



Monitoring of exotic mosquitoes in Belgium



INSTITUTE
OF TROPICAL
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WORKSHOP

‘Introduction to the identification of mosquito species using DNA-based technologies’

By BopCo

Monday 25 and Tuesday 26 February 2019 (9h – 16h)

CODA Building, Royal Museum for Central Africa,

Leuvensesteenweg 17, 3080 Tervuren

Agenda

Monday 25		
Indicative timing	Activity	By
9h-9h20	Welcome and presentation of each participant (+ division into two groups for lab activities)	Nathalie
9h20-9h40	Guided tour in the laboratories: presentation of the general infrastructure	
9h40-10h30	Preparation of Culicidae samples for tissue digestion (Machery-Nagel Tissue DNA extraction kit + presentation of other existing kits)	Nathalie & Kenny
<i>10h30-10h45</i>	<i>Coffee break</i>	
10h45-12h	PowerPoint: Introduction to DNA barcoding and size fragment analyses: concepts + MEMO species identification workflow	Nathalie
<i>12h-13h</i>	<i>Lunch</i>	
13h-14h30	Continuation: DNA extraction using the Machery-Nagel Tissue extraction kit	Nathalie & Kenny
14h30-15h	DNA concentration measurements (Qubit)	
<i>15h-15h15</i>	<i>Coffee break</i>	
15h15-16h	Preparation of PCRs and agarose gels (PCRs running overnight)	Nathalie & Kenny

Tuesday 26		
Indicative timing	Activity	By
9h-9h30	Adding PCR products on agarose gels	Nathalie
9h30-10h	Presentation of 2D barcode collection tubes (scanner and DNA dryer)	
10h-10h15	Visualisation of the gels and interpretation of the results	
<i>10h15-10h30</i>	<i>Coffee break</i>	
10h30-10h40	Presentation of the digital labbook: tracking samples through the entire workflow	Nathalie
10h40-12h	DEMO: Geneious software – workflow to clean sequences and basic NJ-tree analysis	
<i>12h-13h</i>	<i>Lunch</i>	
13h-13h30	PowerPoint: DNA online databases - BOLD <i>versus</i> GenBank	Kenny
13h30-14h	DEMO: Blasting sequences: examples using GenBank and BOLD - gaps and pitfalls	
14h-14h30	DEMO: R script - DNA barcoding gap analysis	Nathalie
14h30-15h	PowerPoint: Introduction to population genetic structure investigation using microsatellites	
<i>15h-15h15</i>	<i>Coffee break</i>	
15h15-16h	Presentation of other activities of BopCo	Yoo Ree