (3rd day: Royal Botanic Gardens, Kew)**

9.15 Arrival: Jodrell lecture theatre (assemble at Jodrell Gate, **9.15 sharp**)

9.30-11.15 **WORKSHOP ON VINES AND LIANAS**

9.30-9.45 MIND THE GAP – What are the main gaps in our knowledge in terms of ecology, evolution and functional biology? And how can we address them?

9.45-10.00 SCALES OF OBSERVATION and cause/effect–What kinds of observation are needed and feasible to demonstrate how, where and why vines and lianas are increasing in ecological importance?

10.00-10.15 WHICH AREAS OF THE WORLD are still poorly documented in terms of vine and liana biology? What kinds of projects might be set up to remedy this?

10.15-10.30 FRIENDS AND FOES – (Besides horticultural and agricultural contexts, what innovative uses can climbing plants be used for: greening of cities, implementation into architectural designs and microclimate of living spaces? Bioinspiration for new technologies? Can we engineer positive feedback between publicly funded "fundamental" research and privately funded "applied" research?

10.30-10.45 WHAT OPPORTUNITIES EXIST for funding collaborative projects and international exchanges? What and where are the opportunities for early career specialists in vine and liana research?

10.45-11.15 Open discussion

11.15-11.45 *Tea / Coffee – Victoria Gate Cafe*

11.45-13.00 Tour of the Palm House (led by Bill Baker)

13.00-14.00 Lunch at the Orangery (own cost)

14.00-15.00 Behind-the-scenes tour of climber collection in the Tropical Nursery (led by Carlos Magdalena)

15.15-16.00 Short tour of the Herbarium (if sufficient interest, led by Bill Baker)

**\*\*\*  End of meeting \*\*\***