Supplementary Material

African elephants can detect water from natural and artificial sources via olfactory cues

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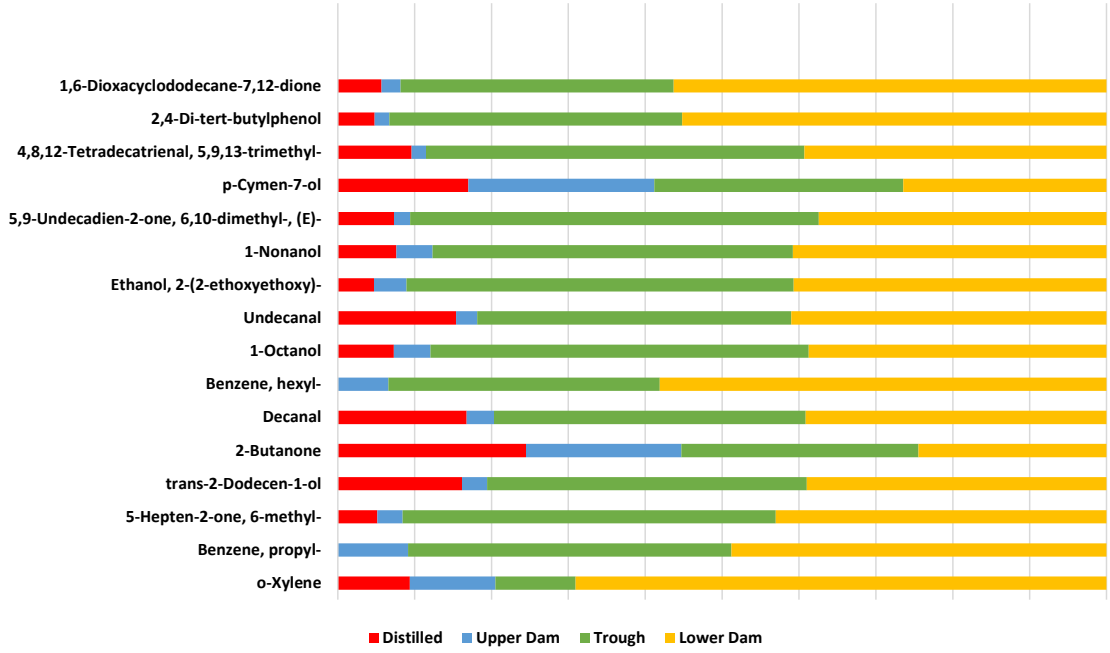

Fig. SM1 Relative content of metabolites in the head-space of the water from the four water sources (distilled, lower dam, through and lower dam) used in the experiments. Metabolites that were higher in the water sources from the study site compared to the distilled water are shown. Metabolites were tentatively identified by deconvoluting their mass spectra and comparing them to published spectra in the NIST v. 98 library using MassHunter (50 percent match factor).

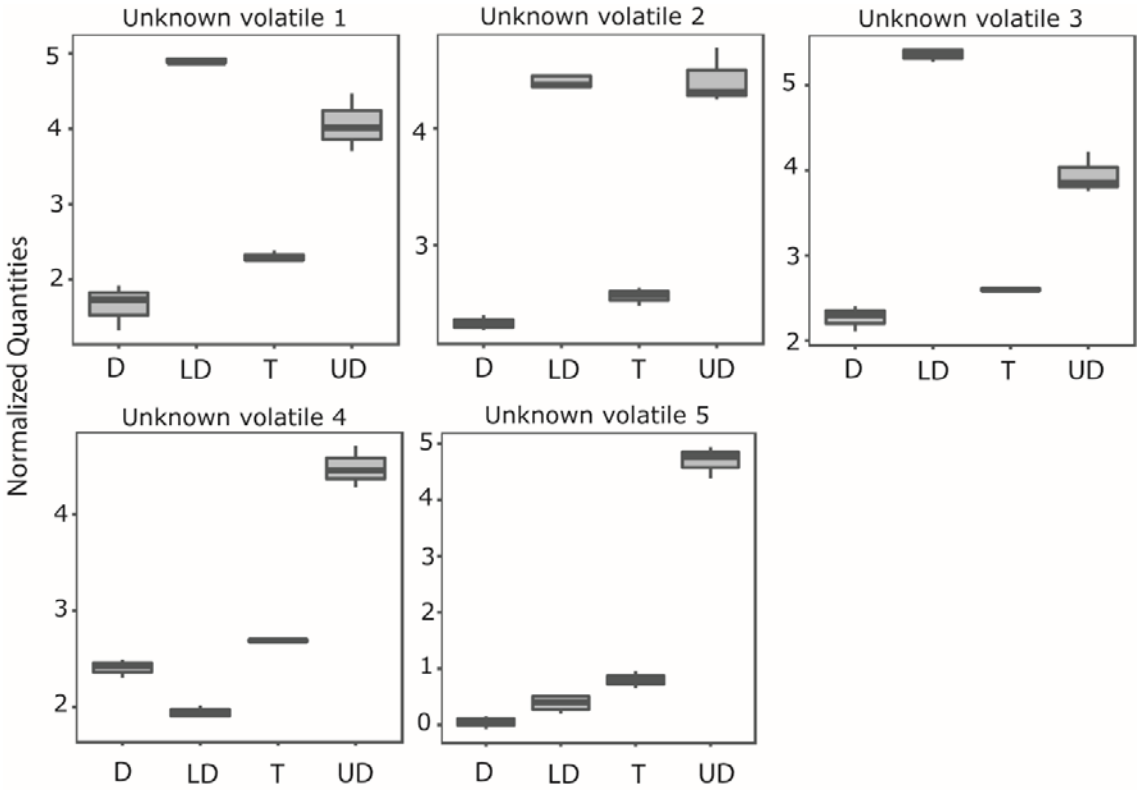

Fig. SM2. Relative quantities of unique naturally occurring volatiles in samples from the 4 water sources. D= Distilled water, LD= Lower Dam, T= Trough, UD= Upper Dam. Unknown volatile 1= Putative nitrogenous volatile; Unknown volatile 2= Oxygenated terpenoid; Unknown volatile 3= Aliphatic hydrocarbon; Unknown volatile 4= Phenolic volatile 1; Unknown volatile 5= Phenolic volatile 2.

