



Supplementary material: Impact of temporal and rearing environment variations on brood ester pheromone production in the honey bee *Apis mellifera*

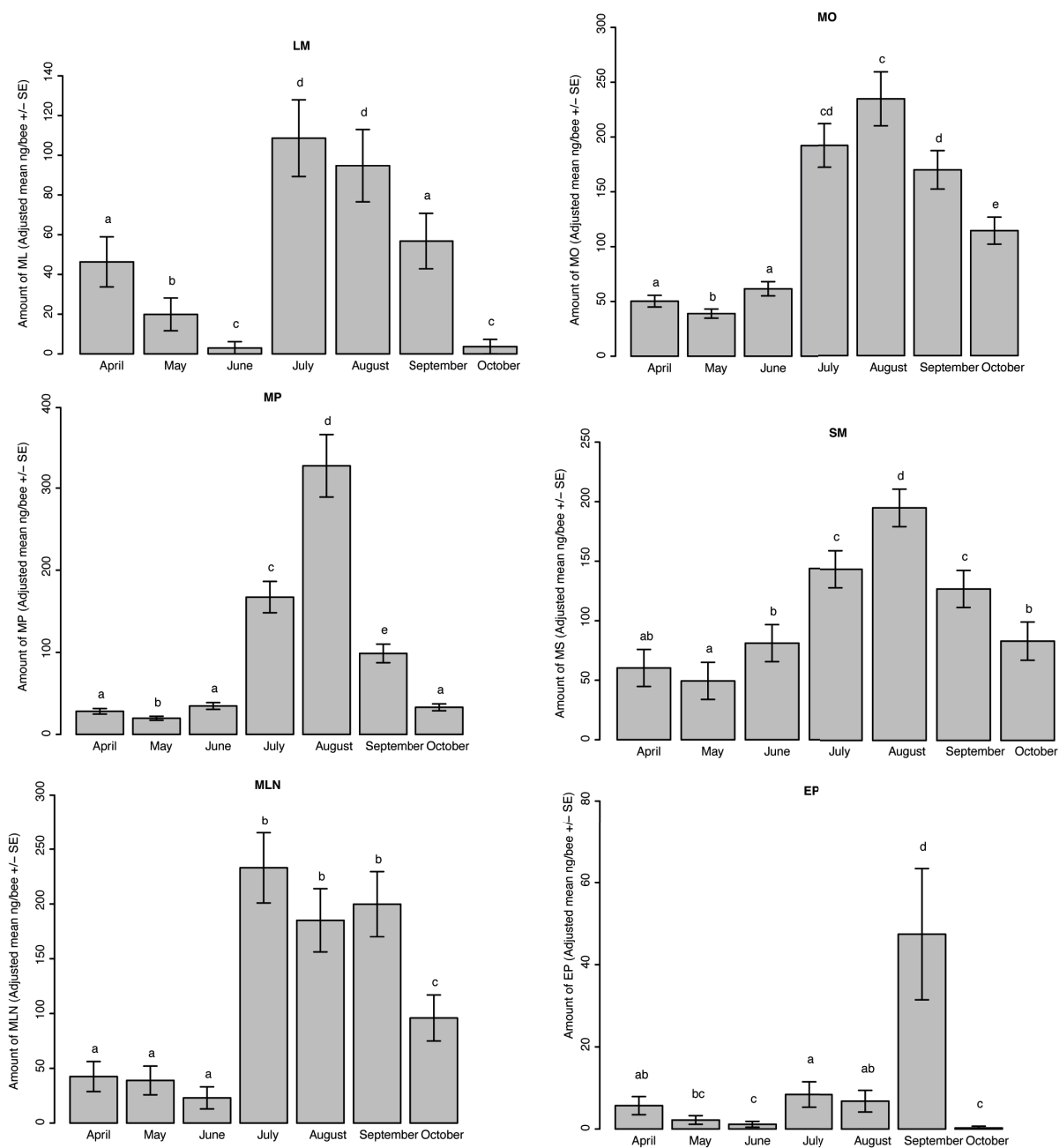
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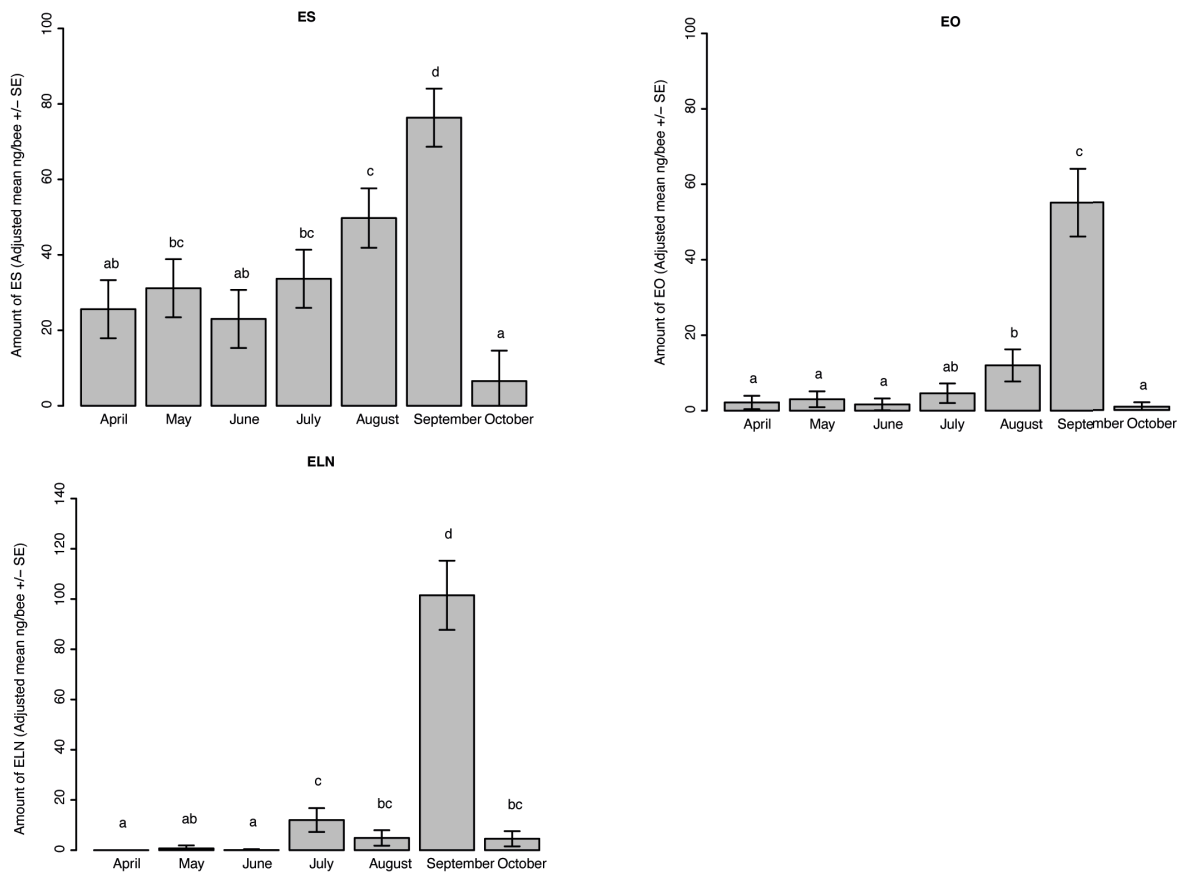
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Not yet published

