

Tropical Forest Ecology 2014

Module coordinator: Norbert Kunert

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Day 1: General introduction (Norbert Kunert, Max Planck BGC, Germany)

- 16.06.2014
9-12 am
- General outline
 - History of tropical forest ecology
 - Discussion and selection of term projects

Day 2: Tropical forest types (Norbert Kunert, Max Planck BGC, Germany)

- 17.06.2014
9-12 am
- Definition of tropical forests
 - Latitudinal range
 - Definition of rain forest, seasonally dry tropical forests, cloud forests, tropical heath forests, swamp forests
 - Forest structure and different tropical forests, with emphasis on the Neotropics

Day 3: Daytrip (Norbert Kunert, Max Planck BGC, Germany)

- 18.06.2014
9-12 am
- Botanical garden Freiburg

Day 4: Public Holiday

19.06.2014

Day 5: Tropical forest meteorology (Stefan Wolff, Max Planck MPIC & INPA, Germany/Brazil)

- 20.06.2014
9-12 am
- Cloud forming in the tropics
 - Flying rivers
 - South American monsoon
 - Amazon Tall Tower Observatory (ATTO)

Day 6: Mechanisms of biodiversity and coevolution (Norbert Kunert, Max Planck BGC, Germany)

- 23.06.2014
9-12 am
- Species richness in tropical forest
 - Factors favoring high biodiversity
 - Definition of coevolution and underlying processes
 - Examples for coevolution and biotic interactions

Day 7: Forest soils and nutrient cycling (Carlos Sierra, Max Planck, BGC, Germany)

- 24.06.2014
9-12 am
- Tropical forest soils
 - Nutrient cycling in tropical forests
 - Up to date research

Day 8: Tropical ecohydrology and carbon cycling in tropical forests (Norbert Kunert, Max Planck BGC, Germany)

- 25.06.2014
9-12 am
- Water budget of tropical forests
 - From the global cycle to carbon cycling in tropical forests
 - Underlying processes
 - Measurement techniques
 - Up to date research

Day 9: Tropical tree allometry (Rempei Suwa, FFPRI, Japan)

- 26.06.2014
9-12 am
6 pm
- Ecology of South East Asian mangroves
 - Biomass inventory and allometric equations in the Amazon
- Brazilian BBQ with Rempei and Tapioca (Tiengener Hütte)

Day 10: Tropical forest dynamics (Daniel Marra, University of Leipzig, Germany)	
27.06.2014 9-12 am	- Forest development - Disturbance ecology - Forest regeneration
Day 11: Human impacts on tropical forests (Alida Mercado Cárdenas, INPA, Brazil & Saroj K. Barik, North-Eastern Hill University, India)	
30.06.2014 9-11 am	- Threats to tropical forests - Deforestation and habitat fragmentation - Reforestation
11-12 am	- Impact of human activities on a few ecological processes in humid tropical forests of north-eastern India
Day 12: Humans in tropical forests (Alida Mercado Cárdenas, INPA Brazil)	
01.07.2014 9-12 am	- Social communities in tropical forest - Traditional knowledge - UN REDD program - Ecosystem services
Day 13: Traveling in the tropics – a beginners' guide & The future of tropical forests (Norbert Kunert, Max Planck BGC, Germany)	
02.07.2014 9-12 am	- What you should know before you are traveling to the tropics - Conservation outlook - Current state - Where do we go?
Day 14 and 15: Final oral presentations	
03.06.2014 and 04.06.2014	
9-12 am	

Student evaluation will be based on three points:

- Participation in class discussions (10%)
- Term paper (70%)
- Final presentation of term paper to the class (20%)

Term paper:

Students will work in pairs. They will select an article from those provided and base their term paper on it. They have to summarize the article (1 page) and they have to write a paper in which they develop a discussion regarding how the article has influenced our knowledge of tropical forest ecology as well as further research on the topic based on current literature (5-10 pages double-spaced). Must include properly cited references, including several recent references. A reference list of papers cited needs to be attached at the end of term paper.