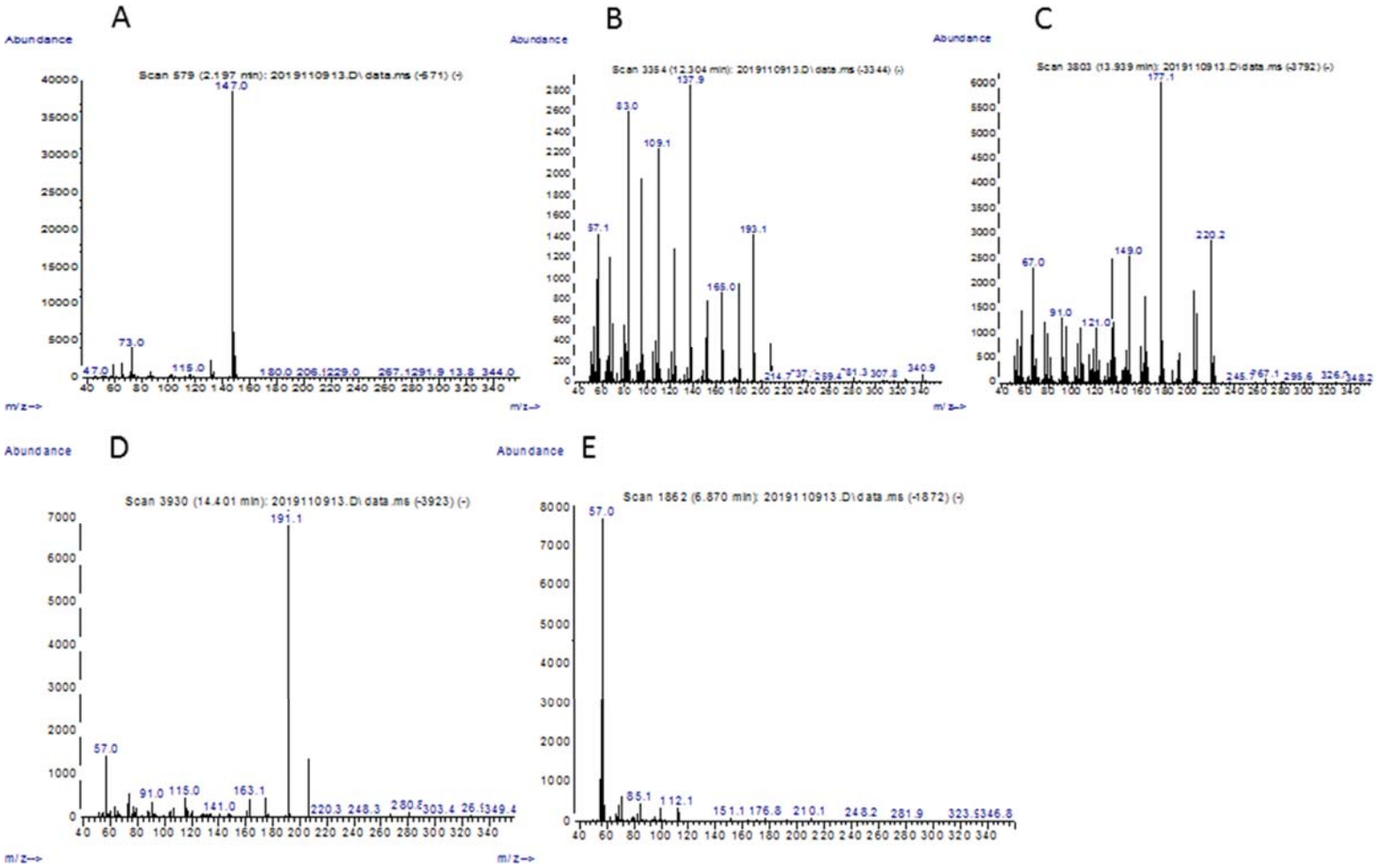

Fig. SM3 Mass spectra of unique volatiles. A, Putative nitrogenous volatile; B, Oxygenated terpenoid; C, Phenolic volatile 1; D, Phenolic volatile 2; E, Aliphatic hydrocarbon.

Table SM1. Proportion of time each elephant located the different water types in Experiment 1.

Elephant	Distilled	Trough	Lower Dam	Upper Dam
Chishuru	1.00	1.00	0.60	1.00
Chova	0.40	0.60	0.60	1.00
Nuanedi	1.00	0.80	0.80	0.80
Shan	0.40	0.60	1.00	0.80
Mussina	0.80	1.00	1.00	0.60

Table SM2. Proportion of time that each elephant located the three key volatile organic compounds associated with water in Experiment 2.

Elephant	Geosmin	Dimethyl sulphide	2-methylisoborneol
Chishuru	1.00	0.67	0.50
Chova	0.67	1.00	0.67
Nuanedi	1.00	0.83	0.83
Shan	0.83	1.00	0.67
Mussina	0.83	1.00	0.50