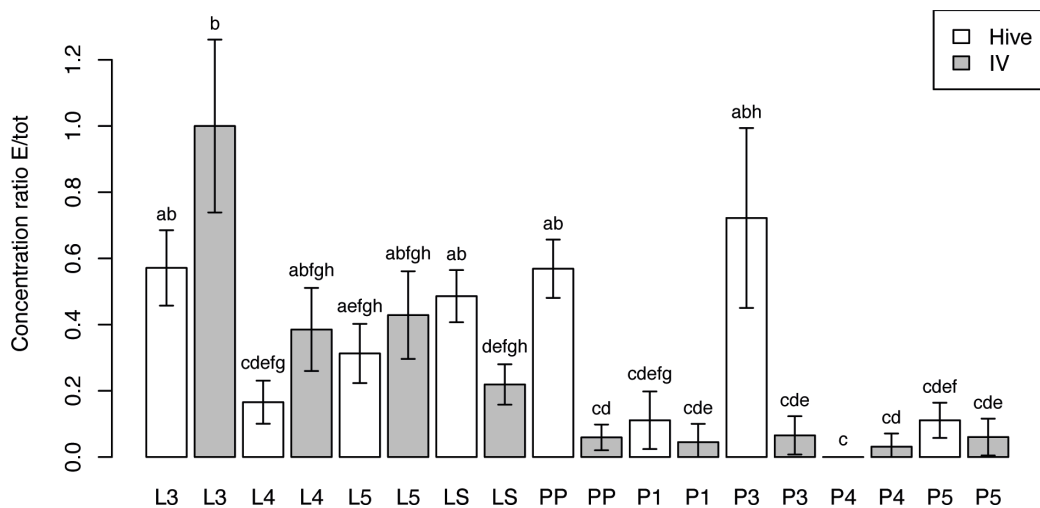
* Corresponding author.



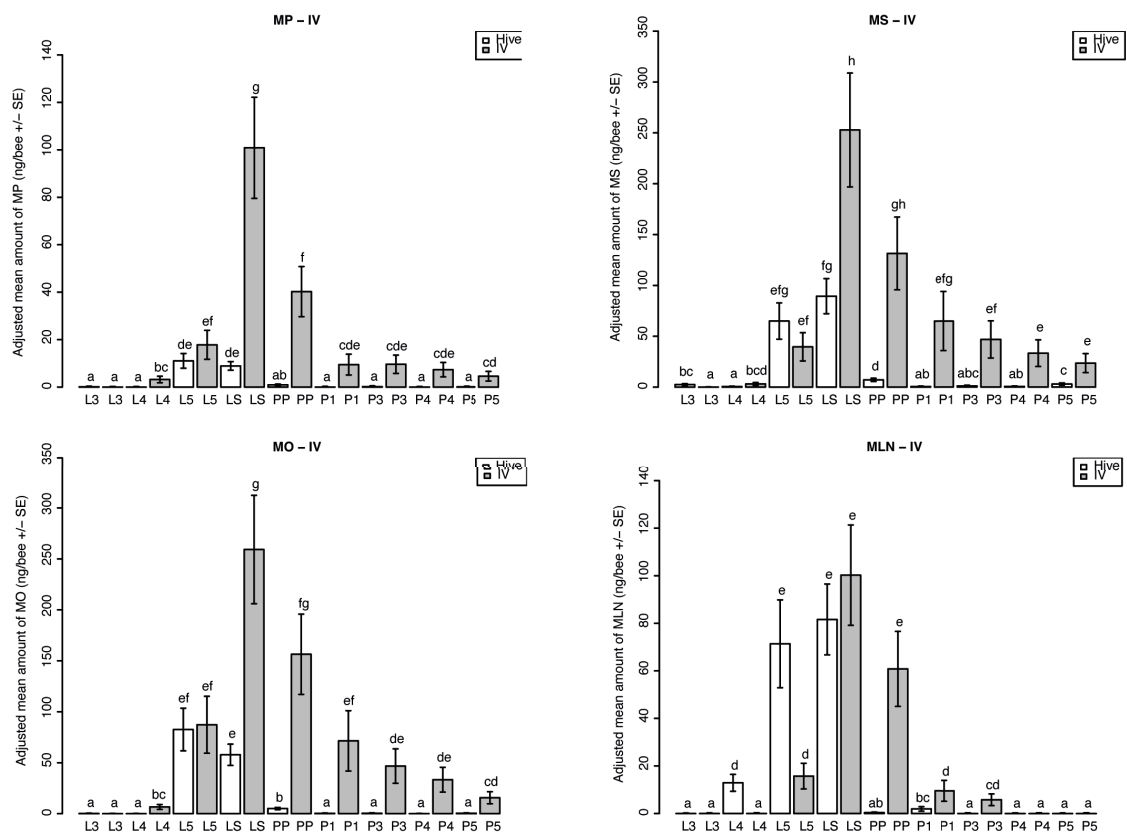
Supplementary Figure S1. Continued on next page.



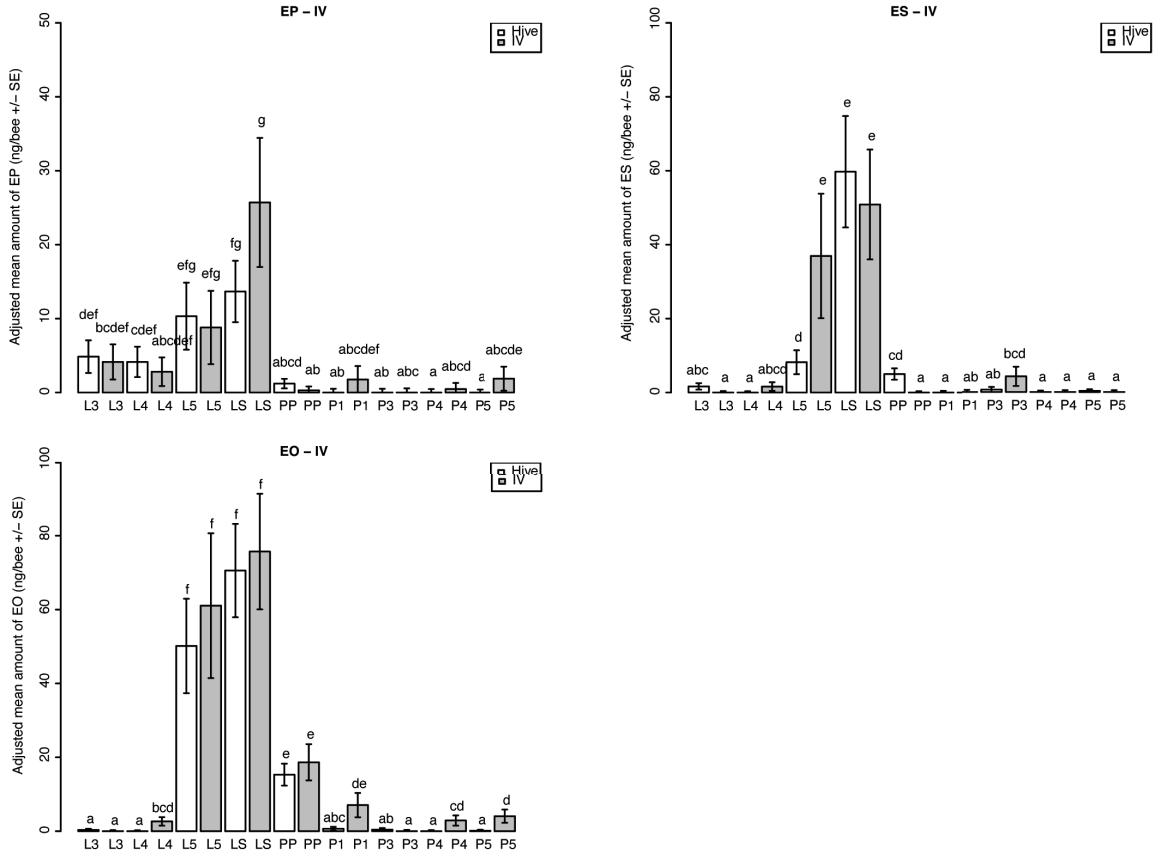
Supplementary Figure S1 (cont.). Temporal evolution of the amount of molecule produced per larva (last-instar larva) for each of 9 brood ester pheromone compounds ($n = 18$ for each month). ML, methyl linoleate; MO, methyl oleate; MP, methyl palmitate; MS, methyl stearate; MLN, methyl linolenate; EO, ethyl oleate; EP, ethyl palmitate; ES, ethyl stearate; ELN, ethyl linolenate. The EL (ethyl linoleate) temporal profile could not be analysed because too many samples did not display any amount of this compound.



Supplementary Figure S2. Stage and rearing environment variations in brood ester pheromone (BEP) ethyl/methyl ester ratios.



Supplementary Figure S3. Continued on next page.



Supplementary Figure S3. Stage and rearing environment variations of each brood ester pheromone (BEP) compounds. $5 \leq n \leq 15$ per stage and rearing condition. Different letters indicate significant differences between groups. MP, methyl palmitate; MS, methyl stearate; MO, methyl oleate; MLN, methyl linolenate; EP, ethyl palmitate; ES, ethyl stearate; EO, ethyl oleate. ML (methyl linoleate), ELN (ethyl linolenate), and EL (ethyl linoleate) profiles could not be analyzed because too many samples did not display any amount of these compounds.

Supplementary Table S1. Statistical test results for temporal variations of each BEP compound (X^2 values of the LMMs, ddl = 6, 115)

Compound	Date effect
MP	525.96***
MS	141.57***
ML	239.83***
MO	470.00***
MLN	318.20***
EP	81.41***
ES	63.83***
EO	126.50***
EL	NA
ELN	293.67***

Supplementary Table S2. Statistical test results for variations in each BEP compound according to stage and rearing conditions (F values of the LMs)

Compound	Stage effect Ddl = 8, 113	Rearing effect Ddl = 1, 113	Stage * rearing Ddl = 8, 113
MP	38.26***	193.40***	7.37***
MS	62.22***	112.12***	15.46***
ML	NA	NA	NA
MO	86.09***	256.91***	14.43***
MLN	90.15***	14.59***	25.84***
EP	14.50***	0.66	0.85
ES	37.71***	0.74	4.04***
EO	93.81***	13.48***	3.65***
EL	NA	NA	NA
ELN	NA	NA	NA